

Car Free Stories:

The irresistible rise of people-friendly, clean air cities

September 2021



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Contents



Contents	4
Introduction	5
Germany: Problems under the bonnet of car culture	9
Freiburg – transforming transport	11
Winning public approval in Nuremberg	13
India	13
New Delhi – road rationing and the odd / even initiative	13
Italy	15
Milan – open streets and the ‘fifteen-minute neighbourhood’	17
United States	17
Prospect Park West, New York – the bicycle lane that was resisted then a success	18
Portland – cutting the car commute	19
Boston & Cambridge – trialling free public transport to end car dependency	20
Sweden	21
Stockholm: congestion charging – from fierce opposition to popularity	21
Spain	23
Madrid – where the public want change, even if some politicians don’t	23
Indonesia	24
Jakarta – home of the Car Free Day	24
France	25
Paris – the plan to bring back breathable air	25
Strasbourg – from opposition to acceptance of traffic reduction	26
Finland	28
Kajaani – lifting a city centre up by taking down the number of cars	28
Belgium	29
Ghent – where cars are only guests on the roads	29
Norway	30
Oslo – where you can cycle in safety	30
Colombia	32
Medellín – where public space and public transport increased and violence radically reduced	32
Conclusion	36

Introduction



There are many reasons that cities around the world are moving to reduce traffic and cut the numbers of cars on roads. Partly it is to make way for healthier, more active forms of travel like walking and cycling. And partly it is to produce more pleasant, less noisy and cluttered urban environments. Playing their important part in the urgent task of reducing carbon emissions to tackle the climate emergency is another reason.

But, besides its severe impact on the climate emergency, transport emissions are particularly damaging for health reasons. The annual toll of death and injury from traffic crashes is huge. Around 1.35 million people are killed, with anything between 20 - 50 million more being injured and many left with permanent disabilities.¹ Vehicles also emit large amounts of pollutants. Of concern these are mainly nitrogen oxides (70%) and particulate matter (30%) according to the European Environment Agency.² Despite these being subject to law governed by European legislation, populations living in urban areas still breathe air that is well above safe limits. Adults breathe around 15,000 litres of air per day. If the air is polluted the internal damage it can cause rapidly accumulates.

Full understanding of the consequences is still evolving. Worryingly, both the range and scale of health impacts are constantly being found to be larger than previously thought. For the World Health Organisation (WHO), out of their estimate of 8 million premature deaths caused by air pollution around the world, half of these are due to ambient air pollution.³ Significant shares of the deaths due to lung cancer, strokes and heart disease are known to be linked in this way. But more recent research from three British universities and Harvard says that the picture could be much worse.⁴ They looked again at the impact from fossil fuel related air pollution alone, using a more sophisticated analysis. It found that more than 8 million deaths could be

¹ [Road traffic injuries - Key facts](#)

² [Road vehicles and air quality](#)

³ [Health impacts and costs of diesel emissions in the EU](#)

⁴ [Deaths from fossil fuel emissions higher than previously thought](#)

attributed alone to just fossil fuel air pollution, accounting for nearly one in 5 of all premature deaths globally.⁵

In responding to the global pandemic, many towns and cities responded with measures designed to ensure more space for people to allow for social distancing. In many places this meant reducing traffic, widening walkways and closing some roads to cars to open them for cyclists and pedestrians. In several places these measures added to, or grew out of already existing priorities to cut traffic, congestion and pollution. At a local level in the UK one range of initiatives became known as Low Traffic Neighbourhoods or 'LTNs'. A small number of vocal opponents to LTNs generated a large public and media debate, creating the impression of widespread opposition.

As this report will show, this is nothing new. In fact it fits a long-established pattern. Time and time again whenever proposals are made in the interests of public health and well-being, to introduce controls on unlimited traffic and car use, there comes a tide of outrage from a vocal minority. But, what is little-known about is the accompanying well-trodden path as to what happens next. Typically when the measures are introduced, the negative consequences that drive many of the outcries do not materialise, people quickly adapt their travelling habits to accommodate the changes, support grows and the majority would not want to go back to how things were before.

Where LTNs are concerned, history is already repeating itself. Polling in the UK in late 2020 found that three times more people had a positive view of the measures than a negative one.⁶ In the mega-city of London, in particular, 44% supported LTNs compared with just 21% opposing them.⁷

Sharpening the need for action, medical research is constantly revealing ever wider impacts from air pollution, including to mental health.⁸ Following the outbreak of the pandemic, many studies have established that living in areas with poor air quality increases the severity of Covid symptoms. Where air pollution is concerned, these impacts disproportionately affect ethnic and racial minorities as well

⁵ [Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem](#)

⁶ [Despite a loud opposing minority, low-traffic neighbourhoods are increasingly popular](#)

⁷ [Londoners support low-traffic neighbourhoods and Greater London boundary charge](#)

⁸ [Yaguang Wei: The dangers of air pollution for human health - The BMJ](#)
[Air pollution is linked to depression and suicide](#)
[Growing Evidence for the Impact of Air Pollution on Depression](#)

as those of lower income and socio-economic status.^{9 10} More importantly, the latest scientific research concludes that among people living in heavily populated areas (in this case US cities), where they are exposed to high levels of fine particulate matter, there is a 11% higher chance of dying from Covid-19.¹¹

The pandemic has been a tragedy for many, but also revealed a number of lessons relating to travel and transport.¹² In particular it has revealed that traffic reduction can provide massive gains in health and lower pollution in very short spaces of time.¹³ It has also revealed that many journeys, often using expensive and polluting forms of transport, are either unnecessary or can be made via a low-carbon alternative. Subsequently this has meant that there is now a wider sense that we can rethink our existing transport systems with a greater tilt towards accessible, affordable, public and low carbon electric alternatives.

If there weren't already enough reasons for our mega-cities to go car free (not to mention many other towns and cities radically reducing traffic) there are now even more. It helps to know that this journey is not new, but merely the next step of applying what we know to improve quality of life at street level. Of course some groups, such as those with personal mobility challenges, will still require vehicle access, but one of the best ways of meeting their needs will be clearing the roads of unnecessary cars. History has shown what works, and that whatever our fears, people are remarkably good at adapting to change. As many leave car culture behind, the path towards better towns and cities is looking clearer.

⁹ [Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure](#)

¹⁰ [Environmental Health: Air Pollution, COVID-19 & Health Disparities](#)

¹¹ [Air pollution linked to greater risk of dying from covid-19 in the US](#)

¹² [How we learned to provide each other with more space, green space and breathable air.](#)

¹³ [Unnecessary travel? The return of breathable air and rethinking transport in a crisis](#)

Germany: Problems under the bonnet of car culture



Germany is synonymous with the European car industry and car culture itself. At the heart of the country's post war industrial renaissance, its manufacturers established themselves early on as a byword for reliability. The nation's autobahns came to epitomise the appeal of the unregulated open road.

But, ever since the emergence of Germany's modern car culture it has been questioned and contested. Today, progressive cities are making moves to u-turn on car dependency and the privilege and priority it has been afforded. But these moves are, at first, seeing early opposition before the better urban environments that result are soon celebrated, with some becoming international models of progress.

