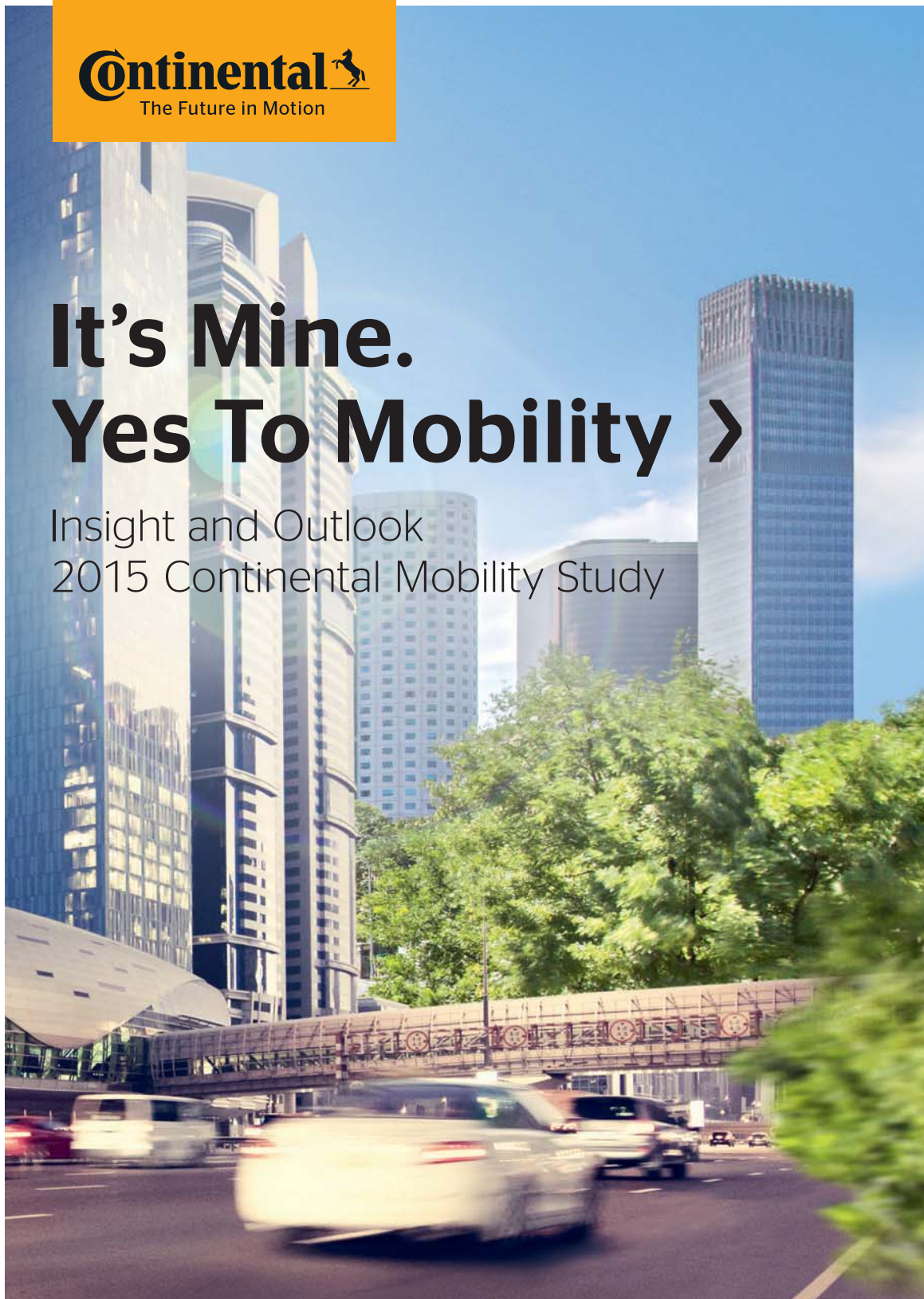


# It's Mine. Yes To Mobility >

Insight and Outlook  
2015 Continental Mobility Study





**Dr. Elmar Degenhart**

Chairman of the Executive Board

The individual mobility of the future is facing major challenges. Fossil fuels are becoming scarcer, urbanization is on the rise, and people are living longer while wanting to remain independently mobile well into their old age. We need to provide solutions to all of these issues, which is why we are working on technologies for safe, efficient, and intelligent mobility worldwide – at an affordable price.

## “Continental Is Shaping the Mobility of the Future.” >

### **Will owning your own car become less appealing in the future? >**

The vast majority of people like to drive and do not want to do without their car in their everyday lives. This was confirmed by our **2015 Mobility Study**, which revealed that the experience of driving is, and will remain, primarily powered by emotion and less so by reason. As a result, we expect to see more and more people buying their own cars in the medium term.

### **Does the same hold true for the young generation? >**

Contrary to the assumption we hear time and again, **future generations will still want to own their own cars. But cars need to become more intelligent**, because driving should not keep people from communicating with one another.

Up to now, the car has been practically the last Internet-free space after the office and the home. In the future, cars will need to send, receive, and process digital information faster. So it is up to the automotive industry to keep pace with the

way young people live and what they want by offering, for example, a wider range of connected in-car services.

