

# Connectivity Scorecard 2011

## New Zealand



**New Zealand**  
**5.84**

	Score	Weight
<b>Consumer Infrastructure</b>	0.64 (0.95)*	0.13
<b>Consumer Usage and Skills</b>	0.68 (0.79)*	0.13
<b>Business Infrastructure</b>	0.63 (0.86)*	0.45
<b>Business Usage and Skills</b>	0.57 (0.83)*	0.19
<b>Public sector Infrastructure</b>	0.25 (0.79)*	0.06
<b>Public sector Usage and Skills</b>	0.49 (0.79)*	0.03

\*The score of the leading performer for this component

Table 1: Component Scores & Weights 2011

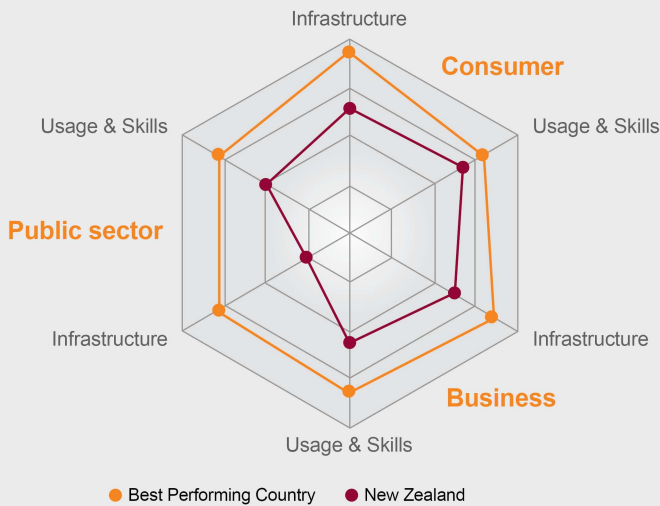


Fig 1: Component Scores 2011

### Overview

New Zealand scores 5.84 and ranks 17<sup>th</sup> amongst the Innovation-driven<sup>1</sup> economies in the Connectivity Scorecard 2011 index, down one place from last year's 16<sup>th</sup> place ranking.

However, New Zealand is still part of the “mainstream” group of innovation-driven economies, in the sense that its actual performance is respectable and relatively close to that of many other advanced economies. This distinguishes New Zealand from the group of countries that are clearly trailing in the Connectivity Scorecard—these countries are in Southern and Eastern Europe.

Further, New Zealand's per capita GDP is comparable to that of Southern European nations, thus its higher Connectivity score should be seen as something of a positive sign. Indeed, New Zealand mostly achieves respectable scores on most consumer and business components of the Scorecard, while on the “public” sector components of the Scorecard it suffers for reasons that are common to a large group of countries this year, explained in more detail later.

### Strengths

New Zealand performs well in terms of fixed and mobile broadband coverage, as in fact do most other Innovation economies. A particular strength of New Zealand - one that it does not share with the larger sample - is that 3G adoption is rather high relative to other innovation economies, although not as high as in Japan and Korea. New Zealand shares this relatively high 3G adoption rate with Australia. Fixed broadband penetration is in line with the levels achieved in a large number of OECD economies. On the consumer usage component of the Scorecard, New Zealand is a strong performer as it was

<sup>1</sup> As defined by The World Economic Forum [www.weforum.org](http://www.weforum.org)

last year. Internet use, frequency of Internet use, and the use of Internet-based services such as banking and retail, are all above-average compared to other Innovation-driven economies. Fixed voice usage is also very high in New Zealand. On the business-related indicators, New Zealand is a respectable or strong performer in terms of secure Internet server penetration, the proportion of businesses that use broadband and the adoption of and availability of mobile data services for business use. On the business usage and skills component is not outstandingly strong on any of the indicators in this component, however New Zealand performs respectably in terms of the proportion of employment in Science and Engineering occupations and the proportion of businesses that use websites. On the public sector components of the Scorecard, New Zealand gets relatively good marks for the availability and utilisation of e-government services.

