

## Emerging Technologies and Key Trends

New transport technologies are reshaping how people move and interact within the City. These modes and services offer opportunities to improve access, reduce emissions and support a more efficient use of street space. Their impact depends on how they are integrated into the city and aligned with broader goals for a liveable, safe and well-functioning place.

### Context

In the past decade, a range of technologies have emerged, changing the way people move. Ten years ago, many of the transport technologies commonplace today were either not available, or at an early stage of development.

### Micromobility

Micromobility encompasses small footprint transport modes, including walking, bikes/e-bikes and e-rideables (such as e-scooters), which have rapidly grown in popularity in recent years. E-rideables can be privately owned or part of a shared system. At its peak, Perth's e-scooter share program (which ran until mid-2025 with two operators: Beam and Neuron), recorded up to 26,000 trips per month, with average trip lengths of 1.7 km and 13 minutes.

Micromobility offers benefits of accessibility, providing an affordable, low cost, emission-friendly and space-friendly form of transport, as shown in Figure 1. It can have significant benefits including replacing car trips,

particularly within the gig economy (e.g. food delivery riders) – the City of Vincent and the City of Stirling reported that over 50% of e-scooter share trips replaced car journeys.

However, the micromobility sector faces significant challenges, most notably safety concerns, highlighted by a fatal collision in 2025 that led to the suspension of the City's e-scooter share program. Additional barriers include inconsistent infrastructure, regulatory uncertainty, and the prevalence of privately owned non-compliant, high-powered devices on public paths. There is also a shortage of secure parking for micromobility devices.

Investment in high-quality cycling infrastructure can significantly increase mode shift and improve safety. This includes providing safer places for people to ride, enhanced and more secure bike parking and engagement with the shared micromobility sector to diversify options.

