

Closing the Gap

How private capital can help deliver our future infrastructure needs





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Introduction

Over the past 30 years, the private sector has financed, built and operated an increasing proportion of the world’s infrastructure.

In many countries this has helped to transform the quality of roads, airports, water, energy and communication networks, hospitals and schools. By working in partnership with public authorities, the private sector has enabled more and better quality infrastructure to be built than would have been possible with constrained government balance sheets. There is more to do, however. The world faces a growing infrastructure gap – possibly as large as \$15tn by 2040 - between the current level of investment and what is needed to meet societies’ needs given expected economic growth.

At GIIA our aim is to work with governments and public bodies to create the right environment to unlock more private capital and increase infrastructure investment. In this document, we explore the scale of the infrastructure gap and why it matters to consumers and taxpayers. We look at the reasons why governments choose private finance and the evidence for how it benefits consumers and society. We examine global best practice and how the private sector, working in partnership with public bodies, can deliver increased investment to benefit future generations.



Andy Rose
Chief Executive of Global Infrastructure Investor Association

About GIIA

Global Infrastructure Investor Association (GIIA) is the membership body for the world's leading institutional investors. On their behalf, we work with governments and other stakeholders to boost the role of private investment in providing infrastructure that improves national, regional and local economies.

Infrastructure investors are looking for long-term investment opportunities that provide a steady income stream on behalf of the citizens they represent. Our members - many of the leading fund managers, pension funds, insurance companies and sovereign wealth funds - own, operate and invest on a continuous basis more than \$500bn of infrastructure assets, comprising 1,160 assets in 48 countries across six continents.

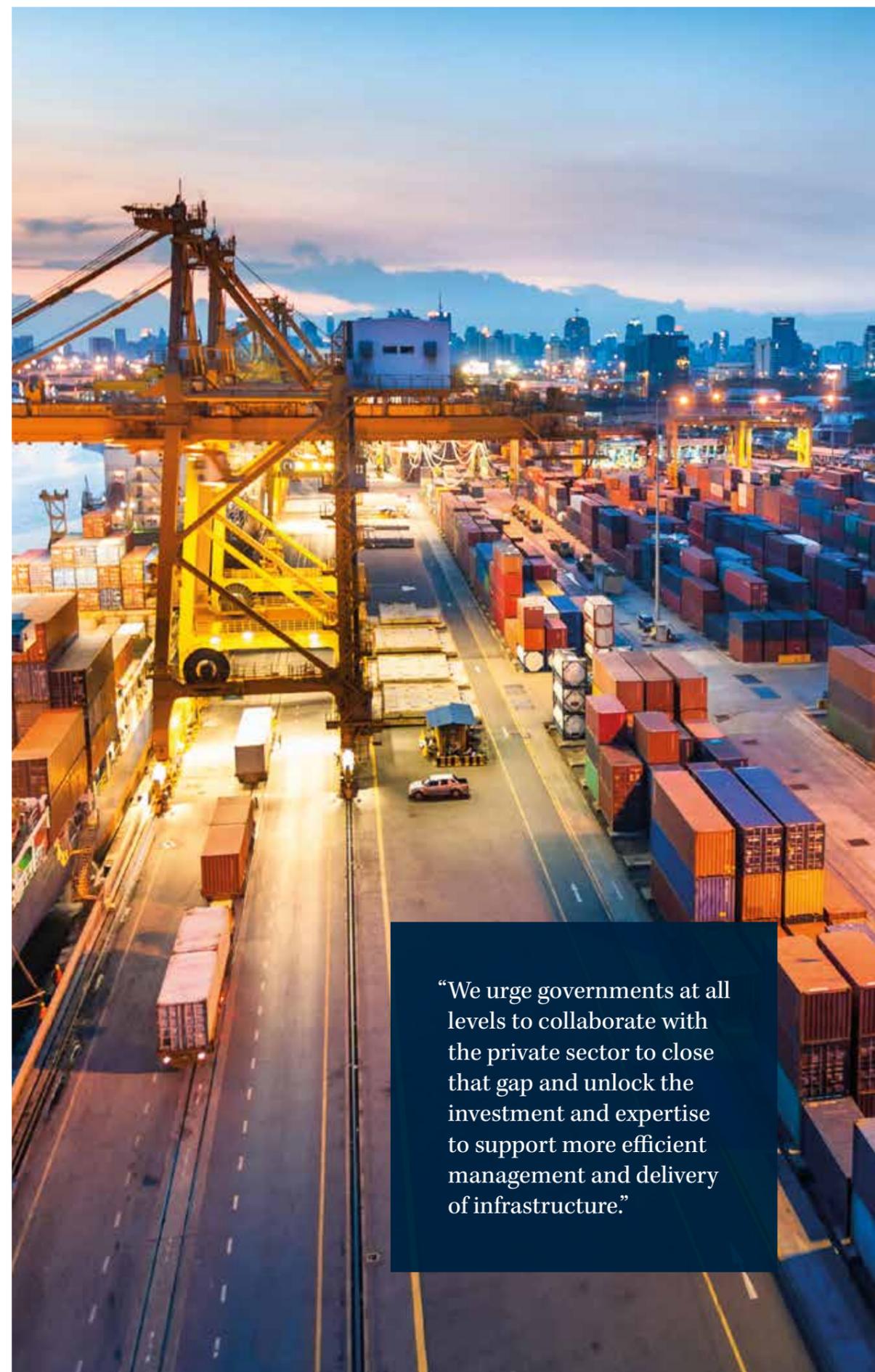
GIIA aims:

