

Sharing the city

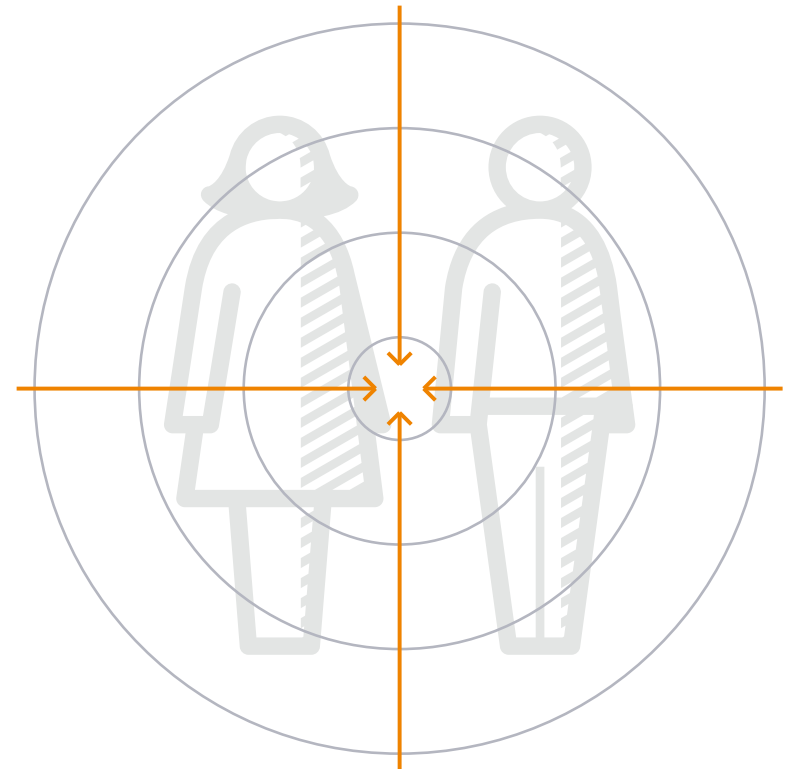
How seven cities are re-inventing
mobility for everyone

Introduction: re-thinking our options for getting around

Every city wants to be thought of as “people-centered”, and provide a clean, safe and stimulating place, where citizens enjoy spending time and money, and are happy to contribute.

Much goes into livability – perhaps no factor more important than mobility – the different ways people and their goods get from point A to point B.

In this guide we'll showcase seven cities that are re-inventing urban travel for ease of use and quality of life. They've recognized that car-only approaches will not solve the mobility crunch, and they're leading this change by exploring multi-modal, interconnected systems of moving people and goods – through vehicles, transit, walking and biking. In shifting their perspectives, these cities are making a big difference to quality of life for their citizens, while at the same time nurturing their economies.



Six ways to improve travel through choice

For people to adopt a mode of transport, it has to be feasible in their city, i.e. easy, affordable, safe, quick and enjoyable.

Here are six principles that can improve mobility in cities and give citizens more, and better, travel options:



Ensuring walkability

E.g. accessible, well-lit sidewalks and crossings that provide safe and wide spaces for pedestrians. This is especially important for the 'first and last mile' of any journey.



Making roads bicycle-friendly

E.g. bike lanes with the appropriate signaling and infrastructure to share the streets in a safe way. Also, easy-to-use bike-sharing.

**Facilitating multi-modal travel**

Making it convenient to get around via multiple modes of transport; integrating different systems to make them easy to use (e.g. electronic and mobile ticketing; coordinated connections; safe bicycle parking stations; car-sharing schemes, etc.)

**Demonstrating equitability**

Putting policies and practices in place that treat people and their travel choices equitably (e.g. cars are not automatically prioritized over other modes of transport). If people don't feel their preferred mode of transport is practicable, they're less likely to adopt it.

**Caring about safety**

Making streets, public transport, and public spaces feel, safe and welcoming. That includes putting appropriate enforcement measures in place.

**Encouraging continuous improvement**

Soliciting feedback from the community and trying out new ways to improve mobility for citizens.

Why are different travel options so important?

There are a host of benefits for cities that put alternative travel choices at the forefront of mobility policy for both people and goods:

Sustainability

Helping more people to walk, cycle and use public transport reduces pressure on streets and highways and supports more sustainable population growth.

Pollution reduction

Cities that encourage walking, cycling and public transport and efficient commercial traffic have lower CO₂ emissions.

Improved health, happiness

When more people walk and bike around the city, population health improves, reducing pressure on healthcare services.

Reduced casualties

Walkable, bicycle-friendly cities have lower rates of vehicle-related accidents, injuries and deaths – reducing pressure on emergency and healthcare services.

Potential for growth

Educated, working-age people flock to cities where quality of life is highest, and businesses flock to cities where there is a high population of educated workers.

