The road to 2030: a survey of infrastructure development in Russia

EY

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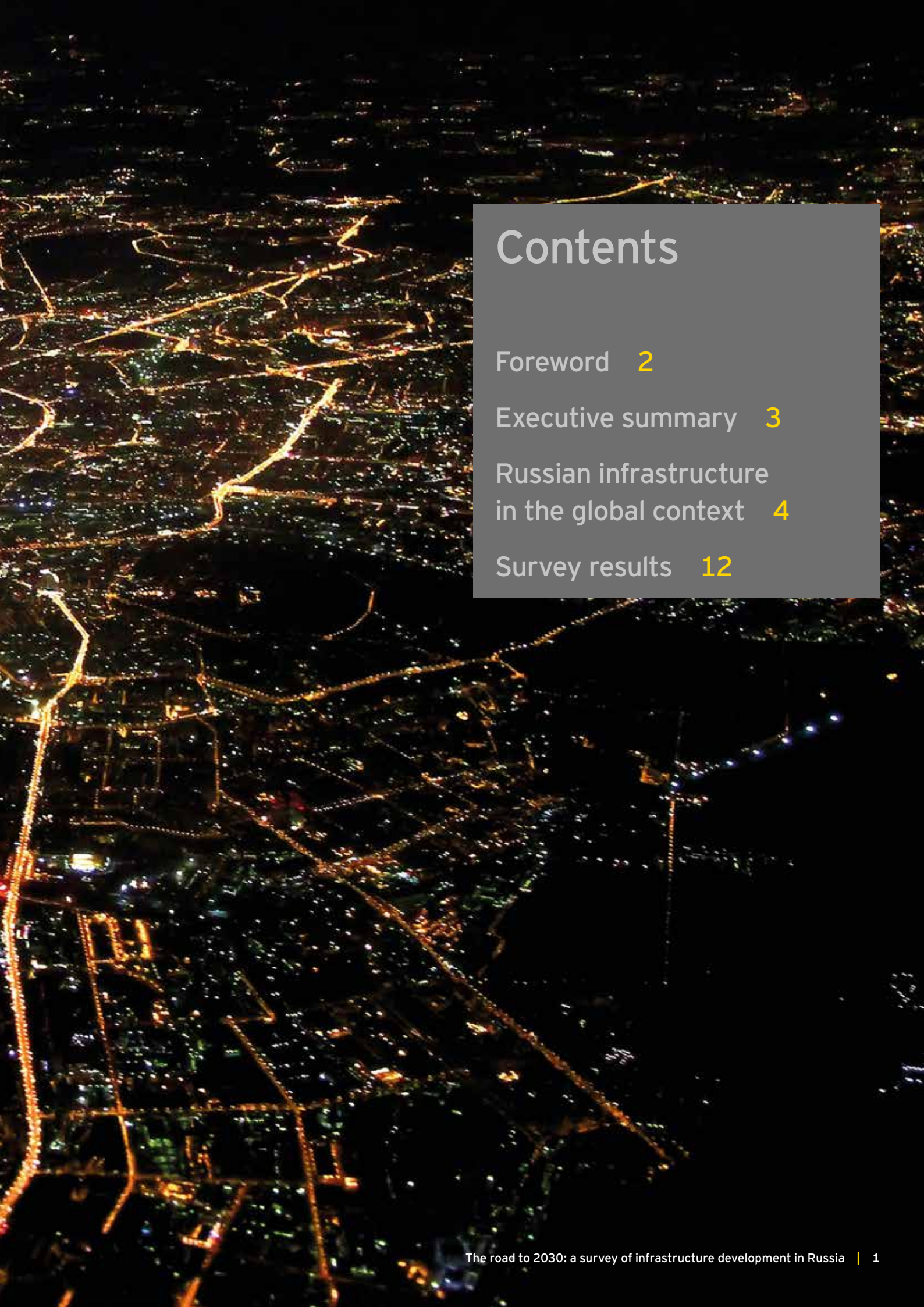

Contents

Foreword

Joe Watt

Chairman of the Management Committee and Managing Partner for the CIS, EY

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Infrastructure has been placed at the center of the Russian policy-maker's agenda, as it had become clear by early 2014 that the domestic economy was in need of enhanced domestic investment, especially to diversify away from extractive industries. Expectations in the first quarter of 2014 were for weak growth of around 1.4% GDP for the year, and there was a determination to focus on increasing inward investment while maintaining low inflation. Recent developments have been negative for the economy, as capital flight has been experienced alongside a weakened ruble. This has forced an increase in domestic interest rates and inflation seems likely to reappear. In the short term, at least, it seems unlikely that the private sector investment climate will improve.

Set against this, the Russian authorities are even more committed to moving forward with infrastructure projects, investments in which could help strengthen the overall economy. It is likely that there will be a greater focus on the reforms needed to enhance private sector investment, as it is clear that this has become more important than ever. Where possible, the Government will encourage public-private partnership (PPP) projects, and they may provide interesting investment opportunities.

Economic Development Minister Alexei Ulyukayev recently announced plans to start seven major new infrastructure projects financed by the National Welfare Fund. If these, and other projects already under way, are properly implemented, they have the potential to improve vastly the business environment as well as the standard of living of the general population. Increased productivity, decreased travel times, access to new markets and new avenues for trade and investment are just some of the ways that improved infrastructure can benefit those living and working in Russia.

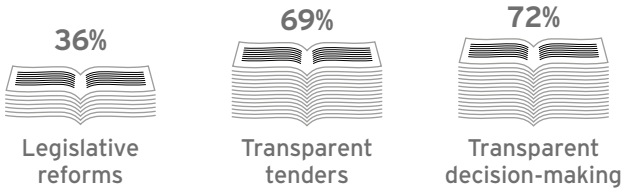
The survey that serves as the heart of this report collected the opinions of key decision-makers and industry development professionals, all of whom have deep knowledge of, and experience with, infrastructure projects in Russia. In some cases, the survey findings support common wisdom, but in other cases they directly contradict the generally accepted state of the investment atmosphere in Russia. What emerges is a clear path forward, supported by suggested reforms and improvements.

In addition to the survey and analysis of the current state of infrastructure investment in Russia, we also present a series of case studies highlighting infrastructure investment projects from around the world. While cautionary tales abound, many countries have implemented creative solutions that can serve as a model for future initiatives in Russia.

Finally, we include in-depth interviews with some of today's leading experts on infrastructure in Russia. They offer unique perspectives from the private sector and provide insight and analysis, while placing individual experiences in the context of the broader national infrastructure strategy.

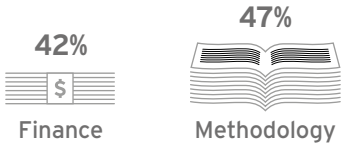
We hope this report will prove a valuable resource for federal and regional planners and decision-makers, sector leaders and industry professionals, as well as the broader public. Infrastructure projects in areas such as roads and highways, railways, airports, water transport, power and utilities, and water supply have the potential to contribute greatly to the further development of Russia.

Executive summary

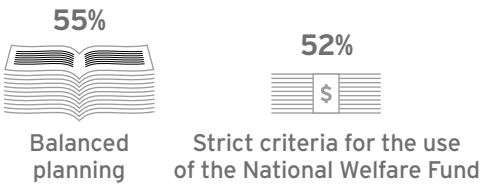


1 **Sixty-nine percent** of respondents say that ensuring that tenders are transparent and competitive would make investments in Russian infrastructure more effective. **Seventy-two percent** of respondents indicate that insufficiently transparent decision-making in regard to projects is one of the main obstacles to the development of infrastructure in Russia. This shows that the survey respondents consider transparency the most important factor for improving the efficiency of infrastructure investment in Russia, followed by the quality of project preparation (57%).

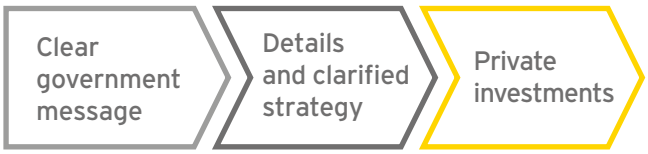
2 **Sixty-eight percent** of respondents say that inadequate guarantees of a return on investments is a chief obstacle to obtaining private investments for infrastructure; however, it is expected that the Government will provide assistance (at least in the initial projects) to achieve a predictable rate of return, for example through the mechanism of availability payments.



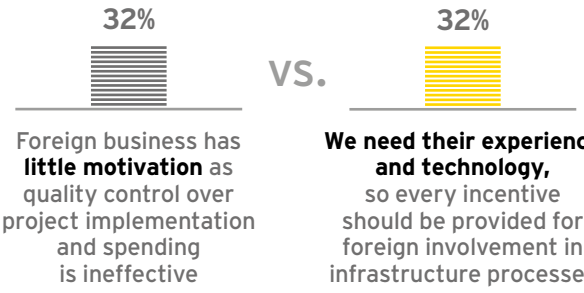
3 **Fourty-two percent** of respondents believe that regional projects should receive federal financing. However, an even greater proportion of the respondents (47%) believe that before providing such financing, other important pre-conditions of project success should be put in place, such as methodological support of the regions that initiate infrastructure projects. Of note, 49% of the respondents mention the absence of a regional infrastructure investment policy as a major issue.



4 Only **7%** of respondents believe that megaprojects are needed at any cost. The majority (55%) believe that such projects should be part of a thorough and balanced planning of regional infrastructure. Likewise, most survey participants (52%) believe that the use of the National Welfare Fund to finance investment projects should not be automatic, but subject to strict criteria.



5 Detailing and clarifying government strategy was highlighted by the majority of respondents as a way of making infrastructure projects more attractive for private investors. The Government should deliver clear messages about key priorities in infrastructure development and provide a pipeline of forthcoming projects.



6 The survey results demonstrate that, while foreign involvement would be welcome, the respondents do not believe that there are currently sufficient incentives to entice international companies to invest in Russian infrastructure projects. Interested international players should look for a reliable local partner to help build a long-term strategy for investing in Russian infrastructure.

