

## 6. Belarus Networked Readiness Index

Using *Guide* [1] as the instrument it was organized systematically the assessment of numerous factors that determine the Networked Readiness of the Republic of Belarus. It has ranked each category from 19 different categories of indicators by levels of advancement in Stages One through Four. But it wasn't provided an overall score the Networked Readiness of the Republic of Belarus.

The researchers of the Center for International Development (CID) at Harvard University have expanded the definition Networked Readiness - "the degree to which a community is *prepared* to participate in the Networked World" from the *Guide* in the GTR including into it a community's *potential* to participate in the Networked World in the future. With this in mind, the Networked Readiness Index (NRI) transforms the complex dynamics of Networked Readiness into more easily understood shorthand [2], not unlike the Human Development Index, published annually by our colleagues at the United Nations Development Programme (UNDP), or the Growth Competitiveness Index, published annually by CID in collaboration with the World Economic Forum.

According to opinion of the CID specialists while any attempt to narrow Networked Readiness down to a single measure is admittedly artificial, the research performed in the creation of the NRI has significantly improved the understanding of how different national environments affect the adoption and use of ICTs. Most well-known indexes, analytical assessments, or national rankings relevant to Networked Readiness paid insufficient attention to how ICT indicator variables relate to one another.

The Networked Readiness Index distinguishes factors that determine the usability of the Network (the Enabling Factors) and variables that reflect the extent of Network Use. To capture the relationship *between highly developed ICT networks and the greatest potential to exploit those networks' capacity*, it have constructed a Network Use component index that measures the extent of current network connectivity, and an Enabling Factors component index that measures a country's capacity to exploit existing networks and create new ones.

Overall Belarus Networked Readiness Index is presented in Table 6.1, where one sees that the Enabling Factors Index is more than the Network Use Index and it signals a country's ability to draw upon existing ICT networks.

The **Network Use** component index is defined as a straightforward measure of the extent of ICT proliferation in the Belarus. It consists of five variables:

- Internet users per hundred inhabitants,
- cellular subscribers per hundred inhabitants,
- Internet users per host,
- percentage of computers connected to the Internet, and
- availability of public access to the Internet.

The **Enabling Factors** component index is constructed to reflect the preconditions for high quality Network Use as well as the potential for future Network proliferation and use in the Belarus.

The four subindexes that make up Enabling Factors are (with constituent micro-indexes in parentheses):

- Network Access (Information Infrastructure and Hardware, Software, and Support),
- Network Policy (ICT Policy, Business and Economic Environment),
- Networked Society (Networked Learning, ICT Opportunities, Social Capital),
- Networked Economy (e-Commerce, e-Government, General Infrastructure).

Network Access considers the extent and quality of the network infrastructure and the existence of the equipment, programs, and support services that allow ICTs to be used. Network Policy relates to the information and communications policy environment as well as the business and economic climate. Networked Society assesses quality of learning using information and communication technologies, the extent of their use in the learning process, the extent of opportunities in the ICT industry, and societal and demographic factors.

