Keeping our cities moving

The four big challenges cities
are facing in 2016

The European Urban Transportation Survey

CONDUENT

A juggling act: rising to the new challenges of city transportation

As a transportation strategist, you know that great urban transport sits at the centre of a Venn diagram, where three imperatives meet:

People: improving the rider experience.

Planet: reducing emissions for a greener, more liveable city.

Pennies: maximizing limited city budgets.

Usually, these goals force difficult trade-offs. In urban transport, the equation works slightly differently.

More people using public transport (instead of cars) leads to a greener, more efficient city and better, more cost-effective services.

People

Planet

Pennies

Great urban transport
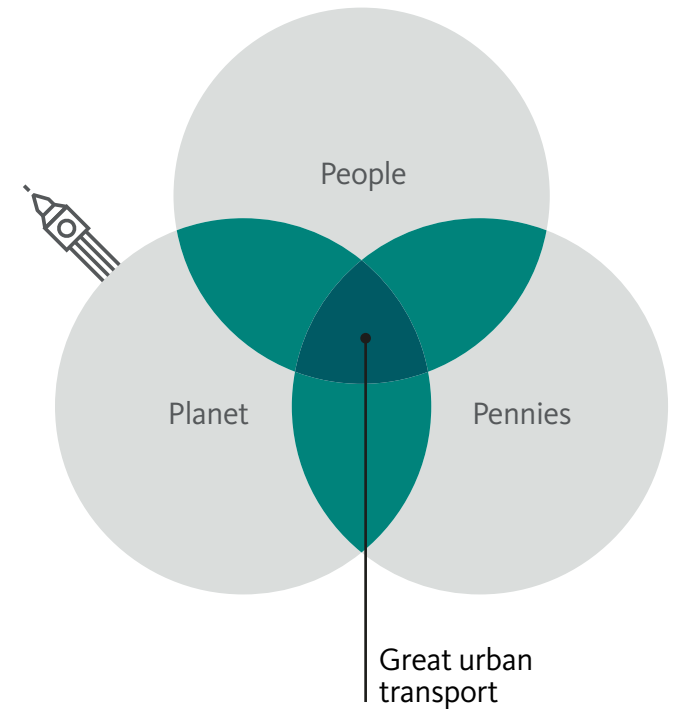
A juggling act: rising to the new challenges of city transportation

The question then is: how can we improve the transport experience to maximise ridership and convenience?

We believe that the best way to improve a service is by listening to the people who use it. So we asked commuters across Europe to tell us how they currently experience transportation in their city.

We then invited Richard Harris, the international expert on Intelligent Transport Systems at Conduent – and author of over 300 papers – to comment on their responses.
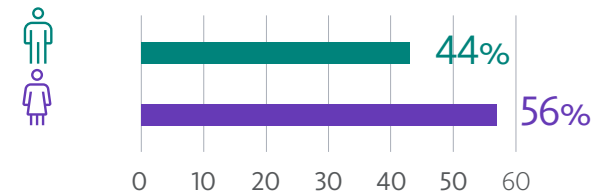
The outcome: fresh data, insights and ideas to improve urban transport, from the people who travel every day. You'll see how these ideas roll up into four big themes that we believe can make a difference in urban mobility.
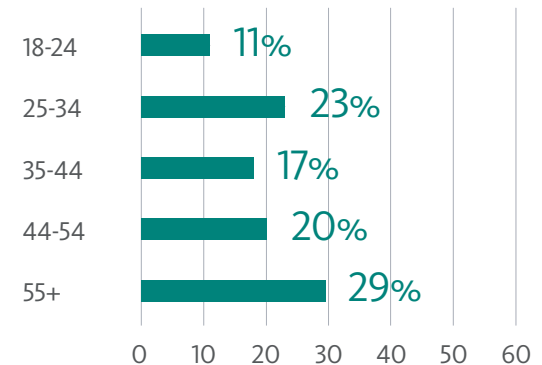
Who did we ask?
We surveyed 1,900 consumers across 19 European cities in France, U.K., Germany, Belgium and the Netherlands.

(For more details, see .)

