



Austroads Innovative Temporary Traffic Management Device and Solution Assessment

Reporting on the first 18-months of operations

The Austroads Innovative Temporary Traffic Management Device and Solution Assessment (AITDSA) scheme commenced operation on 1 July 2022.

This report presents an overview of the status of AITDSA and the lessons learned from its first 18 months of operation.

In Brief

6

innovative TTM devices/solutions, recommended for use.

2

innovative TTM devices/solutions, in assessment.

2

innovative TTM devices/solutions did not meet the criteria.

Contents

About AITDSA 2

Current Status 3

In-field Assessment 4

Operational Insights 5

 Austroads Members 5

 Sponsors 5

 End-users 6

 Project Managers Involved with In-field Assessments 6

Objectives and Measures of Success 7

Lessons Learned 9

 Focused Objectives 9

 Articulating Innovation 9

 Managing Sponsor Expectations 9

 Panel Support 9

AITDSA Recommended for Use Devices/Solutions – Adoption by Jurisdictions 10

Summary 11

 Achievements and Milestones: 11

Appendix 1: AITDSA Recommend for Use Certificate (Example) 12

This report has been prepared for Austroads as part of its work to promote improved Australian and New Zealand transport outcomes by providing expert technical input on road and road transport issues.

Individual road agencies will determine their response to this report following consideration of their legislative or administrative arrangements, available funding, as well as local circumstances and priorities.

Austroads believes this publication to be correct at the time of printing and does not accept responsibility for any consequences arising from the use of information herein. Readers should rely on their own skill and judgement to apply information to particular issues.

About AITDSA

AITDSA provides a way for innovative devices and solutions used for temporary traffic management to be assessed and recommended for use in Australia and New Zealand.

AITDSA responds to the emergence of new technologies, innovative solutions and devices which can be used to improve safety at work sites.

Prior to the introduction of AITDSA, there was not an agreed way for Austroads members to consider innovative devices and solutions for temporary traffic management. Innovative TTM devices and solutions to road agencies for use on the road network, which has been:

- inhibiting the development and adoption of new devices and solutions
- adding unnecessary cost and duplication of effort
- leading to inconsistencies between jurisdictions.

AITDSA is intended to recognise innovative temporary traffic management devices and solutions used on public roads in Australia and New Zealand. Innovative devices and solutions may perform a diverse range of functions, including (but not limited to):

- regulating traffic (i.e., to assign priority and indicate regulations in force)
- informing motorists of hazards or regulatory controls ahead
- warning of temporary hazards that could endanger motorists or workers and plant engaged in work on the road.

AITDSA is not intended for innovative devices and solutions which already:

- fully conform with Australian Standard AS1742.3 (Traffic Control for Works on Roads) and/or the New Zealand Guide to Temporary Traffic Management (NZGTTM) and associated documents, and/or
- have obtained approval for use in one or more jurisdictions in Australia or New Zealand.

However, Austroads members may require an innovative device or a solution to be assessed and recommended for use through AITDSA where:

- the device/solution partially conforms with AS1742.3 and/or NZGTTM and associated documents
- the device/solution has obtained approval in one or more jurisdictions in Australia or New Zealand, but the use of the ITDS is sought in other jurisdictions
- risks and issues have been recognised from the in-field operation of the ITDS which conform with AS1742.3 and/or NZGTTM and associated documents, or have obtained approval from one or more jurisdictions in Australia or New Zealand.

