

# Connectivity Scorecard 2011

## Russia



Russia  
5.68

	Score	Weight
Consumer Infrastructure	0.88 (0.88)*	0.13
Consumer Usage and Skills	0.70 (0.70)*	0.13
Business Infrastructure	0.47 (0.64)*	0.58
Business Usage and Skills	0.39 (0.71)*	0.07
Public sector Infrastructure	0.73 (0.83)*	0.09
Public sector Usage and Skills	0.39 (0.68)*	0.01

\*The score of the leading performer for this component

Table 1: Component Scores & Weights 2011

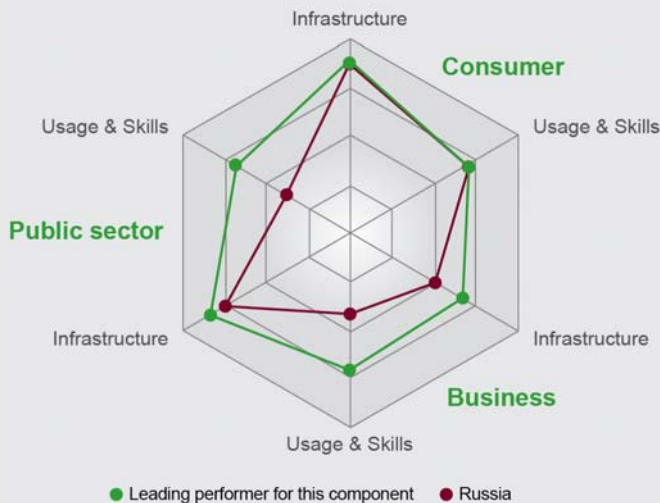


Fig 1: Component Scores 2011

### Overview performance

With a score of 5.68, Russia climbs two places to finish 3<sup>rd</sup> amongst the resource and efficiency-driven<sup>1</sup> economies on the Connectivity Scorecard 2011 index. Russia's performance is perhaps unsurprising given that it finished 5<sup>th</sup> in 2010, and that it has a relatively high level of per capita GDP. As with previous years, a strong performance on consumer infrastructure propelled Russia to its high ranking.

### Strengths and weaknesses

Russia's primary strength is in consumer infrastructure - it is particularly strong on measures of wireless as well as fixed-line penetration, and is comparatively strong on broadband penetration too. On consumer usage, near-universal literacy also aids Russia's performance. It also performs reasonably on measures of mobile minutes of use, mobile email and text messaging usage.

On the business components, Russia has some strength in terms of the penetration rate of enterprise telephony and personal computers, but its performance on the business components generally suffers from the inclusion of ICT trade performance data, which is discussed in greater detail later. On the public sector components, Russia does respectably well on one or two measures of spending by the government, healthcare and education sector on software, hardware, IT services and comm.-unications. However, its performance on other metrics is mediocre, including on the two components of the U.N's e-government index that were included - one metric

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

assessing the availability of online services, and another assessing e-participation.

## Detailed discussion

### Consumer infrastructure

Russia performs well on virtually all the measures for which data were available for Russia. This includes both fixed line and wireless penetration, as well as broadband penetration, which is comparatively high for this group of countries, but is low comparative to Europe.

### Consumer usage

Russia's strong performance on literacy is somewhat surprisingly not matched by a particularly strong performance on Internet usage among the population. However it performs strongly on mobile voice usage and reasonably well in terms of consumer adoption of text and mobile e-mail messaging.

### Business Infrastructure and Business usage and skills

On the business metrics, Russia performs strongly on "traditional" measures such as enterprise telephony penetration and PC penetration. It also performs well on the penetration rate of mobile data lines among enterprises. Russia suffers to some extent, however, as a result of the inclusion of new data on ICT trade in goods and services in the 2011 Scorecard.

Owing to data constraints relating to other indicators in the business infrastructure and business usage and skills components, the study included data on ICT exports of goods (under infrastructure), and ICT imports of goods and exports of services (under usage). The justification for these seemingly idiosyncratic choices is as follows: high levels of ICT exports are likely to be quite correlated with the development of a reasonably strong ICT ecosystem. Similar to the car industry, ICT manufacturing in one area is likely to spawn spill-over effects into ICT in other manufacturing and ICT investment in complementary areas. For instance, an initial advantage in computer assembly might lead to the location of mobile handset assembly in the country. This in turn will likely have positive spill-over effects into the wider economy. However, not all countries are ICT exporters or need to have ICT or export-led growth strategies. In this case, high levels of ICT imports might suggest a high level of domestic demand for ICT and thus be correlated with high levels of usage.<sup>2</sup> High levels of ICT service exports are very likely to correlate with

<sup>2</sup> In fact, a good argument could be made that the "ICT imports" indicator should be stuck under the "business infrastructure" component since they could also be correlated with business

