Return on Investment in Bike Sharing Schemes

Final report

October 2025

Credits: Donkey Republic

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For decades, bike-sharing was viewed as a niche experiment. Today, it stands as one of Europe's most underrated urban innovations — a tool that does far more than cut carbon emissions. By bridging the first and last mile and extending the reach of public transport, bike sharing makes urban mobility more seamless, efficient, and attractive.

A groundbreaking study by EY – commissioned by Cycling Industries Europe (CIE) and EIT Urban Mobility – is the first of its kind globally to put hard financial evidence behind the impact of bike-sharing.

The results are extraordinary: €305 million in annual benefits — from cleaner air and healthier citizens to reduced congestion and job creation. This study demonstrates the transformative power of bike share and sets a new benchmark for understanding cycling's true economic and social value.

A multidimensional impact

Bike-sharing schemes save 46,000 tons of CO_2e yearly, but their real value lies in broader societal gains. By replacing car trips, they slash air pollution, preventing 968 chronic diseases and saving €40 million in healthcare costs. They also ease traffic, reclaiming 760,000 hours lost to congestion—worth €30 million in productivity gains. And with 6,000 direct jobs supported, they foster local economies while making mobility affordable, cutting transport costs by up to 90% compared to cars.

A smart public investment

For cities, the numbers speak for themselves: every euro invested yields a 10% annual return, generating €1.10 in positive externalities. By 2030, these benefits could triple to €1 billion if bike-sharing is prioritized.

The report projects 224,000 tons of CO_2e avoided, 4,205 fewer chronic diseases, and 12,900 jobs — delivering a 75% annual return on investment for public spending.

How to unlock the potential

The study identifies four levers for growth:

- Demand increase (due to urban concentration and rising awareness)
- Supply increase (due to climate regulation and peripherical expansion)
- Fleet electrification (strong interest from users in these bikes)
- Territorial expansion (to address the gaps in major cities)

These successes rely on 3 conditions for success :

- Strengthen policy support (long-term funding, cycling infrastructure) and foster stakeholders' cooperation
- Enable flexible bike-sharing by adapting supply, improving reliability, and using data-driven decision making
- Promote a strong cycling culture (through integration with public transport and continuous improvements in cycling infrastructure)

A call to act

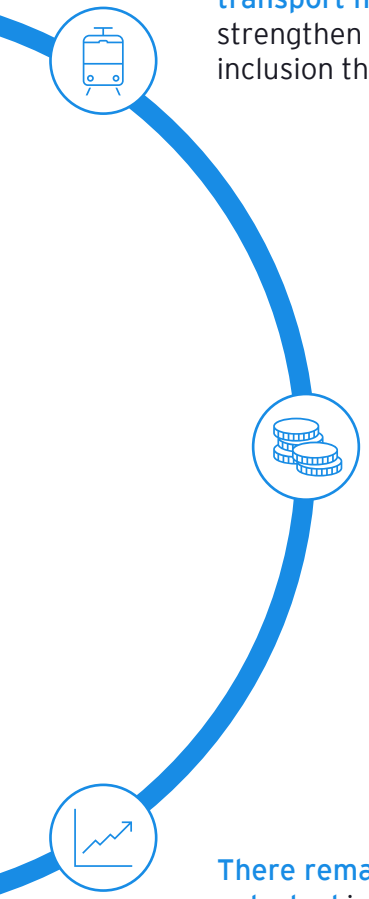
The message to mayors and governments is clear: bike-sharing is not just sustainable—it's strategic. With the right policies, it can reshape urban mobility, making cities healthier, fairer, and more efficient. The time to act is now. Success is within reach.

"For the first time, we will have robust evidence of the return on investment in bike-sharing. Bike-sharing plays a unique role in making cycling affordable and accessible for everyone while driving the shift to zero-carbon mobility. This study can transform the way cities see cycling as part of their transport and clean air strategies – showing how bike-sharing is not just a service, but a powerful tool for delivering greener, cleaner, and more liveable cities, and healthier, happier Europeans." – ***Lauha Fried, Policy director at Cycling Indutries Europe"***

Agenda

Credits : Pixabay

Executive summary



Bike-sharing schemes are a crucial component of cities' transport networks and sustainable development, as they strengthen connectivity and accessibility, and foster social inclusion though reduced transport costs

- Up to 55% of shared bike users combine their trips with other public transport modes
- Public bike-sharing schemes cut individual mobility costs by up to 90%

Bike-sharing schemes make cities more livable, ensuring local authorities' spendings deliver real value for citizens

- Bike-sharing produces more than six times fewer greenhouse gas emissions than private cars, saving the equivalent of 4,300 Europeans' annual emissions each year
- With around 2/3 of trips replacing sedentary travel, bike-sharing schemes promote a more active population, averting ~900 chronic disease cases annually across Europe
- By substituting car journeys, bike-sharing schemes help ease congestion, saving up to 760K hours annually and generating significant productivity gains across Europe
- Bike-sharing schemes support around 6,000 direct local jobs in Europe, most of which deliver high social value
- With €305M in positive impacts annually, each euro of public spending on bike-sharing generates a 10% annual return

There remains significant potential to be unlocked in bike-sharing by 2030

- Bike-sharing's positive impacts could triple by 2030, reaching €1billion annually, driven by rising demand and supply, fleet electrification, and territorial expansion
- By 2030, each euro invested in bike-sharing could yield a 75% annual return in positive impact, compared with a 10% return today
- This report identify nine key conditions for success, essential for unlocking the full potential of bike-sharing

Executive summary

Bike-sharing is an active, eco-friendly mode that delivers health, social, and economic benefits

46k tCO_2e

Greenhouse gases emissions avoided

Yearly emissions from a city of 4,300 residents

200 T NO_x

Air pollutants avoided

51,000 people avoiding car commutes for one year

1,000

Chronic diseases prevented

Daily new cancer diagnoses in France

758,000 h

Productivity gains from reduced congestion

Annual working time of ~1,000 Europeans

6,000

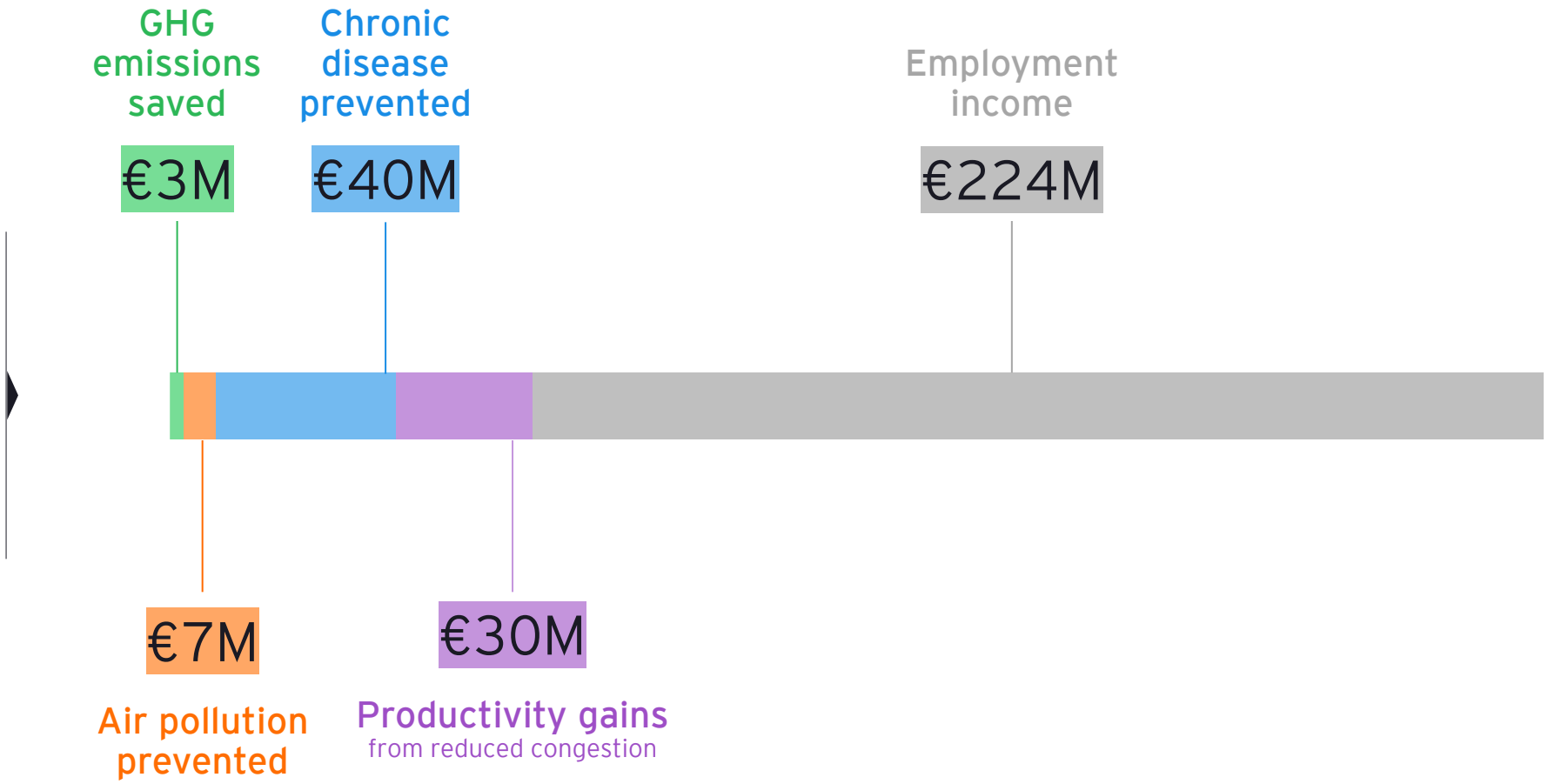
Full-time equivalent jobs created

Sources: EY calculation

Executive summary

€305M

in positive externalities generated each year by bike-sharing usage in Europe

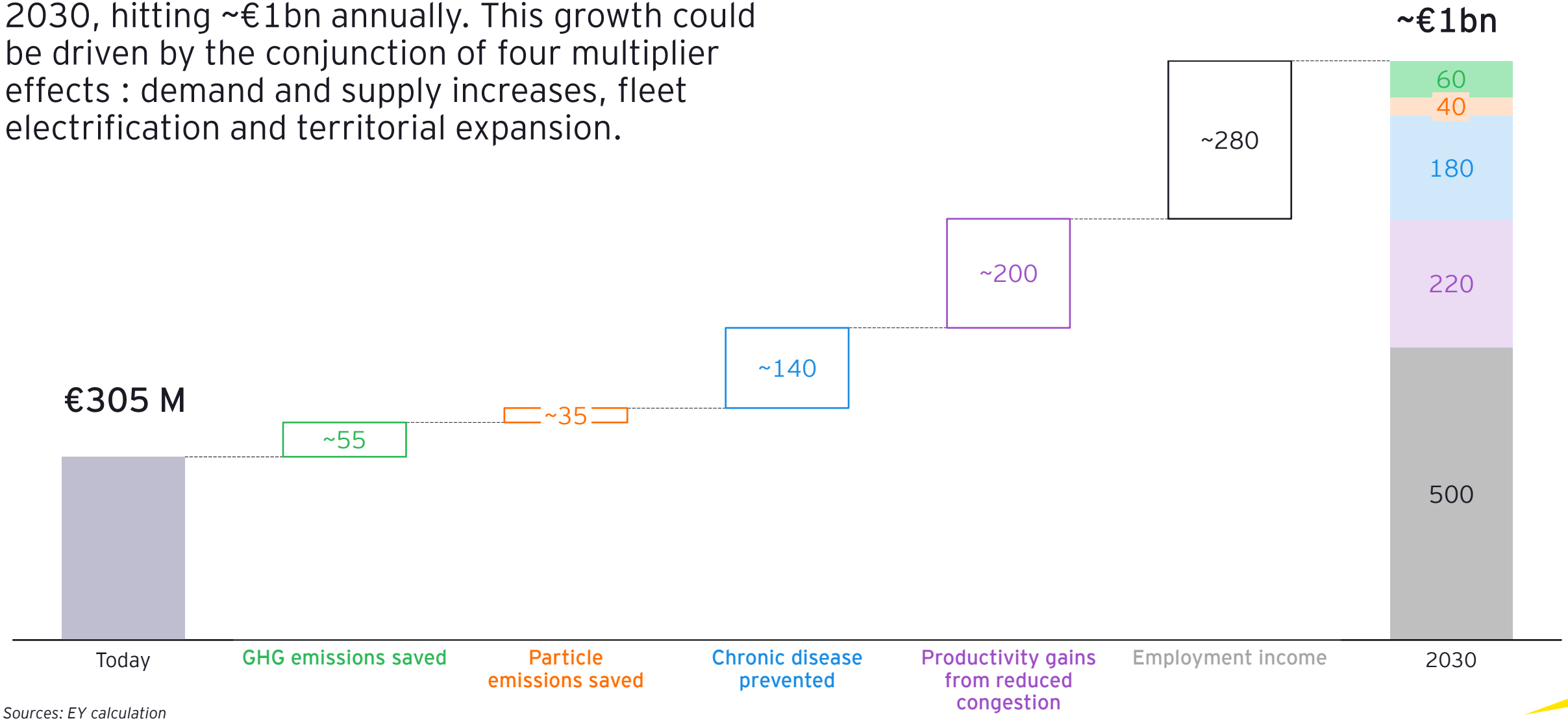


Note: the total differs from the sum of the rounded amounts

Sources: EY calculation

Executive summary

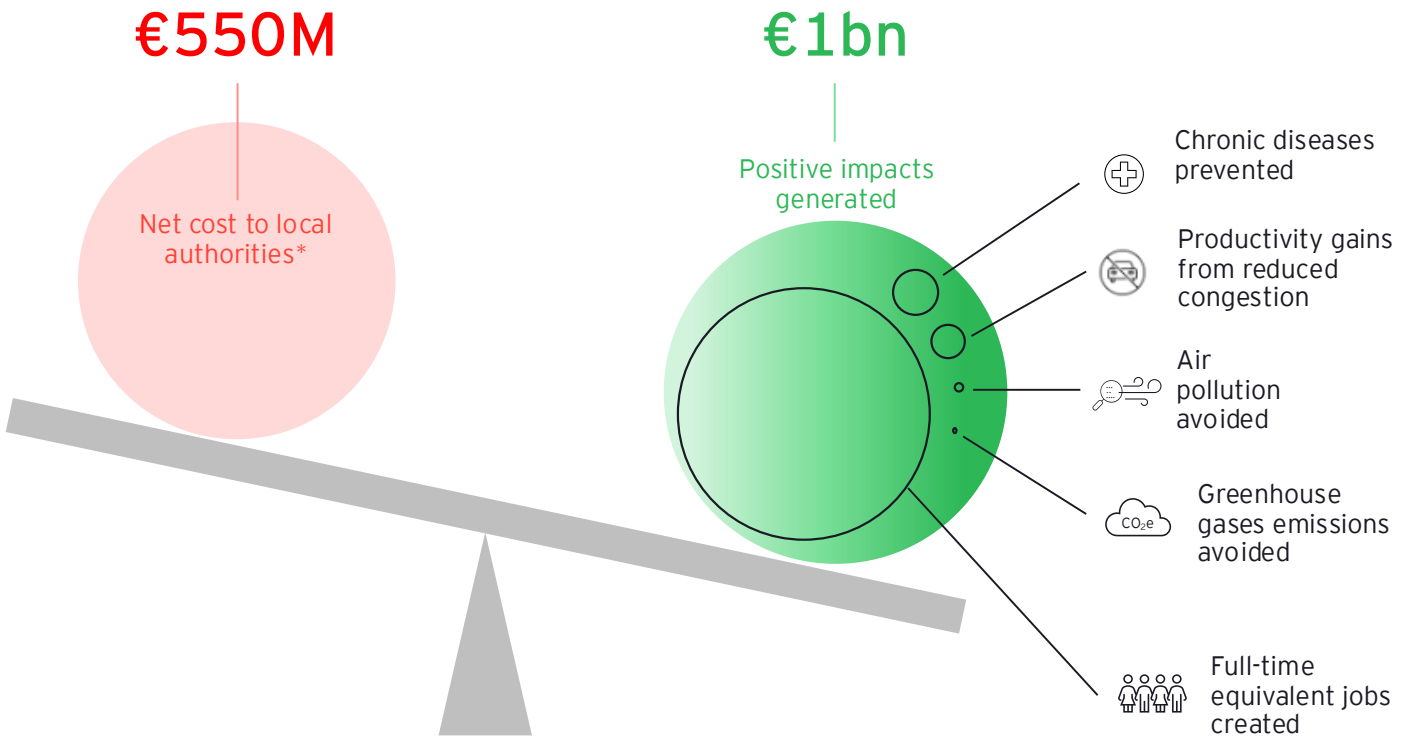
Bike-sharing's positive impacts could triple by 2030, hitting ~€1bn annually. This growth could be driven by the conjunction of four multiplier effects : demand and supply increases, fleet electrification and territorial expansion.



Sources: EY calculation

Executive summary

By 2030, each euro invested in bike-sharing could yield a 75% annual return on public investment, compared with 10% today



*The net cost to local authorities has been estimated using public data, including ADEME's data. It corresponds to the annual net expense per public shared bike, after deducting revenues generated by private shared bikes for the benefit of the local authority.

Sources: EY calculation

Agenda

Credits : Pixabay

Bike-sharing was a utopia in the 60's... it became a mainstream reality and a stepping stone toward the sharing economy

Trends	**Anarchist experimentation** White Bikes, Amsterdam	**1rst organized initiatives** 1976: La Rochelle 1995: Copenhagen	**Precursors (advertisement bikes)** 2001: Rennes 2003: Vienna 2004: Cordoba 2005: Lyon 2008: Milan 2010: London	**Deployment in Europe** 2014: Madrid, Budapest, Vilnius 2012: Warsaw 2016: Helsinki	**Technological changes** 2016: market entry of Ofo and Mobike 2017: creation of Lime (US) 2018: creation of Dott (Netherlands)	**Oversupply and operational challenges** **Regulation of shared micromobility services** **Market consolidation** (withdrawal of Asian operators, concentration, etc.)
Type of access	Unlocked bikes	Coin access	User interface access	Public transportation smart card access	Mobility plateform with seamless payment	
	1965 **Free bike system**	1995 **Coin deposit system**	1998 **IT system**	2013 **Multimodal system**	2017 **Smart mobility**	
Main components	Bicycles					
		Docking stations				
				Electric bicycles		
					Dockless systems and hybrid systems	
						Data management

Dock-based bikes rely on specific pick-up stations where bikes must be rented and returned

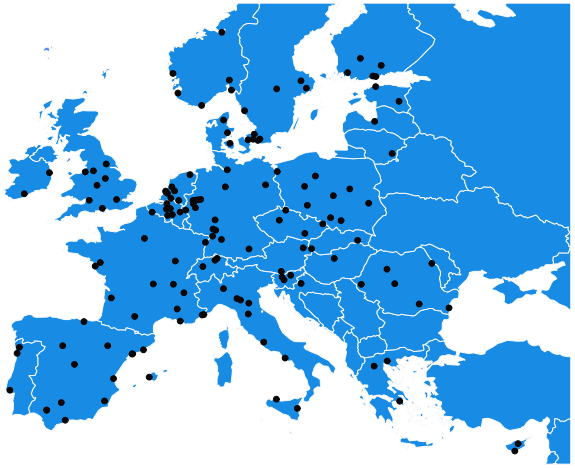
Free-floating bikes can be picked up and dropped off at any intersection, not pick-up station needed

Hybrid bikes can be collected from pick-up points and returned anywhere in the city

Sources: ITF, Measuring New Mobility: Definitions, Indicators, Data Collection, (2023), Chen et al., Fifth generation of bike sharing systems – examples of Poland and China (2018), Médard de Chardon, The contradictions of bike-share benefits, purposes and outcomes (2019), Certu, Fiche vélo n°25 (2012)

Nowadays, ~150 European cities across 30 countries operate bike-sharing schemes, with a fleet of +430,000 bicycles

Key metrics on bike-sharing fleet



30 countries

(EU-27 + UK + Switzerland + Norway)

146 cities

(Mainly capital and major regional cities)