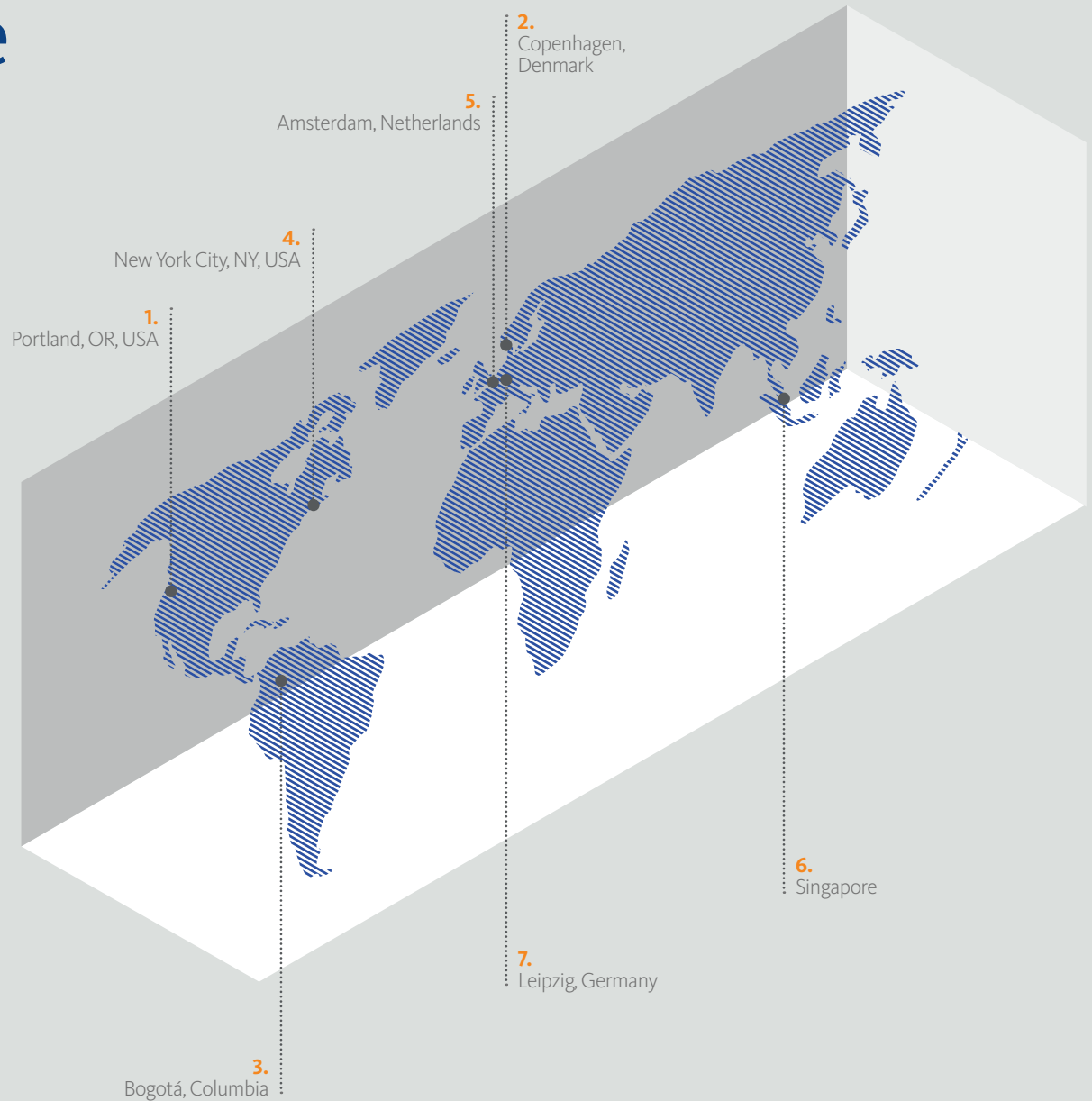
Increased local economic activity

Cities that are affordable and welcoming for people of all ages avoid seeing citizens moving out to suburbs from where they commute more and spend less. Getting goods to their destinations on time also fuels economic success.

Seven cities that are showing the way

A city committed to putting convenient travel options first will typically implement policies to reduce and optimize the flow of traffic, reduce congestion and emissions, and prioritize cleaner and more efficient modes of transport.

We've picked seven examples from around the world that highlight what happens when a city rethinks mobility options.



1. Portland, OR, USA

Multimodal planning
beats suburban sprawl



Portland, OR, USA

The challenge

Portland saw the economic, social and environmental damage that other American cities had experienced as a result of suburban sprawl and car-centered development and set out to make sure it would not suffer the same fate.

The solution

From the 1970s onwards, the city council made conscious planning decisions to encourage a culture of walking, cycling, and public transport use with benefits to population health, reduced emissions and lower rates of accidents and injuries.

This included a \$2 million investment per year in 75 miles of bikeways and cycling facilities.

The results

Portlanders drive 20 percent less than other cities in America, reducing CO₂ emissions by about 11 percent from 1990 to 2013. The policies have triggered a big influx in young, college-educated people, giving the city a 'cool' feel appealing to the millennial generation.

Key takeaway

A determined and coordinated approach to containing sprawl can have hugely positive effects on the city's environment, health and economy.

Walkability pays

In a 2015 APTA workshop, the Washington Metropolitan Area Transit Authority presented a compelling case for making stations more accessible. The agency identified a neighborhood that, though close to a Metrorail station, was cut off from walking commuters. The potential benefit of a re-design: with over 4,000 jobs located in that neighborhood, the transit authority could be seeing an additional 500 entries a day, which translates into additional revenue of \$625,000 in fares per year¹.

City voices

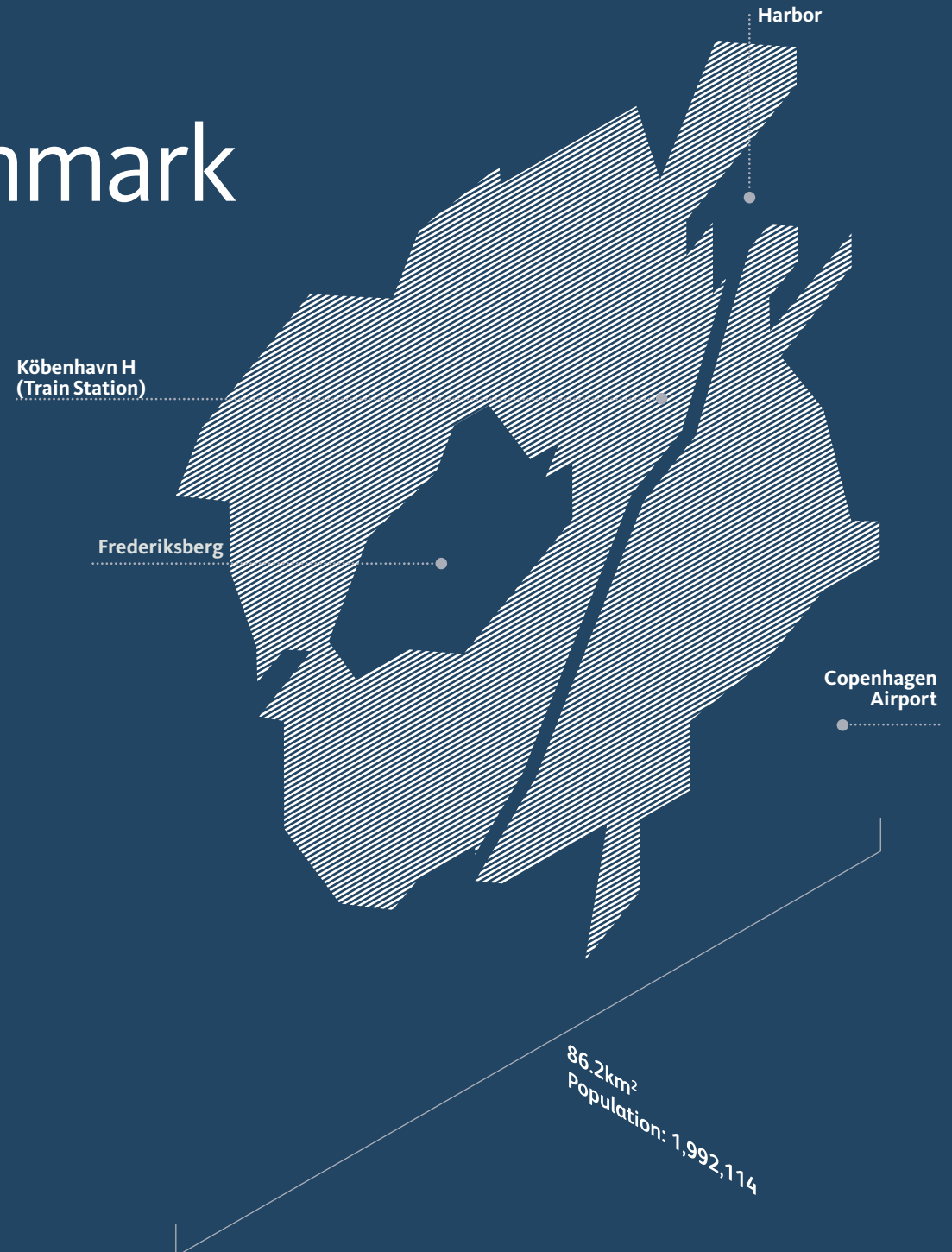
“Our success is nothing to do with Portland’s uniqueness. The lesson we’ve learned is that if you provide people with decent and safe places to walk, they will. It’s as simple as that.”

