

# Infrastructure Investment Trusts (IITs) to help solve the US Infrastructure funding gap



By Fraser Hughes  
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## Executive Summary

*Investment in infrastructure is critical for the US to maintain its competitive position in the global economy. With infrastructure in the legislative spotlight, there is an opportunity to unlock a much-needed wave of new investment by tapping into private capital via a listed infrastructure investment vehicle.*

*A common objection to private involvement in infrastructure investment is a political concern that Wall Street and large private equity firms would unfairly benefit from owning assets that the US population needs to use. However, there is a way to both protect against this and offer the opportunity for the wide ownership of US infrastructure. In fact, this idea has already been tried and tested for decades.*

*The Real Estate Investment Trust (REIT) model in the US has allowed tens of millions of individual investors either directly, or through their retirement savings, to enjoy the benefit of investment in commercial real estate. Today, about 25% of all US commercial real estate is in the hands of such investors through the \$1tn market capitalization REIT market.<sup>1</sup> Another example is the Master Limited Partnership (MLP) model, which has proven to be successful in stimulating broad ownership of US energy pipeline infrastructure.*

*Access to infrastructure investments for every investor can be achieved by creating a similar vehicle that democratizes ownership via the equity market. A listed structure able to efficiently invest in infrastructure assets would enhance the available pool of capital for infrastructure investment plus the valuation the public can achieve for these assets.*

## The practicalities

Structuring a listed infrastructure investment vehicle could follow two paths: either through a purpose-built Infrastructure Investment Trust (IIT) or through the expansion of existing REIT/MLP structures. Either of these options has the potential to be included in infrastructure-related legislation at zero cost to the taxpayer, although we believe broadening the REIT/MLP structure may confuse the market going forward. In this paper, we examine the current US infrastructure landscape and its ownership structure, plus the advantages to investors, consumers and the government of the democratization of infrastructure. We focus on a purpose-built, clearly defined IIT structure as the clear route forward – it does exactly what it says on the tin.

While there is broad agreement on the need for significant investment in US infrastructure, the question of how to pay for it is more contentious, with different views of how to attract essential

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private capital to finance public assets. The US has a long history of successful private market solutions to infrastructure needs, dating back to the creation of the US railway system over 150 years ago. More recently, listed investment structures such as REITs and MLPs, targeting telecommunication infrastructure and energy pipelines respectively, have proven successful in answering the challenge of stimulating private investment to address infrastructure needs by offering access to the widest possible pool of capital. In fact, more than 35 countries around the world have adopted the US REIT structure – a true example of US trailblazing.

We believe that tapping into private capital to fund broader public infrastructure investment presents a mutually beneficial opportunity to meet a public need and broaden the investible infrastructure investment options to generate stable, compelling returns for investors. In addition, by making the investment opportunity available broadly – via a listed structure – it would democratize participation in the ownership of US infrastructure. It is estimated that 80 million Americans own REITs through retirement savings and other investment funds. That's a true success story.<sup>2</sup> We believe an IIT can do the same for infrastructure and provide the way to more efficiently finance infrastructure investment.

An IIT could act as a magnet for global capital to fund new US infrastructure development, reduce pressure on government balance sheets, and allow the broadest possible ownership. What is needed to unlock this potential wave of new investment, and the associated increase in jobs and economic activity that would follow, is a 21st century revamp of some of the 20th century's most successful corporate structures and concepts.

### US Competitiveness and the Infrastructure Landscape – Decades of Underinvestment

The World Economic Forum's Global Competitiveness Index in 2017-18, ranked the US 2nd in overall competitiveness behind Singapore. Impressively, the US scores best in the world for innovation, business sophistication, market size, financial market development, labour market efficiency and higher education and training. However, in stark contrast,

## What's needed to unlock this potential wave of new investment, jobs and economic activity that would follow, is a 21st century revamp of some of the 20th century's most successful corporate structures and concepts.

under the basic requirements category when measuring an economy's competitiveness, the US ranks 25th in the world. Within this category, US infrastructure (transportation, electricity and telephony infrastructure) is ranked 9th in the world. Imagine what would happen if the US can significantly increase its basic requirement ranking, including its infrastructure ranking.

