

Improved outcomes through better regulation

Workshop

OECD / ITF study on
Truck Transport Safety, Productivity and Sustainability

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Outline

- HVs regulate extensively
 - Vehicles
 - vehicle operations
 - need for consistency
- Regulatory approaches
 - traditional, prescriptive
 - performance-based
- Road pricing
- Higher Capacity Vehicles around the world
- Conclusion

Context

- Increasing dependence on road freight
- Community concerns over amenity, safety, sustainability
- Infrastructure issues
 - Congestion
 - Provision
 - maintenance
- Concerns over cost recovery
- Concerns over modal split, esp road-rail

Community attitudes

Oversized trucks to enter cities

Cath Hart

GIANT B-triple trucks, more than 30m long, would be able to drive through crowded capital cities on the east coast under a proposal to be considered by the nation's transport ministers today.

The Australian Transport Council is also likely to endorse a fast-track management program for truck drivers after several years of research.

The National Transport Council will recommend the ministerial council will reconvene an "inter-capital" network for the giant freight trucks.

Documents obtained by The Australian show it would be based on the AusLink network, which links ports and rail facilities based on the national highway grid.

B-triple trucks which can replace two conventional articulated trucks have been identified by the ATC as a key to dealing with Australia's growing freight that runs consist of a prime mover and three semi-trailers which can have about 12 axles.

In February, the Council of Australian Governments agreed to identify a national road network capable of handling the heavier B-triples.

"The use of B-triples is important in meeting the demands of an expanding freight task that is estimated to double over the period to 2020, whilst improving safety and community amenity."

"Safety will be improved as fewer vehicles and fewer drivers will move more freight, using proven and safe combinations in appropriate road environments."

Use of B-triples could lead to productivity increases of up to 25 per cent as well as reduced road wear.

"On densely trafficked roads, there will be a need to ensure adequate

overtaking opportunities and on road networks which connect to densely settled urban areas, there will be a need to ensure that parking and break-up bars are available and suitable for these longer vehicle combinations."

National pricing approaches to the B-triple network will be considered by COAG after the release of a Productivity Commission report on infrastructure.

Opposition transport spokesmen would be a "very controversial" issue for a number of cities.

"There's a lot of concern about driving community about large trucks on the roads so there would have to be a large education campaign if they were to approve that," Senator Kerry O'Brien said.

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Road monsters are heading our way

THE AGE, Friday 1 July 1988

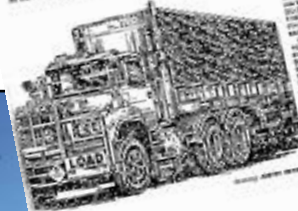
What is almost two times longer than a Ford Falcon, the nation's longest truck is set to enter the roads in a major breakthrough.

The 30m long B-triple truck, which can carry up to 120 tonnes, is set to be used on the east coast of Australia.

