

5.0 TRANSPORT AND COMMUNICATION

Australia has a well-developed civil and social infrastructure, advanced communications networks, a sturdy financial backbone, and road, sea, rail and air connections commensurate with its demographic pattern.

In recent years, as Australia became wealthier and more engaged in international trade, there have been improvements in roads, airports and runways, with greater integration between airports and railways. Road congestion in urban areas continues to be a problem, however, and major investment in public transport is needed. There have been calls for national coordination on transport strategy to maintain the efficiency of the freight distribution system between port, rail and road modalities.

Australia maintains one of the most extensive road networks in the world, on a per capita basis. Forty percent of the total road network of 490,000 miles is paved with either bitumen or concrete. **Sixty-five percent of the total domestic freight tonnage is transported over the road system**, with interstate haulage accounting for a significant proportion of road freight. Average expenditure on Australian road building and maintenance is between \$4 and \$4.5 billion.

The rail industry transports more than one-third of the domestic freight carried by sea, road and rail. Bulk commodities (iron ore, coal and wheat) constitute a large share of the total freight, amounting to twenty percent of Australia's exports. **Recent developments in rail transport include light rail city projects and dedicated city-airport links.**

The majority of freight volume that passes through Australia's ports is comprised of bulk cargo. However, in terms of value, general merchandise trade surpasses bulk, ninety-three percent of which is shipped in containers. Container trade through Australia ports approximates 40 million tons per year.

The telecommunications sector is the star in Australia's infrastructure. **Over half of the Australian population owns a cellular phone, and Australia is second in the world in preparedness for developments in e-commerce. More than fifty percent of the Australian population is connected to the Internet.** Studies have indicated that the uptake of e-commerce will boost the national economy, with developments in media, entertainment, banking and finance leading the way for

expansion. Australia has an extensive fiber optic network for telecommunications, and is investing heavily in broadband technology for business and household purposes.

Air Transport

Air transport is used extensively within Australia, which, including its territories, has around 280 licensed airports. **The nine major international gateways include Sydney, Melbourne, Brisbane, Perth and Cairns.** Almost all airports are now owned and operated by local and state governments, private consortia, and the Department of Defense. **International passenger and cargo flights are frequent and reliable.**

Air is used extensively for lighter cargo, small high-value items, and for urgent needs. Domestic airlines carry about 200,000 tons of cargo per year. An extensive network of air cargo operators, including major international companies, offers a full range of cargo services, processing of documentation relating to importation and clearance of goods, and follow-on delivery to regional centers.

Australia is serviced by most of the world's major air carriers, feeding into a domestic network covering the trunk commuter routes. Regional airline services links regional centers with the capital cities. **Australia's airports have been privatized, and operate on a commercial, profit-oriented basis, competing for passenger and freight revenue.** Australia's major airport, Sydney's Kingsford Smith, was sold by the Federal Government to a group led by Macquarie Bank in a deal announced in June 2002.

The aviation industry is unregulated, and is dominated by long-time carrier Qantas, with Ansett's departure on September 14, 2001. Virgin Blue is operating on a limited service basis on some major air routes and making plans to fill the gap left in the market by the demise of Ansett.

Australia is a member of the International Civil Aviation Organization and is represented on the Air Navigation Commission. It has full treaty, air service agreements with forty countries. Within Australia, Airservices Australia manages air traffic control over Australia's eleven percent of the earth's surface, and the Civil Aviation Safety Authority is responsible for ensuring aviation safety.

International Air Travel Times

Los Angeles to Sydney - 14 hrs

New York to Sydney (via Los Angeles and San Francisco)- 21 hrs

(via Japan) 25 hrs

Honolulu to Sydney - 9 hrs

Tokyo to Sydney - 9 hrs

Hong Kong to Sydney - 9 hrs

Singapore to Sydney - 8 hrs

Singapore to Melbourne – 6 ½ hrs }

(Colombo to Singapore – 3 ½ hrs) □

Air Travel Times within Australia

Sydney to Melbourne - 1 hr

Sydney to Brisbane - 1 hr

Sydney to Perth - 4 hrs

Sydney to Canberra - 35 mins

Melbourne to Brisbane - 2 hrs

Melbourne to Perth - 4 hrs

Brisbane to Perth - 6 hrs

Road/Rail Transport

With its huge land mass, small population and limited tax base, the extensiveness of Australia's modern national, state and local road system is quite remarkable. Road funding continues to feature prominently in both State and Federal Government budgets with the voting public demanding high quality roads, particularly in the Outback. **Australia's road transport industry is relatively efficient and approaches world best practice. The majority of inter-state goods transport is done via the road system.**

A 24,000-mile network of railroads competes with road transport. **Rail transport is the preferred mode to Perth in Western Australia for the transportation of freight from Eastern ports, and for the bulk transport of Australia's mineral exports.** Traditionally, rail transport has lagged behind international best practice.

