

READY TO GO

Sustainable mobility measures & methods



CIVITAS

Sustainable and smart mobility for all



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For the past 20 years, CIVITAS projects have been experimenting with measures, solutions and methodologies that make urban mobility and transport in Europe more sustainable. In these slides, we have identified some of the solutions that can be most readily replicated across a variety of locations, contexts, and by various mobility projects.

In other words: **we experimented so you don't have to.**

Think of this like a to-go lunch box – we have sorted through the raw ‘ingredients’ to hand you a collection of ready-to-go solutions. Explore this compilation of sustainable mobility methods that have been tested by CIVITAS projects, and are now ready to be rolled-out in your city. Find the best practices that inspire you, and implement them in your own context.

These examples are drawn from just the 35 CIVITAS projects whose achievements were evaluated in 2022 by the CIVITAS Initiative Secretariat.

They are designed to inspire readers, and to be picked up and used by all.

➔ **For more information**, read our [Review and Evaluation of the Latest CIVITAS Achievements](#), and browse our catalogue of nearly [1000 mobility solutions](#).

REPLICABLE SOLUTIONS FROM ACROSS EUROPE



21 replicable solutions

10 thematic areas

21 cities

15 countries

The methods, measures and solutions featured in this pack were pioneered in cities across Europe and beyond.

Each was developed with support from a European-funded CIVITAS project.

CIVITAS' 10 THEMATIC AREAS

Active mobility

Clean and energy-efficient vehicles

Collective passenger transport and shared mobility

Integrated and inclusive planning

Urban logistics

Road safety and security

Behavioural change and mobility management

Public participation and co-creation

Smart and connected mobility

Demand and urban space management



OVERVIEW

SOLUTIONS ACROSS EUROPE AND THEMATIC AREAS

THEMATIC AREA	SOLUTION	PROJECT	CITY	COUNTRY
1. Active mobility	Bringing in a peer city with a fresh perspective	Handshake	Bruges	Belgium
	Building on what works	2MOVE2	Brno	Czechia
2. Clean and energy efficient vehicles	Selecting demonstrations that are closely linked to the city's existing vision	GreenCharge	Bremen	Germany
	Integrating sustainable mobility into public procurement to extend impact	MEISTER	Stockholm	Sweden
3. Collective passenger transport and shared mobility	Asking locals what they want from public transportation	CIPTEC	Frankfurt	Germany
	Installing multipurpose infrastructure	ELIPTIC	Szeged	Hungary
4. Urban logistics	Providing opportunities to test before committing	CityChangerCargoBike	Lecce	Italy
	Reducing barriers to entry	ULaaDS	Groningen	The Netherlands
5. Road safety & security	Evaluating and improving existing infrastructure	ECCENTRIC	Ruse	Bulgaria
	Seizing existing trends to achieve sustainable mobility goals	ReVeAL	Helmond	The Netherlands
6. Behavioural change and mobility management	Engaging students as ambassadors for change	SUNRISE	Jerusalem	Israel
	Being transparent	DESTINATIONS	La Palmas de Gran Canaria	Spain
7. Demand and urban space management	Expanding parking management to include bicycle parking	Park4SUMP	Vitoria-Gasteiz	Spain
	Rolling out temporary measures first	PORTIS	Gdynia	Poland
8. Public participation and co-creation	Building mobility measures around local needs	Cities-4-People	Trikala	Greece
	Using games to gather input and data from communities	MUV	Helsinki	Finland
9. Smart, sustainable, connected and shared mobility	Using smart tools to support more effective policy-making in other areas	2MOVE2	Malaga	Spain
	Forming alliances to bring diverse mobility options to one platform	DYN@MO	Aachen	Germany
10. Integrated and inclusive planning	Making children central to inclusive planning	Metamorphosis	Zurich	Switzerland
	Visiting others to see how SUMP development can be done locally	SUITS	Palanga	Lithuania
	Using tailored coaching sessions to increase staff capacity	PROSPERITY	Varna	Bulgaria