438,400

shared bikes

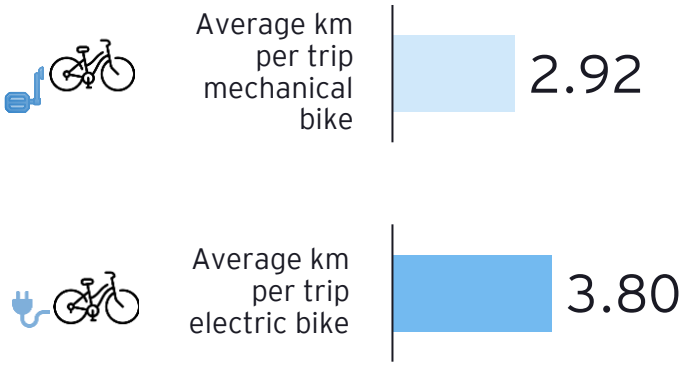
Sources: CIE benchmark (2023,2024), Fluctuo (2023,2024), Otero et al., Health impacts of bike-sharing systems in Europe (2018), Brussels Mobility, Public Bicycles (PB) & Long-Term Rental (LTR) International Benchmark (2024)

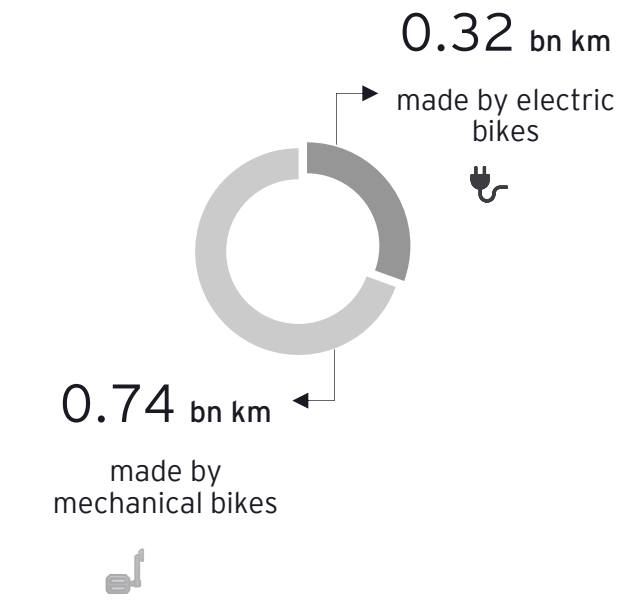
In 2024, bike-sharing users rode over 1 billion kilometres – representing nonetheless <1% of all cycling distance in Europe

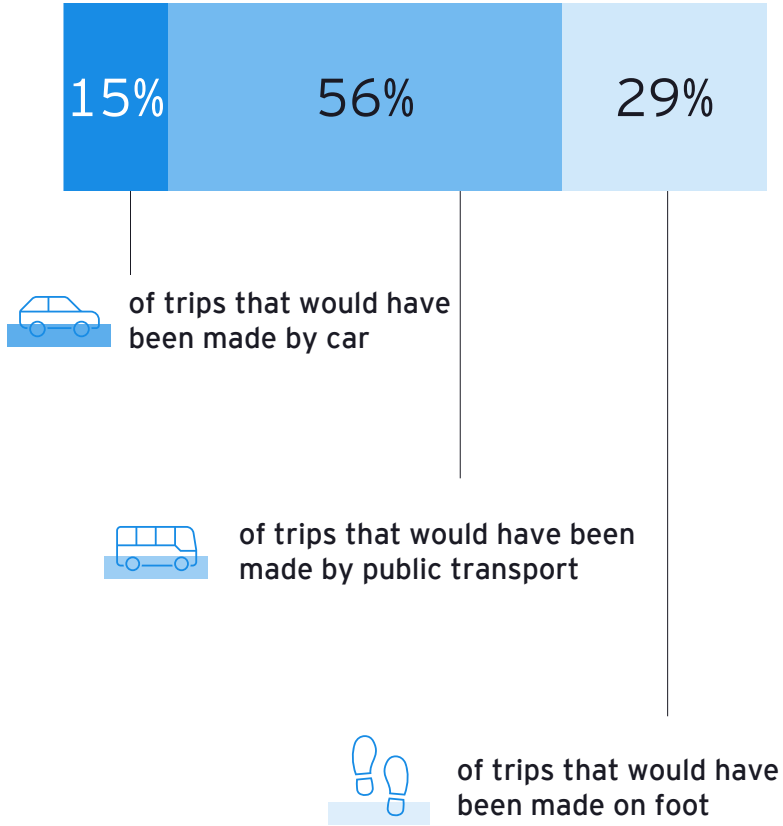
Key metrics on bike-sharing usage

2.12
trips/bike/day

1.06 bn km
covered by shared bikes in 2024 in Europe







- *Sources: CIE (2023, 2024), Fluctuo (2023, 2024) , Donkey Republic, (2024), Brussels Mobility (2024)., Otero et al., (2018), Ma et al., (2020), Association des acteurs du vélo public (2023), Fifteen (2024), ADEME (2021), EY interviews, EY calculation*

Agenda

Credits : Pixabay

Bike-sharing schemes are a crucial component of cities' transport networks, as they strengthen connectivity, improve accessibility, and foster social inclusion

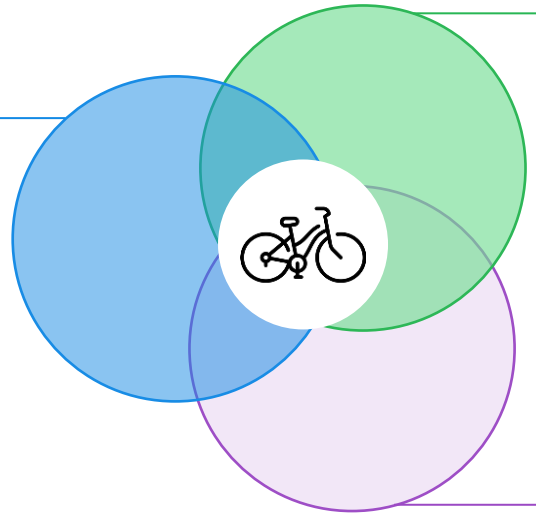
Less expensive, often used to complement other public transport modes, and more easily deployed in underserved areas, **bike-sharing schemes directly address European citizens' concerns.** According to the latest Eurobarometer on mobility and transport, 39% of them consider cost as the main barrier to daily mobility, ahead of the availability and connectivity of different transport systems (32%).

Connectivity

Bike-sharing schemes bridge the first and last mile, extending the reach of metro, tram, and rail networks. They enable seamless multimodal journeys, improve urban transport efficiency, and make public transit more attractive, accessible, and convenient.

Illustrated by case studies:

- *Glasgow (United Kingdom)*
- *London (United Kingdom)*



Accessibility

Bike-sharing schemes – especially in underserved areas – boost mobility, bridge gaps, and expand access to jobs, education, and essential services.

Illustrated by case study:

- *Lyon (France)*

Social inclusion

Public bike-sharing schemes cut transport costs by up to 90% versus cars, breaking financial barriers, reducing inequalities, and fostering social inclusion in vulnerable communities.

Illustrated by case study:

- *Lyon (France)*

Detailed illustrations can be found in the following slides

Up to 55% of shared bike users combine their trips with other public transport modes, confirming that bike-sharing makes the network more resilient and efficient

% of shared bike users combining their trips with public transport in selected locations

Location	% of users combining bike sharing and public transport	Shared bikes
Antwerp (Belgium)	25%	4,300
Brussels (Belgium)	47%	7,650
Helsinki (Finland)	55%	3,480
London (UK, Lime users only)	34%	42,200
Rudersdal (Denmark)	30%	200
France	43%	45,500

Bike-sharing schemes help close spatial gaps within urban public transport networks

In Oslo (Norway), bike sharing complements metro and rail networks by serving perpendicular commute routes and extending reach to areas less accessible by transit.

Bike sharing help increase public transport usage

In France, 7% of users report making more frequent trips since adopting bike sharing.

Sources : Böcker et al., Bike sharing use in conjunction to public transport: Exploring spatiotemporal, age and gender dimensions in Oslo (2020), Brussels Mobility, Public Bicycles (PB) & Long-Term Rental (LTR) International Benchmark (2024), Association des acteurs du vélo public, Rapport du vélo public (2023), Fifteen, Livre blanc - l'impact du vélo en libre service dans les villes moyennes (2024)

Bike-sharing complements conventional transport, boosting capacity and handling demand spikes, like during major events in Glasgow

Bike-sharing usage during global events hosted in Glasgow

2014 – Launch of Glasgow's cycle hire scheme, known as OVO Bikes, operated by NextBike by TIER: 400 bikes deployed across 32 stations

2014 – Commonwealth games – during the event:
+71% rentals
+46% new customer

2021 – COP26 – during the event:
+70% rentals
+69% new customers

2022 – Glasgow's bike rental scheme is the largest in Scotland, featuring 1,000 pedal bikes, 159 electric bikes, and 103 hire stations

2023 – UCI Cycling World Championships – during the event:
+61% rentals
+98% new customers

Launched in June 2014 to coincide with the Commonwealth Games, Glasgow's bikeshare scheme formed a key part of a wider strategy to promote active travel and public transport access to event venues.

The OVO bike scheme has played a pivotal role in easing traffic congestion, facilitating seamless travel for attendees between venues and enabling residents to adapt their journeys amid event-related road closures. Its impact is underscored by a surge in usage during major events, with trip numbers rising by over 70%.

Key success factors in the adoption of shared bikes during major events include:

- **Promotional offers**: to encourage uptake during the event, participants were offered a complimentary 40-minute ride.
- **Coordination and communication among stakeholders**: close collaboration between event organizers, public authorities, and bike-share operators facilitated the alignment of shared objectives, the establishment of secure zones, and the deployment of temporary docking stations.
- **Flexible operations, staff mobilization, and efficient bicycle redistribution**: due to access restrictions, van drivers transitioned to cargo bikes for bicycle redistribution, while the operations team extended working hours to ensure effective relocation of bikes across stations.

During major events, the bike share service has proven essential in facilitating travel and providing a convenient alternative for participants and residents.

Matthew Chapman, Hub manager at Glasgow for Vélogik

Sources: EY interview, Velogik, Glasgow Centre for Population Health, Glasgow's bikeshare scheme: trends in use (2023), Agemob, Retour d'expérience sur le dispositif mis en œuvre par Vélib' Métropole (2024)

Expanding bike-sharing coverage and fleet density can reshape usage patterns, enhancing transport integration and accessibility, as demonstrated in London

Bike-sharing system chronology

2010 – Launch of London's cycle hire scheme, popularly known as Santander Cycles

2017–2018 – Significant disruptions (financial issues, vandalism, pavement blocking), which led to the withdrawal of oBike, Urbo, and Ofo

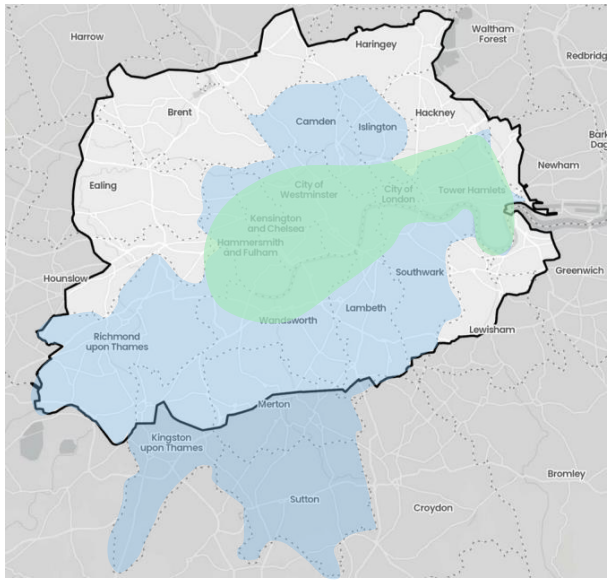
2021 – Launch of Forest bikes

2022 – Launch of Lime e-bikes (Gen4)

2024

- Santander: 12,000 bikes, 80 stations
- Lime: 30,000 bikes
- forest: 15,000 bikes
- voi.: 20,000 bikes

Shared bicycle coverage per operator in 2024



- Santander area (~100 km²)
- Lime area (~480 km²)
- Forest area (~480 km²)

Bike sharing usage

Democratizing cycling in London :

- Since 2022, cycling levels in London have doubled, with 40% of the growth driven by bike-sharing schemes.
- Usage of shared bikes has quadrupled from 2022 to 2024, largely due to the expansion of dockless services. Lime and Forest now represent one in six bikes on the streets. London is Europe's leading city for dockless bike ridership, with 28 million trips recorded in 2024

Accessibility:

- 40% of Lime e-bikes are deployed in areas with limited access to public transport.
- 23% of Lime users say the availability of e-bikes has improved their access to jobs

Transport integration: 34% of Lime riders combine their e-bike trip with public transport.

Everyday use: 35% of Lime users hold a "Weekday Commuter Pass" which streamlines home-to-work travel, a proportion higher than anywhere else in the world.

Sources: Zhang et al, Lessons from thirteen years of the London cycle hire scheme: A review of evidence (2024), Ding et al, Effect of dockless bike-sharing scheme on the demand for London Cycle Hire at the disaggregate level using a deep learning approach (2022), Forest, Lime, Transport for London

Accessibility, Social inclusion

Bike-sharing can tackle transport poverty, improving availability, accessibility, and affordability for underserved communities, as demonstrated in Lyon

Improving availability

- Vélo'v operates 5,000 bikes at 428 stations across 24 municipalities in 2025, with 33 more stations planned for 2026. ~50% of them will serve disadvantaged neighborhoods (~71 000 inhabitants).
- Recent station deployments have steadily increased coverage in disadvantaged areas – from 17% in 2005, to 22% in 2018, and 45% today. By 2026, 20% of stations will be in the poorest neighborhoods.

Improving accessibility

- By the end of 2025, Vélo'v will add 2,500 e-bikes to attract underrepresented users and serve hilly or low-density areas, making cycling more practical.
- Recently deployed stations in the poorest neighborhoods record twice as many trips as those outside these areas, showing the effect of better accessibility.

Improving affordability

- Vélo'v uses social pricing: half-price annual subscriptions for youth (14–25) and 62% off for unemployment benefit recipients, removing cost barriers to mobility.

Map legend

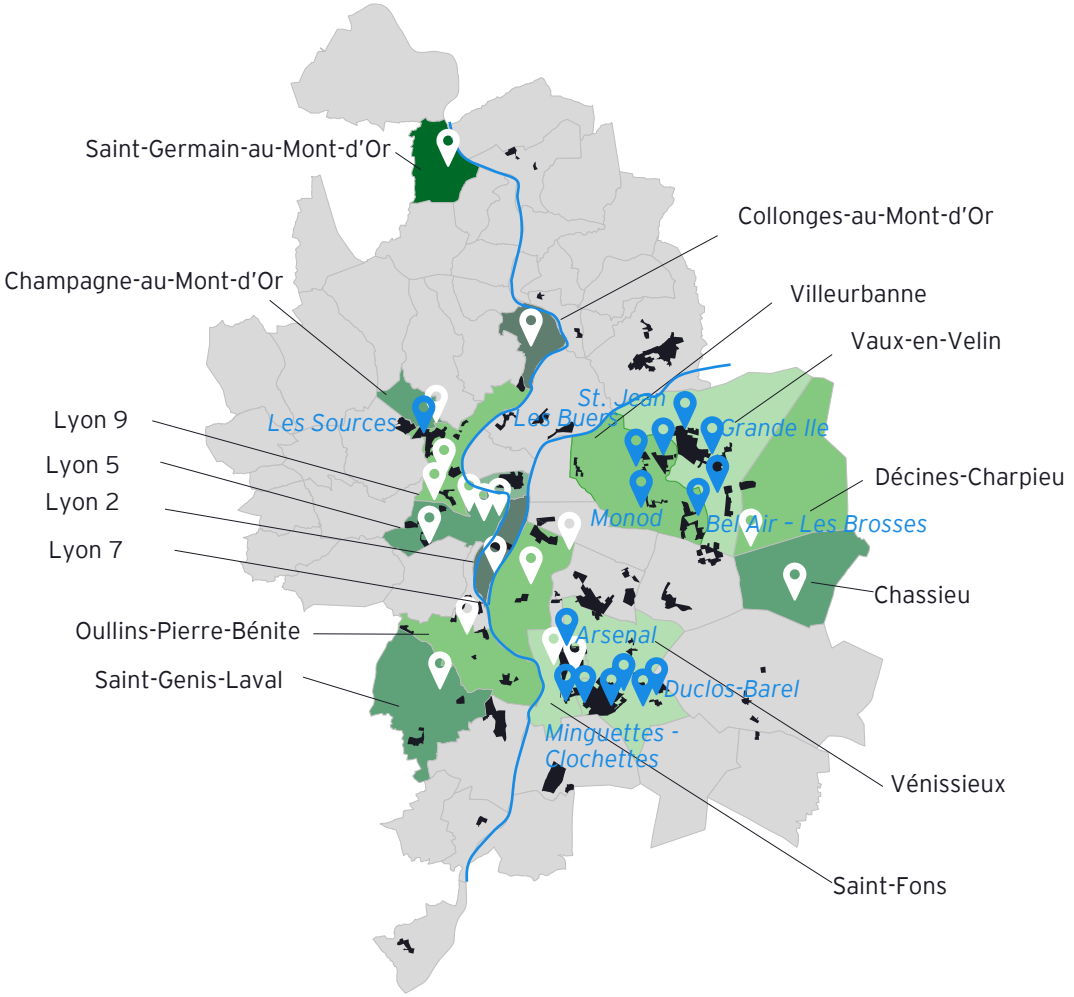
Median income per household

- Less than 10k€
- 10-15k€
- 20-25k€
- 25-30k€
- More than 30K€

33 expected Vélov' stations by 2026

- New stations of Vélo'v (19)
- New stations of Vélo'v located near the low-income neighbourhoods (14)

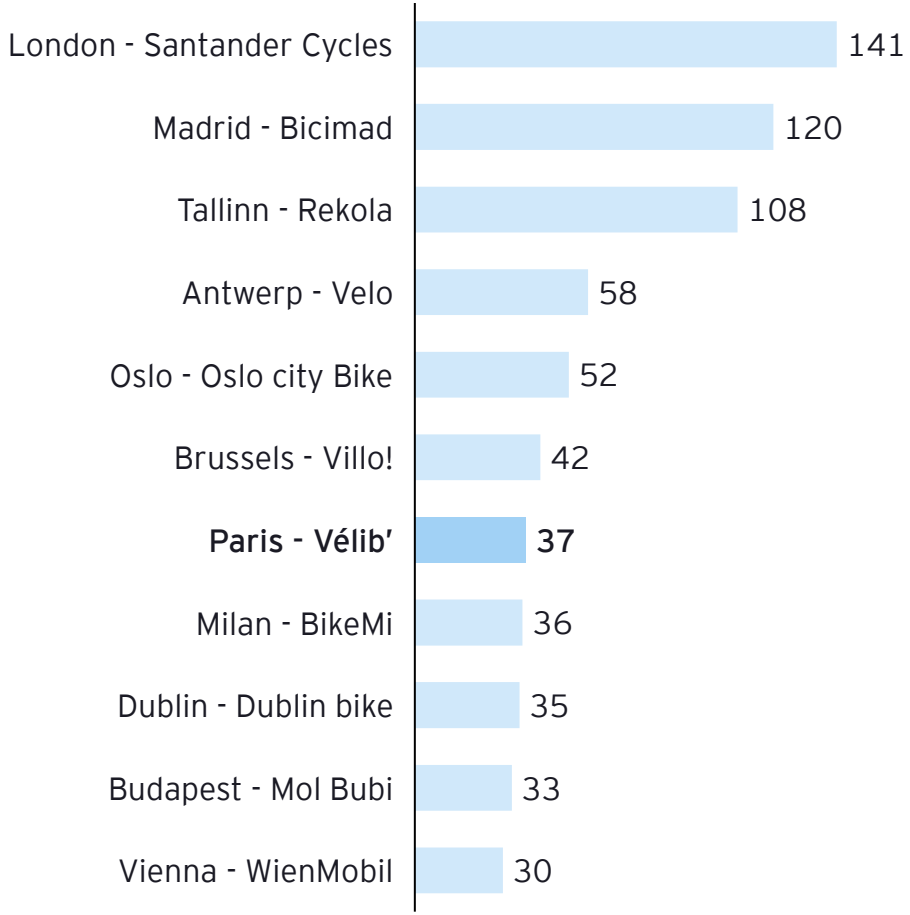
New Vélo'v stations planned for 2026 based on residents' income levels



