

INDIA-UK

Joint Economic and trade Committee

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Background Paper for

Smart Cities and Infrastructure Joint Working Group



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Mr. Ajay Pandey

India Co Chair - India UK Joint Working Group
(Infrastructure and Smart Cities)



Mr David Whittleton

UK Co Chair - India UK Joint Working Group
(Infrastructure and Smart Cities)

India and the United Kingdom share long and flourishing economic trade ties. Today, both markets stand at the brink of the next phase of reform and expansion that present great opportunities for business and wider society. India is looking at an urban transformation with an array of projects announced or already launched. India is projected to spend some USD \$1trillion by 2020 on a spectrum of infrastructure projects in road transport, ports, airports, power and urban regeneration, rail, new cities and towns.

Likewise, the UK is coming up with several infrastructure initiatives that will pave the way for Indian companies to explore a variety of new business engagement opportunities.

Both countries are excited about the significant potential their markets hold for each other, building on strong economic trade ties and working towards taking their economic collaboration to the next level.

As part of that strengthening partnership, we are happy to share with you the **India UK joint report on infrastructure and smart cities conceptualised and finalised by the Joint Working Group (Infrastructure and Smart Cities) of the India - UK Joint Economic and Trade Committee (JETCO)**. The India-UK JETCO was established on 13th January 2005 to develop a strategic economic relationship and to develop business led vehicles to enhance bilateral trade and investment relations between two countries.

This report is one of the many initiatives undertaken by the **Joint Working Group** to identify new areas of cooperation and strengthen existing ones. The report identifies current and upcoming business opportunities in the markets of India and the UK along with their respective market barriers. The report also highlights some of the policy level interventions required from both the governments of India and the UK to eliminate these barriers and facilitate increased bilateral engagement.

We would like to express our gratitude to all the members of the **Working Group** for actively participating in the discussions during the meeting and finalising this report.

We hope you will find the report useful. Your suggestions and feedback are welcome.

Overview

The current prognosis with regard to India's economic prospects is certainly optimistic; India has achieved an impressive GDP growth of over 7 percent per cent in 2016-17.

As per industry estimates, networked economic infrastructure (consisting of transport, water, power and telecom systems) in India needs an investment of USD 6 trillion in the period from 2016-2030. Therefore, there is a great need to mobilise private sector capital that can be invested into infrastructure.

To bolster the Ease of Doing Business in India, the Government of India (GoI) has undertaken attractive initiatives such as an e-Biz platform, new PPP model, simplifying its business ecosystem and the implementation of GST. The GoI has also put in place a liberal FDI policy that permits foreign investments up to 100% without prior approval in most of the infrastructure projects, including services under the automatic route.

There is substantial scope for further UK-India cooperation in the field of developing smart cities and supporting resilient and sustainable infrastructure development. The work spans innovative technologies for developing smart cities in India, improving the design and delivery of highway in terms of engineering and safety, increasing the efficiency and reach of railways, integrating waste and water treatment systems, and building toward greener urban environments, for example, with the development of green fuels and electric vehicles.

UK companies are well-known for their master planning, technology, engineering, and project management skills, experience in construction, building road, railways, bridges, tunnels, city planning, development and urban regeneration. Hence, the UK could be an ideal partner for major construction projects and building world class infrastructure facilities in India.

At the same time, India offers a vast wealth of talent and expertise at every level, providing the scope and scale to make the most of potential opportunities to enhance trade between the two countries.

Working together in partnership, India and the UK have a tremendous opportunity to enhance mutual trade, forge closer business relationships, deliver world-class infrastructure and enhance the lives of millions in the process.

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OPPORTUNITIES FOR UK AND INDIAN COMPANIES IN BOTH MARKETS

Smart Cities is one key area where the UK is looking at furthering cooperation with India. The Indian government is focused on creating smart cities to ease the burden on urban infrastructure caused by massive migration from rural to urban areas. The UK has created 70 smart cities in the past few years and India could immensely benefit by learning from UK experience and leapfrog the initiatives.

The Governments of the two countries have come together to work on the Smart City vision of India. Three smart cities in India have been identified that will be supported in their development by the UK Government: Pune in Maharashtra, Amaravati in Andhra Pradesh and Indore in Madhya Pradesh.