1. To make the case for private investment in infrastructure across the world through evidence-based advocacy.
2. To promote improved understanding and dialogue between governments and the private sector to create the right environment for private investment.

Infrastructure is critical for economic growth, job creation and meeting environmental targets. Infrastructure is more than roads or power stations. It is airports and ports that allow people and goods to move internationally, cables connecting homes to the internet and buildings that house schools and hospitals. It affects every part of our lives. But there is a consensus that a global infrastructure gap exists – a gap between what countries spend and what they need - and it is growing.

We urge governments at all levels to collaborate with the private sector to close that gap and unlock the investment and expertise to support more efficient management and delivery of infrastructure.

Although the need for investment grows each year, governments' balance sheets are often too constrained to provide the necessary funding, while the private sector has capital it is ready to invest. GIIA encourages governments to look at a range of public/private partnership models that have worked well and can deliver positive outcomes for all.



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Common Conditions For Success

We have identified five important conditions for the successful deployment of private capital in the delivery of infrastructure:

1.

A long-term approach to planning infrastructure, at national and regional levels, looking beyond the immediate political cycle.

2.

A stable and transparent regulatory environment, to provide the framework to facilitate ongoing investment while delivering the best outcomes for consumers.

3.

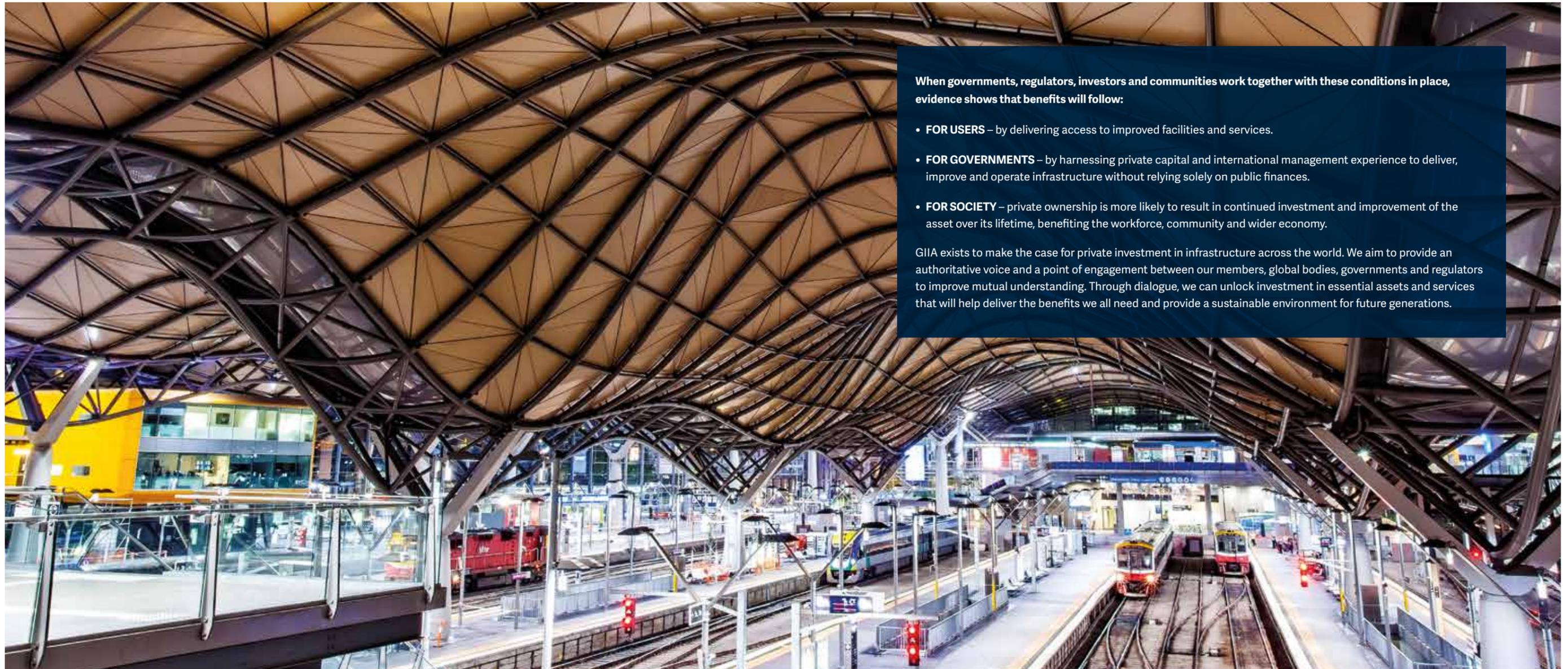
Clarity of required outcomes up front by those making the procurement decision.