Sources: Greater Lyon, Le réseau Vélo'v s'agrandit avec 33 nouvelles stations Vélo'v (2025), Urbalyon, La géographie prioritaire dans la métropole de Lyon (2025), SIG ville, Vélo'v

Public bike-sharing schemes cut individual mobility costs by up to 90%, reducing transport inequalities and boosting social inclusion

Annual subscription cost (€) for bike-sharing schemes (publicly funded schemes only) **across a selection of European cities**



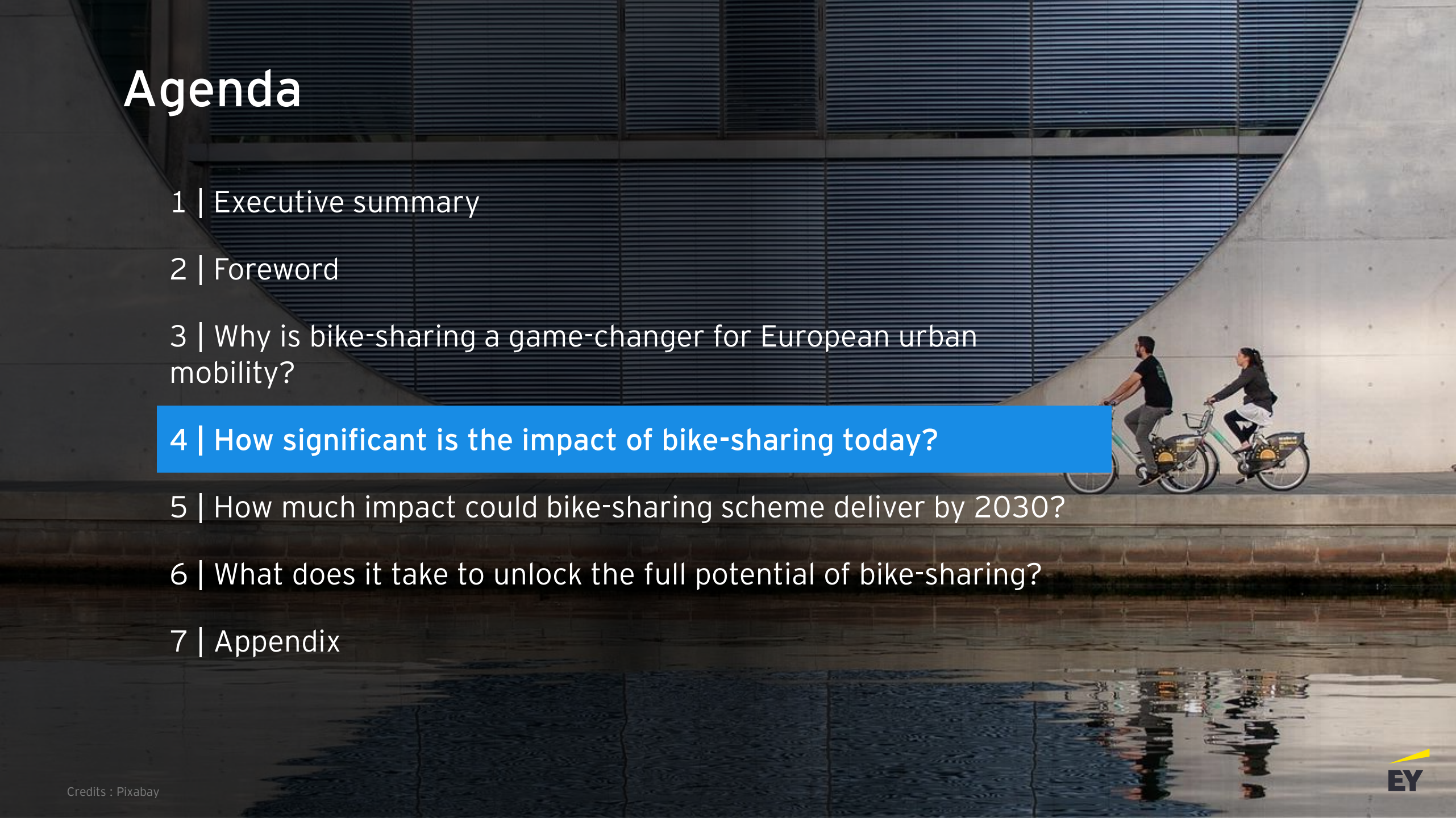
According to the French Environmental Agency (ADEME), owning and driving a car 10 km per day is estimated to cost around €1,000 annually

€963

Annual savings for a Parisian using a bike-sharing subscription with comparable usage to car ownership

Sources: ADEME Changeons d'air, changeons de mobilités, (2024), EY analysis

Agenda

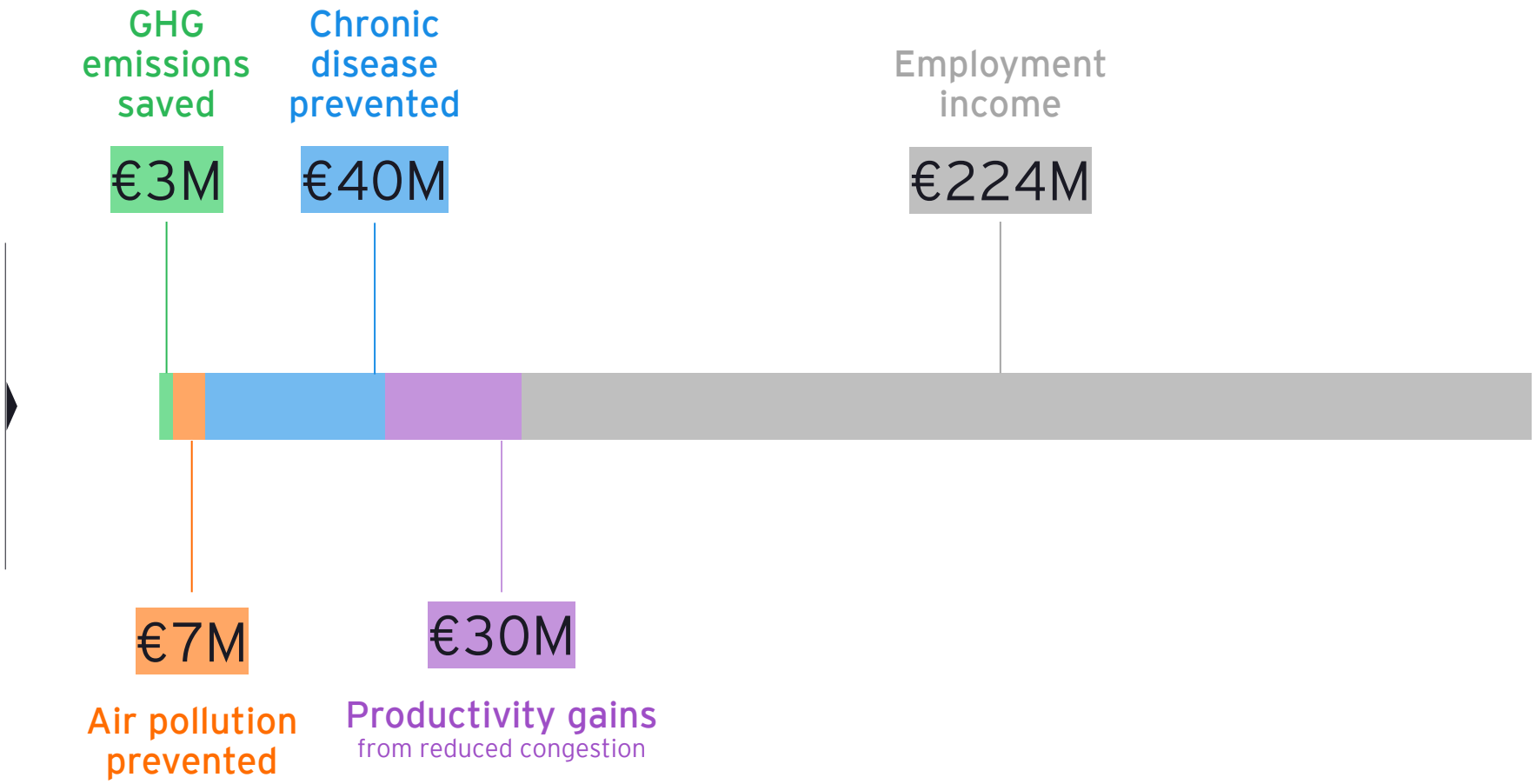


Credits : Pixabay

Estimates based on 2024 usage suggest that bike-sharing generates €305 million in positive externalities annually

€305M

in positive externalities generated each year by bike-sharing usage



Note: the total differs from the sum of the rounded amounts

Sources: EY calculation

Bike-sharing's positive externalities respond to citizens' concerns, mayors' priorities and align with European Commission plans (1/2)

Issues	Why are these issues a concern for citizens or a focus for the European Commission?	How can bike-sharing help?
GHG emissions	• In 2020, transport was responsible for nearly a quarter of Europe's greenhouse gas emissions and still exceeded 1990 levels. Urban passenger transport alone made up 24 % of total EU transport emissions. • Current policies are projected to reduce emissions by only 22% by 2050, far below the 90% needed to achieve climate neutrality.	• Achieving net zero will require overhauling urban transport systems through cleaner vehicles, expanded shared mobility, and a shift toward low-carbon modes such as walking, cycling, and bike-sharing – **which emits six times less CO_2e over its life cycle than cars.**
Air pollution	• In 2022, 96% of urban residents in Europe were exposed to $PM_{2.5}$ concentrations exceeding WHO guidelines, with road transport, especially non-exhaust sources (brake wear and tyre abrasion) being a major contributor. • In some European cities, such as Milan, Barcelona, and London, studies show that road transport is responsible for around 40 % of $PM_{2.5}$ and PM_{10} emissions. • Air pollution is Europe's top environmental health risk, causing diseases like asthma, strokes, and lung cancer. Still, 83 % of urban Europeans think authorities aren't doing enough.	• **About 15% of bike-sharing trips replace car journeys**, cutting vehicles on the road and reducing urban fine particle pollution.
Chronic disease cases	• One-third of Europeans do not meet WHO guidelines of 150 minutes (2h30) of moderate-intensity activity per week, putting them at higher risk of non-communicable diseases (cardiovascular diseases, colon cancers, dementia…). • Aligning with WHO guidelines could prevent 11.5 million new cases of NCDs by 2050, including 3.8 million cardiovascular diseases, nearly 1 million type 2 diabetes cases, and over 400,000 cancers.	• **With ~2/3 of trips replacing sedentary travel**, bike-sharing schemes boost population activity levels. • Bike-sharing schemes are not only for regular athletes: in the UK, 50% of users had not cycling in over a year, and 89% of them use the service for exercise.

Sources: European Commission, International transport forum (2020) International transport forum (2024) European Environmental Agency (2025) Eurobarometer 561 (2025), WHO (2024), CoMoUK (2024), Association des acteurs du vélo public (2023)

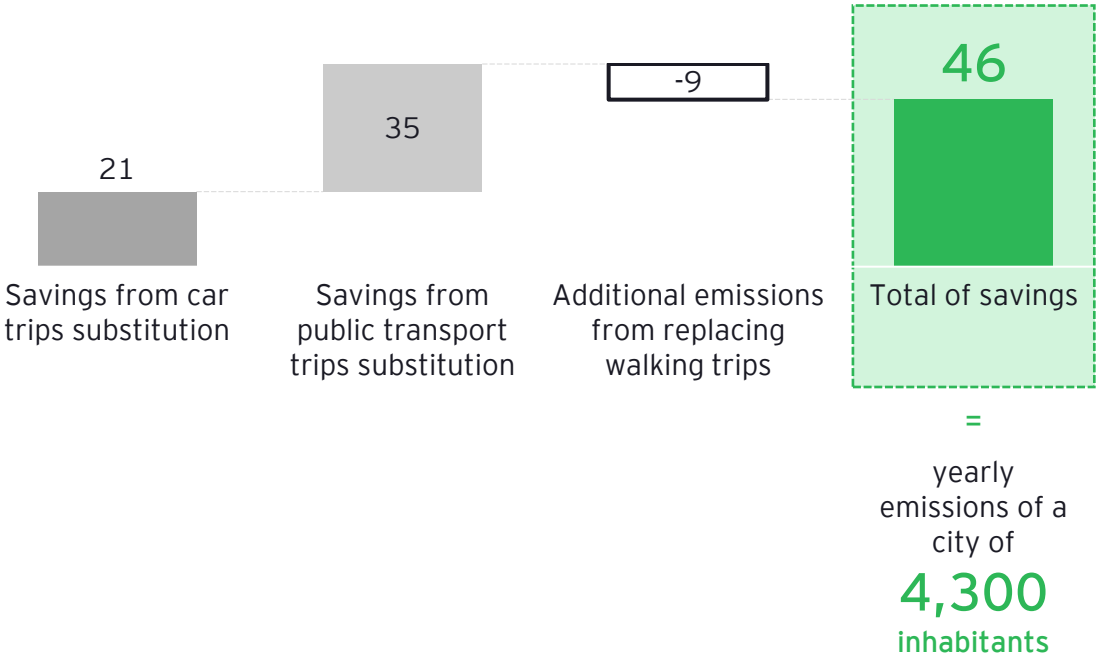
Bike-sharing's positive externalities respond to citizens' concerns, mayors' priorities and align with European Commission plans (2/2)

Issues	Why are these issues a concern for citizens or a focus for the European Commission?	How can bike-sharing help?
Congestion	• Findings from the latest Eurobarometer on mobility and transport show that congestion is perceived as the most significant barrier to daily mobility across Europe, cited by 39% of Europeans surveyed. • In cities such as Dublin, Bucharest, Brussels, and Vilnius, residents lose over 100 hours annually to rush-hour congestion, highlighting the significant strain on urban transport infrastructure. • According to the European Court of Auditors, traffic congestion across EU cities could cost up to €270 billion per year.	• **15% of bike-sharing trips replace car journeys**, cutting traffic and easing peak-hour congestion. • Bernardo (2022) found that introducing bike-sharing reduced congestion by 4.14 %, with stronger effects in cities under one million inhabitants, where reliance on private cars is high, and in lower-income cities, where cost-saving alternatives are more valued.
Employment challenges for low-educated groups	• Unemployment in the EU varies sharply by education: in 2023, 11.8% for low-educated vs. 3.7% for highly educated (overall rate 6%).	• **On average, every 75 shared bicycles give rise to one new job, making bike-sharing a source of opportunities for local communities.** • **Bike-sharing jobs deliver high social value**, often targeting those who need opportunities the most.

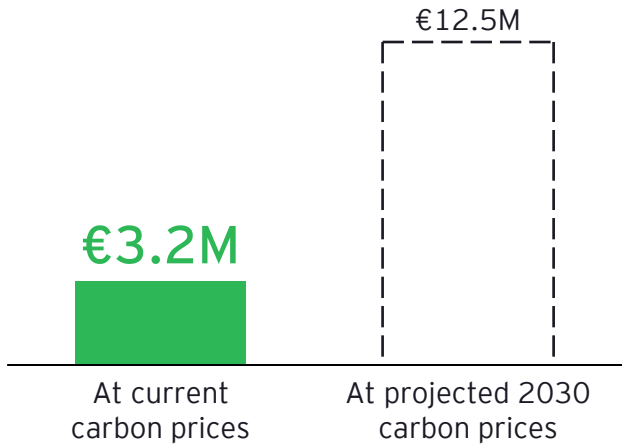
Sources : European Court of Auditors (2020); Bernardo (2020); CEDEFOP (2024)

Bike-sharing avoids ~46k tCO_2e emissions per year, generating €3M in benefits – set to grow as carbon prices rise

Annual GHG emissions saved by bike sharing usage, k tCO_2e (EU 27 + UK, Switzerland, Norway, based on 2024 usage)



Annual economic benefits from bike-sharing (EU 27 + UK, Switzerland, Norway, based on 2024 usage)



EU carbon prices have surged to ~€70/t by mid-2025 and could reach €270/t by 2030 under the EU scenario.

Note: the total differs from the sum of the rounded amounts

Sources: International Transport Forum, Good to go? Assessing the Environmental Performance of New Mobility (2020) , International Transport Forum, Greener Micromobility (2024), EU ETS, Banque de France, Nouveaux scénarios NGFS (Phase 4) : impacts économiques pour la France (2023), EY calculation

Literature review helped identify non-European city initiatives that monetize shared-bike usage through emission credits, generating cost savings

In 2018, the UNFCCC (United Nations Framework Convention on Climate Change) introduced guidelines enabling shared-bike usage to generate carbon credits under the UN's Clean Development Mechanism (CDM). Although implementation remains unreported, several related initiatives have been identified.

	Cities	Operator	Scheme size	Description of the initiative
	**Seoul (South Korea)**	T-Money operator of Ttareungi	• 41M trips	• Under South Korea's emissions trading scheme, the Seoul Metropolitan Government and T-Money sold certified emissions credits in 2023. • That year, bike-sharing usage cut 962t CO_2e, generating €7,100 in revenue, reinvested to enhance the system.
	**Rio de Janeiro (Brazil)**	Tembici	• 3,100 shared bikes • 300 stations	• Tembici's bike-sharing scheme saved 750t CO_2e in 2022. • Emission credits, sold on AirCarbon Exchange following UNFCCC methodology, generated €5,500, reinvested in technology and shared bikes.
	**Wuhan (China)**	*n.a.*	• 80,000 shared bikes • 3,160 stations	• In Wuhan, individuals earn carbon credits that can be spent on small goods or services, like movie tickets, or to offset other emissions. • Each kilometer on a shared bike saves 93.3 gCO_2e; 5,000 gCO_2e can be exchanged for half a dozen eggs.

Sources : UNFCC, Carbon Pulse, Seoul becomes first Korean city to earn carbon credits from bike-sharing scheme (2024), Solution Seoul (2023), C40 Cities, Wuhan, carbon credit scheme bolster massive bike share program (2016), ClimateSeed, ACX, AirCarbon Exchange Hosts World's First Auction of Micromobility Carbon Credits (2022)

Fine particle emission reductions from bike-sharing generate €7M in positive externalities each year

Annual nitrogen oxides (NO_X) and coarse particles (PM_{10}) emissions saved by bike sharing usage (EU 27 + UK, Switzerland, Norway, based on 2024 usage)

200 t NO_X

emissions avoided each year

11 t PM_{10} and $PM_{2.5}$

emissions avoided each year

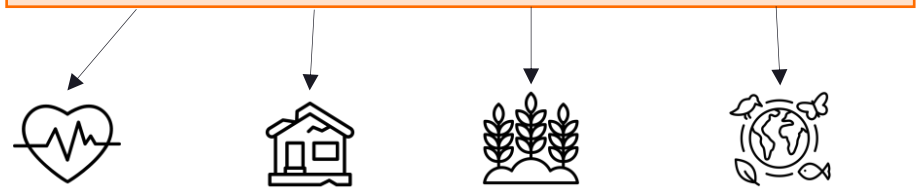
=

51,000 people avoiding car commute annually

Annual economic benefits from bike-sharing (EU 27 + UK, Switzerland, Norway, based on 2024 usage)

€7M

in positive externalities generated each year from avoided air pollution (NO_2, PM_{10}, $PM_{2.5}$, and SOMO35)

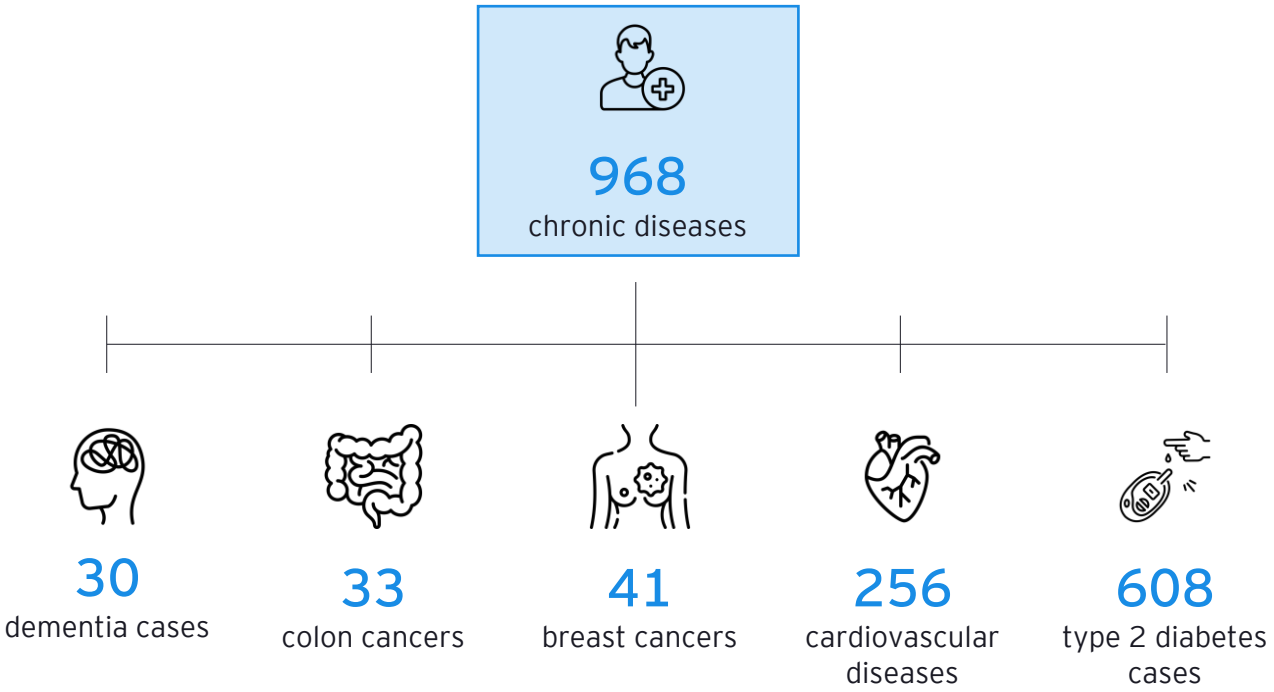


The European Commission estimates the average air pollution-related costs per passenger-kilometer at €0.0091 for car travel, €0.0098 for buses, and €0 for bike-sharing schemes.