The gender split

♂	44%
♀	56%

0 10 20 30 40 50 60

The age breakdown

18-24	11%
25-34	23%
35-44	17%
44-54	20%
55+	29%

0 10 20 30 40 50 60

Multimodal myopia

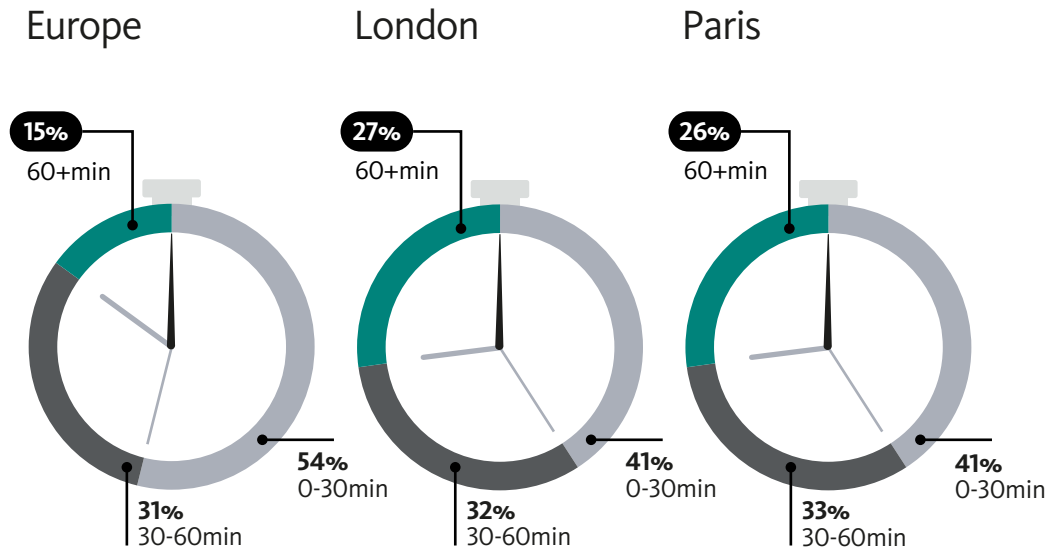## "Make transportation faster and easier to use, and we'll use it."
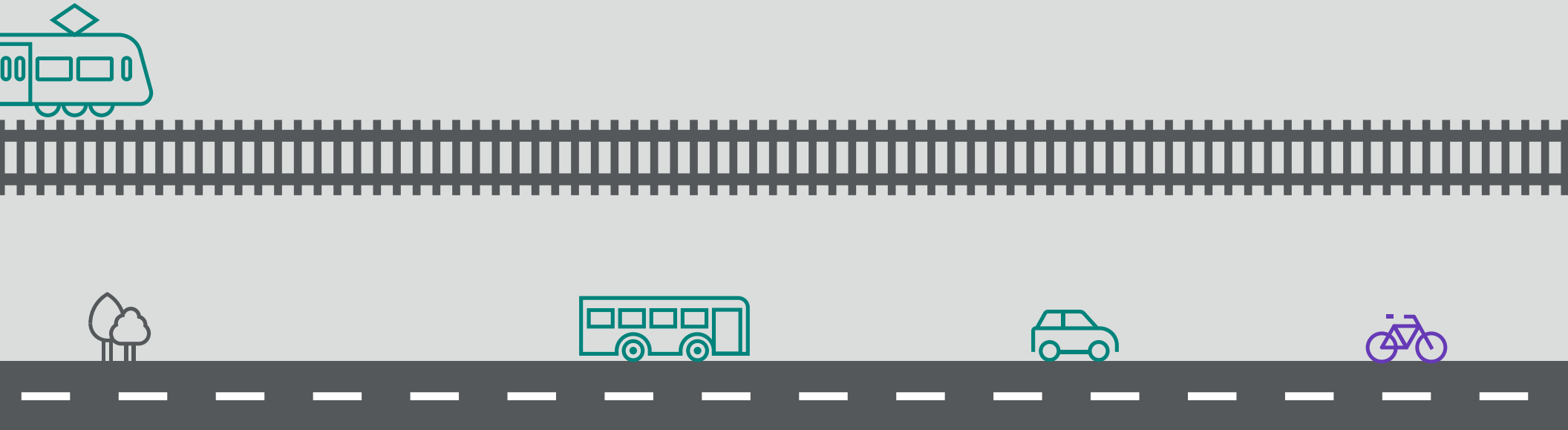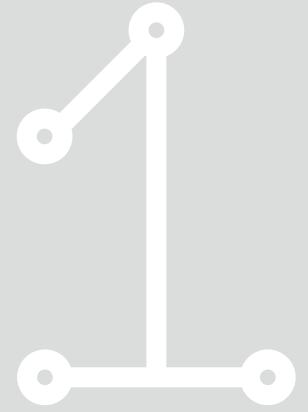
Multimodal myopia

Whatever the journey, most Europeans get to their destination within a half hour on average – with two notable exceptions. Londoners and Parisians face extraordinarily long travel times – with 27% and 26%, respectively, travelling for longer than an hour. And they tend to use well over the European average of 2.09 different modes of transportation (including cars) more than once per week.

Unsurprisingly, people in large cities such as London and Paris also experience more than their share of delays, which adds to travel times and makes journey times unpredictable.

Average travel times

Europe

15%
60+min

54%
0-30min

31%
30-60min

London

27%
60+min

41%
0-30min

32%
30-60min

Paris

26%
60+min

41%
0-30min

33%
30-60min

Different modes of transportation used more than once a week

Europe
2.09

0   1.0   2.0   3.0

London
2.9

0   1.0   2.0   3.0

Paris
2.4

0   1.0   2.0   3.0

Multimodal myopia

Multimodal transport that works: the only way to change behaviours
When asked which factors would lead to increased use of public transport, our respondents clearly identified the two big ones in addition to cost:

Improved service. That includes faster journey times, more frequent service, better information and new routes.

Integrated ticketing. i.e. one ticket that can be used for multiple (or all) modes of transport. (Like the Conduent Seamless® Transportation Solution.)

These responses suggest a need for better connections – ways of allowing riders to go from car to bus, to train and back again, and to access methods of payment. All in service of the mission of making journeys more predictable.

CityPass

Richard Harris, Solutions Director, Conduent

# "If you're going to rethink just one thing in all of your policy, make that thing parking."

"Changing people's travel behaviour is challenging and complex. The key is to remove barriers by making the entire experience more attractive, including cost, ease of payment, safety, convenience, reliability, flexibility, and the ease of changing modes and navigating interchanges.

The next step is to provide all the information and support that travellers need. If they're not confident about using different modes of transport they'll stick to what they currently use (which is likely to be their own car).

We need to be better at turning data into useful, reliable, easy-to-understand information and making sure that access to it is easy. Improving transport efficiency and reducing delays and congestion is good for everyone and will make our cities more liveable."