4.

Effective engagement and communication between governments, stakeholders and investors through all stages of the asset life-cycle.

5.

Commitment from investors to responsible ownership and management.



The Infrastructure Gap

Why it Matters to Consumers and Governments

High-quality infrastructure makes lives better: it stimulates economic growth and creates jobs. The world faces a gap, however, between the current level of spending on infrastructure and the amount needed to meet expected growth and provide essential services.

The investment gap in economic infrastructure amounts to \$5.5tn globally between 2017 and 2035, according to think-tank McKinsey Global Institute¹. Other estimates suggest the gap is even starker. Oxford Economics forecasts a cumulative shortfall of \$15tn between 2016 and 2040². The scale of the finance required highlights the critical role that private sector investment will have to play if this gap is to be filled.

There are major differences in infrastructure gaps around the world. Countries including Germany, the UK and US have significant gaps between current spending commitments and estimated need, according to McKinsey. In contrast, Australia, China and Japan have invested heavily as a share of gross domestic product.

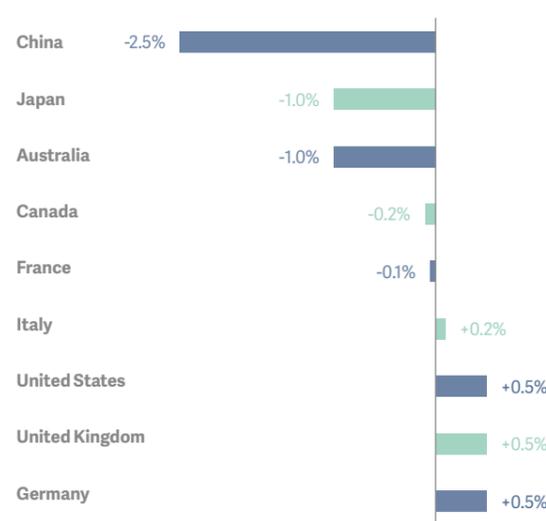
In mature economies, keeping pace with demand and building new and upgraded infrastructure will be vital to sustaining economic growth. Failure to achieve

this would have a variety of unwelcome effects.

Poor roads, railways and airports, for example, mean that travel times for passengers increase. An ageing electricity grid and inadequate water distribution make utilities unreliable for householders. Problems such as these also translate into higher costs for businesses to manufacture and distribute goods and provide services. Higher costs, in turn, get passed on to workers and families. In addition, failure to invest in infrastructure can lead to missed business opportunities, lower job creation and reduce a country's attractiveness for investment.

In emerging and developing economies, filling the infrastructure gap is essential to ensure widespread access to basic amenities such as water, sanitation and reliable electricity, and to help modernise economies.

Gap between spending and estimated economic infrastructure needs, 2017-35 (% of GDP)



Source McKinsey

United States

There is widespread consensus that private capital is needed to upgrade the US's poorly performing infrastructure. To date, however, there has been little political agreement on how to achieve this.