Russian infrastructure in the global context

Largest country in the world by land area: **17,092,246 sq. km**

Population: **143 million**

Sixth largest GDP in the world[1]

Unique geographic location:

- Links Europe with Asia
- Worldwide sea routes – direct access to three out of four oceans (53 sea ports in Russia)
- Major airport hubs – in 2012, 700,000 tonnes of cargo and 64 million passengers passed through Moscow airports alone
- Railway transit routes – leads the world in length of electrified railroads – 43,000km
- Pipelines – to Germany, Poland, Turkey, Czech Republic, the Baltic countries and the CIS
- Borders 17 countries

Host country for:

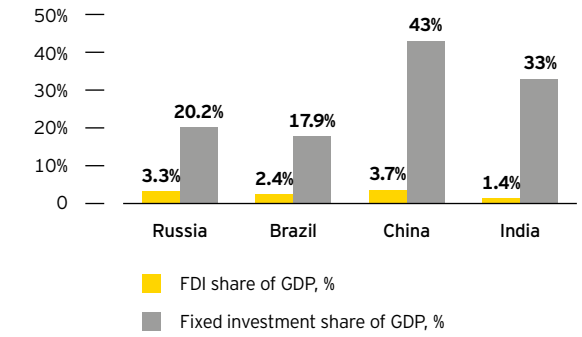
- 2014 Winter Olympics in Sochi
- 2014 Formula 1 Grand Prix in Sochi
- 2016 Ice Hockey World Cup
- 2018 FIFA World Cup

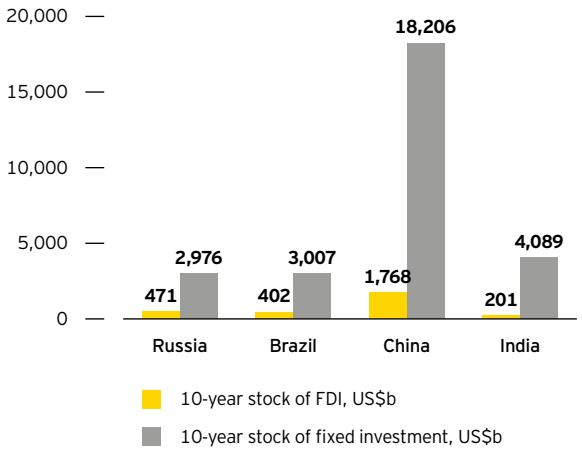
Total trade flow in 2013 – **US$844b:**

- EU – 49%
- CIS – 14%
- APEC (incl. China – 11%, Japan – 4%, US – 3%) – 25%
- India – 1.2%

1 Oxford Economics

Over the last 10 years, Russia has attracted more foreign direct investment (FDI) than Brazil and India, but it has attracted significantly less than China. However, at 3.3%, the FDI share of GDP in Russia is just behind BRIC leader China (3.7%), and far outpaces Brazil (2.4%) and India (1.4%). Russia does not perform as well in fixed investment and is placed third ahead of only Brazil in fixed investment share of GDP.





Source: Oxford Economics

The lack of infrastructure investment over the last 10 to 20 years has dropped Russia to 93rd globally in quality of overall infrastructure in *The Global Competitiveness Report 2013–2014* prepared by the World Economic Forum. China and India are placed at 74th and 85th, respectively. Only the quality of railway infrastructure in Russia comes in at a relatively high level (31st). All other areas (quality of roads and highways, quality of port infrastructure, quality of air transport infrastructure and quality of electricity supply) need improvement.

There are many strategies and programs dedicated to infrastructure development. EY analyzed them and created a map of forthcoming projects, classifying them according to a number of aspects. Overall, 325 infrastructure projects were announced in the last five years, and they are currently at different stages of implementation.

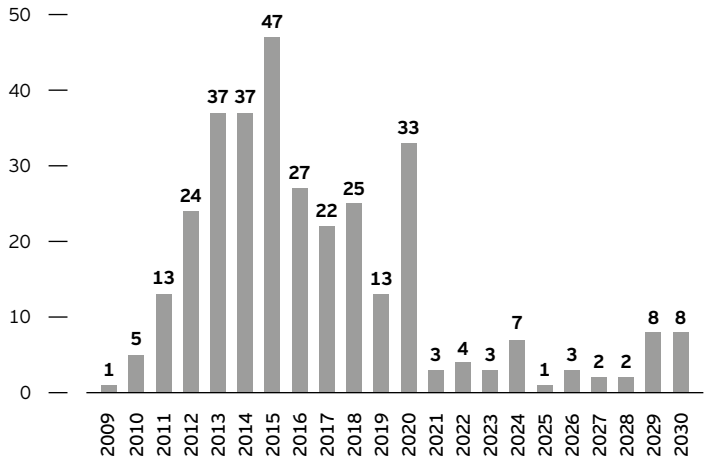
More than half of analyzed projects are "in progress" according to the planning dates but, in reality, most of the projects are delayed and the stage of their implementation cannot be confirmed. Overall, there is no clear pipeline of forthcoming projects, and this was also noted by our respondents.

Status of projects	Number of projects	Sum of planned financing, US$b
Completed	59	31.8
In progress	189	329.5
Planned	77	608.1
Grand total	**325**	**969.4**

Source: EY knowledge analysis

The majority (51%) are planned to be realized in the period from 2015 to 2020, with some projects planned to finish close to 2030.

Pipeline of planned infrastructure projects (number of projects) and when they are expected to be completed



Source: EY knowledge analysis

We welcome the entrance of new players to the transport infrastructure market

Maxim Sokolov

Minister of Transport of the Russian Federation

The regions play a key role in building infrastructure, especially roads, with our other economic arteries typically developed under federal programs. Regional vs. federal roads statistics illustrate this point clearly: 600,000 kilometers vs. only 50,000 kilometers, respectively.

In transport infrastructure development, the ministry's priority areas include promoting uniform policies and standards, coordinating efforts made at different government levels and building federal infrastructure. We have recently updated Russia's transport strategy for the period through 2030, which was approved by the Russian Government at the end of last year. The Transport System Development state program is a key enabler of this strategy.

Coordinating councils for the development of the Moscow and St. Petersburg transport hubs, which connect Moscow and Moscow Region to St. Petersburg and Leningrad Region, are a good example of the ministry's effective and efficient cooperation with the regions. These councils facilitate joint decision-making on construction and renovation deadlines as well as their scale. Coordination is critical, as control over a road to the MKAD (the Moscow ring road), operated by the Government of Moscow, a constituent entity of the Russian Federation, may, for instance, go to the federal government, while the road should be invariably of high standards, with any work on it always requiring close coordination.

Federal concession and investment projects (sections of the M1, M4 and M11 roads) have given a powerful boost to the development of regional transport infrastructure projects and appropriate management competencies at the local level (Pulkovo Airport, Western High-Speed Diameter, bridges across the Kama and the Bui rivers, flyovers in the Ryazan region and a number of others), with some of the regional projects (Western High-Speed Diameter and bridges across the Kama and the Bui) receiving financial support at the federal level out of the Investment Fund of the Russian Federation.

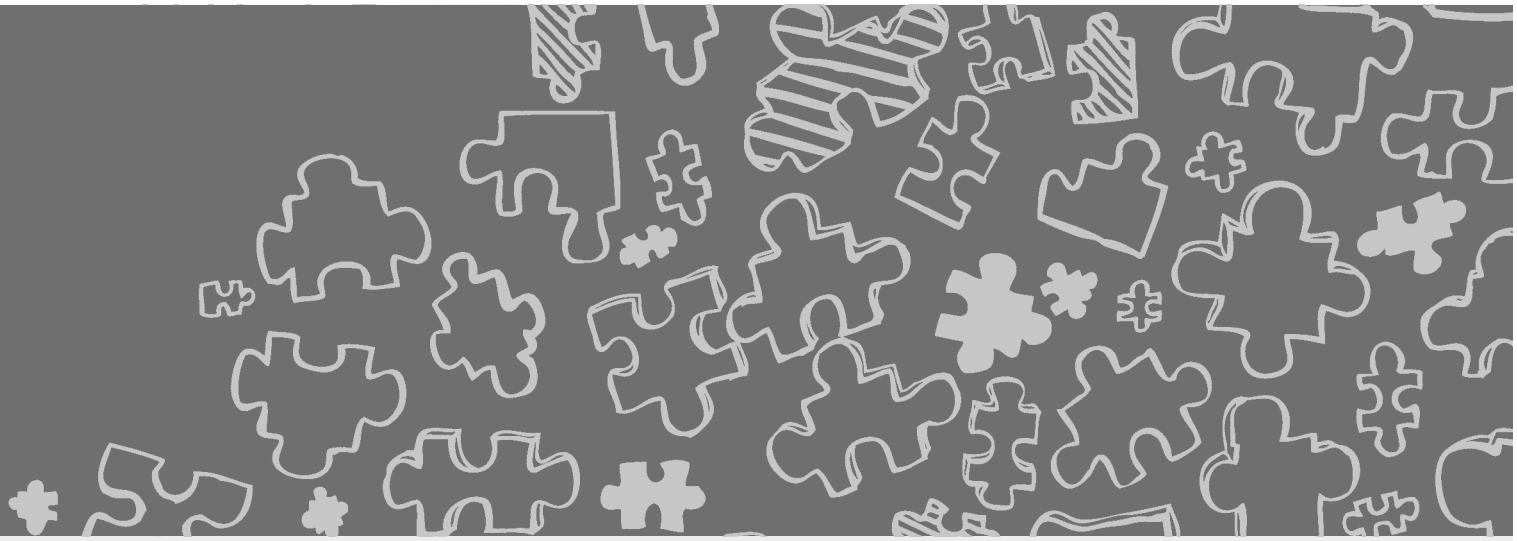
The transport ministry believes that the Investment Fund should be more active, while National Welfare Fund money should be channeled to transport infrastructure development. Most large-scale projects are impossible to implement without such support. Focus on project financing helps distribute limited budgetary funds more efficiently, as it encourages initiators, including regions, to give more scrutiny to prospective projects and design them in accordance with international standards.

Regional road funds are a good source of long-term infrastructure financing

In 2013, regional road funds, created following the positive experience of federal road funds, started operation in Russia. This year, local funds performing the same function were launched. This virtually doubled sources of financing for the renovation of regional roads and made such financing more relevant, stable and transparent, and can be carried forward – cash does not expire at the year-end. Regions now have greater opportunities for planning long-term investment and attracting long-term financing from private investors. Russian President Vladimir Putin has set regions a challenging, but realistic, target of doubling the length of renovated and built roads from the previous decade. At the federal level, we are facing the same target (doubling the construction of roads in the next decade from the previous decade).

Design phase bidding and long-term planning

Long-term design/build/operate contracts spanning over the entire project life cycle provide security against rising costs. Regretfully, offering concession agreements for transport infrastructure design has not become a common practice in Russia, but precedents have been set, including as part of a project to build a bridge across the Lena River near Yakutsk. The relatively smaller size of land plots distributed and lower risks compared with projects in densely populated areas made



it possible to include the project design phase in the proposal. Inviting bids for design through one bidding competition for the construction and operation of extended facilities in densely developed residential areas is hampered by the current rules for pre-construction land preparations, high risks of land seizure and delivery date postponements. We continue work to improve relevant practices and regulations.

Cooperation with foreign players

Last year, the country's authorities decided to involve foreign contractors, operators, investors and manufacturers more actively in infrastructure projects. Obviously, we are extremely interested in seeing new professional players enter our market.

In my opinion, any investor interested in taking part in Russian infrastructure development should primarily do two things: create a partner network in Russia and take an active part in project discussions as well as bidding competitions.

The National Association of Road Industry Investors and Operators has recently been set up at the initiative of the state company Avtodor, with support from the Russian transport ministry. It is an independent platform that brings together key professional players in the road infrastructure market, including Russian and foreign designers, builders and road operators.

I hope that direct contracts between major Russian and foreign players will encourage new investors to expand to the Russian market. Apart from this, we continue to pay close attention to meetings and consultations with investors, presentations and road shows.