Engineering the customer experience

"We care much more about convenience and time than about cost or the environment."
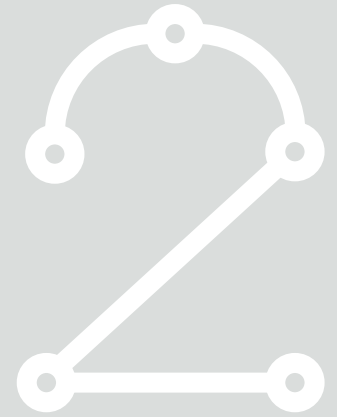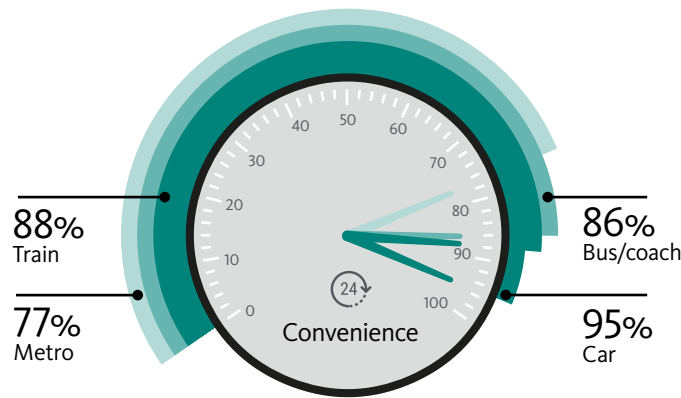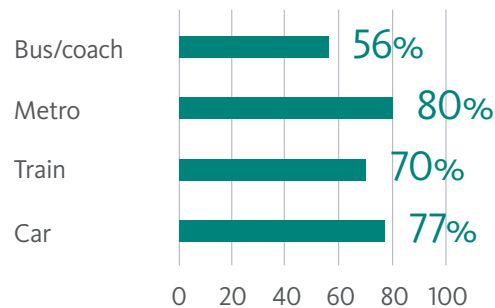
Engineering the customer experience

Commuters do consider cost of travel and environmental friendliness in choosing how to get around. But those factors are overshadowed by two factors core to the travel experience: convenience and speed.

This phenomenon is consistent across all modes of transportation, and it helps to explain why cars are still one of the most popular travel options in Europe – even though very few people think of them as cost-efficient, or eco-friendly.

Reasons for choosing a means of transport:

40 50 60
30   70
20   80
10   90
0   100
24 ↻
Convenience

88% Train

77% Metro

86% Bus/coach

95% Car

Enviromentally friendly

Bus/coach 29%
Metro 31%
Train 24%
Car 3%

Cost

Bus/coach 50%
Metro 41%
Train 32%
Car 13%

Time

Bus/coach 56%
Metro 80%
Train 70%
Car 77%

0 20 40 60 80 100

Only option

Bus/coach 27%
Metro 16%
Train 22%
Car 24%

0 20 40 60 80 100
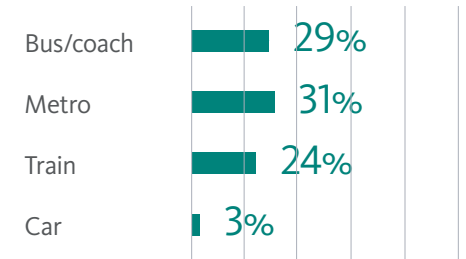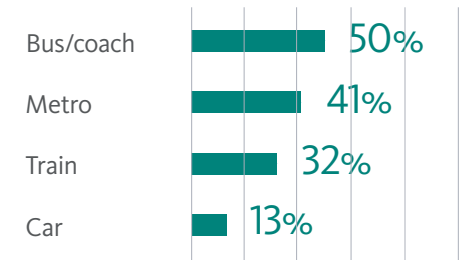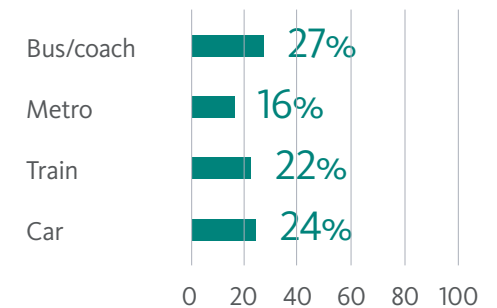
Engineering the customer experience

Giving travellers a 'nudge'
The primacy of speed and convenience may not be a massive surprise – but the fact that cost only ranks third in people's priorities is valuable information for transportation strategists. They can use it to influence travel behaviour in two ways:

Make speed and convenience your main concern. Develop transport strategies to win over the people who currently drive – by improving performance selectively, specifically on speed and convenience. Ask yourself: is there a way to provide more frequent services, better connections, more routes?

Leverage people's readiness to pay. The convenience and speed of driving are valuable. Review and adjust the price of parking (or toll roads) to local market values.

What people mean by...

Convenience: amenities (such as toilets, waiting rooms, cafes), distance from home, comfort, reliability, and transparency about available routes and system performance.

Speed: overall travel time, the least chance of delay (including the time it takes to find parking), and the best connection times.

Richard Harris, Solutions Director, Conduent

"It all starts with educating people about their options."

"People have different transport needs at different times. The default choice is often to use a car, even when that is not the best option, simply because it is available.

Again, communication is crucial: providing choice through (for instance) a mobility app companion that can show the travel options, timing, cost, and other information, will empower people to travel in much smarter ways, depending on their individual need for any given journey.

Cities should also increase their use of data analytics: it will help them not only pinpoint bottlenecks, but also help identify new patterns of travel behaviour and accelerate new services."

Actively managing parking

"When I decide where to park, cost is the most important factor."

Actively managing parking

We've seen that the cost argument doesn't necessarily keep people from driving, but it becomes hugely important once they need to park. Drivers choose where to park based on two factors: how much it costs, and how likely it is to find a space near their destination.

A quarter of Europeans experience delays when parking more than once a week. While 71% of all respondents said they usually find a space (where they work) within five minutes, 6% look for parking for longer than 15 minutes. And 3% look for over half an hour (!).

