Pumping the brakes on urban emissions with mobility planning tools

26. February 2026
13:30–15:00 CET/UTC+1

"Cities on the Move! Driving the innovative transition of urban mobility" webinar series

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Cities on the Move! Driving the innovative transition of urban mobility

Online webinar series
26. February - 9. April 2026

Agenda

Pumping the brakes on urban emissions with mobility planning tools

15 min. **Welcome and setting the scene**

45 min. **Trends, challenges and solutions for sustainable urban mobility**
– key experts working with cities
- Lucy Sadler, Sadler Consulting, project UVAR4US
- Kaylin Lee, Intl. Council on Clean Transportation, TRUE initiative
- Abderrahmane Darghali, Municipality of Chefchaouen (Morocco)

25 min. **Guided panel discussion about ways forward for cities**
- moderated by the UTM/DUT teams
- Panel discussion
- Q&A with the audience

5 min. **Conclusions and outlook**

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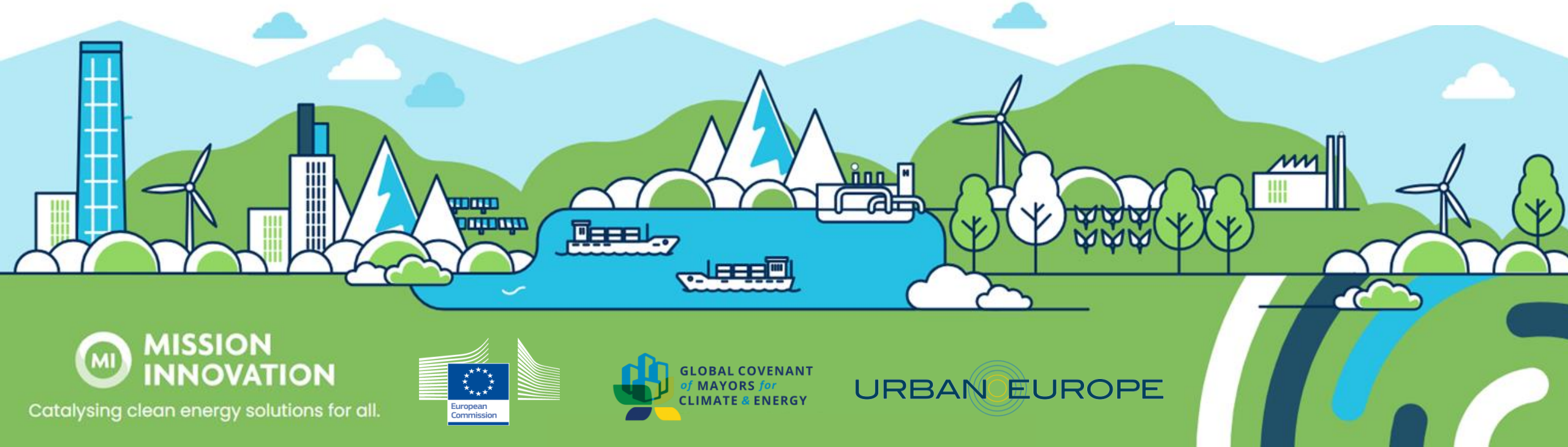
JOIN OUR CITY COHORT!

We **mobilise decision makers** across all levels of government to prioritise net-zero pathways enabled by clean energy and **systemic innovation**.

We **empower cities** to adopt innovative solutions and help reach tipping points in the cost and scale of those solutions for urban transitions and **broker solutions**, approaches, and knowledge for **net-zero transitions** at each stage of a city climate action journey.



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The Driving Urban Transitions Partnership funds transformative research and innovation to build capacities of urban stakeholders and empower them to drive urban transitions in Europe and beyond.

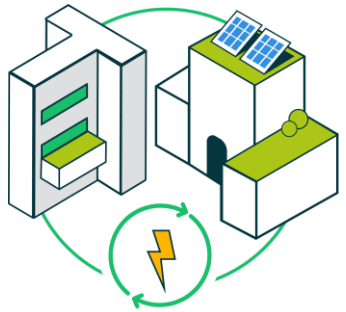
Together with **65+** partners from **28+** countries, and the European Commission, we fund over **40** transnational research and innovation projects each year.

Three Transition Pathways for urban transitions

Circular Urban Economies

15-minute City

Positive Energy Districts



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Today's speakers

Lucy Sadler, Director (Sadler Consultants, Germany), UVAR4US project

Kaylin Lee, Researcher (International Council on Clean Transportation, Germany), TRUE initiative

Abderrahmane Darghali, in charge of the Cooperation and Environment Office (Municipality of Chefchaouen, Morocco)

Pumping the brakes on urban emissions with mobility planning tools

URBAN TRANSITIONS MISSION

Driving Urban Transitions

Intense congestion, air pollution and car-dominated cities remain major challenges for urban mobility systems. This webinar explores the potential and practical application of **Urban Vehicle Access Regulations** (UVAR), **Low Emission Zones** (LEZ) and other complementary levers to reduce emissions, optimise the use of urban space, and improve accessibility.

Adopting a policy-focused and implementation-oriented lens, the session highlights how cities can integrate these instruments into **coherent, data-driven mobility strategies** aligned with climate and liveability objectives that shape the future of their communities.