Sam Adams

Mayor of Portland 2009-2012

2. Copenhagen, Denmark

Bike/train intermodality
keeps cycling popular



Copenhagen, Denmark

The challenge

The Danish capital is one of the most cycle-friendly cities in the world, with 45 percent of its population cycling to work or study each day. But, as in other cycle-friendly cities, this putting demands on other transport infrastructure, particularly trains, to adapt to the new culture.

The solution

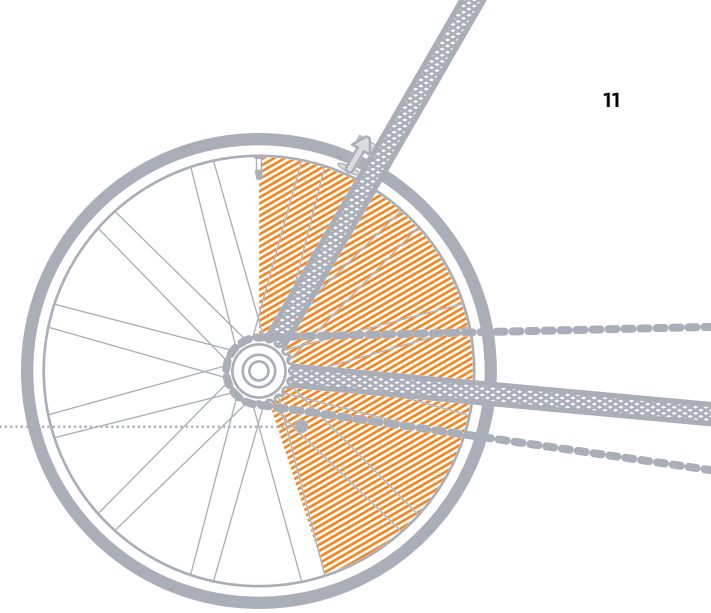
Cycle-friendly cities typically experience intermodal challenges – integrating bikes with other forms of transport. For instance, one problem is insufficient bike parking at rail and bus stations,

and commuter ire as cyclists try to bring their bikes into passenger carriages. Copenhagen has shown how a smart approach to intermodal transport can overcome these issues.

The results

The outcome is visible in the number of people bringing bikes with them on trains run by the state-owned railway DSB – an increase from 2.1 million to 7.3 million. DSB responded by building new bike carriages, increasing capacity from 22 to 46 bicycles per train.

45%
of Copenhagen's
population cycle to work
or study each day



It has opened bike shops in ten stations, where customers can deliver bikes for repair on their morning commute and retrieve them on their way home. DSB has also introduced bike discounts in its loyalty program, put bicycle pumps on trains and is expanding cycle parking at stations.

Key takeaway

Cycle-friendly initiatives must be intelligently integrated with other transportation options to remain successful and popular. But every city is different, so it's important to pay attention to trends to accommodate changing needs.

Potential pedalers

The number of commuters in America's metropolitan areas who could bike to work with relative ease is much higher than one might expect. A recent MIT analysis of several large cities, including Washington, D.C., Philadelphia, and San Francisco, shows that biking would be the fastest way to reach large portions of each city's areas during rush hour². Even a conservative estimate (that assumes 96 days/year of bike commuting) predicts total mobility savings from biking of \$27.6 billion.

