THE VIEW Smart Transportation Infrastructures Of The Future



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Explaining the shift from car ownership to car-sharing



haring, or collaborative, mobility is arguably the most rapidly growing and evolving sector of the sharing economy. In this context, the rapid development of car-sharing is changing the 'usual' mobility choices. Nowadays we are observing a growing shift from the paradigm of owning a means of transport to the paradigm of integrated mobility services which allow end users to access individual or public transport services based on their needs and on the destination to be reached.

We are all aware of the typical problems daily commuters face in populated cities; during commute hours we lose productivity and also human contact and socialisation. Traffic congestion is further causing increased accident rates, ground-level and atmospheric pollution, greater need for parking, and higher cost per journey. In addition, car occupancy is also falling, as more vehicles are driven by single occupants. Average car occupancies in Europe range from 1.8 for leisure trips to 1.1 for commuters. In the UK, for example, the occupancy rate is 1.2 for both business and commute trips.

Though aspects of car-sharing have existed since 1948 in Switzerland, it was only in the last 15 years that the concept has evolved into a mobility solution worldwide. In that time, the car-sharing market has grown from a largely subsidised, university research-driven experiment into a fully fledged for-profit enterprise, owned primarily by traditional car rental companies and auto manufacturers. Today, Zipcar (owned by Avis Budget Group), Car2go (owned by Daimler), Enterprise CarShare and Hertz 24/7 control about 95 per cent of the car-sharing market in Europe and the US.

The latest car-sharing market overview (Winter 2016) developed by the University of California, Berkeley has confirmed the uptrend of the car-sharing market. Most recent numbers indicate a sharp rise in total memberships. For instance, global car-sharing membership more than doubled between 2012 and 2014. In other words, the question is no longer whether the 'shift' will happen but when vehicle sharing will prevail over private mobility and the usual means of public transport.

According to the study above, Europe is the largest carsharing region measured by membership, accounts for 46 per cent of worldwide membership and 56 per cent of global fleets deployed. The world's second largest carsharing market, North America, accounts for 34 per cent of worldwide members and 23 per cent of vehicle fleets.

The car-sharing business has grown rapidly in areas with clear certain social, economic and demographic thresholds. In Germany, for example, some 140 different services are in operation, controlling a car-sharing fleet that has grown from about 1,000 vehicles in 2001 to more than 15,400 today, about 50 per cent of the total European fleet, with most of the growth occurring since 2011. The customer base has grown from a mere handful of early adopters in 2001 to more than 1 million. Station-based carsharing is now available in 490 German cities serving 36 million potential users. The key issue here is to answer to the following question: 'What specifically will induce drivers to forego private ownership?'. In my opinion, there are three conditions to make - or not - the switch.

First, car-sharing services must offer real value by providing vehicles that meet users' needs at a fair price. In Europe, city-car drivers who drive less than 7,500km a year would pay less to share than to own, as would drivers of compact cars who drive less than 12,500km a year. Drivers of mid-size cars would have to drive less than 16,000km a year to gain an advantage from sharing; and drivers of large cars would have to drive less than 24,500km a year.

Second, car-sharing services must ensure extensive coverage: cars should be readily available when users want them and the rental process must be easy to negotiate. Car-sharing services require a critical population mass in order to be profitable. In Europe and North America, that means a population of at least 500,000. Car-sharing in most countries in those regions will therefore be economically viable only in the capital city, or possibly in the three largest cities. In Asia-Pacific, by contrast, where per capita incomes are generally lower and the transportation infrastructure is less developed, car-sharing will be economically viable in cities with populations of 5 million or more.

Thirdly, users must trust the ability of car-sharing services to provide reliable vehicles, deliver on their promises and resolve disputes fairly. When a service is offered by a recognised and respected brand, trust is naturally established by the provider's reputation. But start-ups and P2P services will have to establish trust by other means, such as peer-to-peer reviews, service guarantees and consumer review services.

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