In the last century, before Federation of the States into the Commonwealth, each state government established its own different gauge railway to encourage its own industries, with cargo having to be transferred at state boundaries.

The completion of the first standard gauge rail line from Brisbane to Perth (via Sydney, Melbourne and Adelaide) in June 1995, heralded a new era in rail freight transport and the prospect of an efficient, truly national rail transportation system. The ability to track a coal train from Queensland to South Australia was a symbolic step in Australia's reform agenda.

The mid 1990s also saw every rail administration in Australia substantially restructured with most becoming corporatized entities. In August 1997, the Federal Government sold Australian National Railways (ANR), which operated various freight and passenger operations. In January 1999, the Victorian State Government privatized its freight business, V/Line Freight and franchised its passenger rail and suburban tram networks. This was followed by the sale of West rail, the Western Australian Government's freight business in October 2000. The National Rail Corporation (NRC) owned by the Federal Government and the State Governments of New South Wales and Victoria together with the New South Wales Government's freight rail business, Freight Corp, were sold to an Australian consortium in 2002.

Queensland's passenger and freight business, QR, remains a vertically integrated and profitable Government-owned operation. The Northern Territory has no rail system, although a major project is underway to install track, linking Darwin to Alice Springs, to be completed in 2004. Both South Australia and Tasmania's network was part of the ANR sell-off.

Sea Transport

Australia is a trade-dependent country, with the fifth largest shipping task (workload) in the world. Australia trades with around 200 countries, moving

approximately 550 million tons of cargo per year. In value terms, seventy percent of its imports arrive by sea and eighty-three percent of its exports leave by waterborne transport. **Australia is serviced by major shipping lines that transport goods worldwide to and from the major ports of Melbourne, Sydney, Brisbane, Adelaide and Fremantle. Ninety-five percent of the trade volume is carried by non-Australian flagged vessels.**

Australia has modern deep-water ports. New South Wales and Queensland account for 58 percent of all ships registered in Australia (8,246 total), the majority of which are used for non-commercial purposes. The major Australian trading fleet is comprised of 62 ships of 2,000 tons or more. Two-thirds of these operate on coastal routes, moving around 60 million tons of cargo annually. Interstate trade accounts for nearly two-thirds of coastal freight, although in recent years, this proportion has shown a steady decline. The majority of cargo shipped between Australian ports is comprised of bulk commodities.

The government business enterprise responsible for maritime safety in Australian waters including regulatory issues, the navigational aids network, maritime search and rescue, pollution prevention and clean up, and registration is the Australian Maritime Safety Authority (AMSA). AMSA is funded mostly by levies on the shipping industry.

Rental Cars and Local Transportation

As in Britain and most of Asia, Australians drive on the left side of the road. Major Australian car rental agencies operate throughout the country. Reservations can be made through airports, hotels, travel agents or directly, using a credit card or international driver's license.

Public transportation is well developed throughout urban areas. Comfortable and convenient bus, rail, and air services are available between cities and country towns.

5.1 Sea freight / air freight charges between Sri Lanka and the main ports of the target markets

Freight Rates Levied by Shipping Lines for exports in June and July 2002 to Australia.