City voices

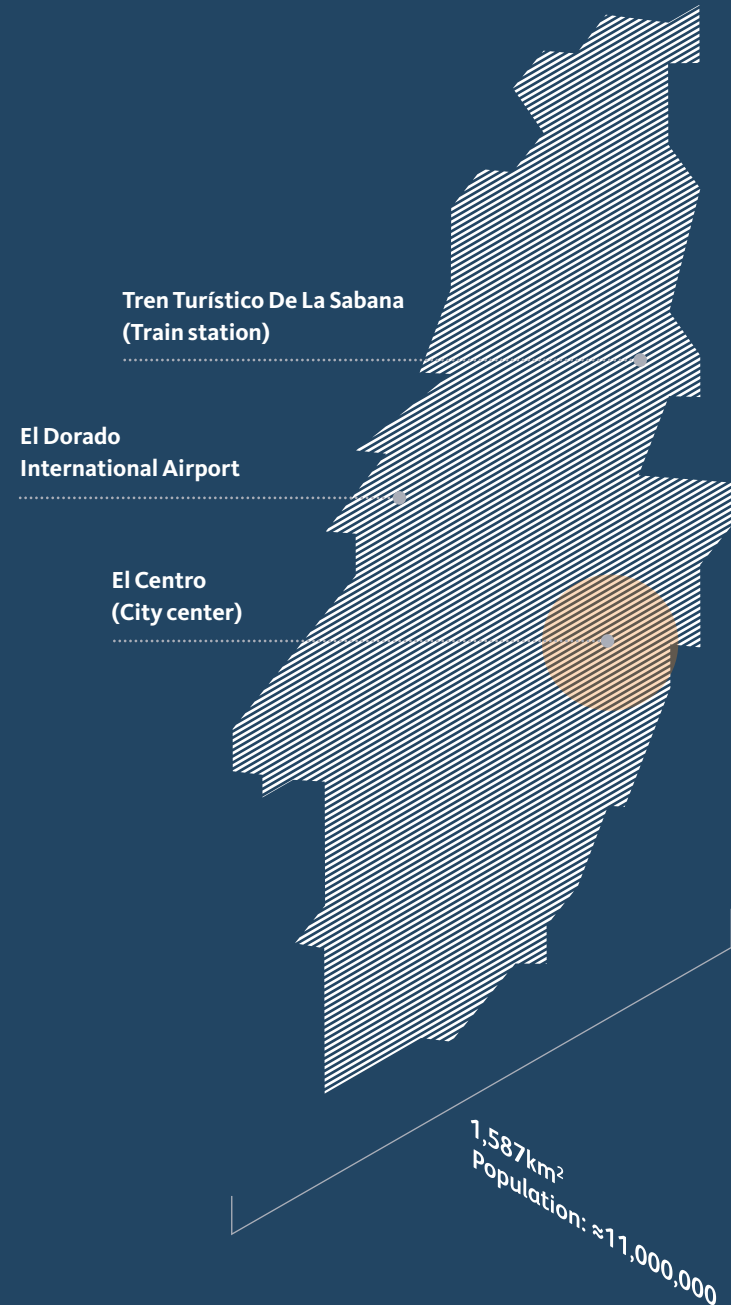
“Cities with more bike traffic are generally cities we want to live in. Our cities were not made for automobiles, and it is becoming clear that it doesn’t work. The best thing is to have a good mix of public transportation and bicycles.”

Mikael Colville-Andersen

Founder, Copenhagenize

3. Bogotá, Colombia

Prioritizing mobility in the
developing world



Bogotá, Colombia

The challenge

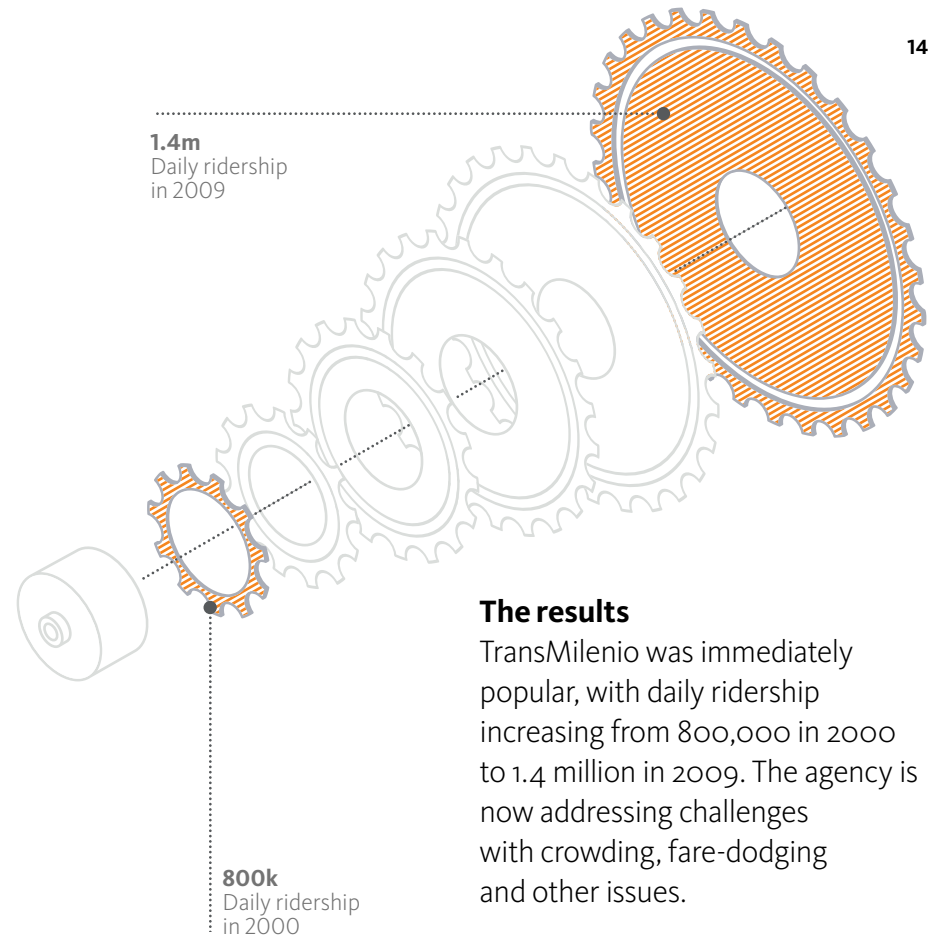
Bogotá is typical of a high-growth city in a developing economy. The rush to own (and drive, and park) private cars was crowding pedestrians and cyclists off the streets. Traffic jams made it slow and difficult to traverse this dense city. The growth in private car ownership was unsustainable.

The solution

The city embarked on an ambitious program to distribute limited road and sidewalk space democratically between pedestrians, cyclists, bus passengers and car drivers.

In 2000 it built TransMilenio, the world's largest bus rapid transit (BRT) system, providing fast public transportation to all areas of the city.

It has also built 200 kilometers of cycle paths, added bicycle parking stations to BRT stations, implemented incentives to reduce rush hour traffic, and banned parking on sidewalks to enable pedestrians to walk without fear of injury.



The results

TransMilenio was immediately popular, with daily ridership increasing from 800,000 in 2000 to 1.4 million in 2009. The agency is now addressing challenges with crowding, fare-dodging and other issues.

Key takeaway

With vision and determination, it's possible to stem the tide of private car traffic, even in the world's densest and fastest-developing cities.