In 1952, nationally set speed levels were abolished in West Germany and powers were devolved to the states.¹⁴ Very rapidly however, due to the quickly rising numbers of death and injury, and in the face of vehicle industry opposition, from 1957 speed limits were brought back for built up areas like towns and cities.

Although there were ten times fewer cars registered in 1952, more than twice as many people died on the streets compared to 2006, with 5094 fatalities. Road deaths would continue to rise until the 1970s and only then was a speed limit set for roads outside towns of 110kmh. But the autobahns remained an exception, where only a "recommended speed" of 130kmh was introduced in 1974.¹⁵

But the issue of speed limits, then as now, became a lightning conductor rod for disagreement over differing visions for people's mobility.

Speaking to the German Automobile Club (ADAC), Fritz Schmidt of Daimler-Benz AG was quite up front about his self-interested reasons for opposing basic traffic controls, "The introduction of the speed limit would significantly change the entire production program of the Daimler-Benz works. Customers are already writing to us today that they

¹⁴ [Nächstes Jahr langsamer](#)

¹⁵ [Im Taumel des Wirtschaftswunders](#)

are no longer interested in our cars with regard to the expected speed limit."

A politician called Oskar Rümmele who had a background in the railways, became chairman of the transport committee in the second Bundestag and took on the task of introducing speed limits. He also became the focal point of organised opposition.

In the range of arguments used against traffic safety measures, some are very familiar to current concerned citizens, while others seem more exotic.

Hans Bretz was the Vice President of ADAC – the equivalent in the UK of the AA or RAC – and sought to persuade Rümmele arguing that, "The driver's obligation to stick to a certain maximum speed is an enormous burden on the flow of traffic... No driver will understand why, for example, he is not allowed to pass a completely clear exit road at a brisk pace... Why should he then, against all common sense, sneak around behind a truck, because the planned speed limit only stipulates 50 kilometers for passing through town?" His subsequent argument against the actual principle of there being rules of the road stray into greater extremes. The government, he said, referring to Rümmele's intentions, "Neither regulates nor prohibits the consumption of alcohol, although a large number of people annually die of alcohol poisoning, but he wants to regulate driving because people have accidents."

A petition was organised, signed by the racing driver, Huschke von Hanstein, supported by vehicle maker Porsche, stating that: "A general speed limit would result in an even greater congestion."

In a debate which will be very familiar to modern campaigners for safer roads there were also calls to create pathways specifically for cyclists to separate them from vehicle traffic to make cycling safer and more attractive.

Given the vastly greater degree of traffic on roads today, it is interesting to see the degree to which people reacted to changes in transport well over half a century ago. An early traffic psychologist, Dr. Wilhelm Lejeune wrote in his book, *The human being in modern traffic*, that, "The intensification and acceleration of traffic ...brought about an upheaval in the world without equal."

Meanwhile, within government, an advisor on road traffic law, Dr. Booß, exclaimed at the time about the increasing number of letters he received 'from mothers who complained about the death of their run-over children and from relatives of old

people, especially from Berlin and North Rhine-Westphalia, who had also been victims of road traffic.’ Adding that most of them wrote about how, with the lack of regulation, the Federal Republic presided over murder in the streets.

The debate never went away. In recent years concerns about climate change and air pollution have added to original worries about road safety.

A 2010 poll indicated that 60% of the German public favoured a speed limit to control carbon emissions.¹⁶ But the issue remains contentious today, and there are gaps between public opinion and legislators in the Bundestag. In 2019 it rejected a proposal for action from the Greens in parliament.¹⁷ This contrasted with public views in which two thirds were in favour of a speed limit and only one third were against.¹⁸ However the rising popularity of the Greens, now the second most popular party, majority support for a 130kmh speed limit,¹⁹ backing from the SPD, the junior partner in the German Federal government, and an election in 2021 means change looks more likely.²⁰

In a pattern which is familiar from cities sometimes taking action on climate change ahead of national parliaments, Cologne and Bremen have independently introduced speed limits. And there are places like Freiburg that have successfully pioneered progressive mobility policies.

Freiburg – transforming transport

The city of Freiburg has been called Germany’s environmental capital because of its transformative rethinking of transport.²¹ How they got there is not complicated. There is a strong inverse relationship between the share of urban trips taken by public transport, bicycle and on foot and the carbon emissions from road use. More of the former means less of the latter. Car makers are a powerful lobby in Germany. But Freiburg also faced opposition from local businesses who feared that new controls on car use would have a negative impact on them. In spite of this, Freiburg was able to coordinate transport and land use to increase journeys by bike threefold, double public transport

¹⁶ [Deutsche für Tempolimit auf Autobahnen](#)

¹⁷ [Bundestag lehnt Tempolimit auf Autobahnen ab](#)

¹⁸ [Klare Mehrheit für Tempolimit auf Autobahnen](#)

¹⁹ [Mehrheit sieht wachsenden Antisemitismus in Deutschland](#)

²⁰ [Germany’s freedom from Autobahn speed limits may end](#)

²¹ Ralph Buehler and John Pucher (2011), ‘Sustainable Transport in Freiburg: Lessons from Germany’s Environmental Capital’, *International Journal of Sustainable Transportation* 5: 43–70, 2011.

use, and cut the share of trips by car to less than one third (32%), meaning that over two thirds of journeys are now made by public transport, walking and bike.²²

The number of cars and light trucks owned per head of population fell in Freiburg over two decades, even as it has risen steadily for Germany as a whole, and rocketed in the US. Freiburg had 419 per 1000 people in 2006, compared with 776 in the US.

Yet Freiburg began with above-average car use until things started to change around 1970. Bike networks, expanded light rail, pedestrianisation and deliberately planning new developments for both homes and businesses close to public transport all contributed to the transition. By 1980 the car officially took second priority to pedal, foot and mass transit. By 2008 the city had several cycle-only streets, and nine out of ten residents lived in areas where traffic could not go faster than 30km p/h (19 mph). In many areas the speed limit drops to 7km p/h (5 mph). The city has set a template now widely being copied.

Winning public approval in Nuremberg²³

In an attempt to address congestion and worsening air quality, the historic centre of Nuremberg was progressively pedestrianized from the early 1970s.²⁴ Potential road chaos resulting from the moves, predicted by some planners, did not materialise, nor did a loss of customers to local shops warned of by business owners. Neither, again, did the warned-of wholesale transfer of traffic onto nearby roads occur. There were only marginal numbers that did, and there was actually a significant 'evaporation' of car numbers.

In 1988 the last through-route was closed in a trial that was, at the time, the focus of a high level of protest and opposition, especially from retailers. Again, severe congestion in adjacent streets was forecast and it did not occur. Over a 12 month period total traffic reduced by around one quarter, with only marginal displacement to nearby streets, and in 1989 the measures went from trial to being permanent. Over the course of the year air pollution fell significantly with nitrogen dioxide levels falling by around 30%.