REPLICABLE SOLUTIONS SPANNING CIVITAS' 10 THEMATIC AREAS

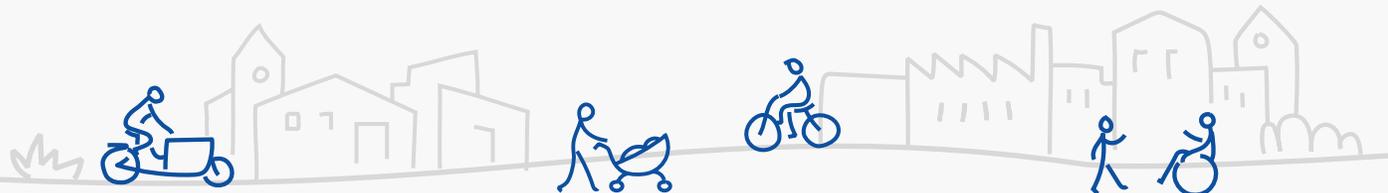
1. Active mobility
2. Clean and energy-efficient vehicles
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5. Urban logistics
6. Road safety and security
7. Behavioural change and mobility management
8. Public participation and co-creation
9. Smart and connected mobility
10. Demand and urban space management

1 ACTIVE MOBILITY

Making walking and cycling the preferred travel choices in cities

Getting more people walking and cycling is vital to meet the goals outlined in the European Green Deal. These are the cleanest forms of transport, and provide wide-ranging benefits such as reducing congestion, and generating no air or noise pollution.

These modes are ideal for short distances; with nearly half of all car trips covering less than five kilometres, active modes of travel have huge potential for growth. With the right infrastructure, active mobility is safe and attractive.



Drawing on solutions from the following CIVITAS projects:





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SOLUTION: BRINGING IN A PEER CITY WITH A FRESH PERSPECTIVE

As part of the Handshake project, **Bruges (BE)** was mentored by the Cycling Capital **Amsterdam (NL)**. When Amsterdam colleagues visited Bruges, they came with fresh eyes and asked new questions, which got Bruges to see their city and its potential in new ways. This was highly impactful, leading, for example, to Bruges realising that they could re-think a proposed bicycle bridge project to instead re-direct car traffic, rather than re-directing cyclists.

Replicability: This is a highly replicable concept for cities, which involves merely bringing in a peer to examine project roadblocks, and ask new questions that can shed light on alternative ways forward.

SOLUTION: BUILDING ON WHAT WORKS

Brno (CZ) has a thriving public transportation system, with public transport accounting for about 50% of the city’s modal split. In the 2MOVE2 project, the city leveraged this success to boost cycling. Namely, they put bike racks on the back of city buses to encourage riders to combine their usual bus trips with bike rides to go the last mile.

Replicability: All European cities have aspects of their sustainable mobility culture that really work. As such, any city can copy this model of first identifying what works, and then brainstorming how to build on or leverage that.

2 CLEAN & ENERGY-EFFICIENT VEHICLES

Travel options and infrastructure for cleaner vehicles and fleets

Transport still relies overwhelmingly on oil. The negative effects of fossil fuel-powered transport are clear, and have led the increased use of clean, energy-efficient vehicles and alternative fuels to be an EU priority.

However, e-vehicle uptake has not kept up with the pace of clean vehicles entering the market. This can be addressed with strategic charging infrastructure, campaigns, and public procurement, as long as these solutions are not designed to the detriment of active modes.

Drawing on solutions from the following CIVITAS projects:



CLEAN & ENERGY-EFFICIENT VEHICLES



© City of Stockholm

SOLUTION: SELECTING DEMONSTRATIONS THAT ARE CLOSELY LINKED TO THE CITY'S EXISTING VISION

In GreenCharge, **Bremen (DE)** had the opportunity to launch several e-vehicle demonstrations. They consulted their overall mobility vision and goals, and selected pilots that were closely linked to these strategies and could fill gaps. This ensured that, if successful, it would be easier and quicker to upscale demonstrations and integrate them into the city's SUMP. This has borne out: a pilot that partnered with companies on e-vehicle charging infrastructure (GreenCharge@Work) is being expanded, and renewable e-vehicle charging is being integrated in municipal Park&Ride plans.

Replicability: Many European projects involve pilot or demonstration sites. These projects should support cities to identify needs and gaps in their strategic documents as the first step in identifying what pilots they will roll-out.

SOLUTION: INTEGRATING SUSTAINABLE MOBILITY INTO PUBLIC PROCUREMENT TO EXTEND IMPACT

Through MEISTER, **Stockholm (SE)** worked to electrify vehicles of those who provide home-care services to the elderly. However, these services are provided both by the city (60 vehicles) and by private providers (230 vehicles). To better reach the private sector, the city introduced environmental requirements for the procurement of private home-care services.

