



THE CIVITAS INITIATIVE  
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# Facts and lessons from the transferred solutions



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# Cycling: a transformative way forward

**Handshake has helped cities of all types become more liveable places, by improving conditions for cycling as an everyday mode of transport.**

Across the globe, cities are facing alarming levels of congestion, air pollution and a scarcity of public space. Meanwhile, urban environments remain dangerous for vulnerable road users. The way we see it, cycling is a powerful way to address these challenges and steer cities towards being more sustainable, equitable and economically prosperous places for citizens.

With this vision in mind, CIVITAS Handshake, a Horizon 2020-funded project under the CIVITAS Initiative, worked to support cities in the transition to two wheels. Thirteen cities comprised of three Cycling Capitals and ten Future Cycling Capitals from across Europe, aimed to identify and implement measures that would help boost the feasibility and attractiveness of cycling. Examples of such measures relate to intelligent transport systems, bicycle sharing and parking, modelling, socio-economic assessment, and governance and decision-making.

Supporting the cities on this journey were six technical partners, as well as an external Advisory Board that included representatives from the Dutch Cycling Embassy, Danish Cycling Embassy, the General German Bicycle Club, and the Smart Cycling Futures project, which met periodically to review and help inform the project.

Now reaching our conclusion, we are proud of the success we have achieved and keen to share it with the world. In the pages that follow, we are proud to present ten fact sheets that represent the main achievements and lessons learned by each of our ten Future Cycling Capitals. We hope that it provides you with the knowledge and inspiration to transform your city into a cycling capital!

Happy reading!

**Mario Gualdi**

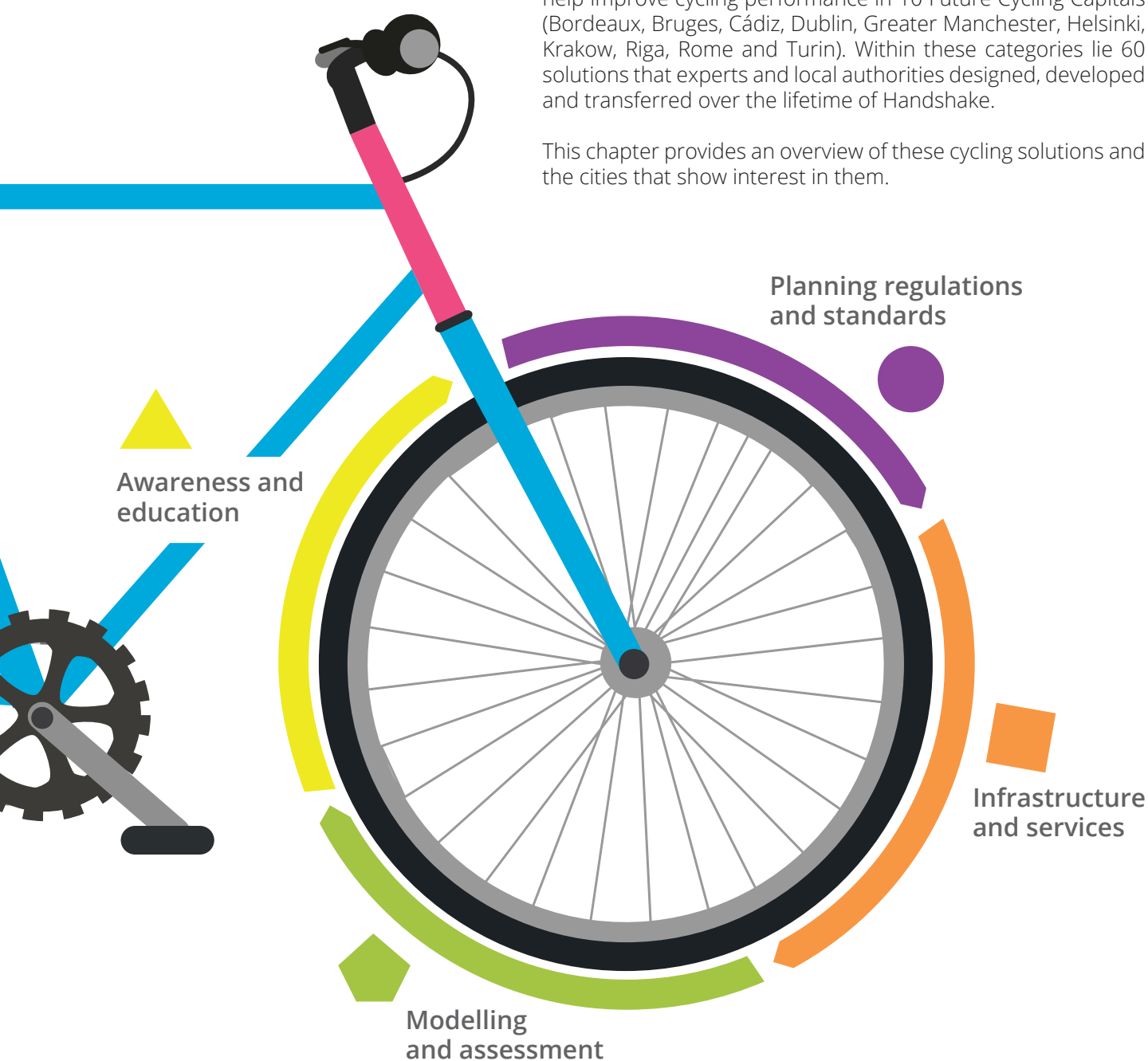
Project coordinator CIVITAS Handshake,  
ISINNOVA



# 1 Cycling innovations brought together in a supportive and novel transfer cycle

Becoming a Cycling Capital does not happen overnight. It takes courage to prioritise active modes of transport, strong political will to invest in building the necessary staff capacity, and foresight to make use of external expertise. Based on the experience of three world class Cycling Capitals (Amsterdam, Copenhagen, Munich), Handshake identified four categories of activities to help improve cycling performance in 10 Future Cycling Capitals (Bordeaux, Bruges, Cádiz, Dublin, Greater Manchester, Helsinki, Krakow, Riga, Rome and Turin). Within these categories lie 60 solutions that experts and local authorities designed, developed and transferred over the lifetime of Handshake.

This chapter provides an overview of these cycling solutions and the cities that show interest in them.





## 1.1 Planning regulations and standards



The delivery of high-quality infrastructure, together with achieving a motivated cycling population, require effective planning and preparation. Activities in this category include: the preparation of cycling infrastructure network plans; raising standards in design guidance documents; and linking cycling with other modes of transport to improve how the transport system is managed. Together, these interventions help to give cycling projects a fair chance to succeed.