²² Ralph Buehler and John Pucher (2011)

²³ [Traffic calming evidence on performance](#)

²⁴ Hass-Klau, C., Nold, I., Bocker, G. and Crompton, G. (1992) *Civilised streets: A guide to traffic calming*. Brighton, Environmental & Transport Planning.

Cobbled street in Nuremberg, Germany



Subsequently there was a programme of continual improvement of the city centre public space. The actual traffic reduction transpired to be double what was expected.

Before the measures were introduced there was substantial public consultation and long term measuring of traffic flows afterwards to understand on 'knock'-on' effects.

Instead of traffic simply being displaced to other parts of the city within its outer ring road, the initial absolute reduction continued in following years. It meant that against a backdrop of rising car ownership, between 1989 and 2000, on the city centre area roads there was a reduction of 10,000 vehicles.

India



New Delhi – road rationing and the odd / even initiative

In terms of air pollution, the worst-hit big city in the world recently has been Delhi – where traffic has been growing inexorably and is a major contributor to poor air quality. Other contributing factors include dust from construction, pollution

from factories and power stations, the burning of fuel and the burning of crops, especially stubble, after harvest.

In a move to improve things, the Supreme Court in 1998 ordered that public transport shift from diesel fuel to compressed natural gas (CNG) which lowered levels of dangerous 'particulate matter.' Other measures including the introduction of unleaded petrol and lowering the sulphur content of fuels also helped. Standards for legally permissible pollution levels from vehicles have also been tightened over time along with the introduction of penalties for burning rubbish.

But all of these have been progressively overwhelmed by trends like the rise in vehicle numbers. In a decade from 2002 to 2012 they nearly doubled in Delhi, increasing 97%.²⁵ Officially, Delhi is now kerosene free and most households use LPG for cooking. But in spite of positive steps like the switching of public transport to cleaner fuel, pollution is responsible for 10,000–30,000 annual deaths in Delhi according to India's Centre for Science and Environment (CSE).²⁶ In November 2017, all the city's schools were closed in response to a worsening smog.²⁷

But, just as the great smog in London in the early 1950s led to action and the passing of the Clean Air Act, Delhi had its own particular crisis moment in November 2016, when particulate matter rose to over ten times the highest acceptable healthy limit.

This led to the odd-even initiative. For a limited period of time, private cars in the city were controlled, with private cars being allowed onto the roads on alternate days according to whether their number plates bore odd or even numbers.²⁸ The initiative faced opposition and legal challenges. Reportedly around nine out of ten people opposed the initiative prior to its implementation with a majority switching to being supportive after the fact.²⁹ New Delhi authorities reported falls in pollution of up to 25% in the two week duration of the scheme and reduced levels of congestion. In addition to raised public awareness of the problem, the introduction of odd/even also improved road conditions for public transport making it more efficient. Official figures reported that public buses – which have a daily target of covering 200km but typically only managed 160km – managed to serve 220km per day during the two week experiment running from

²⁵ [Delhi Clean Air Action Plan](#)

²⁶ [Addressing global mortality from ambient PM2.5](#)

²⁷ [Delhi Schools Closed, Minister Manish Sisodia Cites 'Deteriorating Air'](#)

²⁸ [Odd-Even Rule In Delhi From Today As City Gasps Under Choking Smog](#)

²⁹ [New Delhi's traffic scheme inspires, despite mixed results](#)

January 1-15. Bus passenger numbers increased from 4.7 million per day to 5.3 million.³⁰

Since its initial introduction the odd / even scheme has been used successively during the smog season when air quality has dramatically worsened.

Italy



Milan – open streets and the ‘fifteen-minute neighbourhood’

A city that has become synonymous with traffic and congestion is Milan, Italy. It has, at varying times, taken measures to address its problems. In 2012 the city authorities introduced a selective vehicle charge, but the six month experiment aimed at reducing city centre traffic and improving air quality was brought to an early end by opposition in the form of a legal challenge from a private car park. The company complained about the effect of the measure – which introduced a 5 euro charge on cars entering the city centre – on its business.

Pierfrancesco Maran, a city council member with the portfolio for traffic planning commented at the time that, “Today we register with respect, but also concern, that the loss suffered by a private parking lot is at issue in a court of law and that this has blocked a measure that benefits all Milanese residents.”³¹

The impact of the forced removal of the traffic charge after several months was surprising, with vehicles returning immediately.

But, during the scheme, there had been an overall decline in vehicle numbers of 14.5%. And with some vehicles being exempt, the reduction in vehicles actually subjected to the charge was nearly one in five or 19%.³² While the initiative was later restored, the advent of the coronavirus pandemic has actually led to a more ambitious plan to reduce traffic in Milan being produced.

³⁰ [New Delhi's traffic scheme inspires, despite mixed results](#)

³¹ [Ruling Halts an Effort to Reduce Traffic in Milan](#)

³² [Milan Abruptly Suspended Its 'Area C' Congestion Pricing Zone and Traffic Soared](#)

Open streets

Now, Milan's municipal Strade Aperte (Open Streets)³³ initiative is being cited as a model for improving the quality of central urban environments. It was triggered by the impact of the coronavirus pandemic, with local politicians fearing that restricted use of public transport might cause serious health and environmental problems if people switched to car use. Rather than accept that as inevitable, and in order to ensure that space was available for social distancing to control infection rates, local authorities instead set out to reduce the space available for cars and increase it for pedestrians, cyclists and people using electric bikes and motorcycles. These measures are intended to make permanent changes to the city compared to temporary initiatives elsewhere.³⁴

The measures include 35km of new cycle lanes, new and wider pavements, and expanded areas for children to play in. Some streets have been marked as giving priority to people walking and cycling and 30kph (20mph) speed limits have been introduced on multiple roads.

In one area known as the Lazaretto which is famous for having been a refuge for victims of historical plagues and epidemics in the 15th and 16th centuries, a low traffic neighbourhood has been created.

On the main Corso Buenos Aires new bike lanes have been created along major shopping streets combined with other steps in a move towards pedestrianisation. Milan could also be said to have started a trend with other Italian cities taking action. For example Rome is increasing its bus fleet and Naples has a plan to promote more cycling – efforts very much in their infancy but promising nonetheless.

The '15 minute neighbourhood' – reimagining town and city life

Behind the practical steps taken by Milanese authorities is a bigger vision. The Comune di Milano says that, 'Lazaretto and Isola will be the pilot projects of a city that rethinks its rhythms starting from neighborhoods that offer services and quality of life within the space of 15 minutes on foot from their home.'³⁵ This introduces a big new organising principle for urban planning that reduces pressure and demand on

³³ [Quartieri. Con "Strade aperte" nuove aree pedonali, ciclabili, zone 30 e spazi pubblici](#)

³⁴ [Milán le quitará al coche 35 km de carriles para dárselos a la bici y el peatón](#)

³⁵ [Quartieri. Con "Strade aperte" nuove aree pedonali, ciclabili, zone 30 e spazi pubblici](#)

services, especially transport services, by aiming to make sure that most of the basics for day-to-day living are available within a short walk.