### **One of Continental's aims is to make individual mobility available to everyone. But won't road safety suffer if there are more cars on the roads? >**

Thanks to its “protective shell” of vehicle data and information from other road users, the car of the future will become increasingly adept at preventing accidents from happening in the first place. Human error still plays a causal role in 95 percent of all accidents today. The main causes of accidents include inexperience, tiredness, and driving under the influence of alcohol. **We want to improve road traffic safety by assisting motorists and making driving for them easier and less stressful** – and advanced driver assistance systems are the key to this. These systems are already helping motorists today, with features such as the emergency brake assist system and blind-spot detection displayed in the side mirrors.

## Solutions for the mobility of the future



### Dr. Elmar Degenhart answers five questions about the mobility of the future

#### Why is the connected car so important? >

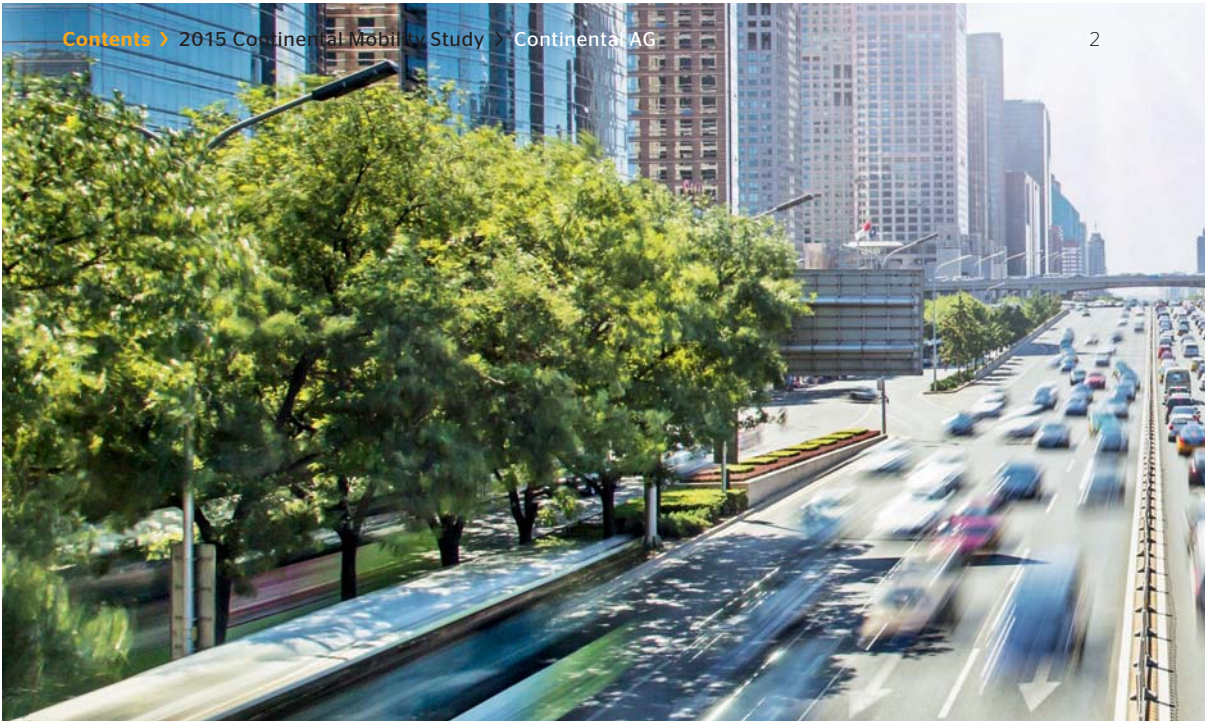
**The more connected cars are, the more intelligent they will become. They will be part of the Internet.** Cars use sensors such as cameras and radar systems to scan their surroundings. Advanced driver assistance systems analyze the data from the sensors and can intervene in dangerous situations. Enabling cars to share data with each other and with the infrastructure will help to make accidents a thing of the past, reduce fuel consumption, and make driving easier and more relaxing. Key data about the traffic situation or weather conditions, for example, can be processed into information via a backend – which is essentially a computer center – and made available to all road users in realtime. This makes it possible to respond earlier and more quickly to the situation ahead and be prepared for potential hazards. Cars will learn how to look around corners, so they will know there is a traffic jam ahead well before they even get there. **The connected car is one of the keys to future mobility.**

#### How can we design vehicles that are more environmentally friendly? >

The more mobile the world's population becomes, the more important it is to make this mobility sustainable – by balancing the energy used and the benefits. **The internal combustion engine will remain the main means of propulsion for vehicles far beyond 2020.** This is why we are continuing to focus on further developing drive technology for diesel and gasoline engines.

But, at the same time, there is no getting around the fact that vehicles need to be electrified. Doing so will help us to continue to reduce CO<sub>2</sub> emissions and protect the world we live in. **We are concentrating on made-to-measure electrification,** combining the advantages of the internal combustion engine with those of the electric motor.





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### **Continental is ready for mobility in 2020**

Year after year, Continental researches mobility issues of the future and develops intelligent solutions.

In 2014, a survey of car drivers in China, Germany, France, Japan, and the U.S.A. was carried out as part of the international 2015 Continental Mobility Study. Experts from science and the automotive industry were also interviewed. The study focused on the specific mobility issues that affect people worldwide, including urbanization, safety, automated driving, connectivity, limited energy resources, and costs.