Table 6.1

## Overall Networked Readiness Index for Belarus

Index	Sub-index	Micro-index	Belarus			Score or values of <i>hard</i> and soft data		
			Rank	Score in 1-to-7 scale	Hard data value	Min (the last country)	Max (the first country)	
1	2	3	4	5	6	7	8	
<b>Networked Readiness Index (1/2 A + 1/2 B)</b>			<b>61</b>	<b>3,19</b>	-	<b>2,10</b>	<b>6,05</b>	
<b>A. The Network Use Index (4/5 Hard Data + 1/5 Survey Data)</b>			<b>51</b>	<b>2,97</b>	-	<b>1,24</b>	<b>6,35</b>	
		<i>1.1 Percentage of computers with Internet connection</i>	32	1,89	7,39	0,01	50,04	
		<i>1.2 Internet Users per host</i>	45	6,94	15,8	1299	2,04	
		<i>1.3 Estimated Internet users per 100 inhabitants</i>	35	1,91	9,07	0,04	59,79	
		<i>1.4 Cellular subscribers per 100 inhabitants</i>	63	1,34	4,54	0,02	80,30	
		<i>1.5 Availability of public Internet access</i>	62	2,8	-	1,8	6,4	
<b>B. The Enabling Factors Index</b>			<b>65</b>	<b>3,40</b>	-	<b>2,65</b>	<b>6,11</b>	
1/4 Network Access + 1/4 Network Policy +	<b>1. Network Access subindex</b>		<b>67</b>	<b>3,71</b>	-	<b>2,88</b>	<b>6,61</b>	
	1/2 Information Infrastructure + Hardware, Software and Support	<b>Information Infrastructure micro-index (5/9 Hard Data + 4/9 Survey Data)</b>		<b>67</b>	<b>4,03</b>	-	<b>2,96</b>	<b>6,65</b>
			<i>2.1 Teledensity</i>	36	3,42	30,50	0,34	75,25
			<i>2.2 Years to first adopt cellular telephony</i>	64	2,13	13	16,00	0
			<i>2.3 Waiting list for telephone lines</i>	72	4,19	4,03	8,61	0
			<i>2.4 Telecommunication staff per 1,000 mainlines</i>	57	6,29	9,19	59,72	2,43
			<i>2.5 Telephone faults per 100 mainlines</i>	44	6,36	35,21	327,0	0,5
			<i>2.6 Availability of telephone lines for businesses</i>	66	4,0	-	1,6	7,0
			<i>2.7 Perceptions of broadband Internet access</i>	68	2,8	-	2,2	6,4
			<i>2.8 Price and quality of Internet connection</i>	66	3,1	-	2,4	6,9
			<i>2.9 Availability and cost of mobile telephony</i>	74	4,0	-	2,9	7,0
	1/2 Hardware, Software and Support	<b>Hardware, Software and Support micro-index (2/5 Hard Data + 3/5 Survey Data)</b>		<b>63</b>	<b>3,38</b>	-	<b>2,52</b>	<b>6,76</b>
			<i>3.1 PCs per 100 Inhabitants</i>	38	1,79	7,77	0,09	58,52
			<i>3.2 Software piracy</i>	63	1,82	87	97	24
			<i>3.3 Availability of specialized IT services</i>	55	4,2	-	2,8	6,6
			<i>3.4 Software products fitting local needs</i>	56	4,6	-	3,1	6,5
			<i>3.5 Competition in the domestic software market</i>	53	4,5	-	3,4	6,7
	<b>2. The Network Policy subindex</b>		<b>73</b>	<b>3,04</b>	-	<b>2,74</b>	<b>6,40</b>	
	1/2 ICT Policy + Business and Economic Environment	<b>ICT Policy micro-index (1/5 Hard Data + 4/5 Survey Data)</b>		<b>66</b>	<b>3,84</b>	-	<b>2,98</b>	<b>6,64</b>
			<i>4.1 Internet access cost</i>	65	5,31	22,95	81,07	0,12
			<i>4.2 Perceived effect of telecommunications competition on quality and price</i>	53	3,6	-	1,9	6,8
			<i>4.3 Perceived effect of ISP competition on quality and price</i>	56	4,1	-	1,7	6,9
			<i>4.4 Legal framework supporting IT businesses</i>	76	3,0	-	3,1	6,2
			<i>4.5 ICTs as overall priority for the Government</i>	72	3,2	-	2,1	6,4
		<b>Business and Economic Environment micro-index (1/10 Hard Data + 9/10 Survey Data)</b>		<b>76</b>	<b>2,24</b>	-	<b>2,24</b>	<b>6,22</b>
			<i>5.1 Income per capita (PPP)</i>	75	1,05	1120	871	33886
			<i>5.2 Rule of Law</i>	71	1,567	-0,813	-1,106	1,996
		<i>5.3 Government Effectiveness</i>	73	1,584	-0,990	-1,321	2,082	
		<i>5.4 Regulatory Burden</i>	76	-3,755	-2,279	-0,721	1,245	
		<i>5.5 Number of days to start a new firm</i>	54	3,76	59	105	5	
		<i>5.6 Women's participation in the economy</i>	49	4,2	-	2,6	6,3	
		<i>5.7 Minority groups' participation in the economy</i>	29	4,7	-	2,7	6,0	
	<i>5.8 Country's relative position in technology</i>	49	3,4	-	1,8	6,8		
	<i>5.9 New government's respect for previous government's commitments</i>	74	2,6	-	2,2	6,7		
	<i>5.10 Trust in public postal system</i>	55	3,3	-	1,7	6,9		

Table 6.1 (cont.)

