National guidelines for implementing future Intelligent Access Program (IAP) schemes
July 2018
Report outline

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<th>Title</th>
<th>National guidelines for implementing future Intelligent Access Program (IAP) schemes</th>
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<tr>
<td>Type of report</td>
<td>Guidelines</td>
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<tr>
<td>Purpose</td>
<td>This document sets out agreed principles and methodology for road authorities to apply when assessing the costs and benefits of including new schemes in the Intelligent Access Program.</td>
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<tr>
<td>Key words</td>
<td>Telematics, heavy vehicle, Intelligent Access Program, IAP</td>
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1 Context

Key points

Some vehicles due to their mass, dimension or configuration have restricted access to the road network and require monitoring through the Intelligent Access Program (IAP). The IAP is designed to assure road managers the right vehicle is on the right road at the right time.

Mandatory enrolment in the IAP is a road condition for some higher mass limit, performance-based standards vehicles, oversize and overmass mobile cranes and concrete pump vehicles.

Industry have requested greater policy certainty and clearer direction from governments about what IAP schemes will be mandated in the future. This document sets out agreed principles and methodology for road authorities to apply when assessing the costs and benefits of including new schemes in the IAP.

The national guidelines for implementing future IAP schemes highlights that where mandating the IAP is a cost-effective risk mitigation, it should be recommended as a condition of access for the vehicle. If there are other risk mitigations that are effective and lower cost, then the IAP should not be recommended. Governments are under no obligation to use IAP schemes in their jurisdiction.

1.1 Objectives

Most vehicles in Australia have a right to access the entire road network and operate under general access. However, some vehicles due to their mass, dimensions or configuration have restricted access to the road network. The Intelligent Access Program (IAP) is a telematics application that provides transport operators with access, or improved access, to the road network in return for their compliance with agreed access conditions. The IAP is designed to assure road managers the right vehicle is on the right road at the right time.

Specific uses of the IAP, referred to as IAP schemes, are determined by individual road transport authorities and vary according to the needs and transport policies of their jurisdiction.

Mandatory enrolment in the IAP is a road condition for some higher mass limit, performance-based standards vehicles, oversize and overmass mobile cranes and concrete pump vehicles.

During the review of regulatory telematics, a common concern raised by industry stakeholders is that the IAP is inconsistently applied across states and territories. Industry stakeholders commented that there are no agreed national principles or policies that determine why some schemes are in the IAP, and others are not. Industry stakeholders explained that this creates uncertainty for transport operators and service providers when making investment decisions.

As a result of the review of regulatory telematics, the Transport and Infrastructure Council recommended that the National Transport Commission (NTC) develop national guidelines that set out agreed principles and a methodology for road transport authorities to apply when assessing the costs and benefits of including new vehicle types or future schemes in the IAP.

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condition of access for the vehicle. If there are other risk mitigations that are effective and lower cost, then the IAP should not be recommended. Governments are under no obligation to use IAP schemes in their jurisdiction.

1.2 Background

1.2.1 Telematics
Telematics relates to the exchange of data and information to and from a vehicle. Telematics are being used in the transport sector to optimise the efficiency of commercial operations by collecting diagnostic information about harsh braking, engine performance and routing, and to monitor drivers and the driving task. Telematics can also be used to underpin regulatory activities, such as granting network access, recording hours of work and rest, or recording on-board vehicle mass.

1.2.2 Intelligent Access Program
The IAP is an access and compliance management tool which uses Global Navigation Satellite Systems (GNSS) to monitor heavy vehicles' road use, giving transport operators flexible access to the Australian road network to suit their specific business and operational needs. In return, the IAP provides road authorities with greater confidence that heavy vehicles are complying with the agreed road access conditions.

The IAP is an application of the Heavy Vehicle National Law (HVNL), and can be used as a condition of access for certain vehicle types to monitor location, mass, speed and time of day.