### Weaknesses

On the consumer components of the Scorecard, the clear “weakness” that New Zealand has is in broadband speeds, which are well below those found in East Asia. They are also significantly below the levels recorded in many parts of Western Europe and North America. On the business front, there are also several areas such as the level of spending on ICT services by businesses, ICT investment per capita, and the production rate of doctorates in science and engineering, where New Zealand has some ground to make up. Indeed, New Zealand significantly lags Australia in ICT investment and spending levels. This may be a reflection of the fact that many Australian-based businesses operate in the New Zealand market, and these businesses tend to make their largest ICT investment at their Australian bases rather than in their New Zealand operations<sup>2</sup>. On the public sector components of the Scorecard, in common with many other countries, New Zealand’s estimated spending levels on ICT in the government, educational and healthcare arenas seem to be well below the levels of a few leading countries such as Scandinavia, and the United States, as derived from WITSA’s Digital Planet data.

<sup>2</sup> The authors are indebted to Professor Bronwyn Howell for suggesting this possibility as an explanation of the substantial gap in the Connectivity Scorecard results recorded by Australia and New Zealand, respectively.

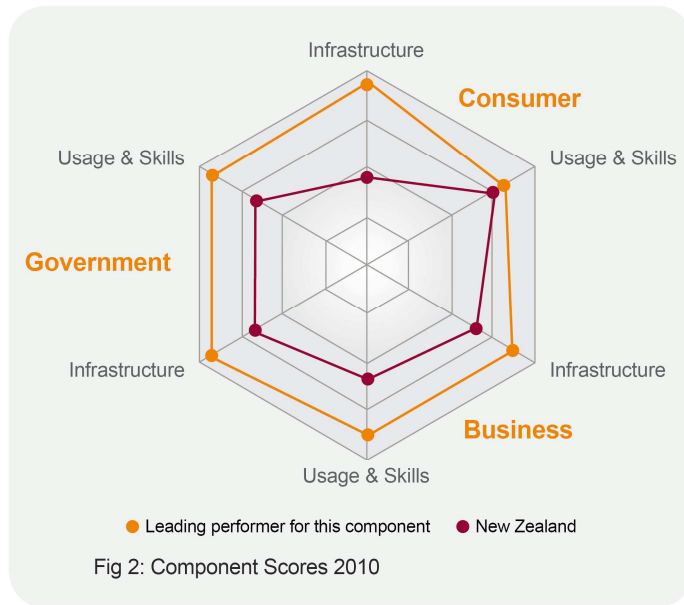
Rank [*]	Country	Connectivity Score
1 [1]	Sweden	7.84
2 [2]	United States	7.82
3 [4]	Denmark	7.47
4 [5]	Netherlands	7.45
5 [3]	Norway	7.09
6 [8]	United Kingdom	7.06
7 [7]	Australia	6.93
8 [9]	Canada	6.88
9 [6]	Finland	6.78
10 [11]	Singapore	6.40
11 [15]	Belgium	6.31
12 [n/a]	Austria	6.27
13 [17]	Germany	6.27
14 [12]	Ireland	6.08
15 [18]	France	6.06
16 [10]	Japan	5.89
17 [16]	New Zealand	5.84
18 [13]	Korea	5.80
19 [20]	Spain	5.09
20 [19]	Czech Republic	4.93
21 [21]	Portugal	4.80
22 [22]	Italy	4.79
23 [23]	Hungary	4.50
24 [24]	Poland	4.26
25 [25]	Greece	4.22

\*last year’s rank in parenthesis

Table 2: Connectivity Scorecard 2011 Results – Innovation-driven Economies

### Conclusions

In some cases, New Zealand’s shortfalls are predictable. New Zealand’s demography and topography are not necessarily the most favourable for deployment of advanced broadband networks, and one might say that the fact the country does as well as it does in bringing usable broadband infrastructure of both fixed and mobile varieties to a proportion of the population that is well in line with OECD norms is actually rather an impressive feat. In other respects, such as the relatively low business ICT investment and spending levels (comparative to Australia) the causes for New Zealand’s moderate performance are not obvious. However, overall New Zealand performs reasonably well, and the shortfalls highlighted previously should not be taken as indicating something fundamentally amiss. Further, to the extent that the shortfalls are in complexly determined areas such as business investment in ICT, they are not



susceptible to being “cured” by infrastructure-centric policy approaches.