Replicability: Throughout CIVITAS projects, cities can be encouraged to look closely at how they can leverage their public procurement power to amplify the impact of sustainable mobility measures, and ensure those measures reach the private sector.

COLLECTIVE PASSENGER TRANSPORT AND SHARED MOBILITY

Public transport and shared mobility help say goodbye to private cars

Public transport provides an alternative to private cars, and reduces pollution and congestion, all while being an equitable option for those who cannot afford or use cars, and for isolated communities.

Other services like car- and bike-sharing also offer options to reduce reliance on cars. Integrating collective and shared services is crucial to creating a multimodal city in which people can complete journeys conveniently and sustainably.



Drawing on solutions from the following CIVITAS projects:



COLLECTIVE PASSENGER TRANSPORT AND SHARED MOBILITY



Photo by Kiran Reddy from Unsplash

SOLUTION: ASKING LOCALS WHAT THEY WANT FROM PUBLIC TRANSPORTATION

Frankfurt (DE) worked in the CIPTEC project to increase the modal share of public transport by going straight to the users, asking Frankfurters to share their innovative ideas that would make the public transport system more appealing to them. With an easy-to-navigate digital platform, users could submit their ideas and vote for their favourite submissions. This led to top-voted ideas including offering combined event + public transport tickets, and improving markings on the road to prevent trams from getting obstructed by illegally parked cars.

Replicability: When aiming to increase modal shares of specific sustainable modes, cities should start by asking locals what would make them use that mode.

SOLUTION: INSTALLING MULTIPURPOSE INFRASTRUCTURE

Szeged (HU) worked with ELIPTIC to electrify its public transport system. Public transportation infrastructure can represent large investments. To ensure that new charging infrastructure was cost-effective and well-used, the city tested out the first public multipurpose electric charging stations, which can be used for hybrid-trolleybuses, e-bikes, and e-cars.

Replicability: Whenever possible, cities should consider the ways in which infrastructure can be made multipurpose, and can support intermodal mobility.

4 URBAN LOGISTICS

Promoting cleaner and more efficient goods distribution

Significant urban traffic derives from commercial goods deliveries, which are only increasing in popularity. Diesel-fuelled vehicles remain dominant for “last mile” deliveries; but they take up space and are major polluters.

More efficient supply chains, innovative consolidation, and clean freight vehicles are needed. We can get there with solutions like cargo bikes, consolidation at city peripheries, and off-peak deliveries.



Drawing on solutions from the following CIVITAS projects:



NEW MODEL FOR URBAN FOOD TRANSPORTATION

4 URBAN LOGISTICS



Photo by Cosimo Chiffè

SOLUTION: PROVIDING OPPORTUNITIES TO TEST BEFORE COMMITTING

In the CityChangerCargoBike project, **Lecce (IT)** worked to encourage the use of cargo bikes by businesses in the city's Limited Traffic Zone (LTZ). These bikes can represent an expensive purchase for small businesses though, who may thus be reluctant to purchase one without first trialling it to see if it suits their needs. To this end, the city provided diverse businesses – including a laundromat, pub, pizza maker, and group of bed & breakfasts – opportunities to trial cargo bikes. This ultimately helped Lecce extend its LTZ, and converted business vehicles to cargo bikes.

Replicability: Mobility solutions can require purchases that are expensive, especially for small players like family-owned shops. CIVITAS projects should identify opportunities for these small players to trial sustainable options before widely committing to them.

SOLUTION: REDUCING BARRIERS TO ENTRY

With support from the ULaaDS project, **Groningen (NL)** and its local association of entrepreneurs have developed a platform that gives businesses access to shared zero-emission vehicles for their logistics, and which can be used to organise deliveries from multiple different participating businesses. It allows businesses to share vehicles, reducing their costs and environmental footprints, and increasing liveability in the city.

Replicability: The platform itself is a highly replicable tool, which could be successfully mimicked in a number of cities. Furthermore, it points to the fact that impactful solutions find creative ways to reduce barriers to entry, e.g. using a sharing scheme to reduce the costs and risks of buying a new zero-emission vehicle.