The American Society of Civil Engineers (ASCE) awarded the US a D+ in its 2017 Infrastructure Report Card, meaning its infrastructure is deemed to be "in poor to fair condition and mostly below standard, with many elements approaching the end of their service life"³.

McKinsey's analysis suggests the US faces an infrastructure investment gap of 0.5% of GDP between 2017 and 2035. The ASCE quantifies the gap at a cumulative \$5,200bn between 2016 and 2040. Analysts say most of the problem is in surface transport. Traffic delays alone are estimated to cost the average US driver \$1,200 a year in wasted fuel and time⁴.

The ASCE concludes that underperforming infrastructure could cost families \$3,600 a year until 2025. According to its infrastructure plan, the current Administration has budgeted

to release \$200bn in federal funds to spur \$1.5tn infrastructure investments, including spending by state and local governments and private industry.

GIIA aims to work with policymakers, at both federal and state level, to develop a framework that will enable the use of innovative financing options that help to deliver infrastructure in partnership with the private sector to boost growth and create local job opportunities. GIIA engages with bodies such as the National Governors Association (NGA) to promote best practice countrywide.

European Union

While EU infrastructure has improved in the past few decades, the European Investment Bank has identified an annual shortfall of €335bn, 30% of which is in energy, 27% in water and waste, 24% in transport and 19% in telecoms⁵.

The European Commission is attempting to address this through a €500bn investment plan.

Higher investment can only realistically be fulfilled with the involvement of private capital. GIIA wants to ensure that EU citizens benefit from private capital to achieve the Commission's aims. GIIA will work with EU institutions, to develop further a market that attracts international investment.

GIIA members already hold over 400 stakes in more than 300 different assets including transport, oil and gas

distribution, telecommunications, renewables and social infrastructure.

We aim to work with individual member states at national level to help bring more private capital into specific sectors and projects.

United Kingdom

The UK's National Infrastructure Commission produced its first ever National Infrastructure Assessment in July 2018. This document, which sets a long-term vision for the country's infrastructure to 2050, highlights the importance of private capital in delivering the country's future needs.

McKinsey suggests the UK needs to spend an extra 0.5% of GDP between 2017 and 2035. The Chancellor of the Exchequer announced in 2016 that gross public investment on economic infrastructure should increase to 1-1.2% of GDP between 2020 and 2050, up from 0.8%⁶. Even if this is achieved, it will fill only part of the projected gap and private capital will need to make up the difference.

The government expects investment in economic and social infrastructure to total £600bn over the next 10 years, with about half coming from the private sector⁷. The private sector is expected to finance schemes such as fibre broadband, wind farms and subsea power cables. Much investment will come in regulated industries such as water, energy and telecoms.

The UK has pioneered private capital models such as public-private

partnerships and the use of economic regulation to oversee privatised utilities. Underpinning these models has been a stable and effective regulatory regime, helping to deliver high-quality infrastructure by attracting reliable streams of private capital.

GIIA members currently hold nearly 400 stakes in over 330 different UK infrastructure assets. This includes the top ten airports, seven water utilities and interests in: rail, ports, roads, telecoms, renewable energy and energy distribution.

For the planned investment to be forthcoming, the UK needs to continue to provide an environment that attracts private capital and provides benefits for consumers and society. This is an essential component of ensuring the UK remains attractive to investors post-Brexit.

Rest of the World

Only a substantial contribution from private capital will make it possible to meet the needs of emerging and developing economies.

There are a number of developed economies which are projected to make adequate future investment in economic infrastructure. Japan, for example, is projected to invest 1% of GDP above the level necessary to avoid a future infrastructure gap.

The same is true for Australia, which has successfully implemented an asset-recycling programme whereby the Government has sold State-owned assets in order to invest in new infrastructure. Although Canada is expected to have a small infrastructure gap, it also has a good reputation for infrastructure development – particularly in terms of delivering Public-Private Partnership projects to budget and on time.

However, almost two-thirds of the global infrastructure investment required by 2035 will be in emerging economies⁸. While China has a recent history of significant investment in its

infrastructure, other countries are set to face challenges of underinvestment. Brazil, for example, is projected by McKinsey to face an infrastructure gap of 1.1% of GDP, while for India the shortfall is estimated at 0.7% of GDP.

