

May
2013



Allianz Risk Pulse

Focus: The Future of Individual Mobility

Inter-connectedness is revolutionizing mobility habits

While technology is changing mobility, so are new consumer attitudes

→ **The nature of mobility is changing at incredible speed. Ongoing trends like urbanization, rising fuel costs, environmental consciousness, an aging society and digitalization have influenced mobility highly and will continue to do so in the future. Today's consumers behave in a different way than even a few years ago and the car is losing its relevance as a status symbol.**

Apart from the basic need to get from one place to another, modern mobility concepts will have to fulfill an already vast and still growing amount of requirements. Inventions like the driverless car, that enable so far non-car users to drive, have the potential to further revolutionize travel; it is obvious that they will require changes in regulation.

The new mobility landscape is already becoming reality and it will not only have an impact on individuals but also on companies and entire industries. Innovative mobility business models and partnerships are emerging. New players are already entering the mobility industry along its value chain and challenging established business models. The mobility market will develop very dynamically and a relatively stable and structured environment will diversify and become a hotbed for new business activity, changing society and many industries in its wake.



"When it comes to purchasing mobility, decisions now increasingly include issues such as the carbon footprint and social responsibility." Clem Booth, Member of the Board of Management of Allianz SE

Top 5 Mobility Trends and Issues



Allianz asked its experts from various mobility related fields for their opinions on the current trends in mobility. The survey was conducted in late 2012.



Growing consumer emancipation

A central aspect of the future of mobility is evolving consumer behavior. We have seen a significant increase in collaborative consumption of all kinds of appliances. As **car-sharing** for example is leaving the niche, cars of professional car-sharing providers are becoming a common sight in many medium and large cities. The number of users is expected to increase up to 5.5 million by 2016 in Europe alone, according to a study by the consultancy Frost & Sullivan (2010).¹

At the same time in major western economies, the young generation has **less interest** in obtaining driving licenses as the IFMO study (2011) shows.² This trend is in accordance with **declining new car sales** in Western Europe and reinforcing a general reluctance to buy new cars.

In professional life, the development of high quality office-to-office-communication is going to change the way business is conducted. The use of video conferencing and virtual workplaces is leading to further digitalization of the working environment eventually culminating in a reduction of business-related travel. In the attempt to create more flexible working conditions, companies are also increasingly expected to offer the option to **work from home** – at least for a specified amount of time during the week. While home office work is still not widely available, its increase will mean a decrease of business-related travel.

Furthermore, **companies will be pushed to provide sustainable infrastructure**, access to public transport and incentives like electric company cars in order to achieve emission reduction targets and satisfy the requirements of their employees and shareholders. Companies might also increasingly consider the reduction of their company car fleet or may even be forced to do so by new regulation.