There is, therefore, immense opportunity to forge a transformative collaboration between the UK and India.

Looking even further, the two partners have huge scope for delivering the type of resilient and sustainable infrastructure required to enhance liveability and deliver world-class, innovative environment for people and businesses to thrive. A partnership between UK and Indian companies offers tremendous potential for both sides. India's sustained economic growth and competitive cost-base offers long-term opportunities for sustainable investment, while at the same time, Indian and UK partners can develop and access world-class technology, innovation, quality and R&D through closer collaboration.

Opportunities for UK companies in India

- India's national programmes- including Make in India, Digital India, Skill India and Smart Cities - offer immense opportunities for UK companies to invest and partner in India's infrastructure sector. UK financial support can lead to the growth of India's infrastructure sector through new avenues like Infrastructure Investment Trusts (InvIT) and the National Investment and Infrastructure Fund (NIIF).
- In India, urban areas are expected to house 40 per cent of India's population and contribute to 75 per cent of India's GDP by 2030. UK companies are well placed to provide products, services and design networks required to develop resilient future cities and play a significant role in enhancing the development of India's urban environment.
- India's infrastructure sector offers multiple collaboration opportunities. For example, the two countries offer a host of complementary skills that can be deployed in the development and regeneration of railway stations, road and highways construction, the development of new port facilities, coastal economic zones, shipbuilding under Sagarmala initiative, the development of inland waterways, coastal and cruise shipping, and associated logistics infrastructure.
- India's rapidly expanding aviation sector creates a host of opportunities for both international hub and regional airport development, but that is only one aspect of the potential that the market offers.

- India's 2017 budget committed US\$60bn to infrastructure spending, with transport alone allocated some US\$35bn, underlining the Government's commitment in this area. As well as improving safety, the funds will support an extensive railway station refurbishment and development programme that can catalyse a number of transport-oriented developments. Investments in metro rail schemes have the potential to boost the productivity and liveability of major urban centres and the example of cities such as Chennai, Delhi, Kolkata, Bangalore, Mumbai and Jaipur demonstrates that such schemes can be hugely successful across the country.
- An integrated multi-modal transport strategy also offers the potential to leverage the country's growth potential, linking roads, railways, ports & shipping and aviation to create a connected network that is far greater than the sum of its parts. At the same time, more efficient transport connectivity and availability across the various modes offers the potential to reduce environmental impacts, e.g. switching freight from road to rail and curbing congestion.
- At the same time, infrastructure opportunities in areas such as renewable energy, water, wastewater, and waste-to-energy offer real opportunities for Indian firms to leverage ties with international investor and specialists to drive delivery.
- Urban areas are expected to house 40 per cent of India's population and contribute to 75 per cent of India's GDP by 2030. This urbanisation trend demands comprehensive and highly integrated physical, institutional, social and economic infrastructure development. Using digital solutions such as Internet of Things (IoT) technology, it is possible to connect services in an intelligent way designed to improve the economic efficiency of cities and the quality of life for their inhabitants.
- Based on the requests for proposals issued by local governments in India, the following digital solutions, which have been successfully deployed around the world, have the greatest potential to develop Indian Smart Cities: traffic management; citizen safety; utilities (smart meters); waste management; and street lighting.
- Indian corporates/businesses could benefit by forging partnerships with businesses from the UK that have expertise in Smart Cities development. Partnerships through joint ventures, knowledge sharing, consulting services, technology transfers and pooling of resources can accelerate the development and implementation of infrastructure and technology solutions. There are many successful global examples to draw on here, such as the Wuxi-Dusseldorf green city partnership.
- Public Private Partnerships (PPPs) can help underpin the financial structure of major projects and create effective financial models, as well as providing the means to exchange best practices in shaping bankable infrastructure developments in both nations. Thus, PPPs are useful for either Indian companies investing into the UK or UK companies investing in India.
- It is noteworthy that the UK is the largest financial centre in the world and could provide an opportunity to Indian corporates to source various types of finance and funding at competitive terms. For example, there is a possibility of raising Smart City / Mobility bonds to raise capital along the lines of the successful Rupee-denominated green bonds that have already been issued in London.

- In addition, the UK is a source of great experience in professional business services related to asset management and project insurance/reinsurance and there may be further scope to explore opportunities here as well.

