



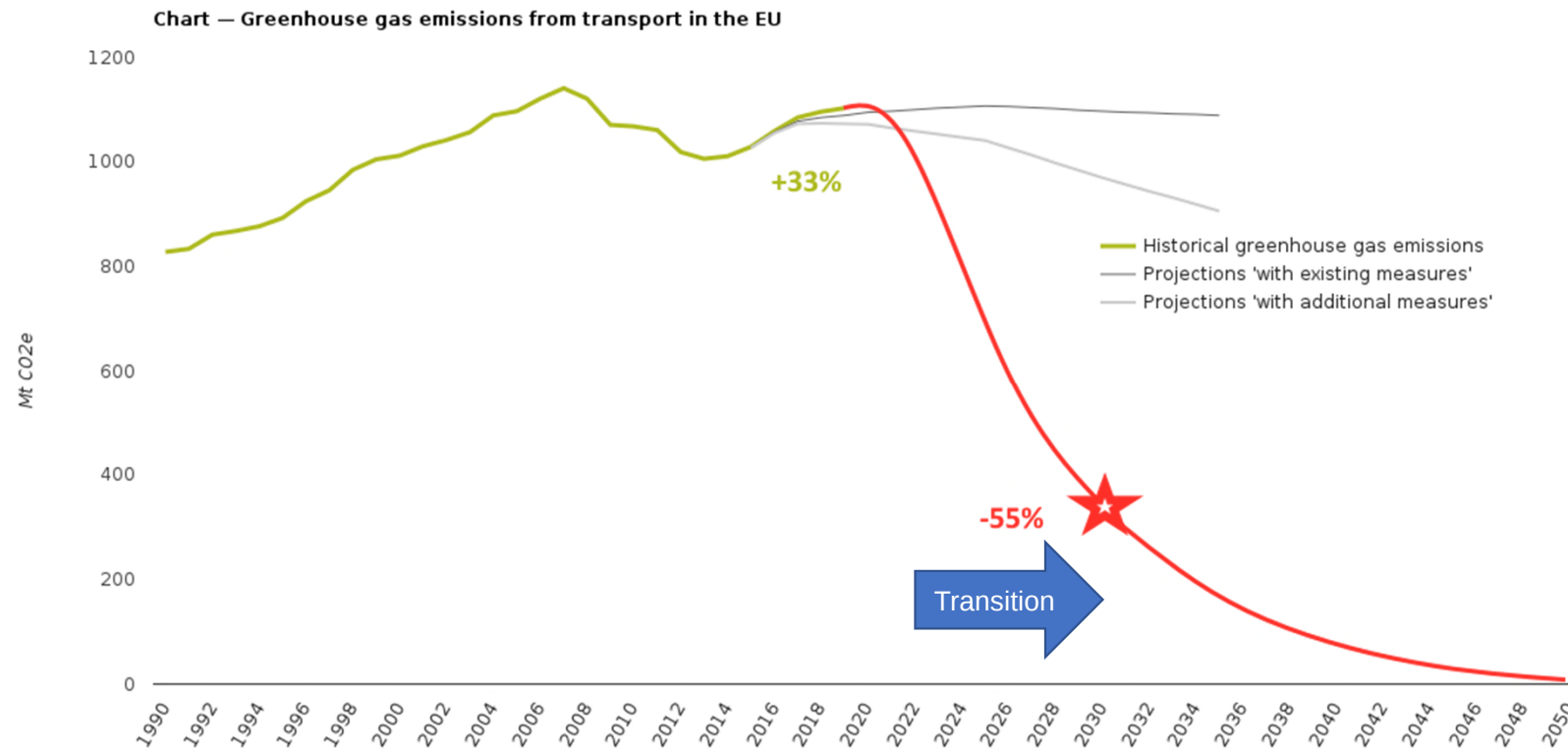
Improvement of SUMP-Methodology for Climate Mitigation