Current Status

During the first 18 months of operation, the AITDSA scheme responded to a total of ten innovative TTM devices/solutions which were presented by Sponsors, to assess and endorse innovative TTM devices and solutions. Specifically, the following achievements have been made:

- **Endorsed Innovative Devices/Solutions:** AITDSA has successfully endorsed six innovative TTM devices/solutions, recommending them for use in TTM environments.
 - 1) **Gibney Barrier** sponsored by Fulton Hogan
 - 2) **TriLight** sponsored by Outsource1 Pty Ltd
 - 3) **TriSign** sponsored by Safetek Solutions Pty Ltd
 - 4) **eBoom** sponsored by Arrows Rooding Safety Pty Ltd
 - 5) **eStop Auto** sponsored by Arrows Rooding Safety Pty Ltd
 - 6) **SentriGate** sponsored by Innov8 Equipment Pty Ltd
- **TTM devices/solutions in Assessment Phase:** Two innovative TTM devices/solutions are currently in the assessment phase.
- **TTM devices/solutions not progressed:** Two innovative TTM device/solution did not meet the criteria for AITDSA recommendation, affirming the AITDSA's commitment to maintaining a structured, multi-disciplinary approach when it comes to recommending a TTM device/solution.



Gavin Hill (TCA General Manager Strategy and Delivery), Peter Duncan (AITDSA Chair) and Geoff Allan (Austroads Chief Executive) at AITDSA Panel Meeting October 2022.

In-field Assessment

The AITDSA panel recognises the importance of conducting in-field assessments for intermediate and complex TTM devices and solutions to determine their suitability for a recommendation. AITDSA's in-field assessments encompass various factors, including:

- Environmental Parameters: This involves evaluating the range of environments where the TTM device or solution can be effectively used and identifying any limitations in this regard.
- Operational arrangements: Assessing the necessary conditions and protocols required for the safe and effective operation of the TTM device or solution.
- Training Requirements: Identifying the user training requirements essential for ensuring the safe and proficient utilisation of the technology.

Since commencing operations on 1 July 2022, Austroads has successfully coordinated five in-field assessments, with an additional two assessments scheduled to begin shortly. The in-field assessments will provide the AITDSA Panel with a comprehensive understanding, enabling them to make informed decisions on recognising innovative devices/solutions.



Hand-over of the first device for in-field assessment, April 2023.

Operational Insights

Numerous operational learnings have been derived since AITDSA first became operational on 1 July 2022.

Austroads Members

Austroads members play a crucial role in the success of AITDSA, playing a pivotal role in decision making process of recognising innovative devices and solutions. In addition to actively participating in Panel meetings, certain Austroads members have gone above and beyond by facilitating in-field assessments as part of the AITDSA complex device evaluations. Some members have taken proactive measures by devising specific processes within their jurisdictions to integrate the AITDSA framework into the approval procedures for new devices and solutions used in TTM environments. This collaborative effort underscores the dedication of Austroads members to fostering innovation and ensuring the effective implementation of AITDSA standards.

- **Progress and Implementation:** Austroads members may view AITDSA as a key driver for progress and bringing in innovation in the TTM sector. They may appreciate the standards and guidelines developed and implemented over the past year.
- **Collaboration Opportunities:** AITDSA serves as a dynamic platform for collaboration, providing members with valuable opportunities to exchange insights, experiences, and best practices. Embracing a harmonised approach in acknowledging innovative devices and solutions, AITDSA offers a framework that allows Austroads members to derive mutual benefits. By aligning with these standardised practices, members can efficiently integrate and adopt innovative devices within their respective jurisdictions.
- **Challenges and Concerns:** Some members may have concerns about the pace of adoption or specific challenges faced during the implementation of AITDSA standards. Continuous communication and feedback channels may be important to address these issues.

Sponsors

Sponsors are the entities which submit innovative solutions and devices for assessment and recommendation for use through AITDSA. It could be a manufacturer, distributor or supplier of an innovative solution or device, the end-user, an Austroads Member or any other relevant entity.

Sponsors seeking an AITDSA recommendation for use for their innovative devices/solutions have been engaging closely with Austroads. This highlights that AITDSA is recognised as the approach agreed to by Austroads members to consider the assessment of innovative TTM devices and solutions.

