The forces that have reshaped other industries are now set to transform mobility. Driven by changing attitudes and enabled by technology, new mobility options are proliferating, redefining mobility as a service. Change has already begun, but the profound transformation will come when intelligent networks link vehicles, people and infrastructure in a self-organising system.

It’s a future that holds immense promise – for society and industry alike, the potential benefits are huge. To realise them, the automotive and transport industry must position itself for a new mobility ecosystem that puts customers in control. In Australia, this means working closely with government to overhaul outdated regulation and harmonise regimes across state borders.

**Forces of change**

Changing customer attitudes are catalysing change in the transport and automotive industries. More and more, customers expect services to be responsive to individual needs. They’re demanding the convenience of real-time information and predictable but flexible services – and they expect it to come at an affordable price. Technological progress is enabling a transformation that gives expression to these customer desires.

High expectations are coupled with a new openness to different ways of doing things. End-to-end multimodal journeys are becoming the norm. Customers understand the crucial role of public transport and are increasingly willing to use it – just as they’re willing to trial and support newer mobility providers such as ride-sharing alternatives. As customers embrace an expanding set of choices, the appeal of car ownership is weakening, especially among the young. While they still prize personal mobility and freedom, they’re able to get it in other ways.
Mobility transformed

In this atmosphere of expanded possibility and heightened expectations, mobility service models are evolving rapidly. In Australia and globally, car and ride-sharing services have emerged and spread. Increasingly, these services are being integrated with public transport to create multimodal services with unified trip planning, payment and reporting systems. These ‘mobility as a service’ models are blurring the boundary of public and private and dissolving distinctions between modes.

Connected and automated vehicles are the next frontier. To deploy them in Australia, automakers will need to navigate a host of complexities – regulatory, commercial and social. But it’s only when the network itself becomes smarter that the benefits of in-vehicle technology will be unlocked, producing truly transformational change.

In an intelligent network, physical infrastructure is complemented by data connectivity between users, vehicles and the network itself. These intelligent networks open up new possibilities for control of network flows. The result is a self-organising mobility system that makes mass, efficient, driverless journeys possible.

Gearing up for the future of mobility

Realising this vision in Australia won’t be easy. Our legacy of inconsistent rules and regulations, built up over decades, will take time to unpick. Governments will need to take the lead, overcoming the historic tendency to wait and follow. The automotive industry, based wholly offshore, will need to surmount the barriers of distance to stay intimately involved.

When these challenges have been overcome, it will be customer preferences – ever-changing, but always known – that dictate the terms. Mobility will be reinvented as a service industry, populated by a host of players meeting a multiplicity of customer needs. Government will focus not on planning and provision, but on facilitating the choices of customers.
Industry will also need to reorient itself. Incumbent automakers have the potential to command the future market for mobility services. But as one type of mobility service provider among many, automotive will need to replace its single service solution with an evolving menu of options that respond to the array of customer needs. Selling cars is no longer the end-game for Australian automakers. Some automotive companies are already offering their vehicles as a service, allowing customers to choose from a range of cars to meet the demands of the moment.

As mobility continues to transform, automotive players will be forced to reinvent their businesses, developing new business models and services at an unprecedented speed. Meeting the challenges of this new era means shifting work cultures and practices. Automakers will need to be agile and fail fast to achieve a good return on innovation.

**Four challenges for industry**

1. **Understand the customer**
   The future of mobility places customers firmly at the centre, surrounded by a web of interconnected service providers, objects and infrastructure. To thrive, mobility service providers will need a far more sophisticated understanding of what customers expect and how they behave. This insight can inform development of a service offering that is highly adaptive, and focused on the customer experience.

2. **Shape the intelligent network**
   The destinies of industry and government are now intertwined. The full benefits of industry investment in automated and connected vehicles can only be realised in an intelligent network. So while network provision will remain the preserve of government, industry needs to push for networks that are smarter - not just bigger. Implementing intelligent networks will generate huge amounts of data and raise questions of public interest, ownership and where responsibilities lie. Industry needs to consider how it might leverage this data, and will want a seat at the table when the crucial issues of ownership and access are being discussed and decided.

3. **Embrace shared mobility**
   Population growth and urbanisation mean that demand for mobility will continue to grow. To keep people moving without worsening congestion in our cities, personalised mobility will need to be balanced with collectivised transport.

   Government will use its policy and pricing levers to encourage shared mobility models - with implications for automakers. To manage the impacts and seize opportunities, they will need to work closely with government and look beyond highly personalised mobility to include shared mobility services in their offering. These services will integrate public and private transport, use single vehicles to meet the mobility needs of many, and make better use of unused capacity, dramatically reducing the number of empty cars.

4. **Prepare to pay for the network**
   As mobility transforms, so too will the way we pay for it. With traditional transport revenues from fuel excise tax to parking fines in decline, government will look for new ways to fund network investment while boosting efficiency. As a result, end-customer charges will give way to network usage-based charging directed at mobility service providers, not just users. In Australia, expect to see ride sharing companies paying for their use of the transport network.

   Industry should prepare to be charged to access and use the network. Before these charges come into play, it should define the network services it wants in return.
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