Do not be afraid of inviting investors and concession participants through open bids to implement federal transport infrastructure projects. The road industry generates the highest number of concession agreements. This year, Avtodor plans to invite bids for 10 large-scale projects, including the financing, construction and operation of four central ring road start-up blocks, two phases in the construction of the new M11 road between Moscow and St. Petersburg (58–149 kilometers and 208–259 kilometers) and a road to Tsemdolina that is part of the Novorossiysk transport hub. Bids will also be invited for the design, renovation and operation of an M1 Belarus Road section (33–132 kilometers) and operation contracts for two M4 Don Road sections (21–225 kilometers and 1,091–1,119 kilometers). We are preparing these bids in line with best international and Russian practices to make them as transparent and clear to investors as possible. I am confident that any company that has adequate competencies and resources can choose an appealing project to play a role in.

"In my opinion, any investor interested in taking part in Russian infrastructure development should primarily do two things: create a partner network in Russia and take an active part in project discussions as well as bidding competitions."

The greatest amount of money is planned for railway transport infrastructure development. This mainly includes the projects set out in the program of high-speed railway development through 2030.

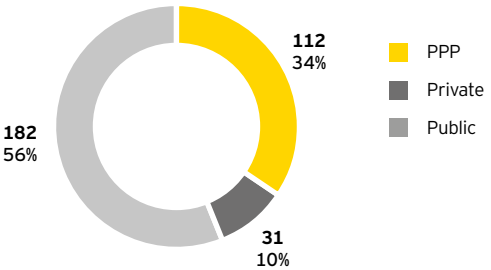
The second-largest direction of planned infrastructure investments is road and bridge construction. This mainly includes projects under the jurisdiction of the state corporation Avtodor and those in the Russian transport strategy through 2030.

The greatest quantity of projects is expected to be realized in the power and utilities segment (including electric power supply, water supply and gas supply infrastructure projects).

Sector	Number of projects	Sum of planned financing, US$b
Air transport	34	21.9
Inland water transport	9	4.7
Maritime transport	14	30.5
Power and utilities	148	175.2
Railway transport	43	462.4
Roads and bridges	77	274.6
Grand total	**325**	**969.4**

Source: EY Knowledge analysis

Among the 325 analyzed projects, 44% assume the participation of private investors (either PPP or fully private).



Source: EY knowledge analysis

According to the plan, there are more air and maritime transportation infrastructure projects set to receive PPP financing than those set only to receive public financing. Thirty-nine projects with the participation of private investments are planned in these segments.

Source of financing/Segment	Number of projects	Sum of planned financing, US$b
Public	**182**	**284.4**
Air transport	9	1.0
Inland water transport	9	4.7
Power and utilities	106	162.1
Railway transport	22	81.8
Roads and bridges	36	34.7
PPP	**112**	**676.7**
Air transport	24	21.0
Maritime transport	14	30.5
Power and utilities	13	5.4
Railway transport	21	380.6
Roads and bridges	40	239.2
Private	**31**	**8.3**
Air transport	1	0.0
Power and utilities	29	7.7
Roads and bridges	1	0.7
Grand total	**325**	**969.4**

Source: EY knowledge analysis

Most investment projects are located in Western Russia, which has higher population density and features more economic activity than the Eastern part of the country.

325 – Number of planned or realized infrastructure projects
969.4 – Volume of planned investments, US$b

Source: EY knowledge analysis

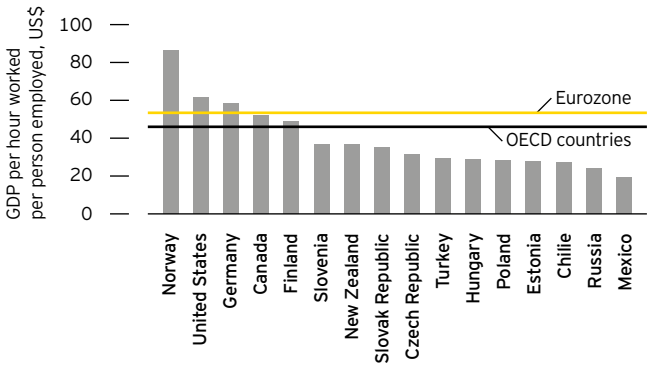
Meanwhile, the positive impact of infrastructure development has been proven by the experiences of other countries. The most cited effects are:

- Lower costs of production
- Increased net output for the national economy
- Widening labor catchment areas
- Increased competition
- Increased inward investment
- Reorganization of land use
- Previously inaccessible sites opened for development

The overall effect of infrastructure investments is increased productivity, a key goal for many companies operating in Russia.[2]

Productivity is clearly higher in countries with more developed infrastructure. In both areas, Russia lags behind the EU and many other comparable countries.

Organization for Economic Cooperation and Development (OECD) countries by GDP per person employed



Source: OECD; Expert RA calculations

In Russia the same correlation holds true: labor productivity is highest in the areas where the infrastructure is most developed. The top 10 list of regions with the highest labor productivity includes traditional leaders such as Moscow and St. Petersburg as well as resource-rich regions like Tyumen oblast and Komi republic. In addition, there are two regions, Tatarstan republic and Kaluga oblast, where labor productivity over the last five years has correlated with active investment in infrastructure development.

2 "Labor Productivity and Growth," *Global Finance*.

Respondents profile

For this survey, we actively targeted 150 key decision-makers with experience in infrastructure projects in Russia.

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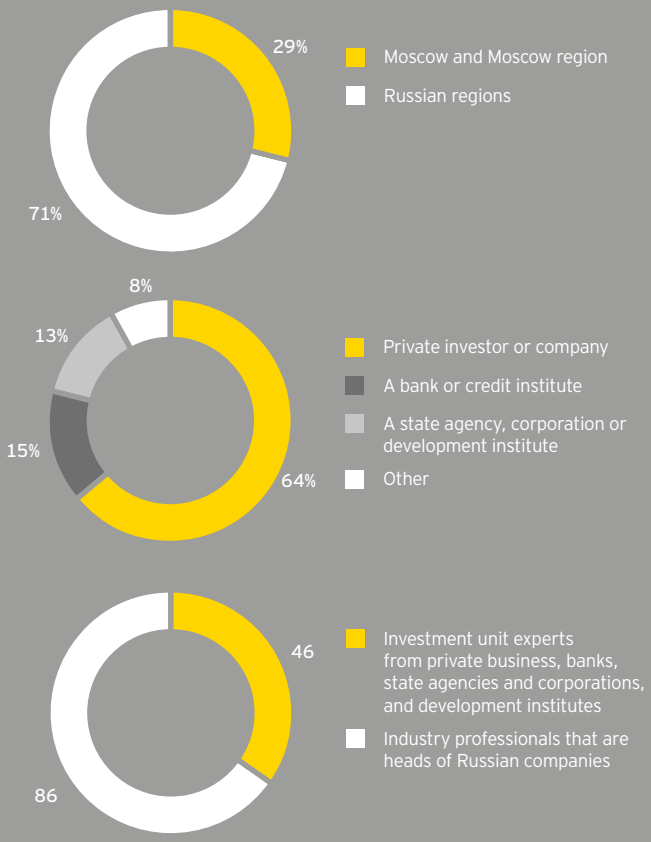
18 Russian heads of major international businesses

+

132 Respondents from Russian business and state institutes



The survey was conducted in February and March 2014.

Key issues for infrastructure development in Russia

Suma Chakrabarti

President,
The European Bank for Reconstruction and Development

The main barriers to infrastructure development in Russia and actions to reduce regional differences

With many emerging economies suffering from a slowdown and capital outflow, the gap between infrastructure needs and ability of the governments to deliver infrastructure investments is getting ever wider. Russia is keen to increase both infrastructure investment and the private sector's share in it to speed up infrastructure development. A growing trend in the last decades has been to take the share of the private sector in a country's infrastructure investments as a measure of such quality. Russia has a long way to catch up both on the increasing infrastructure investment as share of GDP (4% in 2006–10) and private sector participation. The share of private sector as a percentage of cumulative infrastructure investments in Russia over 2006–2010 is estimated at 16%. The same indicator for the US was 29%, India – 40%, EU new members – 44%, EU old members – 64%, and Chile – 66%.

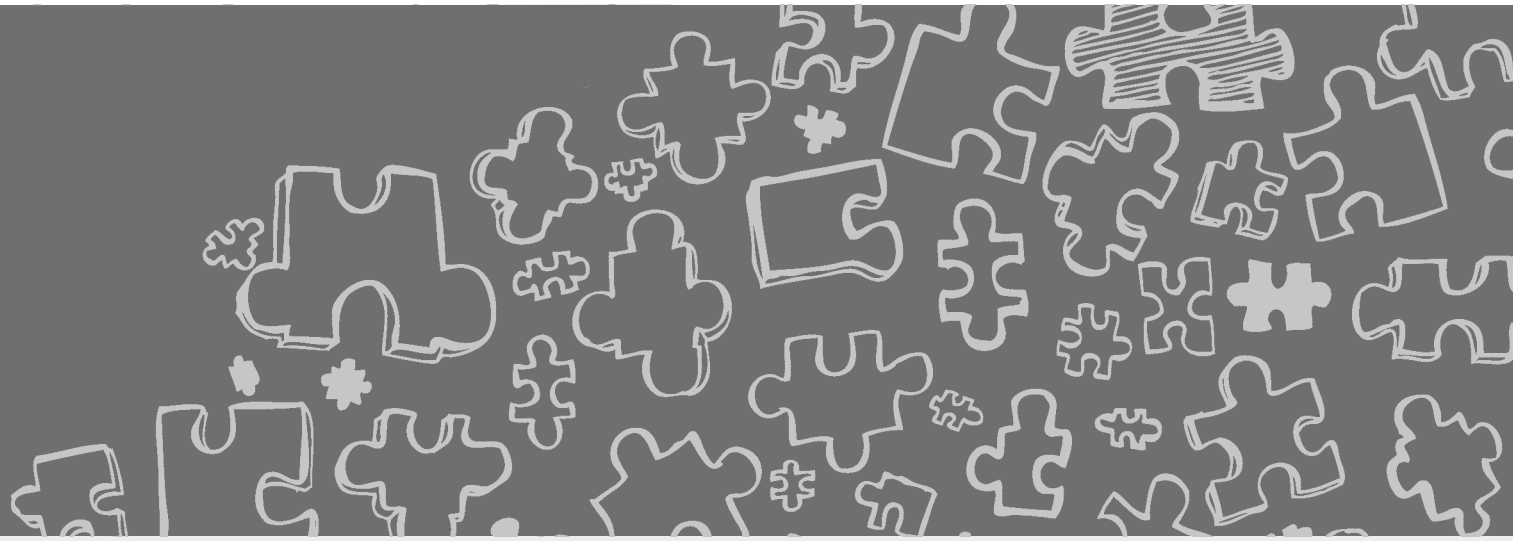
The main challenge in the infrastructure sector (and not only in Russia) is that of consistently managing to structure and deliver projects that are both bankable and sustainable. Under Russia's G20 presidency, the issue of project preparation was taken up and proposals made to enhance project preparation capabilities. This theme has been taken on by the current Australian G20 presidency.