Sources : Airparif, Peitzmeier et al., Real-world vehicle emissions as measured by in situ analysis of exhaust plumes (2017), Institut Terram, mobilités : la santé mentale à l'épreuve des transport (2025), Ministère de la transition écologique, Comment les Français se déplacent-ils pour aller travailler ? (2024), European Commission, The Handbook on the external costs of transport (2019) , ADEME, contribution du développement de la marche et du vélo à la décarbonation et l'amélioration de la qualité de l'air (2025)

Bike-sharing prevents nearly 1,000 chronic disease cases per year, saving €40M in public health costs

Annual diseases prevented by bike sharing usage (EU 27 + UK + Switzerland + Norway, based on 2024 usage)



€40M

saved in public healthcare expenditures

Sources: Emilie et al. The untapped health and climate potential of cycling in France: a national assessment from individual travel data, The Lancet Regional Health – Europe, Volume 39 (2024)

Bike-sharing saves ~760,000 hours annually, turning lost car travel time into €30M in productivity gains

Annual total time saved by all bike-sharing users (EU 27 + UK + Switzerland + Norway, based on 2024 usage)

758k

hours saved each year

The analysis is based on ADEME data, assuming an average cycling speed of 15 km/h and an average car speed of 14 km/h.

€30M

in productivity gains derived from substituting car journeys with bike-sharing trips

EU-27 average productivity assumed: €40/hour.

Sources : ADEME, EY calculation, Bernardo, Valeria, The Impact of Bike-Sharing Systems on Congestion. Evidence from European Urban Areas (2022), ECF and CIE, The benefits of cycling: unlocking their potential for Europe (2018)

Across Europe, bike-sharing supports 6,000 direct local jobs and generates more than €200M in wages

Direct FTEs supported by bike-sharing (EU 27 + UK, Switzerland, Norway)

6,000

FTEs in Europe

Locally anchored roles

Mechanics and Logistics / Transportation

HQ-based roles

Accounting, Marketing, Human Resources, Business development, Engineering, Customer service

€224M

generated in wages

In the absence of sector-specific salary data, EU-27 average income has been used to model the impact.

Sources: Donkey Republic, EY calculation

Local bike-sharing jobs deliver strong social value, as illustrated by the Genèveroule-Donkey Republic partnership in Geneva

Local context

- VéloPartage, the official public bike-sharing network of the Canton of Geneva, was launched in 2020 and is jointly operated by Donkey Republic and the non-profit Genèveroule.
- The system comprises 1,440 shared bikes, including 520 e-bikes, across 620 stations in 22 municipalities.
- Donkey Republic provides the bikes and app-based user access, while Genèveroule manages maintenance, logistics, and the recruitment and training of the operational team.
- In 2023, the VéloPartage team included 27 staff members, 10 on permanent contracts and the remainder mostly temporary positions filled by students.

In what ways is VéloPartage successful in delivering social value?

- **VéloPartage's teams mainly consist of individuals initially distant from the job market.** Hiring occurs through Geneva's "employment solidarity" program, which offers subsidized contracts to those unemployed for at least two years. Contracts for employees under 55 last three years with dedicated time for training and job searching, while over-55s have open-ended contracts supporting the transition to retirement. Other groups facing employment barriers, such as migrants or students, are hired on temporary contracts.
- **VéloPartage provides job stability and opportunities for career progression:** out of 25 employees, 10 have secured permanent positions. Some have progressed internally, for example moving from bike mechanic to service manager, showing the program's potential for career development.
- **Employees at VéloPartage gain valuable technical and vocational skills:** they gain bike repair, driving, and digital skills in a bilingual environment, boosting urban logistics employability.
- **Beyond technical skills, the collaborative and supportive environment helps individuals regain confidence**, rebuild self-esteem, and develop long-term career paths by feeling valued and contributing to a team.

Genèveroule!
VÉLO & INSERTION

Groups supported through VéloPartage

People in vulnerable economic situations

(in collaboration with the Hospice Général)

Unemployed individuals

(in partnership with the Cantonal Employment Office)

Interns and apprentices

Number of Genèveroule staff assigned to VéloPartage

27

People dedicated to VéloPartage

10

of long-term contracts due to VéloPartage

Sources: Genèveroule, Rapport d'activité (2024) , Donkey Republic, ESG report 2024 (2025), Geneva region, EY Interview

Bike-sharing schemes also create strong social value by opening career opportunities for low-skilled populations, as illustrated by Ryan's experience at Vélogik Leeds

The bicycle maintenance sector is accessible to individuals with limited formal qualifications, as recruitment often targets candidates distant from the labor market, thereby supporting social inclusion.

The career of Ryan Whyte, now hub manager at Vélogik in Leeds, exemplifies this trajectory. Without a diploma and following initial roles as a kitchen assistant and warehouse packager, Ryan entered the cycling industry with no prior experience. After spending 18 months working in electric bike repair and advancing to store leader, he joined Vélogik in October 2024 as a bicycle mechanic.

Upon joining Vélogik, Ryan benefited from a comprehensive training program. He progressively acquired technical skills in bicycle mechanics, stock inventory management, safety protocols, financial trainings, and digital tools such as Microsoft 365. His training also included three management courses. Over a period of 22 months, he advanced from mechanic to workshop supervisor (6 months) and ultimately to hub manager, overseeing up to twelve team members.

Building on the experience gained, Ryan now leads the expansion of the Leeds hub, increasing its fleet from 441 to 500 bicycles. He manages a team of seven employees, including four who had no prior bike work experience. His responsibilities encompass a wide range of operational and managerial tasks: reception of bicycles, inventory and flow management, monitoring of contract KPIs, workforce, equipment oversight, employee training, team management and support, and recruitment. In addition to overseeing maintenance activities, Ryan continues to service bicycles himself, adapting to reduced staffing and increasing operational demands.

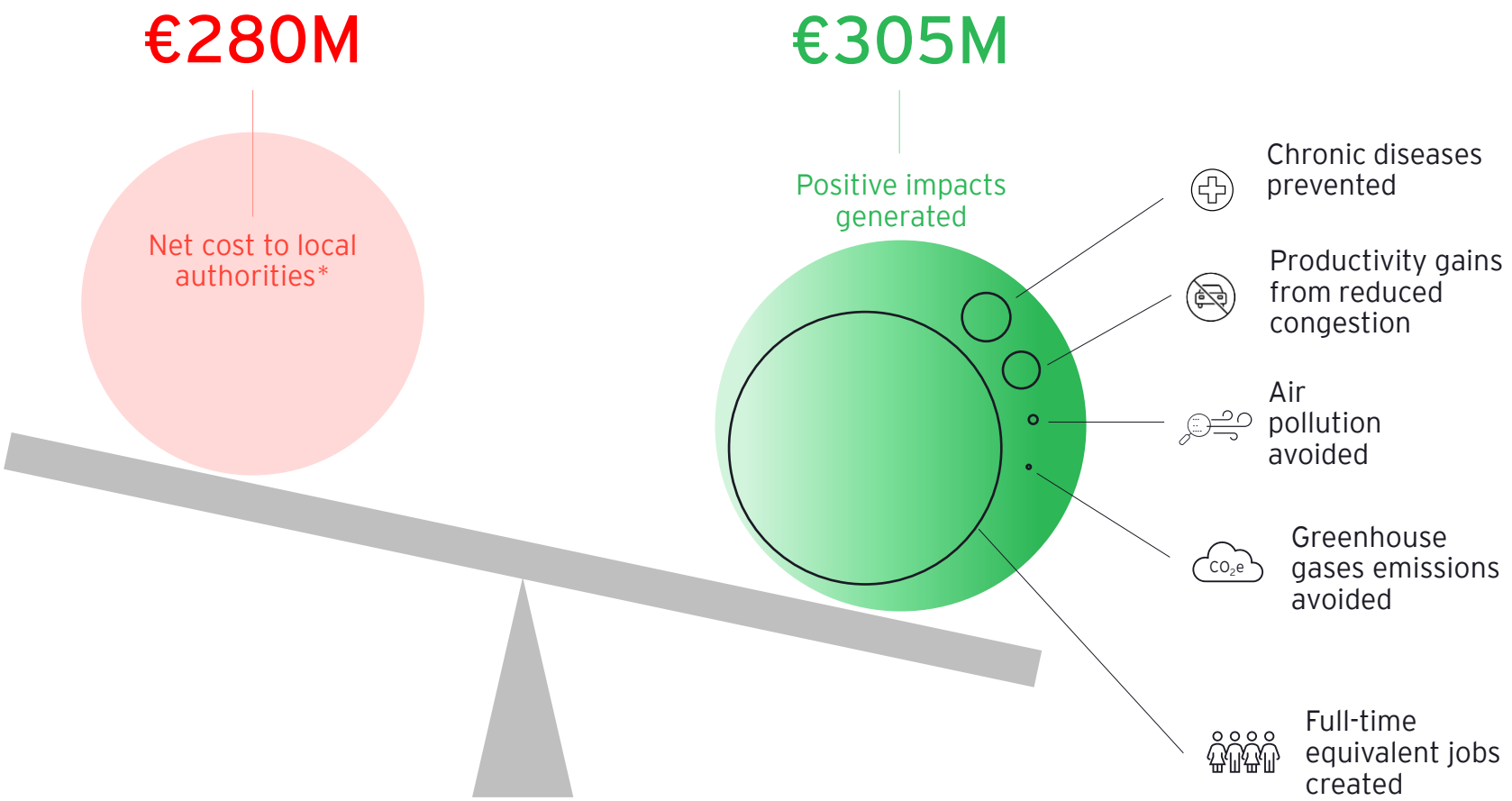
His story is not unique: four out of seven members of his current team also had no prior qualifications and have benefited from similar support and training.

> *Everything I'm able to do today, I learned at Vélogik.*

Ryan Whyte, Hub manager at Leeds for Vélogik

Sources: EY interview

Estimates suggest that every euro spent by local authorities on bike-sharing generates €1.1 in positive externalities, equivalent to a 10% annual return



*The net cost to local authorities has been estimated using public data, including ADEME's data. It corresponds to the annual net expense per public shared bike, after deducting revenues generated by private shared bikes for the benefit of the local authority.

Sources: Brussels Mobility, Public Bicycles (PB) & Long-Term Rental (LTR) International Benchmark (2024), Association des acteurs du vélo public, Rapport du vélo public (2023), ADEME, Actualisation de l'étude d'évaluation des services vélos (2021), EY interview; EY calculation

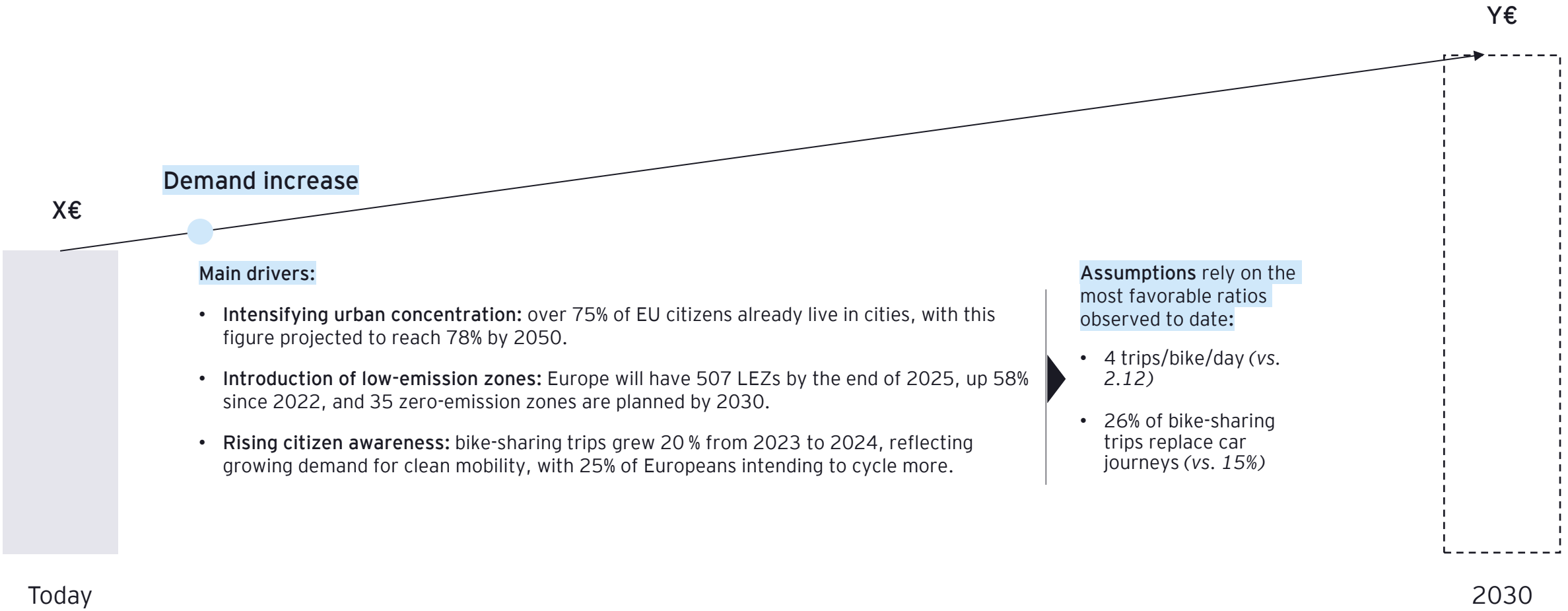
This ratio is conservative since several positive impacts of bike-sharing have not been monetized

Positive impact (non-exhaustive)	**Illustration**
Bike-sharing schemes can foster stronger social ties and greater community interaction by connecting neighbourhoods and bringing people together.	*See our case study on Glasgow.*
Bike-sharing schemes can enhance urban resilience by offering flexible transport options during emergencies such as natural disasters or terrorist attacks.	London Cycle Hire (LCH) recorded its busiest usage since launch on two days marked by London Tube strikes, underscoring how, when public transport is disrupted or unavailable, LCH serves as a vital alternative that keeps the city moving *(Lessons from thirteen years of the London cycle hire scheme: a review of evidence, 2024).*
Bike-sharing schemes can help limit land artificialization, as they require significantly less ground space than other urban transport modes.	A single shared bicycle requires approximately 1.5 square meters of space, compared to around 17 square meters for a standard car parking spot *(European Cyclists' Federation).*
Bike-sharing schemes can enhance students' cognitive focus at school.	Four hours into the school day, students who cycle to school exhibit concentration levels 8% higher than those driven by car *(European Cyclists' Federation, The benefits of cycling).*
Bike-sharing schemes can contribute to lower rates of workplace absenteeism.	Employees that cycle to work regularly have on average 1.3 days less sickness absence per year *(ECF, The benefits of cycling).*
Bike-sharing schemes can contribute to lower injury rates among cyclists by increasing safety.	In cities with bike-sharing schemes, annual cyclist injuries declined by an average of 27% following their introduction *(2018 US study, The safety of bike-share systems).*
Bike-sharing schemes can drive increased spending in local shops.	Per square meter, cycle parking delivers 5 times higher retail spend than the same area of car parking *(ECF, The benefits of cycling).*

Agenda

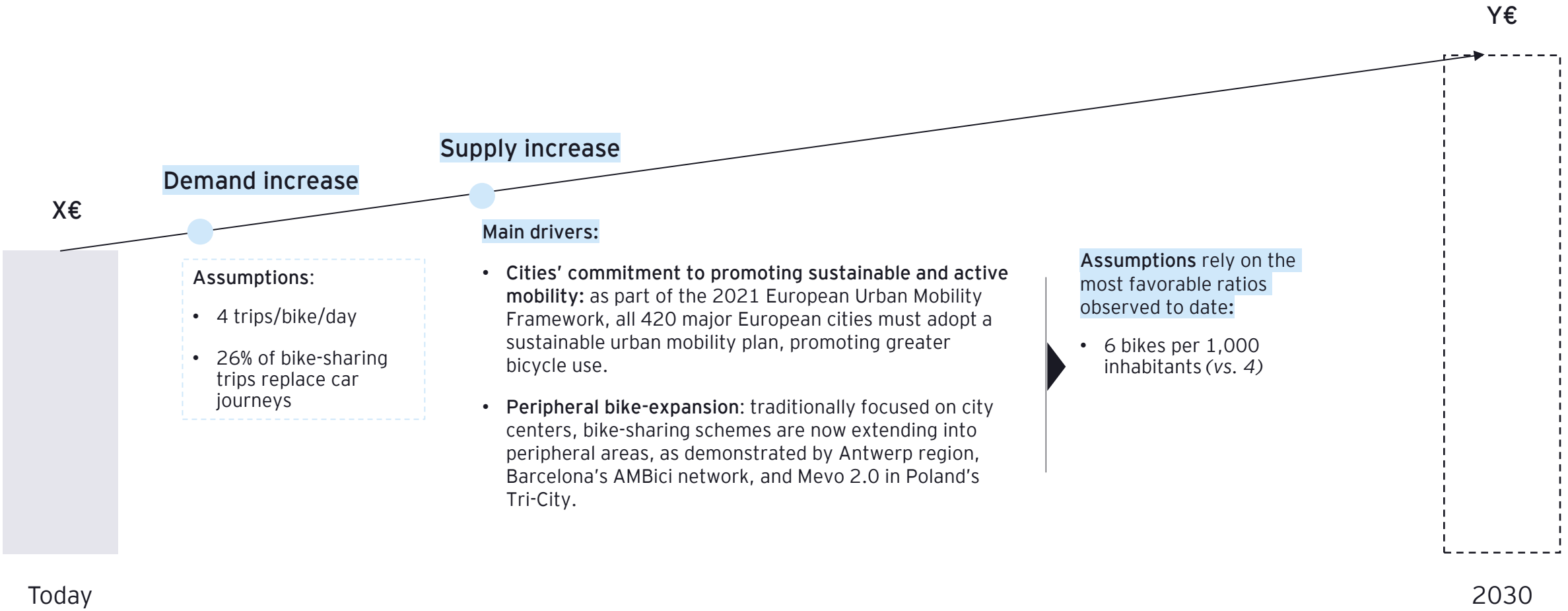
Credits : Pixabay

Four multiplier effects could significantly boost bike-sharing use and its positive impacts by 2030 (1/5)



