

Interreg
Baltic Sea Region



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ENERGY TRANSITION

Climate-4-CAST

Turning climate targets into actionable decisions with the Climate Action Decision Support Tool

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interreg-baltic.eu/project/climate-4-cast/





What Is the CADS Tool?

The Climate Action Decision Support (CADS) Tool is **an open-source tool developed** to help municipalities **plan, assess and prioritise** their climate actions in a transparent and evidence-based way.

It allows for **emissions and financial impact** assessments, thereby supporting the principles of **climate budgeting**.

Key Benefits for Cities and Decision-Makers



Helps identify the **most impactful and cost-effective** climate actions



Helps track progress toward **climate neutrality targets**



Brings climate and financial data together in **one integrated framework**



Creates **transparency** and improves **communication** with decision-makers



Supports **annual climate budgeting** and prioritisation



Supports **cross-departmental collaboration** (climate, energy, transportation, finance)

The CADS Tool strengthens political decisions by providing a clear and transparent analytical basis

The CADS Tool helps cities use limited resources more efficiently

Typical starting points for C4C Pilot cities

- Prioritisation of individual investments and measures
- Climate action plan or roadmap update
- Climate budget preparation
- Scenario discussions with political leadership

Two Core Features

Core Feature 1

Climate Action Impact Modelling:

Assessment of individual climate actions by comparing their emission reduction impacts and economic implications, such as costs, savings and cost-effectiveness.

Core Feature 2

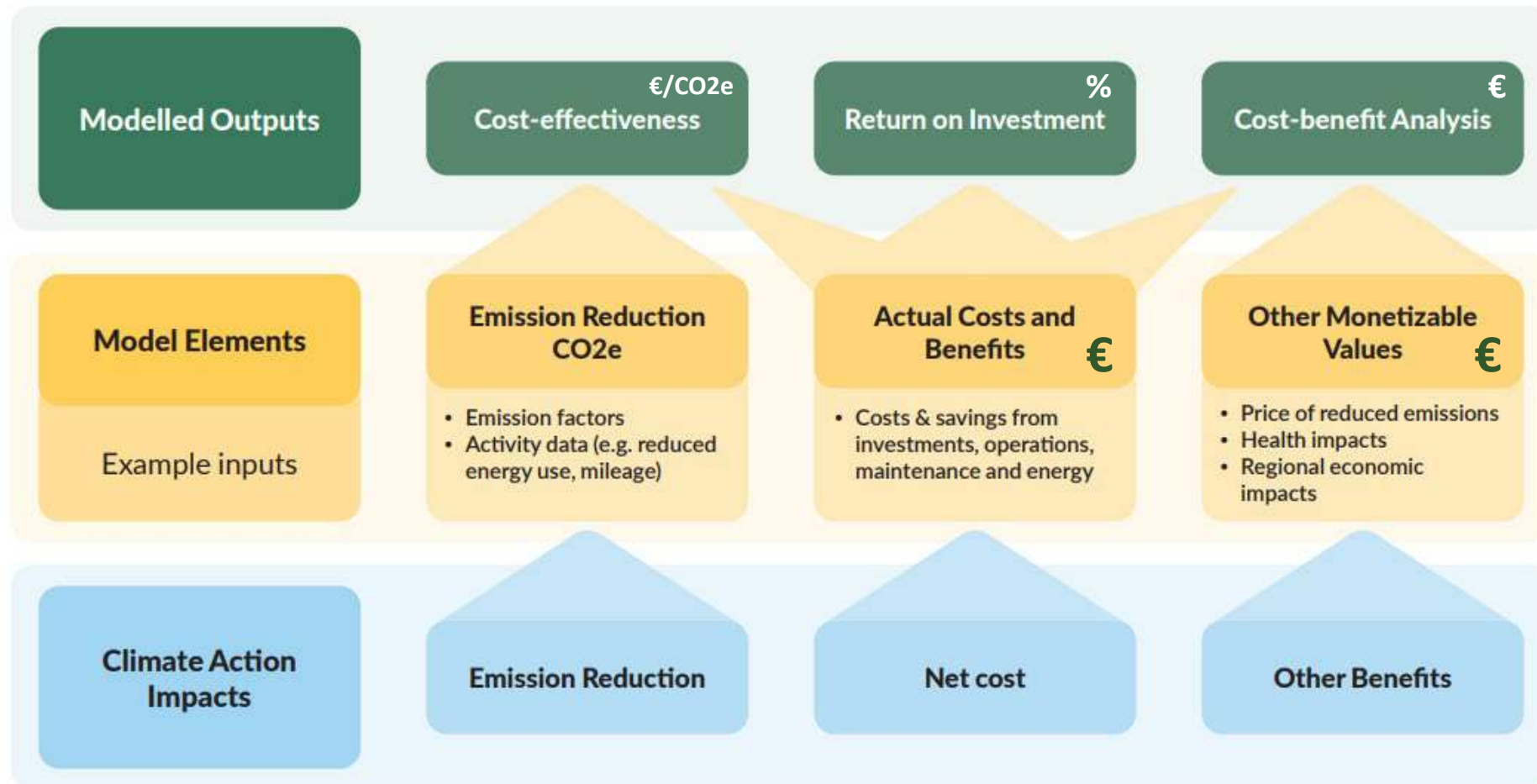
City-Level Emission Scenario Visualisation:

Development of city-level emission scenarios over time, integrating baseline trends, implemented measures and climate targets..



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Core Feature 1: Climate Action Impact Modelling

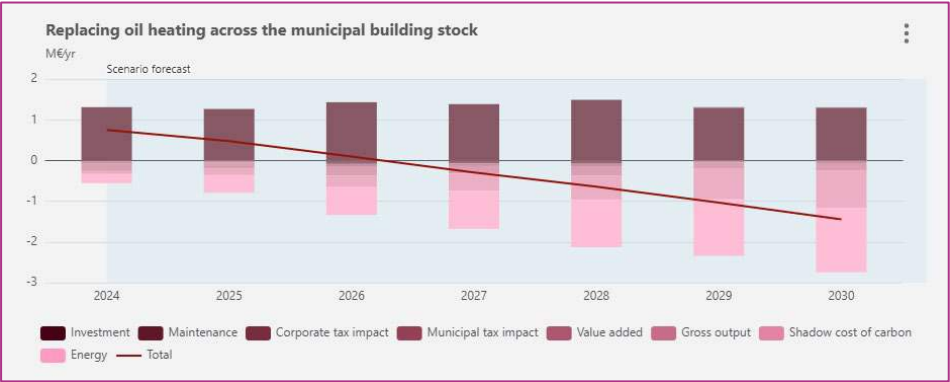
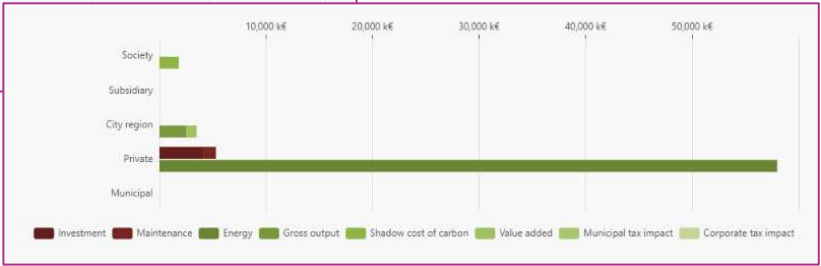
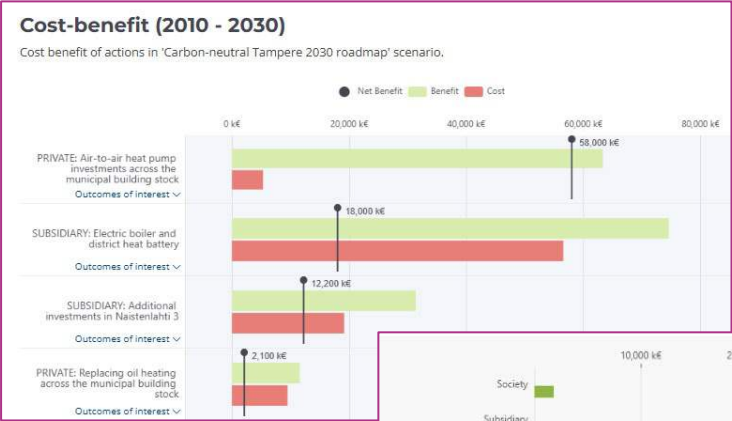