City voices

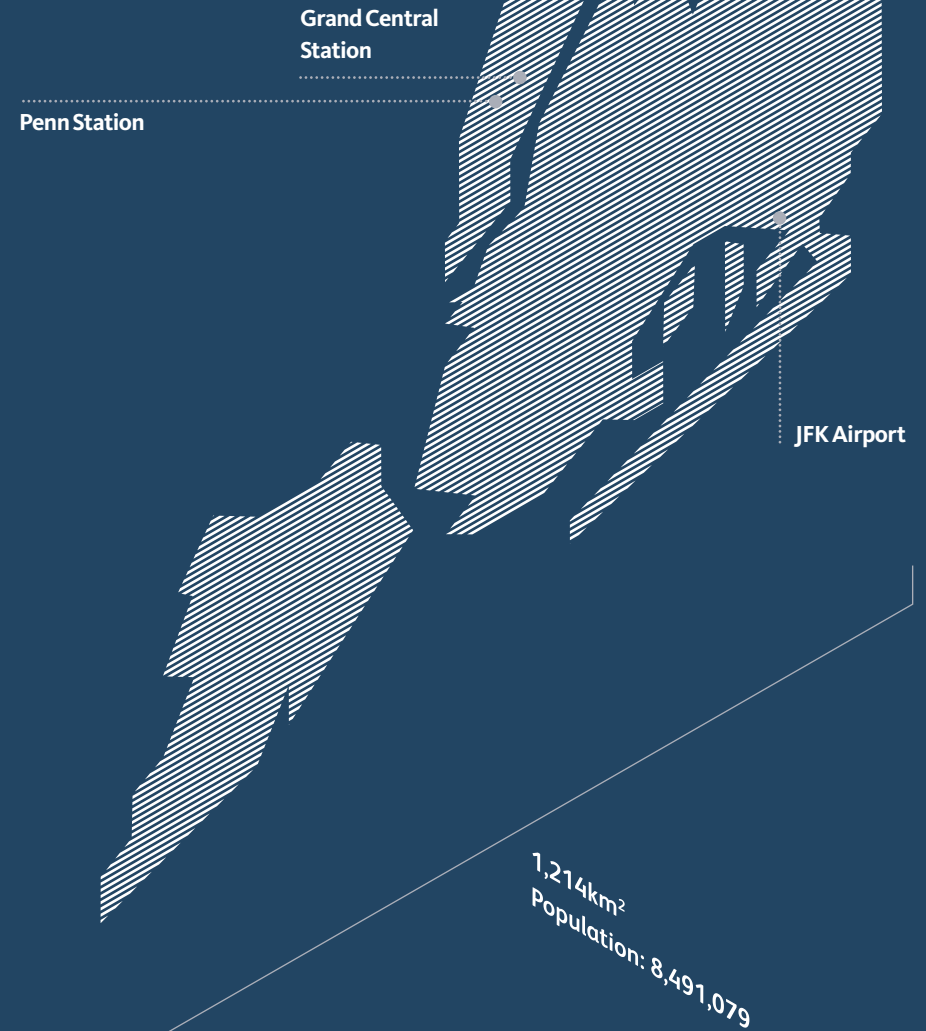
“We’re living an experiment. We might not be able to fix the economy. We might not be able to make everyone as rich as Americans. But we can design the city to give people dignity, to make them feel rich. The city can make them happier.”

Enrique Peñalosa

Mayor of Bogotá, 1998-2001

4. New York City, NY, USA

Proving people-centered mobility
doesn't have to be expensive



New York City, NY, USA

The challenge

Prime areas of New York were dominated by traffic, causing accidents and injuries, and preventing pedestrians and cyclists from moving freely and enjoying their city.

The solution

Turned 50 streets into pedestrian plazas, including Times Square. This was done quickly and cheaply, using paint and movable street furniture to designate pedestrian-only zones.

This low-budget, agile approach enabled fast experimentation, and meant the old arrangements could easily be restored if data showed the experiment had failed. Many other cities have copied it.

Introduced a bike-share scheme and built 350 miles of on-street bike lanes, to encourage more cycling on its busy streets.

Created 57 bus rapid transit (BRT) lanes in the most congested areas to up speed journeys.

The results

Cycling-related injuries have been cut in half across the city³, while in Times Square alone, pedestrian injuries have been reduced by 35 percent, and travel times improved by up to 17 percent. Across the city, retail activity in pedestrian-focused areas has soared.

Key takeaway

Using temporary approaches to experiment with pedestrian initiatives can yield quick and lasting wins – but also makes it easy to put things back the way they were.

Pragmatic millennials

Millennials (current 18-to-34-year-olds) are more likely to choose the most practical mode of transport for each trip (driving, public transit, biking or walking). Nearly 70 percent of millennials use multiple travel options several times each week⁴

City voices

“It’s possible to change your streets quickly – it’s not expensive, it can provide immediate benefits, and it can be quite popular.”

Janette Sadik-Khan

Former Transportation Commissioner,
New York City

5. Amsterdam, Netherlands

Cycle-friendly policies put
an end to car-related deaths



Amsterdam, Netherlands

The challenge

Amsterdam in the 1960s and 1970s had a chilling rate of vehicle-related deaths. In 1971, 3,300 people were killed by cars in the city, including 450 children. Pressure groups formed to lobby the city and national governments to 'Stop de Kindermoord' ("Stop Killing Children").

The solution

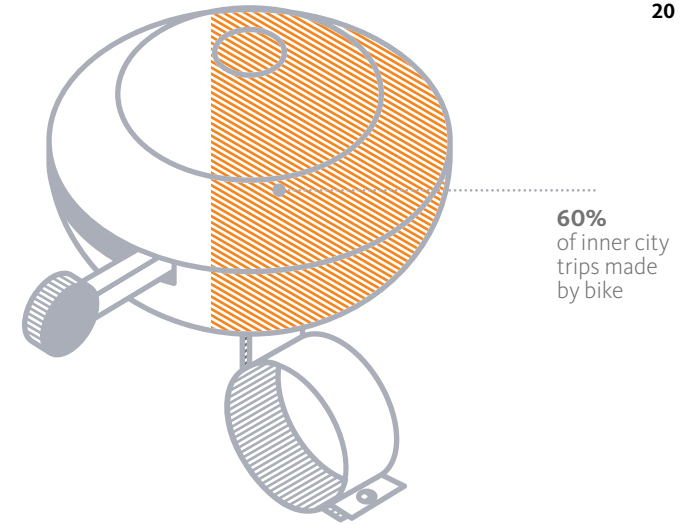
Introduced a network of woonerfs: traffic-calmed, 'shared-space' streets, where vehicle traffic is deprioritized and residents, pedestrians, cyclists and car drivers are all encouraged to share use of the street.

After briefly falling out of fashion, woonerfs are now popular again and other cities are copying them.

Built 400 kilometers of bike paths, which, combined with a succession of cycle-friendly policies, has made Amsterdam one of the most bike-friendly cities in the world.