'Open Squares' - improving the public realm with more and better space

Italy's famous town and city squares reveal the importance of public space and a high quality public realm for urban life. 'Open squares' is another component related to the new measures in which 15 city squares have been improved over an 18 month period by increasing space for pedestrians and active travel such as cycling, with plans now for a dozen more selected after a citizens' consultation exercise, and which include steps to improve safety for children.

United States



Fanned by inflammatory domestic politics, responses to the coronavirus pandemic in the United States have been divisive. Nevertheless, at the heart of measures to protect public health have been changes in city streets, and a swathe of measures to make them safer and more attractive to walkers and cyclists. Many schemes have also been designed to create space for local businesses, bars, cafes and restaurants to keep trading by expanding onto roads normally clogged with traffic.

In Minneapolis, for example, 11 miles of "Stay Healthy Streets" were added using freestanding posts and signs. Brookline in Massachusetts used cones and signs to extend pavements, creating bike lanes along four streets normally congested with traffic. Oakland in California used signs to mark streets as being for local access only, and created an impressive network of "slow streets" totalling 74 miles. Tampa in Florida suspended approval requirements so that restaurants could expand onto designated parts of the public right-of-way. And, in Cincinnati, Ohio, a new street seating plan gives permission for restaurants to use former parking spaces as extra outdoor seating areas for diners.³⁶

³⁶ [Streets for Pandemic Response & Recovery](#)

Prospect Park West, New York – the bicycle lane that was resisted then a success

A street bordering Brooklyn's Prospect Park in New York was reduced in 2010 from three vehicle traffic lanes to two, with the third lane turned into a two way bicycle lane. It was installed to the great delight of New York cyclists, and the extreme annoyance of some very powerful and well-connected people living adjacent to it.³⁷ A legal case was brought against the change led by a high-powered law firm.

Opponents claimed that the benefits of the bike lane were overstated by city authorities, who themselves said that the number of cyclists had tripled on the route in the months since opening. Opponents also complained that the new bike lane had been imposed on the community, even though it was approved by the transport committee of the relevant local Community Board. Another familiar refrain was heard in the local debate – that by reducing space for cars and inconveniencing drivers, and increasing space for active travel like cycling, businesses would suffer lost custom.

The battle over bike lanes became a 'wedge issue' in mayoral politics according to New York Magazine. The demographics of the dispute were complex, with no clear dividing lines in terms of class, income and profession. After a failed attempt in the 1980s to create major bike lanes, a new Transport Commissioner, Janette Sadik-Khan, supported by New York's Mayor Bloomberg, promoted the notion of the 'complete street' – a place for more than cars – and oversaw the introduction of 255 miles of bike lanes up to Spring 2011. The number of people cycling to work doubled between 2006 and 2010 according to the authorities.

The bike lane in Prospect Park West was built in a month, and other lanes have been introduced much quicker. Their cost is a tiny fraction of the cost of road repairs, and streets with protected bike lanes saw 40% fewer accidents.

A bike lane established in Ninth Avenue in 2007 had met with fierce opposition initially, and then been gradually accepted. By 2012, six years into the Bloomberg administration, 66% of New Yorkers had come round to thinking that bike lanes were a 'good idea'.³⁸ Only 27% said that they were a bad idea. This change came about in spite of the fact that a range of

³⁷ [Not Quite Copenhagen](#)

³⁸ [Bicycle Lanes Draw Wide Support Among New Yorkers, Survey Finds](#)

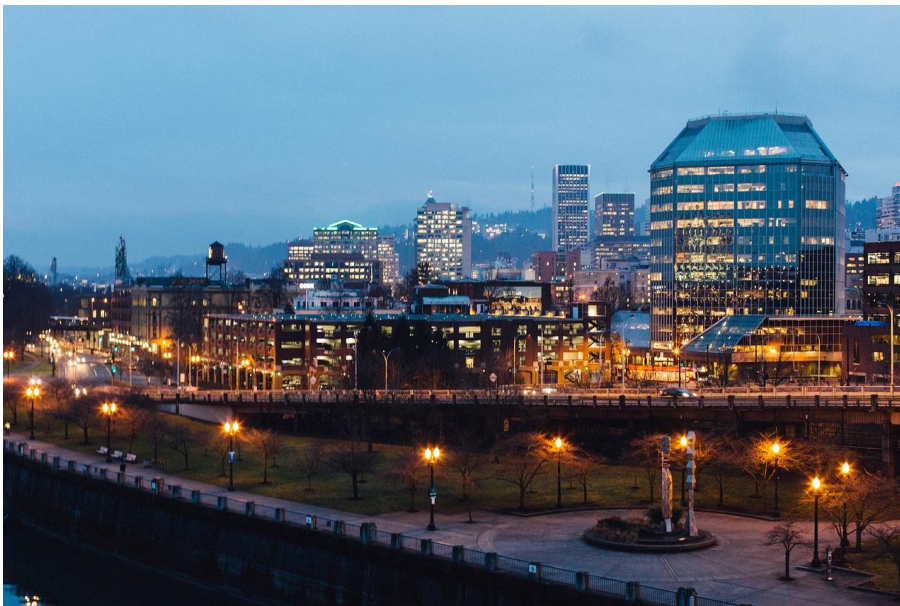
tabloid media had encouraged resistance to the pro-active travel measures.

In 2016, five years after the lawsuit was brought against the Prospect Park West bike lane, a move which some said nearly sank New York City's bike program,³⁹ the action was dropped. One of the reasons the lawsuit failed, apart from lack of legal merit and factual grounds, was the steadfastness of certain councillors and the city authorities in the face of vocal but poorly grounded criticism. What the lawsuit did achieve, however, was to slow down the implementation of more people-friendly urban transport measures, something that cities today can hopefully learn from.

Portland - cutting the car commute

Of course there already were US cities apart from New York that, before the pandemic, were taking steps to change the priority given to cars in urban spaces. Portland, Oregon has been attempting to reduce car use by changing the design of street systems for several years. In the two decades since 1990 the town managed to cut the share of people commuting by car, truck or van by around 10%, with journeys by bike or public transport rising to just under one in five. Daily commutes by bike went up by nearly six times, and public transport by over 50%.

Portland, Oregon



³⁹ [Good Riddance to the Prospect Park West Bike Lane Lawsuit](#)

As of 2008, the substantial cycling infrastructure had been created at the cost of a single mile of normal urban freeway. In 2018 the city introduced a plan to reduce traffic congestion called 'Central City in Motion'. Under the \$72 million plan car parking places would be reduced by 1000 as part of 18 main projects. Each involved the introduction of new bike or bus lanes, or both together. It also included 30 miles of new 'low stress' bike lanes. The city expects its population to increase significantly in the future, and without new, greener transport options could see a huge traffic increase of up to 47%.

But Portland's plans have been influenced by the city of Seattle, which attracted 60,000 jobs in its downtown area, but by investing heavily in public transit, did not increase the number of cars on its roads. In 2020, Portland invested an extra \$10 million in the Rose Lane Project to create more dedicated bus and streetcar only corridors. City commissioners now often speak of the ambition to make the Downtown area 'car free'.