The results of the international comparative and qualitative surveys show that individual mobility is, and will remain, a key issue for the future – and one that is powered by both reason and emotion.



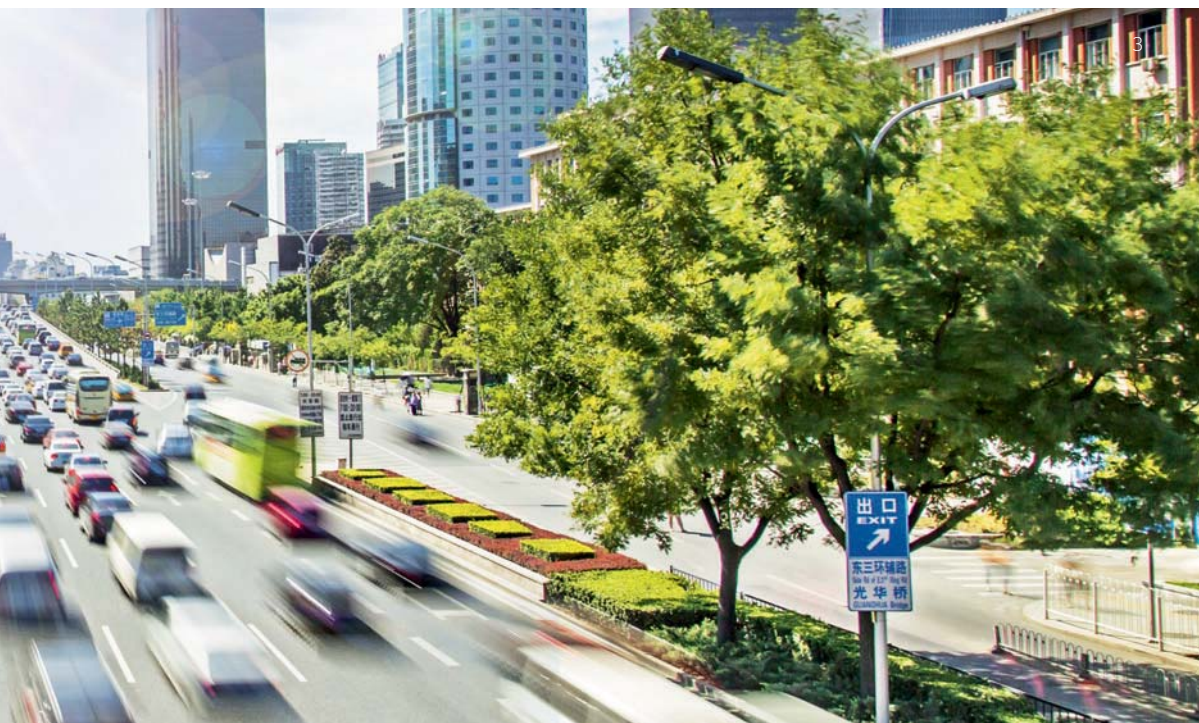
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Diverse Requirements



› To find out  
more

For the full 2015 Continental Mobility Study,  
please visit our website:  
[www.continental-corporation.com](http://www.continental-corporation.com)



# > Automobility Remains in High Demand Worldwide – For Young and Old Alike

## Continental is one of the world's leading automotive suppliers

As such, it is playing an active role in shaping the mobility of the future. The importance of the car as a means of transporting people as well as materials and goods is continuing to grow. Car ownership is still essential – for both young and old people worldwide. Not only do they rely on their cars, they also just enjoy driving and the freedom it gives them. People simply like their cars.