Current trends mean the world is set to fall well short of meeting the United Nations' sustainable development goals by 2030⁹ with potentially serious consequences. The goals cover the building of resilient infrastructure and promoting sustainable industrialisation as well as issues such as eliminating poverty and hunger.

Much needs to be done. In 2015 more than half of India's population lacked access to basic sanitation services, according to the World Bank¹⁰. Some 15% of the world's population – approximately 1.1bn people – still lacked access to electricity in 2014¹¹.



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Why Use Private Finance?

Private finance is a proven method for delivering infrastructure around the world, bringing many benefits to consumers and the wider economy.

There is evidence to show that when the private sector acquires assets from the public sector it improves the assets' efficiency and performance. The private sector is also more likely to deliver projects on time and on budget. While public sector projects are vulnerable to budget cuts and shifting political priorities, private sector involvement aligned with robust contractual structures reduces the risk of delay and cancellation.

Some of the benefits derived from using private finance include:



1. The private sector builds infrastructure more often on time and on budget. Infrastructure Ontario found that of 30 projects delivered with private finance since 2007, 29 were completed below budget and 22 were opened on time¹². Infrastructure Partnerships Australia concluded in 2016 that public-private partnerships "provide superior performance in both the cost and time dimensions, and that the PPP advantage increases (in absolute terms) with the size and complexity of projects"¹³.



2. Use of private finance reduces risk of project cancellation. Public sector projects are sometimes cancelled because of budget shortages or changes in government. Officials may also be reluctant to ringfence toll revenues for road improvements, for example, and may be tempted to spend them elsewhere¹⁴. That can be avoided through PPPs or concessions that require revenues to be reinvested into maintaining and improving assets.



3. Public sector operators are prone to underinvest. Political pressures can mean that public organisations find it difficult to maintain user charges in line with inflation or increase user fees to pay for investment and maintenance. Undercharging asset users can lead either to underinvestment, which creates a poor experience for consumers, or unnecessary subsidies, resulting in lower public sector spending on other areas.



4. Private finance can benefit consumers through greater efficiency. The UN Economic Commission for Europe says the private sector achieves greater efficiency through "innovation, a commercial approach to problem solving, better governance, improved competition and more efficient management"¹⁵. Frontier Economics found that the efficiency of the UK's privatised water sector improved under private ownership faster than in comparator industries¹⁶. In Australia, privately owned energy network companies have been between 15-33% more operationally efficient than publicly owned comparators¹⁷.



5. Private sector has greater expertise in designing and building infrastructure. Many governments do not have in-depth expertise in project management and delivery, leaving them unable to ensure the best outcomes - a capacity failure noted by Yale university¹⁸. Private sector entities with in-depth specialism, experience of international best practice and innovation in managing complex projects are able to bring expertise, ideas and skills to projects and infrastructure management.



6. Private finance results in lower overall life cycle costs. Studies suggest that PPPs typically reduce the cost of public procurement, although there is variation between industry sectors and types of projects. A study by Intervistas Consulting found cost savings of \$9.9bn CAD from 121 value for money assessments undertaken on PPP projects by provincial governments in Canada over a 10 year period to 2012¹⁹.



7. Private sector is more innovative. Many private sector investors have direct access to international best practice in order to bring innovation. For instance, the Humber River Hospital (Canada) was North America's first digital hospital and delivers advanced healthcare in one of North America's most energy efficient hospitals.²⁰



8. Risk transfer. Risk is transferred to the private sector through payment by results. Risks that can be transferred include design and construction costs, delays, volatile market demand and operation and maintenance costs. At Wiri Prison in New Zealand, payments are also linked to reducing reoffending rates.



9. Generate new funding streams. The proceeds from the sale of existing public assets can be recycled into building new infrastructure. Public sector bodies can realise value from assets they own and redirect proceeds into their prioritised new infrastructure projects. This is often referred to as asset recycling. In many cases the acquirer will also invest in upgrading the asset. Examples include the \$12bn sale of a 99-year lease for the New South Wales energy distribution network Ausgrid in 2016, with proceeds reinvested into road, metro or rail projects²¹.



10. PPPs provide better quality infrastructure for consumers. World Bank Group says that in developing and emerging markets "history shows that shifting the development, maintenance and operational risk on to the private sector often results in higher quality"²² A KPMG and University College study found that PPP hospitals had better patient environmental ratings and cleanliness scores than conventionally procured hospitals²³.