The feedback provided by the AITDSA Panel is crucial for Sponsors. Clear communication and constructive feedback contribute to refining their devices/solutions and improving their chances of receiving recognition for their product.

Organisations interested in submitting innovative TTM devices and solutions for approval may have specific expectations and considerations in evaluating AITDSA's success over the last fifteen months. The interest received from prospective sponsors proves the value of the AITDSA scheme. Austroads is presently in discussion with two prospective sponsors regarding the assessment of three distinct devices/solutions through AITDSA.

End-users

End-users, comprising Austroads members and TTM traffic operators and entities who operate under the auspices of Austroads members and individual local governments, AITDSA-recognised devices/solutions, rely on AITDSA standards for smooth integration. The AITDSA assessment process comprehensively examines the:

- intended functionality of the innovative device/solution
- environmental parameters
- operational arrangements
- training requirements.

This thorough assessment instills confidence in end-users, assuring them of the reliability and suitability of AITDSA-recognised devices/solutions for TTM purposes. The feedback obtained from traffic operators during the in-field assessments yielded a positive outcome and encouraged sponsors to implement enhancements in certain devices/solutions.

Project Managers Involved with In-field Assessments

Project managers dealing with in-field assessments play a hands-on role in applying innovative devices/solutions submitted to AITDSA in real world scenarios. They play a vital role in these assessments and in providing feedback to the AITDSA Panel.

The role of Austroads members is crucial to identifying suitable TTM locations for in-field assessments, and the suitability of the innovative TTM device/solution (in the context of the hierarchy of control) for an in-field assessment.








During in-field assessments, project managers assess the practicality and applicability of specific devices and solutions. Any success or challenges encountered during the application of these devices in a live environment would be used to shape feedback. However, conducting in-field assessments of new devices and solutions in a live environment can be quite challenging due to the busy nature of these projects and the tight deadlines for their completion.



Site inspections with Transport for NSW at the Wallgrove Road in-field assessment, October 2023.

Objectives and Measures of Success

As AITDSA moves forward, its objectives and measures of success are clear and well-defined. Below is a table that shows the outcomes against the key success factors agreed to with the TTM Task Force during the implementation of AITDSA during the first half of 2022.

Objective	Measure of Success	Status	Comments
Primary objectives			
1. Implementation within agreed timeframes	<ul style="list-style-type: none"> The Scheme commenced operation from 1 July 2022. 		The Scheme has successfully operated since 1 July 2022.
2. Recognise new and innovative TTM devices	<ul style="list-style-type: none"> Approval of TTM devices with the buy-in and recognition of Austroads members throughout Australia and New Zealand. 		Six innovative TTM devices/solutions have been recognised through AITDSA to the end of September 2023
3. Relieve jurisdictional burden in assessing and approving TTM devices			All Austroads members have benefited from the AITDSA . The outcomes of these assessments are being relied upon by Austroads members to adopt the use of innovative TTM devices/solutions in their jurisdiction.
4. Leverage knowledge and operational experience from Austroads Members and Jurisdictions			The quarterly AITDSA Panel meeting served as a collaborative platform for Austroads members to exchange valuable insights and experiences, fostering a harmonised approach towards acknowledging emerging innovations in TTM devices and solutions.
5. Harmonise approvals across Australia and New Zealand			AITDSA was able to harmonise the recognition process to a certain extent as Austroads members have shown trust in the AITDSA assessments on new innovative products.
6. Provide Austroads members with flexibility when choosing to adopt approved TTM devices		<ul style="list-style-type: none"> Retain flexibility over the timing for approved TTM devices to be adopted in jurisdiction. Recognise the difference between TTM device 'approval' and TTM device 'adoption'. 	
7. Leverage established processes and experience from 'like operating models'	<ul style="list-style-type: none"> Apply well proven operational processes and experience from the ASBAP and the NTF. 		Reference to operational experiences from other operational programs within Austroads benefited AITDSA. This also helped AITDSA in increasing the likelihood of success and avoiding potential pitfalls.