Governance & Integration
Supporting SUMPs

Dr Niklas Sieber, Fraunhofer ISI, Karlsruhe



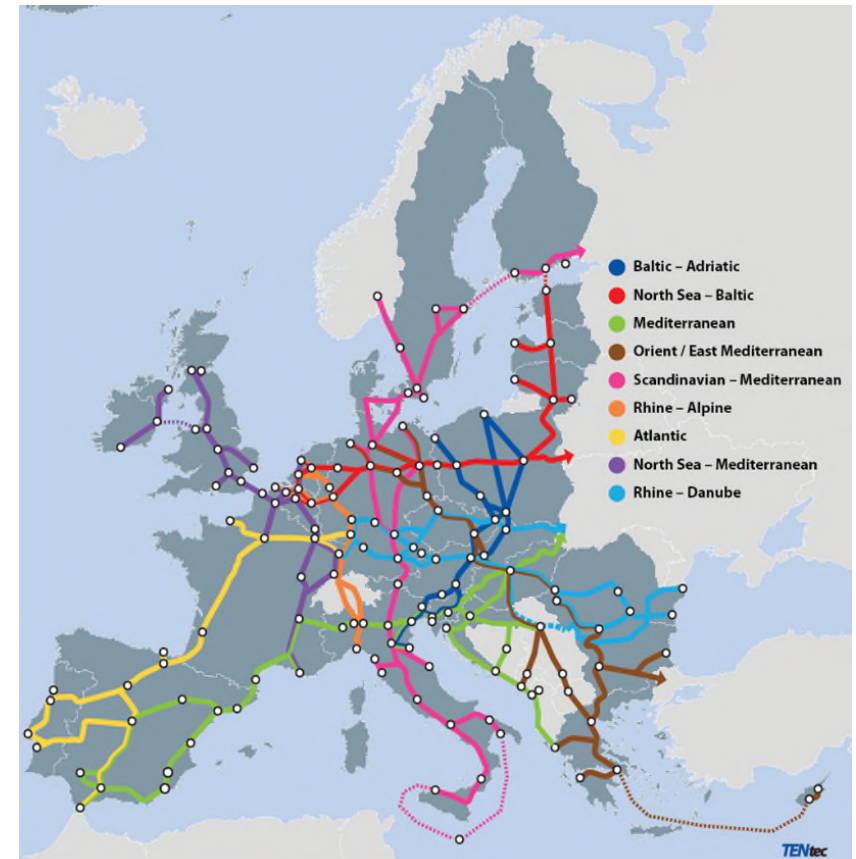
Future pathway needed to achieve climate targets



https://www.eea.europa.eu/data-and-maps/daviz/greenhouse-gas-emissions-from-transport#tab-chart_1

New EU TEN-T Regulation

- Sustainable Urban Mobility Plan (SUMP)
- More than 432 large and medium-sized cities should develop a SUMP by 2025 and collect relevant urban mobility data.
- Contributing to EU Green House Gas reduction targets as set in the Climate Law (including -55% by 2030).



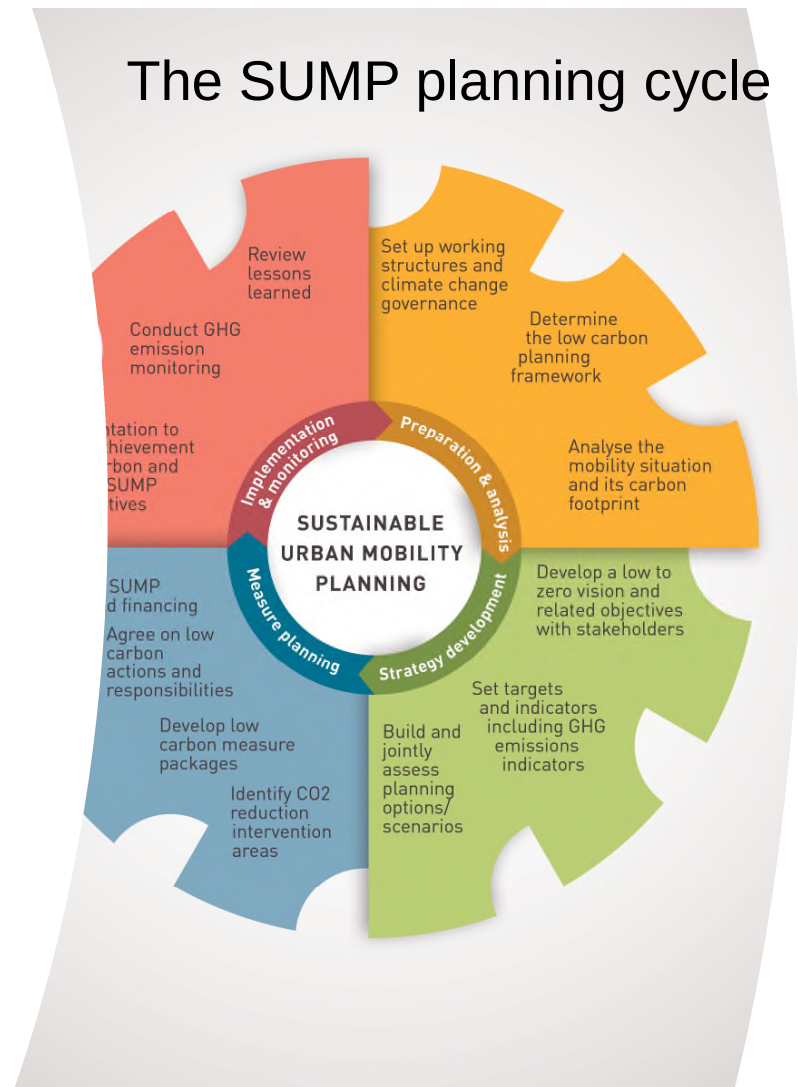
Note: the nine TEN-T core network corridors are based on the CEF and TEN-T Regulations (1316/2013 & 1315/2013); they have been created as a coordination instrument to facilitate the completion of major parts of the core network of strategic importance.
Source: European Commission, Directorate-General for Mobility and Transport, TENtec Information System