Citizens as Investors - How Individuals Help Deliver the Benefits of Global Infrastructure

Much of the capital for infrastructure investment comes from the cumulative savings from millions of individual pensions; as well as from other institutional investors such as insurance companies and sovereign wealth funds.

Either through direct investment or via specialist funds, infrastructure assets are acquired and actively managed, resulting in both improved and additional assets around the world.

So, as well as improving global infrastructure, and supporting local and national economies, millions of people – from teachers and council workers to firefighters and factory workers – are directly benefitting from the proceeds of their investment.



1

Pensioners and savers can invest in a variety of ways in order to help plan for their future financial needs

2

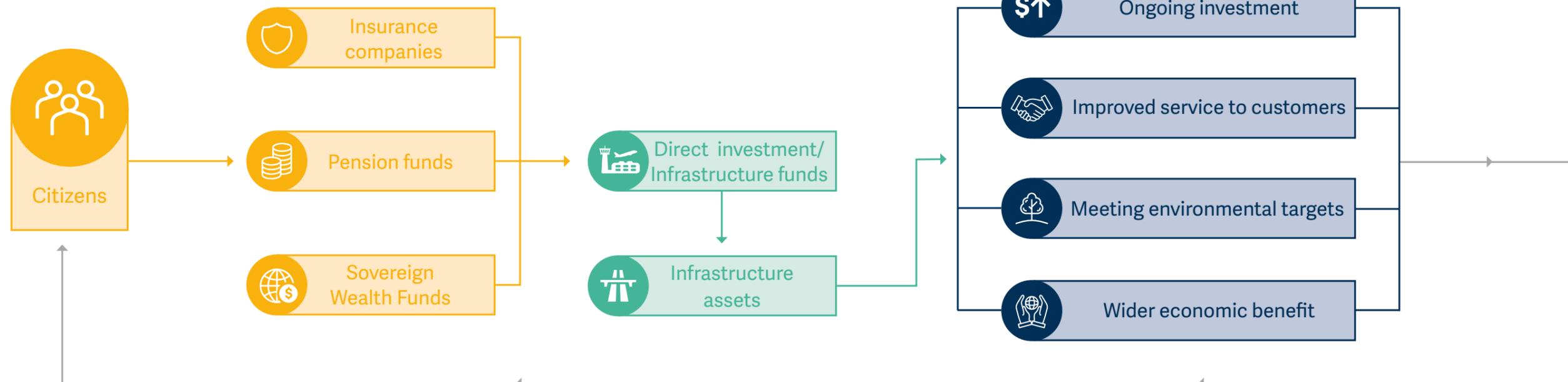
This money may be invested directly or via specially created infrastructure funds to acquire assets such as airports, utilities, renewable energy, telecoms, hospitals and schools which provide low-risk, long term, stable returns

3

These assets are run responsibly and efficiently by operating companies while delivering an improved service to customers, meeting environmental targets and generating economic benefit at a local and national level

4

Profits derived from the successful management and operation of these infrastructure assets are paid via dividends to shareholders who distribute those returns to the pensioners and savers whose money they invested



Best Practice for Private Investment in Infrastructure

Countries that use private finance successfully tend to share common characteristics such as transparent decision-making and a stable business environment. By using the following guidelines, many countries have proved that private finance brings benefits to consumers and taxpayers:

- Enforceable contracts give investors confidence that their original investment will be repaid over time, subject to their performance
- Specialist PPP centres of expertise can ensure best practice is followed in contract management and procurement, achieving best quality and cost. Customer satisfaction in turn helps to reduce risk to investors.
- Audit procedures and the use of comparators that examine value for money can protect taxpayers and consumers from bad practice in procurement and paying too much for a service or product.
- Transparent and objective decision-making helps reduce risk to investors because it will be predictable and rational, balancing the interests of consumers and investors.
- Appropriate and sustainable sources of funding will also underpin the viability of the investment, showing that the asset can be paid for in future.
- Certainty about long-term policy direction and business environment provides investors with comfort about doing business in a particular jurisdiction and also helps them understand how their long-life investment fits within a longer-term investment framework.



“Effective procurement can lead to higher productivity and quality improvements versus public sector provision.”

Privatisation

Privatisation, the outright sale of an existing government-owned asset, is a well understood and used policy tool in a wide range of international markets.