Solutions	Leader	Followers
Planning a <b>strategic network</b> of bicycle facilities	Amsterdam	Bordeaux, Bruges, Cádiz, Dublin, Rome, Turin
<b>Integration</b> between cycling, public transport and land use	Amsterdam	Rome
Making room for cycling by <b>prioritisation and segregated routes</b>	Amsterdam	Bordeaux, Helsinki, Riga
Learning from <b>national standards</b> to improve local design quality	Amsterdam	Cádiz
<b>Intelligent transport</b> systems to give cyclists more priority	Amsterdam	Cádiz, Dublin

## 1.2 Infrastructure and services



The design and layout of physical infrastructure projects was the topic Handshake cities were most keen to address. Cities recognised the importance of getting investment right, and learned from those cities that have already refined and developed their techniques over a number of years.

Solutions in this category ranged from expanding the quality and proportion of space created for cycling, to improving the street environment, catering for bicycle storage, and changing traffic lights to provide cyclists easy and continuous journeys without stopping.

Solutions	Leaders	Followers
Cycling <b>infrastructure design</b> for bigger and better cycling facilities	Amsterdam, Copenhagen	Bordeaux, Cádiz, Helsinki, Riga
Creating large scale <b>cycling parking</b> areas and integrating them with other modes of transport	Amsterdam, Copenhagen	Bordeaux, Dublin, Helsinki, Krakow, Turin
Getting over obstacles in cycling cities by <b>bridging gaps</b>	Amsterdam, Copenhagen	Bordeaux, Bruges, Helsinki
Building <b>smarter streets</b> with information and communications technology	Copenhagen	Cádiz, Dublin, Helsinki, Riga

### 1.3 Modelling and assessment



Techniques can be used before and after cycling schemes are implemented to make sure they contribute effectively towards a wide range of different objectives. Handshake looked to assess the effectiveness of cycling solutions from many angles, such as through experiential analyses of cyclists' safety, by modelling and measuring how the transport system operates, and examining effectiveness of publicity to encourage cycling.

Solutions	Leaders	Followers
<b>Modelling</b> to predict how cyclists may travel	Copenhagen	Cádiz, Riga, Turin
Tracking cyclists' <b>perceived safety</b> to improve cycling networks	Amsterdam, Copenhagen, Munich	Cádiz, Greater Manchester, Krakow
Informing future investment decisions with <b>Bikenomics</b>	Amsterdam, Copenhagen	Bordeaux, Krakow, Turin
Involving target audiences at an early stage to <b>test cycling campaigns</b>	Amsterdam, Copenhagen	Greater Manchester

### 1.4 Awareness and education



Communications campaigns and approaches help blend practical knowledge with inspirational messaging. When done well, they can heighten the success and status of new infrastructure projects. Handshake supported the delivery of information to key audiences, including school children and their parents, those new to cycling, and existing bicycle riders looking for better and safer routes.

Solutions	Leaders	Followers
Raising the profile of <b>safer streets</b>	Munich	Cádiz, Krakow, Munich
Helping persuade people with <b>behaviour change campaigns</b>	Amsterdam, Munich	Rome
Promoting <b>cycling for all ages and abilities</b>	Munich	Bordeaux, Bruges, Cádiz, Krakow, Rome
Using <b>nudge tactics</b> through games, challenges and apps to inform and motivate people to cycle	Copenhagen	Dublin, Greater Manchester, Rome



## 2 Inspiring the creation of holistic cycling visions

Handshake supported ten highly-motivated cities to learn from three pioneering, successful, and world-class Cycling Capitals. In particular, these keen Future Cycling Capitals were supported to take-up the proven cycling solutions described in the previous chapter.

Handshake involved coastal and inland cities, located throughout northern and southern Europe. The cities represented a range both in terms of population size and their degree of cycling achievement at the project's outset.





## 2.1 From Cycling Capital to Cycling Mentor

A cornerstone of Handshake was its mentoring system, whereby each Future Cycling Capital established a direct relationship with a mentoring Cycling Capital. This system was used for informal and formal transmission of knowledge and tips, and for the much-needed work of providing inspiration, encouragement and comfort that only peers can afford to each other.

Meet the Cycling Capitals who have extensive and hands-on experience, and used this to, for example, help their mentees to see the bigger and longer-term picture, reframe views on something, or to consider a different perspective.

### Amsterdam, The Netherlands

Amsterdam is the capital of the Netherlands, with a characteristic semi-circle medieval city centre and attractive canals. Amsterdam and bicycles have enjoyed a long-lasting love affair. In rain or shine, good times or bad, Amsterdammers embrace the bike. Making up 38% of all trips, or roughly 709,000 (2019) bike rides per day, the bike is both the most widely used and fastest growing means of transport: this makes Amsterdam one of the world's bicycle capitals. Daily cycling has become a central part of Amsterdam (and Dutch) society and a solution to congestion, even across longer commuting distances.

As a Cycling Capital in Handshake, Amsterdam has expertise in a wide range of cycling solutions. Focussing mostly on planning, regulations and standards, as well as infrastructure, and modelling and assessment. Its ongoing activities focus on further developing and enhancing its current cycling routes in areas of high cycling use. Amsterdam has the largest number of Handshake mentees, providing them with knowledge and good practices to follow.

**Mentor to Bordeaux, Bruges, Dublin, Rome and Turin**



## Copenhagen, Denmark

Copenhagen is Denmark's biggest city and its capital, as well as a renowned cycling city. Currently, 808,156 people live within the municipal borders, whilst 1.8 million live in the Capital Region of Denmark. Copenhagen is well-known for its high quality of life and vibrant and liveable urban environment; it also excels in combining sustainable solutions with economic growth. Ambitious political goals to become the world's best cycling city are now bearing fruit. In 2018, 49% of journeys were made by bike, with more bikes than cars counted crossing the city centre. By 2025, Copenhagen aims for cycling to have a 50% modal share for trips related to work and education, and it plans to become the world's first carbon-neutral capital.

As a Cycling Capital, Copenhagen has expertise in a wide range of cycling solutions with a specific focus on infrastructure, and on modelling and assessment. Its activities now focus on smarter cycling management solutions. Copenhagen mentored three Handshake cities, paying particular attention to helping them develop technical papers, and organise design challenges.

**Mentor to Helsinki, Greater Manchester and Riga**

## Munich, Germany

Munich is the main urban centre of Bavaria, with more than 1.5 million residents and an additional 360,000 commuters that make their way into the city from the surrounding communities on a daily basis. Strong economic and population growth is expected over the next ten years. Munich offers a lively urban mixture of living, working, and everyday amenities, as well as leisure and recreational facilities. Topographical conditions in Munich are ideal for cycling, as the city is mostly flat. Since most trips are shorter than 5 km, Munich is considered a "city of short journeys."