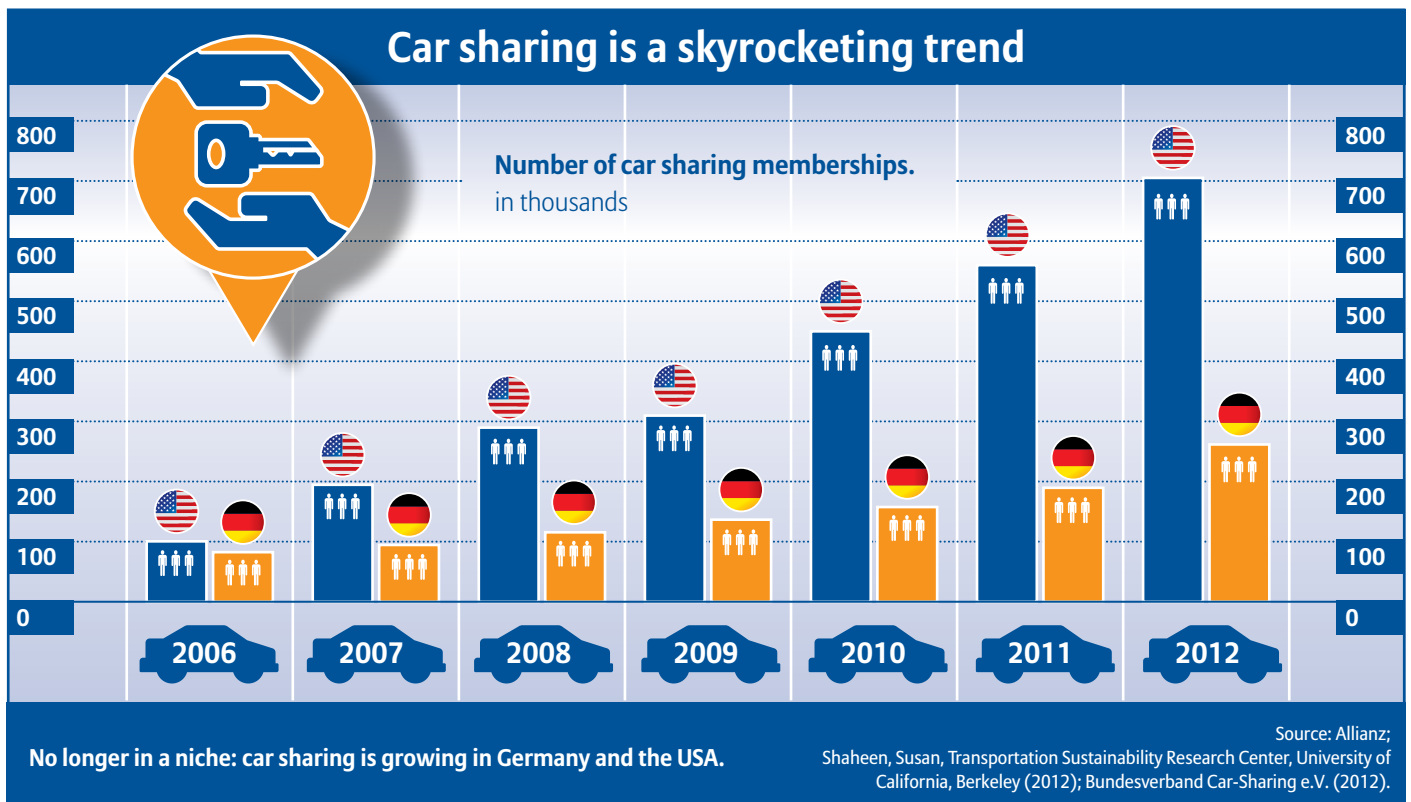
Michael Heise, Chief Economist of Allianz SE, on Changing Mobility Trends

“The financial crisis and the related economic downturn in much of Europe have led to a change in consumption patterns of mobility, thereby strengthening already existing economic shifting processes.

Whereas car sales in Asia are increasing steadily and North America is stable, the European car market has been shrinking continually since the beginning of the crisis. According to forecasts a turnaround of this development is not to be expected in the medium term.

The international car manufacturers and OEMs are shifting their focus towards more promising markets, relocating production and even R&D-capacities, in the wake of these developments. The consequences for the European economy are numerous and range from additional unemployment up to emigration of knowledge and skilled labour.”

The large market of retail sales is going to affect mobility habits as well. In the recent past, we have observed a steady increase in **e-commerce and home delivery**.³ Already distance selling amounts to almost 10% of total retail sales in Germany. By the end of 2012 e-commerce’s share of the total volume of distance selling in Germany rose more than two thirds, showing potential to grow even further. Not only are these distance sales facilitated by a ubiquitous internet, promising to serve aging populations, but they can also lead to a **decreasing need of shopping-trips**. According to the “National Travel Survey” of the UK Department for Transportation (2011) the total number of shopping trips decreased by 10% over a 15-year period.⁴



Demography influences mobility

The United Nations Population Division (2010)⁵ estimates that the number of people aged 65 years and older will grow from today to 2025: In Germany, by 3 million (from 17 to 20 million), in the EU, by 10 million (from 35 to 45 million) and in the USA, by 22 million (from 42 to 64 million). In particular, the retirement of the so-called baby-boomer generation (USA those born between 1940-60s; EU 1950s-60s) will pose new challenges to mobility solutions. The question of how an entire generation used to being mobile will actually stay mobile with increasing age will become more pressing. This demographic reality in addition to increasingly strict regulation potentially preventing older people from driving will require the attention of business and politics alike.



“The over-75 group has a 45-percent greater risk of causing an accident in comparison to younger senior citizens. In an aging society the needs of old people must be given greater attention.”

Christoph Lauterwasser, Managing Director of the Allianz Center for Technology (AZT)

➔ [Find out more about the risks seniors face on the road here.](#)

Car-averse regulation

Already 50% of the world’s population lives in cities. Almost two-thirds will do so in 20 years’ time (UN 2011)⁶. What does this development imply for mobility, in particular, in cities? Clearly, the issue of **congestion**, which is a challenge especially in emerging countries with a soaring car-population, will have to be addressed to avoid a collapse of urban mobility infrastructure.