Source: https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_6729



SUMP Methodology

Sustainable urban mobility planning steps



Source: <https://urban-mobility-observatory.transport.ec.europa.eu/sustainable-urban-mobility-plans>



Sustainable Urban Mobility Plans in practice



Analysis of SUMPs

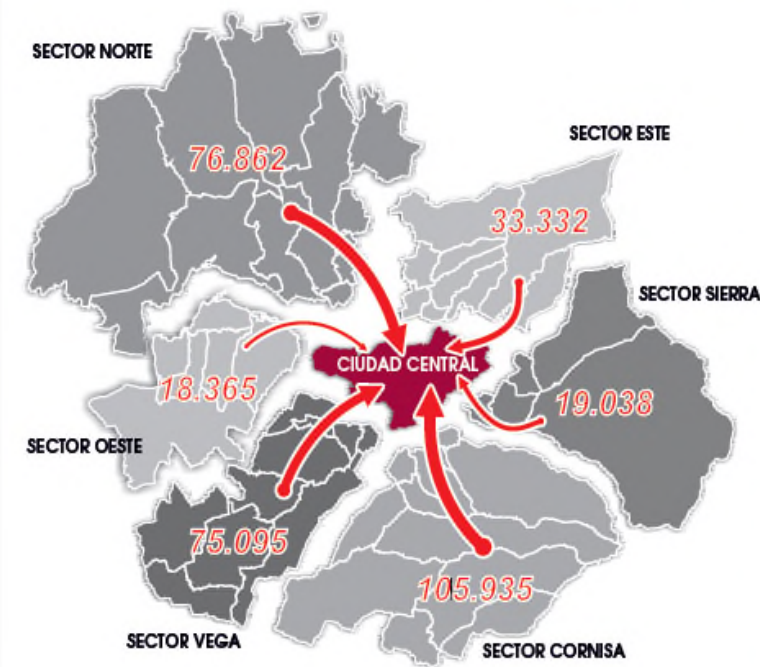
Broad screening of 168 SUMPs

- Climate targets are often not clearly defined at the outset: Less than half of SUMPs have quantitative climate targets for transport.
- Climate targets are often not sufficient to meet Paris goals.
- Impacts of transport measures on GHG emission are often not quantified.
- **Monitoring**: Ex-post evaluation of target achievement and implementation of measures is foreseen in less than half of the SUMPs studied.
- **Lack of implementation**, even if ambitious targets exist. Climate change targets have not been achieved in almost all cases.

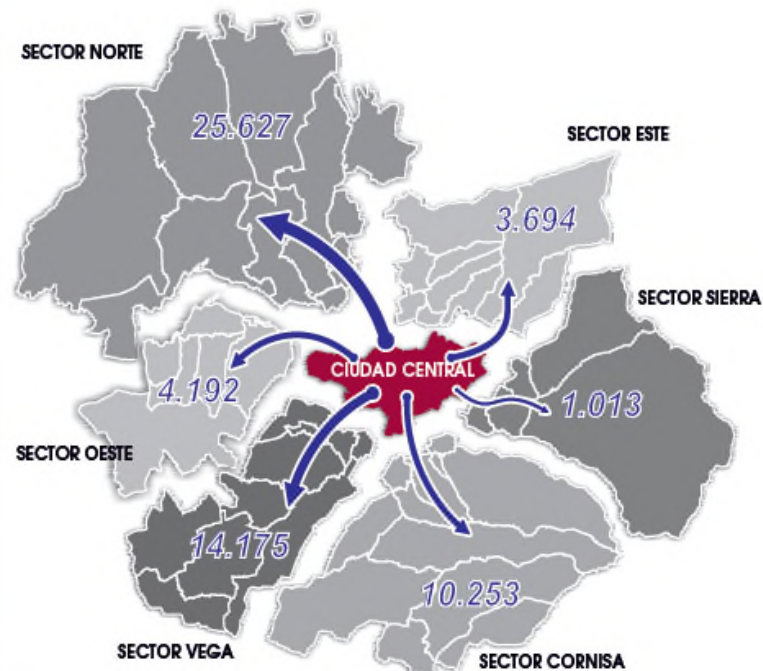
Source: Sutter, Daniel; Maleika Wörner; Caspar Esche (INFRAS) und Niklas Sieber (2022): Overview of Urban Mobility Climate Mitigation Strategies and Climate objectives in Urban Mobility Plans (SUMPs), European Investment Bank EIB / JASPERS, Final Report, Zurich / Stuttgart, 6 January 2022.
<http://www.niklas-sieber.de/Publications/2022%20Urban-Climate-Strategies-and-Urban-Mobility-Plans.pdf>