With nearly 500 miles of bike lanes already built or a small proportion still being completed, the city has the highest proportion of commuters who go by bike in the country.

Boston & Cambridge – trialling free public transport to end car dependency

Research investigating transport habits in the cities of Boston and Cambridge in the US found that nearly 30% of people who normally commute by car were prepared to change their habits and give up their permanent parking permits following a short free-transit trial. The majority switched to holding just an occasional parking permit with some making a full switch to the use of public transport. After a six month period, one in four maintained the change⁴⁰.

But Boston still had a big congestion problem. And, for many it was still hard to imagine life without the car. That was until the coronavirus pandemic hit. Along with many other cities, the average distances driven in Boston fell dramatically; in the first big month of lockdown the distances driven were

⁴⁰ [Even American Drivers Like Mass Transit More Than They Think & Travel mode switching: Comparison of findings from two public transportation experiments](#)

down 75% compared with the previous month. The city closed streets to cars and opened up space for walkers and cyclists.

Now Boston has a plan to improve its long-term mobility called Go Boston 2030. It wasn't just dreamed up in City Hall though. Its action plan consists of 58 projects and policies which were the result of public engagement that generated a bank of ideas that totalled 3,700 suggestions.

The results include priority bike lanes separated from traffic, traffic calmed neighbourhoods, with redesigned streets and wider pavements, pedestrian friendly squares, and multi-use off-road paths. Their target is to increase cycling four-fold by 2030.

Sweden



Stockholm: congestion charging – from fierce opposition to popularity

Even in famously progressive Scandinavian countries, it seems the pattern of attempts to improve town and city life by reducing car use does not succeed without first being opposed.

In 2006, in Stockholm, Sweden, congestion charging was introduced to control excess traffic. At the time it was remarkably successful and cheap. Priced at a 'couple of euros per driver', the policy saw a 20% reduction in car traffic during rush hours.⁴¹

But this form of road pricing faced strong public opposition when it was first introduced with around seven out of ten people against it. Once people had lived with the changes for a while, however, things changed dramatically. Five years after its introduction, in 2011, opposition had switched to support. As many of the public – seven out of ten – were now in favour of the scheme as had been against it.

Stockholm's initiative revealed two other important insights. The first was the speed with which car users responded to measures like road pricing. When there was a pause in the policy in mid-2006, traffic levels increased overnight, quickly returning to almost the same levels as before the scheme.⁴²

⁴¹ [Traffic Jams, Solved](#)

⁴² [Milan Abruptly Suspended Congestion Pricing and Traffic Immediately Soared](#)

The second point of interest was the way in which people adapted, to the point that many could not remember, or even admit to, ever having been opposed to the measures in the first place. This emerged during research to discover who amongst drivers had experienced a change of heart. But the findings didn't correlate because a disproportionate number claimed always to have been in favour of the congestion charges.⁴³

Changing road systems overnight

Change itself is often the thing people fear most and campaign vociferously against. Even if the change is just to retain priority access on roads for residents, emergency services and essential vehicles. But in Sweden, they demonstrated that much larger changes – equally opposed – can be achieved overnight, as reported by the Rapid Transition Alliance.⁴⁴ Although it wasn't about reducing traffic, it was instructive in terms of the management of changing road use:

'On a single day, 3 September 1967, the entire Swedish road system changed from driving on the left to driving on the right to align with driving patterns in neighbouring countries. Signposts, road markings and other street infrastructure had to be altered overnight. The day was officially known as Högertrafikomläggningen (right-hand traffic diversion) or simply Dagen H (H-Day). Thanks to careful planning, education and meticulous organisation, the work was completed on time and the traffic started up the next day on the other side of the road. There were no more accidents than usual – in fact, numbers were down perhaps because everyone was driving cautiously – and Sweden was now more conveniently aligned with its neighbours and able to buy cheaper left-hand drive cars. A massive change had happened literally overnight that affected everyone, involving changes in behaviour, to a huge number of physical structures on the ground and in legislation. And all this happened despite the fact that a majority of the country was initially against the move.

Preparing the country for the change was a costly and complicated endeavour. Traffic lights had to be reversed, road signs changed, intersections

⁴³ [Traffic Jams, Solved](#)

⁴⁴ [When behaviour changes overnight – from stay-at-home, to smoke free air and switching sides of the road](#)

redesigned, lines on the road repainted, buses modified, and bus stops moved. A massive PR campaign was conducted to prepare the public for the change and educate them about how it would be implemented. Dagen H even got its own logo, which appeared on everything from milk cartons to underwear, and a song contest (the winning tune was “Håll dig till höger, Svensson” – “Keep to the right, Svensson” – by The Telestars).

The point of change itself was at 4:50 a.m. on September 3, 1967, with crowds of people gathering to watch, as all vehicles on the road were instructed to come to a halt, move carefully from the left side of the road to the right, and wait. At the stroke of 5:00am, following a countdown on national radio, the announcement came – “Sweden now has right-hand driving” – and the traffic restarted. Time Magazine called the event “a brief but monumental traffic jam.”

Spain



Madrid – where the public want change, even if some politicians don’t

Madrid in Spain, another European city that has become known for congestion, was taking steps well before the coronavirus pandemic struck.

But it followed in even earlier steps taken by places like Pontevedra, in Northern Spain, which serves as a model of the local transformation that giving urban space back to people on foot can bring. The city returned its 300,000 square metre city centre to pedestrians, removed vehicle through traffic in 1999, and as a consequence brought multiple economic, social and health benefits to residents. Since banning cars, Pontevedra has enjoyed a drastic drop in traffic accidents, reduced anti-social behaviour and much lower pollution levels. With three quarters of all journeys formerly made by car now made on foot or by bike, there have been positive health outcomes for fitter, local citizens too. To navigate around Pontevedra, you consult the metro style map – with “móvete coa túa propia enerxía” (move with your own energy) as its strapline – and the map shows average walking times along each of its pedestrianised streets.

Similarly, following suit to improve life in the city and open up its streets for people Madrid decided also to reduce access for cars. In 2018 Madrid made the centre of the city into an 'ultra low emission zone' which effectively banned most cars⁴⁵.

On this occasion the scheme proved popular from the outset with the active support of a significant majority of the public with 64% of city residents in favour. This was matched closely by attitudes nationally in favour of such controls on cars in central urban areas. In some regions support for traffic reduction was even higher. Within months of Madrid's measures being introduced levels of the toxic vehicle pollutant, nitrogen dioxide, were reportedly down by 48%.⁴⁶

However, in 2019, when a rightwing political party won power in the city government, it moved to suspend the congestion reduction initiative. In response, a mass demonstration was organised by Plataforma en Defensa de Madrid Central to reintroduce the measures.⁴⁷ Then, when a legal case was brought against the suspension, an administrative court judge in the city overruled the new council, restoring the popular scheme.

Barcelona has followed suit with a low emission zone that prohibits vehicles not meeting a low emission standard from entering the city between 7am and 8pm.⁴⁸ New low emission zones are set to be mandated by law in all towns and cities with populations of at least 50,000 by 2025, a measure reaching 138 locations.