Regulation is therefore one of the determining factors for the future of mobility that can bring about changes in mobility consumption quickly. In the past, there have been several examples of how regulation has had an impact on mobility. After the congestion charge was introduced in London during the 1990s, traffic in the city decreased by 18% and **public transport use** increased. Also in the UK, changes to **company car taxation** led to a significant drop in company car



Source: Joachim Huber, Allianz

Seniors at risk: Particularly at risk are people over the age of 75, who are involved in a disproportionate number of accidents. Demographically, their numbers are increasing rapidly.

fleets. At the same time as the introduction of these car-averse policies, **car pools** and a well-developed **bicycle paths networks** have been created.

In emerging countries, too, car-averse regulation has been introduced. In Indonesia’s largest city Jakarta, a regulation was put in place requiring vehicles to carry at least 2 passengers, access to some roads may further require cars to have 3 or more passengers. Ironically this regulation has triggered a new business in Jakarta: **professional hitchhiking**. Another example is Singapore, where electronic road pricing with **usage-based tolls** that includes peak-time adjusted pricing was implemented.

Reduction of CO₂ emissions by changing cityscapes

In order to increase the quality of urban living, many cities have set and communicated ambitious goals to **reduce CO₂ emissions**. Munich has set its goal to reduce CO₂ emissions between 1990 and 2030 by 50% and London is aiming at reducing emissions by 60% over the same period. Copenhagen is even planning to be carbon-neutral by 2025. These targets obviously have implications for mobility in these cities and all other cities in the world with similar aims. This has led to a rise of car-averse regulation like the **congestion charge** in London for example.

The question is what does this mean for combustion-engine cars. Certainly, the increase in numbers of **e-cars** will support the efforts of cities and put additional pressure on owners of conventional vehicles to either switch to more environment-friendly means of transport or alternatively avoid using them in the inner city areas.

Moreover, the **public transport systems** will have to be adapted to the new reality of urbanization, demands for climate neutral transport and demographic developments. The car as main source of transport in cities will have to be at least partially replaced by public transport and passenger capacity has to be increased as pictures from Asia vividly show.

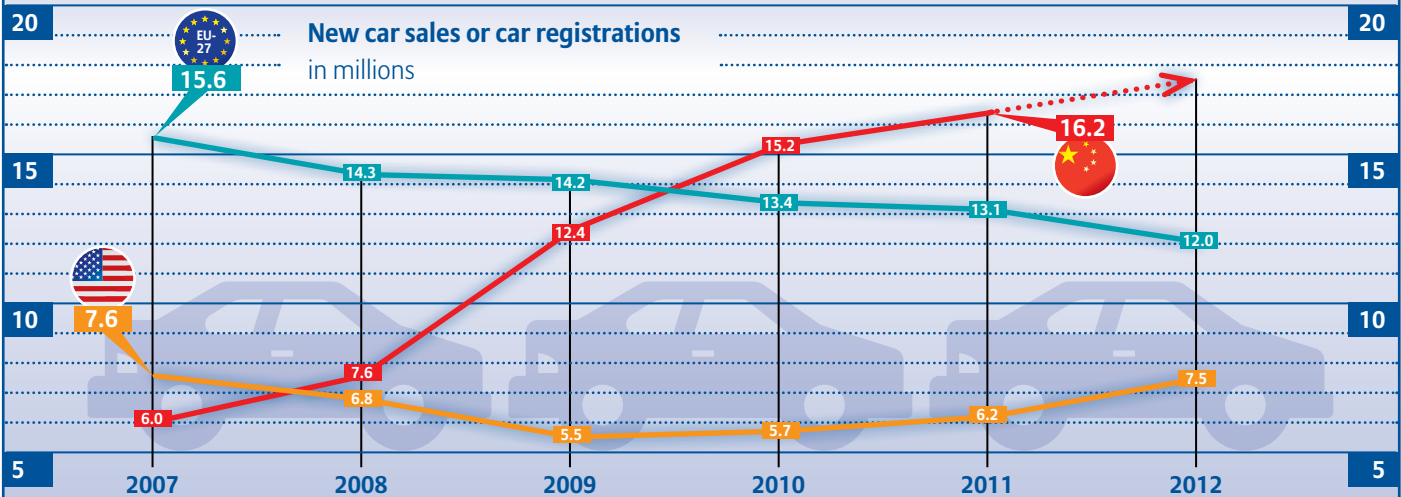


Photo: Allianz

Already ten percent of the Allianz management fleet in Munich has managers driving on electricity in 2013.