Infrastructure projects are generally very complex, not only legally, but also financially and technically. Despite the adoption of the Concession Law back in 2005, what singled out Russia until recently was simply the lack of a project pipeline in which to invest. However, this is starting to change after years of ground work by the public side.

Russia is still developing its approach to the project life cycle, which broadly consists of three main stages: project origination, project preparation and, finally, project implementation and monitoring. The first two require substantial improvements for a PPP market to take off. The infrastructure market is still in its infancy in Russia with the first Russian PPPs achieving financial close only in 2010. With the notable exception of Pulkovo airport, none of the other transport infrastructure PPPs has yet completed the construction stage.

To build a sustainable infrastructure PPP pipeline, PPP units need to be more actively used on both federal and regional levels to concentrate expertise and improve coordination in the origination and preparation of projects. The availability of appropriate local capabilities is key; there are many examples across the world of how local capabilities, when available through dedicated project or PPP units, have made a significant difference. The successful track record of institutional capacity building in the roads sector (Avtodor, Rosavtodor) is a notable example and the pipeline of road-PPP projects confirms this. Other sectors, including railways, ports and airports, inland waterways and municipal infrastructure, still lack PPP expertise. Similar initiatives should be replicated in other sectors and on a regional level. Serious work is needed to improve the enabling environment. Aspects that require further refinement include the revision of the public debt framework to account for PPP public commitments, as well as guidelines for the federal government on PPP best practices to ensure private sector concerns are addressed. The legal framework needs to be developed further (e.g., the PPP law, budget law and land law) and efforts must continue to involve stakeholders in a policy dialogue in order to achieve a balanced outcome.

There is also a need to involve international development banks (IDBs) and international experts in the preparation of infrastructure projects to harness accumulated experience for the development of a sustainable pipeline of projects in the long term.



What can be done to make projects more effective and high hopes for private capital and foreign investors

There is a robust pipeline of transport infrastructure projects under development by government agencies, state-owned companies and regional authorities. The road sector perhaps gets the most attention due to the high visibility of such projects. The year 2014 looks promising in terms of both the number and volume of transport infrastructure contracts to be awarded. Major projects include the M11 toll road, a bridge spanning the Lena river near Yakutsk, a truck tolling PPP and a long-term supply and maintenance contract for Moscow metro carriages.

There is clearly a strong will in Russia to develop infrastructure on the basis of a PPP framework. Although there are reports that over 850 deals were signed on the basis of the Federal Concessions Law or regional PPP legislation, less than a dozen of these incorporated such essential features of PPP deals as transparent procurement rules, detailed risk- and benefit-sharing structures for both public and private participants and lender participation in deal negotiation and documentation.

PPPs are not a panacea; the private sector will not substitute public financing and expertise. What the private sector can do is to provide the latest technologies and valuable expertise along with the required financing. Structuring many potential projects on a PPP basis in the Russian infrastructure market would leverage the role of the public sector in coordinating and leading infrastructure development. This will require the enhanced development of public sector expertise to prepare well-structured PPP projects, something MDBs and international experts can help develop. Russia has unique long-term potential for infrastructure development due to the healthy state of public finances, current high demand for infrastructure development and good prospects for such demand to continue.

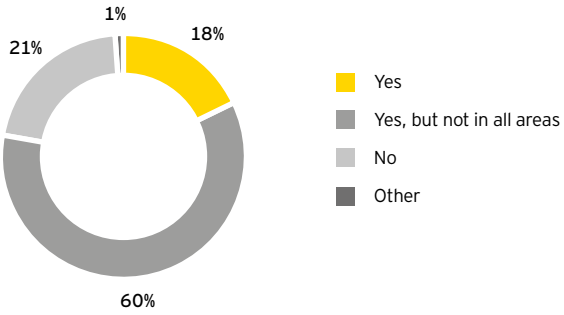
> *"The main challenge in the infrastructure sector (and not only in Russia) is that of consistently managing to structure and deliver projects that are both bankable and sustainable."*

Survey results

The purpose of this survey is to illuminate the current state of Russia's infrastructure sector and policy, with an eye toward how to improve both moving forward. EY collected information from a diverse cross section of businesspeople and industry experts. Within the broad respondent group there are three subgroups: industry professionals, state and investment unit experts, and major foreign investors doing business in Russia. The results generally demonstrate uniformity in the responses across the sub-groups, but in the cases where differences of opinion exist, those differences are highlighted and analyzed.

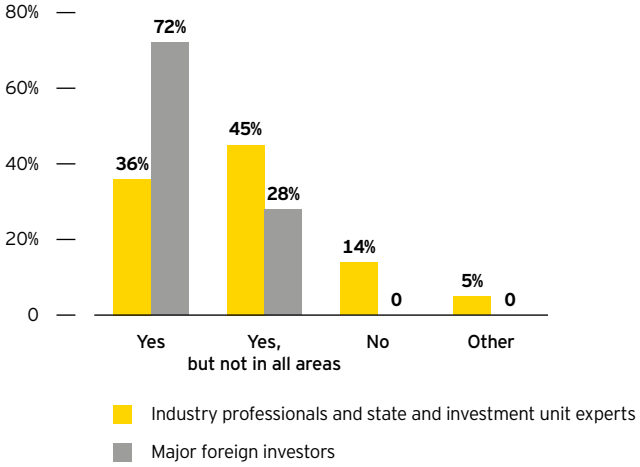
Infrastructure as the way forward

Do you understand the strategy and direction of Russian infrastructure development?



Asked whether they understand the strategy and direction of Russian infrastructure development, the majority of respondents (60%) answered yes, but not in all areas, which suggests that the broad outlines of the strategy are known and understood, but that not all details are clear. The overall range for those providing this answer was from 52% (state and investment unit experts) to 67% (major foreign investors). On the whole, 78% of respondents gave a positive response (yes or yes, but not in all areas), demonstrating both that business is focused on infrastructure as a major opportunity and that the strategy is known among a diverse cross section of companies.

Do you agree that investments in infrastructure will become a significant impulse for Russian economic development?



There are two key viewpoints on the issue of whether investments in infrastructure will become a significant impulse for Russian economic development. Industry professionals and state and investment unit experts generally agree that infrastructure investments will spur economic development (81% answered yes or yes, but not in all areas). However, 45% of the combined group expressed the opinion that investments could only prove effective in certain areas. Industry professionals were generally more skeptical of the universal applicability of infrastructure investments to economic growth, with 50% offering a qualified yes and 34% offering a clear yes, in comparison with a more even 37% and 39%, respectively, of the state and investment unit experts.

Global insights

The effect of infrastructure development on economic growth – the infrastructure investment program in Ontario, Canada

In 2014, Ontario will conclude a large infrastructure spending program that began in 2006. The program has raised productive capacity in the province by 2.1% over the baseline forecast (had the program not gone into effect) and raised the average resident's annual income more than US$1,000 over the baseline. Fifty-five percent of the total spending initiated within the framework of the program has gone to machinery and equipment, while the remaining 45% has been allocated to structures.

The program has had a very positive impact on the well-being of Ontario's residents and the economy as a whole. GDP has been on average US$11.3b higher per year than the baseline when counting direct, indirect and induced impacts. The program has supported 167,000 jobs per year, which has led to a population increase due to interprovincial migration.

Annual personal income has averaged US$7.4b per year more than the baseline since the program began, with corporate profits US$2.2b higher over the same period.

As companies and individuals have benefited, so have the provincial and federal governments, which have seen an average of US$1.6b more in personal income taxes collected than the baseline prediction and US$583m more in corporate income taxes collected. In addition, indirect tax revenue has been higher than the baseline by an average of US$1.6b per year since 2006. In sum, of the cumulative US$96.7b spent on the infrastructure program, Ontario's provincial government will recoup US$16.7b via increased tax revenue from 2006 to 2014.[3]

3 *The Economic Impact of Ontario's Infrastructure Investment Program*, The Conference Board of Canada.

Table 2. Total public infrastructure investment – economic impact in Ontario (key economic indicators)*

	2006	2007	2008	2009	2010	2011	2012	2013	2014	Annual average
Total investment generated (US$m)	6,736	9,609	8,810	10,181	13,411	11,802	12,152	12,502	11,491	10,744
GDP at market prices (US$m)	7,966	11,643	8,875	10,333	15,748	13,742	14,533	15,332	14,927	12,567
Personal income (US$m)	4,268	6,251	5,451	6,141	9,205	8,340	8,660	9,250	9,424	7,443
Corporate profits (US$m)	1,288	1,790	170	1,556	3,075	1,947	2,865	3,652	3,804	2,239
Population of labor force age	8,555	15,697	23,580	31,533	41,457	51,892	62,140	72,532	82,310	43,300
Unemployment rate (level difference in rate)	-0.65	-0.91	-0.76	-0.83	-1.20	-1.05	-1.06	-1.08	-1.05	
Personal income tax collections (US$m)	996	1,476	1,255	1,341	1,906	1,725	1,779	1,883	1,870	1,581
Corporate tax income collections (US$m)	450	601	49	570	877	437	625	792	846	583
Total indirect taxes (US$m)	761	1,209	1,262	951	1,348	1,790	1,963	2,156	2,530	1,552

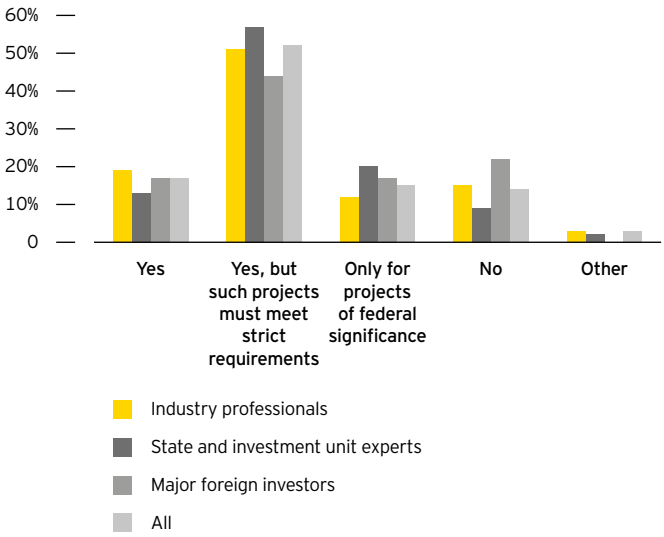
* level difference = shock minus control, except where otherwise indicated

Sources: Ontario Ministry of Infrastructure, The Conference Board of Canada.

Major foreign investors spoke out much more strongly in favor of the ability of infrastructure investments to drive economic growth. Seventy-two percent of respondents from this subgroup answered affirmatively, with the other 28% qualifying their affirmative answer. These opinions match the experiences of two other large countries – the US and China – that instituted large-scale infrastructure projects in response to the global economic downturn of 2008–09. While those projects were generally considered to have created or saved millions of jobs and prevented greater damage to the two national economies, questions were raised in the US about the economic merit of certain projects.