Transport Certification Australia (TCA) is the national government body responsible for administering the IAP and the National Telematics Framework, of which the IAP is the inaugural application. The operation of the IAP is enabled by the Intelligent Access Program (IAP) Functional and Technical Specification and Chapter 7 of the HVNL, which together set out the performance-based functional and technical requirements of the application and the assignment of legal roles and responsibilities of entities that are involved in the IAP application.

1.2.3 Intelligent Access Program operating model
The IAP operates through the legislated interaction of four different parties, under Chapter 7 of the HVNL. The operating model provides each party with defined roles and responsibilities and involves road authorities, transport operators, IAP service providers and TCA. An explanation of the roles and responsibilities for each party is provided below.

Road authorities
Road authorities may establish applications, schemes or permits to improve road access for heavy vehicles and use the IAP as a compliance monitoring tool.

The road authority examines both the proposed vehicle and the requested access to determine what effect, if any, the proposal may have on safety, infrastructure and the environment. Road authorities receive Non-Compliance Reports (NCRs) and follow up on detected breaches.

Transport operator
A transport operator enrolls in an IAP scheme offered by a road authority and gains access entitlements to the road network.
IAP service provider
An IAP service provider is a third party that provides telematics services, certified by TCA to provide IAP services. A transport operator engages an IAP service provider to install and maintain the in-vehicle technology used in the IAP scheme, and to monitor its heavy vehicle from a back-office system. The IAP service provider reports instances of non-conformance in the form of a NCR to the National Heavy Vehicle Regulator (NHVR) or road authority (if acting under delegation of the NHVR).

Transport Certification Australia
TCA is the national government body responsible for the administration of the IAP, certifying and auditing IAP service providers, and type-approving equipment used in the IAP.

Figure 1. Operating model of the Intelligent Access Program
2 National guidelines for implementing future IAP schemes

Key points
The National Heavy Vehicle Regulator (NHVR) and road authorities should consider the risk assessment and cost-benefit analysis principles and comply with the four-step methodology when mandating new IAP schemes. Governments are under no obligation to use IAP schemes in their jurisdiction.

2.1 Overview
An IAP scheme is the generic term for road access entitlements, including permits, concessions, exemptions, gazettes or notices (the terminology depends on the NHVR or road authority) that specify IAP as a requirement.

By specifying the IAP as a requirement, the NHVR or road authority may be realising the outcomes of a single local policy or aligning with any number of national or state policies, frameworks or strategies.

During the review of regulatory telematics, industry stakeholders requested greater policy certainty and clearer direction from governments about what IAP schemes will be mandated in the future. Ministers agreed that a set of national principles and a methodology for assessing future schemes would provide greater policy certainty.

In order to achieve a harmonised and consistent approach to IAP schemes, the NHVR and road authorities should consider the risk assessment and cost-benefit analysis principles and comply with the four-step methodology. Governments are under no obligation to use IAP schemes in their jurisdiction.
2.2 Principles

Considering the following high-level principles when assessing whether to mandate future IAP schemes will help to ensure that the level of intervention and impost on industry is balanced against the potential risk posed to safety and the road asset. The cost benefit analysis is a consideration and is not required to be performed in detail. Transport operators would have an interest in performing their own cost benefit analysis.

Consider the current proposal, route, infrastructure and precedent

- **Principle 1:** consider the nature of the route and vehicle, including the:
  - mass
  - dimensions
  - configuration/vehicle type
  - proposed route or area
  - vulnerable infrastructure on the route or in the area
  - high-risk times of travel
  - risk of the vehicle going off-route
  - ability to conduct compliance and enforcement (i.e. on road or back of house)
  - relevant route assessment guidelines (i.e. the Austroads Guidelines for Assessing Heavy Vehicle Access to Local Roads and the NHVR Performance-Based Standards approval process)

- **Principle 2:** consider whether this scheme or similar scheme has been mandated before and whether mandating this scheme would harmonise the approach adopted in other jurisdictions. If so, enquire about the risk assessment and cost-benefit analysis undertaken in other states and territories.