Objective	Measure of Success	Status	Comments
8. Improve safety outcomes in temporary traffic environments	<ul style="list-style-type: none"> Approval of TTM devices which leverages the collective knowledge and operational experience of Austroads Members, Jurisdictions and subject matter experts. Assessment and approval of TTM devices which take into account the environment and operating parameters in which a device will be used. 	●	Six innovative TTM devices/solutions have been recognised through AITDSA so far and jurisdictions have made great progress in accepting the use of these devices/solutions across Australia and New Zealand to improve the safety outcomes in TTM environments.
9. Encourage a diversity of TTM devices for assessment and approval	<ul style="list-style-type: none"> Provide streamlined arrangements for lodging application for approval. Adopt a risk-based assessment and approval processes. Establish appropriate cost recovery models. 	●	The enquiry and application processes are streamlined and applicants can easily download the application form from the Austroads website.
Secondary objectives			
10. Reduce impediments to the use of new and innovative TTM devices	<ul style="list-style-type: none"> Provide a Scheme which provides a single assessment and approval mechanisms recognised throughout Australia and New Zealand. Establish appropriate cost recovery models. 	●	AITDSA provides a recognised, harmonised approach to assess and recognise innovative TTM devices/solutions in Australia and New Zealand. Some jurisdictions have adopted the AITDSA process within their approval process for innovative TTM devices/solutions. While the final decision on adopting a device/solution rests with the jurisdiction, a process to adopt AITDSA Recommended devices/solutions can contribute to easing the impediment to assessing a new TTM device/solution
11. Apply transparent mechanisms to calculate costs for assessment and testing	<ul style="list-style-type: none"> A structured, consistent assessment and approval process which is understood by all stakeholders. Approval decisions based on evidence and independence. 	●	The cost of assessment is calculated in terms of the complexity of the assessment and informed to the sponsor in advance
12. Apply transparent assessment, testing and approval processes	<ul style="list-style-type: none"> Identification and management of potential conflicts. 	●	The AITDSA process is made transparent to all stakeholders and all testing and assessments are clearly documented
13. Manage real or perceived conflicts of interest		●	Any conflicts of interest are identified and actively managed.
14. Manage risks and liabilities	<ul style="list-style-type: none"> Assign risks to the entity best placed to manage. Clearly defined roles and responsibilities, and the transparent assignment of liabilities and indemnities. 	●	The roles and responsibilities are clearly defined and risk assessments are completed before initiating any assessments through AITDSA.

Lessons Learned

In the first 18 months of AITDSA's operation, several valuable lessons have been learned, which will help future improvements to the operation of AITDSA.

Focused Objectives

AITDSA was established with specific objectives in mind, including relieving jurisdictions from the burden of assessing and approving TTM devices, providing a harmonised approach to recognition, and facilitating knowledge sharing among member agencies. It is crucial to maintain a strong focus on these objectives to ensure that the scheme effectively serves its purpose.

Articulating Innovation

Sponsors seeking AITDSA recognition must clearly articulate the innovative aspects of their device or solution. More specifically, Sponsors have not consistently demonstrated a clear articulation of the innovative aspects of a TTM device or solution, and the reasons it does not conform with the Australian Standard AS1742.3 (Traffic Control for Works on Roads) and/or the New Zealand Guide to Temporary Traffic Management (NZGTTM) and associated documents.

Sponsors are being encouraged to reference AS1742.3 and the NZGTTM and associated documents prior to making a submission to AITDSA, and to demonstrate how their innovation addresses unresolved problems or risks in TTM management practices. This focus on genuine innovation prevents the misuse of AITDSA for introducing devices and solutions which do not advance safety outcomes.



