Infrastructure Index:
Bridging the gap

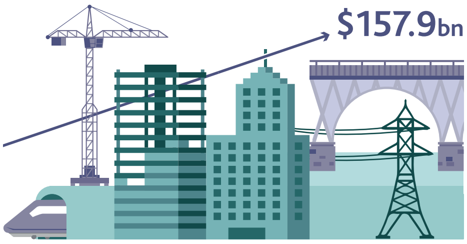
Worldwide Infrastructure Opportunities

Evaluate the potential for investment opportunities across the world with the Nabarro *Infrastructure Index: Bridging the gap.*

The Ones to Watch

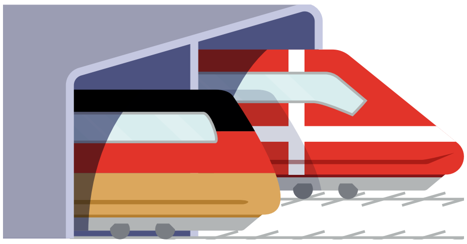
UK Rank: 1

Opportunities include the £43bn HS2 high speed rail link and the Northern Powerhouse initiative.



Canada Rank: 2

Infrastructure projects are valued at $157.9bn, 14% increase on 2014.



Germany Rank: 6

Construction of the Fehmarnbelt Tunnel linking Germany and Denmark has commenced. When completed the tunnel will be the world's longest road/rail tunnel.

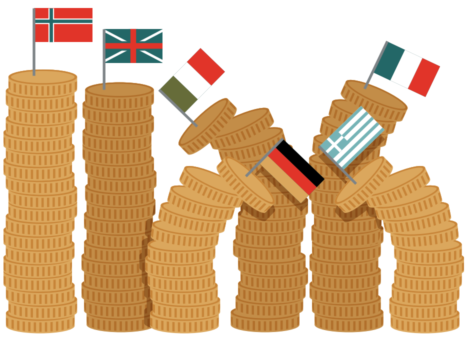
Top Five Rankings

Ranking		Index Score
1	UK	174
2	Canada	161
3	US	153
4	Australia	152
5	UAE	142

2015 Regional Rankings

UK

A combination of stability, an innovative business environment and high rate of private participation make the UK the most attractive for investment opportunities.



Europe

All six European markets score in the top ten worldwide for national security. But the volatility of the Euro has damaged the Eurozone's appeal.

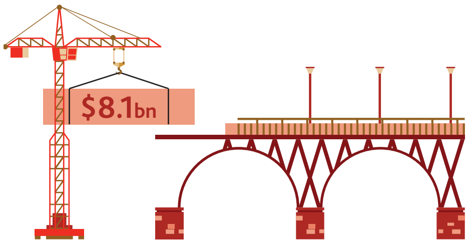
	Rank:		Rank:
UK	1	Italy	14
Germany	6	Spain	18
France	8		
Norway	11		

Turkey — Rank: 10

Government targets include increasing its airport capacity from 165m to 400m people by 2023. Other active markets include transport, healthcare, education and energy.

Dubai (UAE) — Rank: 5

Expo 2020 is bringing $8.1bn of public investment into new infrastructure. This includes a 16 lane road bridge over the $2bn Dubai Water Canal.

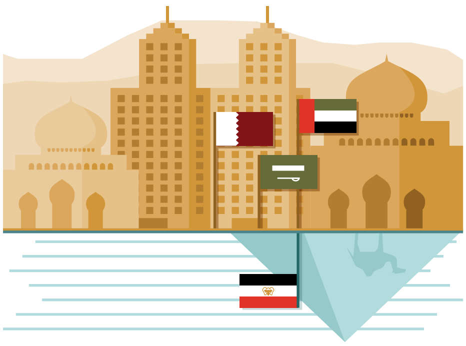


India — Rank: 17

The government of India has set a target of 100GW solar energy output by 2022 potentially to become one of the largest solar power markets in the world.

Singapore — Rank: 7

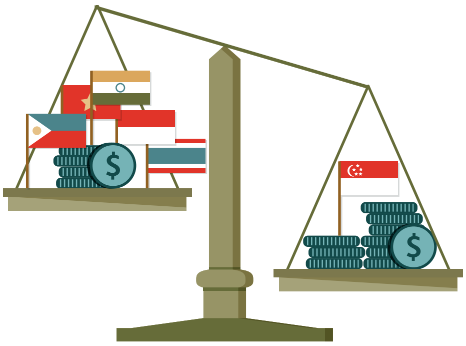
Significant projects expected including the $1.1bn Changi Airport expansion: a new terminal to serve 140m passengers a year.



Middle East

Lenient tax regimes are a big draw for the region. Qatar, Saudi Arabia and UAE score well. However, Egypt comes out bottom as the worst performing global market.

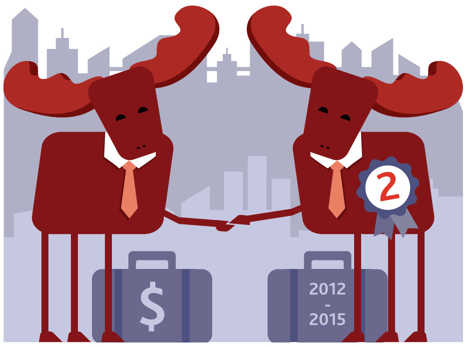
	Rank:		Rank:
UAE	5	Kuwait	16
Turkey	10	Jordan	23
Saudi Arabia	13	Egypt	25
Qatar	15		



Asia-Pacific

The Asian markets suffer from flashpoints of political instability and while Singapore is soaring, other Asian markets score poorly on 'credit and stability'.

	Rank:		Rank:
Australia	4	Thailand	20
Singapore	7	Indonesia	21
India	17	Malaysia	22
Philippines	19	Vietnam	24



The Americas

Canada is the real success story here and takes 2nd place overall in the index. It's seen a significant increase in private investment over the last three years.

	Rank:
Canada	2
US	3
Brazil	9

Infrastructure Index: Bridging the gap

Contents

About the research

The Nabarro Infrastructure Index reviews countries against a number of market conditions including economic status, political stability, tax environment, ease of doing business, sustainability and innovation and private participation. This report reflects historical, current and pipeline information to provide an accurate snapshot of each country's investment opportunities.

Bridging the gap

Creating an attractive environment for investment is never easy. It often seems there is a plethora of opportunities, but very few reach a fruitful conclusion. However, it is not all doom and gloom; you just need to know where to look. The gap is slowly being bridged as investors armed with significant capital become better equipped to understand and accept the risks.

Since the release of our last Nabarro Infrastructure Index, which highlighted the most attractive hotspots for infrastructure investment, there have been notable changes within certain markets. The UK topped our last report as the most attractive market for infrastructure investment. High scores in sustainability and innovation as well as ease of doing business were key factors in putting the UK in pole position. Since then, the Middle East has emerged as a serious contender, China's economy has experienced a downturn and we have faced a Eurozone crisis. In amongst all of this activity, the demand for essential infrastructure has never been greater.