1	2	3	4	5	6	7	8
+ 1/4 Networked Society + 1/4 Networked Economy	<b>3. The Networked Society subindex</b>		<b>51</b>	<b>3,96</b>	-	<b>2,26</b>	<b>6,42</b>
	1/3 Networked Learning + 1/3 Social Capital	<b>Networked Learning micro-index (average of Survey Data)</b>	<b>66</b>	<b>3,03</b>	-	<b>2,23</b>	<b>6,23</b>
		6.1 Investment in employees' development of IT skills	71	3,2	-	2,9	6,0
		6.2 Quality of IT training and educational programs	64	3,3	-	2,0	6,3
		6.3 Internet access in schools	57	2,6	-	1,5	6,6
		<b>ICT Opportunity micro-index (average of Survey Data)</b>	<b>66</b>	<b>3,05</b>	-	<b>2,35</b>	<b>6,65</b>
		7.1 Brain drain of IT-skilled workforce	72	3,0	-	2,2	6,7
		7.2 Brain drain of scientists and engineers	58	3,1	-	2,1	6,6
		<b>Social Capital micro-index (3/6 Hard Data + 3/6 Survey Data)</b>	<b>26</b>	<b>5,81</b>	-	<b>1,88</b>	<b>6,66</b>
		8.1 No schooling in the total population	9	6,9	1,2	50,1	0
		8.2 Average years of schooling in the total population	9	5,8	10,3	2,4	12,2
	8.3 Illiteracy	5	6,97	0,50	59,20	0,20	
	8.4 Political Rights	72	6,0	6,0	7,0	1,0	
	8.5 Quality of public schools	34	4,4	-	1,7	6,7	
	8.6 Difference in quality of schooling for rich and poor children	20	4,8	-	1,5	6,8	
	<b>4. The Networked Economy subindex</b>		<b>65</b>	<b>2,88</b>	-	<b>2,35</b>	<b>5,29</b>
	+ 1/3 e-Commerce + 1/3 e-Government + 1/3 General Infrastructure	<b>e-Commerce micro-index (average of Survey Data)</b>	<b>64</b>	<b>2,68</b>	-	<b>2,06</b>	<b>4,91</b>
		9.1 Business to consumer e-commerce transactions	28	2,5	-	1,5	3,7
		9.2 Business to business e-commerce transactions	32	2,4	-	1,5	3,5
		9.3 Business Intranet sophistication	47	2,6	-	1,5	4,0
		9.4 Commercial websites	62	3,6	-	2,4	6,9
		9.5 Domestic venture capital investment in e-commerce	73	2,6	-	1,8	5,9
		9.6 Competition in dot-com market	71	2,5	-	2,1	6,7
		9.7 Prevalence of Internet start-ups	70	2,9	-	2,1	6,3
		9.8 Use of Internet-based payment systems	67	2,5	-	1,2	6,2
		9.9 Sophistication of online marketing	25	2,5	-	1,6	3,6
		<b>e-Government micro-index (average of Survey Data)</b>	<b>72</b>	<b>2,23</b>	-	<b>1,35</b>	<b>5,43</b>
		10.1 Government effectiveness in promoting the use of ICTs	72	2,6	-	1,7	6,0
		10.2 Availability of online government services	68	2,0	-	1,2	6,4
		10.3 Extent of Government websites	66	2,9	-	1,4	6,9
		10.4 Business Internet-based interactions with government	75	1,4	-	1,1	3,0
		<b>General Infrastructure micro-index (4/7 Hard Data + 3/7 Survey Data)</b>	<b>47</b>	<b>3,75</b>	-	<b>2,20</b>	<b>5,76</b>
		11.1 Electricity consumption	38	1,64	2704	81	24607
11.2 Electric power transmission and distribution losses	40	5,24	11,28	31,81	2,73		
11.3 Percentage of paved roads	27	6,30	89	5,5	100		
11.4 Television penetration	28	4,03	430	7	844		
11.5 Typical driving speed between cities	47	4,4	-	3,4	6,1		
11.6 Quality of ports' facilities and waterways	74	2,25	-	1,8	6,9		
11.7 Quality of air transport	75	2,4	-	1,6	7,0		

Finally, Networked Economy considers the extent to which the public and private sectors are participating in the Networked World and the quality and availability of complementary infrastructure.

The Belarus NRI data sources fall under three general categories (see table 6.2). First, we collected a variety of measures—mainly “hard” variables but also some “soft” ones—from sources

such as the World Bank, the International Telecommunications Union, Freedom House, and the Business Software Alliance. Second, we drew heavily on questionnaire responses from about 50 participants of Fourth Belarusian Internet Forum (November, 29-30 2002) and Belarusian experts of the grant # ICT 015. Third, in the course of research being carried out currently within the framework of *infoDev* grant 11 “hard” variables were received as a result of special research and analysis of data that is absent in statistical reports of either the Belarusian governmental bodies, or the international organizations. Some of such parameters are very important and include the following:

- Percentage of computers with Internet connection,
- Internet Users per host,
- Estimated Internet users per 100 inhabitants,
- Cellular subscribers per 100 inhabitants,
- PCs per 100 Inhabitants,
- Internet access cost and etc.

This unique data source provides a rich array of insights on a range of Belarus ICT issues and, crucially, provides information on aspects of ICT networks for which there are no “hard” data, such as the quality of local Internet Service Provider, market competition, or the efficacy of government ICT policy.

Table 6.2

**The Belarus NRI data variables sources**

Name and Score in 1-to-7 scale or hard data value of micro-indexes for Belarus, 2002	References	Variables of micro-indexes for some countries (GITR, 2001) [2]
1	2	3
<b>1. The Network Use</b>		
1.1 Percentage of computers with Internet connection  <b>7,39 %</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> USA – 50,4 <b>Min:</b> Nigeria – 0,01 USA – 50,4 <b>Russia – 5,18</b> Lithuania – 6,45 Ukraine – 3,62 Poland – 12,73
1.2 Internet Users per host  <b>15,81</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> USA - 2,04 <b>Min:</b> Nigeria – 1298 USA – 2,04 <b>Russia – 9,49</b> Lithuania – 7,26 Ukraine – 6,90 Poland – 8,24
1.2 Estimated Internet users per 100 inhabitants  <b>9,07</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> Iceland – 59,8 <b>Min:</b> Bangladesh – 0,04 USA – 59,75 <b>Russia – 2,11</b> Lithuania – 2,78 Ukraine – 0,39 Poland – 17,40
1.3 Cellular subscribers per 100 inhabitants  <b>4,54</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> Taiwan – 80,30 <b>Min:</b> Nigeria – 0,02 USA – 39,79 <b>Russia – 2,22</b> Lithuania – 14,16 Ukraine – 1,62 Poland – 17,40

Table 6.2 (cont.)