Similar challenges – different solutions

Status quo of many urban mobility systems

Congestion, pollution, emissions, competition over space

Different instruments to address these issues

Urban Vehicle Access Regulations (UVAR), **Low Emission Zones** (LEZ) and other complementary levers

Challenge

Integrating these instruments into coherent, data-driven mobility strategies aligned with climate and liveability objectives

THE REAL URBAN EMISSIONS INITIATIVE

Role of Real-world Data in the Making of the Warsaw Low Emission Zone

26 February 2026 | Cities on the Move! Driving the innovative transition of urban mobility webinar

Kaylin Lee
Researcher, International Council on Clean Transportation

Evidence-based policy is essential to address a major **public health crisis**

'Dieselgate' exposed the need for an independent watchdog capturing real-world vehicle performance

The **TRUE Initiative** was launched 8 years ago to support cities worldwide in developing effective air quality and climate policies with **independent data**, **analysis**, and **expert guidance**.

THE REAL URBAN EMISSIONS INITIATIVE

The TRUE Initiative **drives action towards cleaner urban transport** through data collection, analysis, and policy recommendations

Collect

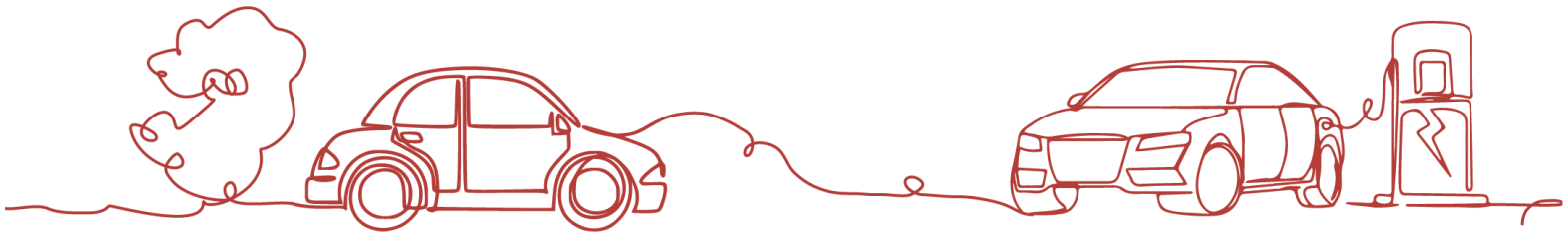
Real-world vehicle exhaust measurements from urban transport.

Analyze

The emissions impact of road vehicles and key contributors to air pollution are identified and quantified.

Support

Develop evidence-based policy solutions for cities to improve air quality and public health.



Researchers at the TRUE Initiative use **data driven approaches** for research and policy support

- Conduct large-scale remote testing to generate novel emissions evidence and stress existing regulatory gaps and loopholes
- Exploit new testing methods to fill data gaps and meet specific policy windows
- Leverage data and analysis tools to provide powerful metrics to policymakers and the public

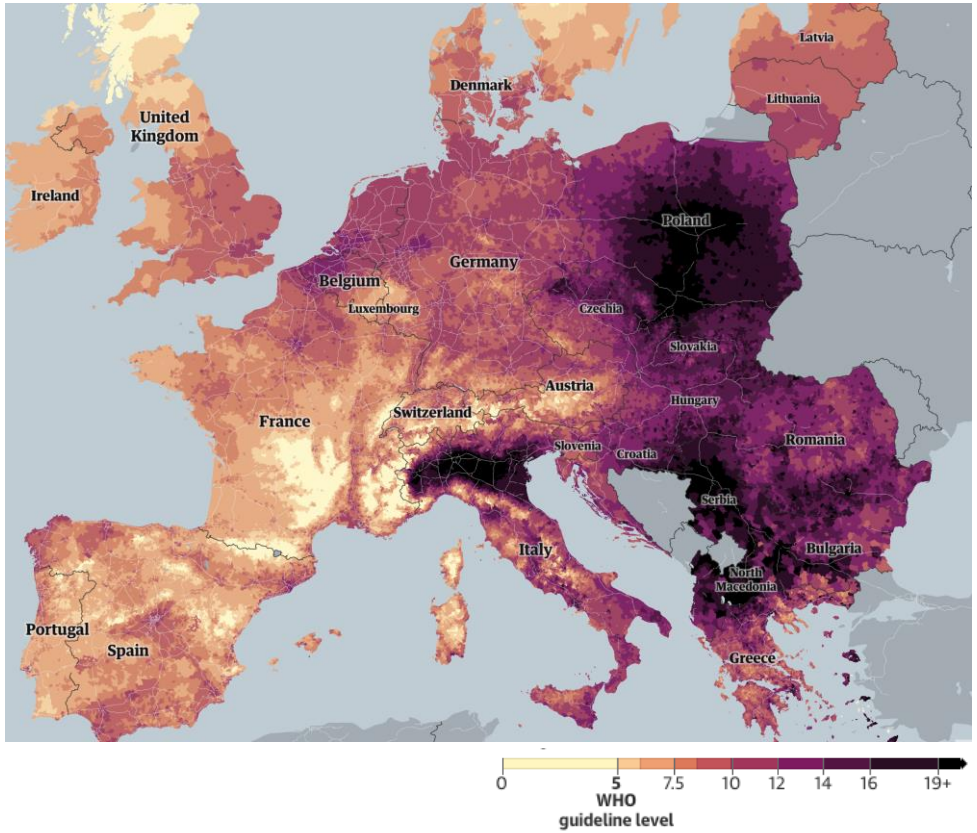
First-ever remote sensing testing in Indonesia; **used to design a low-emission zone**