Indonesia



Jakarta – home of the Car Free Day

World Car Free Day was launched in the year 2000 with just a handful of participating cities. By 2018, the idea had attracted some 2,000+ participating cities from 46 countries around the world to participate.

But in Jakarta, Car Free Day is a weekly, not just an annual, event, held every Sunday since 2012 on the city's main avenues. During 2018's World Car Free Day, the citizens of Jakarta celebrated the event by breaking the world record for the largest 'poco-poco' dance, with 65,000 people

⁴⁵ [Spain Wants to Ban Cars in Dozens of Cities, and the Public's on Board](#)

⁴⁶ [Judge reinstates Madrid's low emissions zone](#)

⁴⁷ [Thousands to march against Madrid low-emissions zone U-turn](#)

⁴⁸ [Low Emission Zones \(LEZs\) in Europe](#)

performing the traditional dance, led by President Joko Widodo.⁴⁹

Jakarta is the most high profile Indonesian city to start weekly car free days, but it wasn't the first – they were led by Bogor and Malang.

Each week the streets are reclaimed by people and given over to a wide variety of activities, with many also enjoying walks, the absence of traffic and cleaner air. The event proves extremely popular with children, families and young people.⁵⁰

It's estimated that each week at least 100,000 people come together to take advantage of the car free avenues. The day is now seen as an opportunity by many different groups and sectors. Businesses have been quick to take advantage, with something of an open market happening each week. As well as the booths selling things, the new open spaces are used to hold events – which are planned and monitored by weekly meetings held by the local transport authority.

But local communities use the weekly event too with good effect. Support groups for people with hearing difficulties, for example, are reported to hold sign language training for free in clear traffic circles. It aids civic engagement too, with young people, students and campaigners gathering regularly to promote causes. Vehicles and generators are banned, to guarantee that the cleaner air benefits are maintained.

But Jakarta still has huge problems with congestion. But that's where the city's other plans come in. An odd/even number plate scheme operates on key routes at busy times, with number plates ending in odd and even numbers allowed on alternate days. An underground metro Mass Rapid Transit (MRT) system is being built, as well as a Bus Rapid Transit (BRT) scheme inspired by Bogotá in Colombia. Overall, the government plans to raise the proportion of journeys using public transport from 23% in the mid 2010s to 60% by 2030.

France



Paris – the plan to bring back breathable air

The Paris Mayor, Anne Marie Hidalgo, is pioneering some of the most ambitious urban improvement measures linked to reducing the number of cars on the city's streets. In a direct

⁴⁹ [Reclaiming the streets: the increasing trend of pedestrianisation around the world](#)

⁵⁰ [Jakarta Car Free Day: Exercise and Socialise](#)

response to the coronavirus pandemic, Paris introduced a further 50km of emergency bike lanes, for a total planned of 650km. It did so in just a few weeks and created the space for bikes by using semi-rigid posts and traffic barricades.⁵¹

Like many well-established cities Paris was not built for modern volumes of vehicle traffic and there had been several previous attempts at tackling congestion and the pollution linked to the large number of cars on the roads.

In 2014 the city was experiencing a serious decline in air quality, drawing comparisons with the polluted Chinese city of Beijing. In response it experimented with a version of the 'odd / even' scheme made famous by Delhi. Public transport was also made free in order to tempt people away from their cars.⁵² In spite of the crisis, the measures were criticised by the political opposition leader Jean-Francois Cope - who complained of there being 'panic' on the ground.

Further moves in 2018 to pedestrianise areas of the city centre met with rightwing opposition.⁵³

Also in 2018, older petrol and diesel vehicles were banned from the city between 8am and 8pm and diesel cars are due to be banned outright in 2024 and petrol cars in 2030. These measures have also faced opposition from groups lobbying on behalf of motorists.⁵⁴

Hidalgo stood for reelection in 2020 with a policy on banning cars being central to her campaign. In the end, she was successfully re-elected and garnered 20% more of the vote than her nearest rival.⁵⁵

Strasbourg - from opposition to acceptance of traffic reduction

Experience from the city of Strasbourg in France in traffic reduction measures echoes that of others in journeying from opposition to support.

In 1992 the city embarked on a 'plan de circulation' that would see the expansion of central areas opened-up for public transport and active travel - cycling and walking - and closed to private cars.

⁵¹ [Streets for Pandemic Response & Recovery](#)

⁵² [Paris car ban imposed after pollution hits high](#)

⁵³ [Paris mayor plans to pedestrianise city centre](#)

⁵⁴ [Polluted Paris steps up war on diesel](#)

⁵⁵ [How Anne Hidalgo's anti-car policies won her re-election in Paris](#)

Following a familiar pattern, there were warnings that the exclusion of private cars from the centre would lead to 'chaos' and congestion. But, once again, the upheaval did not materialise. Over the course of a decade from 1990 to 2000 the number of daily vehicles in the city centre went down by 40,000. Without the measures numbers had been projected to instead rise by 60,000 – a difference of 100,000 vehicles.

The scheme was designed to improve quality of life, reduce pollution and make the city more attractive to residents and visitors by encouraging a full modal shift in people's travelling habits, switching to active travel and public transport. After a 'settling-in' period drivers soon adapted to the new road layout.

Strasbourg's historic centre



Along with the scheme came a new tramline which led to a 17% reduction in traffic coming into the wider city area in its first year alone. Its success led to two further tramlines being installed by 2010. Over the course of a decade from 1989 to 1999, trips made by public transport went up from 11% to 30%.

But it wasn't easy. There was a powerful opposition campaign supported by many retailers who feared that the physical changes and pedestrianisation would reduce the number of customers with fewer car-based visits.

The city engaged in widespread consultation and also staged a major communications exercise – with a popular 'bear' symbol and comprehensive signage explaining the changes. There was also a phone-in advice line.

The scheme ultimately proved to be a popular and political success with some businesses and residents even calling for

a further expansion of traffic reduction measures. Property values were enhanced and the use of parking restrictions triggered greater turnover for businesses.

Strasbourg also innovated as the first city in France to use an 'intelligent traffic management system'.⁵⁶ The approach works by reducing the number of stop-and-go waves along its roads, cutting vehicle stops by 9% which lowers emissions of harmful nitrogen oxide and particulates by 8% and 9% respectively. Trams are also given priority over other forms of traffic.⁵⁷

Finland



Kajaani - lifting a city centre up by taking down the number of cars

In the 1990s the centre of the city of Kajaani had been in decline for some time. For roughly two decades there had been 'heated debate' over proposals to remove car traffic from the city's central area. In 1996 the decision was taken to go ahead and implement the traffic measures as part of the broader plan to stem and reverse the city centre's decline which was to be implemented in 1998.⁵⁸ Once in place, the centre traffic didn't simply transfer onto neighbouring streets, there was actually an 'evaporation' of traffic as people switched to active travel and public transport alternatives.