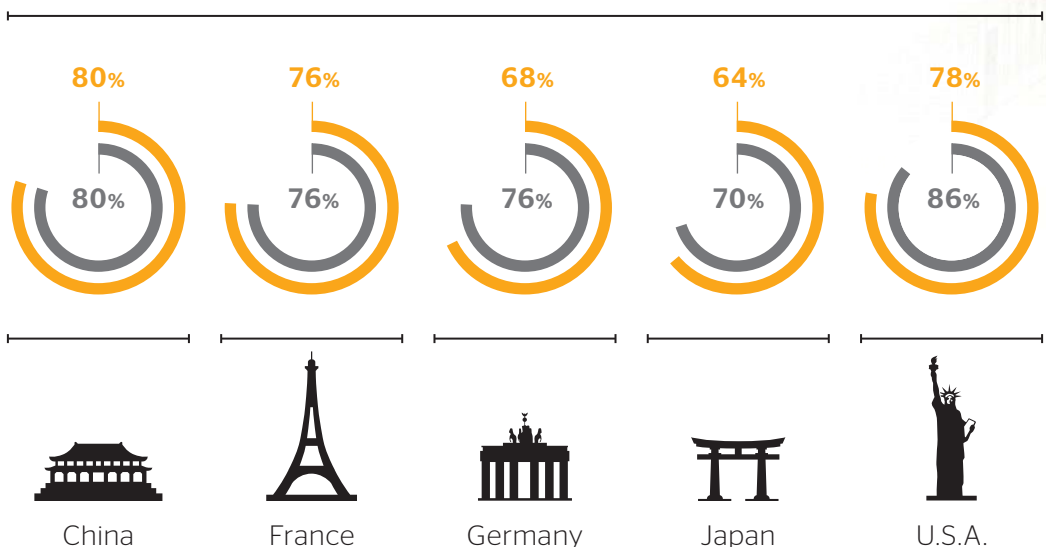
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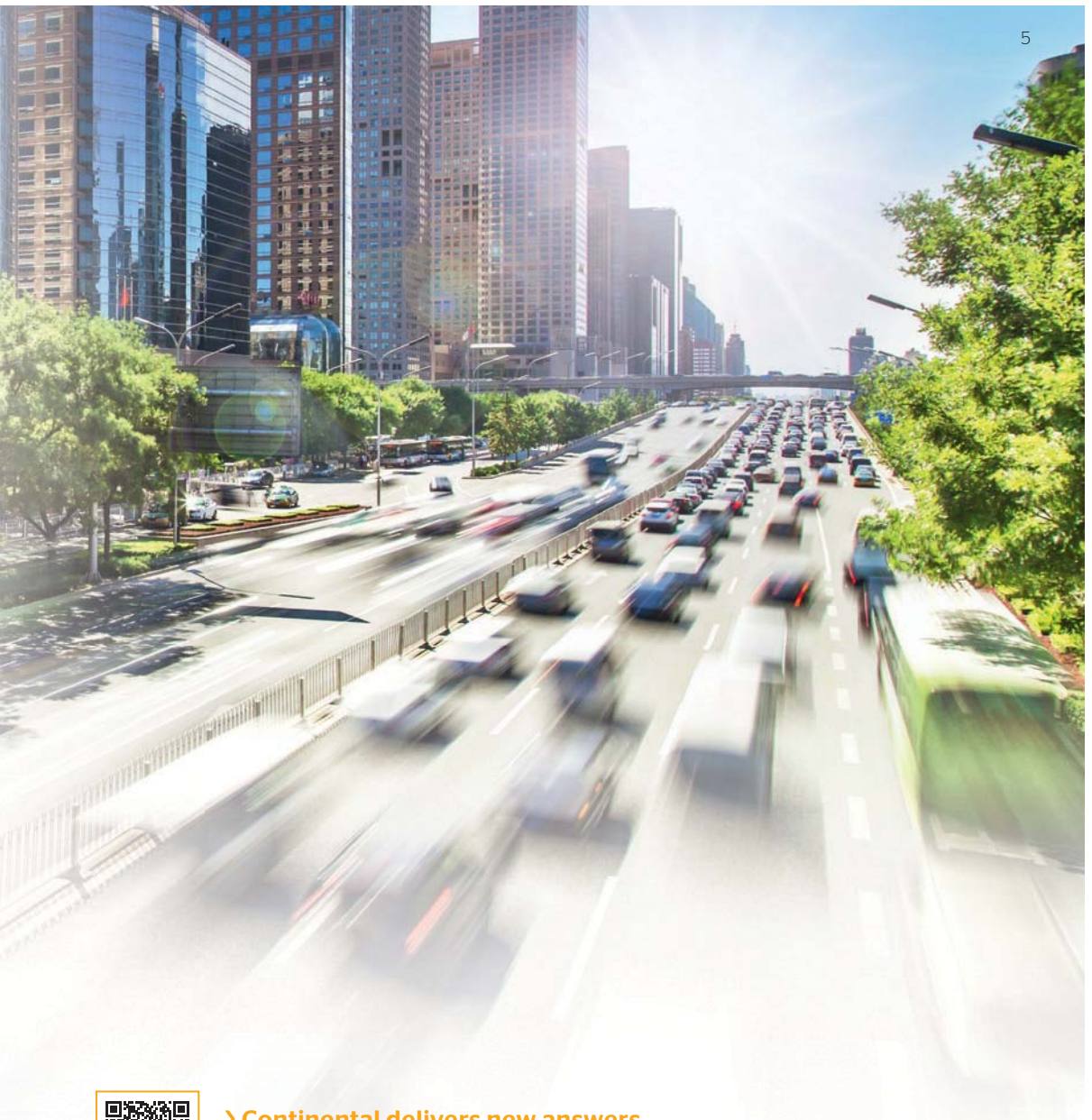


60+



> Owning a car is very important to me.





› **Continental delivers new answers  
to the questions posed by future mobility**

Continental develops intelligent technologies for transporting people and their goods. As a reliable partner, the international automotive supplier, tire manufacturer, and industrial partner provides sustainable, safe, comfortable, individual, and affordable solutions.

In 2014, Continental generated sales of approximately €34.5 billion with its five divisions, Chassis & Safety, Interior, Powertrain, Tires, and ContiTech, employing about 190,000 people at 317 locations in 50 countries.

## > Individual Mobility – With a Green Conscience

### **Increasing mobility in line with urbanization and environmental protection**

Continental is developing systems and components that enable more and more people around the world to fulfill their dream of owning their own car. After all, the car is an incredibly important and popular part of everyday life. But with this desire comes an increasing number of different requirements.

For example, from country to country, the type and size of vehicles that are in demand vary greatly – and it will become increasingly important to meet people's requirements when it comes to global environmental protection and the need to conserve resources. Combining affordable solutions for environmentally friendly cars is one of the cornerstones of Continental's work.



