



## Smart Transport

**We have an opportunity to transform Australia's transport systems to: cut traffic congestion; empower commuters; and make our roads safer.**

### Why?

Our current transport infrastructure and management approaches can't handle Australia's traffic. As the most urbanised nation on the planet, Australia's cities are already battling traffic congestion, with growing populations and the proliferation of cars making the situation worse. Congestion is a source of costly delays and frustration, pollution and wasted fuel – not to mention crashes.

Beyond our cities, poor transport infrastructure is holding back our economy, with ships waiting to unload in our ports and half-empty containers travelling across the country.

To date, our governments have been largely focused on short-term fixes to eliminate these problems: building a new motorway, widening a road, putting up signs and establishing commuter lanes. While providing temporary relief, these short-term solutions only add to the long-term problems by increasing the number of vehicles on the road and exacerbating the related environmental, cost and safety concerns.

The solution lies not just in more concrete and signs, but in smarter transport systems and better informed commuters so they can travel faster and safer – and with greater energy efficiency than ever.

- Congestion will cost Australia \$20 billion in 2010
- The length of congested road is forecast to treble in the next 20 years
- 700,000 empty containers clutter our ports each year
- A ship waiting to be unloaded costs \$50,000 a day

### What?

We can infuse intelligence into our entire transportation system – streets, bridges, intersections, ports, rail, signs, signals and tolls – which can all be interconnected and made smarter.

#### **With smart transport we can achieve:**

- Improved productivity
- Fewer accidents
- Reduced greenhouse emissions

## How?

### Cut traffic congestion...

with intelligent transport solutions that monitor, manage and predict traffic, working the whole system to prevent gridlock

Short-term solutions to eliminating congestion often merely shift the problem: from freeways to city streets; from city centres to suburbs.

We simply don't have room to build more roads, but we do have room to build intelligence into them.

**SMART IS** using cameras, fibre optics and analytics to gather, analyse and share information across our transportation systems.

**SMART IS** Making real time adjustments to traffic lights to ease congestion.

**SMART IS** Electronic tolls with flexible tolling options.

**SMART IS** Predicting what will happen to traffic congestion during new construction and better planning roads and public transport in that area.

**SMART IS** Integrating ports with our smart road infrastructure and phasing out manual processes for shipping documentation.

#### **Reducing congestion**

In London, a smart congestion management system has lowered traffic volume to mid-1980s levels.

#### **Predicting traffic flow**

In Singapore, a system can predict traffic speeds with nearly 90% accuracy. With future enhancements, the system will help predict—rather than merely monitor—other traffic conditions, as well.

## **Empower consumers...**

by giving them real time information on traffic problems, suggesting alternative routes and offering better public transport options

Private vehicles form 90% of Australia's traffic. But traffic congestion and poor public transport leaves Australia's commuters stressed and angry. They come to work less productive because of their challenging journey to work.

Research shows most commuters would be happy to switch from cars to public transport – if the system actually worked.

**SMART IS** Using new sensor technologies, GPS and satellites to tell motorists about the best routes and parking during rush hours.

**SMART IS** Helping commuters make more informed choices about public transport, telecommuting or driving in non-peak periods.

**SMART IS** An integrated public transport system that tracks and adjusts services to meet changing commuter needs.

**SMART IS** Fleets of smaller buses that change route on the fly and go where they're needed most.

### **Changing commuter habits**

In London, investing revenues raised by the Road-User Charge solution into other public transportation improvements increased inbound bus passenger numbers by 37% in the first year.

### **Integrating public transport**

In Shanghai, Singapore, Hong Kong and, most recently, Dublin, people can now use the same smart cards on buses, trains and ferries. Some of these cards will even work for taxis and parking lots.

### **Keeping traffic moving**

In Brisbane, the Queensland government has implemented a smart tolling project, using cashless billing options and license plate recognition technology. The project will give Queensland's motorists substantial benefits in time savings, reliability and improved safety.

## **Make our roads safer...**

by reducing rush hour traffic and using intelligent vehicles that improve safety and reduce greenhouse emissions

Smarter transport systems will address climate change and air quality concerns by reducing the wasted fuel and emissions from congestion.

Businesses can play their part by reducing rush hour traffic by allowing employees greater workday flexibility and work-at-home options. They can also help with and benefit from intelligent fleet management, including: better route planning; off-peak freight movement; and alternative fuel and hybrid vehicles.

In addition, Smart cars will help keep traffic moving, cut green house emissions and reduce accidents. Intelligent cars will be able to sense other vehicles and road conditions ahead, allowing them to take preventive actions under dangerous conditions. They will also tell you where traffic is jammed up and find you an alternative route.

**SMART IS** Active safety capabilities that sense and respond to driver behaviour and road conditions.

**SMART IS** Sending information captured from breaking patterns – for example, from vehicles approaching a recent accident – to other vehicles.

**SMART IS** Introducing common standards so all vehicles can communicate with each other and integrate with road sensors.

**SMART IS** Hybrids and battery technology leading to sustainable vehicles.

### **Lowering carbon emissions**

In Stockholm, a new smart toll system has reduced carbon emissions by 12%.

## **When?**

NOW! There's no better time to start building a smarter transport system – to keep Australia's economy moving.

**Let's work together to drive real progress in Australia.**