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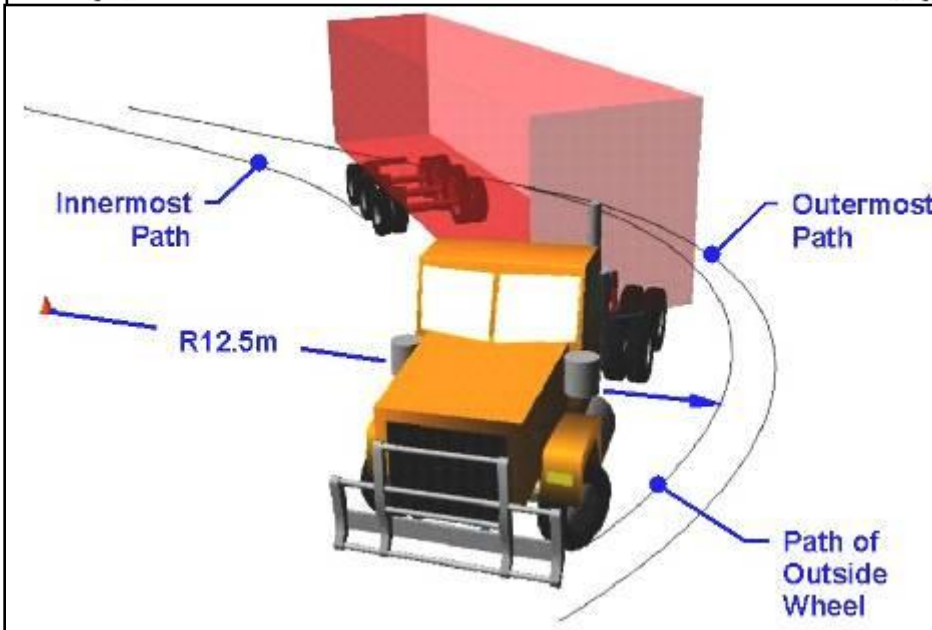
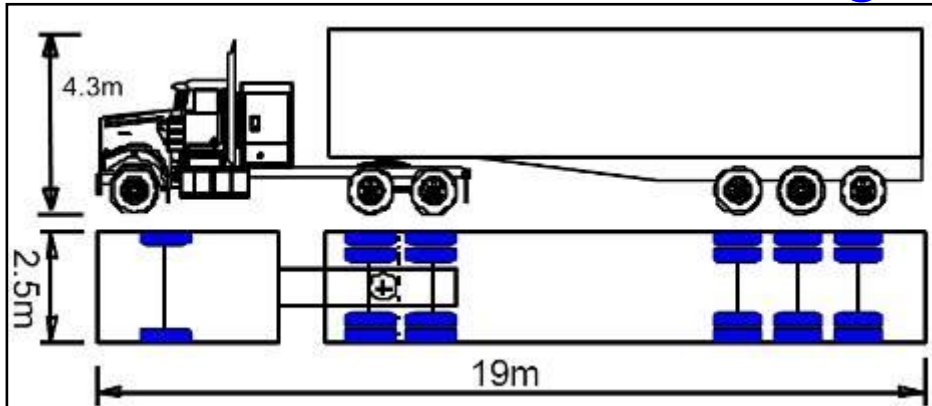
Regulation of trucking

- **Vehicle technical standards**
 - braking, lighting, tyres, suspensions, underrun protection, cabin strength, emission standards
- **Vehicle weights and dimensions**
 - axle mass, gross vehicle mass, all internal and external dimensions
- **Driver requirements**
 - licensing and training
- **Vehicle operations**
 - route/time restrictions, speed limits, access
- **Operator requirements**
 - safety ratings, cabotage, accreditation, training

Performance based

- Weights and dimensions standards generally prescriptive
- Performance standards specify the objective to be achieved (eg, swept path, dynamic stability)
- Performance-based prescriptive regulations: prescriptive standards based on performance analysis
- Allows for innovation in vehicle design and operation
- Allows vehicle characteristics to be linked to operating conditions
 - route
 - bridges
 - speed
 - time of day

Performance-based standards: more flexible vehicle regulation



- WHAT THE VEHICLE LOOKS LIKE



- WHAT THE VEHICLE CAN DO

Network classification

Existing route		PBS road class
General access		Level 1 access*
B-double		Level 2 access
Double road train		Level 3 access
Triple road train		Level 4 access

** L1 roads would become the default classification, subject to existing local constraints on general access heavy vehicles*

Pricing

- Current truck pricing mechanisms very blunt
 - generally fixed charge (registration) plus fuel charge
 - weak links to mass, distance, road type
- Concerns that heavy vehicles do not pay their way
- Improved mechanisms available
 - Gantry based pricing
 - GPS based pricing
 - Measurement of actual mass
- Potential for more accurate pricing for asset consumption
- Potential for linkage of road use and road expenditure

Infrastructure

- Linkage of vehicle types/characteristics/operations with road types
- Differentiation of access based on performance standards, eg
 - swept path linked with road geometry
 - axle mass linked with pavement strength
 - gross vehicle weight linked with bridge capacity
- Differentiation of compliance mechanisms eg
 - accreditation for mass compliance
 - GPS tracking for route compliance
- Differentiation of pricing

