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"While very IT literate and innovative, New Zealand's IT industry has yet to attract outside investment due to its small domestic market."

—*New Zealand IT executive*

"New Zealand business and government don't really support local IT businesses. There appears to be a predominate attitude that 'foreign' is 'better'."

—*IT executive, New Zealand*

New Zealand's overall Networked Readiness ranking of eleven is particularly reflective of the country's relative strength in Network Use (in which it ranks ninth overall) vis-à-vis its network Enabling Factors (in which the nation ranks twenty-first). Government ICT initiatives, the entrepreneurial nature of New Zealanders, profitable business opportunities for businesses, and a slowly liberalizing telecommunications industry have produced a varied and often inconsistent Networked Readiness landscape in New Zealand.

New Zealand was the first OECD country to legally introduce full competition to all sections of its telecommunications industry. Since 1989, no licenses have been required for market entry, and there has been no independent regulator. Due to the small size of the market and the lack of regulation, Telecom NZ, the privatized version of the state telecommunications business, had, until 1999, retained a monopolistic hold on its fixed network, especially in the local loop (Ranking in Effect of Telecommunications Competition: 25). Perceived inconsistencies in the incentive scheme and slow progress in Telecom NZ's network development led to an official inquiry by the government in 2000, which recommended establishment of an independent telecommunications authority.

A small but vibrant software industry has emerged in New Zealand, and has become competitive both locally and in exports to foreign markets such as Australia, Southeast Asia, and the U.S. Export sales in 2000 reached US\$160 million, small by global standards, but a promising sign of the industry's potential.<sup>1</sup> The software industry is primarily homegrown (Ranking in Software Products Fitting Local Needs: 14), and is a product of New Zealand's culture of self-reliance, entrepreneurship, and high-quality education. Few major ICT multinationals have export facilities in New Zealand, and a small venture capital community has emerged to fund high-

potential businesses. Local entrepreneurs have used the country's geography to create a competitive advantage in security software, because the local time zone allows them to detect and address problems first in the global business day.<sup>2</sup>

Overall, however, non-ICT companies have been slower to adopt the Internet for business practices. At mid-year 2000, it was reported that just one-third of New Zealand businesses had a domain name, and only one-tenth have linked e-commerce to existing business systems<sup>3</sup> (Ranking in e-Commerce micro-index: 27). Though B2B e-commerce marketplaces were established rapidly in 2000, primarily in the dominant agriculture and construction industries, companies are only beginning to equip their systems to use these marketplaces effectively.<sup>4</sup> It is hoped by those in the industry that uptake of ICT and e-commerce will receive a boost from the Electronic Transactions Bill currently under debate.

Until 2001, New Zealand's university system encouraged broad and diverse undergraduate education, with little opportunity for the kind of specialization characteristic of many other countries' university ICT programs (Ranking in Quality of IT Education: 25). The university system is undergoing reforms, led by the IT Ministry and the Ministry of Education, meant to improve the offering of software- and engineering-related degrees. Additionally, high costs of tertiary education have contributed to a brain drain. Many ICT graduates are attracted to higher-paying markets in other countries to repay their educational debts.

## Key Facts

|   |            |
|---|------------|
| Population  | 3,830,800  |
| Rural population (% of total population) 1999                       | 24.86 %    |
| GDP per capita (PPP)  | US\$20,010 |
| Global Competitiveness Index Ranking, 2001–2002                     | 10         |
| UNDP Human Development Index Ranking, 2001 (adjusted to GTR sample) | 18         |
| Main telephone lines per 100 inhabitants                            | 49.98      |
| Telephone faults per 100 main telephone lines                       | 14.00      |
| Internet hosts per 10,000 inhabitants                               | 900.87     |
| Personal computers per 100 inhabitants                              | 36.02      |
| Piracy rate   | 28.00 %    |
| Percent of PCs connected to Internet                                | 25.01 %    |
| Internet users per host   | 4.32       |
| Internet users per 100 inhabitants                                  | 38.90      |
| Cell phone subscribers per 100 inhabitants                          | 56.33      |
| Average monthly cost for 20 hours of Internet access                | US\$10.94  |

**RANK**

## Networked Readiness Index **11**

### Network Use component index **9**

### Enabling Factors component index **21**

#### ■ Network Access **17**

Information Infrastructure 19

Hardware, Software, and Support 14

#### ■ Network Policy **17**

Business and Economic Environment 19

ICT Policy 14

#### ■ Networked Society **26**

Networked Learning 20

ICT Opportunities 47

Social Capital 12

#### ■ Networked Economy **23**

e-Commerce 27

e-Government 20

General Infrastructure 22