Line	Commodity	Destination	Rate (US\$)	All in Rates
	<u>Tea</u>			
OOCL	Black Tea in cartons Tea in cases	Melbourne -do-		600/20' 1200/40'
ANL	Black Tea in cartons Tea in Cases -do-	Brisbane Fremantle Melbourne	515/20'+THC+BAF 846/40'+THC+BAF 846/40'+THC+BAF	740/20' 1250/40' 1250/40'
PIL	Tea in cases	Melbourne		1200/40'
Hapag-Lloyd	Tea in cartons -do-	Sydney Melbourne	280/20'+THC+BAF+BCH 250/20'+THC+BAF+BCH	500/20' 470/20'
P&O Nedlloyd	Tea in Paper Sacks Tea in Pallets -do-	Melbourne Brisbane Brisbane	500/20'+THC+BCH 626/40'+THC+BAF 330/20'+THC+BAF	635/20' 980/40' 530/20'
	<u>Non Traditional Items</u>			
OOCL	Solid Rubber Tyres -do- -do- Tyres & Tubes Cocopeat Coconut Husk Chips Coir Yarn Coir Bricks Steel Panel enclosures	Adelaide Brisbane -do- Sydney Brisbane Sydney Burnie Sydney -do-		1200/40' 600/20' 1200/40' 1200/40' 600/20' 1100/40' HC 800/20' 600/20' 600/20'
ANL	Solid Rubber Tyres	Melbourne	375/20'+THC+BAF	600/20'
MISC	Wall Tiles -do- -do- Coconut Shell Floor Tyres & Tubes	Melbourne Sydney Brisbane Melbourne Sydney	275/20'+THC+BAF 275/20'+THC+BAF 300/20'+THC+BAF 410/20'+THC 916/40'+THC	500/20' 500/20' 525/20' 525/20' 1100/20'
PIL	Solid Rubber Tyres -do- Floor Tiles	Brisbane Perth Melbourne		215/20' 750/20' 550/20'
RCL	Floor Tiles -do- -do- Wall Tiles Coir Mattress Fibre	Sydney Brisbane Fremantle Melbourne -do-	414/20'+THC 439/20'+THC 424/20'+THC 414/20'+THC 410/20'+THC	500/20' 525/20' 510/20' 500/20' 496/20'
Hapag-Lloyd	Floor Tiles -do- Activated Carbon -do- Timber	Brisbane Melbourne Fremantle Brisbane Melbourne	250/20'+THC+BAF+BCH 250/20'+THC+BAF+BCH 250/20'+THC+BAF+BCH 280/20'+THC+BAF+BCH 280/20'+THC+BAF+BCH	470/20' 470/20' 470/20' 500/20' 500/20'

Source: Freight Bulletin - Central Freight Bureau of Sri Lanka.

5.2 Warehouse Packaging

One of the most common complaints about overseas suppliers from Australian importers is the lack of attention given to the inner packs in the shipment (these are known as the “order multiple packs”)

The export cartons from overseas suppliers are usually acceptable but the order multiple packs are often not according to specifications.

Australia is a large country and a shipment imported in to Sydney may be broken down in to smaller lots and sent several thousand kilometers to a small retail outlet. The order multiple packs should therefore be strong enough to survive this treatment and they should also be exactly as the importer requests- that is, if the order multiple pack is supposed to contain one dozen red, one dozen blue and one dozen green items this is what must be inside. The cost of repackaging/sorting multiple order packs can be very high and problems in this area will discourage the importer from dealing with a particular overseas supplier.

5.3 TELECOMMUNICATIONS

Australia's telecommunications infrastructure is sophisticated and modern with a fully digitalized network. The main telephone lines are mostly land-based and penetrate about 97 percent of all households. In a population of 19 million, there are over 10 million mobile phone subscribers.

Australia's telecommunications industry was fully deregulated on July 1, 1997. In 2002, the 100th carrier registered with the Australian Communications Authority, compared to two carriers prior to deregulation. Most of the new carriers lease network capacity from Telstra, although a number have developed their own switching and network capability, particularly on the eastern seaboard and for overseas call markets.

Telstra, the former monopoly carrier, is the dominant provider of Australia's land-based telephony service. This network has nearly 10 million land-based connections and an annual growth rate of five percent.

Mobile phone services are well established in Australia, which has one of the highest user rates in the world. The current number of mobile phone subscribers surpasses 10 million and are serviced by the two major technologies; **GSM and Code Division Multiple Access (CDMA)**. Telstra, Optus and Vodafone each operate separate GSM mobile networks.

Hutchison Telecommunications (Orange) has announced the development of a 3G network across Australia, covering the greater metropolitan areas of Sydney, Brisbane, Adelaide, Perth and Melbourne. Services should be available on this network from early 2003.