Compliance

- Technology making on-road enforcement more effective
 - speed cameras, weigh-in-motion, etc
- New techniques needed for differentiated access
 - accreditation
 - electronic monitoring, incl. GPS
- Third party compliance assurance
- More emphasis on systematic/management approaches
 - safety ratings
 - accreditation – external auditors
- Use of IT to target high-risk drivers and operators
 - SafeStat
 - CVISN
- Flexible sanctions and penalties
 - improvement notices
 - supervisory intervention orders
- Chain of Responsibility
 - legal liability of all responsible parties
 - consignors, freight forwarders, receivers, etc.

Federal systems

- United States, European Union, Canada, Australia
- Power split
 - between levels of government
 - Federal vs State/Province/Country
 - between governments
 - States, Provinces
- Harmonisation

European Union

- Access for prescriptive vehicles in international trade
- Tractor-semitrailers: 40t/16.5m
- Truck-trailers: 40t/18.75m
- Variations for local access
- Limited access for longer/heavier vehicles @ 25.25m and up to 60t


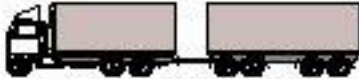



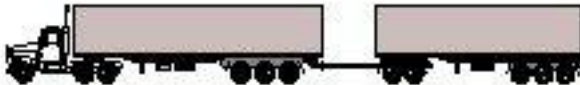

Canada

- Prescriptive regulation based on performance standards
- National operation, on designated routes
 - Tractor-Semitrailers @ 23m/46.5t
 - A Train Doubles @ 25m/53.5t
 - B Train Doubles @ 25m/62.5t
 - C Train Doubles @ 25m/58.5t
 - Higher weights in some provinces
- Extensive operation, in some provinces, of LCVs
 - Rocky Mountain Doubles
 - Turnpike Doubles
 - Triples
 - length up to 40m; gross mass up to 62.5t