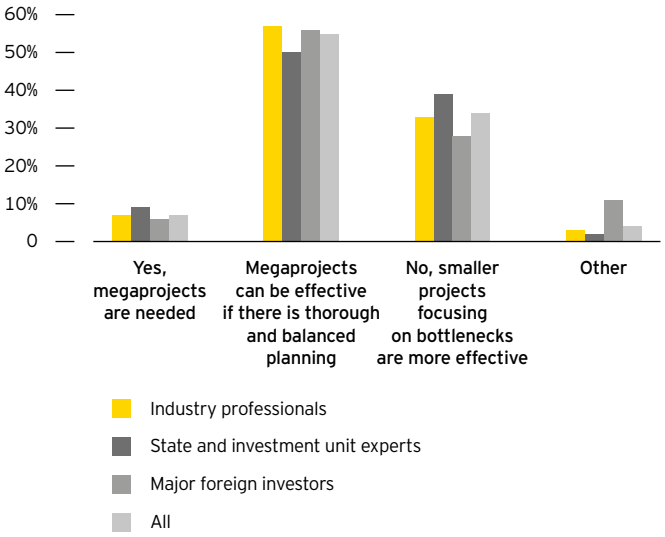
China, in particular, views infrastructure investment as a necessary precondition for sustainable economic growth. The Chinese Government believes that reliable infrastructure is the foundation on which a modern economy is built. So, even before the global economic crisis of 2008–09, China was investing in infrastructure projects in a major way. From 2001 to 2004, investment into rural roads alone grew by 51% each year.[4]

Do you consider investment projects an effective way of using the resources of the National Welfare Fund?



Respondents believe, in general, that investment projects are an appropriate use of the National Welfare Fund. However, only 17% said that is true in all cases. The majority (52%) said that any projects receiving money from the National Welfare Fund must meet strict requirements. A notable minority (15%) said that only projects of federal significance should be considered. Interestingly, major foreign investors were much less inclined to dip into the National Welfare Fund than industry professionals and state and investment unit experts (22% vs. 13%).

Do you think megaprojects are effective, or is it better to concentrate on local projects tied to business projects (special economic zones, industrial parks and clusters)?



Megaprojects have a checkered history in Russia. On the one hand, some of the country's most important infrastructure was the result of a megaproject. Examples include the Moscow metro and many of the country's hydroelectric power plants. However, there have also been megaprojects that came in way over budget or were never completed.

4 *Chinese infrastructure: The big picture*, McKinsey & Company.

It is that history of mixed success that appears to have influenced the views of the survey respondents. Only 7% feel that megaprojects are needed. The majority (55%) believe that megaprojects can be effective, but that there must be thorough and balanced planning of attendant infrastructure as well as investments in related production facilities and social infrastructure. The state and investment unit expert subgroup is more pessimistic (39% said smaller projects focusing on bottlenecks are more effective) than the industry professionals or major foreign investors, 33% and 28% of which, respectively, replied in the same manner. Overall, the respondents are somewhat skeptical of megaprojects, but believe they can be effective in the right situation and with proper planning and development.

Global insights

"Future generation" funds and infrastructure investment

Russia would not be the first country to use a "future generation" fund for infrastructure investments. Australia's Future Fund, created in 2006, is charged with strengthening the long-term financial position in the country. In 2008, the Future Fund Board of Guardians and Management Agency took on the added responsibility of managing three special purpose funds that support spending on education, health and infrastructure.

An example on the regional level is the Alaska Permanent Fund, created by the people of Alaska in 1976 with the goal of safeguarding some of the state's oil revenue for future generations. The current asset mix, on top of everything else, includes an allocation to infrastructure projects.[5]

Risk continues to be a major factor for investors, and infrastructure investment usually makes up no more than 10% of total investment. Projects are generally categorized according to risk, return and life-cycle. Core and core plus projects are the least risky, while opportunistic projects carry the most risk. Value-added projects generally lie somewhere in between the two extremes and are usually focused on the transport sector.

Risk-reward spectrum (less risk, less return to the left)

Core and core plus	Value-added	Opportunistic
Bridges Tunnels Toll roads	Airports Seaports	Development projects
Pipelines Energy transmission and distribution	Rail links Contracted power generation	Satellite networks Merchant power generation
Water and waste-water systems	Rapid rail transit	Non-OECD country infrastructure
Low risk, low return		High risk, high return

Source: Larry Kohn, *Investing in infrastructure*, CIPFA Scotland Asset Management Workshop, 1 March 2007.

5 International Forum of Sovereign Wealth Funds.

Calibrating the role of megaprojects in the further development of the transport sector

Kirill Androsov

Chairman of the Board of Directors
of Aeroflot and Russian Railways Moscow Representative Office

Russia currently has a range of strategies and state programs for infrastructure development, but many question how well they've been thought through. I think the megaprojects planned in Russia are well integrated into the plans for our country's economic development. Thorough planning by agencies, design institutes and every imaginable analytical center has gone into each of them. Russia currently has a Federal Target Program for transport sector development, including medium- and long-range programs with a planning horizon of 2020. Strategies have been developed for other sectors as well. Many projects are based on estimated macroeconomic models. For example, it was estimated how the high-speed rail project would affect the population's mobility and how that mobility would impact medium-term growth in GNP. But the same question always comes up with regard to such projects: the quality of implementation. We admittedly have little experience in quality implementation. Recently, with the exception of the Sochi Olympics, Russia hasn't seen any megaprojects.

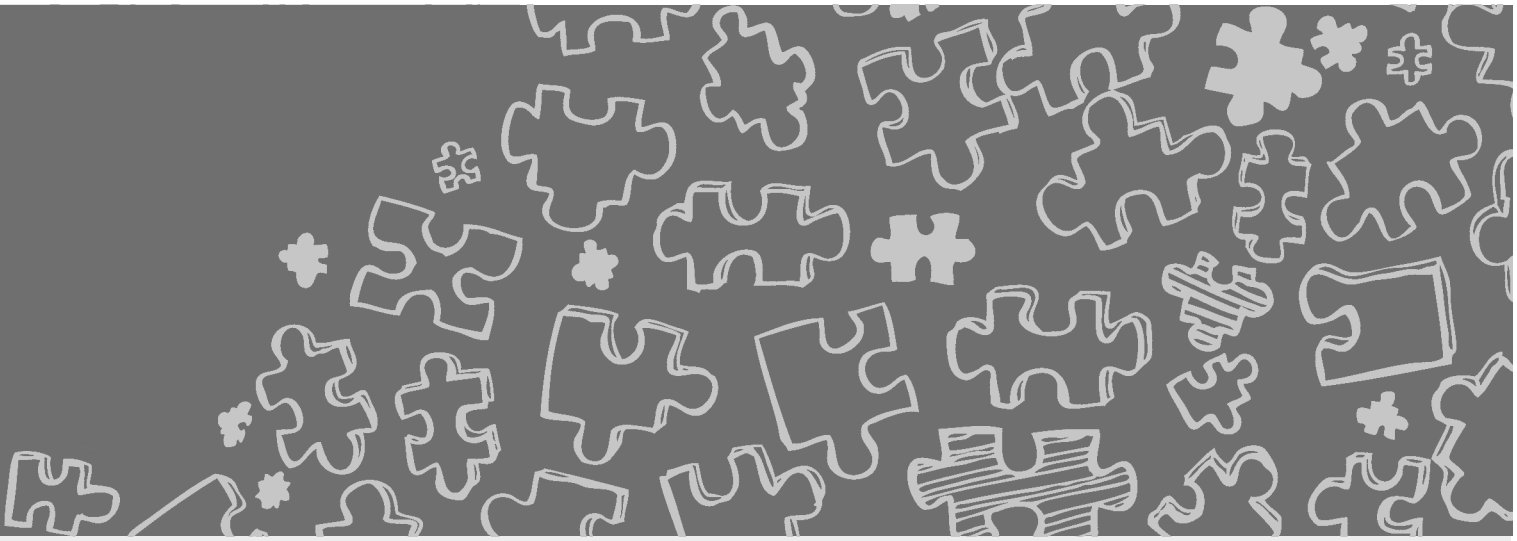
The few projects that have received state support include the reconstruction of the Baikal-Amur and Trans-Siberian railways, construction of the central ring road and, with some qualification, the introduction of high-speed traffic on the Moscow-Kazan route. Of course, I could mention a number of other ideas for the development of airport infrastructure, runways, road service, rapid and regular-speed transport, but these are generally still in the discussion stage. In my understanding, megaprojects require a major capital investment (say, five billion dollars and up per project) and must also contribute to the development of the regional and national economy and growth in GNP. Other projects, in my view, may provide solutions for transport between urban centers, regions and agglomerations, but they don't have a multiplier effect.

In my opinion, it's important to involve foreign investors and concessionaires, as they have more experience and technology, which makes a major difference. For example, construction solutions that are very costly in terms of time and resources might be implemented more efficiently and at substantially less cost, but that requires experience. The best option of all is not just to hold a tender for a foreign contractor, but to form joint ventures entailing commitments to localize production and transfer technology.

Megaprojects are intended to stimulate domestic production and demand. The quantity of products and services produced in Russia should be maximized and the export component minimized – by means of localizing production, among other things. In addition, advanced technological solutions are often used in megaprojects. This opens up new opportunities for our design institutes and contractors, which can implement and develop these technologies, ultimately improving the overall efficiency of infrastructure and civil construction.

The use of proven instruments will make it possible to implement infrastructure projects more efficiently. For example, we make little use of bank oversight of infrastructure projects – a mechanism that has proved itself internationally. Such oversight means that, before financing is released, the organization responsible for a project should demonstrate to a single authorized bank that the work is consistent with the designs and estimates. A conclusion should also be obtained on quality control. Such oversight prevents a project from exceeding the initial estimate and deviating from the designs in an uncontrolled manner.

Major infrastructure projects should definitely be cofinanced with private investors who assume equity and credit risks and are thus motivated to control costs and achieve cost efficiency. The state may guarantee repayment and a minimum return on investments.



Infrastructure megaprojects may receive financing from the National Welfare Fund, but such financing should be interest-bearing, repayable and for a fixed period. While interest is not the deciding factor, repayment and a fixed period are critical for the National Welfare Fund. The purpose of the National Welfare Fund is to promote long-term development and growth in GDP and also, when necessary, to make up for any deficit in the pension system. Thus, if megaprojects receive financing from the National Welfare Fund (and such a decision has been made for at least two projects), the agency responsible for the investment (today, this is the Ministry of Finance) should have complete assurance that it will be interest bearing, repayable and for a fixed period. Financing from the National Welfare Fund isn't a gift; it's an investment. This needs to be understood by all.

Today, the regions' ability to develop their transport infrastructure rationally and efficiently doesn't inspire confidence at the federal level. Time and again we've seen the regions build roads just for the sake of building, and such roads haven't had any significant macro-effects for the region or the country as a whole. That's why the view is common that planning should be more effective at the federal level. Of course, the factor of trust plays an important role when it comes to effective spending for the development of transport infrastructure. Some of the eighty-three regions clearly know how to do it right and some don't know at all. Here we need to take a selective approach.