Consider the opportunities and benefits of the IAP scheme

- **Principle 3:** consider, qualify and quantify the opportunities and benefits of the IAP scheme to:
  - network access
  - road safety and impact on other road users
  - infrastructure, including pavement wear on roads and travel over vulnerable assets
  - traffic congestion
  - freight productivity and efficiency
  - road network planning and reporting purposes
  - the transport operator.

Consider the costs of the IAP scheme

- **Principle 4:** consider, qualify and quantify the initial and ongoing costs of the IAP scheme to the:
  - transport operator, including the upfront cost of technology (if applicable) and operating fees across the fleet
  - NHVR or road authority, including the administration, monitoring and manual analysis costs by NHVR or road authority staff.
2.3 Methodology

Adopting the following four-step methodology when assessing whether to mandate future IAP schemes and vehicle types will help to provide certainty to industry and achieve consistency in decision-making across jurisdictions.

2.3.1 Step 1 – Proposal

The transport operator submits a proposal to the NHVR, or the road authority (depending on transition arrangements) seeking access and/or higher mass for a proposed vehicle. Alternatively, the NHVR or road authority proposes to mandate a new IAP scheme.

2.3.2 Step 2 – Risk assessment, precedent and cost-benefit analysis

The NHVR or road authority undertakes a risk assessment, considers any precedent and performs a cost-benefit analysis of the proposed vehicle and access against the key principles outlined above to determine suitability. The cost benefit analysis is one consideration and is not required to be performed in detail.

Where mandating the IAP is a cost-effective risk mitigation, it should be recommended as a condition of access for the vehicle. If there are other risk mitigations that are effective and lower cost, then the IAP should not be recommended.

The NHVR or road authorities should involve experts in the assessment and decision-making process. These include people who are:

- able to assess risk to infrastructure, such as pavement structure engineers and bridge asset and structure engineers
- responsible for maintenance, investment and repair
- responsible for road traffic management.

2.3.3 Step 3 – Policy consideration

The NHVR or road authority should present their risk assessment and cost-benefit analysis outcomes from Step 2 and recommendation for IAP for policy consideration by the road manager.

Where mandating the IAP is a cost-effective risk mitigation, the NHVR or road authority will submit a policy proposal to an internal decision-making body for consideration and approval.

2.3.4 Step 4 – Final approval

An internal decision-making body will consider the policy proposal and make the final decision about mandating the IAP.

Figure 2. Four-step methodology for assessing whether to mandate future IAP schemes
## 2.4 Assessment checklist

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<td>Step 2 – Risk assessment</td>
<td>The NHVR or road authority undertakes a risk assessment, considers any precedent and performs a cost-benefit analysis of the proposed vehicle and access against the key principles outlined above to determine suitability. The cost benefit analysis is one consideration and is not required to be performed in detail. Transport operators would have an interest in performing their own cost benefit analysis. Where mandating the IAP is a cost-effective risk mitigation, it should be recommended as a condition of access for the vehicle. If there are other risk mitigations that are effective and lower cost, then the IAP should not be recommended. The NHVR or road authorities should involve experts in the assessment and decision-making process.</td>
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**Principle 1:** Consider the nature of the route and vehicle, including the:

- mass
- dimensions
- configuration/vehicle type
- proposed route or area
- any vulnerable infrastructure on the route or in the area
- any high-risk times of travel
- risk of the vehicle going off-route
- ability to conduct compliance and enforcement (i.e. on road or back of house)
- relevant route assessment guidelines (i.e. the Austroads Guidelines for Assessing Heavy Vehicle Access to Local Roads and the NHVR Performance-Based Standards approval process).
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<td><strong>Principle 3</strong>: consider, qualify and quantify the opportunities and benefits of the IAP scheme to:</td>
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<td>• transport operator, including the upfront cost of technology (if applicable), and operating fees across the fleet</td>
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Final approval