Our latest market analysis, *Infrastructure Index: Bridging the gap* is a global snapshot of investment hotspots but this time, we have increased the number of markets to consider and rank 25 countries across the globe in order of investment attractiveness. It has been designed to serve as an indicator of which jurisdictions promise to be the most fertile ground for infrastructure investments, and which have delivered in the past.

The results for the UK have remained strong, ranked top for infrastructure investment once again; the Middle East has begun to shine in the top five; and Singapore is a solid centre of excellence for Southeast Asia. Devolved decision-making is having a positive impact as demonstrated by four of the top five ranked countries in the Index. The National Infrastructure Commission is intended to create clarity and certainty – the future looks promising for UK infrastructure.

Our latest Index provides guidance for those countries looking to create a more welcoming environment for private investment, and direction for investors about which countries can deliver on their potential.

We'd like to take this opportunity to thank our interviewees who have given up their time to share their views and insight on the infrastructure sector in their respective markets.

> "The National Infrastructure Commission is intended to create clarity and certainty – the future looks promising for UK infrastructure."
>
> Kristy Duane

Kristy Duane
Head of Infrastructure, Nabarro LLP
T +44 (0)20 7524 6568
k.duane@nabarro.com
uk.linkedin.com/in/nabarrollp
@nabarrollp

The Index results

The countries below have been ranked on a number of factors including: economic status, political stability, tax environment, ease of doing business, sustainability and innovation and private participation. A full methodology can be found on page 26.

The Index Results Table

Country	Rank	Index Score	Movement since last Index
UK	1	174	↔
CANADA	2	161	NEW
US	3	153	↑
AUSTRALIA	4	152	↓
UAE	5	142	↑
GERMANY	6	128	↑
SINGAPORE	7	121	NEW
FRANCE	8	109	↓
BRAZIL	9	108	↓
TURKEY	10	107	NEW
NORWAY	11	104	NEW
CHINA	12	101	↓
SAUDI ARABIA	13	95	NEW
ITALY	14	94	↑
QATAR	15	91	↑
KUWAIT	16	86	NEW
INDIA	17	84	↓
SPAIN	18	84	↑
PHILIPPINES	19	83	↑
THAILAND	20	79	NEW
INDONESIA	21	72	↑
MALAYSIA	22	60	↔
JORDAN	23	41	↑
VIETNAM	24	40	NEW
EGYPT	25	34	↑

Key:
- ↔ No change
- ↑ Moved up
- ↓ Moved down
- NEW New entry

Market movement

Top 4 movers up

- +7 UAE
- +7 Spain
- +7 Italy
- +5 Philippines

Top 4 movers down

- -4 China
- -3 France
- -3 India
- -1 Brazil

The UK: Still on top

The UK retained its top spot in this year's Nabarro Infrastructure Index, ranking highly in all areas, and boasting a healthy environment for investment.

The UK enjoys a history of private investment which goes back over 20 years. It leads the way in sustainability and innovation. However, it cannot afford to be complacent as its gap over the competition has narrowed sharply. The UK has improved its tax environment since our last Index in 2012, but even so, still remains way behind Qatar who lead the way in this area.

How the UK retained the top spot

Infrastructure UK, a unit inside the Treasury, draws on a heritage going back to 1997 and oversees a £411bn ($630bn) project pipeline. The UK's privatised airport, rail and water operators remain attractive targets for secondary market investment, and Scotland has developed its own infrastructure procurement approach under the supervision of the Scottish Futures Trust.

In both private participation in infrastructure and credit and stability, the UK has improved its score since the last Index. If the UK's new government are looking for evidence that economic policies were creating fertile ground for investment, they should look no further than the UK's performance in the Index.

The UK's pipeline looks promising and includes investment in new nuclear capacity and second high-speed rail line. It also includes Thames Tideway Tunnel, a £4.2bn 'mega' project to extend London's historic sewer network. The project has attracted global interest given the innovative ground breaking delivery model used to attract financing. The model developed by Thames Water, Defra, HMG and Ofwat culminated in the establishment of a new utility company at the end of a procurement process taking just 13 months. The success of the delivery model has been evidenced by a significantly lower than anticipated impact on customer bills and can be attributed to a number of factors, including the effective partnership working between the development team and more recently the bidders.

The government launched the National Infrastructure Commission, and recruited Lord Adonis from the opposition Labour party to run it. This could be a game-changer for infrastructure delivery in the UK. They have already been involved in the recent Heathrow Airport expansion approval.

The previous administration may have been guilty of holding back infrastructure spending to make a wider point about the importance of cutting public spending. The new government now has the chance to put infrastructure investment at the heart of its legacy.

Why is the UK number 1?

Credit and stability

70

Sustainability and innovation

67

Tax environment

70

National stability

88

Ease of doing business

88

Private participation rate

92

Interview

Gershon Cohen, Aberdeen Asset Management

Gershon Cohen is the head of infrastructure funds at Aberdeen Asset Management, which has around $500bn in assets under management. Cohen's team comprises 24 professionals located in London, Edinburgh, Paris, Madrid and Sydney, managing $3bn in assets.

The Aberdeen infrastructure group manages interests in over 120 public-private partnership (PPP) projects worldwide. For Cohen, the countries most welcoming to private infrastructure investment are not always the most promising. "Procurement of major infrastructure assets is politically generated, and democratic principles often seem to stall or disrupt large scale infrastructure delivery. The construction and management of the infrastructure assets and their useful lives extends beyond a single political cycle, and their benefits might be felt by future generations rather than today's voters and taxpayers."

The UK has a long history of public-private partnerships (PPP), and this has helped it create a robust framework for PPP procurement. "The UK has been through a few cycles now. A period during the 1970s when the public sector had shown it could not deliver, and then a period after the introduction of the Private Finance Initiative (PFI) in the late 1990s when the private sector earned generous returns but also took some heavy losses. Recently the UK seemed to reach the right balance with Scotland's non-profit distributing (NPD) and England's PF2 model."

Non-profit distributing model

The NPD model caps the return of the private sector on a PPP contract by requiring it to contribute its risk capital as subordinated debt rather than equity. As of March 2015, the programme had seen £1.5bn ($2.3bn) of projects enter construction. Aberdeen Asset Management was a member of the consortium that won the £270m NHS Dumfries and Galloway hospital project, which reached financial close in March.

The NPD programme, as well as the UK's PF2 programme, represent tweaks to the UK's PFI, which involved £60bn in public investment up until 2011, before the incoming Coalition government reviewed the programme. Increasing pressure both domestically and from the European Union's statistical body, Eurostat, for government to keep PPP liabilities on-balance sheet have combined with pressure on public spending to limit the number of transactions that are coming to market in the UK.