Rank [*]	Country	Connectivity Score
1 [1]	Malaysia	6.61
2 [3]	Chile	6.21
3 [5]	Russia	5.68
4 [7]	Turkey	5.51
5 [4]	Argentina	5.46
6 [6]	Brazil	5.14
7 [8]	Mexico	4.87
8 [10]	Ukraine	4.81
9 [2]	South Africa	4.68
10 [9]	Colombia	4.06
11 [12]	Thailand	3.68
12 [13]	Tunisia	2.79
13 [15]	Vietnam	2.73
14 [17]	China	2.72
15 [14]	Iran	2.41
16 [19]	Philippines	2.15
17 [n/a]	Syria	2.11
18 [20]	Indonesia	2.01
19 [16]	Sri Lanka	2.01
20 [18]	Egypt	1.89
21 [21]	India	1.25
22 [25]	Pakistan	1.14
23 [23]	Nigeria	1.09
24 [22]	Kenya	0.95
25 [24]	Bangladesh	0.90

\*last year's rank in parenthesis

Table 2: Connectivity Scorecard 2011 Results – Resource & Efficiency-driven Economies

the presence of a critical mass of ICT user skills in the economy, which in turn could enable countries to support strong ICT sectors despite large sections of the population without ICT skills.

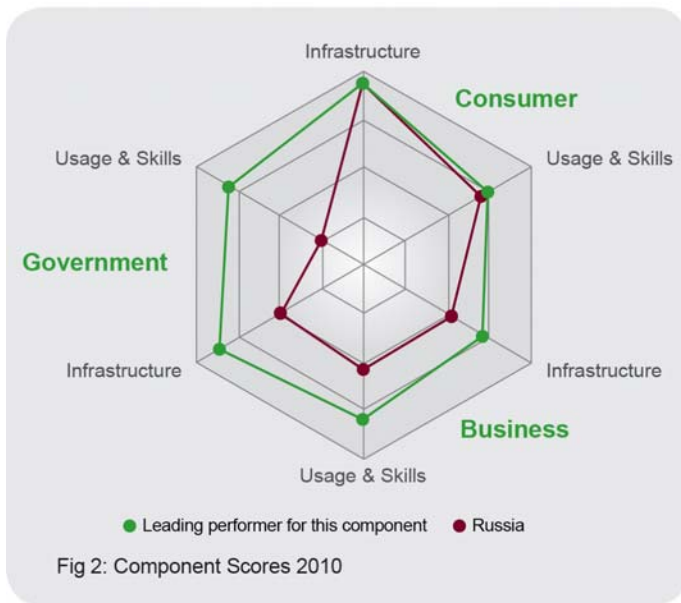
Russia suffered somewhat from the inclusion of these indicators as it is not a major ICT goods or services exporter, that is, on a per capita basis. However, there are several other areas where Russia's business infrastructure performance is not stellar: these include the penetration rate of secure Internet servers and the availability of international internet bandwidth.

### Public Sector Metrics

Russia performs well on measures of government spending on IT hardware and software, and performs

investment. This does not, however, make much of a difference to the overall scores.

respectably on estimated spending by the healthcare and educational sectors too. However, Russia's performance on the specific components of the U.N's e-government ranking that were included, the availability of online services and the level of e-participation, is relatively moderate and serves to drag down its overall performance on the public sector components of the Scorecard.<sup>3</sup>



### Comparison of 2011 and 2010 results

Russia finished in 5<sup>th</sup> place in 2010 with a score of 5.82 vs 3<sup>rd</sup> place and a score of 5.68 this year. Two major factors drive the differences between 2010 and 2011 results for all countries this year<sup>4</sup>. First, there is the effect of using new and updated weights for each of the components, and second, there is the effect of using new indicators. The re-weighting of the different components of the Scorecard served to push up Russia's score somewhat, and if 2010 weights had been used Russia's score would have been 5.35, and it would have finished 5<sup>th</sup>. The reason for this is that the 2010 weights put more emphasis on business usage relative to business infrastructure, and Russia's performance on this metric is somewhat weaker than it is on business infrastructure.

Table 3 summarises the changes in the component

<sup>3</sup> The reason for doing so is that the E-Government index as whole contains components (infrastructure, human capital) that are already captured in other components of the Scorecard.

<sup>4</sup> For more information download the Connectivity Scorecard 2011 Report from [www.connectivityscorecard.org](http://www.connectivityscorecard.org)

scores between 2010 and 2011. Clearly, there was also an effect of including new indicators in the Scorecard this year. In general, to the extent that Russia performed well on metrics such as mobile data adoption in the enterprise sector, this improvement was mitigated substantially by the inclusion of data on ICT imports and exports of goods and services. Including data from WITSA's Digital Planet publication on "public sector" spending on IT hardware and software served to increase Russia's score in the "public sector" infrastructure component, but the effect of this improvement on the final score was modest, given the low weight attached to the public sector component 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 Connectivity Scorecard in terms of absolute "improvements" or "deteriorations" and to make comparisons of scores over time.