Length of time that it usually takes to find parking space where you work (Europe):

19% 6-15min

71% 0-5min

6% 16-30min

3% 31-60min

Data does not add up to 100% due to rounding.

Factors influencing locations that drivers choose to park (Europe):

Cost

No	15%
Low	14%
Medium	29%
High	42%

Influence 0 10 20 30 40 50 60

Likelihood of finding a space

No	13%
Low	15%
Medium	31%
High	41%

Influence 0 10 20 30 40 50 60

Distance to end destination

No	15%
Low	17%
Medium	32%
High	42%

Influence 0 10 20 30 40 50 60

Distance to public transportation

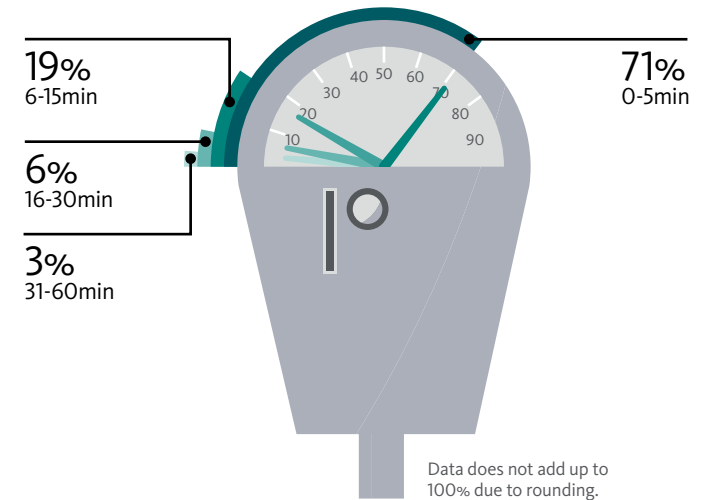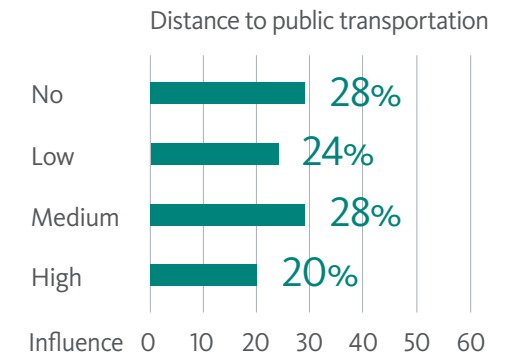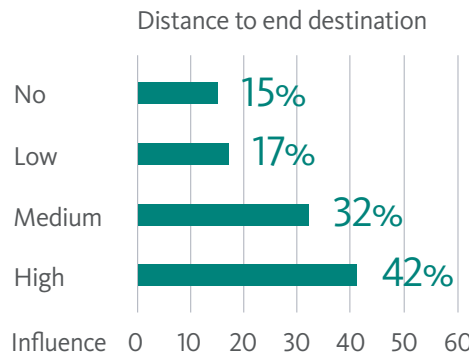|	
No	28%
Low	24%
Medium	28%
High	20%

Influence 0 10 20 30 40 50 60
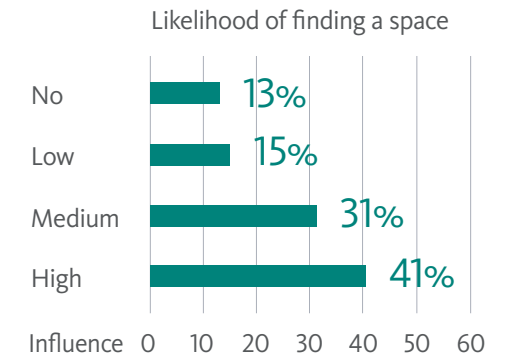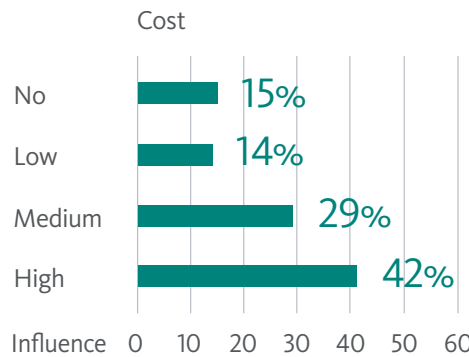
Actively managing parking

The city centre challenge: minimising cruising
While it may sound somewhat inconsequential that only about 1 in 10 people look for parking for over 15 minutes, the impact on congestion can be significant. Drivers who have to circle the block looking for parking significantly increase traffic gridlock and pollution.

Some cities leverage drivers' cost-consciousness through parking apps that highlight available spaces and their cost. This enables drivers to make informed decisions of where to park before the moment of need – and even reserve a space.

The worst cities for parking
Parking is easiest in Belgium and the Netherlands, where four out of five people find parking within five minutes. But in London and in Paris, only about half of all respondents find parking within five minutes. And nearly a fifth needed up to a half hour to find a space.