As a Cycling Capital in Handshake, Munich shared its expertise in a wide range of cycling solutions, focussing mostly on awareness and education. The city's ongoing activities focus on developing and improving its cycle network even further. Munich mentored a smaller group of engaged cities in behaviour change, communication strategies and more.

**Mentor to Cádiz and Krakow**





## 2.2 Future Cycling Capitals to take up integrated cycling solutions

### Bordeaux, France

**The increase in cycling helps to tackle climate issues and other global environmental challenges!**

#### About Bordeaux

The centre of the Bordeaux metropolitan area is the city of the same name, which lies on the Garonne river in south-western France. A regular high-scorer in surveys on the best places to live and work, Bordeaux is flat with an oceanic and mild climate. The city environment is very green, enriched by well-preserved historic buildings. Over the last 15 years, four new tram lines have been built; these have helped open up the streets to cyclists and pedestrians, and helped reduce car use.

#### Main achievements during CIVITAS Handshake

- ★ Elaboration of a third bicycle plan.
- ★ Deployment of new bike parking solutions.
- ★ Implementation of new services, such as bike loans and repair kits.
- ★ Work on infrastructure and missing links.
- ★ Work towards a general increase of the number of cyclists.

*"In 2017, Bordeaux was ranked as the sixth most cycling-friendly city in the world in the Copenhagenize Index. When joining Handshake, the ambition was to continue to build on the strong political will that has been generated and go beyond its initial traffic calming measures. Advances in cycling needs to be embedded in all infrastructure projects across the city as action continues to modernise its public spaces."*



**Clémence Burgué and Florent Coignac,**  
Bordeaux Métropole

#### Key statistics



**801,041**  
Population



**12,000/day**  
Number of cyclists on  
busiest the route



**570 km<sup>2</sup>**  
City area



**720 km**  
Length of cycle network



**619**  
Car ownership rate  
(cars per 1000 residents)



## Bordeaux, France

### Timeline of main achievements

- **June 2019:**  
Data report from Bicycle Observatory with statistics.
- **May 2020:**  
Launch of cycling plan to combat COVID-19.
- **December 2020 – November 2021:**  
Elaboration of the third metropolitan cycling plan and first walking plan.
- **February 2021:**  
Cycling services extended, making bikes available for loan, and offering Véloboxes.
- **November 2021:**  
Bordeaux hosts Handshake's Immersive Symposium.
- **April 2022:**  
Measures implemented to become a soothed city with speed limit reduction, pedestrian-friendly neighbourhoods, children streets, and car free Sundays.



### Key lessons learned

- ★ Political will is a very important driver of change. The new political team elected in 2020 was willing to develop cycling, reduce the space dedicated to cars, and promote walking.
- ★ Travelling to Copenhagen with city officials helped to put cycling on the agenda even more.
- ★ Elections and the subsequent establishment of a new political team with new people and priorities takes time, and can slow down the process of cycling promotion at times.
- ★ The COVID-19 pandemic accelerated cycling policy. Cycling increased considerably during the pandemic and has been accompanied by the creation of an Emergency Cycling Plan that aimed to help people to continue to cycle after COVID restrictions lifted, by developing long-term infrastructure and services.

### Key ambitions beyond CIVITAS Handshake

- ★ Based on the third metropolitan cycling plan (2021-2026), the goal is to reach a cycling modal share of 18% by 2030.
- ★ Develop an efficient cycling network by: extending the existing one, patching up missing links, bolstering maintenance, building the ReVE (Réseau Express Vélo) by 2030, and by updating the cycling design guidelines, cycling signage, and repair facilities on routes.
- ★ Improve bike parking solutions and bike storage in new buildings.
- ★ Improve cycling services, and contribute to developing cycling logistic.
- ★ Continue and improve communication and cycling training.





# Bruges, Belgium

**Ready to ride a grand finale!**  
**We have the ambition to become world's most picturesque cycling capital!**

## About Bruges

Bruges is the third-biggest city in the Flanders region of Belgium, located near the sea. Its main economic activities are linked to its harbour and to tourism. Making up 42% of the modal split, bicycles are the second-most used means of transport for commuting to work or school. Bruges aspires to remain one of Belgium's leading cycling cities, and to become an example for other local authorities to follow.

## Main achievements during CIVITAS Handshake

- ★ Exploratory surveys conducted at the railway station area (2018–2019), leading to an extensive survey (2019–2022) defining a make-over of the R30, including three passages for cyclists and pedestrians underneath the ring-road which will enhance road safety, and which will realise a grand entrance to the historic city centre.
- ★ A vision and roadmap created (including the roll-out of 75 actions) for the FR30 cycling network concept, integrated in the urban DNA of Bruges, yet inspired by stories and experiences from Amsterdam.

*"We joined Handshake because of challenges in infrastructure and road safety. Bruges' city centre is UNESCO protected, which challenges us in relation to urban development and upgrading mobility infrastructure. Cycling in parts of the historic centre can be uncomfortable due to extensive cobblestone paving, whilst there are – because of the rising success of cycling – weak links in the bike network and connections to the suburbs."*



**Bart Slabbinck**, City of Bruges

## Key statistics



**118,861**  
Population



**138 km<sup>2</sup>**  
City area



**6,327/hr**  
Number of cyclists on busiest the route



**328 km**  
Length of cycle network



**482**  
Car ownership rate (cars per 1000 residents)





## Bruges, Belgium

### Timeline of main achievements

#### August 2019:

FR30 project kick-off meeting with Amsterdam as Handshake mentor.

#### January 2020:

Handshake Immersive Symposium in Bruges focuses on the FR30, followed by the organisation of a transition arena.

#### November 2020:

Approval of the FR30 vision.

#### January 2021:

Press release: "50 years of mobility policy in Bruges".

#### March 2022:

Approval of plans for the redesign of the R30 in the railway station area.

### Key lessons learned

- ★ Visiting other cities, organising workshops and in-depth exchange with the mentor city Amsterdam enhanced capacity.
- ★ Cycling infrastructure is not an isolated domain and the shift towards an integrated city approach is important.

- ★ Taking into account an integrated approach helped to trigger action in other policy domains, such as heritage and urban planning.
- ★ Even if there is broad support for adopting an integrated vision, it can be time-consuming and challenging to do so, as every party has its own values and priorities.
- ★ Investing in capacity also has its limits. The Mobility Department in Bruges is relatively small, which is why joining forces in a European context is important, not only to move the figurative horizon, but also to move towards that new horizon.