Opportunities for Indian companies in the UK

- International private investors will play an increasingly important role in rejuvenating the UK's infrastructure over the next few years. Investors will be attracted by opportunities in 'soft' social infrastructure such as large-scale housing and regeneration projects, alongside 'hard' infrastructure schemes in energy for example.
- As more Indian companies look to expand their base across international markets, the UK has emerged to be one of the most-favoured destinations for Indian companies. Indian firms invested £4.25 billion in capital expenditure in 2016, and recorded revenues of £47.5 billion in UK.
- The UK's successful track record of attracting international investment into infrastructure assets provides confidence to the private sector for investment in UK.
- The 2016 fall in Sterling has made the UK a more cost-competitive hub for investment, as well as providing procurement opportunities for Indian companies to buy UK goods and services.
- The publication of the first-ever National Infrastructure Plan (NIP) in October 2010, and subsequent updates, provided an integrated strategy for how the government would plan, prioritise, finance and deliver critical projects and programmes in key economic infrastructure sectors: transport; energy; communications; flood defence; water and waste; science, and smart cities. There are many opportunities for financing and delivering over 600 critical projects and programmes in these critical sectors, according to UK Government National Infrastructure Delivery Plan 2016-2021.
- The UK is one of the top destinations for investment in infrastructure. The UK Government has recently released the details of its infrastructure investment pipeline, which outlines over £500 billion of planned investment, with over £300 billion of this to be invested by 2020-21.

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BARRIERS RESTRICTING THESE OPPORTUNITIES

Barriers faced by Businesses in India

- Public sector contract terms with unlimited liability clauses, challenging bond terms, multiple bid cancellations and resubmission requirements, drawn-out payment profiles, and arbitration that precludes rapid referral to independent international routes to resolution remain all too prevalent. Plans to deliver infrastructure to truly world-class design, construction and operational standards relies on being able to drive transparent procurement competitions that attract a broad selection of the world's best firms - including, of course, many Indian groups. Unnecessarily challenging terms and conditions, along with uncertainty during the bid process, makes it more difficult to deliver projects to the highest global standards.
- Another issue worth exploring is the challenge of procurement, where focusing on the superficially cheapest initial capital cost can offer poor value-for-money in the long-run, so there could be a benefit in fostering clearer value discussions contrasting capex versus lifetime costs.
- The complexity and scale of many projects pose procurement challenges as the requirements are often beyond the expertise of a single supplier - even the largest and most experienced of India's infrastructure development companies. This necessitates building consortia and using subcontractors, which creates a risk of non-alignment with the prime contractor, which can impact the costs and timelines of a project.
- Equally, there is a large infrastructure funding gap that could be bridged by leveraging private finance in greater volumes and it is worth exploring how procurement and client-side capabilities could be enhanced to 'crowd in' investment. For example, public-private partnerships (PPPs) are becoming more apparent in specific areas such as aviation, but there is a way to go before such approaches are routinely understood and deployed.
- While the Smart City use-cases are well-defined from an application perspective, integration between various facets of the technology chain (operators, analytics providers, electronics and sensor manufacturers etc.) needs to consistently evolve, mature and scale in order for the Smart City solutions to deliver value. Approaches like Software Defined Networking are being employed in the UK for the Smart City deployments. Such techniques allow for better use and sharing of network infrastructure and resources amongst different Smart City projects. An "open data" approach would also benefit ULBs and enhance collaboration.
- The good news is that the Government recognises the challenges in many of these areas and positive steps are being taken in areas such as land pooling, Hybrid Annuity Models, and the opening of International Arbitration Centre in Mumbai, for example. But more can be done.

- The more challenging aspects against faster infrastructure investment are issues such as land assembly, planning and policy coordination between national, state and municipal levels, as well as sometimes overly complex environmental clearance procedures for major projects.

Barriers faced by India Businesses in the UK

- Due to Brexit, existing commercial contracts Indian companies have with UK parties may be affected by the terms of future trade agreements, continuing currency fluctuations, and the ability of the UK nationals to work in the EU and of other EU nationals to work in the UK.
- For Indian companies with nationals from other EU member states working in the UK, the rights of those individuals to continue to live and work in the UK following Brexit are unclear.
- UK is also one of the most expensive countries to do business. Property prices, living and transportation costs are all expensive relative to most other European cities.