1	2	3
1.5 Availability of public Internet access  <b>2,8</b>	2002, indoDev Grant # ICT 015*:  Public access to the Internet (through telecenters, libraries, post offices, etc.) is (1=very limited, 7=pervasive – most people have frequent Internet access)	<b>Max:</b> Iceland – 6,4 <b>Min:</b> Bangladesh – 1,8 USA – 5,4 <b>Russia – 2,6</b> Lithuania – 3,3 Ukraine – 2,6 <b>Poland – 3,1</b>
<b>2. Network Access</b>		
2.1 Teledensity  <b>30,50</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> Denmark – 75,25 <b>Min:</b> Bangladesh – 0,34 USA – 69,97 <b>Russia – 21,82</b> Lithuania – 32,11 Ukraine – 19,88 Poland – 28,23
2.2 Years to first adopt cellular telephony  <b>13 (1993)</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> Finland – 0 <b>Min:</b> Zimbabwe – 16 USA – 4 <b>Russia – 11</b> Lithuania – 12 Ukraine – 13 Poland – 12
2.3 Waiting list for telephone lines  <b>4,03</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> Australia – 0 <b>Min:</b> Jamaica – 8,61 USA – 0 <b>Russia – 4,45</b> Lithuania – 2,03 Ukraine – 5,26 Poland – 4,65
2.4 Telecommunication staff per 1,000 mainlines  <b>9,19</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> Japan – 2,43 <b>Min:</b> Vietnam – 59,72 USA – 5,81 <b>Russia – 13,34</b> Lithuania – 5,09 Ukraine – 12,54 Poland – 6,96
2.5 Telephone faults per 100 mainlines  <b>35,21</b>	International Telecommunications Union (ITU) Database, August 2001. World Telecommunications Indicators, 2001. ( <a href="http://www.itu.int/ITU-D/ict/statistics/at_glance/Internet01.pdf">http://www.itu.int/ITU-D/ict/statistics/at_glance/Internet01.pdf</a> )	<b>Max:</b> Netherlands – 0,5 <b>Min:</b> Nigeria – 327,0 USA – 13,40 <b>Russia – 35,21</b> Lithuania – 18,95 Ukraine – 34,47 Poland – 26,00
2.6 Availability of telephone lines for businesses  <b>4,0</b>	2002, indoDev Grant # ICT 015*:  New telephone lines for your business (1=scarce and difficult to obtain, 7=widely available and highly reliable)	<b>Max:</b> Finland – 7,0 <b>Min:</b> Honduras – 1,6 USA – 6,6 Russia – 4,1 Lithuania – 5,5 Ukraine – 4,0 Poland – 5,1
2.7 Perceptions of broadband Internet access  <b>2,8</b>	2002, indoDev Grant # ICT 015*:  Broadband Internet in your country (e.g. through DSL or cable modem) is (1=not available, 7=widely used)	<b>Max:</b> Finland – 6,4 <b>Min:</b> Mauritius – 2,2 USA – 5,7 Russia – 2,7 Lithuania – 3,2 Ukraine – 3,6 Poland – 4,0

Table 6.2 (cont.)

1	2	3
2.8 Price and quality of Internet connection  <b>3,1</b>	2002, indoDev Grant # ICT 015*:  Leased line or dial-up in your country is (1=slow and expensive, 7=as fast and cheap as anywhere in the world)	<b>Max:</b> Finland - 6,9 <b>Min:</b> Vietnam - 2,4 USA - 6,6 Russia - 3,2 Lithuania - 3,3 Ukraine - 3,2 Poland - 2,9
2.9 Availability and cost of mobile telephony  <b>4,0</b>	2002, indoDev Grant # ICT 015*:  Mobile or cellular telephones for you business are (1=not available, 7=as accessible and affordable as in the world's most technologically advanced countries)	<b>Max:</b> Finland - 7,0 <b>Min:</b> Nigeria - 2,9 USA - 6,7 Russia - 4,6 Lithuania - 6,4 Ukraine - 4,9 Poland - 6,5
<b>3. Hardware, Software and Support</b>		
3.1 PCs per 100 Inhabitants  <b>7,77</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> USA – 58,52 <b>Min:</b> Bangladesh – 0,09 USA – 58,52 <b>Russia – 4,29</b> Lithuania – 5,95 Ukraine – 1,59 Poland – 6,89
3.2 Software piracy, 2001  <b>87%</b>	Business Software Alliance, Annual BSA Global Software Piracy Study, 2002. <a href="http://www.bsa.org/">http://www.bsa.org/</a>	<b>Max:</b> USA – 24 <b>Min:</b> Vietnam – 97 USA – 24 <b>Russia – 88</b> Lithuania – n/o Ukraine – 89 Poland – 54
3.3 Availability of specialized IT services  <b>4,2</b>	2002, indoDev Grant # ICT 015*:  Specialized information technologies are (1=not available in the country, 7=available from world-class local institutions)	<b>Max:</b> USA - 6,6 <b>Min:</b> Bangladesh - 2,8 USA - 6,6 Russia - 4,4 Lithuania - 4,6 Ukraine - 4,2 Poland - 5,0
3.4 Software products fitting local needs  <b>4,6</b>	2002, indoDev Grant # ICT 015*:  Software products sold in your country (1=need to be highly modified to fit local needs, 7=fit local needs)	<b>Max:</b> USA - 6,5 <b>Min:</b> Vietnam - 3,1 Russia - 4,9 Lithuania - 4,9 Ukraine - 4,7 Poland - 4,9
3.5 Competition in the domestic software market  <b>4,5</b>	2002, indoDev Grant # ICT 015*:  How many local software and software services companies are competing in domestic markets? (1=none, 7=a large number, the domestic market is competitive)	<b>Max:</b> USA - 6,7 <b>Min:</b> Romania - 3,4 USA - 6,7 Russia - 4,7 Lithuania - 4,8 Ukraine - 4,6 Poland - 4,9
<b>4. ICT Policy</b>		
4.1 Internet access cost  <b>22,95 %</b>	2002, infoDev Grant # ICT 015  (Average annual ISP cost for 20 hours of monthly Internet Access as percentage of GDP per capita (PPP), 2001)	<b>Max:</b> Sweden – 0,12 <b>Min:</b> Bangladesh – 81,07 USA – 0,65 <b>Russia – 10,64</b> Lithuania – n/a Ukraine – 32,74 Poland – 7,65

Table 6.2 (cont.)