Lost opportunity

Cohen views the period since the 2008 crisis as a lost opportunity in the UK, and now goes as far as calling the PPP market "essentially closed". "The saddest thing about the years following 2008 was that we were dealing with commodity prices that were very low and interest rates that were very low, and we did not capitalise on them by attracting more investment in infrastructure. Both of these conditions are still present to a great extent and we are still not exploiting them."

There are opportunities for Aberdeen elsewhere in Europe, though Cohen sees the market as "challenging", and he also points to the US, which "relative to its size has a small programme, but in global terms is starting to bring strong numbers of projects forward". Elsewhere, Colombia, Mexico and Chile are starting to impress, according to Cohen.

Cohen notes "you need to have political commitment, consisting of high-level political champions who can communicate their reasons from that level, a competitive market for the bidding of projects combined with ready availability of finance, a legal system free of political interference, and the means of monitoring projects for the life of concessions."

That last factor is crucial, and often overlooked. "It allows you to make information available to other departments and control your programme properly." Governments, suggests Cohen, are starting to acquire this capacity.

> "You need to have political commitment, consisting of high-level political champions."

Interview

Danny Duggan, Dragados UK and Simon Addyman, London Underground

Danny Duggan is rail director and project director for the Bank Station Capacity Upgrade at Dragados UK.

Simon Addyman is programme and project manager for the Bank Station Capacity Upgrade at London Underground, a subsidiary of Transport for London (TfL).

The Facts: £560m upgrade project; 1 new entrance; 1 new platform; 3 new lifts; 12 new escalators; 190 metres of moving walkways; and 600 metres of new tunnel

Transport for London (TfL), the British capital's transport authority, picked Dragados, a part of Spain's Grupo ACS, to carry out the work on the Bank underground station in 2013.

London Underground's Bank station handles over 52.3m passengers per year. In recognition of the Bank Station Capacity Upgrade's (SCU) significance, Duggan took on direct responsibility for the project on top of his overall responsibility for Dragados' rail activities in the UK.

Innovative Contractor Engagement (ICE)

The Bank SCU is notable as the first time that TfL has used its ICE process for delivering a project. ICE involves a greater degree of sharing of information between the public and private sectors during the early stages of the bidding phase.

"This is the first time in 30 years of working in UK rail that the client gave us detailed information about how they priced risk," says Duggan. "They gave us what they didn't want, and didn't hold their cards too close to their chest." TfL provided bidders with its business case assessment tool, another first, and also made sure that unsuccessful bidders were compensated for their contributions.

"TfL made it possible for us to help them improve the whole-life value of the project. They'd typically want a project to produce a benefit: cost ratio of at least 1:5 to secure initial funding agreement, and before going out for bids had managed to increase that ratio to 2.4:1. We were eventually able to improve that to 3.5:1 at bid and improve further during design development," says Duggan.

The importance of local planning and engagement

Central government plans for increased rail investment in Northern England, and news of a National Infrastructure Commission are welcomed by Duggan. "One of the things I've always wanted government to do is ring-fence infrastructure spending. Assets with a 60-year life and 60-year maintenance requirements need the political cycle to be put to one side. The appointment of Adonis looks encouraging."

The development and procurement of the Bank Station Capacity Upgrade took place alongside a shift in the way that London Underground (LU) procured and financed infrastructure. Addyman has been involved from the start in 2011.

Financing the project

TfL and London's mayors, have taken greater leadership in planning, procuring and financing infrastructure. The financing for the Bank project comes from a combination of revenue, UK Government grant, TfL's borrowing in the bond market, and some of the proceeds of a loan from the European Investment Bank.

TfL ended up bringing the two PPP concessions for the underground back in-house and the Bank upgrade's financing showcased TfL's ability to rely on its own financial resources. But the station upgrade proved that central government still has a role in the way the capital's projects are delivered, and also that drawing on private sector creativity does not always mean using private sector equity.

Value creation rather than cost

Addyman stresses that LU focused on value creation by placing all of its tender evaluation weighting on the benefit created rather than purely on cost. "We had a maximum budget that we developed during dialogue with bidders, and went for approval based on that number. All of the bidders indicated that they were comfortable with that number."

LU chose Dragados to deliver the project, ahead of a consortium of Vinci and Costain, in 2013, and the work on the station is scheduled to be completed in 2021. The project is smaller than the £7bn Crossrail, a commuter rail project running east-west across London that has captured the public imagination and involved considerable construction work in central London. But the Bank upgrade will probably have a much greater impact on how TfL works with private contractors.

Europe: Suspension on progress

The Infrastructure Index includes two of the Eurozone's largest economies - France and Germany - and two others - Spain and Italy - that are slowly recovering from the European debt crisis that ran from 2009 to 2012. Fixing the Euro's woes will be just as important to their changing fortunes, as the €315bn ($360bn) Juncker plan for infrastructure investment that the European Commission put forward at the end of November 2014.

Germany missed out on a spot in the top five in part because of its performance in tax environment and private participation, while France's performance in those two areas was at best average. France also scored poorly in sustainability and innovation.

But dragging down both countries was the performance of the wider Eurozone, as measured in credit and stability. Our first Index was released while the crisis was subsiding. The first brinkmanship over Greece and sluggish economic performance across the continent have combined to drag on the value of the Euro.

For international investors with dollar liabilities, the Euro's problems are a very real disincentive to invest in long-lived infrastructure assets, even though France and Germany's credit ratings are still high. Both countries have well-regarded, if underused, PPP programmes, and should be able to use them to spur infrastructure investment rapidly.

Still **France**, which fell three places, is among the big losers in the Index. The administration of François Hollande, which has made tentative steps towards tax and labour market reform, still has room to improve. The impact of the Eurozone crisis on Germany's attractiveness may explain why the integrity of the Euro is such an important consideration for German policymakers.

Spain and **Italy**, while some way behind Germany and France, both gained seven places since our last report. Much of this is down to improvements in their private participation levels. Spain's construction companies remain globally and domestically active. Italy's government is attracting investment in its gas and power grid operators from China State Grid.

What does the future hold for Europe?

The continent's governments may be able to use policy and regulatory measures to compensate for the effects of weak economic demand - at least in attracting infrastructure investment.

European rankings

UK	1
Germany	6
France	8
Norway	11
Italy	14
Spain	18

Interview
Manfred Rosenauer, STRABAG

Manfred Rosenauer is commercial division manager and member of the managing board for European construction firm STRABAG's Austrian operations. His responsibilities include civil engineering and road construction, and around 7,000 employees.

Rosenauer spent nine years running STRABAG's roads operations in Central and Eastern Europe before briefly taking responsibility for Swedish and German rail, and then, from 2014, his Austrian role.

This journey gives him a useful perspective on how governments in Central and Southeastern Europe get infrastructure procurement right and how they get it wrong.

Poor execution

"Romania has huge potential, and a complete lack of necessary primary infrastructure in roads and rail. The government started planning but was not able to develop any projects because of administrative issues. The country had been successful in winning European Union funding, but at least some of the funding had to come from the state, and it did not really have the financial resources."