Polling conducted before and after the experiment showed a pronounced, positive shift in public attitudes towards the city centre. Before the changes 60% of residents thought the city a good place to live and 47% that the centre was 'beautiful'. After the changes opinions shifted to 80% thinking Kajaani good to live in and 55% that the centre was beautiful.

Traffic reduction measures in the Finnish capital, Helsinki, also led to them achieving zero traffic related pedestrian deaths in 2019, the first time this had happened since current records began being kept in 1960.⁵⁹ Oslo in Norway achieved the same that year.⁶⁰

⁵⁶ [Developing and implementing sustainable and accessible transport strategies](#)

⁵⁷ [How to tackle air pollution in cities with intelligent traffic management](#)

⁵⁸ [Reclaiming city streets for people: Chaos or quality of life?](#)

⁵⁹ [City of Helsinki records zero pedestrian fatalities in 2019](#)

⁶⁰ [How Helsinki and Oslo cut pedestrian deaths to zero](#)

Belgium



Ghent – where cars are only guests on the roads

Ghent, Belgium has become something of a poster-child for progressive transport policy, but to get to that point wasn't easy and took political courage in the face of opposition. Like many cities not designed for the car, its streets suffered heavy congestion and attempts to tackle the problems, counterintuitively, faced 'strong opposition'.⁶¹

A medieval city, its maze of narrow streets and squares began to be overwhelmed by traffic during the 1980s. An early attempt was made in 1987 to reduce traffic and begin to address the combined problems of congestion, air and noise pollution, and poor conditions for cyclists, pedestrians and public transport. But the plan was cancelled after only 5 months due to vociferous protests from retailers.

A cycling plan was then introduced in 1993 followed by a city centre mobility plan in 1997. Prior to this, however, during 1996, there were over 300 public hearings to allow for extensive consultation on the proposals. That wasn't all. Advance notice of proposed road closures was also carefully communicated using a range of media channels including radio, television, maps and posters. Households were even mailed and a phone information line was established. Then, overnight in November 1997, and still in the face of much resistance, through traffic was stopped from entering the city centre.

The congestion that opponents warned of did not come about. Public transport use increased, the centre was opened to pedestrians and a range of life-enhancing cultural activities, making it more attractive to residents and visitors, began.

The city leaders took the decision to demote cars to being only 'guests' on its roads and, at the heart of its mobility plan, was the facilitation of a huge shift toward cycle use.

Ghent not only built new infrastructure for cycling, including 300km of cycle routes and 7500 rental bikes, but the city also promoted the culture of cycling with art and exhibitions to increase its appeal. Journeys are now quicker by bike than by car.

⁶¹ [Reclaiming city streets for people: Chaos or quality of life?](#)

Mr Peter Vansevenant, Director of the Mobility Service, Ghent, said that key lessons from the experience were, the importance of 'Communication, communication, communication', and that when space for private cars is removed, it is important immediately to give back something in return, such as improved squares and streets, better facilities for cyclists, and more reliable public transport services.

In a decade the share of commutes by bike rose to one in five, more than double the national average, up from just 12%. Ghent plans to be carbon-neutral by 2050 and won an international prize, the Eurostar Ashden Award for Sustainable Travel, in 2012.⁶²

Norway



Oslo - where you can cycle in safety

Not a single pedestrian or cyclist died in a traffic incident in the city of Oslo, Norway in 2019.⁶³ For comparison, in 1975 there had been 41 traffic fatalities (one person did die in 2019 when a driver drove into a fence).⁶⁴ The turnaround was the result of years of considered work reducing traffic on the city's streets. "The car became the owner of our cities," Rune Gjør, from Oslo's Department of Mobility has been quoted as saying, "but we're resetting the order again."

In spite of such extraordinary achievements, Oslo's shift to designing-out the car from the city has faced increasingly familiar opposition. Some from those who simply have had difficulty adapting to change, and more from individuals fearing a loss of business when cars are reduced on roads. In fact, and again following in the footsteps of other towns and cities, Oslo city centre reported an increase of footfall of 10% after reduction measures indicating that they made the streets more attractive to pedestrians.

What were some of the steps taken by the city? Most on-street parking was replaced with bike lanes and pavement for pedestrians.⁶⁵ New street furniture such as benches were also introduced along with miniature parks.

⁶² [The Ashden Awards for Sustainable Energy \(2012\), Case Study: City of Ghent, Belgium – A Summary](#)

⁶³ [Oslo got pedestrian and cyclist deaths down to zero. Here's how](#)

⁶⁴ [Oslo saw zero pedestrian and cyclist deaths in 2019. Here's how the city did it.](#)

⁶⁵ [Watch Oslo transform into a car-free utopia](#)

Certain major streets were closed to traffic, congestion charges were introduced along with lower, safer speed limits.

Downtown Oslo



Hanna Marcussen, the vice-mayor for urban development, explained that Oslo's main objective is, "to give the streets back to people... It is about how we want to use our streets and what the streets should be for. For us, the street should be where you meet people, eat at outdoor restaurants, where kids play, and where art is exhibited."⁶⁶

Indicative, perhaps, of a broader cultural shift, something else extraordinary happened in 2019. Not a single child under the age of 15 anywhere in the whole country of Norway died in a road crash. By comparison in Britain, between 39 and 69 children (0-15) died each year from 2010-2019, with 2,686 killed or seriously injured and 13,574 total casualties in 2019 alone.⁶⁷

Echoing the attitude adopted in Ghent, Belgium, city planners now see drivers as 'guests' on the streets, rather than them being privileged and prioritised.⁶⁸

⁶⁶ [What happens when a city bans cars from its streets?](#)

⁶⁷ [Reported road casualties in Great Britain: 2019 annual report](#)

⁶⁸ ['Drivers are guests': How Oslo cut traffic deaths to almost zero in 2019](#)

Oslo saw the number of trips taken by public transport increase by 63% in a decade from 2007 – 2017,⁶⁹ with the city attributing its success to ‘long-term, comprehensive investment, with predictable funding, which has offered more frequent departures and higher quality’.⁷⁰ Already by 2017, 56% of public transport was powered by renewable energy with a target of going 100% renewable by 2020. This has included the conversion of ferries to be electric-powered; all boats are now planned to be ‘emissions-free’ by 2024.

One of the ways that Oslo overcame the doubts and opposition was by first experimenting with pilot projects in order, as Hanna Marcussen states, “to let people see what it would be like and we began making changes little by little.” Outside Oslo’s town hall there was, for example, a beautiful square that was typically full of cars. Marcussen says, “When we closed it off about a year ago, people thought it was strange – but now they think it was weird that we ever allowed cars to drive through there at all.”⁷¹

Colombia



Medellín – where public space and public transport increased and violence radically reduced

The example of Medellín, the second largest city in Colombia, is different.⁷² This is not a tale of habitual drivers and worried retailers at first resisting and then celebrating traffic reduction measures. Instead it is an example of how the bold re-imagining of public space and the innovative use of public transport can overcome far greater threats and obstacles, and stands as something of a reproach to more timid approaches to change in cities with fewer problems and greater initial advantages.