1	2	3
4.2 Perceived effect of telecommunications competition on quality and price  <b>3,6</b>	2002, indoDev Grant # ICT 015*:  Is there sufficient competition in the telecommunications sector in your country to ensure high quality, infrequent interruptions, and low prices? (1=no, 7=yes, equal to the best in the world)	<b>Max:</b> Finland - 6,8 <b>Min:</b> Mauritius - 1,9 USA - 6,4 Russia - 3,6 Lithuania - 2,9 Ukraine - 3,1 Poland - 3,4
4.3 Perceived effect of ISP competition on quality and price  <b>4,1</b>	2002, indoDev Grant # ICT 015*:  Is there sufficient competition in the ISP sector in your country to ensure high quality, infrequent interruptions, and low prices? (1=no, 7=yes, equal to the best in the world)	<b>Max:</b> Finland - 6,9 <b>Min:</b> Mauritius - 1,7 USA - 6,7 Russia - 3,7 Lithuania - 4,1 Ukraine - 4,3 Poland - 4,7
4.4 Legal framework supporting IT businesses  <b>3,0</b>	2002, indoDev Grant # ICT 015*:  The legal framework in your country supports the development of online and IT businesses (including ISPs) (1=no, strongly impedes, 7=yes, significantly promotes)	<b>Max:</b> Finland - 6,2 <b>Min:</b> Romania - 3,1 USA - 6,2 Russia - 3,3 Lithuania - 3,8 Ukraine - 3,9 Poland - 3,7
<b>4.5 ICTs as overall priority for the Government</b>  <b>3,2</b>	2002, indoDev Grant # ICT 015*:  Information and communication technologies (ICTs) are an overall priority for the government (1=strongly disagree, 7=highly successful)	<b>Max:</b> Singapore - 6,4 <b>Min:</b> Romania - 2,1 USA - 5,2 Russia - 4,3 Lithuania - 3,9 Ukraine - 3,4 Poland - 3,4
<b>5. Business and Economic Environment</b>		
5.1 Income per capita (PPP)  <b>1,120.- (2001)</b>	World Bank, World Development Indicators 2001 and IMF World Economic Outlook, May 2001. <a href="http://www.worldbank.org/data/wdi/index.htm">http://www.worldbank.org/data/wdi/index.htm</a>	<b>Max:</b> USA – 33,886 <b>Min:</b> Nigeria – 871 USA – 33,886 <b>Russia – 8,213</b> Lithuania – 6,999 Ukraine – 3,693 Poland – 8,971
5.2 Rule of Law, 2000-01  <b>-0,813</b>	Kaufmann, Kraay and Zoido - Lobaton 2000-01. “Aggregating Governance Indicators.” <a href="http://www.worldbank.org/wbi/governance/pubs/aggindicators.htm">http://www.worldbank.org/wbi/governance/pubs/aggindicators.htm</a>	<b>Max:</b> Switzerland – 1,996 <b>Min:</b> Guatemala - -1,106 USA – 1,254 <b>Russia – -0,722</b> Lithuania – 0,180 Ukraine – -0,707 Poland – 0,538
5.3 Government Effectiveness, 2000-01  <b>-0,990</b>	Kaufmann, Kraay and Zoido - Lobaton 2000-01. “Aggregating Governance Indicators.” <a href="http://www.worldbank.org/wbi/governance/pubs/aggindicators.htm">http://www.worldbank.org/wbi/governance/pubs/aggindicators.htm</a>	<b>Max:</b> Singapore – 2,082 <b>Min:</b> Nigeria - -1,321 USA – 1,366 <b>Russia – -0,595</b> Lithuania – 0,127 Ukraine – -0,893 Poland – 0,674
5.4 Regulatory Burden, 2000-01  <b>-2,279</b>	Kaufmann, Kraay and Zoido - Lobaton, May 2001. “Aggregating Governance Indicators.” <a href="http://www.worldbank.org/wbi/governance/pubs/aggindicators.htm">http://www.worldbank.org/wbi/governance/pubs/aggindicators.htm</a>	<b>Max:</b> Singapore – 1,245 <b>Min:</b> Ukraine - -0,721 USA – 1,135 <b>Russia – -0,303</b> Lithuania – 0,089 Ukraine – -0,721 Poland – 0,565

Table 6.2 (cont.)

