Daniel Strzina

BYRON SHIRE COUNCIL
Byron Shire Council’s
Integrated Transport Management Strategy
What is a Transport Strategy?

• An overarching, policy-level strategic document that will act at high level to guide how Council proceeds with funding.
• A mechanism by which to support projects and initiatives (funding).
• It will inform and support other Council plans and strategies, including:
  – Northern Rivers EV Strategy
  – Bike Strategy and Action Plan (Bike Plan)
  – Pedestrian Access and Mobility Plan (PAMP)
  – And many others…
• It will inform future transport use with a view to 2040.
• It will consider technological change (drones, autonomous vehicles, electric vehicles, etc.).
• It will provide a direction for the Byron Shire transport network through the next 20 years, and will identify priorities and have a coordinated set of actions that will be achieved within clearly identifiable five year goals.
Why develop a Transport Strategy?

- Local government plays a key coordinating role in planning and delivery of infrastructure and services.
- Planning needs to be considered in the context of a range of pressing environmental, economic and social challenges.
- Strategic transport planning provides the opportunity to give consideration to transport challenges so as to maximise the benefits and reduce the economic, environmental and social costs of an integrated transport network that meets the long term needs of the community.
- Provide a strong and clear direction to Council to address and improve transport in Byron Shire, and facilitate a coordinated approach by all relevant agencies to the planning, implementation and monitoring of transport programs and projects.
Purpose – How will this document be used?

The purpose of the Integrated Transport Management Strategy is to:

- Inform Council on how to implement the vision.
- Support and integrate with existing and future planning documents e.g. Council strategies, Community Strategic Plan, DCP, LEP, etc.
- Ensure infrastructure projects satisfy strategic goals.
- Support funding applications and opportunities.
- Support and promote general health and wellbeing.
- Cultivate environmental stewardship.
- Foster economic growth.
- Encourage change in modes.
- Coordinate with other Councils across the region.

Vision: An integrated, innovative and equitable transport system, providing a range of sustainable, efficient, accessible and safe ways for people and goods to reach their destination.
Where are we up to?

The Transport and Infrastructure Advisory Committee (TIAC) and Staff have been working together to develop:

- Vision
- Principles
- Challenges and opportunities
- Targets and desired outcomes
- Key Actions to achieve objectives
- Community and stakeholder consultation

Council are ready to engage a specialist consultant to proceed with the development of the Strategy.
Vision:

An integrated, innovative and equitable transport system, providing a range of sustainable, efficient, accessible and safe ways for people and goods to reach their destination.
Principles:

1. Encourage transport options that meet the needs of both locals and visitors.
2. Prioritise our focus on moving people and goods rather than moving cars.
3. Provide infrastructure and services that are designed to give priority to pedestrians, cyclists, scooters and public transport over private cars.
4. Improve and promote the safety and amenity of pedestrians, cyclists and vulnerable road users in our transport infrastructure. (safety amenities vs behaviour)
5. Address peak time traffic congestion by reducing traffic rather than increasing road capacity.
6. Take advantage of changes in transportation technology.
8. Design for, encourage and facilitate transport options that reduce the emissions produced by our community.
9. Recognise the need for transport options in rural areas and evoke a sense of equity within transport planning.
10. Integration – Strengthen connections between different forms of transport, land use and transport planning, and to regional and metropolitan networks.
11. Equity – Support a range of accessible and affordable transport options for all people, neighbourhoods and future generations.
12. Efficiency – Build a more reliable and effective transport system that supports skills development, business and employment growth and provides competitive alternatives to private car travel.
13. Encourage the use of ride sharing and car sharing services.
14. Encourage active transport and healthy transport options.
15. Promote behavioural change to improve safety.
Targets and desired outcomes:

- The transport network is designed to facilitate and encourage an overall modal shift away from private car use towards more sustainable transport modes including walking, cycling, public transport, electric vehicles and motor scooters/cycles.
- New technologies are being used in our transport solutions; transport initiatives result in significantly reduced greenhouse gas emissions.
- Prepare for the electrification of transport and support the provision of renewable energy to match growth.
- Vehicles being flexible to meet emission targets.
- On demand public transport including driverless vehicles.
- Key regional destinations such as hospitals, airports and universities are readily accessible by public transport from Byron Shire.
- The transport system supports the local lifestyle and also tourism by delivering both active and public transport infrastructure that meets the needs of locals and visitors.
- Local public transport routes offer efficient and frequent services. (Note: frequency, connectivity etc. Include reference to regional and interregional networks)
- Provision of multimodal HUBs with accessible infrastructure footpaths.
- Road crossings and associated pedestrian networks are safe and accessible for mobility scooters, cyclists and pedestrians.
- …
Engagement of a consultant

• Use outcomes from TIAC meetings and workshops to date as a foundation for the development of the Integrated Transport Management Strategy.

• Outcomes must align with existing plans and strategies, including the Northern Rivers EV Strategy and Net Zero Emissions Strategy for Council Operations 2025.

• Provide analysis of potential impacts and opportunities that could be realised through emerging trends including:
  – Public provision of charging for electric vehicles.
  – Autonomous vehicles.
  – Software and mobile applications.
  – Other emerging technologies.
How can you be involved?

3 Stages of Consultation:

1. Public Survey (October 2019)
   - Watch out for the survey (newspapers, Council website) and respond with your input.

2. Stakeholder Workshops (November 2019)
   - Get in touch to become a stakeholder representative.
   - Work with TIAC, Staff and the Consultant to help develop the Strategy.

3. Provide feedback once the draft document is complete (June 2020)
   - Watch out for the Public Exhibition of the Draft Integrated Transport Management Strategy (newspapers, Council website) and respond with your input.
Thank you!

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The Future of Transport
Connected and autonomous vehicles

8 June 2019

Susannah Wilkinson, Senior Associate, +61 7 3258 6786, susannah.wilkinson@hsf.com
A vision of the future


Primary benefit of autonomous vehicles

**Increased safety**

- **90%** of all car accidents are caused by human error \(^1\)

**Economic benefit**

- **$30bn** the annual cost of road trauma in Australia \(^3\)

- **1,141** deaths in Australian from car accidents in 2018 \(^2\)

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Other benefits and opportunities

- Convenience and mobility
- Improved infrastructure capacity (vehicles drive closer, narrower lanes, higher speeds)
- Increased productivity/multi-tasking (drivers can focus on other tasks)
- Environmental benefits (reduced footprint, better efficiency with ‘slipstreaming’, consequential reduction in greenhouse gas emissions)
- The autonomous vehicles industry worldwide is anticipated to be worth $87 billion by 2020*

*“Accenture “The Era of Autonomous Vehicles Is Here”
Classification & timing
# Levels of automation (for road vehicles)

<table>
<thead>
<tr>
<th>Level</th>
<th>Automation</th>
<th>Example</th>
<th>Driver</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 0</td>
<td>Driver only</td>
<td>N/A</td>
<td>Driver continuously in control of speed and direction</td>
<td>No intervening vehicle system active</td>
</tr>
<tr>
<td>L 1</td>
<td>Assisted</td>
<td>Park Assist</td>
<td>Driver continuously performs the longitudinal or lateral driving task</td>
<td>The other driving task is performed by the system</td>
</tr>
<tr>
<td>L 2</td>
<td>Partial automation</td>
<td>Traffic jam Assist</td>
<td>Driver <strong>must</strong> monitor the dynamic driving task and the driving environment at all times</td>
<td>System performs longitudinal and lateral driving task in a defined use case</td>
</tr>
<tr>
<td>L 3</td>
<td>Conditional automation</td>
<td>Highway Patrol</td>
<td>Driver <strong>does not</strong> need to monitor the dynamic driving task nor the driving environment at all times; must always be in a position to resume control</td>
<td>System performs longitudinal and lateral driving task in a defined use case. Recognises its performance limits and requests driver to resume the dynamic task with sufficient time margin</td>
</tr>
<tr>
<td>L 4</td>
<td>High automation</td>
<td>Urban Automated Driving</td>
<td>Driver is not required during <strong>defined use case</strong></td>
<td>System performs the lateral and longitudinal dynamic driving task in all situations encountered during the entire journey. No driver required</td>
</tr>
<tr>
<td>L 5</td>
<td>Full automation</td>
<td>Full end-to-end journey</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** KPMG and the Society of Motor Manufacturers & Traders (SMMT), Connected and Autonomous Vehicles: The UK Economic Opportunity (March 2015)
**Timeline**