Notable examples of privatisations include Heathrow Airport (UK), the world’s seventh busiest airport, which has doubled passenger numbers since privatisation in 1986²⁴. Japan Rail East (Japan) was privatised in 1987 and was previously part of loss-making Japan National Railways; JRE is now one of the world’s most efficient train operators²⁵.

Private sector owners have an incentive to maximise the value and utilisation of the asset and invest on an ongoing basis to improve and maintain the infrastructure, whilst the asset and future liabilities are removed from the government’s balance sheet. Privatisation is also more likely to result in a user pays model, reducing the need for taxpayer subsidy in future. Privatisations may be part of an asset recycling programme, with the money raised being reinvested in new infrastructure, a concept pioneered in Australia.

Partial privatisations are sometimes used where the public sector is looking to benefit from specific private sector expertise. Following the partial privatisation of Swedish Telecoms company, Telia AB, it has become Europe’s largest wholesale “internet backbone” company and through consolidated customers is one of the world’s largest mobile phone groups with 182m customers²⁶.

There are different ways in which governments can retain a degree of control or influence over the asset that has passed to the private sector owner. Governments can use economic regulation to influence the new owner’s behaviour or alternatively they can retain a “golden share”, giving them a decisive say to prevent an unwelcome takeover or veto certain corporate decisions. In other cases, there are clauses that revoke a monopoly if the licensee has not followed rules put in place to govern their activities.

Concessions

Concessions are time-limited franchises to operate assets, commonly used in the water and airports sectors. A private company enters an agreement with the government for the exclusive right to operate, maintain and carry out investment in a public utility for a given number of years. A concessionaire will pay a fee to the owner, which is typically related to the performance of the asset over the course of the contract. Concession lengths can be renegotiated and extended. The main difference between a concession and a privatisation relates to the time-limited nature of the concession.

Some significant infrastructure projects have used this approach successfully around the world with notable examples including: High Speed One Railway (UK), Chicago Skyway (US), Pocahontas Parkway (US), Cofiroute (France).

Benefits to governments include receiving an upfront payment and ongoing licence or concession fees. Governments can transfer the risk of project delay, non-delivery or cost escalation of projects to the private sector. The time-limited nature of the concession means taxpayers benefit from any future sale of the asset or have it returned to them. Governments influence the behaviour of concessions through licences and regulations.

Public-private partnerships

P3s and PPPs can have different meanings in different markets. In a P3 or PPP the public sector procures a private sector provider to deliver outcomes, normally associated with creating a building or other asset, such as a road. In many PPPs revenue (or unitary charge) paid by the project procurer to the provider is contractually linked to goals and outcomes set by the procuring body. The incentives of the private sector provider are aligned with the public sector procuring entity through the contract.

Examples of notable PPPs include: Eglinton Crosstown Metro (Canada), Mersey Gateway Bridge (UK).

This approach can be beneficial to governments in a number of ways:

Risk is transferred to the private sector by linking payments to performance. It can transfer the risks of delay, non-delivery or escalation of costs to the private sector, using legal contracts to hold the provider to account.

Effective procurement can lead to higher productivity and quality improvements versus public sector provision. A whole-life cost approach will likely provide lower costs and enhanced benefits for service users and the specification of outputs is more likely to lead to innovation in provision compared with the public sector.

Careful value-for-money and comparator analysis can ensure PPPs are selectively used in the right circumstances, with effective contract management and procurement ensuring continuing value for money for taxpayers.

Towards a Solution to the Infrastructure Gap

Countries around the world face a difficult task to fill the infrastructure gap over the next 20 years.

By working together, private and public sectors can not only meet expectations for raising economic growth, but also provide essential services to increasing numbers of people. A decade on from the financial crisis, the political climate in some countries may be uncertain, but the evidence for involving the private sector in financing, building and operating infrastructure is strong and clear.

It can achieve far more than government balance sheets can achieve alone. With a clear long-term policy direction, transparent decision-making and a well calibrated regulatory framework, we can benefit taxpayers and transform consumers' lives for the better.

Appendix

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⁵ CaixaBank Research, Infrastructure in the European Union and the Juncker Plan, March 2017

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¹⁰ World Bank, People using at least basic sanitation services (% of population)

¹¹ US Energy Information Administration, Global access to electricity has increased over the past two decades, 2017

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²⁶ www.telia.lv/en/telia-latvija-add-customer-value-and-decrease-time-to-market-of-services-by-utilising-apache-cloudstack



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