Factors influencing decisions to use public transport more (Europe):
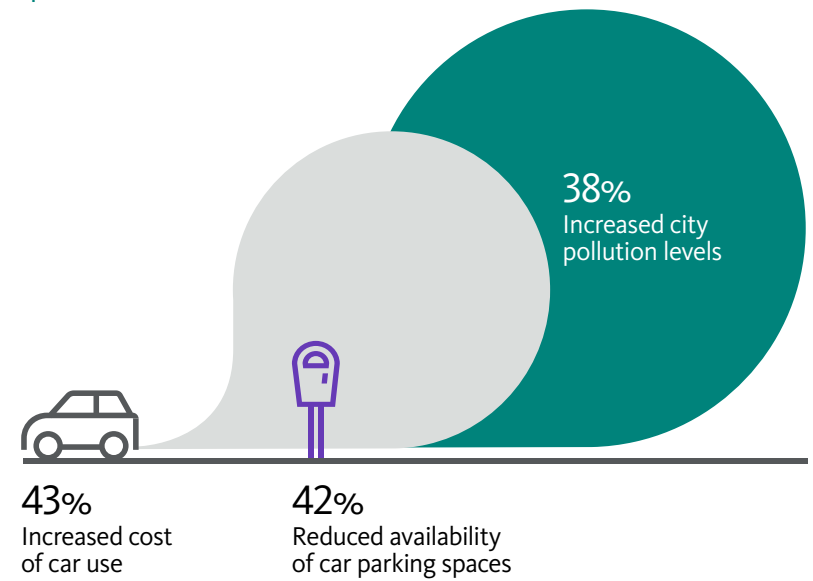
38%
Increased city pollution levels

43%
Increased cost of car use

42%
Reduced availability of car parking spaces

Richard Harris, Solutions Director, Conduent

"If you're going to rethink just one thing in all of your policy, make that thing parking."

"Let's be honest. Parking is a pain. Up to 30% of cars in our cities are circling looking for a parking space. This causes congestion, pollution, and frustration. And it wastes time.

Data can help with that: cities can use real-time occupancy data and better payment systems to provide simpler and more efficient parking for drivers. Thanks to better tracking systems, improved information and guidance, cities can actively manage parking-related congestion, maximise revenue, and use demand-based pricing to influence drivers' behaviour.

Of course, cities will seek to balance the impact of easier and more efficient parking with other measures so that it doesn't just encourage more car traffic. That's why we need flexible systems that can adapt to changing policy objectives."

Mobility-as-a-Service

"Public transport is crucial to keep cities alive and kicking."
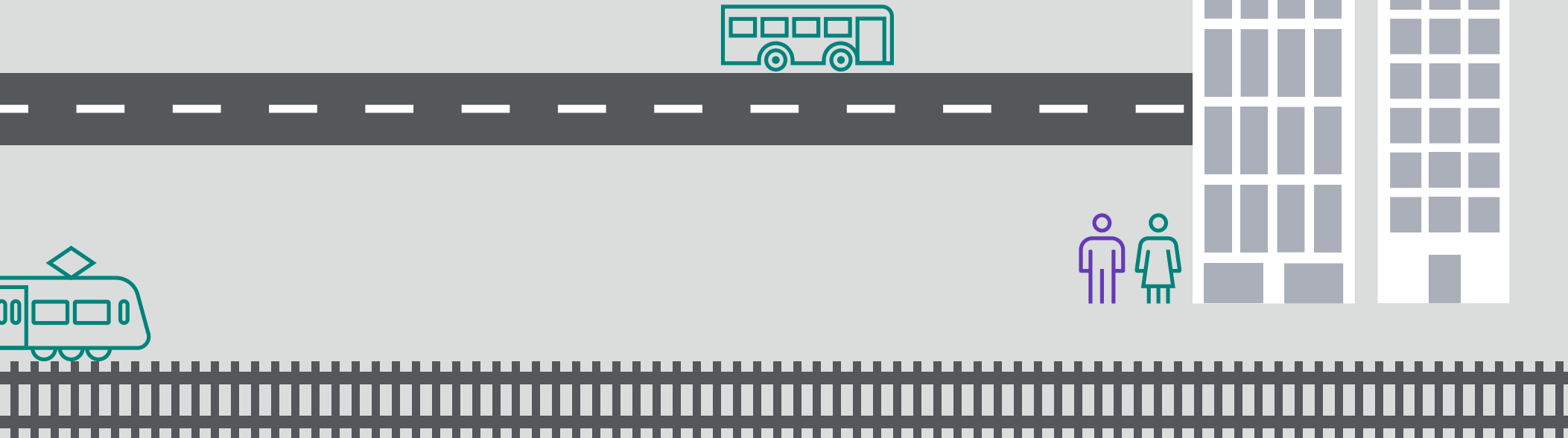
Mobility-as-a-Service

Europeans don't agree on the impact that emerging technology will have on transportation. There is no clear consensus that we'll all be moving about in electric vehicles, or self-driving cars – but the majority agrees:

"Better public transport provision will heavily influence the economic success of my city."

Most respondents also agree that public transport will steer their decisions on where to live or work. The upshot of this: respondents will take an active interest in transportation policy where they live.

Mobility-as-a-Service – the future of transport?
<u>Studies</u> indicate that millennials are much more open to joining the 'sharing economy' as illustrated by services such as Uber and airbnb. They're also more likely to want urban mobility to work 'as a service', with subscription or pay-as-you-go models that give access to the most convenient modes of travel.

The public and private sectors are coming together to develop, MaaS models – a great opportunity to pioneer new mobility solutions and services.

Europe's transport system is incredibly varied, so a degree of complexity is to be expected. It's the job of today's transport operators, city planners and infrastructure providers to break down this complexity and make public transportation an easy, reliable and intelligent experience for those that use it.

What exactly is Mobility-as-a-Service?
Mobility-as-a-Service combines all forms of personal transport (bike and car sharing, trains, buses, metro, etc.) together into seamless trip chains, with bookings and payments managed collectively for all legs of the journey, often via a mobile app that works in many cities.

What it means: people will have access to all the means of transport available, without long-term commitment, or the need to own a car (or even a bike) themselves.