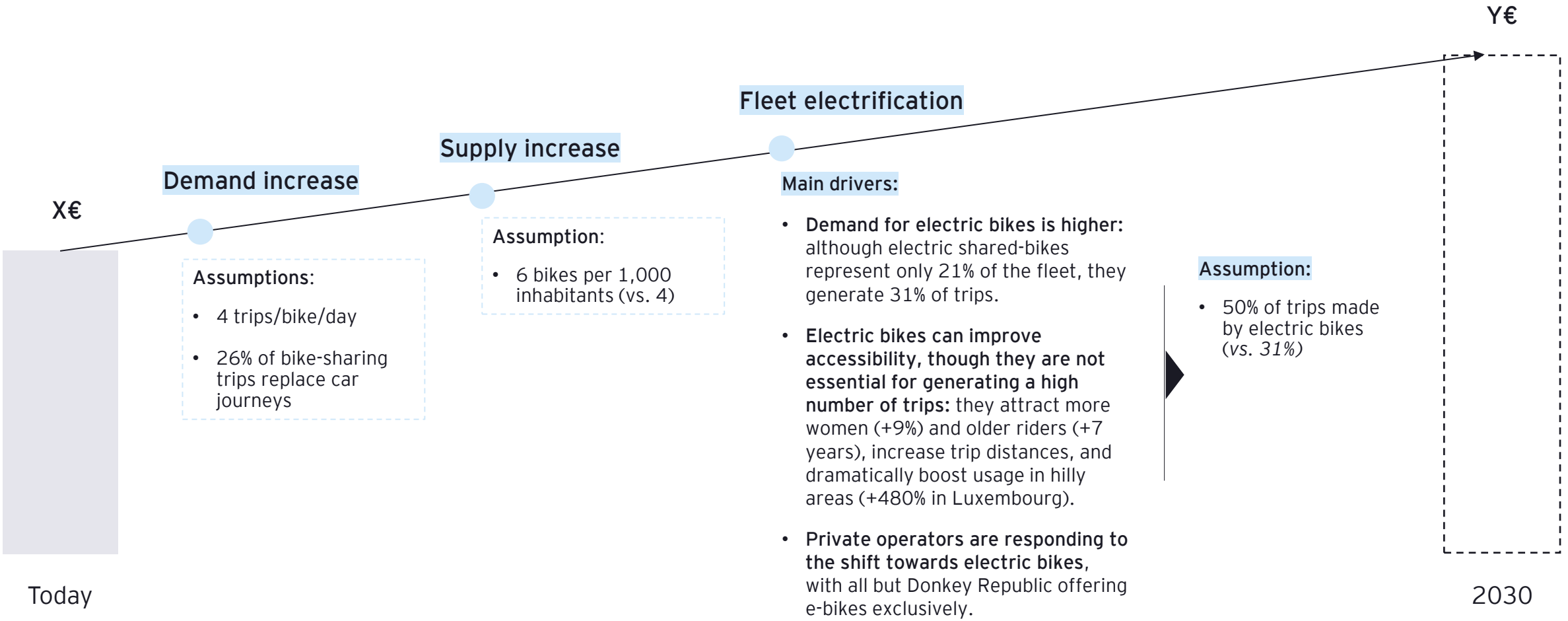
Sources : European Environment Agency, Urban adaptation in Europe (2020), Clean cities, The development trends of lowand zero-emission zones in Europe (2022), Ipsos, Mobility barometer (2024)

Four multiplier effects could significantly boost bike-sharing use and its positive impacts by 2030 (2/5)



Sources : European Commission, New European Uban Mobility Framework (2021), EY research

Four multiplier effects could significantly boost bike-sharing use and its positive impacts by 2030 (3/5)

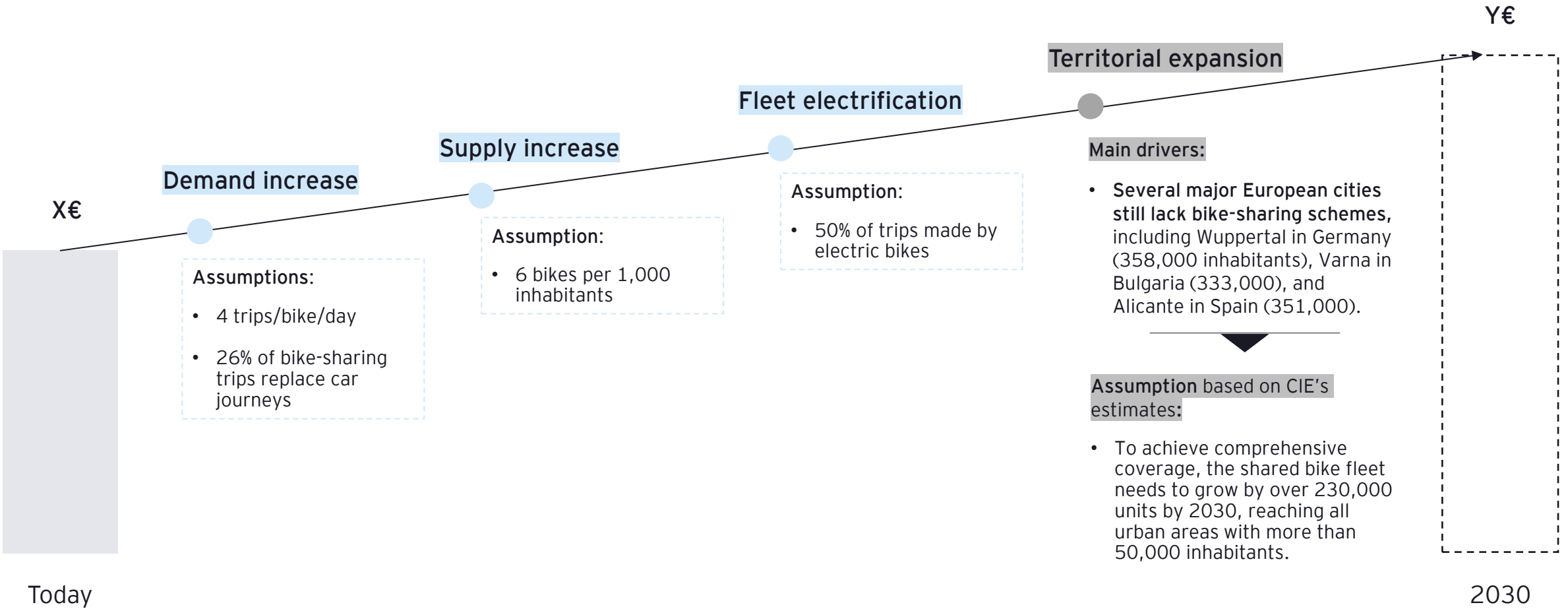


Sources : Brussels Mobility, Public Bicycles (PB) & Long-Term Rental (LTR) International Benchmark (2024) , CIE, Shared Ambition (2023, 2024), Fluctuo (2024)

Four multiplier effects could significantly boost bike-sharing use and its positive impacts by 2030 (4/5)

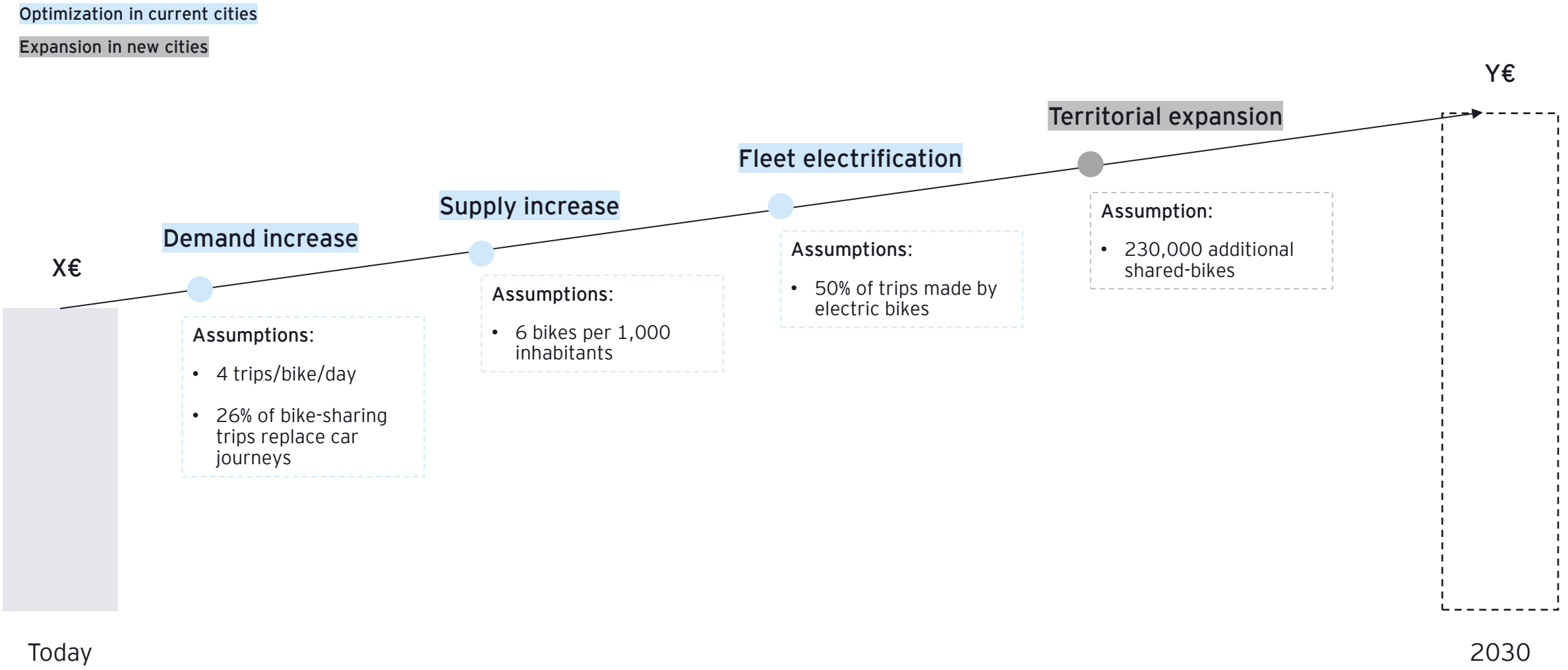
Optimization in current cities

Expansion in new cities



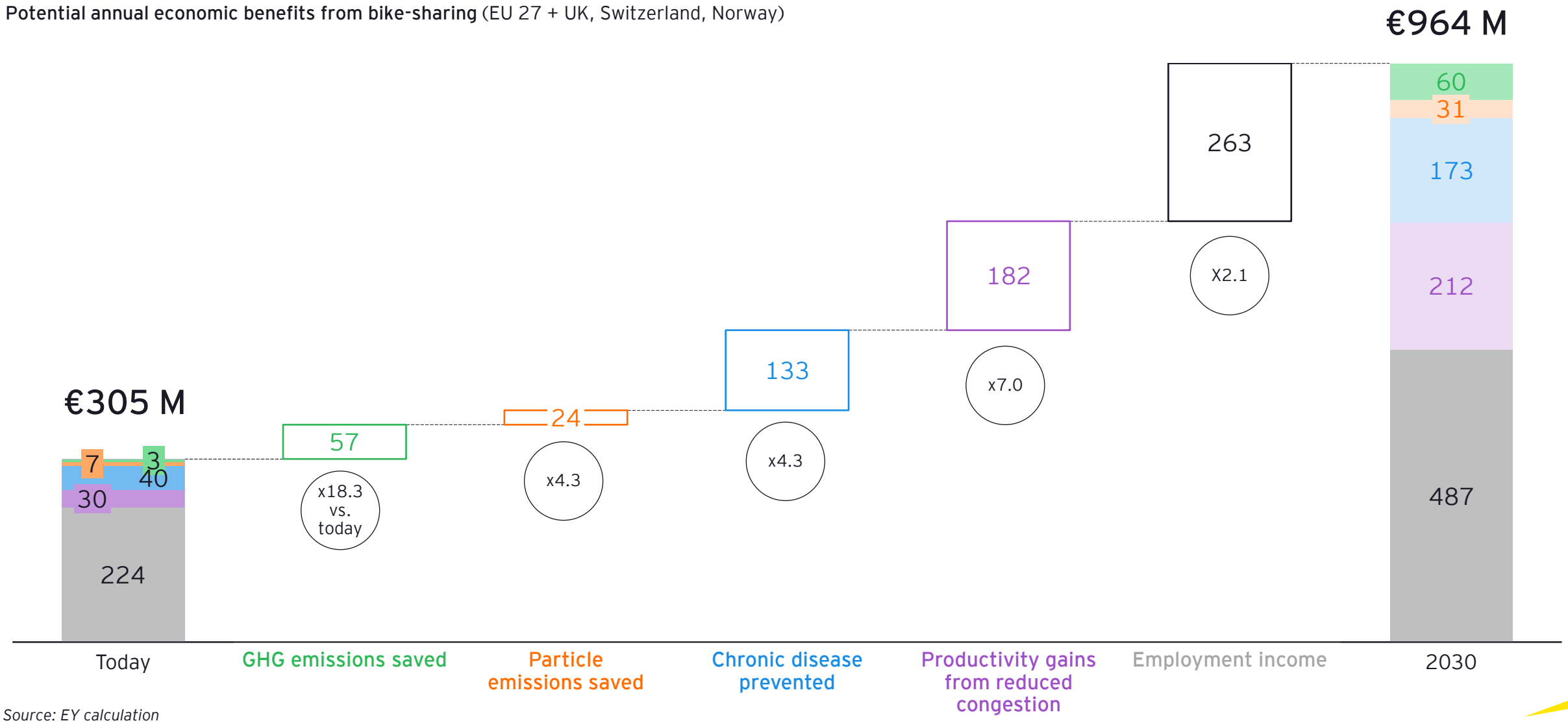
Sources : CIE, Bike Sharing to accomplish EU's Social Climate Fund goals (2025)

Four multiplier effects could significantly boost bike-sharing use and its positive impacts by 2030 (5/5)



Bike-sharing's positive impacts could triple by 2030, hitting ~€1 billion annually

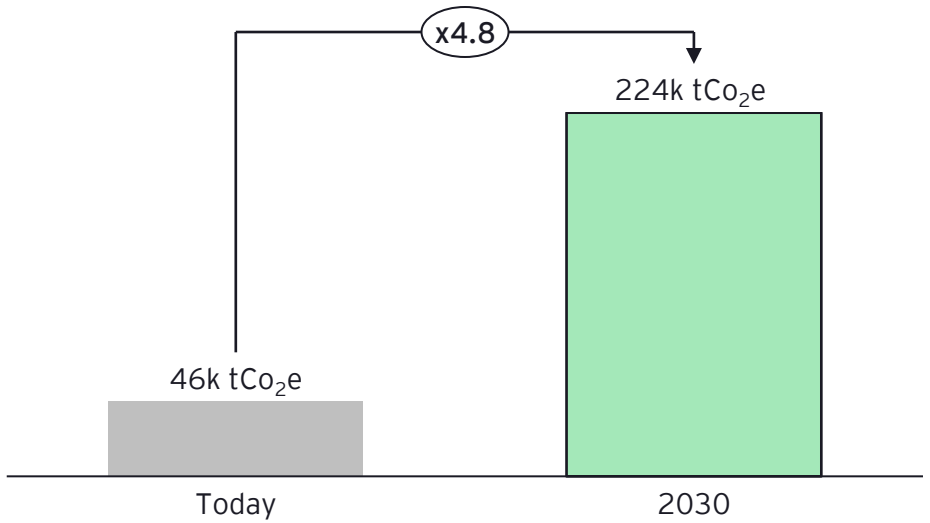
Potential annual economic benefits from bike-sharing (EU 27 + UK, Switzerland, Norway)



Source: EY calculation

Bike-sharing could cut 224,000 t CO_2e per year by 2030 - x5 today's levels - with savings estimated at €60M – x19 current benefits

Annual GHG emissions saved by bike sharing usage, k tCO_2e (EU 27 + UK, Switzerland, Norway)



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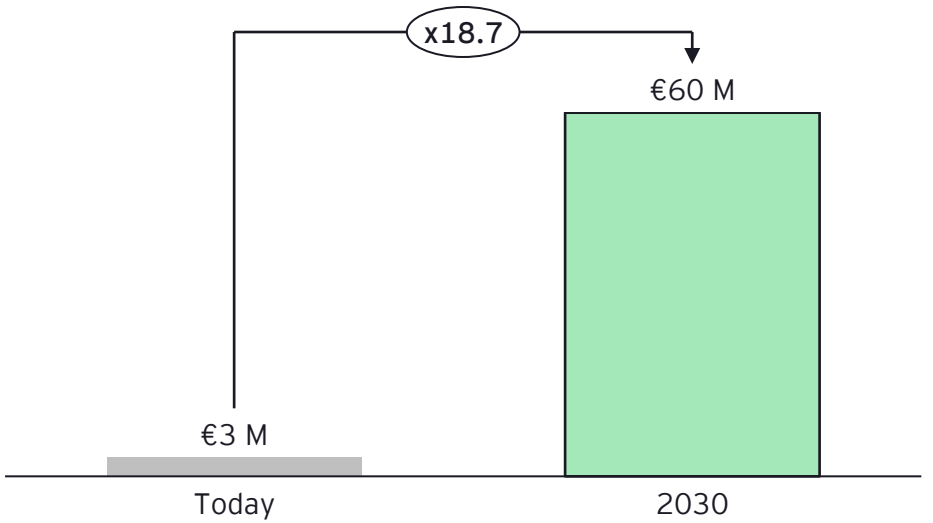
yearly emissions of a city of

21,000

inhabitants

Annual economic benefits from bike-sharing (EU 27 + UK, Switzerland, Norway)

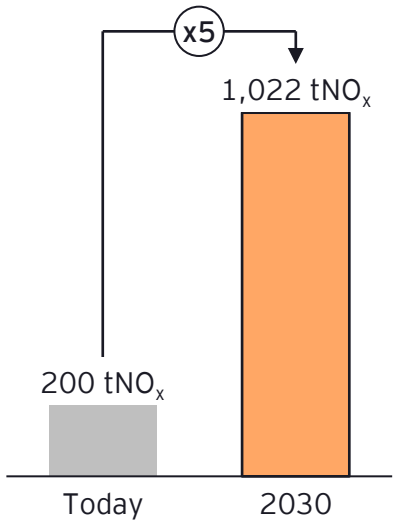


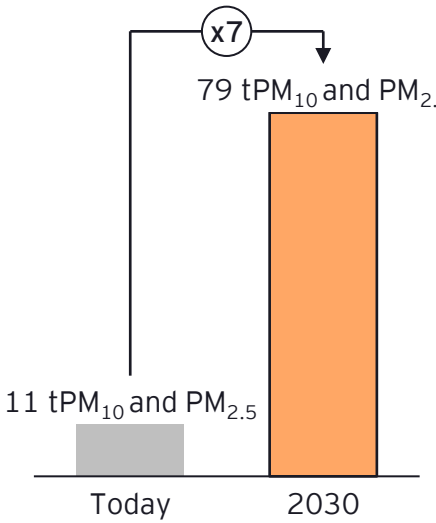
EU carbon prices could climb to €270/t by 2030 under the EU scenario.