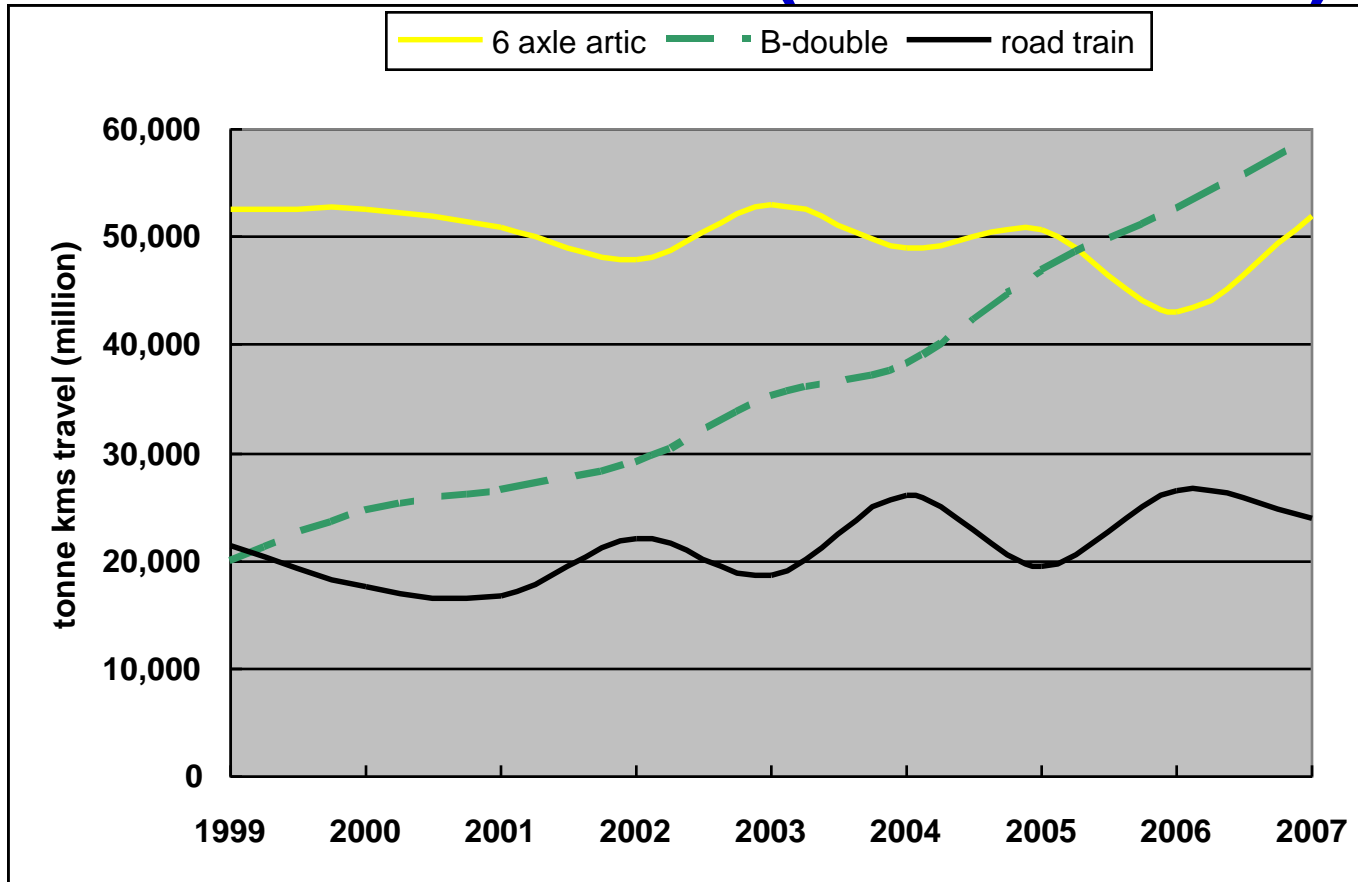
Australia

- General access for prescriptive vehicles up to 46.5 t/19m
- Widespread access for B-doubles @ 68.5t/26m
- Road trains in remote areas: up to 53.5m/124.5t
- Developing PBS framework to replace permit regime

Australian trucks

Vehicle Type	Maximum Length (m)	Maximum Gross Mass (t)	
		General Mass limits	Higher Mass Limits*
3-axle rigid truck 	12.5	22.5	23.0
Truck and dog 	19.0	50 (with jurisdictional variation)	
6-axle semi-trailer 	19.0	42.5	45.5
9-axle B-Double 	26.0	62.5	68.0
12-axle B-Triple 	36.5	82.5	90.5
Double road train 	36.5	79.0	85.0
Triple road train 	53.5	115.5	124.5

Growth in freight carried by B-doubles Australia (1999 to 2007)



United States

- Little change since 1980s
- Workhorse vehicle @ 36.3t (80,000lbs)
- Increasing use of Turnpike Doubles and Rocky Mountains Doubles
 - limited access to National Network
- Best vehicles cannot use best roads

United States – TRB view

Present federal standards are for the most part the outcome of a series of historical accidents instead of a clear definition of objectives and analysis of alternatives. The regulations are poorly suited to the demands of international commerce; their effectiveness is being eroded by ever-expanding numbers and types of special exemptions, generally granted without evaluation of the consequences; and freight traffic is bypassing Interstate highways, the safest and most efficient roads, to use secondary roads where limits are less restrictive, but the costs generated by that traffic are higher. The greatest deficiency of the present environment may be that it discourages private- and public-sector innovation aimed at improving highway efficiency and reducing the costs of truck traffic because vehicle regulations are inflexible and because highway users are not accountable for all the costs they generate.