1	2	3
5.5 Number of days to start a new firm <b>59</b>	2002, infoDev Grant # ICT 015	<b>Max:</b> Iceland – 5 <b>Min:</b> Italy – 105 USA – 30 <b>Russia – 26</b> Lithuania – 30 Ukraine – 20 Poland – 30
5.6 Women's participation in the economy <b>4,2</b>	2002, indoDev Grant # ICT 015*: Women's participation in the economy is (1=limited and usually takes place in less important jobs, 7=equal to that of men)	<b>Max:</b> Hong Kong SAR - 6,3 <b>Min:</b> Bangladesh - 2,6 USA - 5,4 Russia - 4,0 Lithuania - 4,6 Ukraine - 4,4 Poland - 4,6
5.7 Minority groups' participation in the economy <b>4,7</b>	2002, indoDev Grant # ICT 015*: Minority groups' participation on the economy is (1=limited and usually takes place in less important jobs, 7=equal to that of other groups)	<b>Max:</b> Ukraine - 6,0 <b>Min:</b> Ecuador - 2,7 USA - 4,8 Russia - 4,5 Lithuania - 4,9 Poland - 5,7
5.8 Country's relative position in technology <b>3,4</b>	2002, indoDev Grant # ICT 015*: Your country's position in technology (1=generally lags behind most other countries, 7=is among the world leaders)	<b>Max:</b> USA - 6,8 <b>Min:</b> Honduras - 1,8 USA - 6,8 Russia - 3,2 Lithuania - 3,4 Ukraine - 3,0 Poland - 3,9
5.9 New government's respect for previous government's commitments <b>2,6</b>	2002, indoDev Grant # ICT 015*: New governments (1=do not honor the contractual commitments and obligations of previous regimes, 7=honor the contractual commitments and obligations of previous regimes)	<b>Max:</b> Switzerland - 6,7 <b>Min:</b> Guatemala - 2,2 USA - 6,2 Russia - 4,0 Lithuania - 3,5 Ukraine - 2,5 Poland - 5,2
5.10 Trust in public postal system <b>3,3</b>	2002, indoDev Grant # ICT 015*: Do you trust your country's postal system sufficiently to have a friend mail a small package worth US\$100 to you? (1=not at all, 7=yes, trust the system entirely)	<b>Max:</b> Finland - 6,9 <b>Min:</b> Nigeria - 1,7 USA - 6,4 Russia - 3,4 Lithuania - 3,8 Ukraine - 2,5 Poland - 4,6
<b>6. Networked Learning</b>		
6.1 Investment in employees' development of IT skills <b>3,2</b>	2002, indoDev Grant # ICT 015*: Your company's investment in employees' development of IT skills is (1=minimal, close to nothing, 7=a top priority)	<b>Max:</b> USA - 6,0 <b>Min:</b> Bulgaria - 2,9 Russia - 3,0 Lithuania - 3,4 Ukraine - 3,2 Poland - 4,5
6.2 Quality of IT training and educational programs <b>3,3</b>	2002, indoDev Grant # ICT 015*: Your company's training and educational programs for IT (1=lack far behind most other countries, 7=are among the best in the world)	<b>Max:</b> Finland - 6,3 <b>Min:</b> Romania - 2,0 USA - 6,2 Russia - 3,1 Lithuania - 3,5 Ukraine - 3,6 Poland - 3,9

Table 6.2 (cont.)

1	2	3
6.3 Internet access in schools  2,6	2002, indoDev Grant # ICT 015*:  Internet access in schools is (1=very limited, 7=pervasive - most children have frequent access/widely used)	<b>Max:</b> Finland - 6,6 <b>Min:</b> Bangladesh - 1,5 USA - 5,7 Russia - 2,1 Lithuania - 2,9 Ukraine - 2,1 Poland - 3,6
<b>7. ICT Opportunity</b>		
7.1 Brain drain of IT-skilled workforce  3,0	2002, indoDev Grant # ICT 015*:  Highly skilled IT workers in your industry (1=have to leave the country to find good jobs, 7=have their pick of highly desirable, paid jobs within the country)	<b>Max:</b> Netherlands - 6,7 <b>Min:</b> Romania - 2,2 USA - 6,7 Russia - 3,7 Lithuania - 3,6 Ukraine - 2,7 Poland - 5,3
7.2 Brain drain of scientists and engineers  3,1	2002, indoDev Grant # ICT 015*:  Scientists and engineers in your country (1=normally leave to pursue opportunities in other countries, 7=almost always remain in the country)	<b>Max:</b> USA - 6,6 <b>Min:</b> Zimbabwe - 2,1 Russia - 3,9 Lithuania - 3,3 Ukraine - 3,1 Poland - 3,9
<b>8. Social Capital</b>		
8.1 No schooling in the total population  1,2	Barro, Robert and Jong-Hwa Lee. "Human Capital Updated Files." <a href="http://www.cid.harvard.edu/ciddata/ciddat a.html">http://www.cid.harvard.edu/ciddat a.html</a>	<b>Max:</b> Denmark - 0 <b>Min:</b> Bangladesh - 50,1 USA - 0,8 <b>Russia - 1,2</b> Lithuania - 7,4 Ukraine - n/o Poland - 1,9
8.2 Average years of schooling in the total population  10,3	Barro, Robert and Jong-Hwa Lee. "Human Capital Updated Files." <a href="http://www.cid.harvard.edu/ciddata/ciddat a.html">http://www.cid.harvard.edu/ciddat a.html</a>	<b>Max:</b> USA - 12,2 <b>Min:</b> Bangladesh - 2,4 USA - 12,2 <b>Russia - 10,0</b> Lithuania - 9,4 Ukraine - n/o Poland - 9,9
8.3 Illiteracy rate, adult total (percentage of 15 and above)  0,50	World Bank, World Development Indicators, 2001 <a href="http://www.worldbank.org/data/wdi/index .htm">http://www.worldbank.org/data/wdi/index .htm</a>	<b>Max:</b> Latvia - 0,20 <b>Min:</b> Bangladesh - 59,20 USA - 1,0 <b>Russia - 0,50</b> Lithuania - 0,50 Ukraine - 0,41 Poland - 0,30
8.4 Political Rights  6,0	Index of Political Rights 2001 (Scale from 1=free to 7=not free)  Freedom House. Freedom in the World 2000-2001. 2001. <a href="http://216.119.117.183/research/index.htm">http://216.119.117.183/research/index.htm</a>	<b>Max:</b> Argentina - 1,0 <b>Min:</b> Vietnam - 7,0 USA - 1,0 <b>Russia - 5,0</b> Lithuania - 1,0 Ukraine - 4,0 Poland - 1,0
8.5 Quality of public schools  4,4	2002, indoDev Grant # ICT 015*:  The public (free) schools in your country are (1=of poor quality, 7=equal to the best in the world)	<b>Max:</b> Switzerland - 6,7 <b>Min:</b> Nicaragua - 1,7 USA - 5,2 Russia - 4,4 Lithuania - 4,3 Ukraine - 3,7 Poland - 4,7