Diesel particulate filter testing in Brussels; **deployed today at the federal level in Belgium**

Real-world emission analysis, policy guidance, and public awareness across 5 continents and over 20 cities

Background

- One of the most polluted cities in Europe
  - NO2 and PM2.5 levels frequently above World Health Organization guidelines
- Poor air quality exacerbated by road transport
  - A high rate of vehicle ownership
  - A large share of old, imported used vehicles in the fleet
- Clear opportunities for emissions reduction
  - Existing national framework for low-emission zone (Act on Electromobility and Alternative Fuels)
  - Pilot ultra low-emission zone in Krakow

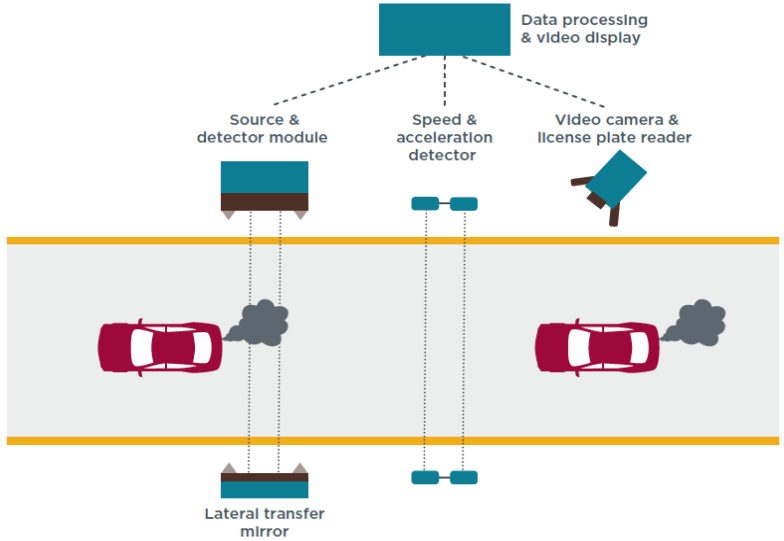


Europe's pollution divide: see how your area compares (source: The Guardian, 2023)

Real-world data collection

- Vehicle tailpipe emissions measured using remote sensing technology
  - September – October 2020
  - Six diverse sites across the city
  - Over 220,000 emission measurements from nearly 150,000 unique vehicles

- Importance of real-world data
  - Discrepancies between laboratory and on-road performance
  - Fleet composition and activity vary across countries and regions



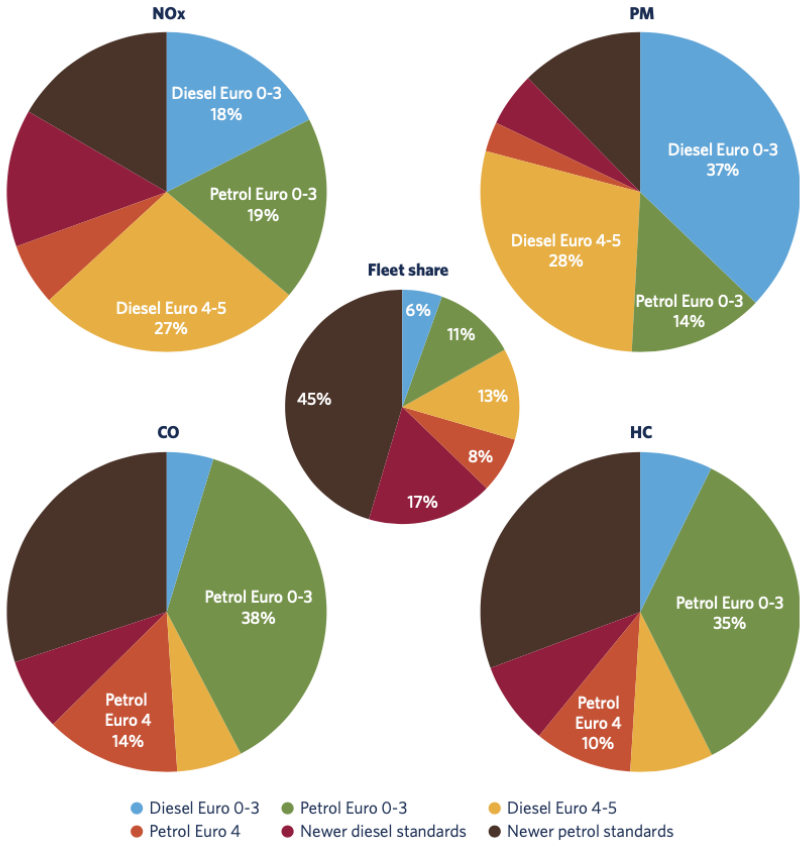
Remote sensing setup for emissions testing in Warsaw (source: TRUE Initiative)

Insights from real-world data...