Sources: International Transport Forum, Good to go? Assessing the Environmental Performance of New Mobility (2020) , International Transport Forum, Greener Micromobility (2024), EU ETS, Banque de France, Nouveaux scénarios NGFS (Phase 4) : impacts économiques pour la France (2023), EY calculation

By 2030, the use of bike-sharing could slash fine particle emissions sevenfold, creating €31M in annual positive externalities, up from €7M today

Annual nitrogen oxides (NO_X) and coarse particles (PM_{10}) emissions saved by bike sharing usage (EU 27 + UK, Switzerland, Norway)





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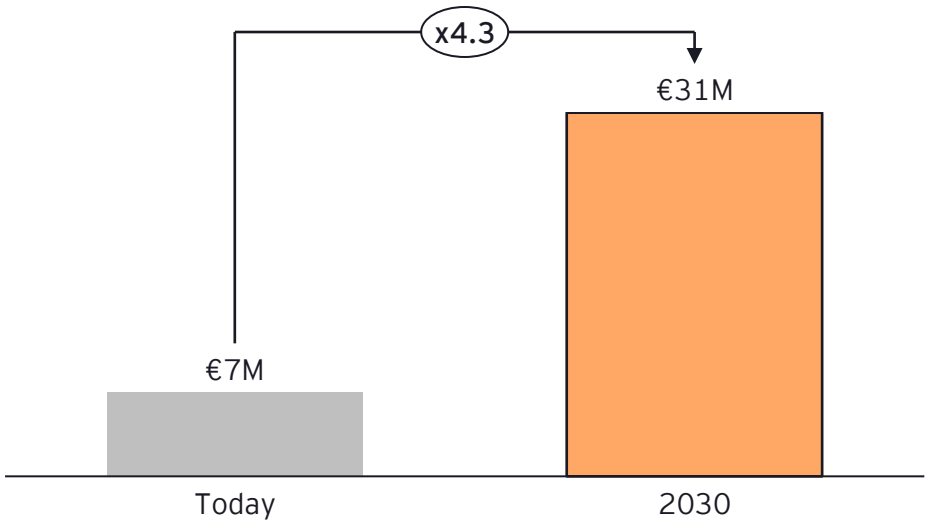
+260,000 people avoiding car commute annually

Annual economic benefits from bike-sharing (EU 27 + UK, Switzerland, Norway)

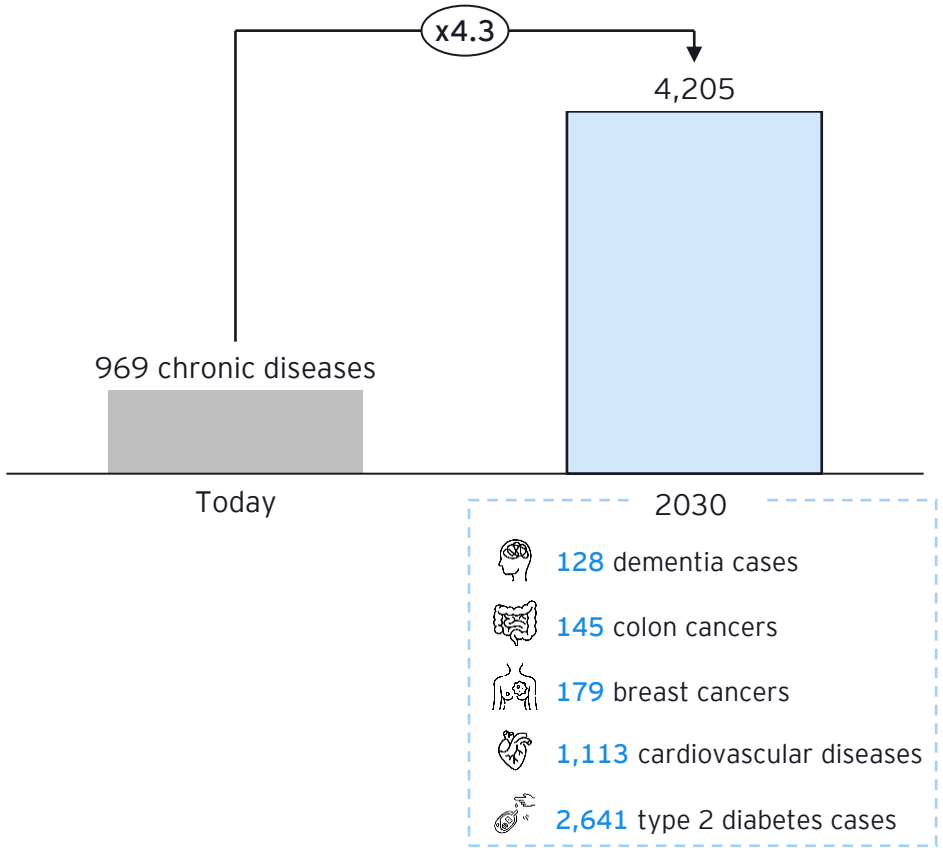


€31 M in positive externalities generated each year from avoided air pollution (NO_2, PM_{10}, $PM_{2.5}$, and SOMO35)

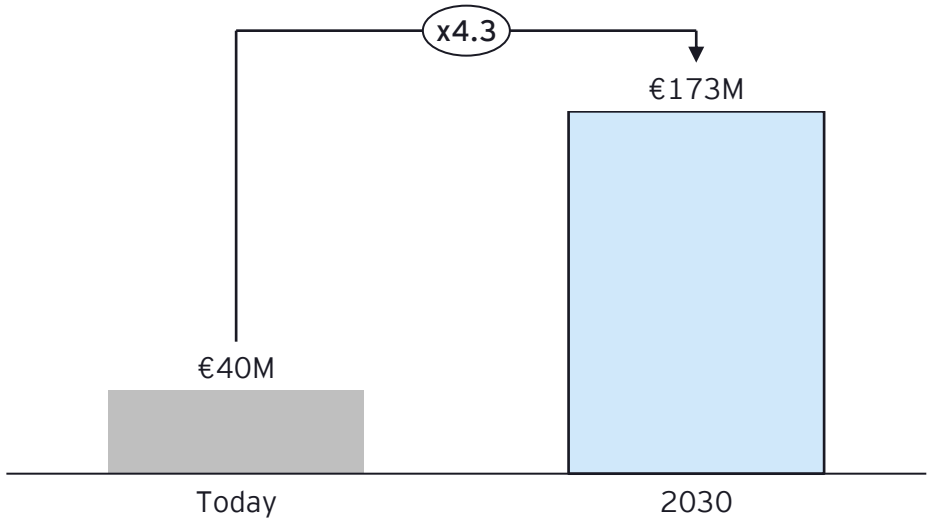
Sources : Airparif, Peitzmeier et al., Real-world vehicle emissions as measured by in situ analysis of exhaust plumes (2017), Institut Terram, mobilités : la santé mentale à l'épreuve des transport (2025), Ministère de la transition écologique, Comment les Français se déplacent-ils pour aller travailler ? (2024), European Commission, The Handbook on the external costs of transport (2019) , ADEME, contribution du développement de la marche et du vélo à la décarbonation et l'amélioration de la qualité de l'air (2025)

By 2030, bike-sharing could prevent around 4,000 cases of chronic disease annually and generate €173M in healthcare savings – x4 more than today

Annual diseases prevented by bike sharing usage (EU 27 + UK + Switzerland + Norway)



Annual economic benefits from bike-sharing (EU 27 + UK, Switzerland, Norway)

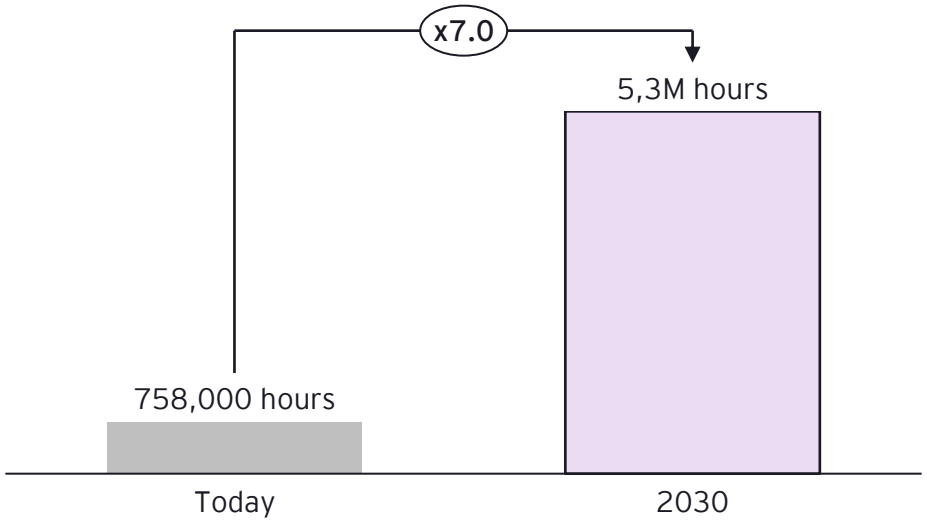


Annuals savings in public health expenditures

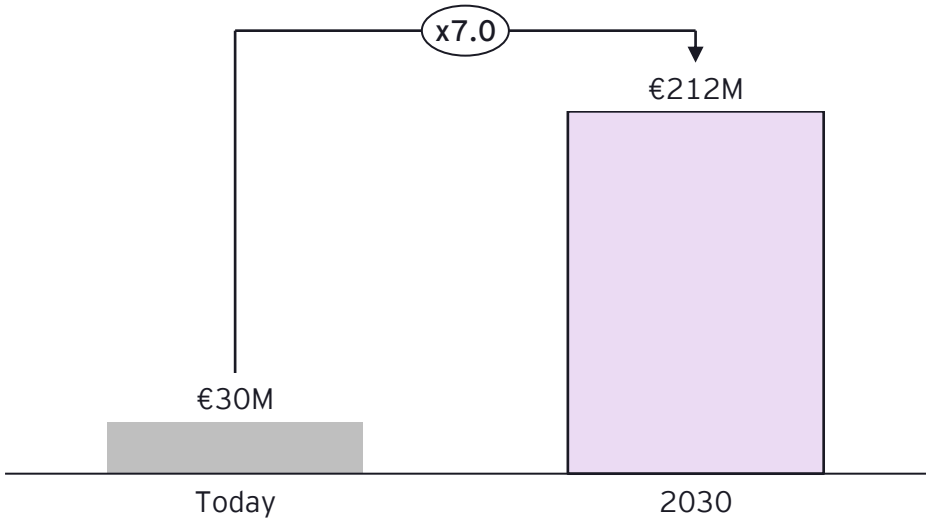
Sources: Emilie et al. The untapped health and climate potential of cycling in France: a national assessment from individual travel data, The Lancet Regional Health – Europe, Volume 39 (2024)

By 2030, each year, bike-sharing could reclaim ~5M hours lost to car travel, generating €212M in productivity gains – x7 times today's figure

Annual total time saved by all bike-sharing users (EU 27 + UK + Switzerland + Norway)



Annual economic benefits from bike-sharing (EU 27 + UK, Switzerland, Norway)

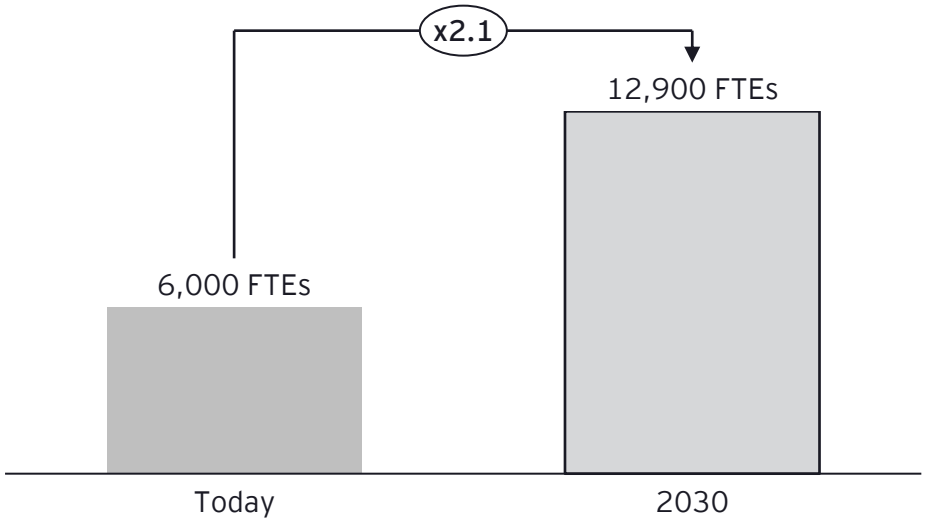


Annuals productivity gains derived from substituting car journeys with bike-sharing trips

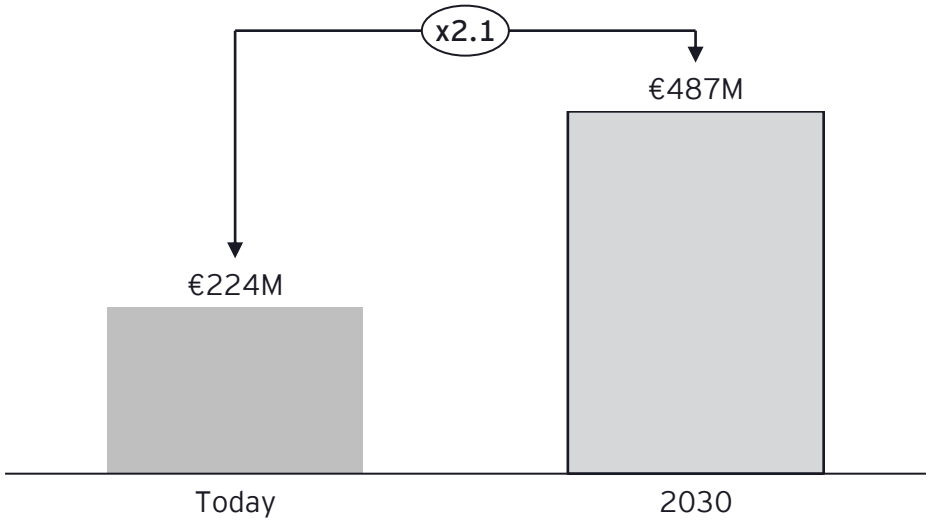
Sources: ADEME, EY calculation, Bernardo, Valeria, The Impact of Bike-Sharing Systems on Congestion. Evidence from European Urban Areas (2022), ECF and CIE, The benefits of cycling: unlocking their potential for Europe (2018)

Bike-sharing could support ~13,000 direct local jobs by 2030, generating €487M in annual wages and enhancing social value

Direct FTEs supported by bike-sharing (EU 27 + UK, Switzerland, Norway)



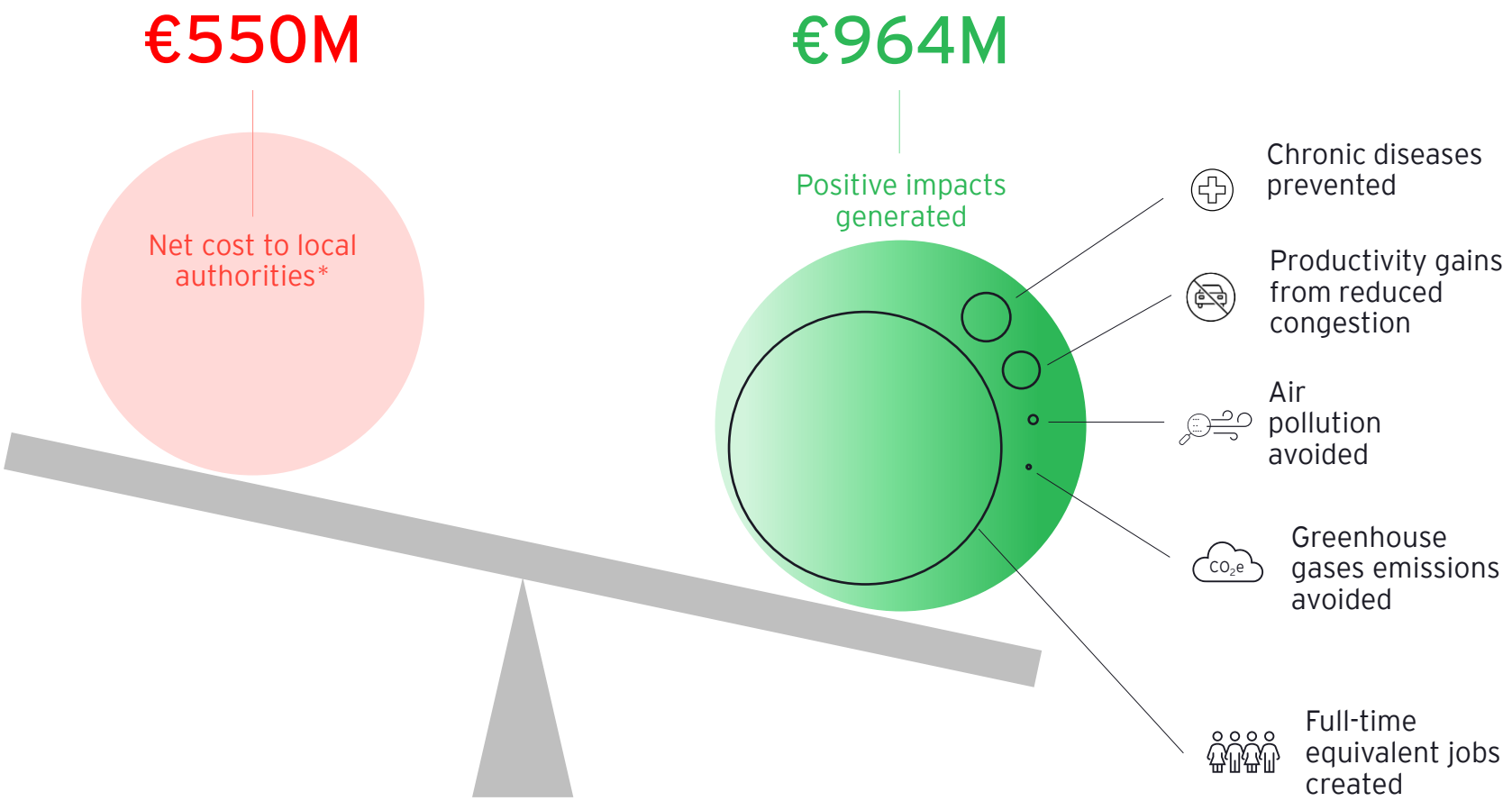
Annual economic benefits from bike-sharing (EU 27 + UK, Switzerland, Norway)



Annually generated in wages

Sources: Donkey Republic, EY calculation

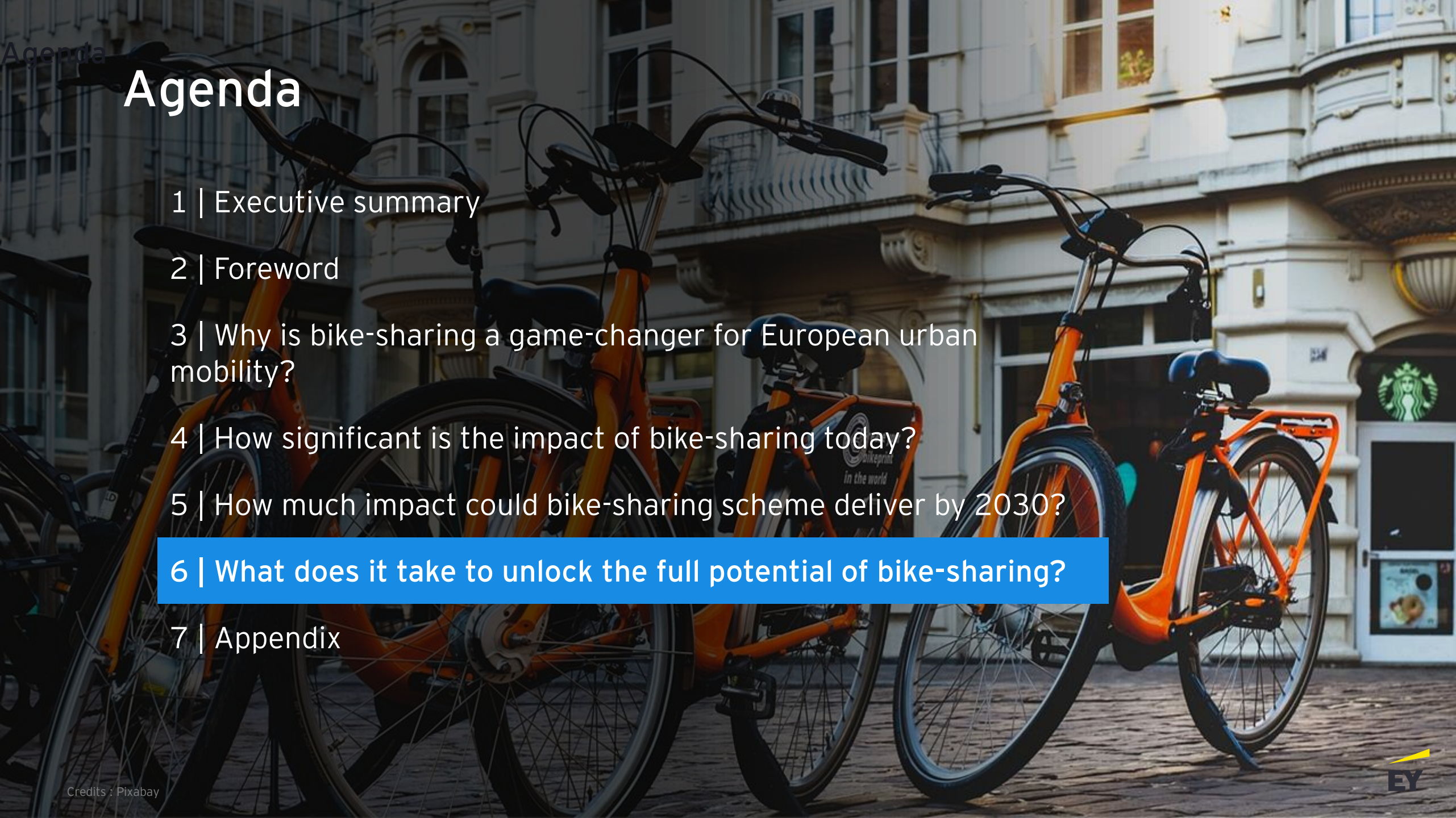
By 2030, each euro invested in bike-sharing could generate €1.75 in positive impacts, delivering a 75% annual return



*The net cost to local authorities has been estimated using public data, including ADEME's data. It corresponds to the annual net expense per public shared bike, after deducting revenues generated by private shared bikes for the benefit of the local authority.