#### **> A Continental solution: The 48-Volt Eco Drive system**

The new hybrid technology can be easily integrated into the architecture of conventional-drive vehicles. It provides features that up to now have only been found in high-voltage hybrid systems – such as switching off the combustion engine while driving; quick, low-vibration, and quiet engine start-up; and more efficient braking energy recovery. Altogether, this technology can help reduce fuel consumption by up to 20 percent. The new technology



will go into production with European car manufacturers as early as 2016. Tires with optimized rolling resistance help to protect the environment. In the last few years, we have succeeded in reducing the rolling resistance of our passenger car and light truck tires by a third, while at the same time significantly improving safety-critical tire properties.

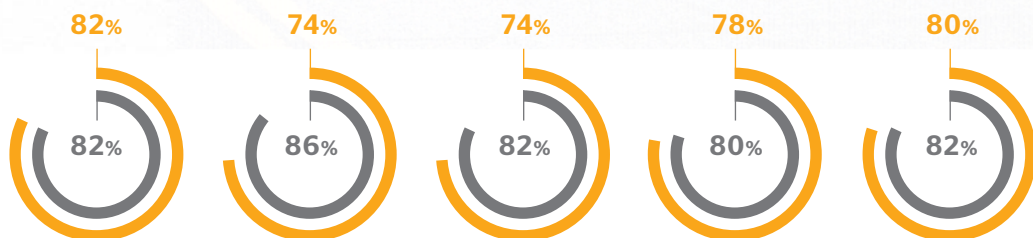




› The car is an essential part of everyday life.



› Low fuel consumption is important to me.



China



France



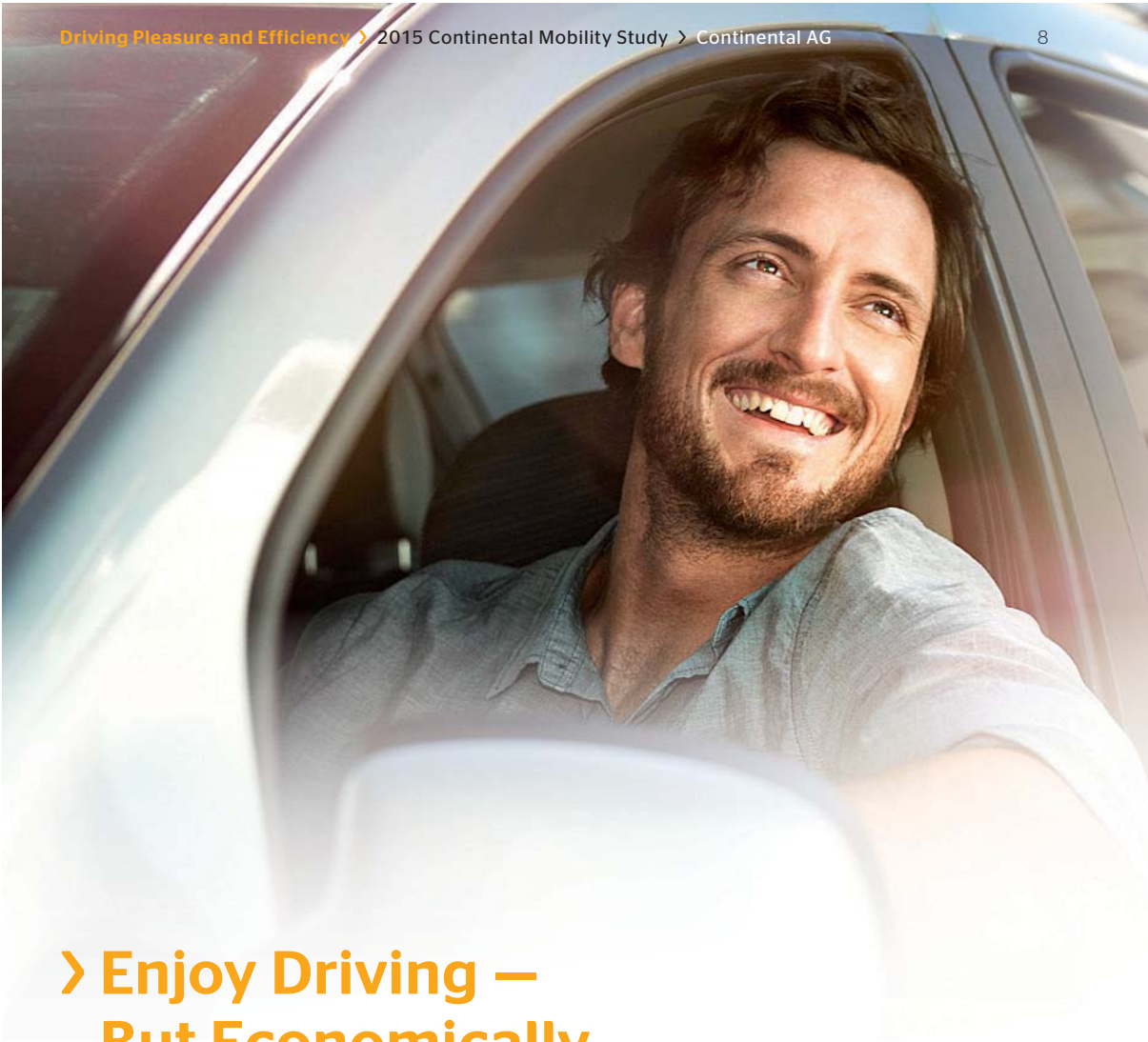
Germany



Japan



U.S.A.