- Characterization of the Warsaw fleet
  - Predominant use of old, LPG/gasoline-powered vehicles
  - Higher emissions from imported used vehicles than domestic ones
  - Elevated emissions from LPG vehicles considered to be ”clean”
  - Disproportionate emission contribution from vehicles of 18 years or older (Euro 1 – 3)

- Restrictions based on emission standard or age could remove the highest-emitting vehicles on the roads of Warsaw

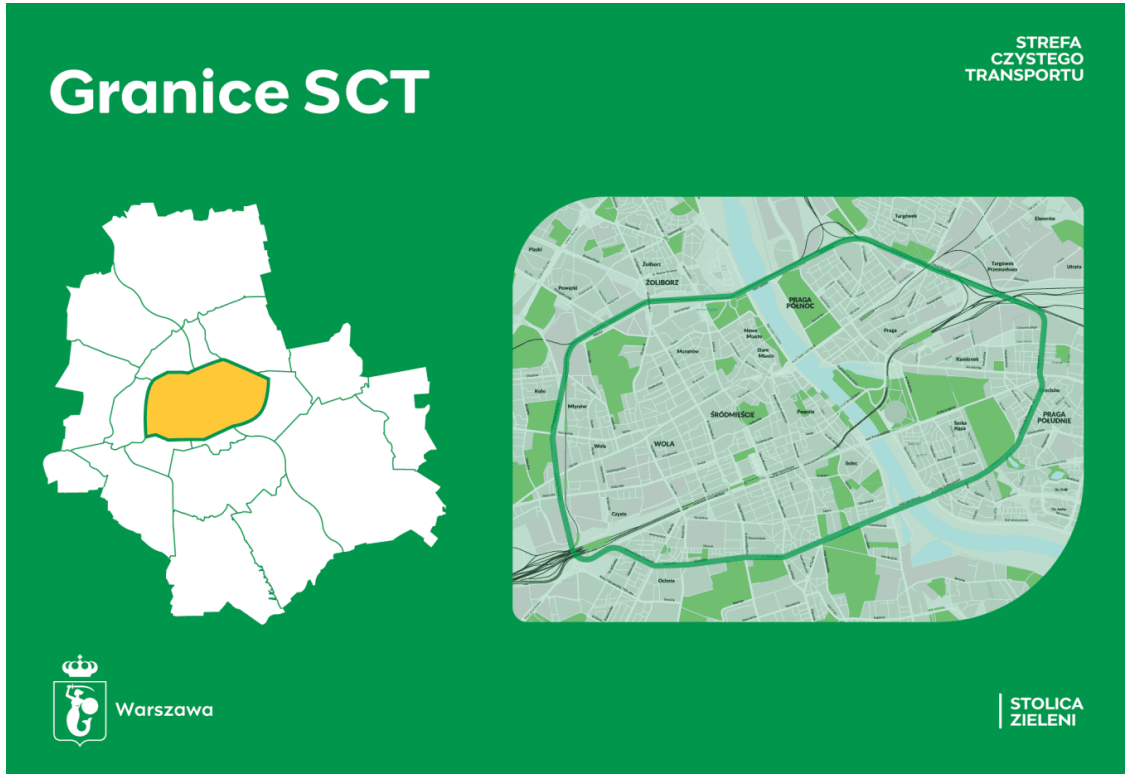
Potential policy tool:
Low-emission zone (LEZ)



Emission share of vehicle groups measured in Warsaw in 2020 (source: TRUE Initiative)

...to tailored measure for the city

Passenger car	Minimum standard		Implementation schedule	
Phase	Diesel	Petrol	Option 1	Option 2
1	Euro 4	Euro 2	2024	2024
2	Euro 5	Euro 3	2026	2025
3	Euro 6	Euro 4	2028	2026
4	Euro 6d-TEMP	Euro 5	2030	2027
5	Euro 6d	Euro 6	2032	2028
6	Euro 7	Euro 6d	2034	2030
7	Euro 7	Euro 7	2035	2035
8	BEV	BEV	2038	2038