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WHAT BUSINESSES WOULD LIKE THE GOVERNMENTS TO DO TO REMOVE THESE BARRIERS

- Establishing the optimum total lifetime cost for major infrastructure schemes is a challenge that many countries around the globe struggle with, but there is a growing understanding of the tools and solutions available and we would encourage closer collaboration in developing a mutual understanding that could help shape more bankable, resilient projects.
- The Government of India has taken a positive step in taking a more integrated and holistic approach to strategic transport planning. Encouraging further progress along this path will inspire further opportunities to enhance the potential of major projects by lowering carbon impacts, boosting resilience, and maximising land value capture opportunities from transport-oriented developments.
- Land assembly has long been recognised as a major challenge for infrastructure development, but policy changes and greater use of special development company vehicles (SPVs) could and should be explored further. In relation to the Government's plans to promote development and regeneration in and around railways stations, it might also be helpful to review and extend the lease periods available to attract a larger pool of global developers.
- Making infrastructure procurement and delivery work more efficiently and driving even further toward high global standards has the potential to create a virtuous circle, by stimulating further infrastructure investment and growth and development across the country. It is also important that Indian ULBs (Urban Local Bodies) meet to share knowledge and best practice in areas such as project implementation and joint procurement with a view to lowering costs and delivering better value outcomes.
- Businesses are already witnessing improving levels of knowledge across ULBs, which is enabling smarter procurement, including selecting between consortia bidders. Consortia are the norm, as it would be rare for one company to have sufficient expertise to deliver all solutions for a smart city project or major infrastructure scheme. So officials who have specialised knowledge of "best in class" providers for Smart City build-outs will be at an advantage, for example.
- In the meantime, the Indian Government's positive 'ease of doing business' initiative presents the ideal opportunity to open up the potential for international investors to get involved in the sector in India, highlighting unnecessary contract terms, overly complex arbitration procedures, and new strategies for lifetime cost approaches to procurement and green funding.
- Deployment and application of Smart City initiatives will enable more efficient use of public resources, while also increasing the savings opportunities in multiple industries. The UK has so far developed over 70 Smart Cities. The Indian Government can evaluate best practices adopted by urban development bodies, municipal commissions, and town planning departments in the UK for smoother deployments of Smart Cities strategies. For example, Smart Cities digital solutions

successfully underpin large-scale government initiatives in the UK, such as planning commuter services in London and relieving motorway traffic congestion, and there are many similar initiatives that can be studied and enhanced for the Indian market.

- A greater degree of collaboration between the two governments would also lead to a faster roll-out of the Smart Cities initiative. The UK has set up a Ministerial Smart Cities Forum, bringing together representatives of business, academia, local and national government to identify the barriers to success and develop solutions.
- UK companies from the infrastructure sector believe that the traditional 'design-bid-build' approach has inefficiencies and India, as a growing nation, should consider more robust forms of procurement, such as the Lean Integrated Project Delivery System (LIPDS), collaborative contracting, and other innovative project delivery systems.
- UK companies commended the Indian Government's vision of a stable, clear, and transparent tax regime. It is felt that GST will be a significant step forward and that its introduction was bound to have suffered from associated teething problems. There is a positive sentiment regarding the improvement in the financial environment of the country.
- The UK has an opportunity to work more closely with partners in India to enhance access to India's human capital. The UK Government could examine ways to simplify the application process for work permits and other work-related visas.
- The UK should consider setting up a demonstration centre in India to showcase its technologies, which would improve awareness of innovation opportunities and build first-hand knowledge regarding product feasibility in India.
- An "open data" approach should be adopted to generate a more collaborative effort towards the development of "add on" user services, such as tailored Apps. This would generate more interest from independent software developers, thus improving the experience of citizens.
- Both countries could work on encouraging Small and Medium Enterprises (SMEs) to explore business opportunities. It has been suggested that, while lots of large MNCs have a presence in the UK and India, the two Governments can chart a cooperation agreement and create an "India Country cluster" in the UK and "UK Country Cluster" in India, for SMEs to come together and accelerate trade.
- Indian companies will expect a clear road map toward a positive trade regime that will allow firms to service the EU from the UK, post Brexit. It is critical for Indian companies to have clarity on their long-term business investment cases.