But for Rosenauer, a government's ability to plan and prepare properly is the most important aspect of successful infrastructure procurement. "The main issue is preparation, which is never flawless, but governments always try and rectify issues after a contract has been awarded." He notes that Romania suffered from both poor planning and poor execution.

"I think in Romania government is aware of planning weaknesses at the top level, but the administrative levels further down are less so. The political spectrum is also fairly wide, so people tend to be nervous about making big changes."

Positive signs

He praises the work of multilateral lenders like the European Investment Bank and European Bank for Reconstruction and Development, and views them as positive forces for integration. But Rosenauer suggests that they could play a greater role in monitoring project tenders and bidding. "Some smaller eastern European countries do not attract a high calibre of engineers and consultants, so there is a gap there."

Rosenauer observes a shift in culture between Southeast Europe and Germany and Austria.

Still, while government in Austria is better placed to procure infrastructure effectively, its needs are much more modest, because government has moved too fast. National government has preferred, with some small exceptions, to procure transport infrastructure directly "and unless there is a change to its budget situation, I do not see that changing," adds Rosenauer.

At the local level, however, there are more opportunities, because urban growth, even in a mature economy like Austria's, is still a huge source of infrastructure development. The city of Vienna has launched PPP procurements for schools and hospitals using a well-regarded template. While Austria's central government is relatively flush, notes Rosenauer, Vienna has had to invest heavily in social infrastructure and housing to meet the needs of a population that is shifting from rural areas to the country's capital.

> "Where I've worked more recently there's been a strong movement in administrative circles to make sure a project happens, and a strong sense of collaboration. In other countries you find that parts of government work against each other, though I think things will improve over time."

Middle East: After the spring

High dependence on hydrocarbons and the dollar help to explain the performance of some of the Middle Eastern countries in this year's Index. The United Arab Emirates climbed seven places to enter the top five, while three other economies - Saudi Arabia, Qatar and Kuwait - came in just below the middle of the table. The currencies of all four countries are pegged to the dollar to some degree which helps their performance.

But low oil prices are starting to have a serious impact on these economies. **Saudi Arabia** is liquidating its currency reserves to plug holes in its budget. It may cut investment by as much as 10 per cent, though it still wants to spend $100bn on transport over the next 10 years.

However, the region's ambitions in infrastructure development remain bold. **Qatar** is pressing ahead with preparations for the 2022 FIFA World Cup, and is toying with the greater use of PPP in procurement, while Dubai has won the bidding for Expo 2020. Saudi Arabia also needs to accommodate better the millions of pilgrims who travel to Mecca each year and therefore will require significant investment in infrastructure in the future.

The **UAE** owes its spot in the top five of the Index to its efforts to rebalance its economy. Its tax environment tied with Saudi Arabia for second place. Its credit and stability score tied with Australia, though its private sector participation level was by some way the lowest in the top five.

The UAE may demonstrate the potential - and the limits - of state-led infrastructure development. It now boasts several state-owned national champions, including Dubai World and Mubadala, as well as acquisitive sovereign wealth funds. Dubai, despite lacking the hydrocarbon reserves of its neighbouring emirate Abu Dhabi, now faces few serious rivals to be the region's financial hub. The UAE's level of private participation is considerably ahead of neighbours Qatar, Saudi Arabia and Kuwait.

The three economies in the region with lower levels of dependence on the natural resources sector enjoyed varying fortunes. **Turkey**, in 10th place, is the most promising and its construction firms are emerging as global players. One European infrastructure fund, Meridiam, has made a big bet on the country's PPP programme, though Turkey's location and febrile political atmosphere has caused other financial investors to pause.

Egypt is far from the worst performer in private participation, at 18th, but placed last in both credit and stability and national stability. Egypt is well-equipped to exploit a return to normal. Officials from the European Bank for Reconstruction and Development visited the country in March which is a positive indicator for the future.

> The region's ambitions in infrastructure remain bold.

Middle East rankings

UAE	5
Turkey	10
Saudi Arabia	13
Qatar	15
Kuwait	16
Jordan	23
Egypt	25

Interview
Umit Kazak, TAV Construction

Umit Kazak is managing director of Turkish firm TAV Construction. TAV specialises in the construction and operation of airports and high-rise towers. Its sister company, TAV Airports Holding, operates at 14 airports and is listed on the Istanbul Stock Exchange.

Cautious approach

The Middle East has taken a cautious approach to encouraging private investment in transport infrastructure. Governments, particularly the Gulf Co-operation Council's Qatar, Abu Dhabi and Dubai, have encouraged the development of airport and port hubs. But they have typically used state-owned enterprises to fulfil their ambitions.

Still, the region's populations are growing, and becoming more prosperous. The Middle East and North Africa is TAV's main business focus. "For the last decade we have been witnessing a significant shift in the aviation industry with the rise of the big three of the Gulf: Emirates, Etihad and Qatar Airways; therefore the majority of our work was concentrated in this region, building the hubs of these airlines."

Qatar and the Emirates of Dubai and Abu Dhabi have supported these airlines handsomely and have made sure that they have enough airport capacity to expand. They have also usually retained ownership and operational responsibility of the airports.

But TAV's preference is to finance and operate airports, and not just build them; "Saudi Arabia had the funds to build Medina Airport, a $1bn new facility and the country's first build-operate-transport PPP but it asked the private sector to do it more efficiently." Kazak notes that Dubai is considering the use of PPP to procure the new Al-Maktoum airport.

Overcoming low oil prices

Kazak believes that the healthy growth of the region's aviation market can overcome the impact of lower oil prices on host governments. "We may see some processes being suspended and governments might consider smaller-sized projects, but we do not expect any cancellations."

International airports are much less exposed to the financial health of host countries, though as Kazak notes, airports' clients are airlines, airlines need passengers, and there is a strong correlation between economic growth and passenger numbers. He adds that governments need to provide a stable legal framework that allows for bankable concession agreements.

He believes that government should nevertheless be more ambitious in what it asks the private sector to do. "From an investor's point of view, we think government should consider including airside operations in concessions more often. I understand that they would like to retain air traffic management responsibility for security and other reasons, but often they just ask the private sector to take responsibility for terminal operations. Running an airport involves a chain of operations, and separating terminal and airside often creates co-ordination issues."

Kazak has nothing but praise for the way Dubai has planned for the arrival of the 2020 Expo and Qatar for the 2022 World Cup. Qatar's new Hamad International Airport has an initial capacity of 30m passengers and its runway design means that it can be expanded to 50m easily. The growing list of middle income countries in Asia leads Kazak to think that the region will be the next promising centre for airport development.

> "The private sector is more flexible and open to new ideas. It doesn't matter what country you're in, it can add a lot of value."