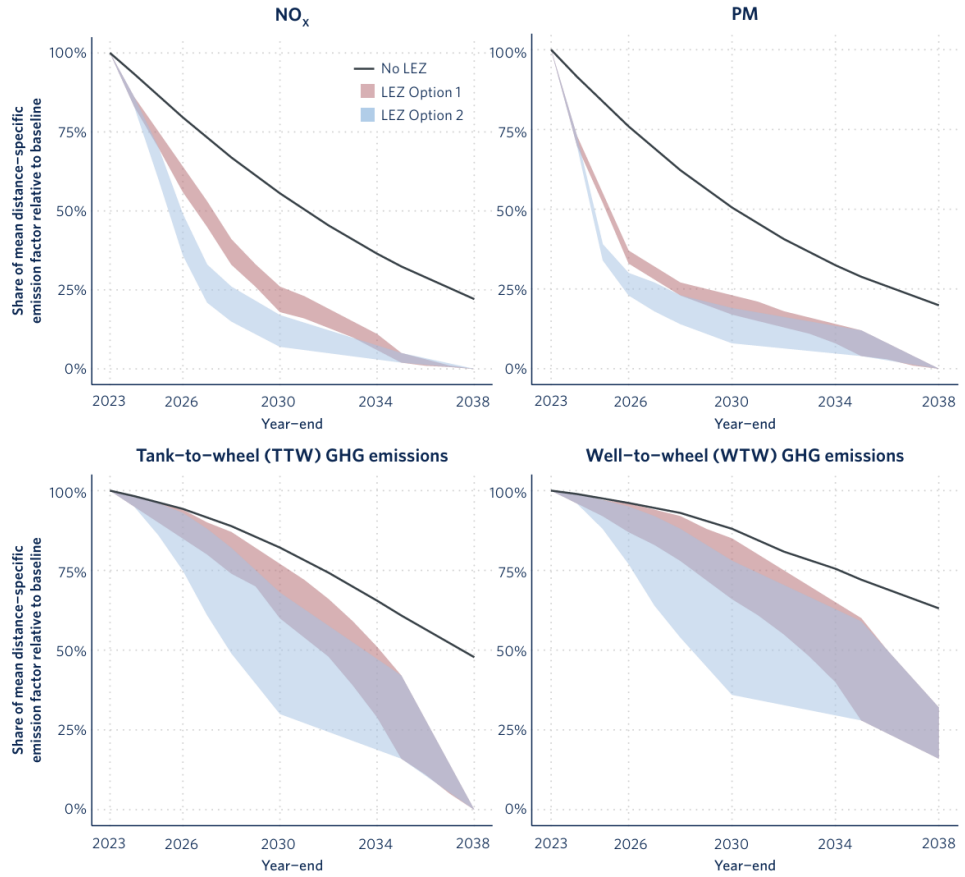


Left: LEZ implementation restrictions and schedule options for passenger cars for Options 1 and 2 (source: TRUE Initiative)
Right: Warsaw clean transport zone boundaries (source: transport.um.warszawa.pl)

… and to further impact assessments

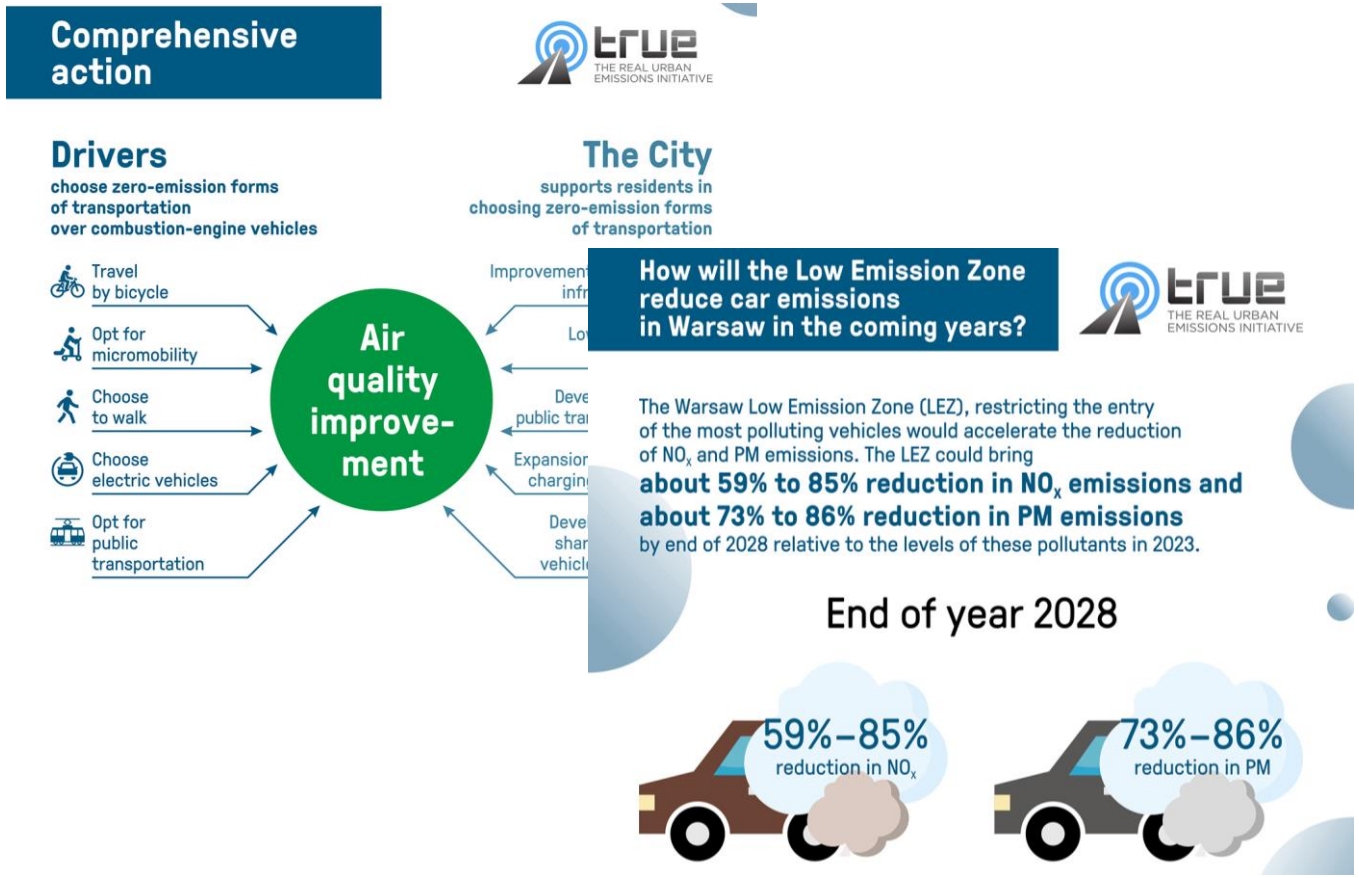
- Emission reduction potential of the LEZ by 2028 compared to 2023 levels
  - Up to around 85% of NO_X and PM emissions
  - 18-51% of tank-to-wheel GHG
  - 12-26% or well-to-wheel GHG
  - Policies promoting zero-emission mobility to maximize GHG emission reduction