Our country has an enormous territory, most of which is totally undeveloped in terms of transport infrastructure. I'm firmly convinced that we'll be rewarded a hundredfold for everything we invest in transport infrastructure in the next 10 to 20 years. There's a wonderful old Arab saying: "Wherever there's a road, you'll find a merchant."

"The best option of all is not just to hold a tender for a foreign contractor, but to form joint ventures entailing commitments to localize production and transfer technology."

"Financing from the National Welfare Fund isn't a gift; it's an investment."

Global insights

Implementing megaprojects – The Golden Quadrilateral (India)

The Golden Quadrilateral (GQ) is a recently completed highway network connecting four major cities in India: Dehli, Mumbai, Chennai and Kolkata. The network comprises 5,846km of highway, making it the fifth largest in the world. The project began in 2001 and was 95% finished by 2006. The project ultimately came in below budget, but the completion date was pushed back due to challenges in awarding contracts, land acquisition and zoning, funding delays and related contractual problems – most of which are unavoidable in a project of this scale.

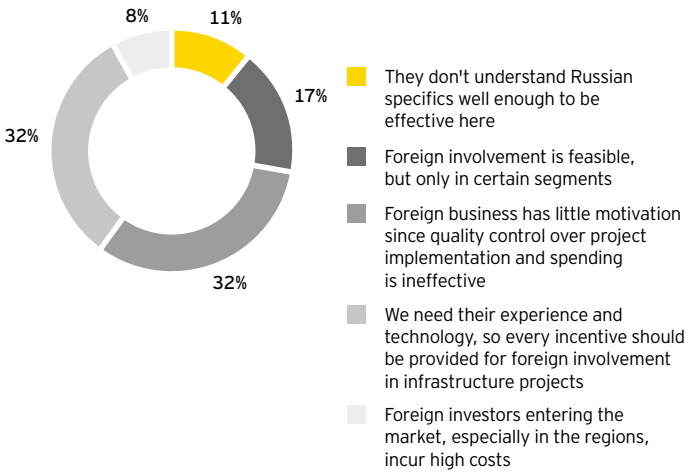
The GQ project, executed via public-private partnership, included a variety of PPP models. Traditional arrangements, such as build-operate-transfer and joint ventures, were utilized, as was annuity concession, which succeeded in attracting private finance to situations in which the aforementioned structures would carry too much risk. Annuity Concession keeps revenue risk with the Government, but transfers initial financing, construction, operations and management and project completion risk to the private sector.[6]

The GQ has already yielded numerous benefits. It has eased the movement of people and products, opened up new locations for industrial activity, reduced wastage in the agriculture sector and contributed to a decrease in vehicle operating costs and time. State-run steel plants have reported a 50% decrease in transportation time and a 15% decrease in transportation costs following the upgrade.[7]

6 Kathleen Booth, *New Approaches to PPP in the Roads Sector: India's Annuity Concessions*.

7 "Highway to Prosperity: The economic benefits of the Golden Quadrilateral project are already visible", *Business Today*.

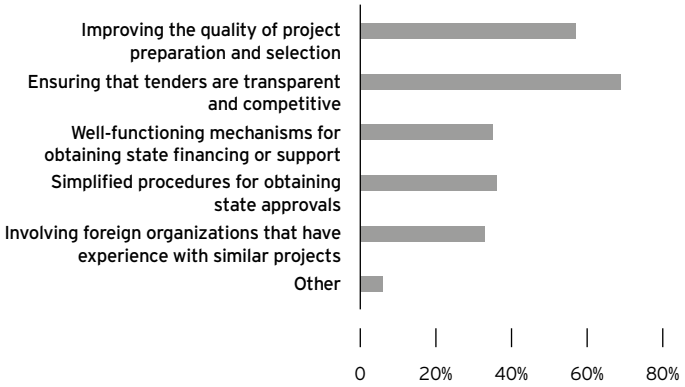
What do you think about the prospects of involving foreign business in Russian infrastructure projects?



Asked about the prospects of involving foreign business in Russian infrastructure projects, 32% of respondents said every incentive should be provided for foreign involvement in infrastructure projects and, correspondingly, 32% said foreign business has little motivation since quality control over project implementation and spending is ineffective. Seventeen percent said foreign involvement is feasible, but only in certain segments. Combined, the other two options were chosen by less than 20% of respondents. The results demonstrate that while foreign involvement would be welcome, the respondents do not believe that there are currently sufficient incentives to entice international companies to invest in Russian infrastructure projects.

Improving the effectiveness of infrastructure projects

What measures would make investments in Russian infrastructure more effective?

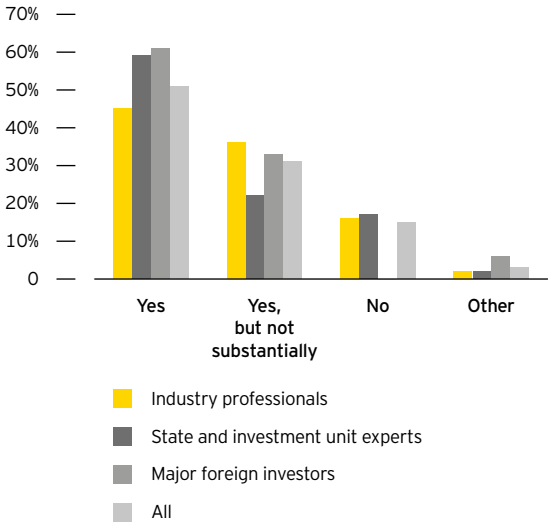


The survey results show that questions around planning and the regulatory environment are the areas where there is the most room for improvement. Sixty-nine percent of all respondents, including 78% of major foreign investors, said that ensuring transparent and competitive tenders would make investments in Russian infrastructure more effective. In addition, 57% believe that improving the quality of project preparation and selection will make a positive impact.

State and investment unit experts and major foreign investors both stressed the importance of improving the quality of project preparation and selection (78% and 66%, respectively), while 53% of Industry professionals believe that ensuring transparent and competitive tenders would do the most good. About one-third of respondents believe the following measures would prove effective: well-functioning mechanisms for obtaining state financing or support, simplified procedures for obtaining state approvals for projects involving foreign organizations that have experience with similar projects and involving foreign organizations that have experience with similar projects.

The opinions of the respondents show that while there is room for improvement in government policies and the regulatory structure, policy-makers could make the greatest impact by focusing on execution – well-planned projects that employ more transparent and competitive tender processes have the potential to improve infrastructure investment effectiveness greatly, are likely to save the Government money on implementing projects and could lead to greater long-term economic growth.

Do you think the involvement of private partners or investors (including the use of PPP mechanisms) would make state investments in infrastructure projects more effective?



A majority of the respondents (51%) believe the involvement of private partners or investors (including the use of PPP mechanisms) would make state investments in infrastructure more effective. Noteworthy within that figure is the fact that only 45% of industry professionals agreed, but a strong majority of state and investment unit experts (59%) and major foreign investors (61%) believe private involvement would be a positive development. A solid minority (31%) said that private involvement could help, but not very much. Only 15% of respondents think that the involvement of private investors would not make state investments in infrastructure more effective.

Taking the long view on infrastructure projects

Lou Naumovski

Vice President and General Director,
Moscow Representative Office, Kinross Gold Corporation

My perceptions of the national infrastructure strategies are, in one word: ambitious. From our perspective as a mining company, we would like to see more attention paid to ways in which the abundant natural resources in the Far East could be exploited in the most cost-effective way possible. What does that mean, how do we see that? We see it as a review of the regulatory framework that has so far restricted investment in mineral exploration and that has stymied growth in foreign investment in hard-rock minerals in particular, and which has essentially allowed the tremendous wealth in the Far East to go virtually unexploited or developed.

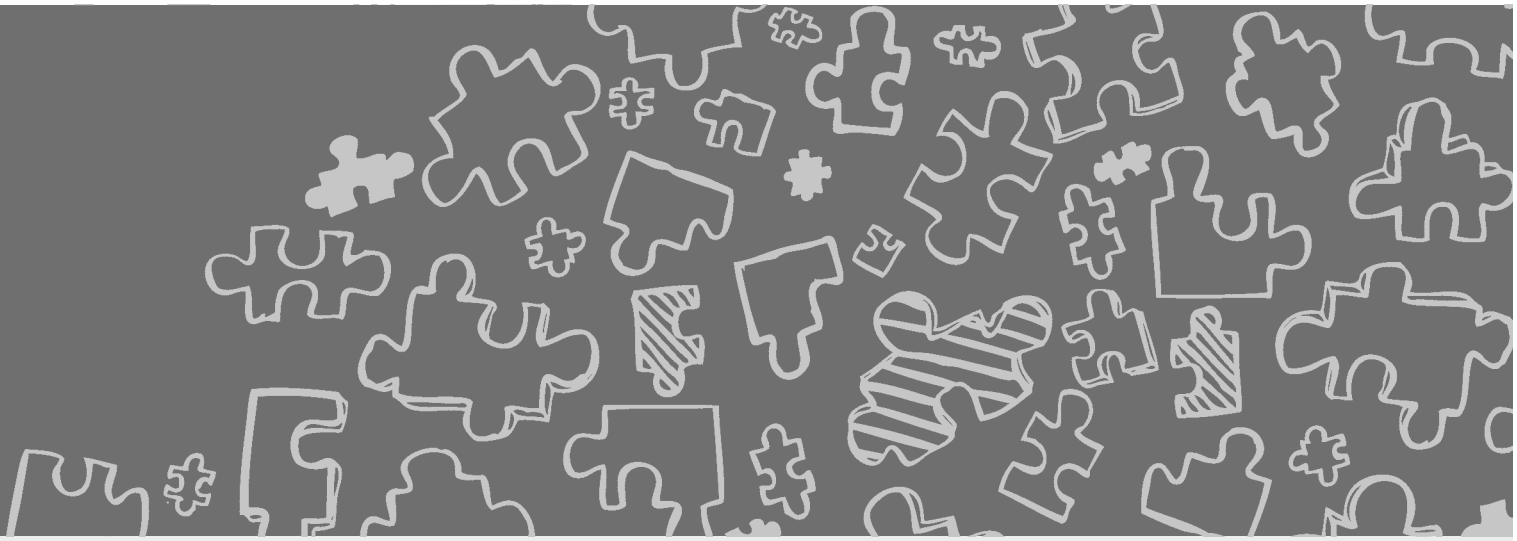
The areas that we work in will, for a long time, if not forever, remain partially populated, and dozens of mines may not provide sufficient demand to make such energy-generating infrastructure projects economically viable. In Canada, our experience in the Far North demonstrates that if there is no cost benefit, then building permanent roads does not make much sense, especially when you consider the freeze and the thaw and the necessity for very high-cost maintenance of these roads. So, we would like to see more attention paid to ways in which regulations can be reduced and streamlined to encourage more investment, both domestic and foreign. For certain parts of the Far East where we operate, large infrastructure projects, whether fully government-funded or public-private, may not be the most cost-effective and the most appropriate way in which to develop those parts of the Far East. However, well-targeted and appropriately sized infrastructure projects in air and sea transport can play an important role in support of mining projects.