Sources: Brussels Mobility, Public Bicycles (PB) & Long-Term Rental (LTR) International Benchmark (2024), Association des acteurs du vélo public, Rapport du vélo public (2023), ADEME, Actualisation de l'étude d'évaluation des services vélos (2021), EY interview; EY calculation

Agenda



Credits : Pixabay

Workshops and in-depth interviews have provided valuable insights from both cities and operators, shedding light on the main barriers to the effective roll-out of bike-sharing schemes

Workshop held in Gdansk (Poland) during the Velo-city event on 11 June, bringing together approximately **30 participants**, including city representatives and bike-share operators

~20 interviews conducted via videoconference between May and July 2025. Participants included operators, city officials, and academic experts.

In your view, what are the main barriers to the expansion of bike-sharing systems for cities?

Word cloud generated based on responses provided by city representatives

Word cloud generated based on responses provided by operators

Analysis and responses from cities and operators helped identify nine key conditions for success, essential for unlocking the full potential of bike-sharing

Drive innovation and performance

Create conditions for flexible and efficient bike-sharing deployment
to give operators the opportunity to adapt supply to demand, implement dynamic pricing, and optimize fleet usage

Improve experience and service reliability
to effectively meet demand and user expectations

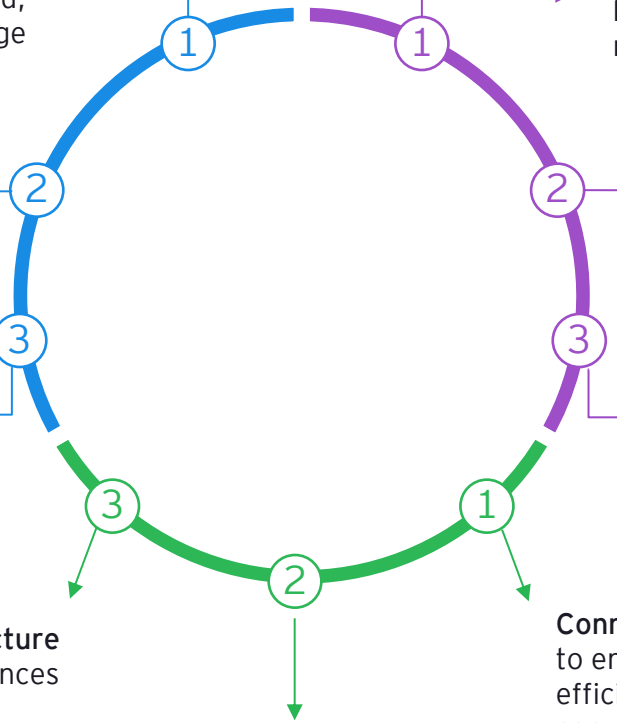
Establish a data-centric approach
that builds staff expertise, maximizes their capacity, and drives informed, evidence-based decision making

Build leadership and partnerships

Ensure long-term commitment
by securing political support and dedicated fundings and resources

Foster strong partnerships with bike-sharing operators
by creating conditions that guarantee long-term operational stability

Strengthen multilevel governance
to foster coherence across a broader territorial scale



Improve cycling infrastructure
to provide safe and seamless cycling experiences

Connect bike-sharing schemes with existing public transport networks
to enable seamless multimodal journeys, improve urban transport efficiency, and make public transit more attractive, accessible, and convenient

Promote a strong cycling culture
positioning bike-sharing as the go-to option for everyone

Empower people and places

Build leadership and partnerships | Recommendations to help policymakers ensure the conditions for success are met

1

Ensure long-term commitment

by securing political support and dedicated fundings and resources

- Integrate bike-sharing into city master plans and policies to embed it within urban mobility strategies and foster sustainable, long-term transport solutions
- Allocate long-term dedicated budget for maintenance and expansion
- Monitor performance and report impact to decision-makers

2

Foster strong partnerships with bike-sharing operators

by creating conditions that guarantee long-term operational stability

- Establish communication channels and share data with operators
- Lengthen contracts to ensure ROI and stable operations
- Streamline regulations and procurement to encourage investment
- Refine agreements with e-bike fleet investors to reward public objectives and offset the high costs of e-bike assets
- Incentivize operator expansion into peripheral areas
- Prioritize holistic ecosystem management over fragmented approaches

3

Strengthen multilevel governance

to foster coherence across a broader territorial scale

- Organise multi-jurisdiction governance, particularly within the same functional urban area (FUA)
- Align fleet sizes and station locations within FUAs
- Share data and best practices between municipalities
- Develop regional pricing and subscription models
- Coordinate infrastructure standards (bike lanes, signage, docking…)
- Plan joint communication/marketing campaigns to encourage cross-city cycling

Empower people and places | Recommendations to help policymakers ensure the conditions for success are met

1

Connect bike-sharing schemes with existing public transport networks

to enable seamless multimodal journeys

- Develop additional bike-share stations around transit nodes
- Implement unified payment systems, allowing single-ticket or app-based payments across all modes
- Planning routes connecting key residential, commercial, and educational areas, maximizing usability and convenience

2

Promote a strong cycling culture

positioning bike-sharing as the go-to option for everyone

- Launch public awareness campaigns promoting cycling benefits
- Organize community events, bike-to-work days, and competitions
- Offer cycling education programs in school and workplaces
- Enhance social incentives to bike-sharing accessibility

3

Improve cycling infrastructure

to provide safe and seamless cycling experiences

- Build protected bike lanes separated from traffic
- Improve intersection design to reduce conflicts with cars
- Install clear and consistent signage and road markings
- Maintain smooth road surfaces and remove hazards regularly
- Limit vehicle speeds where protected cycling infrastructure is absent

Drive innovation and performance | Recommendations to help policymakers ensure the conditions for success are met

1

Create conditions for flexible and efficient bike-sharing deployment

to give operators the opportunity to adapt supply to demand, implement dynamic pricing, and optimize fleet usage

- Provide bike-sharing operators with flexible operational frameworks that support real-time adaptation of supply to meet fluctuating demand
- Implement flexible pricing models (pay-as-you-go, daily passes, subscriptions, bundles for public transport users…)
- Allow incentives during high-demand periods or in busy zones to encourage balanced usage

2

Improve user experience and service reliability

to effectively meet demand and user expectations

- Offer intuitive, app-enabled rental and payment systems
- Include e-bikes or assistive options, especially for longer trips or hilly terrain
- Provide multilingual instructions and customer support, inclusive and easy to use for all demographics
- Implement incident reporting and real-time alerts to accelerate maintenance and problem resolution

3

Establish a data-centric approach

that builds staff expertise, maximizes their capacity, and drives informed, evidence-based decision making

- Collect and analyse real-time usage data to identify hotspots
- Monitor usage across docked systems and implement predictive redistribution to ensure availability
- Use predictive analytics to plan station locations and fleet size to future demand

The literature review helped identify cases where conditions for success were met, giving bike-sharing schemes a significant boost (1/2)

City	Ambition	Implementation	Success factors met
Gijon (Spain)	Update the system created in 2004 to provide an attractive and modern service	• Introduction of 250 electric bicycles to encourage adoption in a context of challenging topography • Introduction of lighter bicycles with redesigned and safer braking technology • Integration of sensors and connectivity features to streamline maintenance and generate real-time data • Expansion of the network to reach 47 stations	2 Improve user experience and service reliability 3 Establish a data-centric approach 3 Improve cycling infrastructure
Marseille (France)	Update the system created in 2007 to provide an attractive and modern service	• Introduction of 200 electric bicycles, effectively doubling the fleet • Creation of 70 stations to reach a total of 200 *Results: Trips doubled within six months despite a launch during the off-peak season (December)*	2 Improve user experience and service reliability 3 Improve cycling infrastructure
Cardiff (UK)	Combat vandalism and theft	• Cooperation with multiple stakeholders: led by Nextbike, in partnership with OVO Energy, the city council, the police, and local charities. • Key measures included community awareness campaigns, joint patrols, police training, improved incident reporting, strategic reallocation of stations, and increased enforcement.	2 Foster strong partnerships with bike-sharing operators 3 Strengthen multilevel governance 2 Promote a strong cycling culture
Barcelona (Spain)	Continuous improvement of the bike-sharing service	• The launch of the Bicing system in 2007 was accompanied by a plan to build over 200 kilometers of new cycling lanes. • Barcelona's regional AMBici system was gradually deployed across 15 municipalities, with 236 stations and 2,600 electric bicycles to support longer trips. • Barcelona stands out as the first city to use 100% of net revenue from on-street parking fees to finance its public bike-sharing system.	1 Ensure long-term commitment 3 Improve cycling infrastructure

Sources: Fifteen, Bicicleta compartida en Espana: oportunidades y retos para una movilidad urbana mas sostenible (2023), CoMoUK, Bike share guidance for local authorities (2022), ITDP, the Bikeshare planning guide (2018)

The literature review helped identify cases where conditions for success were met, giving bike-sharing schemes a significant boost (2/2)

City	Ambition	Implementation	Success factors met
The Capital Region of Denmark, Hovedstaden (Denmark)	Increasing the share of bike commuting from 22% to 32% of total commuting distance by 2035 and developing mobility hubs to enhance intermodal connectivity	• Deployment of 1,800 bicycles in areas underserved by public transport to serve as a first- and last-mile solution and enhance connectivity with the existing network • Launch of a pilot of 200 bicycles to test the model and gather critical insights • Coordination of 47 municipalities through a regional governance framework • Integration of shared bikes with the regional mobility authority to align transport modes • Monitoring of performance via a monthly data-driven steering committee using key indicators • Targeted hub placement using local stakeholder input, demographic analysis, and public transport data • Inclusion of shared bikes in the regional mobility app to streamline access and encourage multimodal use *Results : since the launch of the 200 bikes, over 8,700 unique users have used the service, with 30% of trips connected to other public transport modes.*	3 Strengthen multilevel governance 1 Connect bike-sharing schemes with existing public transport networks 3 Establish a data-centric approach
Antwerp Region (Belgium)	Extend shared bikes availability beyond the city limits to cover a broader metropolitan area	• Deployment strategy featuring a low station density of 0.3 stations per km², well below typical European urban averages of 2.4 to 5.2 stations per km² • Allocation of 86% of the fleet as electric bicycles to facilitate longer-distance trips to the city and inter-suburban travel, particularly for daily commutes integrated with public transport • Coordination of regional governance under Lantis, uniting two transport regions and 32 municipalities around a shared strategy • Enhancement of multimodal accessibility by deploying virtual stations near mobility hubs to streamline connections with public transport	3 Strengthen multilevel governance 3 Improve cycling infrastructure 2 Improve user experience and service reliability

Sources: UE Gemini project, Dott, Rudersal Kommune, Hovedstaden, Traffic and mobility plan for the capital region of Denmark, City of Copenhagen, The bicycle account 2022 (2022), EY interviews, Donkey Republic, Brussels Mobility, Public Bicycles (PB) & Long-Term Rental (LTR) International Benchmark (2024)

Interviews suggested that both municipalities and operators are grappling with which procurement approaches are most suitable to implement

Interviews and the literature review helped identify issues and examples related to procurement. The following provides a non-exhaustive overview.

What are the issues ?	What is at stake ?	Examples
Public-private partnership or permitted system?	• Publicly procured bikeshare systems are generally used for docked bikes. This structure is defined by the establishment of one or more contracts between the organizing public authority and each of the various system components, including bikes and stations, software, operations, advertising, and marketing. • The permitted system framework is designed for privately operated systems, potentially involving multiple operators. In addition to the permit itself, several cities require private bikeshare operators to agree to comply with additional rules to obtain approval.	• In London, the model chosen is a public-private partnership between Transport for London and Serco for Santander Cycles. • In Rome, the permitted system allows multiple private operators to obtain authorization for a three-year concession, paying a fee per vehicle and complying with rules on speed, vehicle identification, and prior operational experience.
Bundling of contracts or separate contracts?	• Combining infrastructure and operations incentivizes the contractor to provide high-quality infrastructure thus reducing maintenance costs and easing system transition from infrastructure implementation to service operation. • a distinct contract for operations and infrastructure due to varying depreciation times of hardware such as stations, terminals, and control centers.	• In Antwerp, Paris, and Brussels, cities issued tenders combining both the provision of bikes and stations and the service operations. • In Budapest, the city issued a tender only for operations.
Short or long contracts?	• Long-term contracts are generally used when significant infrastructure investment is required, allowing for asset depreciation and enabling the operator to earn a return on investment. • Short-term contracts are often aligned with the lifespan bicycles (three to five years), offering the city flexibility to adapt to new technologies and operating models. • To ensure uninterrupted service, the city must retain control over the software and data, since hardware and software do not have the same lifespan.	• Contracts generally last more than 10 years (Brussels, Antwerp Region). • Budapest has a five-year contract corresponding to bicycle depreciation. • Vienna has a five-year contract with the possibility of a four-year extension.
Which operation and impact objectives ?	• The primary objectives are to effectively manage public space, promote equity and accessibility, enhance planning and enforcement, and protect users. • Bikeshare can also be a key component in achieving accessibility, sustainability, health, and other goals cities are already working toward. • Unrealistic quality targets can lead operators to inflate bids or face financial failure.	• The Belfast tender incorporated a 20% scale value scoring in the selection process. • Brussels required that the operator use renewable electricity for both operation and maintenance. • Antwerp's Velo sets non-punitive targets.

Sources : ITDP, The Bikeshare planning guide (2018), EY interviews

Agenda

Credits : Pixabay

25 city representatives, operators, and experts participated in the workshop organized in Gdansk during Velocity on June 11, 2025

Name		Entity	Country
Alejandro	Martín Barraza	INURBA mobility	Spain
Alessia	Di Maio	Lyft Urban Solutions	
Bram	de Pooters	City of Antwerp	The Netherlands
Camille	Loth	Cooltra	Spain
Christophe	de Voghel	City of Brusells	Belgium
Emma	Edvardsson	City of Goteborg	Sweden
Hanna	Helsing	City of Stockholm	Sweden
Henrik	Söderström	City of Stockholm	Sweden
Jean-Michel	Boëz	Fifteen	France
Jennifer	McGrath	Dublin city council	Ireland
Julien	Renggli	Mobilidée	Switzerland
Karen	Vancluysen	Polis	Bruxelles
Keroum	Slimani	Metropolis of Lyon	France

Name		Entity	Country
Kristian	Brink	Urban Sharing	Norway
Małgorzata	Jedynak	Krakow	Poland
Mark	Sexton	Its Global	UK
Nicolas	Boutaud	Smovengo	France
Piotr	Kaczmarek	Next Bike	Poland
Piotr	Borawski	Gdansk	Poland
Sebastian	Schlebusch	Dott	Germany
Sheila	Ferrer	Spanish Ministry of Transport and Sustainable Mobility	Spain
Sven	Huysmans	City of Antwerp	The Netherlands
Thomas	Mourey	Eurocities	Belgium
Tom	Nutley	Urban Sharing	Norway
Victor	van der Have	Fondation Rotterdamse Stadsfiets	The Netherlands

Around 20 interviews with city representatives, operators, and experts have been conducted throughout the project timeline

Name		Position	Entity	Date
Rikesh	Shah	Independent consultant	-	12/06/2025
Søren	Kofoed Bom	Project Manager for Mobility	Capital Region of Denmark (Hovedstaden)	21/05/2025
Romeo	Arianna	Mobility Officer		
Damien	Cottereau	Cycling Policy Project Manager	Grenoble Metropolitan Mobility Entity	13/06/2025
Marine	Francon		Lyon Metropolis	04/07/2025
Lara	Assouline	Mobility director		
Anouk	Exertier	Development of Mobility Services		
David	Leicher Auchapt	Project Manager for Bike and Station-Based Carsharing Services		
Anne-Sophie	Petitprez	Head of the Mobility Management Unit		
Fabien	Tshiteya	Head of the Data, Monitoring, and Mobility Modeling Unit		
Mathieu	Meylan			04/08/2025
Céline	Magry	Head of the land and real estate strategy coordination unit		
Laurence	Castellon	Head of the public space transformation department		
Sylvain	Raifaud	President of Agemob (the entity in charge of Vélib'). Paris city councillor	City of Paris	14/07/2025
Sebastian	Schlebush	Head of Market Development	Dott	21/07/2025
Bram	Seeuws	Project and policy coordinator	Way to go	24/07/2025
Matthew	Chapman	Hub manager at Glasgow	Velogik	29/07/2025

More than 50 sources, including academic research, industry reports, and press articles, were drawn upon to underpin the study (1/3)

Theme	Title	Author	Date
Fleet	Shared ambition benchmark, 1rst and 2dn edition	CIE	2023,2024
	European shared mobility, 2023 and 2024 edition	Fluctuo	2023, 2024
	Health impacts of bike-sharing systems in Europe	Otero et al.	2018
	Public Bicycles (PB) & Long-Term Rental (LTR) International Benchmark	Brussels Mobility	2024
	City statistics – demography	Eurostat	2024
	ESG report	Donkey republic	2024
	Bike-sharing Systems' Impact on Modal Shift: A Case Study in Delft, the Netherlands	Ma et al.,	2020
	Rapport du vélo public	Association des acteurs du vélo public	2023
	Livre blanc : l'impact du vélo en libre-service électrique dans les villes moyennes	Fifteen	2024
	Actualisation de l'étude d'évaluation des services vélos	ADEME	2021
	Measuring New Mobility: Definitions, Indicators, Data Collection	ITF	2023
	Fifth generation of bike sharing systems – examples of Poland and China	Chen et al.	2018
	The contradictions of bike-share benefits, purposes and outcomes	Médard de Chardo	2019
	Fiche vélo	Certu	2012
Congestion	Special Eurobarometer 495 - Mobility and transport	European Commission	2020
	TomTom Traffic Index 2025	TomTom	2025
	Sustainable Urban Mobility in the EU: No substantial improvement is possible without Member States' commitment	European Court of Auditors	2020
	The Impact of Bike-Sharing Systems on Congestion. Evidence from European Urban Areas	Bernardo, Valeria	2022
	The benefits of cycling: unlocking their potential for Europe	ECF and CIE	2018

More than 50 sources, including academic research, industry reports, and press articles, were drawn upon to underpin the study (2/3)

Theme	Title	Author	Date
Health	Step up! Tackling the burden of insufficient physical activity in Europe	WHO, OCDE	2024
	Health-enhancing physical activity in the European Union	WHO	2024
	European Declaration on Cycling	European Commission	2024
	Annual Shared Micromobility Report	CoMoUK	
	Rapport du vélo public	Association des Acteurs du Vélo Public	2023
	Annual activity report (Rapport d'activité)	Agemob	2023
	The untapped health and climate potential of cycling in France: a national assessment from individual travel data	Emilie et al.	2024
GHG emissions	Decarbonizing transport in Europe – the way forward	International Transport Forum	2020
	The ITF Urban Passenger model – Insights and example outputs	International Transport Forum	2020
	Good to go? Assessing the Environmental Performance of New Mobility	International Transport Forum	2020
	Greener Micromobility	International Transport Forum	2024
	Nouveaux scénarios NGFS (Phase 4) : impacts économiques pour la France	Banque de France	2024
Air pollution	Air pollution in the EU: facts and figures	Council of the European Union	2022
	Air quality status report 2025	European Environment Agency	2025
	Flash Eurobarometer 561 – Public opinion on urban challenges and investment in cities	European Commission	2025
	Premature deaths due to exposure to fine particulate matter in Europe	European Environmental Agency	2024
	Contribution du développement de la marche et du vélo à la décarbonation et l'amélioration de la qualité de l'air	ADEME	2025
Jobs	ESG report 2024	Donkey republic	2025
	Rapport d'activité	Genèveroule	2024

More than 50 sources, including academic research, industry reports, and press articles, were drawn upon to underpin the study (3/3)

Theme	Title	Author	Date
Accessibility	Changeons d'air, changeons de mobilités	ADEME	2024
	Transport poverty: definitions, indicators, determinants, and mitigation strategies	European Commission	2024
	Le réseau Vélo'v s'agrandit avec 33 nouvelles stations Vélo'v	Métropole Grand Lyon	2025
	Nouveau Vélo'v électrique : la mobilité active en toute simplicité	Métropole Grand Lyon	2023
	La géographie prioritaire dans la métropole de Lyon (contrat de ville 2024-2030)	Urbalyon	2024
	Lessons from thirteen years of the London cycle hire scheme: A review of evidence	Zhang et al	2024
	Effect of dockless bike-sharing scheme on the demand for London Cycle Hire at the disaggregate level using a deep learning approach	Ding et al	2022
	Glasgow's bikeshare scheme: trends in use	Glasgow Centre for Population Health	2023
2030 scenario	Urban adaptation in Europe	European Environment Agency	2020
	The development trends of lowand zero-emission zones in Europe	Clean cities	2022
	Mobility barometer	Ipsos	2024
	European Urban Mobility Framework	European Commission	2021
	Bike Sharing to accomplish EU's Social Climate Fund goals	CIE	2025
Barriers	Optimising Bike Sharing in European Cities	OBIS	2011
	Bicicleta compartida en Espana: oportunidades y retos para una movilidad urbana mas sostenible	Fifteen	2023
	Bike share guidance for local authorities	CoMoUK	2022
	The Bikeshare planning guide	ITDP	2018
	Traffic and mobility plan for the capital region of Denmark	Copenhagen Hovedstaden	-
	The bicycle account 2022	City of Copenhagen	2023

Focus | *The untapped health and climate potential of cycling in France: a national assessment from individual travel data*

Health

Articles

The untapped health and climate potential of cycling in France: a national assessment from individual travel data

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[b]Mistra, Stockholm School of Economics, Stockholm, Sweden
[c]Centre for Environmental Policy Imperial College London, London, United Kingdom
[d]MRC Centre for Environment and Health, School of Public Health, Imperial College London, London, United Kingdom
[e]Centre International de Recherche sur l'Environnement et le Développement (CIRED), Centre National de la Recherche Scientifique (CNRS), Nogent-sur-Marne, France
[f]Unité PACRI, Institut Pasteur, Conservatoire national des arts et métiers, Paris, France

Summary

Background Promoting active modes of transportation such as cycling may generate important public health, economic, and climate mitigation benefits. We aim to assess the mortality and morbidity impacts of cycling in a country with relatively low levels of cycling, France, along with associated monetary benefits. We further assess the potential additional benefits of shifting a portion of short trips from cars to bikes, including projected greenhouse gas emissions savings.