Higher capacity vehicles: analysis and experience - benefits

- Productivity
- Safety
 - dependent on vehicle use and characteristics
 - reduction in vehicle numbers
- Environmental
 - per vehicle emissions, fuel use higher
 - per tonne/km emissions, fuel use lower
- Compliance
 - operator processes
 - conditions of use

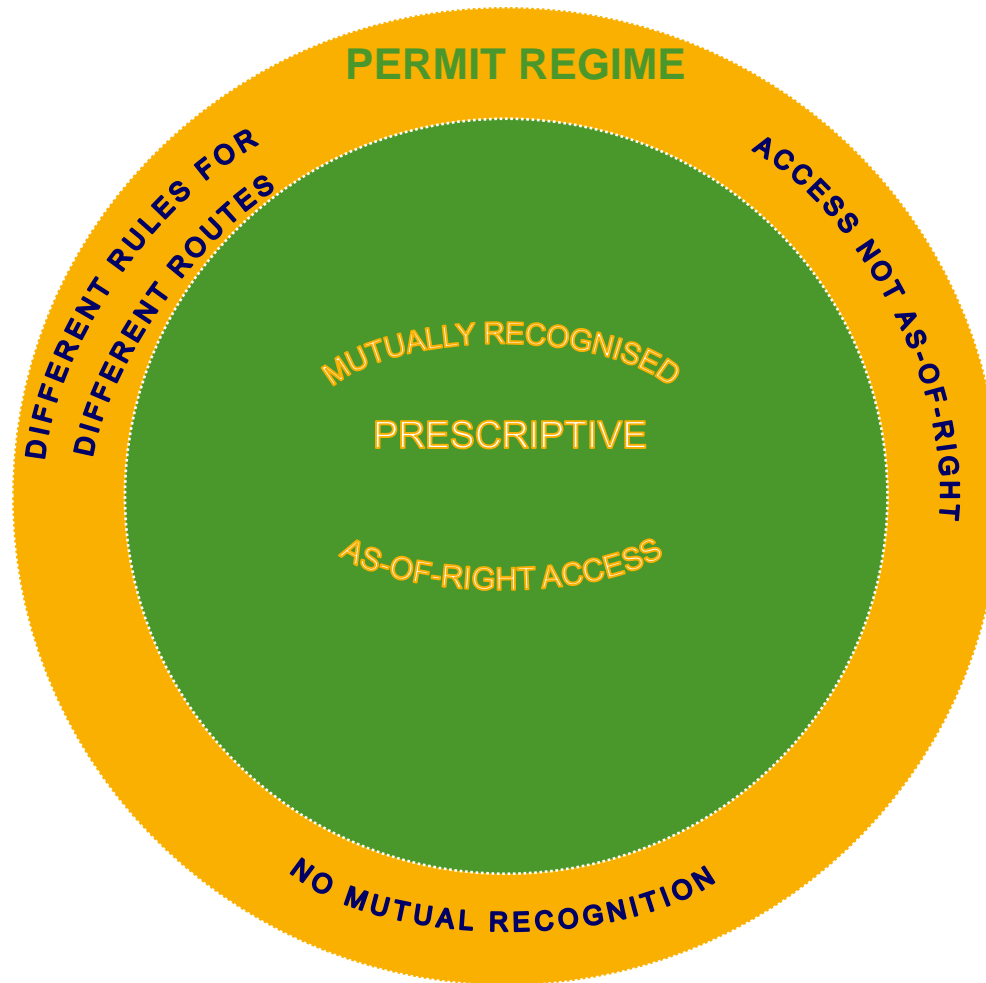
Higher capacity vehicles: analysis and experience - concerns