➔ [Read more.](#)

Top years of new car sales are behind us



This graphic shows the number of newly registered passenger vehicles in European countries and China and new sales for the USA. There may be many reasons for this trend: saturation of markets, financial crisis and changing lifestyles. Notice the opposite trend in China.

More country information on page 6.

Source: Allianz; European Automobile Manufacturers' Association and Association Auxiliaire de l'Automobile; China Bureau of Statistics; EcoWin; Bureau of Economic Analysis; US Department of Commerce.

Car ownership is an economic privilege

Due to increasing oil prices and regulation, owning a car has become increasingly expensive and it is most likely that this development will continue. In Germany, **petrol prices** rose by at least 30% since 2005. In the UK, costs have been identified as a central reason for not driving a car among the younger generation (UK Department for Transportation 2011). An important question is: what is the tipping point when the gasoline price prompts people to consider alternatives to cars? For Western Europe, it appears that we have already passed the car peak, as the **number of new cars sold has been declining** for years. Furthermore, the financial crisis has put many households under great financial pressure. When weighing up the costs of car ownership against the benefits, more and more people in the western world are **deciding against**

car ownership, especially since car sharing services have made "just in case" access to cars easier than it used to be.

In the emerging countries, however, this point still seems to be on the distant horizon. Here, rising household income is increasing the size of the middle class and its purchasing power, with the result that there is an immense demand for cars, a trend that is likely to continue. While car sales are still booming, these countries too will see economic and social pressure influencing this trend soon: for Beijing alone new car registration had to be capped officially at 240,000 per year in 2012.

→ [Read more in the Allianz Risk Pulse on Global Road Safety Trends.](#)



Photo: Hung Chung Chih / Shutterstock.com

Even though the demand for new cars is increasing in Asia, there are natural boundaries to this development.

Enabling mobility through technological innovation

The dominant factors affecting future mobility solutions are technological trends. A simple example depicts how the intelligent connection of two unrelated technological trends can create synergies and spur the development of innovative mobility solutions: The increasing number of **smartphones** has made the usage of car-sharing a lot more convenient and attractive by simply displaying the location of vacant and accessible cars on a map and in the case of MyTaxi and others even serving as mode of payment.

Furthermore, technological advances driven by digitalization are enabling additional services, these include the development of **telematics** and its associated **Pay-As-You-Drive** and **Pay-How-You-Drive** options. Vehicles are also being equipped with **driver assistance systems** (e.g. parking assistant, automatic braking) with the aim of correcting human errors, leading to fewer accidents. Even if an accident cannot be prevented, the **mandatory emergency-call** function, which will be introduced EU-wide by 2015, will help to decrease the reaction times of emergency services, thereby increasing road safety. These and other assistance systems will also reduce fuel consumption and make driving more comfortable.

As these developments become more widespread, the issue of **mobility-related data** and its ownership is gaining importance. While the car evolves into an increasingly connected data-platform, safe data transmission and systems security (e.g. from hacking) have to be guaranteed to provide a safe driving experience.

A multitude of developments in technology as well as in society and global economics affects our mobility habits. Whether it is digitalization, the increasing importance and capabilities of assistance systems or the rise of car sharing, mobility as we know it is changing fundamentally. While some of these developments are already being discussed individually, it is essential however to take a holistic view in order to explore the interconnectedness of our modern world and to understand new threats and opportunities that evolve.



How Driver Assistance Systems improve road safety

Allianz explains the six technologies that keep your car on the road. For example, the ESP counteracts skidding on icy or wet roads, the BLIS keeps a constant watch of what is happening in the blind spot and the lane departure warning keeps you firmly in your lane.

[Find the interactive information here.](#)



Telematics black box will one day be mandatory

The telematics system for cars is similar to the black box in an airplane; it serves as a kind of trip recorder. It collects data on kilometers travelled and, with the help of GPS, computes in real time other relevant data like the location, speed and type of the road. In the near future it may not be anything more than a software application that can be embedded in a smart phone. Those collecting the data consider very well how they use the data to make sure that privacy laws are not breached.



“One day we will buy Telematics like we buy a smartphone, a computer or a TV. There will be a wide range of mobility services including insurance and assistance to choose from. An early example of this concept is a self-installed telematics device of Allianz Italy called Allie, which together with a set of apps, gives the user a new way to use and interact with their vehicle,” says Jacques Amselem, CEO of Allianz Telematics.

[Find more information on Telematics here.](#)

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Source: Allianz France

The next generation: digital games teach kids about road safety

In the game app “On the road with Antoine & Zélie”, French youngsters learn about road safety in a fun way. The app was developed by Allianz France and Prevention Routiere. The test users were mummy bloggers and their kids.