Table 6.2 (cont.)

1	2	3
8.6 Difference in quality of schooling for rich and poor children  4,8	2002, indoDev Grant # ICT 015*:  The difference in the quality of the schools available to rich and poor children in your country is (1=large, 7=small)	<b>Max:</b> Finland - 6,8 <b>Min:</b> Bangladesh - 1,5 USA - 3,2 Russia - 3,5 Lithuania - 4,7 Ukraine - 2,6 Poland - 4,5
<b>9. e-Commerce</b>		
9.1 Business to consumer e-commerce transactions  2,5	2002, indoDev Grant # ICT 015*:  In your company, Internet-based transactions with consumers are (1=behind other local companies, 5=equal to the best in the world)	<b>Max:</b> Germany - 3,7 <b>Min:</b> Slovakia - 1,5 USA - 3,5 Russia - 2,1 Lithuania - 1,8 Ukraine - 2,0 Poland - 2,8
9.2 Business to business e-commerce transactions  2,4	2002, indoDev Grant # ICT 015*:  In your company, Internet-based interactions with suppliers are (1=behind other companies, 5=equal to the best in the world)	<b>Max:</b> Finland - 3,5 <b>Min:</b> Romania - 1,5 USA - 3,2 Russia - 1,8 Lithuania - 1,9 Ukraine - 1,9 Poland - 2,7
9.3 Business Intranet sophistication  2,6	2002, indoDev Grant # ICT 015*:  In your company, Intranet sophistication is (1=behind other local companies, 7=equal to the best in the World)	<b>Max:</b> Germany - 4,0 <b>Min:</b> Romania - 1,5 USA - 3,8 Russia - 2,1 Lithuania - 2,2 Ukraine - 2,0 Poland - 3,1
9.4 Commercial websites  3,6	2002, indoDev Grant # ICT 015*:  In your country, how common are web pages by companies?(1=rare, 7=as common as in the world's leading countries)	<b>Max:</b> Finland - 6,9 <b>Min:</b> Romania - 2,4 USA - 6,8 Russia - 3,9 Lithuania - 4,1 Ukraine - 4,1 Poland - 5,3
9.5 Domestic venture capital investment in e-commerce  2,6	2002, indoDev Grant # ICT 015*:  Domestic venture capital and private equity markets in your country are (1=unwilling to invest in local e-commerce ventures, 7=willing to invest in local e-commerce ventures)	<b>Max:</b> USA - 5,9 <b>Min:</b> Romania - 1,8 USA - 5,9 Russia - 2,8 Lithuania - 3,1 Ukraine - 3,3 Poland - 4,8
9.6 Competition in dot-com market  2,5	2002, indoDev Grant # ICT 015*:  Competition in your country's dot-com marketplace is (1=non-existent, 7=equal to the most vibrant in the world)	<b>Max:</b> USA - 6,7 <b>Min:</b> Mauritius - 2,1 Russia - 3,7 Lithuania - 3,3 Ukraine - 3,7 Poland - 4,7
9.7 Prevalence of Internet start-ups  2,9	2002, indoDev Grant # ICT 015*:  Internet business start-ups in your country are currently (1=not found, 7=happening everywhere)	<b>Max:</b> Israel - 6,3 <b>Min:</b> Mauritius - 2,1 USA - 6,2 Russia - 4,5 Lithuania - 4,2 Ukraine - 4,4 Poland - 4,6

Table 6.2 (cont.)

