The three dimensions of tech-enabled urban mobility

**Infrastructure**
- Supply and capacity
- Network management and control
- Asset management

**Technology**
- Sensor networks
- Smart devices
- Communication platforms
- Control systems
- Data analytics

**Users**
- Understanding of travel demand and travel behaviour
- Enhancing user experience
- Traveler information
- Behavioural modeling

Creating smarter mobility with meaningful tech for better user experience
The changing landscape of urban mobility

<table>
<thead>
<tr>
<th>Conventional approaches</th>
<th>Emerging approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply and capacity</td>
<td>Demand management and resilience</td>
</tr>
<tr>
<td>Focus on mobility</td>
<td>Accessibility</td>
</tr>
<tr>
<td>Street as road for vehicles</td>
<td>Shared between all modes</td>
</tr>
<tr>
<td>Physical dimensions</td>
<td>Social dimensions</td>
</tr>
<tr>
<td>Vehicle-oriented</td>
<td>People-oriented and customer-focused</td>
</tr>
<tr>
<td>Motorised transport</td>
<td>Hierarchy of modes</td>
</tr>
<tr>
<td>Travel as a derived demand</td>
<td>Travel also a valued activity</td>
</tr>
<tr>
<td>Minimisation of travel times</td>
<td>Reliability of travel times</td>
</tr>
<tr>
<td>Petrol taxes/vehicle registration fees</td>
<td>User-pay models</td>
</tr>
<tr>
<td>Private car ownership</td>
<td>Car-sharing and ride-sharing</td>
</tr>
</tbody>
</table>


The fourth dimension: No ordinary disruption

Future of mobility:
- Autonomous
- Shared
- On-demand
- Electric

Underpinned by AI-based computational platforms where the mode of transport will be a smart, self-moving device embedded in a digitalised eco-system.
Arcade City: Ridesharing using tokens and blockchain

Connected cities powered by AI will enhance city resilience with predictive infrastructure

- By 2020 there will be 1 billion video cameras in cities around the world
- Public safety will be improved - response times will be reduced and harm minimized
- Meaningful insights, delivered reliably and accurately, will enable city services to be citizen-centric and personalised.
- Self-healing and self-learning infrastructure

aiCities: How AI will create thinking cities

AI: That quality that enables an entity to function autonomously and with foresight in its environment
EMERGING BUSINESS MODELS

The merging worlds of technology, vehicles and shared mobility

“Explore strange new worlds—business model to come”
Jeff Bezos, CEO Amazon

Uber - Huge Growth, Big Losses

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Capitalisation</th>
<th>Gross Bookings</th>
<th>Net Revenue</th>
<th>Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$40 billion</td>
<td>$2.93 billion</td>
<td>$495 million</td>
<td>-$671 million</td>
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<tr>
<td>2015</td>
<td>$63 billion</td>
<td>$10.8 billion</td>
<td>$1.5 billion</td>
<td>-$987 million</td>
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<tr>
<td>2016</td>
<td>$69 billion</td>
<td>$20.0 billion</td>
<td>$6.5 billion</td>
<td>-$2.8 billion</td>
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<tr>
<td>2017</td>
<td>$72 billion</td>
<td>$37.0 billion</td>
<td>$7.5 billion</td>
<td>-$4.5 billion</td>
</tr>
</tbody>
</table>

Auto Manufactures  →  Tech Providers  →  Shared Mobility Providers

Kilometre as a utility

In 2016, Australian households spent $65.8 billion a year on private vehicles and $2.7 billion a year on public transport
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