Methods Using individual data from a nationally representative mobility survey, we described the French 2019 cycling levels by age and sex. We conducted a burden of disease analysis to assess the incidence of five chronic diseases (breast cancer, colon cancer, cardiovascular diseases, dementia, and type-2 diabetes) and the number of deaths prevented by cycling, based on national incidence and mortality data and dose–response relationships from meta-analyses. We assessed the corresponding direct medical cost savings and the intangible costs prevented based on the value of a statistical life year. Lastly, based on individual simulations, we assessed the likely additional benefits of shifting 25% of short (<5 km) car trips to cycling.

Findings The French adult (20–89 years) population was estimated to cycle on average 1 min 17 sec pers^{-1} day^{-1} in 2019, with important heterogeneity across sex and age. This yielded benefits of 1,919 (uncertainty interval, UI: 1,101–2,736) premature deaths and 5,963 (UI: 3,178–8,749) chronic disease cases prevented, with males reaping nearly 75% of these benefits. Direct medical costs prevented were estimated at €191 million (UI: 98–285) annually, while the corresponding intangible costs were nearly 25 times higher (€4.8 billion, UI: 3.0–6.5). We estimated that on average, €1.02 (UI: 0.59–1.62) of intangible costs were prevented for every km cycled. Shifting 25% of short car trips to cycling would yield approximatively a 2-fold increase in deaths prevented, while also generating important CO_2 emissions reductions (0.257 $MtCO_2e$, UI: 0.231–0.288).

Interpretation In a country with a low- to moderate-cycling culture, cycling already generates important public health and health-related economic benefits. Further development of active transportation would increase these benefits while also contributing to climate change mitigation targets.

Funding This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Keywords: Physical activity; Cycling; Health impact assessment; Active transportation; Health co-benefits of climate action; Urban mobility

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Translation: For the French translation of the article see Supplementary Materials section.

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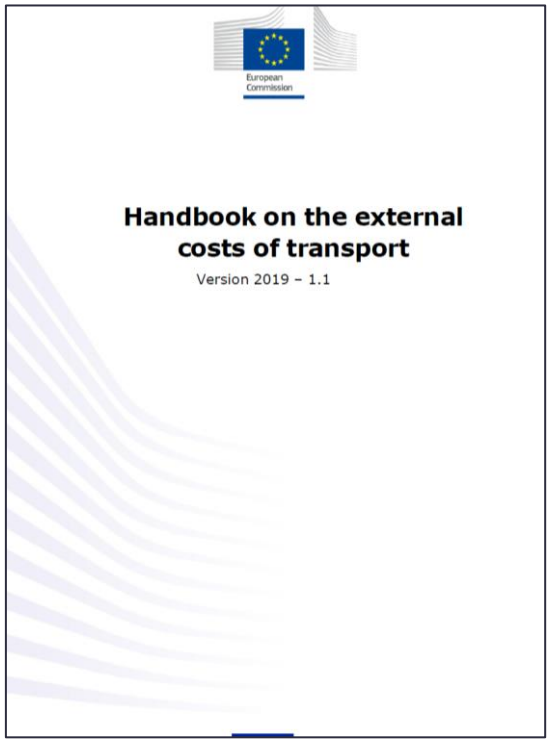
Emilie et al. The untapped health and climate potential of cycling in France: a national assessment from individual travel data, The Lancet Regional Health – Europe, Volume 39, 2024

Relevance	• Recognized by the scientific community (published in The Lancet, promoted by the Institut Pasteur). • Details the diseases studies : make the study more pedagogical to understand.
Limitation	• Exclusively focused on the French population. We assumed that travel patterns observed in the French population are considered representative of those of the broader European population. • Not specific to bike-sharing, but applicable to all forms of bicycle use. • No differentiation between mechanical bikes and e-bikes. • Healthcare cost figures for the diseases: originally in 2018 euros and updated to 2025 terms.

Data	• Counterfactual scenario used: cycling trips are replaced by modes of transport involving no physical activity, such as cars or public transport.
	• Diseases studied :
	  • breast cancers
	  • colon cancers
	  • cardiovascular diseases
	  • dementia cases
	  • type 2 diabetes cases
	• Health care costs are based on expenses reimbursed by all health insurance schemes : (1) outpatient care, (2) hospitalization in public or private healthcare facilities (3) daily allowances. Total disease-specific medical costs were estimated from annual costs assuming an average duration of disease. The average duration is estimated as : if the disease is stable within the population (neither increasing nor decreasing), then the average duration can be estimated by dividing the total number of individuals currently affected (prevalent cases) by the number of new individuals who develop the disease (incident cases).

Focus | *Handbook on the external costs of transport*

Noise and air pollution

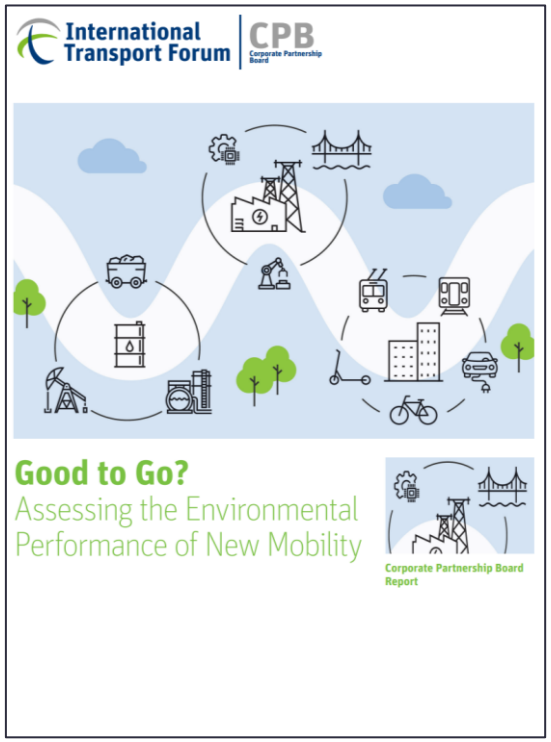


European Commission DG MOVE, Handbook on the external costs of transport, 2019

Relevance	• Data representativeness: ratios calculated at the European level • Reference document: used in numerous studies on transportation in Europe
Limitation	• No details on physical quantity avoided or emitted
Data | Noise pollution costs	• Annoyance represents the disturbance individuals experience when they are exposed to traffic noise. It can hinder people in performing certain activities, which may lead to a variety of negative responses, including irritation, disappointment, anxiety, exhaustion and sleep disturbance. • Health costs include the burden associated with conditions such as ischemic heart disease, stroke, dementia, and hypertension.
Data | Air pollution costs	• Health effects: Inhalation of air pollutants increases the risk of respiratory and cardiovascular diseases. These adverse health impacts result in higher medical costs, reduced productivity due to lost workdays, and, in severe cases, premature death. • Material damage: Air pollution causes corrosion through acidification, as well as the degradation of paintwork and plastics. • Crop losses: Ozone and other acidic pollutants damage agricultural crops, leading to reduced yields as pollutant concentrations rise. • Biodiversity loss: Air pollutants contribute to ecosystem damage—such as soil and water acidification and eutrophication—resulting in decreased biodiversity.

Focus | *Good to Go? Assessing the Environmental Performance of New Mobility*

GHG emissions

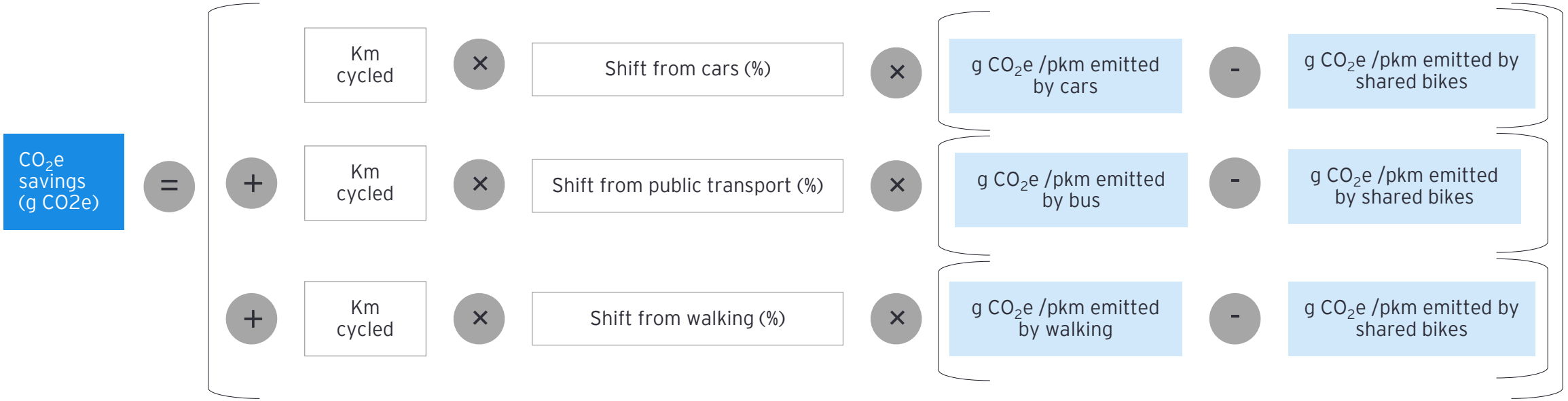


ITF,
Good to Go? Assessing the Environmental Performance of New Mobility, 2020
and Greener Micromobility, 2024

Relevance	• The ITF data are based on a full life-cycle assessment. • ITF is a non-partisan source and emissions from shared bikes are calculated based on Dott, Bolt, Lime, Tier, Voi, Swapfiet, Veligo data completed by data from scientific papers. • ITF has a consistent and standardised methodology. The same calculation method and methodological choices are applied across all vehicle types, enabling reliable comparisons. • ITF uses a harmonized European approach. The methodology is based on European-level data rather than being limited to national or local scopes, providing a broader and more representative perspective. • ITF updated its calculation in 2024.
Limitation	• None

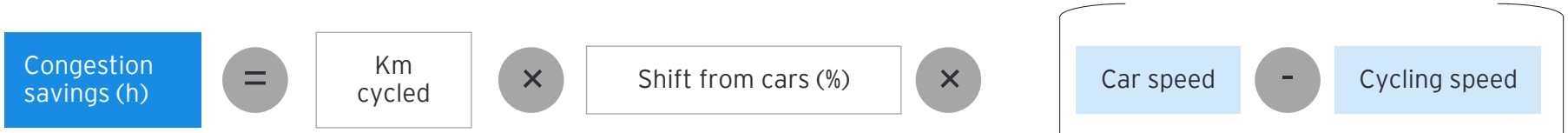
Data	The lifecycle analysis evaluates energy use and environmental impacts during design, production, use and operation, maintenance and repair and end-of-life treatments. The ITF underlines 4 mains components of the life cycle :
	1. Vehicle components which includes the emission of:
	  • Primary and secondary material extraction and processing
	  • Vehicle component fabrication
	  • Vehicle assembly, transport to point of use
	  • End-of-life treatment
	2. Fuel component which includes the emission of:
	  • Primary energy extraction and production of the fuel/energy vector
	  • Final use of the fuel/energy vector by the vehicle
	3. Infrastructure component which includes the emission of:
	  • Construction, maintenance and end-of-life management of the transport infrastructure
	4. Operational services which includes the emission of :
	  • (For shared bikes only) travel needed for charging and repositioning

Approach adopted for impact quantification (1/4)

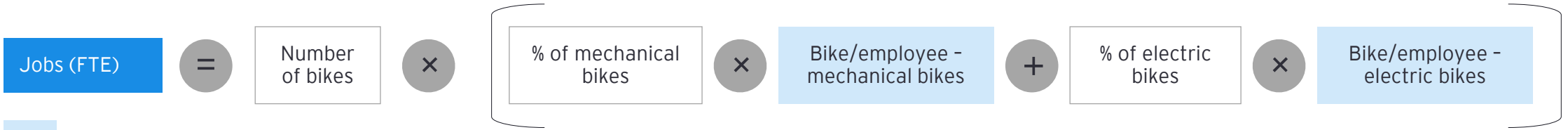


Source: IFT, Good to Go? Assessing the Environmental Performance of New Mobility (2022) and Greener Micromobility (2024)

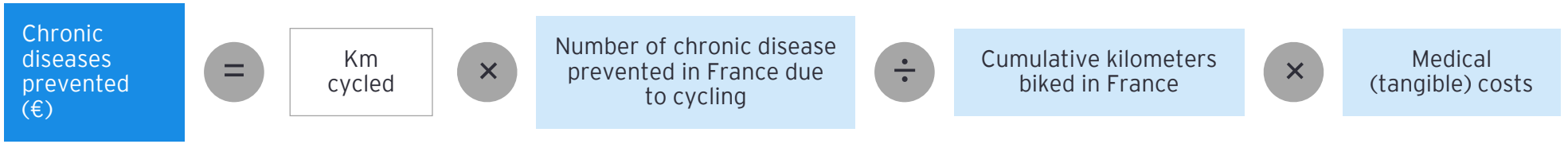
Approach adopted for impact quantification (2/4)



Source: ADEME

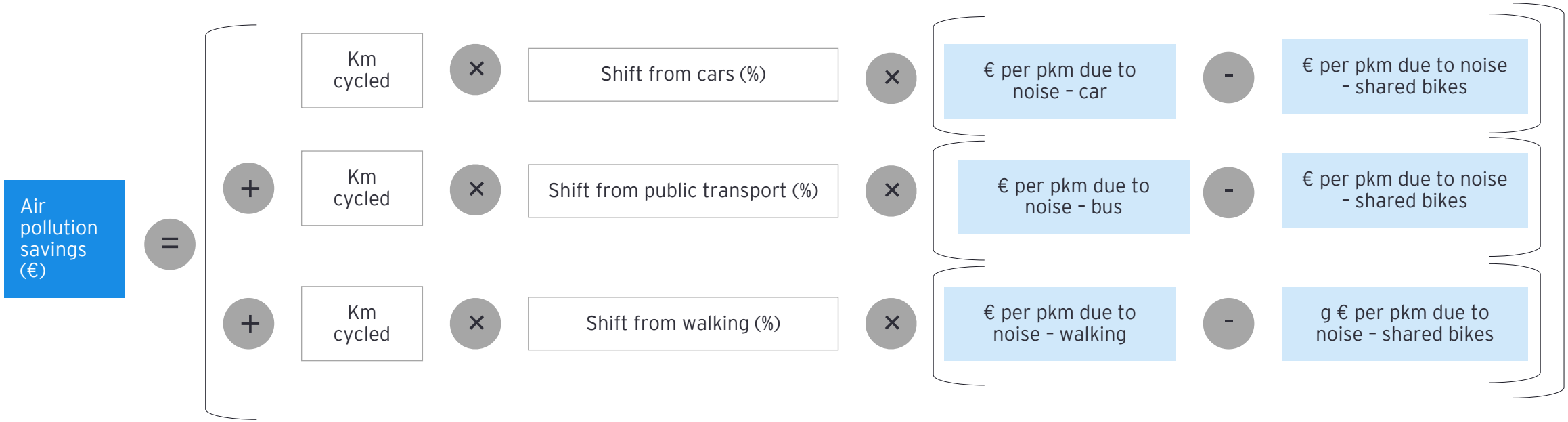


Source: Donkey Republic



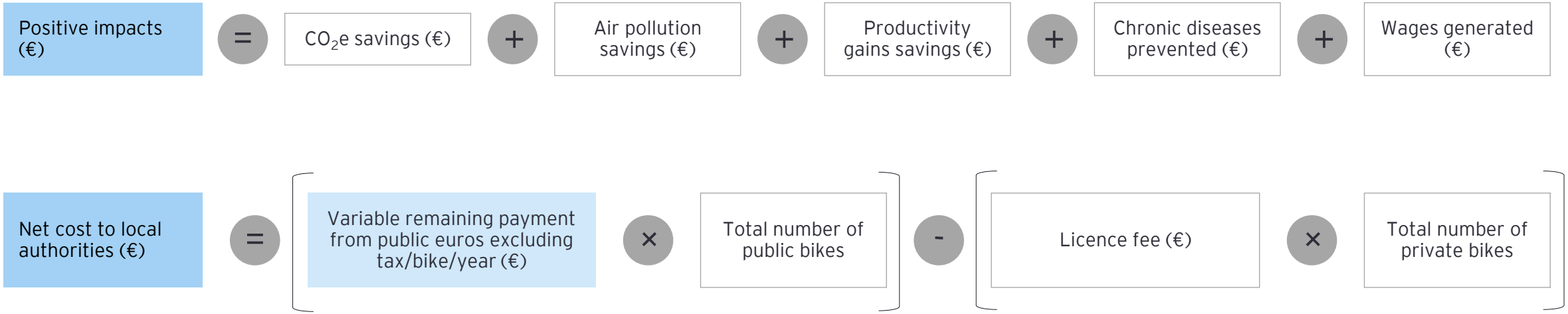
Source: Emilie et al. The untapped health and climate potential of cycling in France: a national assessment from individual travel data (2024)

Approach adopted for impact quantification (3/4)



Source: UE Commission, Handbook on the external costs of transport (2019)

Approach adopted for impact quantification (4/4)



Source: Brussels Mobility, Public Bicycles (PB) & Long-Term Rental (LTR) International Benchmark (2024), Association des acteurs du vélo public, Rapport du vélo public (2023), ADEME, Actualisation de l'étude d'évaluation des services vélos (2021), EY interview

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