Mobility-as-a-Service

Perspectives of future transport usage (Europe):

☺ Agree 😐 Neutral ☹ Disagree

Public transport provision will heavily affect the overall economic success of my city
60% | 24% | 16%

I will no longer need to drive a vehicle
48% | 29% | 23%

I will share the use of a car
45% | 34% | 21%

Public transport provision will heavily affect my choice(s) of where to live and work (for a breakdown by city, see next table)
43% | 31% | 26%

I will use self-driving cars
36% | 37% | 27%

I will use an electric car
35% | 46% | 19%

Public transport provision will heavily affect my choice(s) of where to live and work:

☺ Agree 😐 Neutral ☹ Disagree

City	Agree	Neutral	Disagree
Marseille	60%	24%	16%
Paris	48%	29%	23%
Lyon	46%	38%	16%
London	45%	34%	21%
Amsterdam	43%	31%	26%
Frankfurt	41%	33%	26%
Hamburg	36%	37%	27%
Brussels	35%	37%	28%
Edinburgh	35%	46%	19%
Rotterdam	28%	47%	25%
Berlin	28%	43%	29%
Birmingham	24%	37%	39%

Richard Harris, Solutions Director, Conduent

"The future of transport starts with integrated data. Integration is vital if we are to harvest information from the rivers of data that now exist in our cities."

"We have, up until now, introduced new and isolated back office systems for each operation: e.g. a congestion charge back office system, a bike hire back office system, a public transport fare collection back office system and so on.

In reality, these back office systems hold similar data and manage similar transactions. There are no technical constraints involved in having a back office system support many services.

Integrating services through smart, 'Mobility-as-a-Service' (MaaS) solutions will put users at the heart of the transport network, offering tailor-made travel services based on preferences and the means to achieve the smarter, simplified transportation landscape envisioned and expected by future users."

The data imperative in European transport

Parking, convenience, speed, the connectedness of services: many of the transportation priorities that are emerging for 2016 aren't so very different from past years.

The biggest challenge still remains that of aligning what respondents want and what transport policy makers have set as their goals (within their budget).

What's different today are the new capabilities we have to align policy with behaviour: the smart use of transport data to optimise convenience, frequency, speed and cost for respondents in developing environment-friendly, cost-efficient transportation ecosystems.

Respondents' transport experience

Transport policy goals
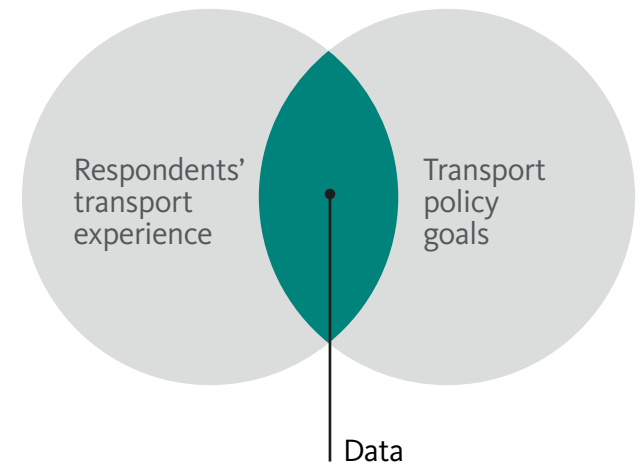
Data

The data imperative in European transport

Data is at the heart of transforming mobility in our cities in the following ways:

- Optimising connections between modes for faster travel times

- Minimising the cost of operation and increasing convenience based on data analytics of actual travel behaviour

- Delivering better information services for respondents driven by real-time data – for any journey, time of day, or mode of transport

- Producing connected systems that are ready for the transport users of the future

Data has opened new opportunities to improve the transportation experience. While some European cities are already exploiting the growing amount of available data – from sources ranging from social media to parking sensors and video cameras – others are only starting out. But there's no doubt about it: data is here to stay, and learning to use it to improve mobility in our cities is in the interest of any transport decision-maker.

Leverage data analytics for your city
Data can lift the financial bottom line and improve the environmental performance of any city. And it can improve travel experiences.

We've looked at the many improvements that data analytics can deliver – for greener transportation, better customer experiences, and right-sized operations.

Download our City Analytics eBook to learn more.

Richard Harris, Solutions Director, Conduent

"Find the data sources – then connect them."

"If we want to improve mobility in our cities, we need better information, more coordinated services, clear policies and the tools for stakeholders to plan, operate, update, select and use the range of services and combinations of transport modes available.

Crowd sourcing data is still not exploited appropriately and ignoring information from the public will lead to mistrust and frustration."

A close look at France

Throughout our survey, we noticed consistently that French respondents showed a stronger interest in transportation issues in general compared to other countries. So we dug a little deeper to find out why:
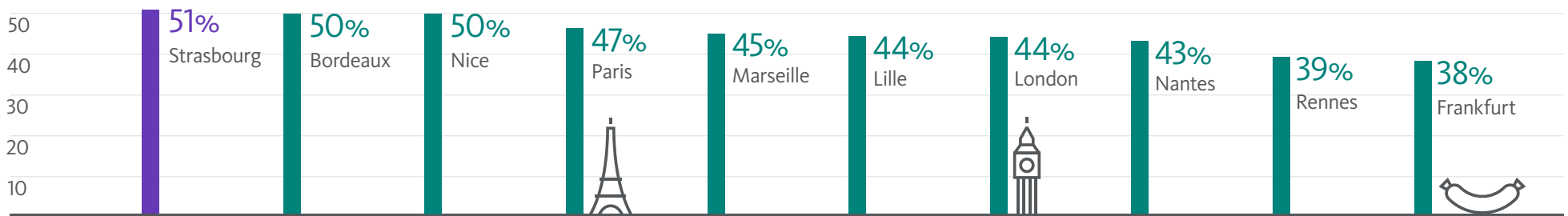
The French are smart mobility pioneers
The French are early adopters when it comes to embracing new technologies in transport: up to 51% (in Strasbourg) of French respondents use smartphones and tablets as their primary travel planning devices.