- Economic and health impact assessment
  - Up to 23% reduction in NO2 concentrations by 2028
  - 555 life-years saved by 2028



Modeled impacts of a LEZ on NO_X, PM, TTW and WTW GHG emissions in Warsaw (source: TRUE Initiative)

… providing robust evidence base for building political and public awareness



Left: Infographics used for the Warsaw LEZ campaign
Right: Real-world emissions study launch event at the Warsaw city hall (source: TRUE Initiative)

Lessons learned: How to enable use of real-world data in effective policymaking

- Development of comprehensive dataset
  - Memorandum of Understanding to access vehicle registry data
  - Revealed shortcoming of CEPiK (Polish vehicle registry database) which led to the updates to the database
- Close collaboration with cities
  - Ensure understanding of data and analysis findings
  - Adjust and refine analysis to fit the local context (exemptions, high share of used vehicles, etc.)
- Ensuring data sharing and application
  - RS data can be complex and not easily understandable by stakeholders
  - TRUE provides readily usable data for policymakers (e.g., emission factors)

Conclusions and outlook

- **Success factors for the Warsaw LEZ**
  - Robust scientific evidence based on real-world data
  - Proactive city initiatives
  - Continuous political and public engagement
  - Effective communication

- **Monitoring efforts in progress**
  - RS campaign conducted in Sep – Oct 2025
  - LEZ compliance and impact assessment
  - Guidance for updates to future LEZ steps

Download our reports here:

Evaluation of real-world vehicle emissions in Warsaw (2022)

Impacts of a low-emission zone on air pollutant and greenhouse gas emissions in Warsaw (2023)

THE REAL URBAN EMISSIONS INITIATIVE

Thank you!

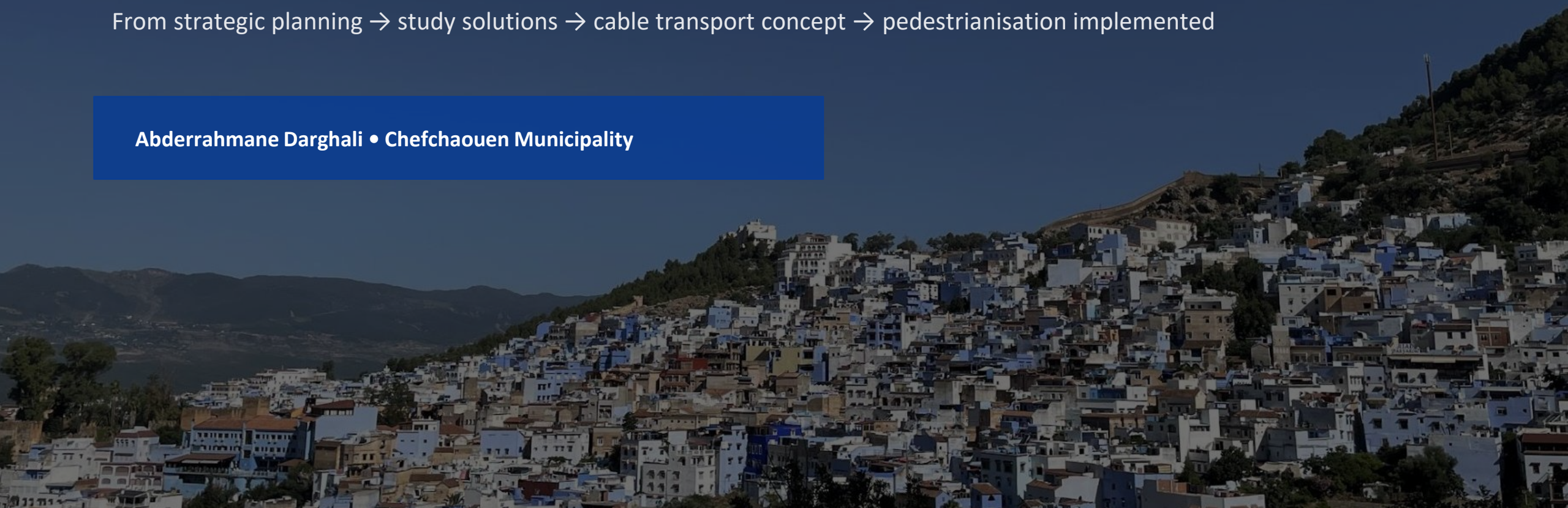
www.trueinitiative.org

Kaylin Lee
k.lee@theicct.org

Chefchaouen: Mobility Planning in a Mountain Heritage City

From strategic planning → study solutions → cable transport concept → pedestrianisation implemented

Abderrahmane Darghali • Chefchaouen Municipality



1. Chefchaouen at a glance

A small city with a global profile

- Mountain city in the Rif region ("Blue Pearl" heritage identity)
- Population ~46,000; compact urban footprint
- Local economy: tourism, crafts, local agriculture, social economy
- Known for climate ambition and governance capacity (SECAP, SDGs)
- Active international networks: ICLEI, UCLG, GCoM and city partnerships

Mobility planning matters here because:
- Narrow streets in the historic core
- Steep topography
- Tourism peaks

2. From strategic vision to mobility actions

planning logic is to link climate strategy → investment-ready projects

Chefchaouen Vision 2030
Participatory city vision

→

SECAP (2022)
GHG inventory + mitigation & adaptation actions

→

SDG Cities (UN-Habitat)
Data-driven planning + bankable projects

→

Integrated Mobility Plan
Multimodal solutions + demos (walking, e-mobility)

