

## MEDIA RELEASE

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# Shared mobility solutions improve access to jobs, health services and education

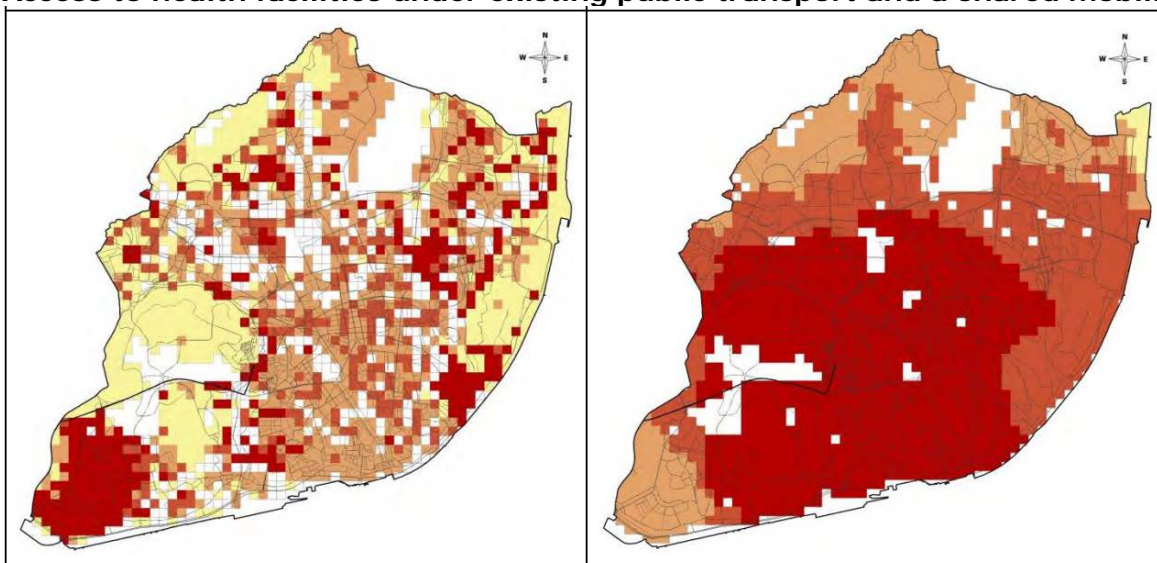
Study: On-demand shared vehicles provide better service for citizens —  
Traditional bus lines with fixed routes and timetables likely to disappear

A public transport system using on-demand shared mobility rather than a traditional system with fixed routes and timetables significantly improves citizens' access to schools, health services and work opportunities. With shared mobility providing better service and at lower cost, traditional urban bus services are likely to disappear.

These are main findings of a new study published by the International Transport Forum at the OECD. The report [Shared Mobility: Innovation for Liveable Cities](#) is now available online.

In a simulation exercise, ITF researchers used detailed data on mobility behaviour from the city of Lisbon (Portugal) to compare how easily citizens can reach workplaces, health services and educational institutions using two different transport systems: a) the currently existing public transport system of metro, rail and bus services; and b) a system where metro/rail services are complemented by fleets of on-demand 8- or 16-seater taxi-buses.

### Access to health facilities under existing public transport and a shared mobility system



Access with the current public transport system  
(Red indicates good access, light yellow poor access)

Access with an on-demand shared mobility solution

To gauge impact on social inclusion, the ITF researchers looked at the number of jobs, hospitals/health centres and secondary schools (or higher) in the city accessible within 30 minutes of each grid cell (of 200 m side) under each system. For each system, they then calculated the ratio of opportunities (jobs, etc.) between the 10% best served element of the population and the 10% worst-served. This ratio indicates to what extent access is more equitable (low values) or less so (high values).

The results show that the on-demand shared mobility system provides vastly superior access:

- **Jobs:** The ratio of 17.3 for access to potential workplaces using the current public transport system indicates great inequality. For the on-demand mobility configuration, however, the quotient was only 1.8, or almost ten times smaller, indicating much more equitable access and hence better opportunities to find a job.
- **Health services:** Shared mobility services improve access to hospitals and health centres from a highly inequitable ratio of 39.0 under the existing public transport system to a quite equitable 2.5 under an on-demand shared mobility system. The majority of the 200-by-200-metre grid cells into which the city is divided move from the lowest level of access to the highest (see map), indicating a strong improvement in accessibility and hence inclusiveness.
- **Education services:** While public transport in its current form provides only limited access to secondary and higher schools in the model city (with an access ratio of 29.2), the shared mobility system tested in the study resulted in an access ratio of 2.0.

A second commonly-used indicator for social inequality showed similar results. The so-called Gini co-efficient (which denotes perfect equality with zero and perfect inequality with one) underlined the positive impact of shared mobility on social inclusion. Under a shared mobility system, the Gini co-efficient dropped from 0.27 to 0.11 for access to jobs; from 0.26 to 0.08 for access to health services; and showed near perfect equality at 0.01, down from 0.26, for access to education.

The more efficient use of vehicles makes it possible to cut current prices of public transport journeys in the city by 50% or more without any subsidies.

Shared mobility has further and potentially huge positive impacts for cities:

- **Fewer and better cars:** The tested fleet of shared taxis and taxi-buses can provide the same level of mobility to citizens with only 3% of the current number of vehicles. As vehicles are used more intensively, they need to be replaced in shorter intervals, thus speeding up the uptake of new and cleaner technologies.
- **No congestion, reduced emissions, freed-up space:** If shared taxis and taxi-buses were to replace private cars and scheduled buses in a city, congestion would be eliminated, traffic emissions cut by one third even without any new technology and on-street parking places would become superfluous, freeing public space for other uses.

These results confirm and augment those of a previous ITF study which examined [the impact of self-driving shared cars](#) on urban mobility and found that this could make 9 out of 10 vehicles redundant.

“Using transport capacity more efficiently helps the environment. But it also has potential to build fairer, more inclusive societies by providing broad access to the opportunities for everyone”, said José Viegas, Secretary-General of the International Transport Forum, who oversaw the study.

“As a next step, we will test our model with data from five more cities. This will help to better understand how to adapt shared mobility solutions so they provide maximum benefit in specific conditions”, Viegas added.

Both studies were instigated by the ITF Corporate Partnership Board. More details about the CPB, including recent work on regulating app-based mobility services, Big Data in transport, infrastructure investment needs for global trade and on NOx emissions from shipping is available at <http://www.itf-oecd.org/CPB>.

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