About a quarter of French residents already use cashless payment methods (including contactless technology and apps), compared to just 8% of Germans.

Three in ten people use apps to get traffic and timetable updates (33%, 29%) and to book a journey (29%).

After automatic machines and cash, two-thirds of French residents say online is the simplest way to buy their travel tickets.

Europe's 'smartest' commuters live in:

51% Strasbourg	50% Bordeaux	50% Nice	47% Paris	45% Marseille	44% Lille	44% London	43% Nantes	39% Rennes	38% Frankfurt

A close look at France

It's no country for on-street parking
In France, it's harder to find on-street parking than in any other European country:
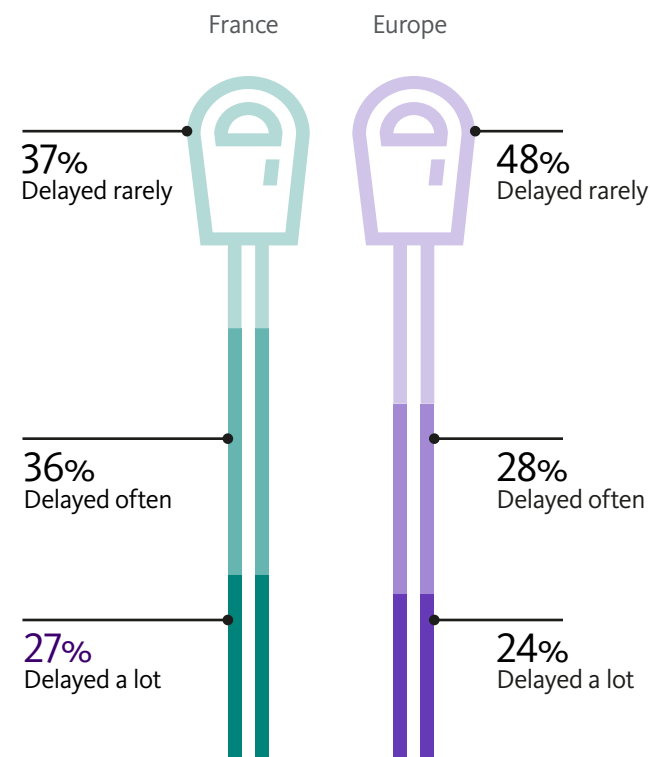
Delayed a lot (more than once per week):
27% (European average: 24%)

Delayed often (once per week – once a month):
36% (European average: 28%)

Delayed rarely (once per quarter or less often):
37% (European average: 48%)

But, contrary to what one would expect in the capital, Parisians find it a lot easier to park on-street than the rest of their country. Half of all respondents said they were rarely delayed. 30% are delayed often, but only 21% struggle to find parking more than once per week.

Other French cities however, are a nightmare when it comes to parking: in Bordeaux, 35% and 37% are delayed often and a lot, respectively, with Marseille (34%; 35%) and Nice (34%; 38%) reporting similar numbers – in fact, these three French cities were the worst of all 19 European cities surveyed.

France   Europe

37%
Delayed rarely   48%
                                            Delayed rarely

36%
Delayed often   28%
                                            Delayed often

27%
Delayed a lot   24%
                                            Delayed a lot

A close look at France

What the French want from public transport
Cost is the single one factor that would make the French use public transport more. They're also eager to see better service (such as higher frequencies, better connections, more routes) and would welcome integrated ticketing.

The French seem less interested in mobile transportation apps than the rest of Europe – but this might be due to the fact that they're already avid users.
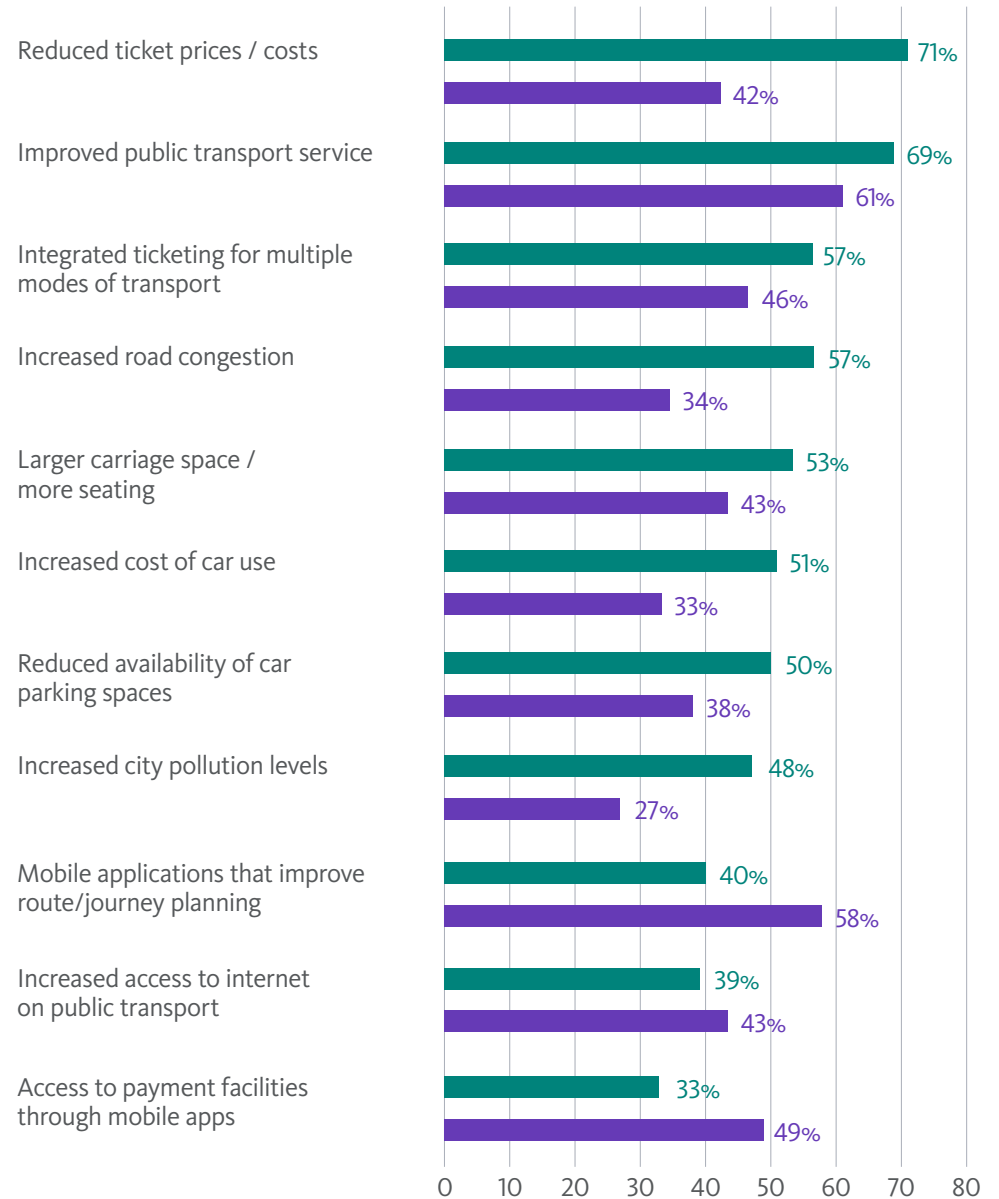
France