New Car Sales or Registrations around the World

		2007	2008	2009	2010	2011	2012
Austria	↗	298,182	293,697	319,403	328,563	356,145	336,010
Belgium	→	524,795	535,947	476,194	547,340	572,211	487,377
Bulgaria	↘	41,042	43,758	24,972	15,646	19,252	19,752
Czech Republic	→	174,456	182,554	167,708	169,580	173,595	173,997
Denmark	↗	159,347	150,145	112,201	153,587	169,744	170,531
Finland	↘	125,285	139,611	88,344	107,346	121,171	107,166
France	→	2,064,543	2,050,282	2,302,398	2,251,669	2,204,229	1,898,760
Germany	→	3,148,163	3,090,040	3,807,175	2,916,259	3,173,634	3,082,580
Greece	↘	279,745	267,295	219,730	141,501	97,680	58,479
Hungary	↘	171,661	153,278	60,189	43,476	45,094	53,008
Ireland	↘	186,325	151,607	57,453	88,446	89,878	79,498
Italy	↘	2,493,106	2,161,682	2,159,463	1,961,579	1,749,739	1,402,089
Netherlands	→	505,538	499,918	387,152	482,567	555,844	502,675
Norway	↗	129,195	110,617	98,675	127,754	138,345	137,967
Poland	→	293,305	320,040	320,206	333,490	297,937	271,215
Portugal	↘	201,816	213,389	161,013	223,464	153,404	95,290
Romania	↘	315,621	270,995	130,195	106,328	94,619	72,148
Slovakia	↗	59,700	70,040	74,717	64,033	68,254	69,195
Slovenia	↘	68,719	71,575	57,967	61,142	60,193	50,091
Spain	↘	1,614,835	1,161,176	952,772	982,015	808,051	699,589
Sweden	↘	306,799	253,982	213,408	289,684	304,984	279,478
Switzerland	↗	284,688	288,557	266,049	292,453	316,846	326,081
United Kingdom	↘	2,404,007	2,131,795	1,994,999	2,030,846	1,941,253	2,044,609
Turkey	↗	594,762	494,023	557,126	760,913	864,439	777,761
Russia*	↗	2,351,603	2,721,533	1,365,117	1,776,005	2,478,439	2,755,506
Ukraine*	↘	514,100	610,212	175,165	169,540	207,453	237,602
Colombia	↗	253,034	219,498	185,129	253,869	324,570	315,968
USA*	↘	7,618,400	6,813,500	5,456,100	5,728,600	6,193,800	7,359,300
Australia*	→	1,049,437	1,010,539	920,244	1,028,537	1,025,886	1,111,436
China	↗	6,079,209	7,631,839	12,459,452	15,288,186	16,242,474	n.a.
India**	↗	1,379,979	1,549,882	1,552,703	1,951,333	2,501,542	2,618,072
Indonesia	↗	323,100	439,200	369,300	555,900	620,100	800,100
Malaysia	↗	442,885	497,459	486,342	543,594	535,113	552,189
Thailand	↗	327,076	350,619	325,992	489,306	566,643	922,305

Shown is the number of newly registered passenger vehicles.
The year of highest car sales or registrations is highlighted.

* Number of new car sales. ** India refers to the financial year of April 1–March 31 and not the calendar year.

Source: Allianz; European Automobile Manufacturers' Association and Association Auxiliaire de l'Automobile; ODD, Turkey; Association of European Businesses, Russia; Association of Ukrainian Motor Vehicle Manufacturers; Econometria, Colombia; US Department of Commerce; Australian Bureau of Statistics; Motor Vehicle Census; China Bureau of Statistics; Society of Indian Automobile Manufacturers; GAIKINDO, Indonesia; Malaysian Automotive Association; Thailand Department of Land Transport.

Endnotes

- Frost & Sullivan (2010): **Car Sharing – Driving the way into a greener future**, 18th Feb. 2010
- Ifmo (2011): **Mobilität junger Menschen im Wandel – multimodaler und weiblicher**, München 2011
- Bundesverband des Deutschen Versandhandels (2012): **Zahlen & Fakten**, www.bvh.info
- Department for Transport (2011): **National Travel Survey 2010 – Statistical Release**, 28th July 2011
- UN Population Division (2010): **World Population Prospects**, the 2010 revision
- UN Department of Economic and Social Affairs/Population Division (2011): **World Urbanization Prospects: The 2011 Revision**

Publisher:

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