Core Feature 1: Climate Action Impact Modelling

Visualisation options to compare and view impacts

Impact view	
Action lists	Measures sorted by emission impact, net cost, cost-efficiency, cost-benefit or emission sector
Impact graphs	Cost-benefit graphs: What are the economic implications of climate measures Marginal Abatement Cost curve: Which actions are most cost-effective Return on Investment: How much benefit do the investments generate relative to their costs
Action-specific node graphs	Costs and benefits broken down to different dimension such as cost type or owner type

Type	Name	Included in scenario	Total impact 2010-2030	Annual impact 2030	Net cost 2010-2030	Cost efficiency ↑
Electricity consumption	PRIVATE: Building renewable electricity production (PV)	☒	-12.3 ktCO ₂ e	-2.53 ktCO ₂ e/yr	-103,000,000 €	-8,370 €/ktCO ₂ e
Electricity consumption	CITY: Replacing street lighting with LEDs	☒	-0.36 ktCO ₂ e	-0.045 ktCO ₂ e/yr	-1,970,000 €	-5,490 €/ktCO ₂ e
Building heating	PRIVATE: Air-to-air heat pump investments across the municipal building stock	☒	-9.83 ktCO ₂ e	-1.96 ktCO ₂ e/yr	-52,100,000 €	-5,300 €/ktCO ₂ e
Building heating	CITY: Energy efficiency renovations in city's building stock	☒	-0.526 ktCO ₂ e	-0.092 ktCO ₂ e/yr	-928,000 €	-1,770 €/ktCO ₂ e