No regional scope of SUMP

Viajes totales en día laboral con origen en los distintos sectores metropolitanos y con destino Granada: **328.627**



Viajes totales en día laboral con origen Granada y destino en los distintos sectores metropolitanos: **58.954**

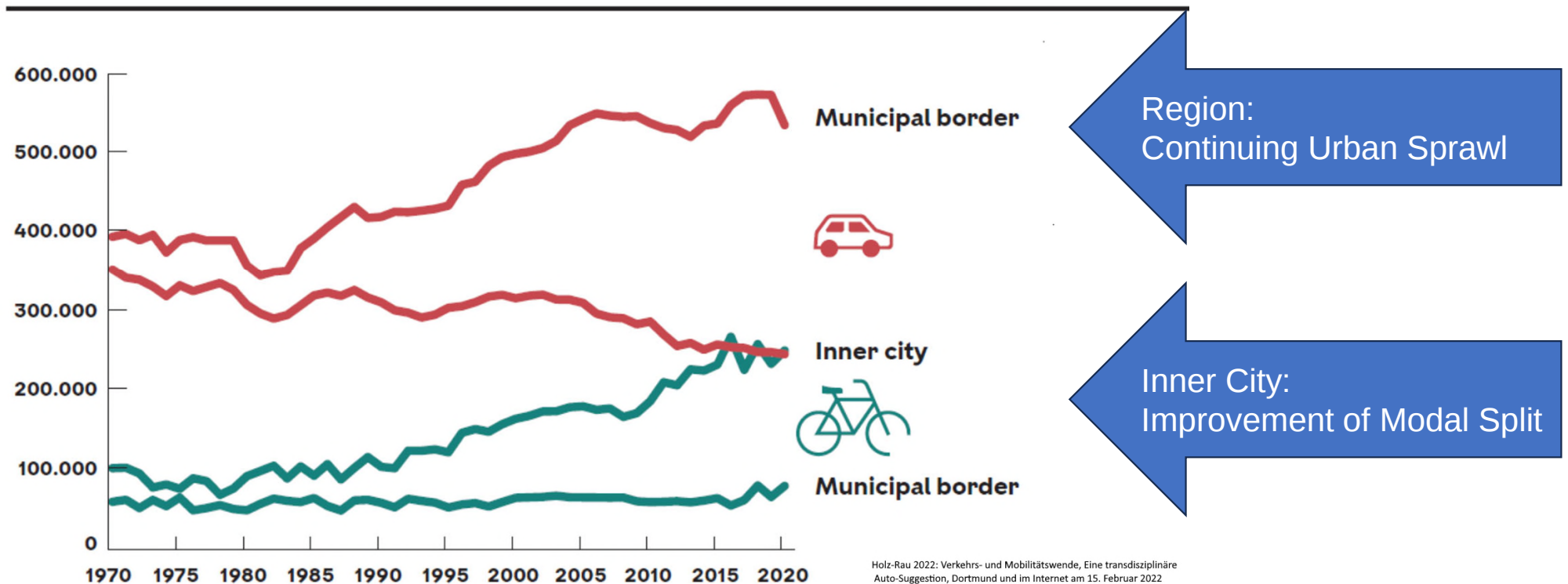


Granada 2025, Plan de Movilidad Urbana Sostenible



Best practice City: Copenhagen

Car and bicycle traffic from 7-19 through the inner city and across the municipal border, 1970-2020



Political preference for Pull Measures



- Push measures that make car traffic unattractive have a **low acceptance**.
- Improvements in public transport do **not** automatically lead to a reduction in car traffic; and due to the improved supply of public transport, CO₂ emissions might even increase.