There are many examples globally where public-private partnerships have worked in large infrastructure projects. As a rule, these projects take decades to come together, and have usually been set in regions where there has been some more advanced development already – urban areas, where the demand for electrical power has been very definitively demonstrated. Franklin Delano Roosevelt's "New Deal" demonstrates that there has to be existing demand, rather than an expectation of future demand, even generations hence. In some parts of the Russian Far East, I'm not sure that such large infrastructure projects would make sense today or in the next 20 years. Obviously, in areas such as Khabarovsk, Vladivostok and other urban areas it does make sense. And the work of the Government to prepare for the APEC meeting a couple of years ago was a wonderful example of where it's appropriate. There is demand – people will be using the bridges. The university buildings that were built will be occupied.

Attracting private investment

In terms of making projects more efficient, global examples are everywhere – what not to do and what to do properly: the role of the private sector, the way in which tenders are organized, the degree of transparency and the public accountability for such projects. Those are really, really important. I think any government would want to avoid future criticisms by properly structuring infrastructure projects. I don't advocate creating new organizations. Capital has no passport. Capital is only interested in demonstration that there will be a return on the investment, that the funds used will be transparently accounted for and that what people invest in is exactly what they end up getting. I think a lot of attention and effort needs to go into developing these structures in a way that, perhaps, hasn't been done in Russia before.

Foreign companies do not represent a panacea. There are certain things that foreign companies do better: organization, management and capital cost controls. In other jurisdictions, there is less likelihood that a project will require the approval of multiple agencies to have access to natural gas or electricity or other utilities, water for example. If Western companies were to become involved, then the usual procedures that are followed in Russia would have to be extremely streamlined because companies will not tolerate, if they've got large contracts, if their reputation is on the line, delays or the ability of minor-level officials to hold up projects because their



signature is key on a certain document. Foreign engineering and construction companies and foreign sources of capital are not a panacea, but if they are encouraged to come, then they have to be on terms that are significantly different than how Russian companies work on Russian projects with purely Russian approaches to doing business. I think it's in the best interests of the Russian Government and the Russian people if such projects were made as transparent as possible. There's no advantage for the society as a whole when projects are held up or when foreign investors or foreign engineers and construction companies run away in disgust because they are not able to deal with the way that business is sometimes conducted in this country.

Our experience in the Far East

Improving labor mobility is perhaps the most challenging aspect of developing the Far East. Depopulation happened, but when you look at Chukotka as an example, yes, the population has shrunk, but most of the people who left were military people. And people sometimes forget that, up until 1990, there were tens of thousands of troops located in Chukotka. Anywhere in the world where there is a military base, there are settlements to supply that military base.

So, what can keep people in these remote areas? Well planned and targeted infrastructure projects. For example, in Chukotka again, until the last couple of years, Kinross used probably 75% or 80% of all shipments that came into the Port of Pevek. The port was not in great shape. How do you improve that port? As the opportunity to attract ships from the Northwest Passage, not only from the Pacific, increases because of ice-free navigation, that port can become more important. As more companies invest in mining projects in Chukotka, that port should become more important. But who's going to pay for its development? The Government has to have the capacity and political will to pay for some of these infrastructure improvements, and ports is one example, and not try to get a three- or a five-year payback for those types of investments. Those types of investments are 20-, 25-year paybacks. Therefore, if they're too eager now to raise tariffs at a port like that, which has very few users, the incentive is lost for people to support that.

If you want labor to move freely, you need better connections, you need better aviation. You shouldn't have to fly from Anadyr through Moscow to get to Khabarovsk. Because we needed to move labor, we built our own airstrip, one of the few privately constructed airstrips in all of the Far East. If the Government can encourage private companies to build those types of infrastructure facilities, that's what they should be doing. They don't even have to spend a lot of money, but they need to be very judicious and very appropriate in the degree of control that they place. Money is not the answer, necessarily, to these challenges. It's a holistic approach, starting, first of all, with the question, "What's the reason for such little investment there in the first place?" And in our sector, it's regulation. In aviation, it's regulation. In ports, it is underinvestment and the desire to recoup whatever government investment is put in there much too quickly.

> *"As a rule, these projects take decades to come together, and have usually been set in regions where there has been some more advanced development already."*

Global insights

Infrastructure planning — the development of China's high-speed rail

China started planning its high-speed rail network in 1990, when the Ministry of Railroads submitted a proposal for a high-speed line between Beijing and Shanghai. Four years later, the State Council commissioned a feasibility study for the line. Supporters believed the proposed line would lead to economic growth, while critics pointed to high costs in other countries that have inhibited profitability.

In 1998, a debate began over conventional rail vs. maglev technology. At the time, Chinese planners were split on the question, but in 2000, the Shanghai Municipal Government agreed to purchase a turnkey TransRapid train system from Germany. The system would connect Shanghai's downtown area to Shanghai Pudong International Airport. In 2004, it became the first commercially operated high-speed maglev, and to this day it remains the fastest train in China, peaking at 431km/h and covering the 30.5km route in 7.5 minutes.

Ultimately, though, maglev technology did not catch on, due to its high costs and German refusal to share technology. At the same time Shanghai's maglev was being developed, China began modernizing its existing, conventional tracks. From 1997 to 2007, the network underwent six rounds of "speed up" campaigns, which improved the grade through tunnels and bridges, reduced turn curvature and installed continuous welded rail. In 1997, China had 752km of track that could handle speeds above 160km/h. By 2007, that number had risen to 14,000. In 2006, the State Council selected conventional track high-speed rail (HSR) over maglev technology, highlighting the choice in its *Mid- to Long-Term Railway Network Plan*.

The next step was the deployment of CRH-series trains, which further increased travel speed. Years earlier, China had recognized that domestically produced high-speed trains were not reliable enough for commercial transportation. As China looked to international companies to supply the trains, it stipulated that a major goal was to benefit domestic manufacturers in the long term through a transfer of technology and know-how that would enable China to develop domestic manufacturing capabilities.

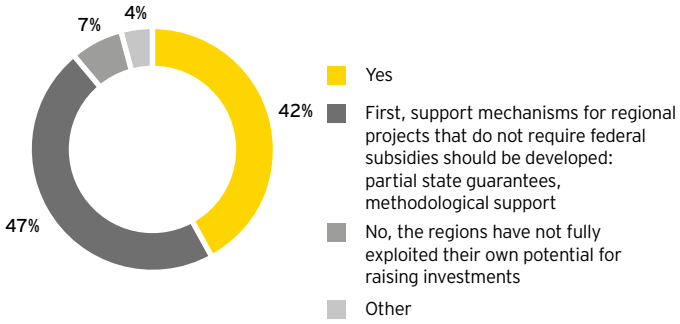
In June 2004, the Ministry of Railroads solicited bids for 200 high-speed train sets that could travel up to 200km/h. Major companies submitting bids included: Alstom of France, Siemens of Germany, Bombardier Transportation based in Germany and a Japanese consortium led by Kawasaki. Alstom, Bombardier and Kawasaki all won portions of the contract. Siemens was excluded from this round because it refused to lower its price for the train sets and the technology transfer. The next year, Siemens lowered its bidding price and managed to win a tender for 60, 300km/h train sets. Each of the foreign companies adjusted their HSR train sets to work with China's common standard. Assembly was completed through local joint ventures or cooperation with Chinese manufacturers. Ultimately, the technology transfer enabled Chinese engineers to design their own new CRH trains, each modeled after one of the foreign trains.

The Chinese-designed trains are able to transport passengers from Beijing to Shanghai (1,463km) in under six hours, half the time needed by previous trains. Higher-speed trains also allowed more trains to run on the tracks, increasing the country's rail transport capacity. However, because HSR trains were forced to share tracks with freight trains, the only way to increase speed and capacity further was to build passenger-dedicated HSR tracks. The Government continues to manage, plan and finance the HSR expansion, recently embarking on a campaign to build passenger-dedicated HSR tracks. The current five-year plan (2011–15) calls for 16,448km of new passenger dedicated high-speed tracks to be built.[8]

8 *China Railway Market Study*, SwissRail Industry Association, January 2011.

Challenges

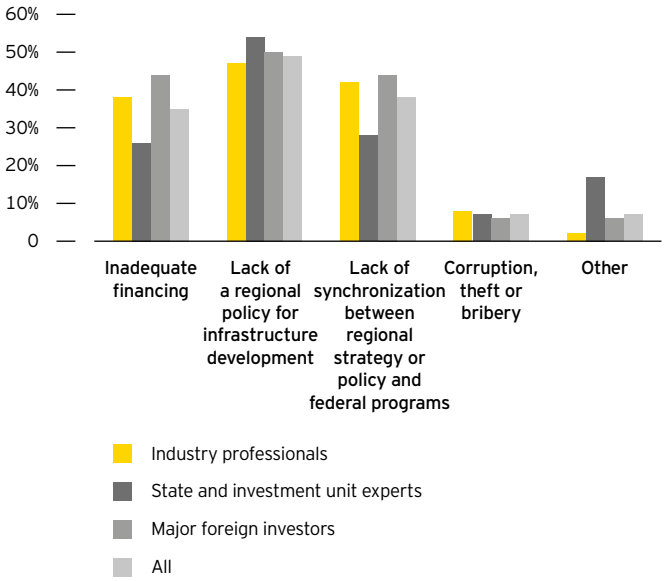
Recently, many experts have noted that the Russian regions are cutting back on investments in infrastructure due to growing budget deficits. Do you think regional infrastructure development should receive federal financing?



As Russian regions have reduced their investment into infrastructure projects in recent years, some have called for federal financing of regional infrastructure development projects. The survey respondents were split fairly evenly in their opinions on this topic. Forty-seven percent said that before any federal financing for regional projects was approved, support mechanisms for regional projects that do not require federal subsidies should be developed: partial state guarantees and methodological support. This response addresses a key area that would greatly improve the overall investment climate.

A slightly smaller, though still substantial, minority (42%) agreed without qualification that federal financing of regional projects would be helpful. However, it is noteworthy that only 33% of major foreign investors agree, a decidedly smaller percentage than Industry professionals (42%) and state and investment unit experts (46%). Only 7% of respondents believe that the federal government should not finance regional projects because the regions have not fully exploited their own potential for raising investments.

What do you consider the main obstacles of infrastructure development in your region?



When asked about the main obstacles to infrastructure development in the region where the respondents are active, 77% pointed toward policy concerns. Forty-nine percent cited a lack of regional policy for infrastructure development, while 38% pointed to the lack of synchronization between regional strategy or policy and federal programs. The third most popular response was inadequate financing, noted by 35% of respondents. Importantly, only 7% consider corruption, theft or bribery to be one of the main obstacles to infrastructure development.

