Peak Car Use and the Rise of Global Rail: Why this is happening and what it means for large and small cities

The 21st century promises some dramatic changes—some expected, others surprising. One of the more surprising changes is the dramatic peaking in car use and an associated increase in the world’s urban rail systems. This paper sets out what is happening with the growth of rail, especially in the traditional car dependent cities of the US and Australia, and why this is happening, particularly its relationship to car use declines. It provides new data on the plateau in the speed of urban car transportation that supports rail’s increasing role compared to cars in cities everywhere, as well as other structural, economic and cultural changes that indicate a move away from car dependent urbanism. The paper suggests that the rise of urban rail is a contributing factor in peak car use through the relative reduction in speed of traffic compared to transit, especially rail, as well as the growing value of dense, knowledge-based centers that depend on rail access for their viability and cultural attraction. Finally, the paper suggests what can be done to make rail work better based on some best practice trends in large cities and small car dependent cities.

Citation
Curtin University would like to pay our respect to the indigenous members of our community by acknowledging the traditional owners of the land on which the Bentley Campus is located, the Wadjuk people of the Nyungar Nation; and on our Kalgoorlie Campus, the Wongutha people of the North-Eastern Goldfields.

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The use of wheeled vehicles encouraged construction of better roads to support the additional weight. However, a road transport system requires a level of labor organization and administrative control that could only be provided by a form of governmental oversight offering some military protection over trade routes. By 3,000 BC the first paved road systems appeared in Mesopotamia and asphalt was used to pave roads in Babylon by 625 BC. The Persian Empire had a road of 2,300 km in the 5th century BC. The success of cars and trucks has given rise to a number of serious problems. Road congestion has become a feature of most urban areas around the world. This is a means of providing emergency vehicles and public transport buses priority at traffic lights in congested areas.