Asia-Pacific: Room needed for private spending

The Asian Development Bank (ADB) predicts that the Asia-Pacific region requires $8tn in infrastructure investment between 2010 and 2020. However, it hosts two of the three countries that fell the furthest in the Index - India (8th to 11th) and China (6th to 10th), and three of the bottom five - Indonesia (21st), Malaysia (22nd) and Vietnam (24th).

It also hosts one member of the top five - Australia (4th) - and Singapore, which came top on every single component of the Index except sustainability and innovation, where it ran a close second to the UK, and private participation, where it came fifth from bottom. Increasing private sector engagement will be key to the improvement in performance of all regional economies except Australia.

State holding company Temasek owns stakes in Singapore's port, power, telecoms and mass transit operators, as well as Singapore Airlines. Foreign investors and bank lenders respond enthusiastically when Singapore brings PPP and other private infrastructure projects to market, though this happens infrequently.

Singapore can, however, afford to be sparing in its approaches to the private market. The city has emerged as the regional hub for infrastructure finance, as demonstrated by its hosting of the Asia Infrastructure Centre of Excellence, a joint venture with the Asian Development Bank to export PPP expertise. If it relied less on self-financing infrastructure, could Singapore top the Index?

Australia has held on to a high ranking despite falling behind the US and Canada, and being heavily exposed to a China-driven fall in commodities. Australia's index-leading private participation compensated for poor showings in credit and stability and its tax environment. Australia's well-regarded privatisation programmes have counteracted a slowdown in resources spending and cuts to the country's renewables incentives.

China and India both saw reductions in their scores for private participation, as their state-owned enterprises started to act as a serious drag on economic growth.

India's high levels of private participation were enough to counteract a poor performance elsewhere, including a zero in ease of doing business. But the Modi administration's efforts to foster the growth of a non-bank infrastructure lending sector and increase infrastructure spending have so far floundered in the face of bureaucratic inertia and the poor health of some of its developers. India's regulatory apparatus, electricity sector and transport development processes all require a major overhaul.

Australia has held on to a high ranking despite falling behind the US and Canada.

Asia-Pacific rankings

Australia	4
Singapore	7
China	12
India	17
Philippines	19
Thailand	20
Indonesia	21
Malaysia	22
Vietnam	24

Interview
Sharad Somani, KPMG

Sharad Somani is partner, global infrastructure advisory, and head, ASPAC Power & Utilities, at KPMG in Singapore. KPMG's infrastructure group in the region comprises around 150 personnel, of whom 50 are working in the power sector.

Somani's group has a presence in Australia, Japan, Hong Kong, South Korea, the Philippines, Vietnam, Thailand, Indonesia, Malaysia and Taiwan. Its recent engagements include advising the government of Singapore on broadband and waste-to-energy procurements, advising the governments of Singapore and Thailand on rail projects, and Vietnam on its electricity privatisation roadmap.

Ambitious governments

Governments in the Asia-Pacific region do not lack ambition. International and regional banks are extremely willing to fund well-structured projects. Asia's population is young, its economies were relatively unscathed following the 2008 crisis, and not all of them are dependent on commodities exports.

But large amounts of debt and equity capital are still chasing a small number of projects. Environmental permitting and land acquisition issues, not to mention government inertia, allow only a small number of projects to emerge from unwieldy lists of proposed projects.

KPMG's Sharad Somani believes that governments in the region might be better off recognising that a wave of large projects is unlikely to close financing at once, and pick the best candidates early on in the process. "I think countries should do more project prioritisation. Only pick two projects, but do whatever you need to do, in terms of land acquisition and permitting, to make sure that they happen."

Lack of credibility

The private sector often says that it wants to see a large number of projects in the pipeline before it commits resources to bidding in that market. But long lists of projects are starting to lack credibility. "Indonesia puts forward a list of 100 projects every year, but it has not closed one of them," notes Somani. "There are likely to be a number of different lobbies at work on any single project, so prioritisation is much harder than it looks."

With the notable exception of Australia, Asia-Pacific may be the region where a strong central government is still a necessary evil. "In Indonesia, a lot of government functions are devolved, for instance in land acquisition, which is why one power project has taken five years to close."

Dependence on local government

But Somani notes that the Asian Development Bank, the region's leading development finance institution, has set up a fund to support sub-sovereign projects, and that success in the water sector, a vital priority in the region, is dependent on the actions of local government.

Urban government at the very least may require greater powers. "We've seen in China cities grow and prove to be economic growth engines. In Southeast Asia, cities lack the capacity to serve that kind of growth, and much of their infrastructure is in a poor state," notes Somani.

Asia's governments are responding to the unsettled economic situation in different ways. "Indonesia's economy is becoming more closed, and Malaysia's economy is still very insular. Some of the largest names in Malaysia have been quietly diversifying their asset base overseas during the last four years," he says.

"I think countries should do more project prioritisation. Only pick two projects, but do whatever you need to do to make sure they happen."

The Americas: Top-rated for PPP

The Americas rankings

Canada	2
US	3
Brazil	9

With strong performances from the US (up from 4th to 3rd place), and Canada's entry into the Nabarro Infrastructure Index at 2nd, the Americas hold the most top five places of any region. Those two modern, diversified economies enjoy plenty of economic tailwinds, but also point to real progress in welcoming private investment in infrastructure.

Canada, in particular, rivals the UK in terms of its influence globally on infrastructure procurement methods and boasts active institutional investors, a liquid project bond market, and reliable provincial and federal PPP programmes. It has the second highest national stability score and scores joint third highest for credit and stability. Without the drag caused by falling commodity prices on its currency, Canada might have been in a better position to challenge the UK for 1st place.

The US benefits from a strong dollar and an environment welcome to private enterprise (even with its taxation rates). What is the main reason for improvements in the US? Answer: a huge boost to its private sector participation levels. A decade of false starts, occasional reverses, and recent bankruptcies in the toll roads sector have not slowed PPP's advance.

The US is starting to achieve critical mass in PPP procurement. While its use relative to conventional methods is still small, the size of the US, and the diversity of its state programmes still produce enough opportunities to make it a favoured destination for international developers and investors. Policymakers' keen awareness of the poor state of some of its infrastructure means that further action to increase private sector involvement is still a real possibility.

Brazil's fall from grace could have been much worse, given the commodities plunge, the collapse of the EBX conglomerate and a recent corruption scandal taking in national oil company Petrobras. Brazil's credit and stability score was 21st and only coming top in private participation kept it in the top 10. The prognosis for political and economic stability in Brazil is not good.

> Brazil's fall could have been much worse, given the commodities plunge.

Political leadership: Devolved decision-making brings benefits

The Index highlights the increasingly important role that devolved government plays in infrastructure. Of the top five members of the Infrastructure Index, four are federal states, and the fifth (and top) member, the UK, is devolving increasing amounts of control over transport and social infrastructure to national and local governments.