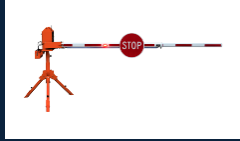



Managing Sponsor Expectations

Managing sponsor expectations is essential, especially concerning in-field assessments. Sponsors should understand that there is no fixed timeframe for these assessments, and timing depends on suitable deployment locations and coordination by local traffic management personnel. Furthermore, the results of an in-field assessment may not guarantee AITDSA endorsement.

Panel Support

The support of AITDSA Panel members and Austroads member agencies is instrumental in the success of the scheme. Panel members should actively consider ways to support future in-field assessments in their respective jurisdictions, enhancing AITDSA's reach and impact.

AITDSA Recommended for Use Devices/Solutions – Adoption by Jurisdictions

Jurisdiction	 Gibney Barrier	 TriLight	 eBoom	 TriSign	 eSTOP Auto	 SentriGate
ACT	●	●	●	●	●	●
NSW	●	✔	✔	✔	●	✔
NT	●	●	●	●	●	●
NZ	✔	✔	✔	●	●	●
QLD	●	●	●	●	●	●
SA ¹	✔	✔	✔	✔	✔	✔
TAS	✔	✔	✔	✔	●	●
VIC ¹	✔	✔	✔	✔	✔	✔
WA	●	✔	✔	✔	✔	●

Legend

● Not currently adopted. ✔ Adopted for use in the jurisdiction.

Note: 1. In South Australia and Victoria the recommendations of the AITDSA Panel are automatically adopted. In other states and territories sponsors are required to seek approval for use of the device/solution.

Summary

Achievements and Milestones:

1. Recommendation of six Innovative Devices/Solutions:

The successful recommendation of six innovative devices/solutions, showcasing the AITDSA panel's commitment to endorsing cutting-edge technologies and innovation in the TTM sector.

2. Execution of Recommend for Use Agreements:

The Recommend for Use agreements have been completed for six AITDSA recommended devices/solutions indicating progress in formalising the recognition. The sponsors have also been presented with a Recommend for Use Certificate (Appendix 1).

3. Efficient Organisation of In-Field Assessments:

Successful coordination and organisation of several in-field assessments, demonstrating the AITDSA's commitment to thorough evaluations as part of complex device/solution assessments.

4. Increasing Recognition of AITDSA Process Model:

The gaining attention and recognition of the AITDSA process model, indicating its relevance and effectiveness in assessing and recognising innovative devices/solutions.

5. Timely Delivery of Panel Meetings:

The successful delivery of five panel meetings as promised, showcasing organisational efficiency and commitment to scheduled activities.

These achievements highlight the positive momentum and impact of AITDSA in endorsing innovative solutions, building partnerships, and maintaining a robust assessment process. Continued focus on these successes will contribute to AITDSA's growth and influence within the industry and TTM sector.

In conclusion, the first 18 months of AITDSA have been marked by significant progress, with valuable lessons learned. By staying committed to its objectives, AITDSA can continue to play a pivotal role in advancing innovation and safety in TTM across Australia and New Zealand.

Appendix 1: AITDSA Recommend for Use Certificate (Example)

	
<h1>Certificate of Recommendation</h1>	
<p>The following Innovative Temporary Traffic Management Device or Solution conforms to the following details:</p>	
Sponsor	Systemised By Design Pty Ltd
ABN	58 623 212 331
AITDSA recognised device/solution	TriLight
Date of recognition	10 October 2022
Conditions for use	<p>The TriLight must be used in accordance with the environmental and operating procedures detailed by Outsource1 Pty Ltd</p> <p>All requirements pertaining to the Austroads Guide to Temporary Traffic Management apply for use of the TriLight.</p>
 Geoff Allan Chief Executive, Austroads	
<p>Further information can be obtained from the Austroads website https://austroads.com.au.</p>	
 Austroads	



Austroads

Level 9, 570 George Street
Sydney NSW 2000 Australia

Phone: +61 2 8265 3300

austroads@austroads.com.au
www.austroads.com.au