What our SECAP highlighted

- Transport and public lighting are major sources of emissions
- Need to manage tourism peaks and steep topography constraints
- Priority to people-centred mobility: walking + clean public transport

Implementation approach

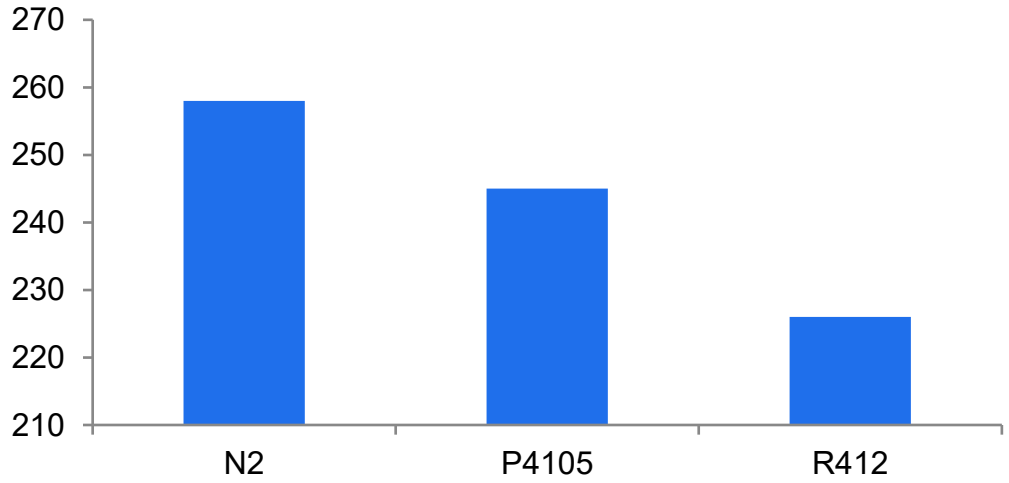
- Use data (inventories + surveys) to prioritise
- Bundle measures (public transport + access + public space)
- Work through partnerships and innovative finance
- Start with demonstration projects to build public support

3. Mobility baseline (today)

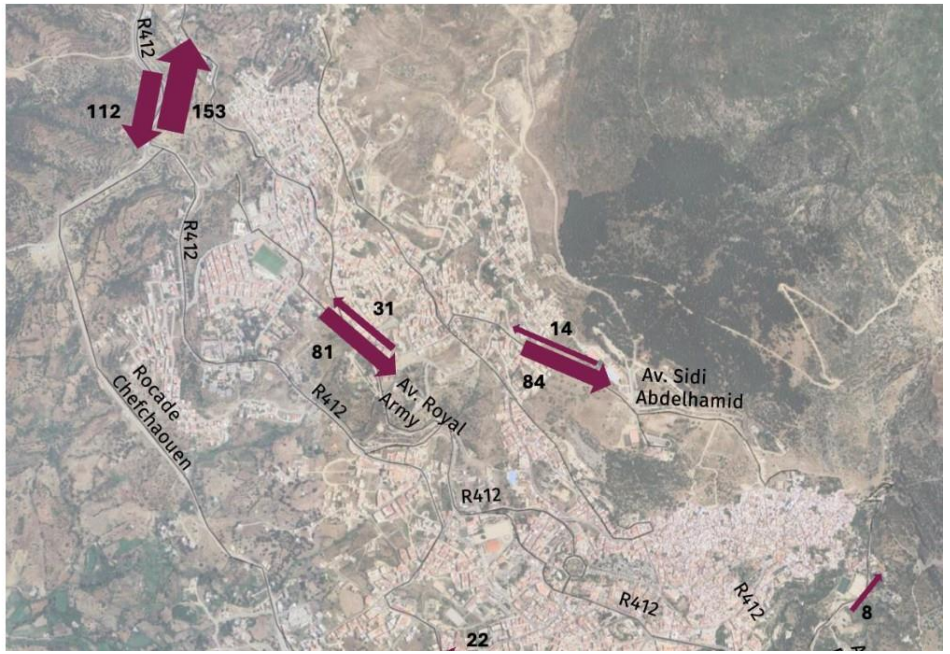
Current situation

- Public transport relies mostly on taxis
- Grand taxis (type A): 66 %, 6 seats
- Small taxis (type B): 33 %
- Main passenger corridors: R412, N2, P4105
- Challenges: long waiting times, unsafe driving incentives, limited shelters

Observed passenger flows (pphpd)



Where demand concentrates



Typical taxi stations / stops

4. Solutions recommended

Modern public transport

- Introduce modern, low-emission (eventually electric) buses
- Universal access, better comfort and reliability
- Move from per-passenger incentives to contracted operations

Passenger experience & digital tools

- Real-time + static passenger information at stops
- Electronic fare collection and standardised tariffs
- Simple dashboards for service monitoring

Network coverage & stops

- Extend lines to reach underserved districts
- Target ~1 km spacing between main routes
- Upgrade stops: safety, lighting, crossings, and shelters
- 31 improved bus-stop sites identified