### Key ambitions beyond CIVITAS Handshake

- ★ Expressed by the Climate Action Plan (2022), the City of Bruges aims to reach climate neutrality by 2050, including through a 10% increase in the cycling modal share.
- ★ By 2030, the city's ambition is to have a coherent and safe "Cycling Network 2.0" in place.
- ★ A new vision on "proximity" will be developed, inspired by the concept of a 15-minute city. This will be supported by the development of neighbourhood mobility plans, which will strengthen the existing 30 km/h zones in most of Bruges' neighbourhoods.
- ★ A Sustainable Urban Logistics Plan, including a roadmap, has to be edited such that cargo bikes have a key role to play.
- ★ Ongoing projects, such as bike parking or traffic education, will continue.



City of Bruges



## Cádiz, Spain

**Aims to become a more sustainable city by creating a network of bike lanes that provide safe, fast and efficient mobility!**

### About Cádiz

Cádiz is a coastal city and provincial capital in the Andalusia region of Spain. Cádiz is located on a small promontory island, joined to the mainland by a narrow link. Cádiz is surrounded by sea, with urban beaches and a mild coastal climate that make it an appealing tourist attraction. The city has the highest population density within the province, and is comprised of a dense network of streets. Any urban growth is limited, due to Cádiz's location on the water, which also helps to create a strong connection between the settlement area and the natural environment.

### Main achievements during CIVITAS Handshake

- ★ Almost 9 km of bike lanes built.
- ★ Ran cycling awareness campaign for children called "BiciCole".
- ★ A Traffic Municipal Ordinance developed, which includes bikes.

*"The city is concerned with finding ways to change people's relationships to the private car, which is currently the main mode of transport in Cádiz, and to do so while avoiding any negative repercussions on other sustainable modes of transport (walking and public transport). Actions have been taken to remove parking lanes in order to build bike lanes, addressing the lack of space in the city. The biggest challenge to joining Handshake was dealing with opposition (from car users, local shop and restaurants owners, leisure and commercial activities) in continuing to build the city's first kilometres of cycle lanes."*



**Manolo Navarro**, City of Cádiz

### Key statistics



**114,244**  
Population



**13.6 km<sup>2</sup>**  
City area



**1,823/day**  
Number of cyclists on busiest the route



**27.35 km**  
Length of cycle network



**378**  
Car ownership rate  
(cars per 1000 residents)



## Cádiz, Spain

### Timeline of main achievements

- **May 2019:** Cádiz becomes part of the Cycling Showbiz; 60% of planned bicycle lanes implemented.
- **June 2021:** Complete construction of 95% of planned bike lanes.
- **November 2021:** Raising awareness and building infrastructure: the wheel moves ahead in Cádiz.
- **November 2021:** Press release: Handshake session about bicycle promotion in Cádiz.
- **April 2022:** Handshake session about bike rental in Cádiz.
- **May 2022:** Immersive Study Tour in Munich.

### Key lessons learned

- ★ Detailed planning is essential in order to achieve the proposed objectives.

### Key ambitions beyond CIVITAS Handshake

- ★ Expanding and maintaining the cycling network.
- ★ Install new bike parking facilities.
- ★ Communication to promote cycling by, for example, continuing the 'BiciCole' programme, and building a cycling website.



Reggie Tricker



## Dublin, Ireland

**Creating more space for cyclists to support Dublin in developing a cycling culture as it becomes a more liveable city.**

### About Dublin

Dublin is Ireland's capital city, located on the eastern coast of the country. Founded by the Vikings in 841, Dublin is steeped in history and culture, with the city's Medieval, Georgian and modern architecture providing a fascinating backdrop to a friendly cosmopolitan city. The city has a unique landscape: it is coastal, divided by a river and encircled by canals, and is the only capital in the world that is also a UNESCO Biosphere Reserve. Dublin is Ireland's main economic centre, with its port responsible for 68% of all of the country's imports and exports. Dublin also has the youngest population in Europe, which is highlighted by the fact that approximately 50% of its population is less than 25 years old. In addition, Dublin is one of the oldest cities in Europe. With its ancient churches, grand buildings, and fine museums, cultural riches abound and can result in issues relating to road capacity and the use of space in the city's historic centre.

*"Dublin is aiming towards creating a high-quality cycle network, which will connect 95% of residents to almost every school, workplace and sports facility in the city by 2030. Interim measures are currently being implemented to increase protection and the level of comfort for cyclists in the city. Learning from cities across the Handshake network has been invaluable to us in the development of these cycling solutions."*



**Deirdre Kelly and Antonia Martin,**  
City of Dublin

### Key statistics



**554,554**  
Population



**6,500/day**  
Number of cyclists on  
busiest the route



**115 km<sup>2</sup>**  
City area



**320 km**  
Length of  
cycle network



**446**  
Car ownership rate  
(cars per 1000 residents)



## Dublin, Ireland

### Main achievements during CIVITAS Handshake

- ★ Completion of Phase 2 of the Royal Canal Premium Cycle Route (opened in July 2020).
- ★ Reallocation of road space and car parking to make space for cycling; for example: the interim Liffey Cycle Route.
- ★ Introduction of Dublin city's first cargo bike parking, and parking-protected cycle lanes.
- ★ Over 5,000 cycle and scooter parking spaces installed in 2021.
- ★ Undertaking of a number of trials to test out new infrastructure, including filtered permeability trials and traffic-free streets, and using quick interventions such as extruded kerbs, plastic wands, etc.
- ★ Implementation of protection on over 20 kilometres of cycle lanes, as part of the COVID Mobility Programme.

### Timeline of main achievements

- **June 2019:** Dublin hosts Velo-city Conference.
- **October 2019:** Dublin hosts European Transport Conference 2019.
- **December 2019:** Dublin trials smart radar detectors to give cyclists longer at junctions.
- **January 2020:** New pedestrian and cycling bridge opens in Dublin.
- **May 2020:** Launch of Interim Mobility Intervention Programme for Dublin City developed in response to COVID-19.
- **July 2020:** Completion of Phase 2 of the Royal Canal Premium Cycle Route.
- **March 2022:** Dublin hosts Immersive Symposium



City of Dublin

### Key lessons learned

- ★ The visit to Copenhagen was particularly inspiring for the Dublin team, especially as they were at the beginning stage of the transition to becoming a cycling city. It was most useful to visit and experience a city who has successfully made that transition. In particular, to learn that the changes they made are quite recent was an added inspiration for Dublin.
- ★ The meetings with mentor city Copenhagen inspired Dublin in terms of seeing how a cycling city can look, and learning about the process of achieving it.
- ★ Exchanges with other Future Cycling Capitals within the Handshake network were incredibly useful in terms of sharing similar challenges with cities at a similar stage in the transition process, and learning from each other.
- ★ Organising the Immersive Symposium showcased local leadership and commitment to building Dublin's Cycling Culture.
- ★ Dublin identified the need to bring together recognised leaders to co-create guiding principles and a framework for delivery of a new strategy to increase the number and diversity of people walking and cycling. This process identified critical gaps in existing policy, specifically in relation to transition management, which should take on broad and varied community engagement methods.
- ★ Cultural changes during COVID-19 have enabled more ambitious changes, which would not have been previously possible.