Core Feature 2: Emission scenario visualisations

Understanding the development of City-Level Emissions over time

Key Scenario Elements

1

Baseline inventory

Emission development in previous years

2

Baseline scenario

Emission development in future without climate actions

3

Target overlay

City's official climate neutrality target

4

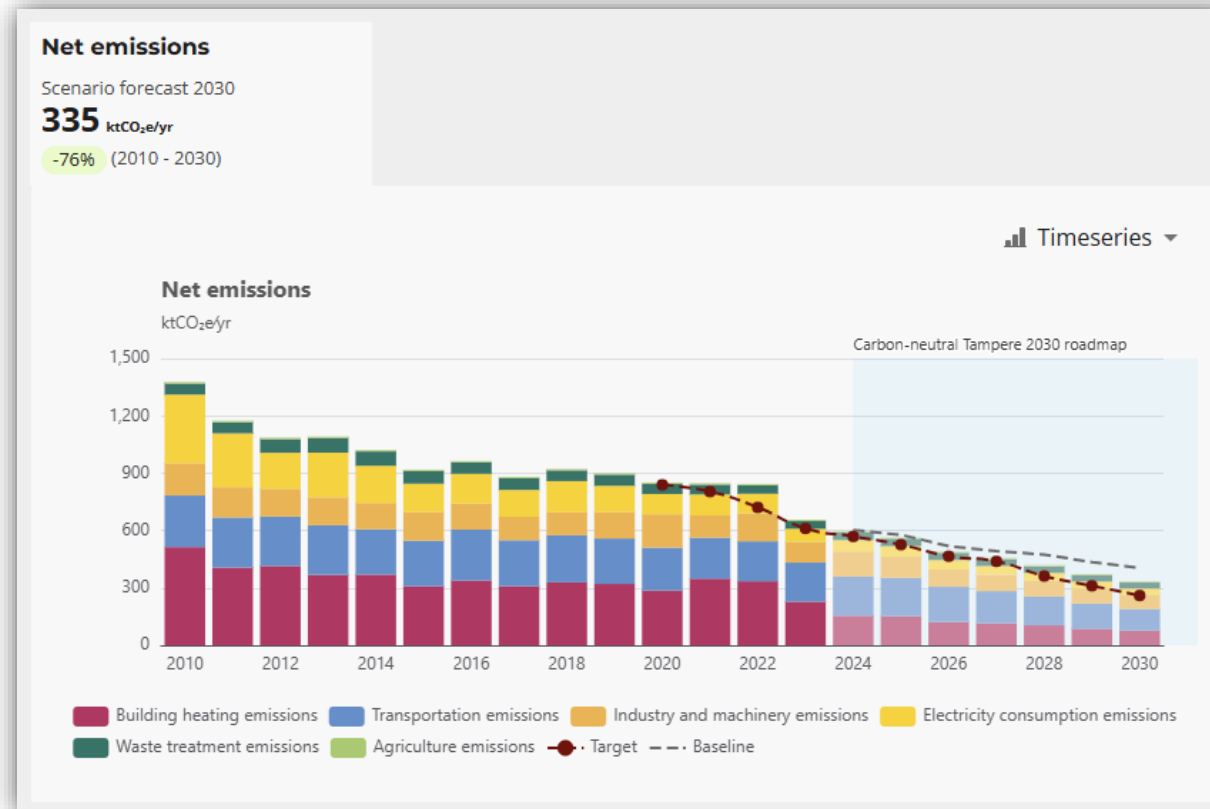
Climate action plan scenario

Development with all climate actions ON

5

Tailored scenarios

Scenario building with certain action ON/OFF



Scenario visualisations support:

- Comparing baseline and action-based scenarios
- Assessing progress towards climate targets
- Identifying the emission gap to targets
- Supporting strategic discussions and decisions

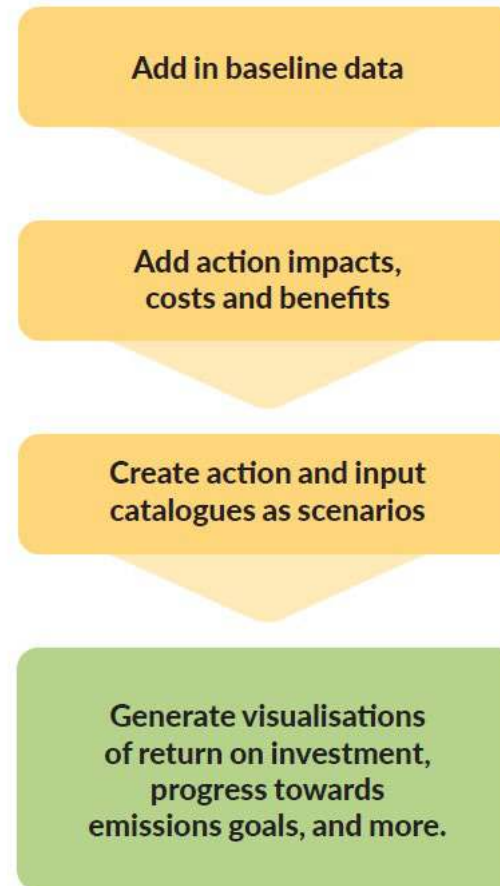
How to get started?

Flexible to start

The CADS Tool is designed to be **flexible** and **scalable**, allowing cities to start with available data and gradually deepen the level of analysis.

The building blocks of the tool:

- **Baseline emission data:** Historical & current emissions and expected emissions development without new actions (baseline forecast).
- **Climate action impact data:** Measures with estimated emission and cost impacts.
- **Scenarios and targets:** Combinations of actions and developments against city climate goals.



Getting started with the CADS Tool does not require perfect data or complex modelling

What a city needs to get started:

- ☒ A recent city-level emission inventory
- ☒ A defined emissions reduction target
- ☒ Planned or existing climate actions
- ☒ Basic information on actions' emissions impacts, costs or benefits.
- ☒ If available, additional details on contributing factors to action impacts such as energy price or interest rates, etc.
- ☒ A responsible team or coordinator

Open-Source Solution for All Cities

Three access options

1. **Browser based online tool:** A ready-to-use web version. Just register and start modelling your tool! [CADS Tool web version](#).
2. **Self-hosted open-source tool code-package** (GitHub under AGPL-3.0 licence): use own IT-staff to set-up and implement the tool.
3. **Supported deployment via service providers** (SaaS solution): contract external support for implementation, maintenance and further development of the tool through specialised service providers

Scan the code for tool access options and quick set-up info:
kausal.gitbook.io/climate-4-cast-tool



For more detailed info about CADs Tool basics go see our Final Output: <https://interreg-baltic.eu/project/climate-4-cast/#output-0>

There you can find:

- Detailed calculation and modelling methods
- Modelling examples from C4C pilot cities
- Empty sheets for tool operationalisation

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Kiitos! Thank you!

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