## > Enjoy Driving — But Economically

### **More fuel efficient but still just as fun to drive**

Efficiency is a core requirement and, as such, represents an important mission to which all the Continental divisions are committed.

Economical use of resources does not have to be at the expense of driving enjoyment. Instead, it takes into account people's economic constraints and environmental concerns. Continental is working hard to maximize the enjoyment and benefits of driving, while minimizing the costs and the impact on the environment.

## > A Continental solution: Turbocharger with aluminum turbine housing



Smaller cubic capacity and lower fuel consumption while offering the same, if not better, performance. This is the recipe for success when it comes to downsizing – for example, reducing the cubic capacity, while offering the same level of performance. Continental is setting new milestones with its pioneering turbocharger technology. The most recent innovation was the world's first-ever car turbocharger with an aluminum turbine housing. Integration of the unit into the three-cylinder gasoline engine for the MINI Hatch has been ongoing since spring 2014.



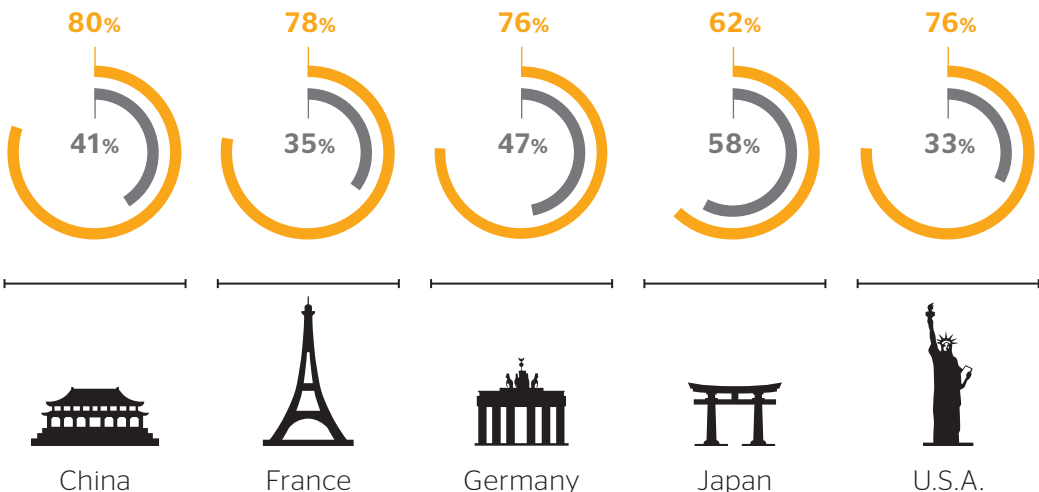
The lightweight material makes this turbocharger almost 30 percent lighter than its steel counterpart, thus cutting costs and providing significant system advantages in terms of performance and driving enjoyment. To make cars lighter, Continental manufactures more and more of its components – even highly resilient engine mounts and structural components – from polyamide. These components weigh up to 50 percent less than conventional engine mounts.



## > Driving is, and will remain, an enjoyable experience.



## > The favorite from five optional extras was the efficiency package.





## > Arrive Relaxed — With Intelligent Assistance

### Relaxed on arrival — thanks to automated driving

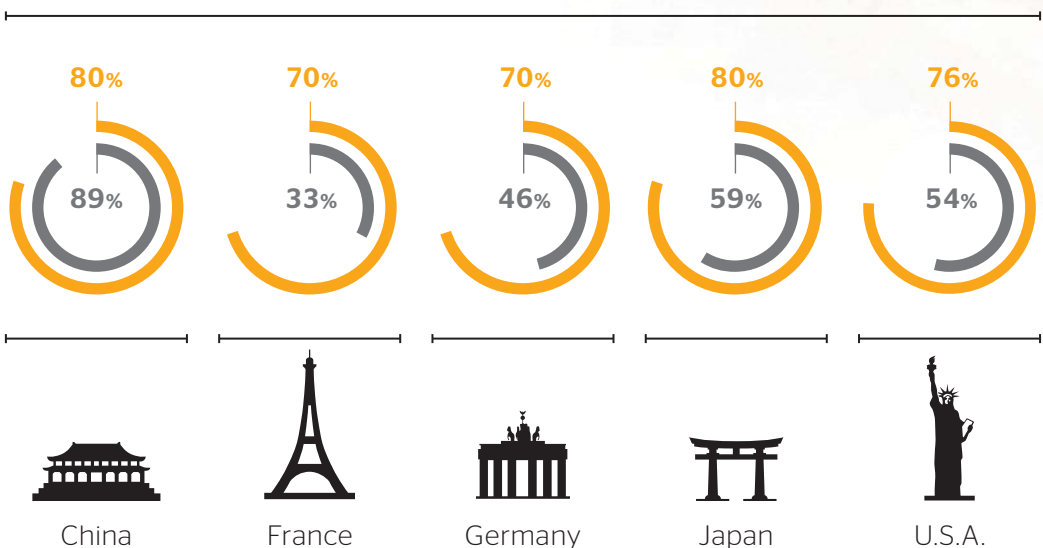
For many drivers, heavy traffic is a major stress factor. Continental is developing innovative assistance systems that help in these situations. These systems are the key to increasing the level of automation in vehicles. Drivers will be able to decide when they would like help driving, but by doing so they will not give up responsibility for or control of the vehicle. This development is beginning to gain traction in European markets too.