It could be said that Medellín faced the violent opposition of its own history and circumstances to change. But achieving what it did in the context strongly suggests that other cities could be far bolder in transforming themselves to improve quality of life, increase public spaces and create a better environment for all. In the early 1990s, it was the most violent

⁶⁹ [‘Drivers are guests’: How Oslo cut traffic deaths to almost zero in 2019](#)

⁷⁰ [‘Drivers are guests’: How Oslo cut traffic deaths to almost zero in 2019](#)

⁷¹ [What happens when a city bans cars from its streets?](#)

⁷² [The Medellín miracle](#)

city in the world. The homicide rate reached an unprecedented scale of 381 murders per 100,000 people in 1991, nearly 40 times worse than the UN's measure for endemic violence, at 10 per 100,000 people. Much of the violence can be attributed to the thriving illicit drug trade and turf wars between the drug cartels, and between the cartels and the state, which led to spiralling levels of violence that hit the poorest and most deprived parts of the city worst.

Since the early 2000s, however, the city has seen a remarkable transformation, with rates of violence plummeting. The rate of murders fell between 1991 and 2015 from 381 to 20 per 100,000 people – still relatively high, but a marked improvement and impressive compared to some other large Latin American cities. In the last two decades Medellín has moved on to become a world-renowned centre of innovation with a thriving civil society. It is now admired by city planners around the world for its innovative architecture and public infrastructure.

Although still facing challenges, Medellín has transformed itself from a no-go area to outsiders, into a thriving tourist hub with high levels of foreign investment and a strong civic culture – unimaginable just two decades previously. A progressive coalition of academics, community organisers and business people came together to seek solutions to Medellín's crisis in the late 1990s. Their collaborative and pro-poor innovations actively engaged with communities and were the building blocks of the rapid transition that has been termed the "Medellín Miracle". It has been a success of open participatory, civic engagement.

A movement of civil society leaders, business people and academics from the city's leading universities came together in a series of public debates on the city's crises, seeking to collectively define measures to address the violence. The movement actively sought to engage with community organisations from the most marginalised areas, and fostered the abilities of poorer communities to participate in the governance of the city.

This urban coalition came up with proposals to invest in education, public infrastructure and public spaces in the city. The coalition came to be called *Compromiso Ciudadano* ("citizen commitment"), and eventually formed into a political party. In 2003, the party's mayoral candidate, Sergio Farjado, was elected on a ticket based on the movement's proposals. Farjado dedicated his mayoral term to "repaying the historic social debt" to the poorest parts of the city. The collection of policies that he put in place included developing new public spaces, schools, parks and public libraries and supporting

local businesses in the lowest-income areas of the city. It marked a turning point.

The original aim of the Compromiso Ciudadano coalition was to reduce violent crime and inequality in the city. However, the drive for a social change also resulted in actions promoting urban sustainability – Medellín now hosts Colombia’s most advanced sustainable public transport network, and the city has vastly increased and enhanced green spaces, including through the development of a new green belt around the city’s periphery. Medellín even took on a leadership role in the C40 group of cities combating climate change.

The violence of the drug war was exacerbated by a long-standing history of inequality and exclusion in the city. Economic liberalisation had led to high rates of unemployment, especially amongst the young making them easy recruits for drug gangs. The topography of the city also served to exacerbate patterns of inequality and exclusion. Medellín sits in a valley of the Andes, with the poorest and most marginalised barrios climbing up into the steep mountain sides.

The richer parts of the city developed in the valley to the exclusion of the poorer ones in the city’s periphery. There was limited public infrastructure connecting the richer and poorer zones, which allowed the city’s elites to disregard the violence for many years until worsening conflict brought it to their doorsteps.

The participatory process to reimagine the city bore a vibrant civic culture that still exists today. Decisive to Medellín’s social and security transition was the transformation of its physical space to be more inclusive. That was aided when Colombia launched a new National Constitution in 1991 which recognised public space as a constitutional right – used by subsequent mayors to justify changes. Before the 1990s there were no public spaces in Medellín, then authorities worked to open up parks, botanical gardens and centres for science, education and arts that were free to the public.

Conspicuous infrastructure projects that supported the inclusion of the most marginalised areas were also critical factors in the city’s transition. One mayor, Luis Perez, introduced the first cable car – which employs Alpine ski-lift technology to connect one of the most dangerous parts of the city’s hillsides to its wealthy centre.

Part of Medellín's cable car network



Three more cable car lines connecting other marginalized barrios have since been built. The cable cars intend to support a more inclusive economy, providing economic opportunities to poor residents, whose average travel time to the centre was cut down from over an hour to 15 minutes (excluding queuing time). The cable cars also hold a powerful symbolic value in areas of the city that had long felt neglected by the state – one resident interviewed for a study remarking ‘I used to say I’m going to Medellín, now I say I’m going to the city centre.’

In terms of political factors, Farjado’s technocratic approach made a break with populist models of urban governance that predominated in Colombia. Decisions on public investments were based on data from the Human Development Index – the areas with the lowest indicators received investment. Farjado also introduced a Participatory Planning and Budgeting programme, in order to bring urban planning and governance closer to the citizenry. The infrastructure projects were also accompanied by social programmes – including a programme of cash grants similar to Brazil’s successful Bolsa Familia programme. Business development support centres were launched in the poorest parts of town, offering free technical advice and favourable loans to residents interested in launching their own microenterprises.

Another critical economic factor in Medellín's rapid transition was the financial support provided by the publicly owned utility company, Empresas Públicas de Medellín (EPM). EPM is one of Latin America's largest companies, providing water, gas and electricity services in countries across the region. As a publicly owned company, EPM provides 30% of its profits to the city – an economic boost that has allowed the municipality to make investments in public infrastructure that might otherwise not have been possible.

Conclusion



Like flags of hope planted on an atlas, these are stories of progress and potential about making the streets of cities around the world better for people and nature. Whether it is to ensure cleaner air entering the lungs of children, create space for more convivial neighbourhoods, cut climate-wrecking pollution, reduce physical threats and noise pollution, or to open up greater opportunity for more healthy, active lives, the good reasons to work towards car free cities are many.

People fear change even when the present is polluted. But these tales from around the world demonstrate that across cultures and generations, once traffic reduction is introduced people, including those who resisted, adapt quickly, and don't want things to go back to the old congestion and pollution.

The traumatic experience of the coronavirus pandemic hugely strengthens the case for change. With respiratory diseases, such as Covid-19, worsened by air pollution, needs for more street space close to local businesses, such as cafes and restaurants, flexible thoroughfares and space so people can socially distance now, more than ever, we must urgently reclaim space from private cars.

As these examples demonstrate, the good news is that it can be done, and quickly. A huge amount of experience has been gained over decades to minimise problems and maximise benefits in bringing change about. Clear explanation and consultation, but also courage and tenacity by local authorities prove to be key. Multiple examples from during the pandemic of municipalities acting quickly to protect public health and local economies show what is possible.

The importance of breaking the chains of car dependence and congestion to make cities is now so well understood, all that is left to do is take action.