**RethinkX** predicts that Transport-as-a-Service (TaaS) vehicle fleets, owned by single organisations, will be seen as early as 2021 and that by 2030, 95% of US passenger miles travelled will be served by TaaS fleets.

**NVIDIA** predicts fully autonomous vehicles will be on the road before 2022.

**NRMA** predicts that fully autonomous cars will be seen in Australia by 2025.

**McKinsey & Company** predicts that level 4 vehicles will probably appear in the next five years. Fully autonomous vehicles will not be available in the next ten years.

**KPMG** predicts that level 5 vehicles will be on the road by 2030.

**IAG** predicts that mainly driverless vehicles will account for 20% of the total vehicle fleet in Australia by 2035, and by 2040 mainly driverless vehicles will account for 48% of cars on Australian roads, with fully driverless vehicles accounting for 14%.
Regulatory reform
NTC seeks submissions in discussion paper ‘Changing driving laws to support automated vehicles’

NTC complete National Enforcement Guidelines to clarify ‘control’ and ‘proper control’

State and territory governments complete review of compulsory third-party and national injury insurance schemes

NTC due to release new recommendations

End-to-end regulatory system in place in Australia for all levels of automation

NTC develop legislative reform options for ‘driver’

NTC develop options to manage government access to automated vehicle data

NTC complete a National Performance Based Safety Assurance Regime

State and territory road and transport agencies complete review of current exemption powers

Regulatory reform – progress so far & next steps

Oct 2017

November 2017

May 2018

During 2018

Nov 2018

May/June 2019

2020

End-to-end regulatory system in place in Australia for all levels of automation
On road trials
On road trials of driverless cars in AUS

- Flinders Autonomous Shuttle Trial (Level 4) (SA)
- RAC Intellibus (Level 4) (WA)
- CAVI Ipswich (Level 4) (QLD)
- AV trial – semi-automated (ACT)
- Heavy Vehicle Priority Project (NSW)
- Volvo trial (Level 3) (SA)
- Transurban (VIC, NSW & QLD)
- Adelaide Airport shuttle (Level 4) (SA)
- Autonomous heavy vehicle platooning trial (WA)
- Driverless shuttle bus (VIC)
- National Connected Multi-modal Transport test bed (VIC)
- Cohda Wireless on-road trial (SA)
- Navyatech bus (Level 4) (NSW)
- Bosch Highly Automated Driving Vehicle (VIC)
- Automated cargo pod (SA)
- AV trial (ARRB / LaTrobe Uni) (NSW)

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Future transport strategy
Future transport strategy

1. Confluence of technologies

Source: McKinsey
Future transport strategy

2. Smart cities

Source: McKinsey
Future transport strategy

3. Mobility-as-a-Service
Future transport strategy

4. Revenue streams impacting government

**Federal Government**
- Loss of luxury car tax, fuel excise tax and fringe benefits tax

**State Governments**
- Loss of GST on car purchases, fuel and maintenance
- Loss of diver’s licence fees, car registration fees and speeding fines

**Local Governments**
- Loss of parking fee revenue (partially offset by fewer parking inspectors)
Driving forward

Capturing the full benefits of autonomy

- Capital planning for an uncertain future
- Integrating AVs with existing infrastructure
- Optimising and redefining curb
- Redeveloping off-street parking
- Rethinking road construction, maintenance & revenue sources

Source: McKinsey