### Key ambitions beyond CIVITAS Handshake

- ★ Increase cycling (and micro mobility) to 13% by 2028.
- ★ Reach 310km of high-quality cycle lanes by 2030.
- ★ Implementation of the Connecting Communities Action Plan along four thematic areas: (i) Engaging the City, (ii) Building and Maintaining the Infrastructure, (iii) Promoting Sustainable Mobility, and (iv) Learning, Evaluation and Discovery.



# Greater Manchester, United Kingdom

**We have a vision to create the most comprehensive and interconnected walking and cycling network in the UK.**

## About Greater Manchester

Transport for Greater Manchester (TfGM) is responsible for transport services across the ten districts of Greater Manchester. It is currently also developing and implementing an ambitious package of cycling improvements as part of its "Bee Network" proposals. TfGM's 2040 Transport Strategy for Greater Manchester sets out a long-term vision for cycling. Chris Boardman (the former Olympic cycling champion) was appointed as Cycling and Walking Commissioner in 2017, and is the driving force behind the city region's ambitions to change the way people travel.

*"Greater Manchester has a vision to create a comprehensive cycling network where it is no longer necessary to share space with busy motor traffic. Learning lessons from the Dutch, Danish and German examples is key to achieving this vision, and that is what Greater Manchester wanted to gain from the Handshake project."*



**Dominic Smith,**  
Transport for  
Greater Manchester

## Main achievements during CIVITAS Handshake

- ★ As part of the Bee Network Active Travel programme, segregated and fully protected cycle lanes have been adopted as standard practice across the programme.
- ★ Delivered close to 100 km of new/upgraded cycle routes in 2021.
- ★ The CYCLOPS Junction was partly inspired by the Dutch design principles to create fully protected cycle infrastructure at junctions.
- ★ Received authorisation from the UK national government to use a new signage system for cycling and walking routes, based on the Dutch 'Knooppuntten' system.
- ★ Created a standard design detail for Shared Bus Boarders.
- ★ 10,406 miles cycled within the first four weeks of the scheme opening.

## Key statistics



**2,835,686**  
Population



**4,705/day**  
Number of cyclists on  
busiest the route



**1,276 km<sup>2</sup>**  
City area



**1,679 km**  
Length of  
cycle network



**440**  
Car ownership rate  
(cars per 1000 residents)



## Greater Manchester, United Kingdom

### Timeline of main achievements

#### June 2019:

Support at the national UK level between active travel commissioners at Velo-City 2019.

#### February 2020:

Greater Manchester unveils walking and cycling investment plan.

#### September 2020:

Opening the UK's first CYCLOPS junction.

#### March 2021:

Published Greater Manchester Interim Active Travel Design Guidance.

#### November 2021:

Launch of the Bee Network Cycle Hire Scheme.

#### May 2022:

Immersive Study Tour to Copenhagen.

### Key lessons learned

- ★ Much inspiration has been taken from the other 'Future Cycling Capitals', as they are in a similar position in terms of cycling numbers, and share similar active travel issues as Greater Manchester.
- ★ Workshops involving technical experts from each city in the Copenhagen mentoring group were very effective in accelerating change on the ground and, for example, in designing junctions.
- ★ The most influential activity was travelling to other EU cities and experiencing and researching different cycle infrastructure in the field.
- ★ Appointing an active travel commissioner has boosted political will and support for all aspects of active travel; for Greater Manchester to have Britain's most successful Paralympian championing active travel will further raise awareness to make cycling and walking a natural modal choice.

### Key ambitions beyond CIVITAS Handshake

- ★ Transport for Greater Manchester remains optimistic and ambitious to achieve our short-term cycling goals, outlined in the 2021-2026 Delivery Plan, as well as our longer-term active travel vision, which is set in the 2040 Transport Strategy.
- ★ To implement real-time feedback technology for cycling infrastructure.
- ★ To achieve the Greater Manchester 'Right Mix' targets by 2030.





# Helsinki, Finland

**A year-round cycling city for people of all ages!**

## About Helsinki

The City of Helsinki, located in northern Europe, is often ranked amongst the most liveable cities. The city has been working on cycling promotion since the 2000s and published its first multidisciplinary plan for cycling in 2014, which was updated in 2020. The new Bicycle Action Plan 2020-2025 outlines 34 measures to help Helsinki achieve its goal of becoming one of the best cycling cities in the world. Helsinki prioritises sustainable transport, which is highlighted by its modal split (walking 36%, cycling 11%, public transport 33%). The city's traffic and street planning sector has over 100 employees, five of which work full-time on cycling at a holistic level.

## Main achievements during CIVITAS Handshake

- ★ Revised Bicycle Action Plan for 2020-2025.
- ★ Increased investment budget for cycling to 23,000,000 EUR.
- ★ Created a prioritisation and implementation plan for cycle ways.
- ★ Implemented major renovation of Hämeentie street with modern cycling paths and car restrictions.
- ★ Opened the first cycling street in Finland in the Kulosaaren puistotie.
- ★ Launched a summer street concept.

*"Helsinki wants to become the world's best sustainable transportation metropolis. We need to make the bicycle an easy, convenient, attractive, and equal part of the city's transport equation. We joined Handshake to build our infrastructure faster and more efficiently, to create an intuitive space for cyclists. Furthermore, we wanted to learn how to reach the cultural shift needed to start prioritising cycling instead of car traffic."*



**Oskari Kaupinmäki**, City of Helsinki

## Key statistics



**656,920**  
Population



**719 km<sup>2</sup>**  
City area



**6,300/day**  
Number of cyclists on busiest the route



**1,300 km**  
Length of cycle network



**429**  
Car ownership rate (cars per 1000 residents)



## Helsinki, Finland

### Timeline of main achievements

- **November 2020:**  
Approval of the Bicycle Action Plan for 2020-2025.
- **April 2021:**  
Helsinki hosts a webinar on best practices in bicycle parking.
- **May 2021:**  
First Bikenomics analysis and dissemination of the results to the public.
- **August 2021:**  
Immersive Symposium in Helsinki with guests from Copenhagen and Amsterdam, as well as politicians and other professionals from Finland.
- **January 2022:**  
Publication of Helsinki Cycling Communications Guide.
- **March 2022:**  
Helsinki Traffic Junction examined in Handshake design challenge.
- **May 2022:**  
Immersive Study Tour in Copenhagen.