5 ROAD SAFETY & SECURITY

Ensuring the well-being of all those navigating urban environments

So-called vulnerable road users – such as pedestrian and cyclists – account for 68% of road deaths in urban areas, but have been neglected in many road safety approaches, which tend to focus on vehicles.

Mobility strategies must include specific measures, ranging from infrastructure to speed limits, which boost the safety and use of sustainable modes. Furthermore, safety should extend to harassment, which is widespread and underreported in public transport and public spaces.



Drawing on solutions from the following CIVITAS projects:



5 ROAD SAFETY & SECURITY



Photo by Dirk van Gestel from Pixabay

SOLUTION: EVALUATING AND IMPROVING EXISTING INFRASTRUCTURE

In a peripheral neighbourhood of **Ruse (BG)**, poor pavement quality led people to use the main roads instead of pedestrian or cycling paths. In the context of ECCENTRIC, the city researched best practices in designing and upgrading pedestrian and cycling paths, and constructed new pavements in 2019. This is expected to decrease road accidents involving pedestrians by about 10%!

Replicability: Cities should follow Ruse's lead and evaluate existing infrastructure to see whether it has shortcomings that are preventing greater strides from being made towards sustainable mobility.

SOLUTION: SEIZING EXISTING TRENDS TO ACHIEVE SUSTAINABLE MOBILITY GOALS

With support from ReVeAL, **Helmond (NL)** is designing a new Smart District that is safe and people-friendly. To achieve these aims, the city is rolling-out driver assistance technology that uses data from a smart camera and map to make it harder for vehicles to exceed speed limits, thereby making the neighbourhood safer for all.

Replicability: Driver assistance technology is already widely installed in new vehicles to help drivers with parking, navigation, and more. Plus, these technologies are only becoming trendier with the introduction of autonomous vehicles. Cities can seize on existing vehicle trends to find creative ways to make vehicles work better for communities.

REPLICABLE SOLUTIONS

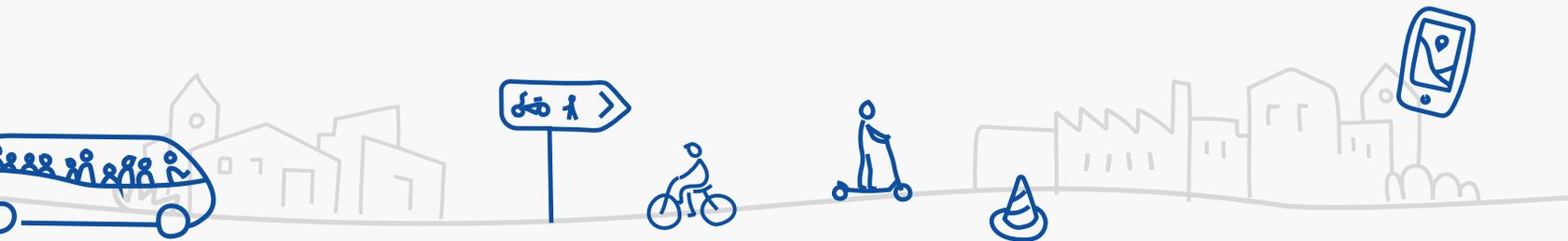
6

BEHAVIOURAL CHANGE AND MOBILITY MANAGEMENT

Influencing attitudes and travel behaviour through “soft” measures

Sustainable mobility systems must be used to be impactful – that is where mobility management comes in.

This concept means promoting sustainable mobility by challenging and changing travellers’ attitudes and behaviour with so-called “soft” measures, such as campaigns, info points, games, and school or company travel plans. These measures can have huge benefits without requiring a lot of financial investment.



Drawing on solutions from the following CIVITAS projects:



BEHAVIOURAL CHANGE AND MOBILITY MANAGEMENT



Photo by Sanjana Laddha on Unsplash

SOLUTION: ENGAGING STUDENTS AS AMBASSADORS FOR CHANGE

The neighbourhood of Bak’a in **Jerusalem** worked within SUNRISE to shift mindsets to ensure that walking was seen as safe. They organised a “walking to school” programme, in which children were both beneficiaries and programme leaders. The students then became ambassadors of walking, walking to school and bringing other pupils and parents along with them to spread this cultural change.

Replicability: Children should not be overlooked when planning CIVITAS projects! Their leadership and connectivity in communities (to teachers, parents, friends, community groups) should be tapped to amplify impact.