Map: proposed improved stops

5. Cable transport concept: objectives & corridor options

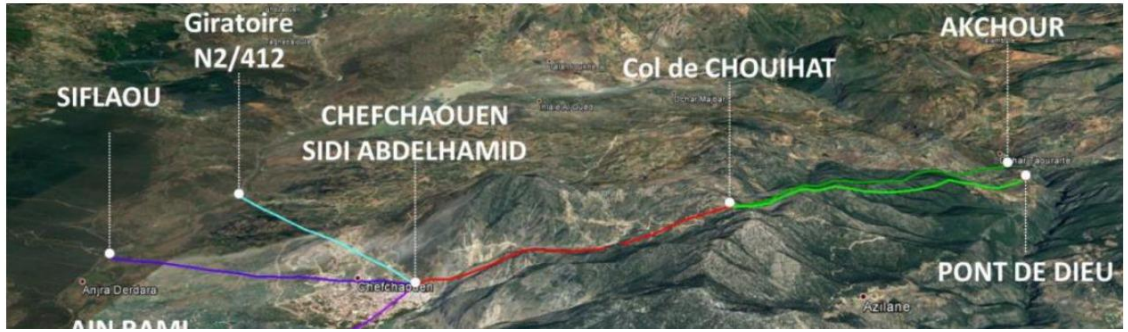
Why cable transport in Chefchaouen?

- Steep topography + limited road capacity
- Connect city ↔ nature destinations (e.g., Akchour / Pont de Dieu)
- Reduce travel times and road traffic pressure
- Support tourism while improving access for residents

Important planning caution

- Demand must be re-validated with updated data
- Transamo estimate: 500k annual users (study input)
- Observed 2023 visitors: ~140,810
- Field surveys show much lower peak flows on key axes

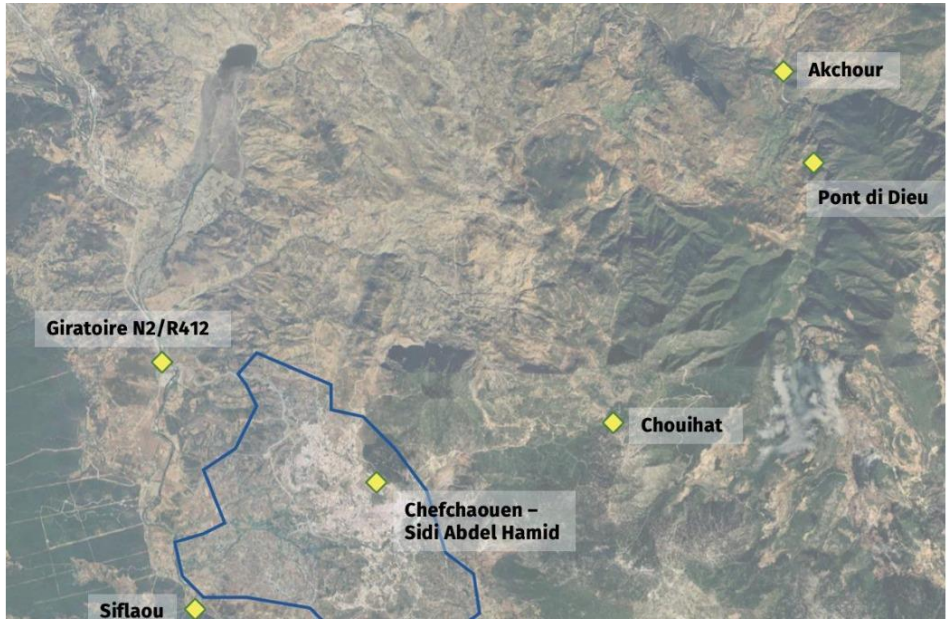
Indicative routes (Transamo variants)



Preferred valley station option: roundabout N2/R412 (enables park-and-ride + bus/taxi interchange).
Suggested phasing: start with Chefchaouen–Chouihat, then connect to Akchour.

6. Cable transport: readiness steps (data + integration)

Planned station locations (illustrative)



What we need before implementation

- Additional passenger data: OD, boarding/alighting, FO across all corridors
- A dedicated multi-criteria analysis including demand sensitivity
- Station-area design as multimodal hubs (bus + taxi + park-and-ride)
- Phasing plan + operations model + integrated ticketing options
- Digital monitoring: occupancy, reliability, and safety KPIs

7. Pedestrianisation: an implemented demonstration project

1. Define the zone
Historic core / sensitive streets
where walking is the natural priority

2. Manage access
Residents & services permits
Delivery time windows
Emergency access always

3. Upgrade the street
Safety + accessibility
Wayfinding, lighting, shade
Comfortable public space

Strategic objectives

- A core measure in Chefchaouen's sustainable mobility strategy: pedestrianise key public squares
- Reduce motorised traffic and reclaim public space for people (walking + greenery/shade)
- Improve accessibility and comfort while cutting CO_2 emissions
- Support sustainable tourism and position Chefchaouen as a model of green mobility

Key message: pedestrianisation is not just "closing a street" — it is an operating system (rules + design + monitoring).

Thank you

Abderrahmane Darghali• Chefchaouen Municipality
darghaliabderrahmane@gmail.com

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Panel discussion & Q&A

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Abderrahmane Darghali, in charge of the Cooperation and Environment Office (Municipality of Chefchaouen, Morocco)

Conclusions and outlook

- 5. March
  Accelerating the implementation of active mobility in cities
- 26. March
  Putting citizen needs in the driver's seat for inclusive urban spaces and mobility
- 9. April
  Steering towards sustainability via electrified transport

webinar series

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Accelerating the implementation of active mobility in cities

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Housing Capital: How to Expand Financial Accessibility?

11. March 2026
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