### Key lessons learned

- ★ The project, the relationships and the discussions have provided confirmation on the skills and direction the city has established, and widened the perspective to international exchange.
- ★ The Helsinki summit and visits to partner cities have accelerated the process of building collaboration and relationships.
- ★ The implementation process to ensure that measures are executed and used well has also required relentless work. Sometimes the phrase “every street is a struggle” paints a picture of reality. But the hard work pays off.
- ★ To build a unified vision for the cycling plan, the city had to consult with various stakeholders and decision makers. This transition process has led to more investment in the cycling team and other resources.

### Key ambitions beyond CIVITAS Handshake

- ★ Carbon neutrality by 2030.
- ★ The modal share of cycling to be at least 20% by 2030.
- ★ Direct and efficient routes for cyclists.
- ★ High quality and effective maintenance and worksite arrangements in place.
- ★ Parking and other services improved and made more supportive of cycling.
- ★ Marketing and communication strongly support the shift to cycling.





# Krakow, Poland

**Having the know-how to communicate cycling well also helps to expand the role of the bicycle from recreational to every day transportation!**

## About Krakow

Krakow lies in the southern part of Poland and is its second-biggest city, with a population of more than 760,000 inhabitants. The post-war years ingrained the use of the private car into the consciousness of the Polish society and its decision makers, resulting in the subsequent decline in the quality of cycling infrastructure. Now, the development and modernisation of cycling infrastructure is beginning to take shape. Studies on local mobility show that the number of cyclists is growing and that cyclists are visible throughout most of the year.

## Main achievements during CIVITAS Handshake

- ★ 4 free Safety Bike Checks.
- ★ A Mass Cycling Night Ride and Bike Flea Market.
- ★ Opportunity for businesses to test drive a cargo bike.
- ★ Trans-shipment point allowing the delivery of goods by cargo bike with electric assistance.
- ★ "Park-e-Bike": free pilot rental of electric bikes at one of the P+R stations.
- ★ Preparation of a study on basic cycling routes of Krakow.
- ★ Development of a "bike to work" campaign.

*"Cycling in Krakow is getting more and more popular, although people still regard car ownership as an indicator of success, and do not yet appreciate the full value of cycling (such as its health, social and economic benefits). For years, cycling has also been seen more as a recreational activity. However, with strong support from the public, our challenge when joining Handshake was to learn how to boost the cultural shift needed to start prioritising cycling instead of car traffic. Furthermore, we wanted to provide high quality cycling infrastructure that is fast and intuitive, to allow for trips all year round. We want to act from several sides, i.e. to provide even better infrastructure, but also, and perhaps above all, to influence a change in transport habits by encouraging new, sustainable behaviour among both children and adults."*



**Joanna Majdecka,**  
City of Krakow

## Key statistics



**782,137**  
Population



**327 km<sup>2</sup>**  
City area



**4,107/day**  
Number of cyclists on busiest the route



**178 km**  
Length of cycle network



**361**  
Car ownership rate (cars per 1000 residents)



## Krakow, Poland

### Timeline of main achievements






-  **December 2019:**  
Study of basic cycling routes in the City of Krakow.
-  **November 2020:**  
Krakow makes cycling safer through bike service checks.
-  **December 2021:**  
Cycle to Work campaign declared a hit among employers in Krakow in 2021.
-  **May 2022:**  
Cycle to Work campaign reaches its greatest popularity.
-  **August 2022:**  
The first Mass Cycling Night Ride in Krakow.



### Key lessons learned

-  Regular meetings with mentor city Munich were valuable, particularly because of great commonalities between the two cities' paths to promote cycling.
-  A focus on implementing safety and promotional actions has proven very successful. The free bike checks have shown great results and will become a recurring event.
-  A remaining challenge is the long-standing lack of sufficient staff, which is needed to sustain established changes.
-  Measure implementation can take a long time because of legislative and procedural issues, including excessive bureaucracy and administration.
-  The Bikenomics study has great potential to speed-up cycling policy.

### Key ambitions beyond CIVITAS Handshake

-  Share of cycling in the distribution of transport tasks increases to 13-17% by 2030.
-  Strive for "vision zero" (no road deaths) among pedestrians and cyclists.
-  80% of residents with improved access to a backbone of bicycle routes, and no more than 3% without bicycle access by 2030.
-  Krakow connected to the Vistula Cycling Route, EuroVelo 4 and 11, and bicycle access to railroad stations.
-  Construction of 39 km of cycling routes according the new study of basic cycling routes in Krakow.

Unsplash / Jacek Dylag





# Riga, Latvia

**We aspire to develop everyday cycling as a mobile, environmentally-friendly and healthy means of transport!**

## About Riga

The biggest city in the Baltic states, Riga blends timeless tradition and cutting-edge cool. There is far more to Riga than meets the eye. Its 800 years of turbulent history have seen everyone from German knights to Swedish kings and Soviet commissars leave their mark. Today, Latvia's capital is an exciting European metropolis at the crossroads of eastern and northern Europe. Riga's skyline tells its story – timeless Gothic spires in the Old Town mingle with the grand facades of one of the world's richest collections of Art Nouveau buildings along the city's boulevards.

## Main achievements during CIVITAS Handshake

- ★ Cycling lanes along four new routes.
- ★ Allocated funding for old and future cycling projects.
- ★ Increased public attention toward cycling and public transport.
- ★ Renewed the Riga Cycling concept plan.
- ★ Redesigned Brunineku street.
- ★ Began the process of building two new bicycle routes.

*"Riga has no deep-seated cycling tradition, and most people do not use the bike as their everyday mode of transport. The greatest challenge that drove us to join Handshake was addressing a lack of good quality, well-connected and safe cycling infrastructure. Furthermore, awareness raising was necessary among all road users – drivers, bicyclists, pedestrians and public transport users – to communicate the shared principles of mutual understanding and a safe road movement."*