SOLUTION: BEING TRANSPARENT

The municipality of **Las Palmas de Gran Canaria (ES)** was aware that some people would be inconvenienced during the construction of its Bus Rapid Transit (BRT) system. So, with help from DESTINATIONS, they launched a campaign to lay out the economic and environmental benefits of the BRT, and the ways it would help cement the city as a place that puts climate and people first. The campaign included press, meetings with local groups and stakeholders, sessions with schools, videos made in cooperation with the Gran Canaria Film Commission, and information sessions targeting vulnerable groups like the elderly and students.

Replicability: Construction, parking restrictions, and more may inconvenience and frustrate some. Cities should be honest about this, acknowledge it, and invest in campaigns and communications to ensure that locals can understand why they are being inconvenienced, and what the end visions are.

7 DEMAND & URBAN SPACE MANAGEMENT

Managing urban space and travel demand for people-centric places

The design and allocation of urban space is one of the keys factors that shapes urban mobility. Moving away from car-dominated cities requires equitable distribution of street space, that considers accessibility and mobility needs, and both ground and air mobility. Regulatory push-and-pull measures (vehicle access regulations, parking management, etc.) and new mobility services (such as drone deliveries) are promising solutions!



Drawing on solutions from the following CIVITAS projects:



+ [Urban Air Mobility thematic cluster](#)

DEMAND AND URBAN SPACE MANAGEMENT



Photo by Alberto Cabello from Pixabay

SOLUTION: EXPANDING PARKING MANAGEMENT TO INCLUDE BICYCLE PARKING

The City of **Vitoria-Gasteiz (ES)**, who worked in the Park4SUMP project, has an expanded concept of parking management that goes beyond cars. Parking regulations now feature minimum bicycle parking provisions, and these regulations broaden which building/development types are required to provide bicycle parking.

Replicability: An effective way to approach controversial and even emotional topics in CIVITAS projects, like urban parking, is to expand already existing regulations and concepts.

SOLUTION: ROLLING OUT TEMPORARY MEASURES FIRST

Gdynia (PL) was built in the 1920s and '30s, at a time when cities were designed specifically for cars, making it particularly bold to restrict vehicle access. To ease this transition, the city undertook temporary closures of parts of the city's road network within the PORTIS project, all to enable locals to test out pedestrian areas, while facilitating the development of procedures, rules and regulations around pedestrian areas.

Replicability: Sometimes the best way to engage diverse groups in big mobility changes is to make the change slightly smaller by starting with a pilot that has potential to be expanded.

PUBLIC PARTICIPATION & CO-CREATION



Photo by Tapio Haaja on Unsplash

SOLUTION: BUILDING MOBILITY MEASURES AROUND LOCAL NEEDS

With help from Cities-4-People, **Trikala (GR)** hosted workshops, prototyping, and ultimately created a Citizen Mobility Lab, all to get clear guidance from locals on their mobility needs and desires. Citizens used the Mobility Lab to request better mobility options for wheelchair users, and smart lockers in the city centre where people can drop their things before getting on bicycles. The city has implemented both smart lockers, and ‘converters’ that are attached to wheelchairs to make them into electric scooters.

Replicability: Projects should embrace citizens as real partners, which enables new, simple and effective solutions to emerge, like installing lockers. This furthermore makes citizens more likely to accept and even promote the resulting mobility measures.

SOLUTION: USING GAMES TO GATHER INPUT AND DATA FROM COMMUNITIES

The MUV project created a mobile game to both shift mobility behaviour, and provide crowdsourced data and information to mobility planners. In **Helsinki (FI)**, app users provided neighbourhood-level data on daily mobility choices and use of sustainable modes, and app roll-out was paired with citizen workshops. This all created a culture of participation in the neighbourhood that has continued in newer mobility projects, and helped lead to the establishment of a Mobility Living Lab in the community.

Replicability: Projects can think outside of the box and use new methods like mobile games to gather community insights.

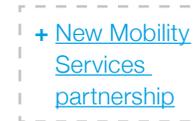
SMART, SUSTAINABLE, CONNECTED AND SHARED MOBILITY

Establishing the link between new mobility services & decarbonisation

A wide range of smart, sustainable, connected and shared mobility solutions and services, enabled by digital technologies, have the potential to advance decarbonisation, air quality, accessibility, use of space, social inclusion, and economic opportunities. Smart mobility is, however, complex, with many stakeholders, implementation barriers, and rapid tech developments. This calls for ‘learning by doing’ in multi-stakeholder ecosystems.