> Stop-and-go traffic and traffic jams are the biggest causes of stress while driving.



> Automated driving is a feature drivers want.



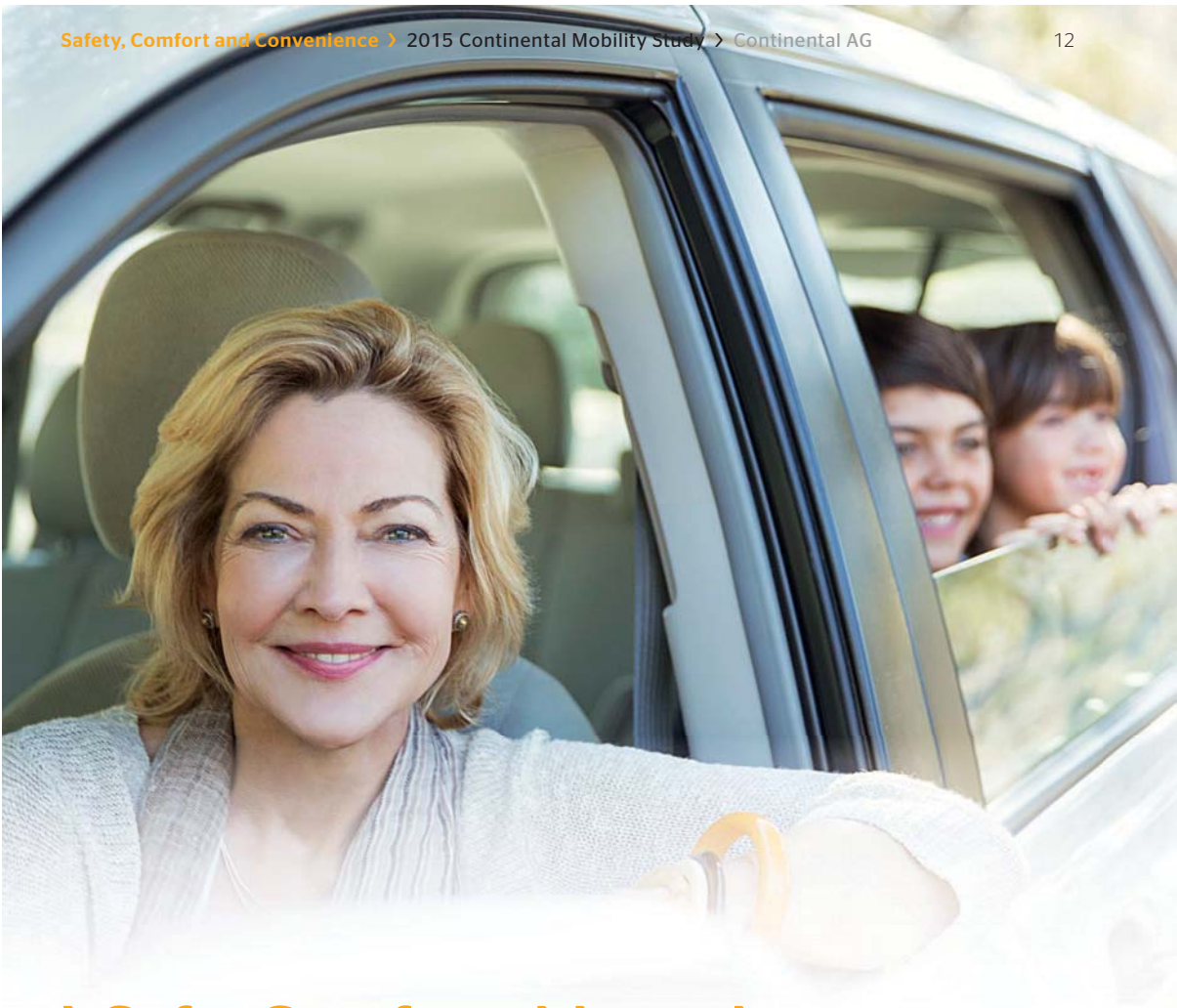


### › A Continental solution: Intelligent advanced driver assistance systems

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Today, intelligent advanced driver assistance systems already take the strain off drivers, making everyday driving safer and more relaxing. Emergency Brake Assist automatically brakes if the car is getting dangerously close to a vehicle ahead and the driver has failed to take appropriate action. In heavier traffic, Traffic Jam Assist and Adaptive Cruise Control take over braking, moving off and maintaining distance.

Once the car has reached its destination, the parking assist system not only chooses a suitable parking space but will also park the car itself if required. Vision 2025: a fully automated vehicle will be able to take full control of all driving operations on the freeway at speeds of up to 130 km/h. Drivers will then have time to do other things like answering e-mails, reading, or letting their minds wander.