**Ieva Pastare,**  
City of Riga

## Key statistics



**639,600**  
Population



**304 km<sup>2</sup>**  
City area



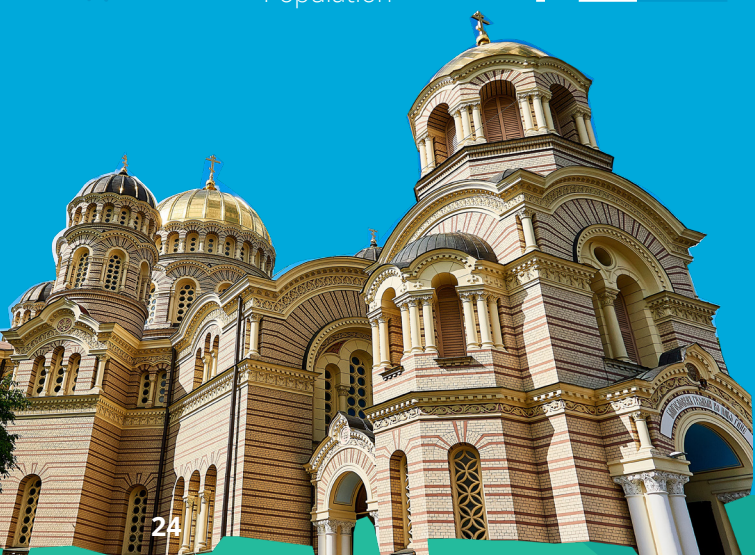
**600/hr**  
Number of cyclists on  
busiest the route



**68 km**  
Length of  
cycle network



**374**  
Car ownership rate  
(cars per 1000 residents)



## Riga, Latvia

### Timeline of main achievements

- **March 2021:**  
New Mobility Division established.
- **July 2021:**  
Cyclists in Riga embrace new cycling infrastructure.
- **January 2022:**  
The city council approved the establishment of a bicycle development unit in the Traffic Department.
- **May 2022:**  
Immersive Study Tour in Copenhagen.

### Key lessons learned

- ★ While Riga is not yet near to reaching the status of “global cycling capital”, it’s important to celebrate the vast improvements that have been realised. Change needs to happen step by step on all levels.
- ★ The relationships that were built are likely the most valuable result from Handshake, and will continue even after the project ends.
- ★ The most memorable activities for Riga were guided tours in the different Cycling Capital cities, which provided an opportunity to admire successful cycling infrastructure.

- ★ Due to a change of the political team, investments in cycling infrastructure have increased tremendously. In 2018, 1.18 million EUR were invested in the construction of bicycle infrastructure; but, by 2021, that number increased to a remarkable 4.43 million EUR. What’s more, in 2022 there are plans to invest 5.1 million EUR in the development of bicycle infrastructure. In other words, a political shift resulted in more than four times more funding to cycling!
- ★ Bikenomics helped shift ways of looking at how cycling infrastructure can have different kinds of impacts beyond only providing safer roads. This method made the city look at the whole picture rather than just part of it.

### Key ambitions beyond CIVITAS Handshake

- ★ The total length of the cycle paths is planned to reach 240km by 2027 and 300km by 2030 (compared to 119 in 2021).
- ★ The total number/capacity of local government bike parking is planned to reach 270-2150 by 2027 and 350-2787 by 2030 (compared to 111-886 in 2020).
- ★ The total amount of bike counters is planned to increase to 12 by 2027, and to 30 by 2030 (compared to 1 in 2021).
- ★ By 2027, 78% of residents should rate the quality of the existing cycling network as positive, and 80% by 2030 (compared to 75.7% in 2021).
- ★ By 2027, 71% of the residents will travel by bike, and 75% by 2030 (compared to 66.8% in 2021).
- ★ By 2027, the bike should have a modal share of 9%, and 15% by 2030 (compared to 3.5% in 2019).





# Rome, Italy

**Ride your bike to enjoy the sweet smell of freedom!**

## About Rome

Rome is the capital of Italy, and of the Lazio region. It is the country's most populated comune and the third most populous city in the European Union (by population within city limits). What's more, the greater Metropolitan City of Rome counts 4,355,725 residents. Rome has much unfulfilled potential when it comes to active mobility. Cycling has a crucial role to play in reducing congestion and improving quality of life for all in the Italian capital.

## Main achievements during CIVITAS Handshake

- ★ Development of a 150 km transitory cycle route plan.
- ★ Getting awareness and education high on the local agenda.

*"The combination of a lack of a cycling culture and proper infrastructure, and the influence of decades of car-oriented policies, has created a challenging mix for Rome. The city has one of the Europe's highest car ownership rates and one of its lowest cycling rates. Rome's inhabitants spend 135 million hours commuting each year. There exists great promise for sustainable urban mobility to become an integral part of the city fabric, and in the process, to make it a more liveable place for residents and tourists alike."*



**Francesco Iacorossi,**  
Roma Servizi per la Mobilità



## Key statistics



**2,876,614**  
Population



**1,285 km<sup>2</sup>**  
City area



**20,000/day**  
Number of cyclists on  
busiest the route



**125 km**  
Length of  
cycle network



**613**  
Car ownership rate  
(cars per 1000 residents)



## Rome, Italy

### Timeline of main achievements

#### July 2019:

Working closely with Amsterdam as a mentor, and being represented at the Velo-city conference in Dublin.

#### May 2020:

Rome responds to COVID-19 with 150 kilometres of cycle routes.

#### November 2020:

Runner-up in the "CIVITAS Resilience" category of the CIVITAS Awards.

#### June 2021:

Rome's mobility highlighted in the June 2021 issue of "Thinking Cities" magazine.

#### January 2022:

Handshake General Assembly hosted in Rome.

#### May 2022:

Immersive Study Tour in Amsterdam.

### Key lessons learned

- ★ The highlight of the whole project was being able to gather deputy mayors, technicians, public servants, and shop owners around cycling. That may have been a real turning point in achieving common goals.

- ★ Introducing temporary cycling infrastructure during the COVID-19 pandemic was a real game changer, as it created openness for long-term change.
- ★ Collaboration with other cycling-minded initiatives have also emerged, like the GRAB project, which will see the development of a Great Bike Ring Road. With additional advancements in cycling infrastructure, cycling is becoming an increasingly attractive option in a city famous in Europe for its traffic congestion.
- ★ Rome particularly benefited from the relationship developed with other Handshake cities, as well as the support of the expert partners.

### Key ambitions beyond CIVITAS Handshake

- ★ Promoting car/bike/scooter-sharing schemes, car-pooling and taxis.
- ★ Mobility manager to promote active mobility projects for the home-school connection, and home-work travel plans, to support the reduction of private car use.
- ★ Support the adoption of smart working.
- ★ 304 km of new cycling routes, 91 km of which are under construction.
- ★ Six plans for extending cycle paths have been drafted. Studies suggest that creating infrastructure to ensure cyclist safety will increase the modal share of cycling from 1% to 5.1%.
- ★ Using Bikeconomics to influence and support policy making.
- ★ Create at least one urban area with zero emissions from transport by 2030.





# Turin, Italy

**Moving beyond car-oriented mobility, and creating a better, cleaner, safer and more friendly urban environment to boost cycling!**

## About Turin

Turin is the capital of the Piedmont region, and one of Italy's important economic centres. Since the 1990s, Turin has been following a path that has seen it transform from an industrial capital into a hotbed of innovation and culture. During this time, the City of Torino has worked hard to foster sustainable mobility, launching its Sustainable Urban Mobility Plan in 2010. The city approved its strategic cycling mobility plan in 2013, with the aim of bikes achieving a 15% modal share by 2023.