Drawing on solutions from the following CIVITAS projects:



SMART, SUSTAINABLE, CONNECTED AND SHARED MOBILITY

SOLUTION: FORMING ALLIANCES TO BRING DIVERSE MOBILITY OPTIONS TO ONE PLATFORM

In the context of DYN@MO, **Aachen (DE)** brought together a vast diversity of mobility providers to develop a regional mobility platform that offers multimodal options, including reservation, booking and ticketing systems. The platform, known as the “movA app”, is still thriving even years after DYN@MO, in part due to the strong multi-partner alliance that was formed around its development.

Replicability: Smart tools and platforms should be seized as a key opportunity to streamline regional mobility offerings. Cities and CIVITAS projects are uniquely well-placed to convene collaborations to this end.

SOLUTION: USING SMART TOOLS TO SUPPORT MORE EFFECTIVE POLICY-MAKING IN OTHER AREAS

As part of 2MOVE2, mobile air quality sensors were installed on five public buses in **Malaga (ES)** to collect and communicate data wirelessly to a data concentrator. This has provided regular data to the city regarding in which areas, and at what times of day, air quality is the worst, which has thereby enabled policy-makers to put forth traffic-curbing solutions that are data-driven, and location- and time-specific.

Replicability: Before implementing a smart mobility tool, it is important to consider its added-value. As Malaga demonstrates, this can open the possibility of smart tools being used to bolster mobility solutions across a vast diversity of other mobility thematic areas.

10 INTEGRATED & INCLUSIVE PLANNING

Integrated mobility planning to create liveable cities for all citizens

Integrated planning is crucial to creating sustainable transport networks and ensuring mobility is incorporated into broader city plans and goals.

Applying integrated planning principles in urban mobility has been conceptualised in the form of Sustainable Urban Mobility Plans (SUMP). SUMP help design transport systems that serve all communities, with an eye to the mobility needs of the most vulnerable and remote users.

Drawing on solutions from the following CIVITAS projects:



INTEGRATED & INCLUSIVE PLANNING



Photo by Ernesto Velázquez from Pixabay

SOLUTION: MAKING CHILDREN CENTRAL TO INCLUSIVE PLANNING

In Metamorphosis, **Zurich (CH)** hosted workshops for children that empowered them to identify ideas to improve their neighbourhood. This led to a transformation of an old village square with a playground and an area for local gatherings.

Replicability: For more inclusive planning, projects should actively seek out input from hard-to-reach and vulnerable groups like children. Using targeted workshops with maps and games facilitated this process smoothly.

SOLUTION: VISITING OTHERS TO SEE HOW SUMP DEVELOPMENT CAN BE DONE LOCALLY

Palanga (LT) had not begun SUMP development when it joined SUITS. The project sent municipal staff on exchanges and site visits to increase their capacity to design, implement and monitor SUMP. In Palanga's case, this particularly focused on learning about effective public involvement in SUMP development – a lesson the city has applied!

Replicability: Cities cannot do what they cannot envision. Site visits broaden perspectives and can help kick-start complex processes like SUMP development.

SOLUTION: USING TAILORED COACHING SESSIONS TO INCREASE STAFF CAPACITY

PROSPERITY provided **Varna (BG)** three coaching sessions and a Bulgarian version of the EU SUMP Guidelines, all to support its SUMP development. Coaching inputs were all locally-specific, so directly translated to SUMP and strategy development.

Replicability: Projects should seek opportunities to be as locally-specific as possible. This can lead to simple solutions with big impacts, like translating key resources.

CONCLUSIONS

Over the past two decades, CIVITAS has supported well over 50 projects and its community of nearly 400 cities to test new methods, measures and approaches to foster sustainable urban mobility for all.

The examples presented here represent a number of CIVITAS achievements that are ready to inspire others and be directly replicated by cities and projects. These examples span CIVITAS's 10 thematic areas, and were tested and perfected in 21 cities across 15 different countries.

This pack aims to support local sustainable mobility leaders across Europe to take-up, copy, and be inspired by CIVITAS results and achievements, so as to help usher in a sustainable and climate-neutral mobility and transport future that leaves no one behind.