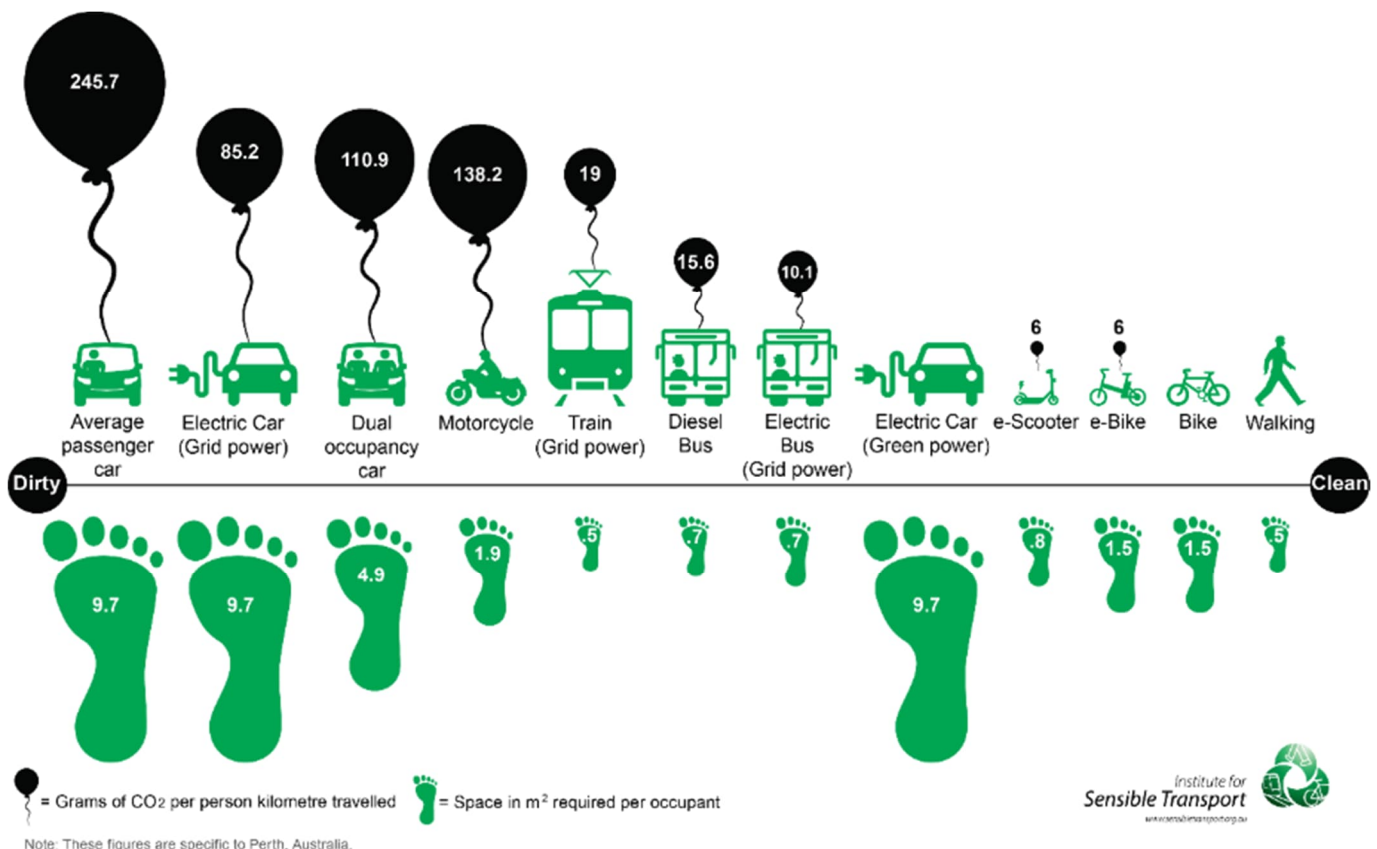


**Figure 1 Emissions and space footprint, different transport modes**

## Car Share

Car share has become a well-established service in many cities, offering an alternative to private vehicle ownership. Users book a car via an app and pay by the hour. This enables people to gain the benefits of a car, without the need to own it. It has been shown to reduce vehicle ownership levels, with each share car replacing around nine privately owned vehicles (depending on the transport context of the city).

Despite the potential, there are currently no hourly car share services operating in Perth, likely due to the current transport, land use and demographics.

Lessons from other Australian cities suggest policy options that may help to create a more conducive environment and encourage car share operators to establish in central Perth. Options include reducing parking requirements in new developments, with favourable terms for those that lower car parking provision and favour car share 'pods' within their developments.

## Ride Sourcing

App-based ride sourcing services (e.g. Uber, Didi) have become a mainstream transport option. These services offer personal benefits to users, including convenience and flexibility, however, they tend to lead to more car travel as:

- People choose these services over alternatives (active or public transport) – only about 15% of ride sourcing trips directly replace a trip by private vehicle.
- The vehicles often drive with no passenger – in other cities, it has been found that for every 1km driven with a paying passenger, ride sourcing vehicles drive between 400m and 1.26km without a passenger.

The added kilometres travelled has an impact on wider transport outcomes, including increased congestion, emissions and road use.

## Electric Vehicles and Charging

The transition to electric vehicles (EVs) is accelerating in Perth, with ownership projected to increase significantly by 2035. As of 2024, there were 504 EVs garaged in the City of Perth, with ownership projected to increase by up to 67 times (in a 'high' forecast scenario).

EV technology has advanced rapidly in recent years, becoming cheaper, offering longer battery range and becoming available in a wider variety of vehicle types. However, barriers to a higher uptake still exist, such as range anxiety, higher purchase costs, and insufficient charging infrastructure.

The City can facilitate further EV uptake, with more charging stations to keep up with forecast demand. The City currently has 75 public EV charging ports (as of 2025), with 7 new on-street trial charging locations. Further opportunities include partnering with

commercial operators to expand the charging network, enabling retrofitting in existing buildings, and piloting new infrastructure in city-managed car parks.

## Car Parking Technology

Advancements in car parking technology offer opportunities to enhance the user experience and better use parking assets. This includes app-based enhancements, such as for payment and parking availability, sensors and videos that provide data on occupancy and duration (improving compliance), and dynamic signage providing real-time parking information. Dynamic pricing can also help manage and balance parking demand, as demonstrated in San Francisco where this led to a 10% reduction in congestion and increased parking availability.

The City of Perth has already embraced many of these technologies, including using apps that enable smoother payment (EasyPark) and provide users with real-time parking availability (City of Perth Parking app). However, it is noted these initiatives improve the user experience, thereby inadvertently supporting driving as the first choice to access central Perth. An over-reliance on parking supply can undermine efforts to shift travel behaviour toward active and public transport. The benefits must be balanced with the wider strategic need to reduce car use. An opportunity is to use public space more efficiently, transitioning towards enhanced public realm outcomes, or safer streets for all road users. An outcome that results in less car parking will heighten the need for technology to better use the car parking that remains.

## Driverless Vehicles

Fully driverless cars, also known as autonomous vehicles, are yet to emerge on Australian roads. The regulatory environment does not accommodate driverless vehicles and the vehicles themselves are not ready to operate in Australia now or in the near future.

A key concern regarding driverless cars is the potential to increase the total amount of driving and the implications this has on congestion. A clear theme from US cities with driverless-taxi services is that many of the trips are short and can increase congestion as they replace more space-efficient forms of transport, such as active and public transport.

As the technology progresses, it will be important to set the regulatory and policy signals that ensure these technologies service the wider public interest and the City's long term strategy. This includes prioritising pooled and shared models of autonomous transport over private ownership, monitoring developments in driverless vehicle technology and regulations, to ensure any future integration aligns with wider strategic objectives.