	2011 Score	2010 Score
Consumer Infrastructure	0.88	0.93
Consumer Usage and Skills	0.70	0.71
Business Infrastructure	0.47	0.52
Business Usage and Skills	0.39	0.53
Public Sector Infrastructure	0.73	0.51
Public Sector Usage and Skills	0.39	0.26

Table 3: Changes in Component Scores between 2010 and 2011

### The Broader Context

Despite low broadband penetration relative to the rest of Europe, Russia has actually been a front-runner in deploying Fibre-to-the-Home and Fibre-to-the-Building (FTTH/FTTB) broadband. In fact, the penetration rate of FTTH/FTTB in Russia was higher than the similar penetration rate in any big Western European country (Figure 3). In those big European countries, DSL remains the predominant platform used to supply broadband to this date. Admittedly, in some major Western economies, a large amount of very high-speed broadband connections are supplied by cable operators (this is the case in the Netherlands and Belgium, for example). The interesting aspect of this deployment is that it illustrates two trends: first, that there is substantial potential for less developed

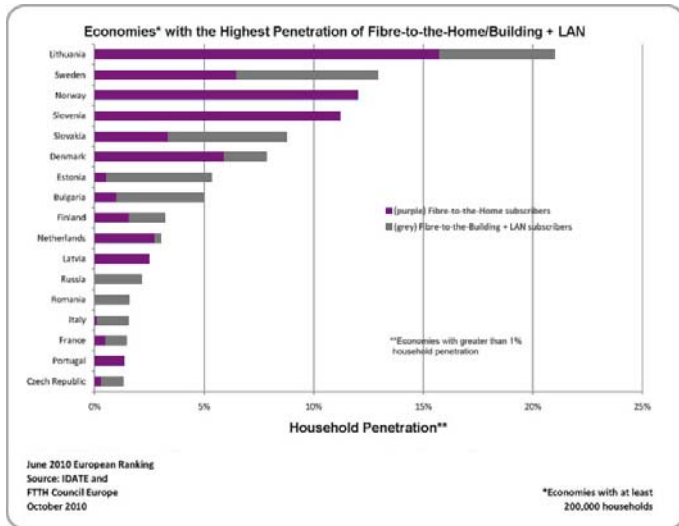


Fig 3: Penetration Rates of Fibre-to-the- Home/Building

countries to leap-frog older technologies and protocol, both in wireless and in wired broadband. Second, Russia and the “transition” economies of Eastern Europe share some advantageous traits that should help them boost broadband adoption but also boost the effective use of broadband. Notably, these countries are relatively rich in human capital. Russia’s human capital profile is, in many respects, much closer to the human capital profile of advanced nations than it is to the nations of Africa or even Asia (which is still in catch-up mode on these counts). Thus one can actually expect a different pattern of ICT adoption, particularly broadband adoption in these “transition” nations relative to “emerging” markets such as China or India. While wireless adoption in Russia is very strong, there ought not to be the kinds of skills-related barriers that might hinder the use of fixed-line broadband (e.g., the “skills hurdle” involved in using PCs and laptops is somewhat higher, and traditionally has been much higher, than the “skills hurdle” associated with using wireless technologies). To the extent that this remains a relevant factor in determining the optimal mix of technologies to deploy, one might expect Russia to feature relatively more fixed broadband deployment compared to “emerging” markets. Further, given its supply of skilled labour, Russia could well harness the deployment of advanced networks to become a front-runner in developing applications and software. In this sense, it is actually more advantageously positioned for the future than any other “Resource and Efficiency” economy in this Scorecard. This is particularly the case since Russia also has a strong cadre of entrepreneurs in the technology and telecoms sectors.

Unfortunately, a major hindrance that holds back Russia is the perceptions around the quality of its governance, which is a major consideration in achieving inward foreign direct investment, but perhaps also a potential

barrier when foreign nations consider eliciting participation by Russian-based firms. For example, Russia not only lags well behind the developed world on the World Bank’s aggregate indicators of governance, but it also lags behind several emerging economies and several former Communist nations in Eastern and Central Europe. Perceptions such those of poor governance quality mar what could otherwise be a very promising environment.<sup>5</sup>

### 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)

Olga Galashevskaya, Communications  
Nokia Siemens Networks  
[olga.galashevskaya@nsn.com](mailto:olga.galashevskaya@nsn.com)

<sup>5</sup> See, for example, Kaufmann, D., A. Kraay, and M. Mastruzzi, “Governance Matters VIII: Governance Indicators for 1996-2008,” Washington D.C.: World Bank, 2009.