The results

Today, 490,000 city-dwellers cycle a total of two million kilometers each day, with 60 percent of inner city trips made by bike. This has created its own problems, mainly due to inadequate bike parking at the city's rail stations.



New bicycle parking stations have now been constructed that will charge users after the first day. In terms of safety, the Netherlands now has one of the best records in Europe, with 3.2 vehicle-related deaths per 100,000 inhabitants per year.

Key takeaway

Encouraging cycling can be transformative in reducing injuries and deaths. But extensive bicycle use can bring its own problems if not carefully integrated with other transportation options.

Big idea: woonerf

"A street or square where cars, pedestrians, cyclists, and other local residents travel together without traditional safety infrastructure to guide them. Also sometimes called a 'shared street,' a woonerf is generally free of traffic lights, stop signs, curbs, painted lines, and the like. The basic idea is that once these controls are stripped away, everyone is forced to become more alert and ultimately more cooperative."

Eric Jaffe, *The Atlantic*, 6 Places Where Cars, Bikes, and Pedestrians All Share the Road As Equals, March 2015⁴

6. Singapore

Managing growth in a city with
nowhere to expand



Singapore

The challenge

As a small, tropical island city nation with few natural resources and no scope for suburban sprawl, Singapore has had to manage its growth extremely carefully, with a meticulous focus on transportation.

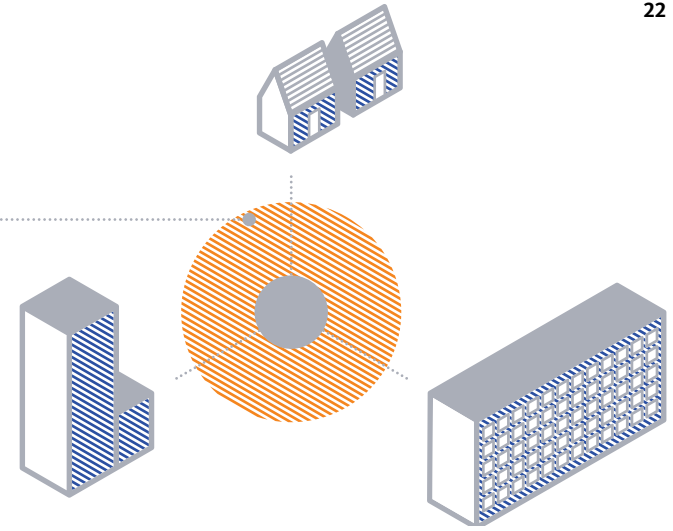
The solution

Singapore has maintained a tight focus on sustainability and livability since the 1950s, when rapid population growth, combined with a housing shortage, saw it become a slum city.

That twin focus has led the city to focus on alternative transportation methods, in particular cycling and walking. The city has managed private car traffic through congestion charging, and built 230 kilometers of walkways and cycle paths – including 210 kilometers of “park connectors” – to enable walking and cycling in and between the island’s individual towns. To encourage active mobility in the tropical heat, the city has built covered walkways and is currently planning to install shower facilities at popular cycle destinations.

700km

The city plans to increase the cycling network from 230km to more than 700km by 2030



The results

The city’s efforts are paying off. As cycling’s popularity grows, the city plans to increase the cycling network from 230 kilometers today to more than 700 kilometers by 2030.

Key takeaway

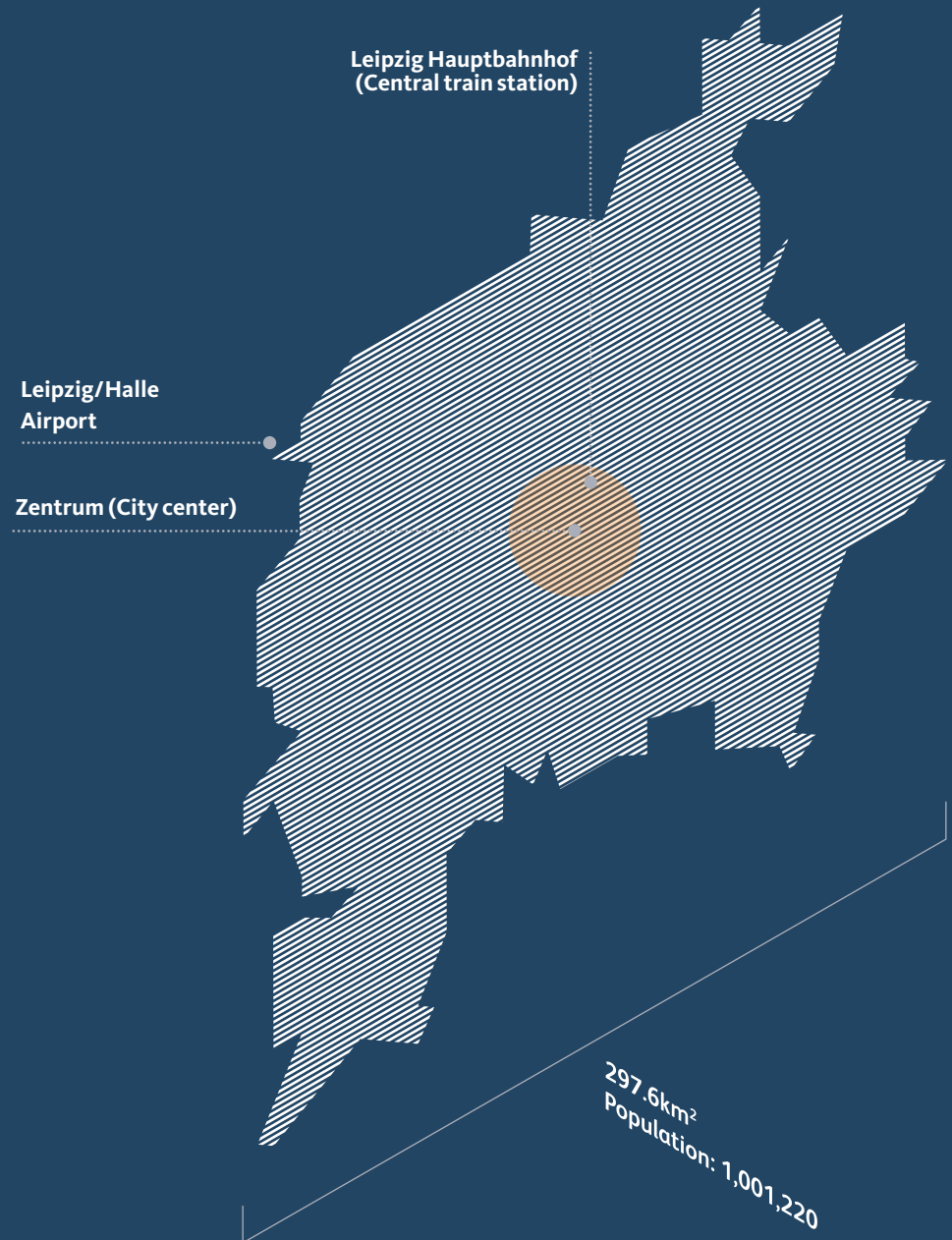
Active mobility is key to sustainable growth – and with thoughtful planning, it can be encouraged even in tropical cities with no culture of cycling.