1	2	3
9.8 Use of Internet-based payment systems  2,5	2002, indoDev Grant # ICT 015*:  Online Internet payment systems your country are (1=not available, 7=used by most people)	<b>Max:</b> Finland - 6,2 <b>Min:</b> Romania - 1,2 USA - 4,9 Russia - 2,6 Lithuania - 3,1 Ukraine - 3,0 Poland - 3,3
9.9 Sophistication of online marketing  2,5	2002, indoDev Grant # ICT 015*:  In your company, online marketing is (1=behind other local companies, 5=equal to the best in the world)	<b>Max:</b> Germany - 3,6 <b>Min:</b> Jamaica - 1,6 USA - 3,2 Russia - 2,1 Lithuania - 1,8 Ukraine - 1,9 Poland - 3,0
<b>10. e-Government</b>		
10.1 Government effectiveness in promoting the use of ICTs  2,6	2002, indoDev Grant # ICT 015*:  Government programs promoting the use of ICT are (1=not very successful, 7=highly successful)	<b>Max:</b> Singapore - 6,0 <b>Min:</b> Romania - 1,7 USA - 4,5 Russia - 3,1 Lithuania - 3,3 Ukraine - 3,1 Poland - 3,3
10.2 Availability of online government services  2,0	2002, indoDev Grant # ICT 015*:  Are government services (downloadable permit applications, tax payments, government tenders, etc.) available on the Internet in your country? (1=not available, 7=commonly available)	<b>Max:</b> Singapore - 6,4 <b>Min:</b> Zimbabwe - 1,2 USA - 5,4 Russia - 2,6 Lithuania - 4,5 Ukraine - 3,5 Poland - 4,1
10.3 Extent of Government websites  2,9	2002, indoDev Grant # ICT 015*:  In your country, how common are Web pages by government offices/public agencies?(1=rare, 7=as common as in the world's leading countries)	<b>Max:</b> Finland - 6,9 <b>Min:</b> Romania - 1,4 USA - 6,7 Russia - 3,6 Lithuania - 4,9 Ukraine - 3,4 Poland - 5,3
10.4 Business Internet-based interactions with government  1,4	2002, indoDev Grant # ICT 015*:  In your company, Internet-based transactions with government are (1=behind other local companies, 5=equal to the best in the world)	<b>Max:</b> Finland - 3,0 <b>Min:</b> Romania - 1,1 USA - 2,9 Russia - 1,8 Lithuania - 1,9 Ukraine - 1,7 Poland - 2,3
<b>11. General Infrastructure</b>		
11.1 Electricity consumption  2,704 (1999)	World Bank, World Development Indicators, 2001 <a href="http://www.worldbank.org/data/wdi/index.htm">http://www.worldbank.org/data/wdi/index.htm</a>	<b>Max:</b> Norway – 24,607 <b>Min:</b> Bangladesh – 81 USA – 11.832 <b>Russia – 3,937</b> Lithuania – 1,909 Ukraine – 2,350 Poland – 2,458

Table 6.2 (cont.)

1	2	3
11.2 Electric power transmission and distribution losses  <b>11,28</b>	World Bank, World Development Indicators, 2001 <a href="http://www.worldbank.org/data/wdi/index.htm">http://www.worldbank.org/data/wdi/index.htm</a>	<b>Max:</b> Paraguay – 2.73 <b>Min:</b> Nigeria – 31,81 USA – 6,75 <b>Russia – 11,28</b> Lithuania – 9,06 Ukraine – 17,37 Poland – 10,89
11.3 Percentage of paved roads  <b>89 %</b>	World Bank, World Development Indicators, 2001 <a href="http://www.worldbank.org/data/wdi/index.htm">http://www.worldbank.org/data/wdi/index.htm</a>	<b>Max:</b> Austria – 100 <b>Min:</b> Bolivia – 5,5 USA – 58,8 <b>Russia – 35,4</b> Lithuania – 91,0 Ukraine – 96,5 Poland – 65,6
11.4 Television penetration  <b>429,99</b>	Television sets per 1000 inhabitants.  International Telecommunications Union Database, August 2001. <a href="http://www.itu.int/">http://www.itu.int/</a>	<b>Max:</b> USA – 844 <b>Min:</b> Bangladesh – 7 USA – 844 <b>Russia – 421</b> Lithuania – 420 Ukraine – 413 Poland – 387
11.5 Typical driving speed between cities  <b>4,4</b>	2002, infoDev Grant # ICT 015*:  Taking into account the average quality of roads outside the major cities, what is your typical driving speed on a journey between cities? (1=10 km/hr, 7=150 km/hr)	<b>Max:</b> Germany - 6,1 <b>Min:</b> Romania - 3,4 USA - 5,5 Russia - 4,6 Lithuania - 4,9 Ukraine - 4,6 Poland - 4,5
11.6 Quality of ports' facilities and waterways  <b>2,25</b>	2002, infoDev Grant # ICT 015*:  Port facilities and waterways in your country are (1=underdeveloped, 7=as developed as the world's best)	<b>Max:</b> Singapore - 6,9 <b>Min:</b> Bolivia - 1,8 USA - 6,1 Russia - 4,0 Lithuania - 4,2 Ukraine - 4,3 Poland - 3,6
11.7 Quality of air transport  <b>2,4</b>	2002, infoDev Grant # ICT 015*:  Air transport in your country is (1=infrequent and inefficient, 7=as extensive and efficient as the world's best)	<b>Max:</b> Singapore - 7,0 <b>Min:</b> Slovakia - 1,6 USA - 6,7 Russia - 3,6 Lithuania - 4,2 Ukraine - 4,4 Poland - 4,5

\* Average score according to the questionnaire responses from about 50 participants of Fourth Belarusian Internet Forum (November, 29-30 2002) and Belarusian experts of the *infoDev* grant # ICT 015.