*"Cycling in the city of Turin is growing steadily thanks to a large amount of investments that have allowed the extension of the cycling network. The mostly car-oriented mobility culture, built-up through decades of street design planning, is now shifting to a more balanced modal mix. The city has one of the highest levels of car ownership in Europe, which has meant that public areas are congested by cars, a problem which we aimed to overcome by joining Handshake, which helped us advance in allocating space for separated bike lanes."*

## Main achievements during CIVITAS Handshake

- ★ Re-organisation of the space in specific junctions and roundabouts, providing adequate areas for cyclists and pedestrians, including safety standards that aim to reduce fatalities, forcing vehicles to reduce their speed.
- ★ Adoption of the bicycle street concept.
- ★ Conduction of an assessment of a new bike lane; this achieved great results, and the city plans to do the same for other new projects under construction.



**Gloria Tarantino** and  
**Giuseppe Chiantera**, City of Turin

## Key statistics



**847,287**  
Population



**130 km<sup>2</sup>**  
City area



**3,800/day**  
Number of cyclists on  
busiest the route



**222 km**  
Length of  
cycle network



**660**  
Car ownership rate  
(cars per 1000 residents)



## Turin, Italy

### Timeline of main achievements

- **June 2020:** Rapidly implementing interventions from the Bicycle Master Plan of 2013 as a response to COVID-19.
- **February 2020:** Project meeting in Turin with Rome and ISINNOVA, before travelling to Amsterdam to join the General Assembly.
- **March 2021:** New interventions to promote active mobility that have been specifically designed to deal with COVID-19 and to improve walkability in Turin.
- **August 2021:** New Sustainable Urban Mobility Plan that covers the metropolitan area of Turin.
- **April 2022:** Dutch film screening on cycling change in the Turin offices.
- **May 2022:** Immersive Study Tour in Amsterdam.

aspects, and taking inspiration from effective solutions already implemented abroad.

- ★ The analysis conducted with great support from Decisio of the new bike land along Nizza street, has allowed for careful understanding of many different aspects and how they changed before and after the implementation of the new cycling infrastructure, such as traffic inputs, traffic safety, traffic effects, and trip motives.
- ★ The public administration started to invest financial resources and to identify dedicated offices to the sustainable mobility planning process, in order to promote active mobility in Turin.
- ★ The lack of human resources (personnel, technical skills) is a persistent challenge, as well the public administration's organisation, in which the offices involved in road design are not adequately integrated with cooperation and dialogue.
- ★ Despite having a speed limit of 20 or 30km/h in much of the central city, many would-be cyclists in Turin feel uncomfortable sharing the road with other modes of transport, especially cars and lorries.

### Key lessons learned

- ★ All the events and meetings among Handshake cities have allowed ongoing sharing of solutions, points of view, diverse approaches, and best practices in different contexts. Q&A sessions, General Assemblies, debates and Master classes led to an enrichment and growth of expertise among the public administration, and helped to create a network that will allow the cities to keep sharing new experiences over time.
- ★ Having access to a Handshake Exchange Hub and to several useful handbooks, papers, videos, interviews, etc., enabled them to broaden their vision, by looking at new technical

### Key ambitions beyond CIVITAS Handshake

- ★ -27% of CO<sub>2</sub> emissions and -33.9 % of PM emission by 2030.
- ★ Cycling to make up 15% of the modal split by the end of 2023.
- ★ +95 km of cycling infrastructures by 2030.
- ★ -12.6% of car traffic by 2030.
- ★ 25% of car traffic from electric vehicles by 2030.
- ★ A bicycle parking plan within 2023.
- ★ Development of cycling and pedestrian paths.
- ★ Ensure road safety regulations.
- ★ Launch of MaaS (Mobility-as-a-Service).
- ★ Support of mobility sharing services.



City of Turin



### 3 Lessons learned, tips and recommendations

To our greatest pleasure, we have noticed that the ambitions of participating cities grew throughout Handshake's lifetime. Each one of the post-project action plans are ambitious, and most Handshake cities are striving to become climate-neutral by 2030.

Furthermore, we've learned from bad and good impacts of contextual factors like the COVID-19 pandemic, and political elections in some cities. On the one hand, elections sometimes slowed down processes; on the other hand, they also resulted in extra investments and greater support for cycling.

And as we all know by now, the COVID-19 pandemic has had both negative and positive impacts on

cycling. Handshake was constrained by not being able to meet for a long time, and postponing planned activities. At the same time, the pandemic fostered openness to temporary measures to promote cycling as a healthy means of transport. Several Handshake cities took action to install quick wins for cyclists, and they have been able to turn those temporary actions into permanent and sustainable changes.

To support you, as our reader, to turn your city into a Cycling Capital as well, we have compiled some useful tips from our experts in the field, who learned from the project, external factors, and from each other.

#### Top 10 tips from the Handshake cities

1. Start by securing **political will, courage and accompanying investments in cycling** to become a Cycling Capital.
2. **Join forces on a European level** and exchange with other like-minded cities to cultivate thoughtful and motivated decisions.
3. Go out and cross borders to **experience good cycling practices first-hand**.
4. **Don't copy-paste, but rather get inspired** and find your own style and story that matches your city.
5. Convince and **motivate policymakers with numbers**: calculate the social and economic benefits of cycling solutions with a Bikenomics analysis.
6. **Don't neglect soft measures**. Hard measures like infrastructure solutions are important, but so too are investments in soft measures and campaigns like "bike checks" and promotional websites.
7. **Listen to cyclists** and their needs regarding infrastructure, services and more.
8. **Make use of temporary measures**, which can be real game changers to test certain solutions, and to create openness without the need to invest a lot of money upfront.
9. Develop a **long-term cycling plan** that is ambitious, and fosters collaboration with all relevant stakeholders.
10. **Make cycling fun and enjoy the (bike) ride!**



# Imprint

## About

This publication has been developed within the framework of the CIVITAS Handshake project and describes the results and lessons learned from solutions developed in the 10 CIVITAS Handshake Future Cycling Capitals, inspired by and transferred from the three Cycling Capitals. It identifies and creates a portfolio of cycling solutions, taking into account not only successes, but also other lessons learned, ambitions, and challenges beyond Handshake. It should inspire other cities and projects to design and execute a portfolio of cycling solutions, and improve their existing cycling conditions. The Handshake project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 769177.

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City and technical partners met in Rome, Italy in January 2022.

## Partner cities



## Technical partners



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