Partnering with the private sector and neighboring countries to develop Russia's Far East

Alexander Galushka

Minister for the Development of the Russian Far East

The development of the Russian Far East is a national priority, and above all, this task requires infrastructure solutions. The region, which for geographical and historical reasons is underpopulated and underdeveloped, can and should match the level of fast-growing economies in the Asia-Pacific region.

The network of advanced development zones being created today should help bring the development of the Russian Far East up to international standards. In conditions of intense competition in the Asia-Pacific region, all means available must be used to improve the Far East's investment appeal. We need not only special economic conditions, but also advanced standards and regulations, customs procedures, town-planning solutions and, naturally, the appropriate infrastructure. We have an ambitious goal: to bring the world's best administrative procedures to bear on concrete tasks.

Major projects planned at the federal level unquestionably make an essential contribution to the development of the Russian Far East. Modernization of the Baikal-Amur and Trans-Siberian railways, construction of a new bridge across the Amur in the Jewish Autonomous District – all this shows how important it is to coordinate federal programs with regional development plans.

The state and development institutions (including the Far East and Baikal Region Development Fund) will be directly involved in financing national projects and projects of advanced development zone residents. The state's involvement, however, doesn't solve the problem of minimizing costs. International experience shows that optimal, competitive projects are successful only if they can interest private capital. State financing is only to get investments started. The main emphasis should be on private investments. This approach not only controls costs, but helps to ensure that projects are efficiently implemented.

The best solutions for infrastructure projects involve the use of foreign experience. That's why we're working actively with our neighbors – for example, companies in Japan, China and South Korea. We're interested not just in taking part, but in coordinating projects with the infrastructure development of partner countries for the creation of efficient logistical and transport corridors. We're also interested in having investors stay in the region long term and share their advanced technological solutions with us.

The development of infrastructure should also solve the traditional Russian problem of labor mobility. To bring specialists into the region, new jobs need to be created as well as adequate housing and infrastructure to make life comfortable.

The goals have been set, and they are achievable. We now have a lot of hard, pragmatic work to do.

"The main emphasis should be on private investments. This approach not only controls costs, but helps to ensure that projects are efficiently implemented."

Global insights

Regional infrastructure development – Andhra Pradesh, India

India has delegated significant legislative freedom to state governments, which has led to a boom in PPP-financed infrastructure projects in recent years.[9] Andhra Pradesh, one of India's leading states in both the number and value of PPP projects, has set up a number of institutions to promote infrastructure. These include: Andhra Pradesh Industrial Infrastructure Corporation (APIIC), AP Invest, AP Tourism Development Corporation, Infrastructure Corporation of Andhra Pradesh (INCAP), AP Road Development, AP Urban Finance & Infrastructure Development Corporation and the state PPP cell, which serves as a central node for all PPP projects and supports the state's PPP initiatives.

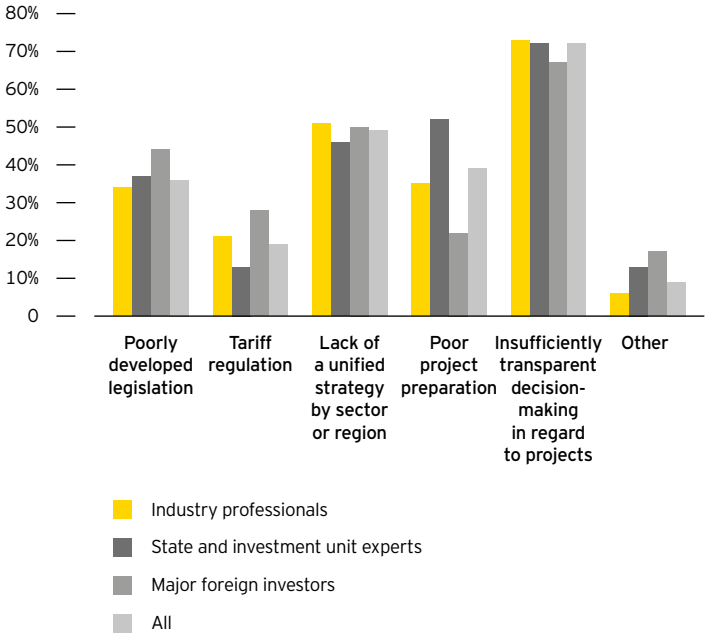
In 2001, Andhra Pradesh was the first state to enact the AP Infrastructure Development Enabling Act. It covers all state implemented infrastructure projects and sets guidelines for the selection of developers. It also outlines PPP options and the support available from the state for infrastructure projects. The state offers direct financial support via the state's share of viability gap funding (VGF), tax exemptions, asset-based support to provide government-owned land at concessional lease charges and administrative support in connecting to utilities.

The result of the efforts of Andhra Pradesh and other Indian states is clear. PPP projects have risen from 86 nationwide in 2004 to 758 in 2011, with project value increasing by a factor of 10, from INR340b to INR3.8t. PPP financing in India is typically utilized for roads and highways (53.4% of projects in 2011) and urban development (20.1% of projects), but railways, airports, energy and ports have all benefited from state-based PPP projects.[10]

9 "Highway to Prosperity: The economic benefits of the Golden Quadrilateral project are already visible", *Business Today*.

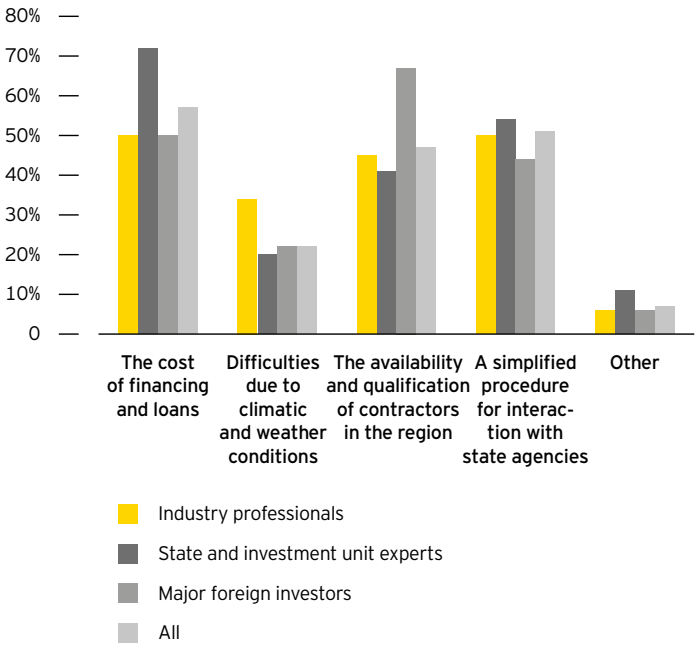
10 *Accelerating public private partnerships in India*, FICCI and EY.

What, in your opinion, are the main obstacles to the development of infrastructure in Russia? (up to three variants)



Respondents were also asked about the main obstacles to the development of infrastructure nationwide. By a wide margin (72% vs. 49% for the second most cited factor, lack of a unified strategy by sector or region), respondents said insufficiently transparent decision-making in regard to projects was the main obstacle to the development of infrastructure in Russia. Other significant obstacles include poor project preparation (39%) and poorly developed legislation (36%).

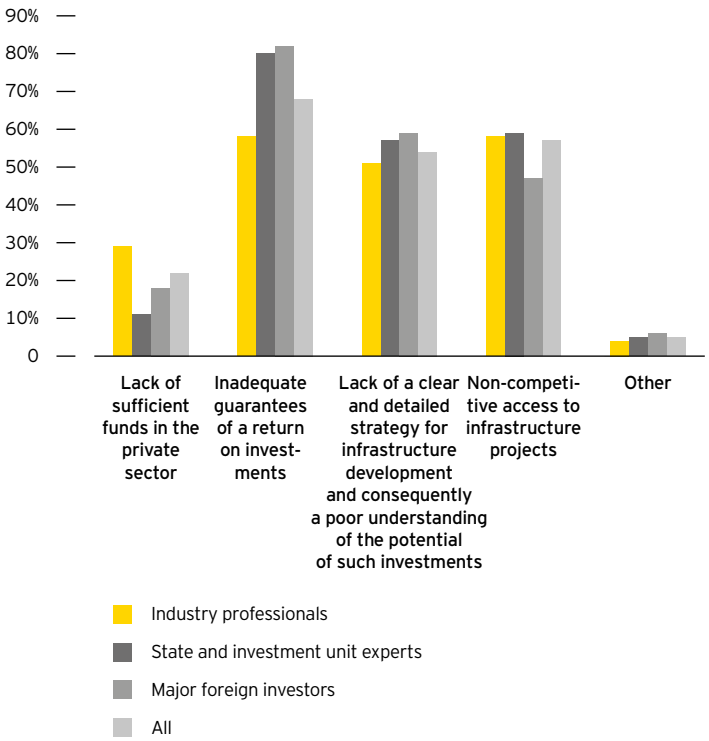
What are the key factors affecting the cost of infrastructure projects in your region? (up to three variants)



The survey asked about the key factors affecting the cost of infrastructure projects in the region in which the respondents conduct business. Respondents were allowed to select up to three factors and, indeed, three answers stood out above the rest: the cost of financing and loans (57%), a simplified procedure for interaction with agencies (51%) and the availability and qualification of contractors in the region (47%). The three sub-groups were generally in agreement, with ranges of answers spread not more than 14 percentage points, except for the cost of financing and loans. Seventy-two percent of state and investment unit experts cited this factor, while only 50% of industry professionals and 44% of major foreign investors did.

Even though 57% indicated that the cost of financing and loans was a key factor impacting the cost of infrastructure of projects, it should be noted that in an earlier question only 35% of respondents said that inadequate financing was one of the main obstacles to infrastructure development.

What do you consider the chief obstacles to obtaining private investments for infrastructure? (up to three variants)



Uncertainty is cited as a chief obstacle to obtaining private investments for infrastructure. Three choices received the support of a majority of the respondents. Sixty-eight percent of respondents said inadequate guarantees of a return on investments is a chief obstacle to obtaining private investments for infrastructure, while 57% noted non-competitive access to infrastructure projects and 54% said lack of a clear and detailed strategy for infrastructure development and consequently a poor understanding of the potential of such investments.

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Area designation

- High concentration of infrastructure investments
- Medium concentration of infrastructure investments
- Low concentration of infrastructure investments
- To be determined

Infrastructure

29/84.5 – 29 – number of planned or realized infrastructure projects; 84.5 – volume of planned investments

1/* – * – volume of planned investments is less than US$1m

- Roads and bridges
- Railway transport
- Maritime transport
- Power and utilities
- Air transport
- Inland water transport
- Trans-Siberian Railway
- Northern (additional) route of the Trans-Siberian Railway
- Southern (additional) route of the Trans-Siberian Railway
- Baikal-Amur Railway
- Moscow–Kazan High-Speed Railway
- Highways and high-speed roads that are under the trust management of State Company Avtodor
- Constructed highways and high-speed roads that are under the trust management of State Company Avtodor
- Prospective highways and high-speed roads

Graphic symbols

KURSK REGION — Regions; Borders; OKA — Rivers; KURSK — Cities; Railway; Roads

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