The largest of Australia's states and Canada's provinces operate their own infrastructure procurement bodies, which have strong track records and market credibility. US departments of transportation are adopting PPP more slowly and many still prefer conventional public procurement.

The UAE's, on the other hand, operate in a more top-down fashion that allows them to build up specialisations. So Dubai has developed globally competitive financial services, tourism and port capabilities, while Abu Dhabi's power and water procurement and renewables development programmes are the envy of its regional neighbours.

In contrast, the big losers in this year's Index were larger countries with greater tension between local and central government, or where local governments have been unable to build up credible procurement capacity. Clashes between departments have hindered half of Indonesia's proposed PPP projects, and Indonesia has increasingly turned to Chinese bilateral sovereign loans to finance infrastructure investment.

China's struggles to make local government more accountable have been a factor in its recent economic downturn. India and Brazil, the worst performers in ease of doing business, also fail to benefit from responsive and accountable local governments.

4 out of 5 top ranked countries have devolved decision-making powers.

Interview

Paul Dollin, WSP Parsons Brinckerhoff

Paul Dollin is the chief operating officer of WSP Parsons Brinckerhoff, an engineering professional services firm present in 39 countries with 35,000 employees. Toronto-listed WSP acquired MMM, a consulting firm based in Ontario, in October 2015, and US firm Parsons Brinckerhoff in 2014.

Funding

WSP Parsons Brinckerhoff's Paul Dollin refers to funding, rather than financing, infrastructure. "Governments fundamentally know that you need some public funding for infrastructure, whether direct or indirect. They tinker with the financing mechanisms, but whether the source is government payments or charges on members of the public, the funding mechanism will be the same."

For instance, the recent agreement between EDF and China General Nuclear Power for the development of a new nuclear reactor at Hinkley Point in the UK is more about the financing than the funding of that £18bn project. The funding for the project - a guaranteed price for the plant's power funded through consumers' bills - is already in place.

Dollin, an avowed nuclear enthusiast, believes that the private sector will be able to take on a greater share of the risks associated with nuclear investment. He also points to the UK regulatory regime as a model to follow. "It's a reactive regime, under which the regulator has the knowledge not to try and tell the private sector how to manage risks, but to prove it has the ability to do so."

Shortage of good projects

Governments are slowly coming to the realisation that availability of capital is not the limiting factor on infrastructure development. "There's loads of financing out there, but there's a shortage of good projects. Governments should invest more time in planning for projects than in their financing."

Dollin points to the US city of Denver as a jurisdiction where government got the planning and funding right early on. John Hickenlooper was Mayor of Denver when the city established its infrastructure development programme and is now governor of the state of Colorado.

"He was a visionary. To link up the rail network with logistics and come up with a good funding plan - the sales tax." Denver's Regional Transportation District has used a combination of Federal grant funding and a sales tax increase that passed in 2004 to fund the FasTracks light and commuter rail and bus network development.

The FasTracks programme has involved the use of PPP structures to procure some infrastructure. Local initiatives are one reason why PPP has taken off in the US, despite patchy Federal action on infrastructure. "They're struggling to get a federal bill through, but the states are filling the gap. The US is a little behind in developing financing mechanisms, and the political environment can get in the way of developing infrastructure."

Availability of skills

Dollin's other big concern is the availability of skills, knowledge and capability in the infrastructure industry. "As emerging economies develop and as it becomes more obvious that developed markets' infrastructure is not up to snuff, shortages will become more apparent. The skills required are enormous."

> "For me, to get good infrastructure you need visible and visionary leadership, a good plan and a way of funding it."

Fiscal priorities: The austerity movement

The relationship between the pace of private infrastructure spending and a government's fiscal health is not straightforward. This is evidenced by Brazil which has the highest private participation score in this year's Index, yet only ranked 9th place overall.

The use of PPP procurement methods can allow governments to move the financing for infrastructure off its balance sheet. But governments rarely admit that this is the main motivation for the use of PPP and frequently find that they have to re-classify infrastructure obligations as government debt.

And as governments proceeded to rein in public sector spending in the period after 2008, they did not make an exception for infrastructure, even if privately financed. While the financially stronger governments, and eventually their banks, were able to borrow at low rates, few chose to borrow for investment in infrastructure.

Some of the highest performers on credit and stability in the Index have middling or poor private sector participation rates. Countries in Asia and, until recently, the Middle East, operate smaller governments and so may have more room to grow balance sheets for investment, though they are also exploring the use of PPP.

Likewise, few governments are exploring the sale of operational infrastructure assets to fund further investment. Because of the slump in procurement in several markets, many will not have operational assets to offer to the private sector for several years.

The UK has few of the right assets left following a pause in procurement since 2008. The US has shifted back from asset sales which attracted bad publicity for the use of PPP as a greenfield procurement tool. Australia is the big exception, with large mature assets in the power and transport sectors currently out to market.

But governments are trying to encourage institutional investors to take a more active role in providing debt and equity for greenfield investment. Several large insurance companies are demonstrating increased appetite for construction risk and the European Union has approved changes to its Solvency II regulations that would make infrastructure more attractive to some institutions. Both the UK and the US now boast institutional infrastructure funding platforms.

Some oil exporters are trying to adapt to lower oil revenues by taking advantage of lower oil prices to cut fuel subsidies, while others are turning to sovereign wealth funds for infrastructure funding.

Off-balance sheet infrastructure investment vehicles do not always stay independent of government. In 2014, the UK government brought the £34bn ($52bn) in debt obligations of Network Rail, its rail infrastructure owner, back on balance sheet. The troubles at 1MDB, the Malaysian sovereign wealth fund that expanded aggressively into the domestic power sector, has been a major source of political instability there.

Governments are trying to encourage institutional investors to take a more active role in providing debt and equity for greenfield investment.

Top 5 countries with the highest levels of private participation

	Rank	Private participation score
Brazil	9	100
Australia	4	96
UK	1	92
US	3	88
Canada	2	83

Renewables: Burning bridges?

Government budget deficits are contributing to falls in support for renewables across the developed world. Italy has repeatedly cut its feed-in tariff for new solar plants. Spain cut its tariffs for existing solar plants leading to an outcry from investors. The UK is also sharply reigning in its support for renewables and making it harder for onshore wind developers to build plants. Nevertheless, it is still ranked top for sustainability and innovation with Spain coming second.

In Europe, feed-in tariffs have frequently been funded with surcharges on consumer power bills. Given that Europe's recession has led to cuts in emissions due to less industrial activity, governments have been tempted to cut subsidies to allow for reductions in power bills. Similar cuts were also the centrepiece of Australia's Liberal National coalition government's election campaign.

Thailand and Malaysia both cut subsidies to solar plants after early movers earned returns that government viewed as overly generous. In Asia, only Japan, which wants to reduce its reliance on nuclear and imported energy, still offers generous enough tariffs to attract interest from international developers.