European average

Factors that influence increased use of public transportation:

Reduced ticket prices / costs
71%
42%

Improved public transport service
69%
61%

Integrated ticketing for multiple modes of transport
57%
46%

Increased road congestion
57%
34%

Larger carriage space / more seating
53%
43%

Increased cost of car use
51%
33%

Reduced availability of car parking spaces
50%
38%

Increased city pollution levels
48%
27%

Mobile applications that improve route/journey planning
40%
58%

Increased access to internet on public transport
39%
43%

Access to payment facilities through mobile apps
33%
49%

0 10 20 30 40 50 60 70 80

Richard Harris, Solutions Director, Conduent

"An amazing opportunity to turn parking around in France."

"There is no doubt that French cities are amongst the leaders when it comes to urban mobility. But they're clearly lagging behind when it comes to parking policy, control and enforcement. There will definitely be a change when national legislation comes into force in 2018 which decriminalises parking offences. Local authorities will be able to determine their own pricing structures (parking area, length of stay, size and energy efficiency of vehicles etc.) to support their policy and mobility targets and to take over the enforcement process. This change in legislation is set to revolutionise parking in France as more automated systems and processes providing flexible policy adaptive services are introduced."

About the report

This survey has been carried out by TNS on behalf of Conduent. The company conducted its research between October 5th and 26th 2015, using its proprietary online panels.

They questioned 1,900 respondents (aged 18+) in 19 cities across the UK (London, Birmingham, and Edinburgh), France (Paris, Lyon, Marseilles, Bordeaux, Lille, Nantes, Nice, Toulouse, Rennes, Strasbourg), Germany (Berlin, Hamburg and Frankfurt), Belgium (Brussels) and the Netherlands (Amsterdam and Rotterdam).

For the European part of the report (pages 1-22), TNS analysed the results from 12 of the 19 cities (including only the three largest French cities).

The French part of the report (pages 23-26) looks at the results from all the ten French cities surveyed.

To find out more about how your customers responded to all of these questions contact us.

Further reading

If you liked this report, you might enjoy reading <u>our blog</u> and some of our eBooks:

Sharing the city
Cities that are redefining mobility –
and what you can learn from them.

Make your city flow
Seven ways cities are fighting congestion.

Make your
city flow

Seven causes of congestion
and how cities are tackling them

CONDUENT

Download >

About Richard Harris

Richard Harris is internationally recognised as an expert in Intelligent Transport Systems (ITS).

His experience in the field spans more than 30 years and includes involvement and oversight of major contracts, including many European Commission projects. Richard is a 2015 inductee into the ITS World Congress Hall of Fame in Bordeaux and recipient of its lifetime achievement award.

He is a member of the board of directors of the International Road Federation, the International Director of ITS UK and within ERTICO – ITS Europe, a member of the Supervisory Board, the Strategy Committee and the Chairman of the Travel and Traffic Industry Sector.

At Conduent, Richard is the subject matter expert on ITS and responsible for a range of activities including business development, marketing, strategy and thought leadership.

Prior to joining Conduent in 2011, Richard served as director of Intelligent Transport Systems with Logica, and held senior level positions in several leading international consulting engineering companies.

Richard Harris
Solutions Director
Conduent International Transportation and Government Group

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About Conduent

Conduent is the world's largest provider of diversified business process services with leading capabilities in transaction processing, automation, analytics and constituent experience. We work with both government and commercial customers in assisting them to deliver quality services to the people they serve.

We manage interactions with patients and the insured for a significant portion of the U.S. healthcare industry. We're the customer interface for large segments of the technology industry. And, we're the operational and processing partner of choice for public transportation systems around the world.

Whether it's digital payments, claims processing, benefit administration, automated tolling, customer care or distributed learning – Conduent manages and modernizes these interactions to create value for both our clients and their constituents. Learn more at www.conduent.com.

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