## > Safe, Comfortable and Convenient — Yet Affordable

### **High standards are no longer a privilege**

People around the world have surprisingly similar standards when it comes to their cars: the main ones being comfort and convenience as well as low costs and low fuel consumption.

Continental combines all these requirements into innovative product solutions, which — thanks to their scalability — can be utilized cost effectively.

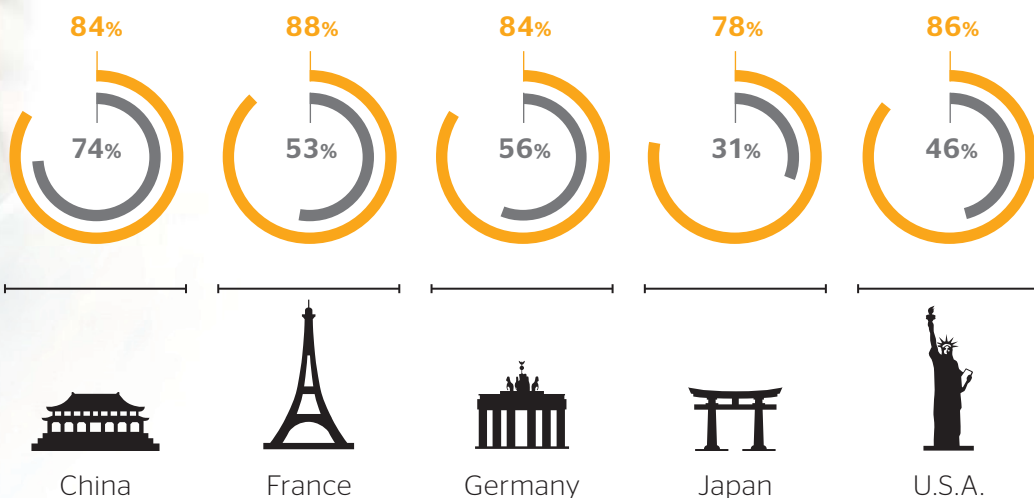




› **Comfort and convenience are important considerations when choosing a vehicle.**



› **Safety innovations are the most important factor.**



2015 Continental Mobility Study

Respondents agreeing with statement.



### › **A Continental solution: An electric parking brake for small cars**

Continental has been developing a tailor-made solution for smaller vehicle classes in the form of the electric parking brake (EPB) for drum brakes. Up to now, such vehicles have had to make do with mechanical parking brakes. Easy to operate at the touch of a button, the EPB offers drivers enhanced safety and convenience features – such as hill-start assistance – at a



comparatively low price. Since the EPB does not have a hand brake lever, it gives vehicle manufacturers more freedom when it comes to designing the vehicle's interior. The electric parking drum brake will go into production in 2017.

## > Intelligently Connected – And Fully Focused

### Connectivity with more intuitive, more reliable functionality

Continental is driving forward the advanced connection of vehicles with each other, with mobile devices, and with the surrounding infrastructure. It underpins a number of technical innovations with regard to driving safety and efficiency. Communication between in-car systems and external devices, such as cell phones, is also opening up whole new possibilities for entertainment and information – and for safety as well.



> **Mobility 2020: connectivity is one of the most significant trends.**  
**What do customers want most when it comes to connectivity?**



China



France



Germany



Japan



U.S.A.



Even more enjoyment and less stress when driving



More information about the driving conditions on the route (traffic jams, accidents, etc.)



Connection with technical devices and distance control



Warning if the driver nods off



Better entertainment options



### **> A Continental solution: The holistic human-machine interface (HMI)**

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Drivers expect to have the same access to information, services and networks that they do when they are not in their cars. A holistic HMI is based on a cross-system network of hardware and software components, which enables it to provide the driver with information relevant to and important for that particular situation. The

information shown varies depending on the traffic situation, the driver's personal preferences and current mood. This happens, for example, in the instrument cluster, on the head-up display, on the display on the center console, or on connected – and securely placed – mobile devices.



## > Variety – The Answer to Diverse Requirements

### **Producing various equipment options cost-effectively**

Continental is developing technologies that can be used in a wide range of vehicle classes. Modular components are a cost-effective part of “made-to-measure” cars. Variety is the best way to meet the diverse requirements drivers have when it comes to their cars.





## › Mobility in 2020: variety remains an important trend. What makes driving enjoyable?



China



France



Germany



Japan



U.S.A.



Fast, flexible, and comfortable driving provides a sense of satisfaction



I decide: window down, music on loud, no stops



Feeling of freedom – driving fast but safe even when the music is on loud



Mobility with the feeling of being in your own home



Getting out and about and seeing what's going on

## › A Continental solution: Smartphone integration for all classes



Smartphones offer communication and convenience features that drivers would also like to use when driving. However, these features can only be operated safely and legally using the controls of the vehicle's on-board system. Continental gives vehicle manufacturers worldwide the foundation to do so. By placing the smartphone in the specially designed box, the driver has the possibility to then use the car's

controls to access all the relevant features. The multifunctional smartphone terminal combines wireless battery charging, wireless antenna connection, and near field communication. Thanks to the modular design, vehicle manufacturers can decide which features they want to offer in their models. The new terminal will appear in production cars for the first time in 2015.

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