Big idea: park connectors

Singapore has increased walkability and bikeability by building a network of pleasant, leafy cycle-paths and walkways that link up its many parks and residential areas. While park connectors are designed for leisure cycling, they are contributing greatly to instilling a cycling culture in Singapore.

7. Leipzig, Germany

Sharing economy attracts
millennials to booming “Hypezig”



Leipzig, Germany

The opportunity

After decades of post-industrial decay, Leipzig has started to boom again, with thousands of young people moving to the city to work or study. As an up-and-coming 'cool city' (earning it the nickname 'Hypezig'), Leipzig must cater to a new generation of people who think very differently about urban mobility.

The solution

Pioneered a 'sharing economy' for transportation, with a combination of innovative bike-share and car-share schemes – including one that now manages 20,000 bikes in 30 cities. Leipzig also operates a very successful car-sharing scheme run by Teilauto in partnership with the city council. Teilauto stations dot the city in small parking lots, so there is always one at a convenient distance.

The results

Leipzig's millennial-friendly approach to transportation is just one of the reasons it's become a magnet for young people. The city is experiencing a boom in inward migration to the city center, adding 10,800 new inhabitants in 2012. Meanwhile, unemployment has reduced from 18.2 percent in 2003 to 9.8 percent in 2014.

Key takeaway

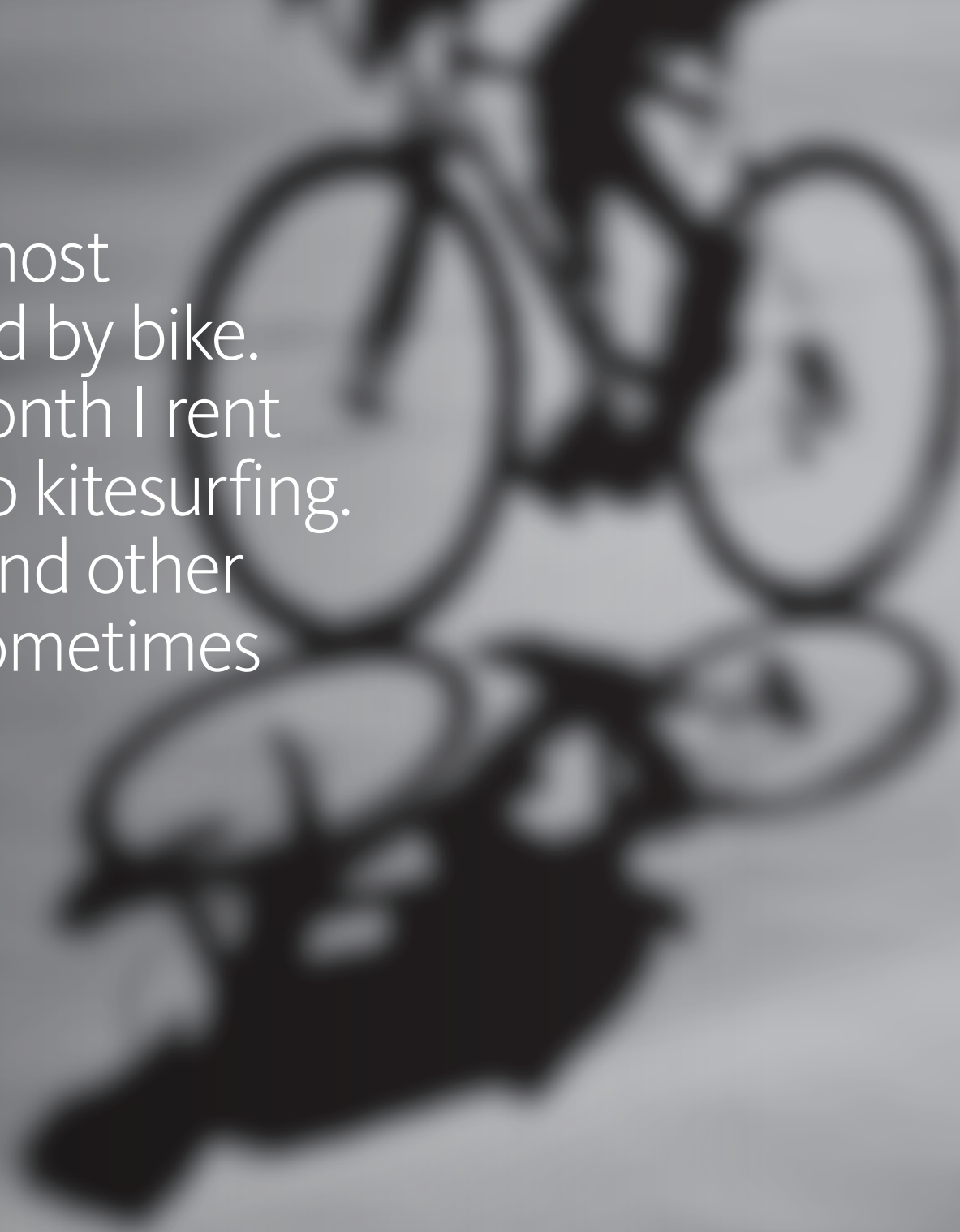
Innovative use of shared transportation resources can make a city safer, greener and more attractive to the millennial generation.

City voices

“At home in Leipzig, I almost exclusively move around by bike. Two to three times a month I rent a car from Teilauto to go kitesurfing. For big shopping trips and other logistical challenges I sometimes also rent a cargo-bike.”