- Modal impacts, esp rail
- Infrastructure impacts
- Safety
- Amenity

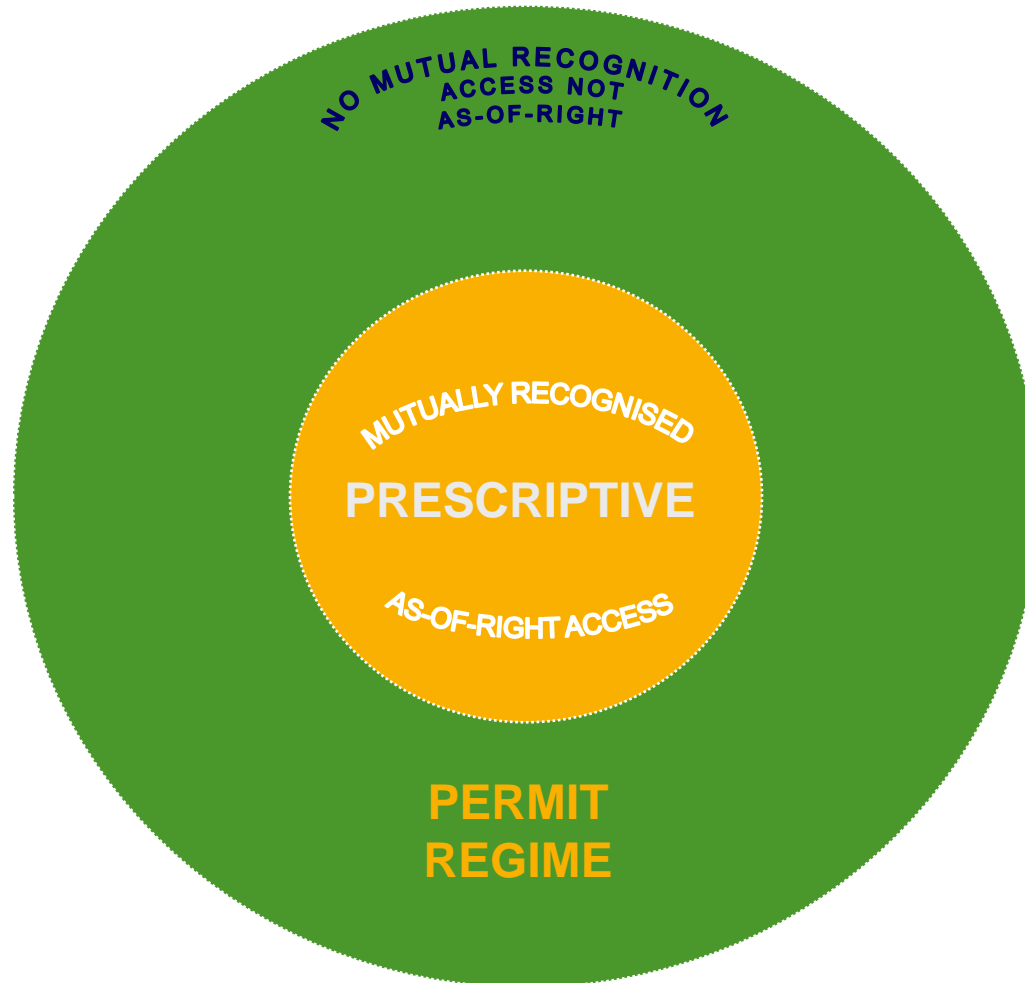
Current regulatory regimes for trucking

- Inflexible
- Prescriptive
 - not closely linked to performance objectives
- Inconsistent
- Not linked to infrastructure characteristics or provision
- Not achieving public confidence

Regulatory framework for trucking: today



Regulatory framework for trucking: the future



Reform drivers

- Need for continuing productivity improvements to meet the freight task
- Need to meet community requirements for safety, sustainability and amenity
- Need to ensure that road transport 'pays its way'
- Need to shift regulation outside the prescriptive envelope

The vision – an integrated approach to trucking regulation

- Standards linked to infrastructure capability
 - based on performance objectives
- Improved safety
- Differentiation of system access
 - vehicle type
 - vehicle behaviour
 - time of day
 - etc
- Pricing related to asset use
- Effective compliance
 - enforcement technology
 - systematic approaches: safety ratings / accreditation
 - third party compliance assurance
 - chain of responsibility

The result: balancing transport needs with community aspirations

Recommendation

The key to effective utilization of trucks is to demonstrate to the community and their political leaders that these vehicles comply with route restrictions, deliver high safety and environmental outcomes and recover all costs associated with their use of the network.

The tools to deliver these requirements are available. The challenge for regulatory agencies is to implement an integrated and effective approach to the regulation of trucking.

Thank you