The performance of most countries in sustainability and innovation, which captures some of these initiatives, has been strong, with few outliers. Cuts to incentives have not been significant enough to affect governments' credit and stability scores. Encouragingly, India, which ranks last in sustainability and innovation, has ambitious targets for solar installation and Lord Adonis' remit with the NIC will focus on the UK's energy sector.

Top 5 countries with the highest scores in sustainability and innovation

	Rank	Sustainability and innovation score
UK	1	67
Spain	18	66
Singapore	7	65
Germany	6	63
Australia	4	61

Commodities: Troubled waters

Up until recently, China's economy supported high prices for oil, gas, coal and iron ore. Now its economy is wavering, along with infrastructure spending. China experienced the toughest fall in the Nabarro Index and has probably contributed to the decline of at least two others (Australia and Brazil).

Commodities exporters have to adapt to a new operating environment. Australia, with a modest fall and an advanced social and transport infrastructure finance market, is likely to remain stable. Brazil, which was unable to kick-start a private market during recent years, could be exposed.

China's efforts to re-balance its economy towards domestic consumption, encourage a larger service economy, and reduce environmental impacts may also lead to greater political instability. With a poor national stability rating, China's evolution will be one of the most important stories to follow for the global infrastructure community.

Chinese soft loans may continue to be a factor in infrastructure investment in emerging markets. Governments in countries such as Ecuador, Brazil, Nicaragua, Indonesia and Thailand have turned to China for financing. The UK has made attracting Chinese infrastructure investment a priority, particularly in nuclear power.

But 10th ranked Turkey, the top-ranked UK, and 3rd ranked US, show that countries can create welcoming environments for infrastructure development without a dependence on revenues from natural resources.

> The UK has made attracting Chinese infrastructure investment a priority, particularly in nuclear power.

Interview

Andrew Charlesworth, John Laing Infrastructure Fund

Andrew Charlesworth is the investment adviser to the UK-listed John Laing Infrastructure Fund (JLIF) and a director at John Laing Capital Management. He oversaw the fund's initial public offering in 2010, having previously worked on social housing and local authority public-private partnerships at John Laing.

JLIF has a market capitalisation of £990m and owns stakes in 57 PPP concessions. It buys stakes in operational assets both from its founding sponsor, UK infrastructure developer John Laing Group, and from third parties.

Market leader

The UK has become a market leader in developing listed investment vehicles for infrastructure, taking over from Australia which was an early adopter in listed infrastructure. Some listed funds have been developed by private equity managers or banks, but many were launched by construction companies wanting to free up cash tied up in assets to invest elsewhere.

"Terms like alternative assets and infrastructure were not as common in 2010 as they are now," says Charlesworth. The rise of the market was in part down to UK investors' search for stable-yielding assets. "We listed just after the BP Deepwater Horizon incident, when investors were nervous about where they were going to find assets that produced a good yield. The end of the UK's annuity obligation [under which at retirement a pensioner had to purchase an annuity with their savings] also means that more people have been self-investing."

This increase in demand for the funds' yield coincided with an increase in the supply of assets. The UK's Private Finance Initiative (PFI) peaked in 2005-7, according to Charlesworth, and three years later a wave of projects entered operations. But now the supply of assets in the UK is falling and funds are looking overseas. JLIF has acquired assets outside the UK from John Laing under its pipeline agreement and Charlesworth says that it will look at Australia, Continental Europe, North America and maybe, in the longer term, at Latin America.

"To get infrastructure right, federal government needs to be the strategy and vision provider, while local government needs to create the opportunities to deliver."

For JLIF, stable government counterparty is more important than a convincing procurement pipeline. "We can afford to bid on any asset from anywhere we need, so we don't need to devote huge numbers of people to a market, at least until we look at managing that asset," says Charlesworth.

Availability payments

Every single one of JLIF's assets benefits from availability payments from governments, so a country's willingness to honour its obligations is one of the fund's most important investment criteria. "We have thought for a while that Spain would provide an opportunity to invest," says Charlesworth, "but until recently we would have struggled to persuade investors that it would provide sufficient fiscal covenant strength."

For Charlesworth national or federal governments and state or local governments have complementary roles to play. "To get infrastructure right, federal government needs to be the strategy and vision provider, while local government needs to create the opportunities to deliver." He also notes the role that national government plays in funding infrastructure. "In the UK you had PFI credits provided to local government, and I don't see how the market would have emerged without them."

Pipeline: The difference between promising and fruitful

The Nabarro Infrastructure Index indicates which jurisdictions promise to be the most fertile for infrastructure investments, and which have delivered in the past.

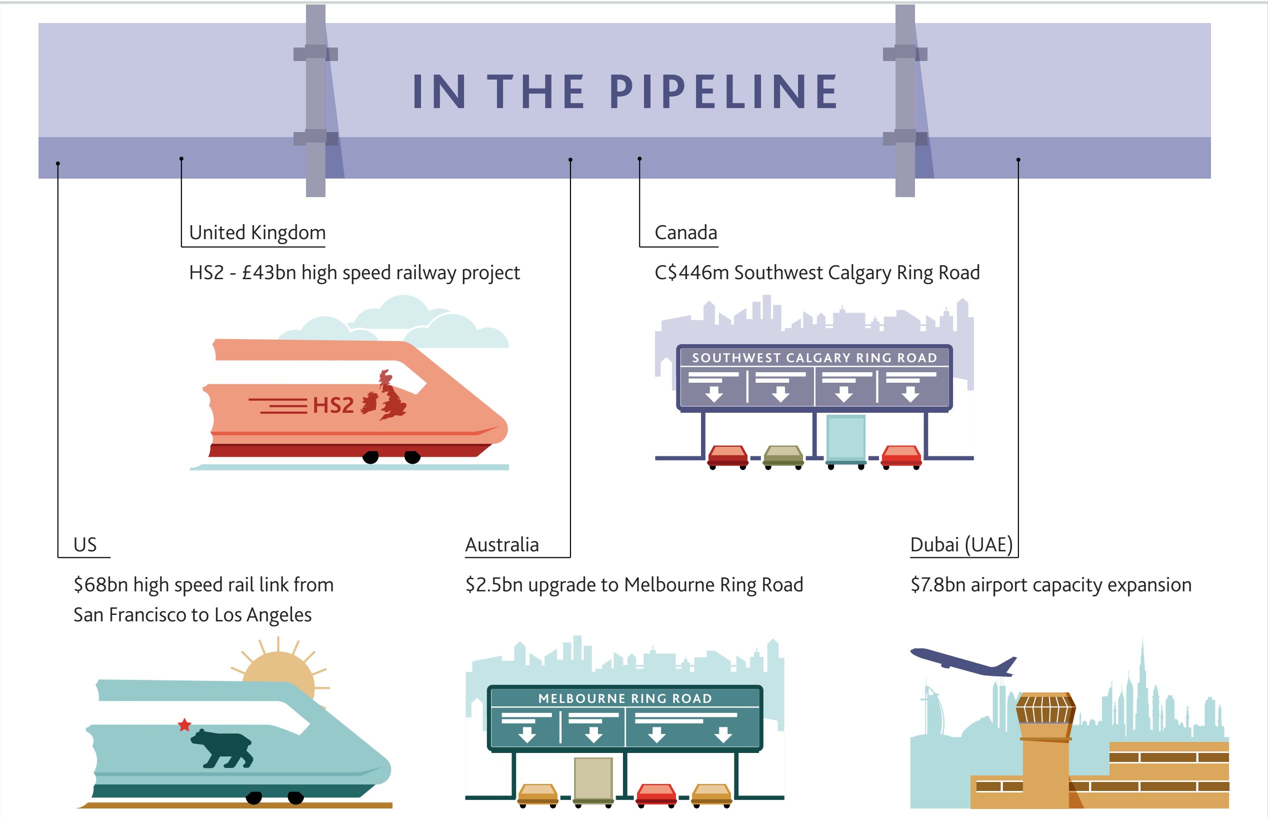
But past performance is not necessarily an indicator of future results. Projects in both developed and emerging regions may face permitting or planning approval obstacles. Governments may change infrastructure procurement methods depending on political or economic priorities, sometimes right in the middle of procurement.