### 2011 vs. 2010

New Zealand ranks 17th with a score of 5.84 in 2011, dropping one place from 2010 when it scored 6.07 and ranked 16th. In large part this reflects a balancing of three effects: (a) the use of new and updated weights, (b) the use of new indicators relating to consumer infrastructure, and (c) the use of new indicators pertaining to “public sector” spending on ICT.

With respect to weights, had the 2010 weights been applied to the 2011 data, New Zealand would have achieved a score of 5.91, and a ranking of 17th, which means that the new weights had a very small effect on New Zealand’s score. The change in most countries’ consumer infrastructure performance owes to the inclusion of three indicators which tend to equalize countries’ performance. These three indicators are (a) fixed broadband coverage, (b) 3G coverage, and (c) unique user mobile penetration. On the first two indicators, most “innovation” nations have at least 80% to 85% of their population covered by wireless and fixed-line broadband networks. On the third metric, most nations have at least around 60% of their population that owns a mobile device, but the proportion seldom, if ever, exceeds 95%. Thus this indicator shows only limited

<sup>3</sup> For more information download the Connectivity Scorecard 2011 Report from [www.connectivityscorecard.org](http://www.connectivityscorecard.org)

variation. Had the more conventional, but less merited, indicator of “SIM cards per 100 population” been used (which is how many agencies measure mobile penetration) there would be some more variation on the “mobile penetration” metric as some countries have SIM card penetration rates of 150 per 100 population or more. The inclusion of these metrics pushed up New Zealand’s consumer infrastructure score, as it did the score on this component for numerous other countries. In 2010, for example, New Zealand’s average score on the consumer infrastructure component was a mere 0.46. The decrease in many countries’ government sector scores is due to the inclusion of additional metrics on public sector or quasi-public-sector investments in IT hardware, software and IT services. These new metrics had the effect of creating additional dispersion in country scores, with some country scores on the “public” or “government” subcategories falling substantially as a result of the inclusion of these metrics. New Zealand was one of the countries substantially affected by these new metrics, as its performance on the new indicators that were sourced from WITSA’s Digital Planet was not particularly strong. In 2010, New Zealand achieved average scores of close to 0.7 on the public sector components of the Scorecard.

The Connectivity Scorecard is based on comparative scores between countries, and, therefore, each country’s performance is measured in relation to the best performing nation in each component at a given point of time. As with other indices of relative rankings, it is therefore hard to interpret the Scorecard in terms of absolute “improvements” or “deteriorations” and to make comparisons of scores over time.

### About Connectivity Scorecard

The Connectivity Scorecard is a global ICT index which, unlike other available research, is the first of its kind to rank countries in terms of “useful connectivity”. That is, not only on the deployment of ICT infrastructure but also to measure the extent to which consumers, businesses and the public sector “make use” of connectivity technologies to enhance social and economic prosperity. This “useful connectivity” is defined as the bundle of infrastructure, complementary skills, software and informed usage that makes ICT the key driver of productivity and economic growth.

Commissioned by Nokia Siemens Networks, the study was created by Professor Leonard Waverman, Dean,

Haskayne School of Business, University of Calgary, and Fellow, London Business School. The study was conducted by the consulting firms Berkeley Research Group and Communicea.

For more information on the Connectivity Scorecard, visit [www.connectivityscorecard.org](http://www.connectivityscorecard.org)

#### **Business Contact**

Kim Jones, Marketing & Corporate Affairs  
Nokia Siemens Networks  
[kim.jones@nsn.com](mailto:kim.jones@nsn.com)

#### **Media Contacts**

Riitta Mard, Media Relations  
Nokia Siemens Networks  
[riitta.mard@nsn.com](mailto:riitta.mard@nsn.com)

Anders Kager, Marketing & Corporate Affairs  
Nokia Siemens Networks  
[anders.kager@nsn.com](mailto:anders.kager@nsn.com)