Sebastian Schlebusch

Head of International Development,
Nextbike



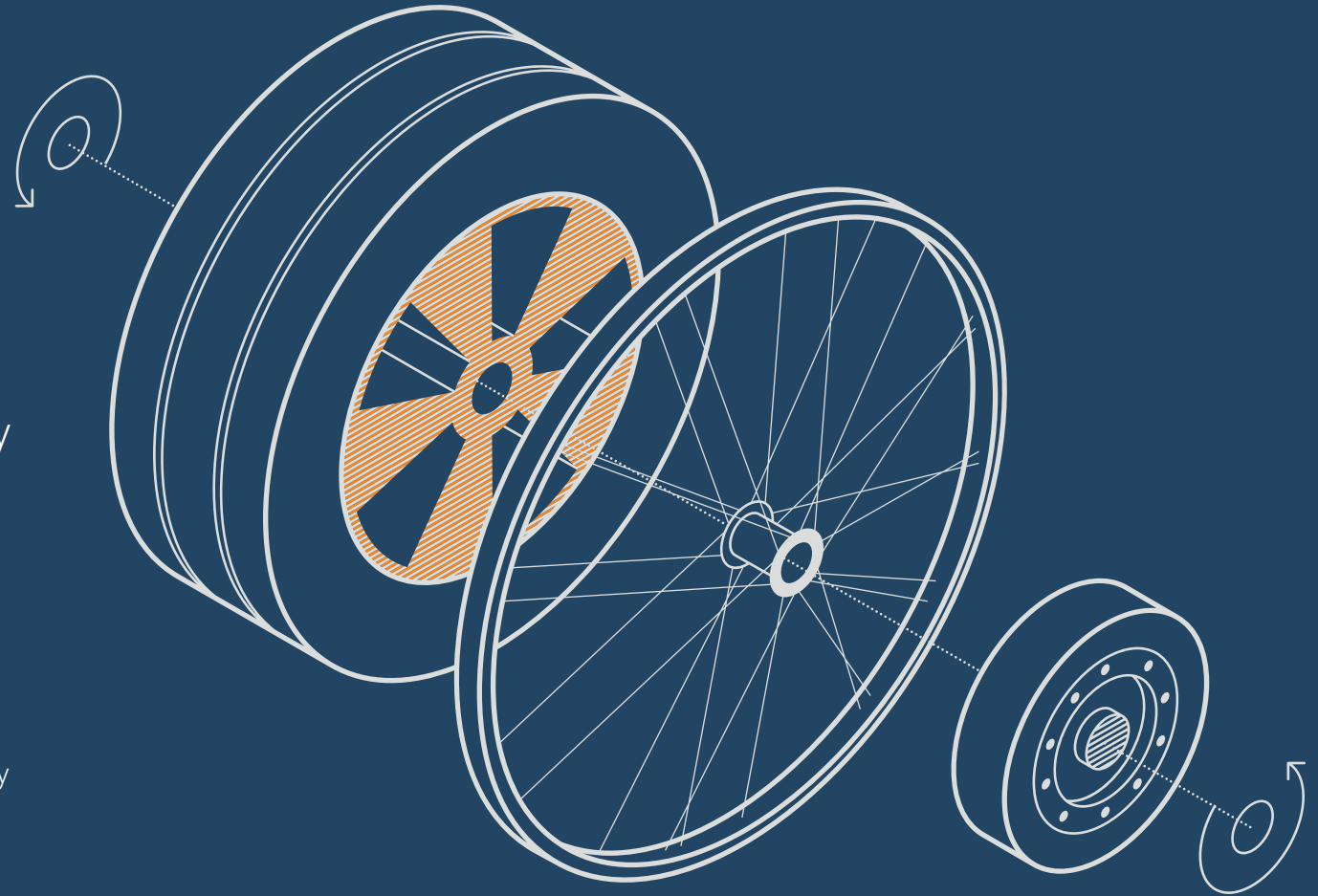
Summary

There are huge advantages for cities that prioritize the availability of different transport choices.

They include sustainable growth, more money spent in the local economy, a healthier population and fewer accidents, injuries and deaths.

As cities continue to grow, a diversified mobility policy creates a better quality of life for city-dwellers of all ages.

Conduent™ works with city governments around the world to provide data, insights and technologies that support people-centered mobility initiatives.



Further reading

If you liked this eBook, you might enjoy reading some of our other ones:

Make your city flow

Seven ways cities are fighting congestion.



[Download >](#)

City analytics

Ten ways data can improve your city planning, traffic flow, public transportation and parking efficiency.



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Resources

For more on how we help, browse the resources below:

Blog

[Embracing Urban Mobility in 2015 and Beyond](#)

Case Study

[Los Angeles Eases Congestion Through Smart Parking Initiatives](#)

Infographic

[Five Benefits of Public Transportation](#)

Browse the links below to learn more about the cities and initiatives featured in this guide:

Transit Sustainability Guidelines

[A Framework for Approaching Sustainability and Overview of Best Practices \(APTA\)](#)

Infographic

[How a Combined Mobility Offer Provides an Alternative to Private Car Use \(UITP\)](#)

Portland

[The Eco Tipping Points Project: Portland, Sustainable City](#)

[TED Talk: Jeff Speck, The Walkable City](#)

Copenhagen

[Murmur.dk: Q&A with Mikael Colville-Andersen](#)

[Cycling Embassy of Denmark: X-tra Bikes on the S-Train](#)

Bogotá

[TED Talk: Enrique Penalosa, Why Buses Represent Democracy in Action](#)

[The Economist: A City Uses Actors to Teach People Better Manners](#)

New York

[TED Talk: Janette Sadik-Khan, New York's Streets? Not So Mean Any More](#)

Amsterdam

[The Atlantic CityLab: 6 Places Where Cars, Bikes, and Pedestrians All Share the Road as Equals](#)

Singapore

[Eco-Business: How to Promote Cycling Culture in Hot and Humid Singapore](#)

Leipzig

[Wocomoco: Seven Answers from Sebastian Schlebusch](#)

[Slate.fr: Berlin C'est Fini: C'est A Leipzig Qu'il Faut Aller \(French\)](#)

Sources

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- 2 d2mtr37y39tpbu.cloudfront.net/wp-content/uploads/2015/05/DUP_1027_Smart-Mobility_MASTER1.pdf
- 3 TED Talk: Janette Sadik-Khan, New York's Streets? Not So Mean Any More
- 4 www.apta.com/resources/reportsandpublications/Documents/APTA-Millennials-and-Mobility.pdf
- 5 www.citylab.com/cityfixer/2015/03/6-places-where-cars-bikes-and-pedestrians-all-share-the-road-as-equals/388351/

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