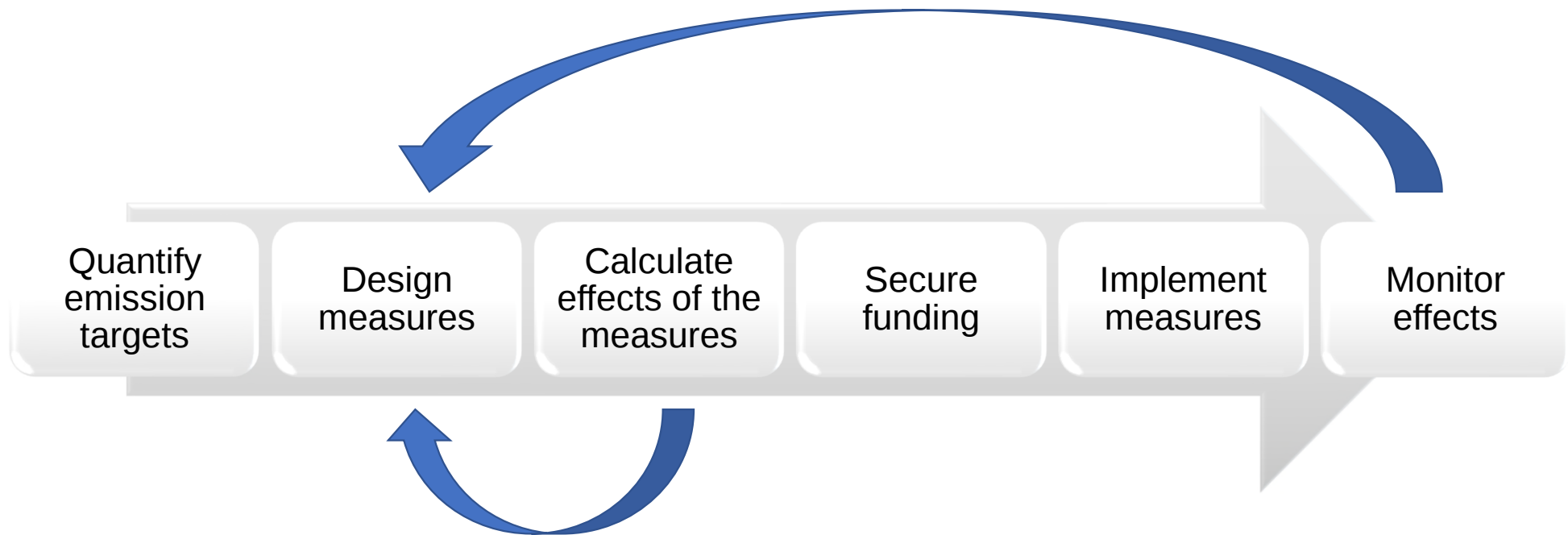
- Push- und Pull-Maßnahmen im Verkehr. © Müller, P., Schleicher-Jester, F., und TOPP, H. (1992): Konzepte flächenhafter Verkehrsberuhigung. In: Flächenhafte Verkehrsberuhigung – Folgerungen für die Praxis. Herausgeber: Bundesministerien für Verkehr, für Umwelt und Reaktorsicherheit, für Raumordnung, Bauwesen und Städtebau, Bonn.
- Eriksson, L.; Garvill, L.; Nordlund, A. M. (2008): Acceptability of single and combined transport policy measures: The importance of environmental and policy specific beliefs. In: Transportation Research Part A, Vol. 42, S. 1117-1128.
- Häkler, Martina et.al. (2022): Push & Pull. Aktueller Forschungsstand. Ergebnisse einer Literaturanalyse der internationalen Diskussion. In: Internationales Verkehrswesen (4).



Improvement of SUMP Methodology

Reversal of planning procedures through backcasting

- Previous practice is often trend-extrapolation: **Predict & Provide**
- Future practice backcasting: **set maximum emission quantity as target value**





What can governments do to promote SUMPs?

Support from central government:

- **Incentives**: Money for planning and investments.
- **Tie financing** of infrastructures to their provision within the SUMP.
- Initiate **regional cooperation** (functional urban area) for SUMP development.
- Set common planning standards.
- Provide technical support.
- Control **target achievement**.

Support from local government:

- Political **consensus** on achievement of Paris goals in transport
- Agree on the SUMP
- Secure finances
- **Avoid later discussions** about measures



Mobile City Game on Polis 2024



Booth 35:
Technology Region
Karlsruhe





Thank you for your attention!

Dr. Niklas Sieber

Fraunhofer-Institut für System- und
Innovationsforschung ISI
Breslauer Straße 48 | 76139 Karlsruhe
Telefon +49 721 6809-5952
niklas.sieber@isi.fraunhofer.de