There has been a massive development of telecommunications networks in Australia during the last 3-5 years. Infrastructure has been established for digital mobile technology and the digitalization of land-based networks. Hundreds of kilometers of fiber have been laid, crisscrossing the continent.

Carriers are required under the Telecommunications Act of 1997 to submit and follow Industry Development Plans, listing companies they have negotiated with for the supply of infrastructure and equipment.

Internet Access

Australia has one of the most mature Information Technology (IT) markets in the Asia-Pacific region. In comparison to other countries on such indicators such as Internet access, B2B uptake, telecommunications infrastructure, etc., **Australia ranks third in the world just behind the U.S.**

According to the Australian Bureau of Statistics (ABS), as of September 2001, there were 3.7 million household Internet subscribers and 544,000 government and business subscribers.

Household Use of the Internet

According to the National Office of the Information Economy (NOIE), **52 percent of Australian households are online.** Forty-nine percent of households access the Internet through PCs, while the remainder access the Net through other devices such as hand-held devices and mobile phones. The most recent Census survey (June 2002) confirmed this data and showed that more than a third of the population had used the Internet.

Business Uptake of the Internet

Four out of every five businesses use computers. Just under three in every five businesses access the Internet while about one in every six businesses have Web sites.

Internet Speeds for Small Business

Sixty-three percent of small business access the Internet through a dial-up connection (56 K is the most prevalent speed). Nineteen percent have net access by permanent dial-up, while five percent have cable access, and nine percent access the Net with ADSL broadband. Over the next year or so, it is expected that there will be a strong shift by Australian businesses to DSL-type connection.

Price of Internet Use

According to NOIE analysis, on the basis of prices per 40 hours of Internet use at peak times, Australia ranked third behind the U.S. and New Zealand as of September 2000. Forty hours of Internet use at peak times in Australia costs US\$42.90 compared to US\$38.40 in New Zealand and US\$23.50 in the United States.

E-Commerce

E-Commerce has had a strong impact on the Australian business environment, as it has in other parts of the world. Although the sector has lost some of its gloss over the past year, following a stock market downturn and the collapse of some high-profile Australian companies, there is no doubt that e-commerce will continue to transform the way companies do business here.

Australian businesses are also well connected to the Internet, at rates comparable to Scandinavian countries. **The overall percentage of businesses connected to the Internet is 69 percent. However, the uptake of Internet depends on the size of the business: almost 100 percent of large businesses are connected to the Internet, compared to only 64 percent of very small businesses** (those employing less than 5 people).

The market is being driven by private sector marketing and consumer preferences, along with Government initiatives to encourage businesses Internet use. The Australian Government, through the National Office of the Information Economy (NOIE), has been actively promoting the development of Australia as an "information economy".

The exact impact of e-commerce in Australia is difficult to measure. The report predicted e-commerce would increase national output by 2.7 percent by 2007, and would raise consumption by about US\$6.3 billion within the next decade.

Initial estimates of the uptake of e-commerce appear now to be overly optimistic. Companies and consumers are integrating e-commerce principles into their normal activities, albeit at a slower rate than expected. Recent NOIE figures indicate that B2B commerce equates to just over one percent of GDP. Nonetheless, business-to-business (B2B) e-commerce continues to expand, with many industries refining supply chains and integrating systems with suppliers to improve efficiencies in operations. In addition, many companies are incorporating e-business into their internal operations, such as human resource management and knowledge management.

Australian consumers are increasingly moving online to make purchases of a range of products. The most popular items for online shopping continue to be books and magazines, music, software, entertainment/tickets, and vacations. Fifteen percent of Australians with Internet access ordered goods or services over the Internet in the six months ending September 2001, or a 50 percent increase on figures for the previous year.

Stock brokerage and other financial services and information is now well entrenched on the Internet. Local on-line retailers are increasing in number: this includes both "virtual" retailers as well as existing "bricks and mortar" retailers that

are developing an on-line presence. E-commerce has also exposed Australians to retailers that have not previously supplied the Australian market, and many Australians purchase from overseas websites.

Research undertaken by the Economist Intelligence Unit has found that, out of 60 countries, **Australia is ranked second behind the USA in terms of providing a conducive environment for the development of e-business opportunities.**