Dubai, Qatar and Singapore all have long project lists, with the Gulf States hosting major international events in the next decade. All of them are expected to lean towards direct procurement, much as the UK did with the 2012 Olympics. In Turkey, on the other hand, the private sector will be the first choice to deliver mega projects, as long as its banks can stay liquid.

But governments have tried to provide some visibility about their infrastructure procurement pipeline, and have increasingly taken charge of encouraging investment in energy, even where this sector is privatised. Both the UK's £411bn and Canada's C$158bn ($120bn) project pipelines include energy assets.

Australia's government has been unable to provide the same level of certainty, and the state of Victoria scrapped one project - the East-West Link - after it had reached financial close.

The Index provides some important pointers for governments looking to create a more welcoming environment for private investment, and some idea to private investors about which countries can deliver on their potential. But political leadership and meaningful investment programmes will still excite the private sector the most.



Methodology

The Index weightings were determined based on our assessment of their relative importance. While we are not disclosing the detailed methodology and weightings used; to help with any adaptation for use, users may find the following helpful.

The Index collates quantitative information on each market based on 13 individual indicators that are grouped in six sub-indices:

1. Credit and stability sub-index
- Credit rating
- Credit outlook
- Currency volatility

2. Sustainability and innovation sub-index
- Environmental performance
- Ecological sustainability
- Innovation

3. Tax environment sub-index
- Corporate tax rate
- Resource drain (Time to compliance)
- Complexity (Number of payments)

4. National stability sub-index
- Governance and stability
- Safety and security

5. Ease of doing business sub-index

6. Private participation rate sub-index

The data for each indicator is collected from world-renowned and reputable sources. The indicator data is then standardised to allow for comparison to other measures and a sub-index score calculated as a result of standardisation. Multiple linear regression analysis is then used to develop a weighting system for each sub-index score, which is then taken into account when calculating the Infrastructure Index results.

The Nabarro *Infrastructure Index: Bridging the gap* report therefore allows the reader to understand the multiple dimensions on which a market can be ranked as an investment target. Our weighting system reflects the necessary trade-off in consideration between a strong business and economic environment, credit and national stability required to successfully invest over a medium-to-long term, and the efforts of developing markets to expand their private participation in infrastructure.

Changes since our last Index

Expansion in the number of markets
The number of markets featured in the Index has been expanded from 20 to 25, to include key strategic markets across Asia, the Middle East and Europe.

Expansion in the number of indicators
A national stability sub-index has been introduced to account for certain reputational and human risk factors in investment.

Currency volatility is now measured against the special drawing rights (SDR)
Currency volatility is now measured against the SDR to allow for the increased number of currencies featured in the Index.

Taxation is now measured quantitatively
Taxation is now measured quantitatively as opposed to through a qualitative evaluation of each market. This ensures maximum standardisation in our Index.

Index weights have been updated
Based on the results of multiple linear regression modelling relative to infrastructure spend, the relative weightings of the indicators have been updated. The fundamental methodological model has been retained in 2015 and updated to reflect the broader coverage of the Index.

Opinium
Established in 2007, Opinium Research is a full service market research agency with its own research panel of 35,000 UK consumers. Opinium works with organisations across multiple geographies, using a wide variety of research methodologies to uncover commercial and social insights which deliver robust findings to guide clients towards accurate and strategic business and policy decision-making.

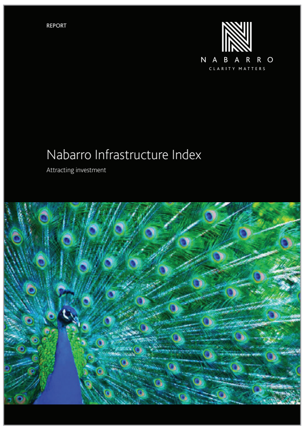
About Nabarro

Nabarro LLP is an international law firm with offices in London, Brussels, Dubai, Manchester, Sheffield and Singapore. We deliver the highest quality, business-focused advice to clients, clearly and concisely, no matter how complex the situation.

Our core practice areas include Corporate/Commercial, Real Estate, Dispute Resolution and Infrastructure, Construction and Energy. The sectors where we have a particular specialism include Healthcare, Infrastructure, Real Estate and Technology.

Our infrastructure group comprises 170 lawyers and can assist across the whole infrastructure life-cycle from financing, planning and project advisory, to construction, asset management and sale. Our group also includes specialist teams in health and safety, environment, litigation and tax.

Further information is available on the Nabarro website at http://www.nabarro.com



Infrastructure Index: Bridging the gap is the second instalment in our Infrastructure Index series. To receive a copy of the first Index or to find out more about our other thought leadership reports, please email info@nabarro.com.

NABARRO

CLARITY MATTERS

Nabarro offices

London
125 London Wall
London EC2Y 5AL
T +44 (0)20 7524 6000

Sheffield
1 South Quay Victoria Quays
Sheffield S2 5SY
T +44 (0)114 279 4000

Manchester
1 The Avenue Spinningfields
Manchester M3 3AP
T +44 (0)161 393 4700

Brussels
209A Avenue Louise 1050 Brussels
Belgium
T +32 2 626 0740

Singapore
Marina Bay Financial Centre Tower 3
12 Marina Boulevard 35-01
Singapore 018982
T +65 6645 3280

Dubai
Office 105 Level 1
Tower 2 Al Fattan Currency House
DIFC PO Box 506873
Dubai United Arab Emirates
T +971 4302 6000

You can find out more about us at:

www.nabarro.com
Twitter: @nabarro
LinkedIn: nabarro-llp

Nabarro LLP
Registered office: 125 London Wall
London EC2Y 5AL.

12866