The last time the US had a comprehensive infrastructure investment plan was two generations ago<sup>3</sup>, and many of the assets built then were only intended to last 50 years. US infrastructure spend has not reached 1% of GDP since the early 1980's (see Figure 1). To put this in context, McKinsey estimate that if the US can attract the capital to get to 1% of GDP it would translate to 1.5 million direct and indirect jobs across the country.<sup>4</sup>

Figure 1: Federal Spending on Transportation and Water Infrastructure as a % of GDP

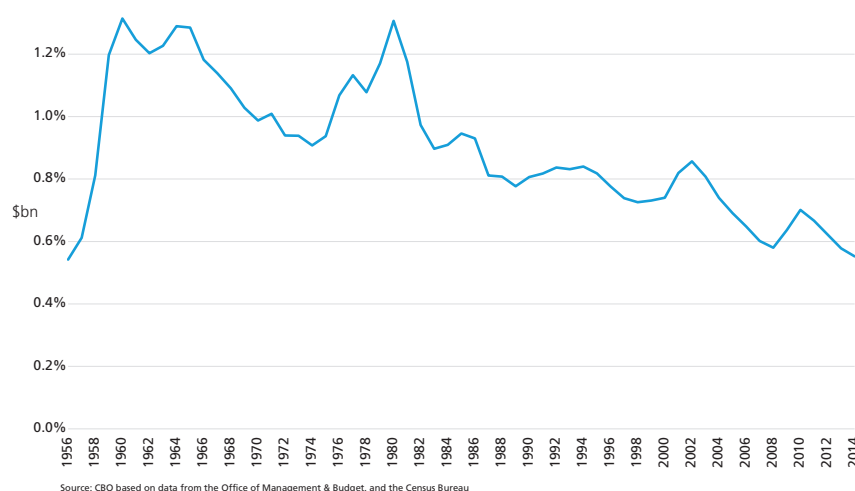
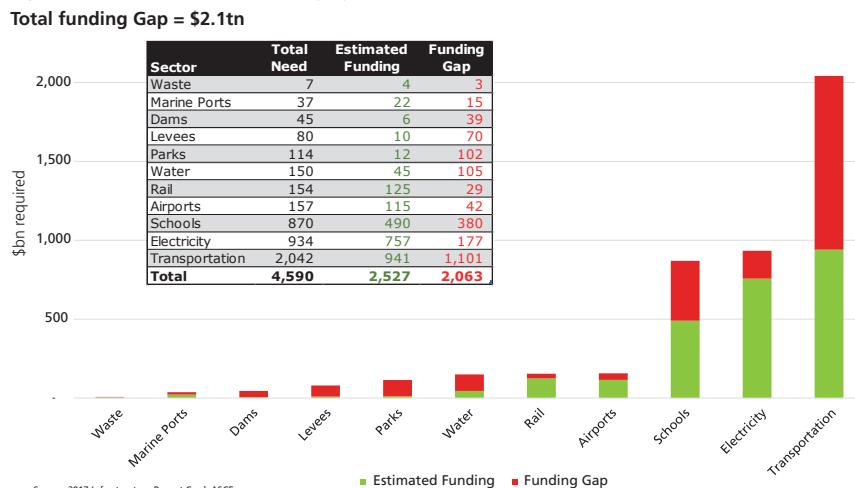


Figure 2: US Infrastructure Needs by System Based on Current Trends, (2016-2025): Total funding Gap = \$2.1tn



<sup>2</sup> www.reit.com

<sup>3</sup> Federal Aid Highways Act of 1956 (under President Eisenhower)

<sup>4</sup> Source: McKinsey Global Institute, "Infrastructure productivity: How to save \$1 trillion a year", 2013

Figure 3: US Grades & Infrastructure Ownership

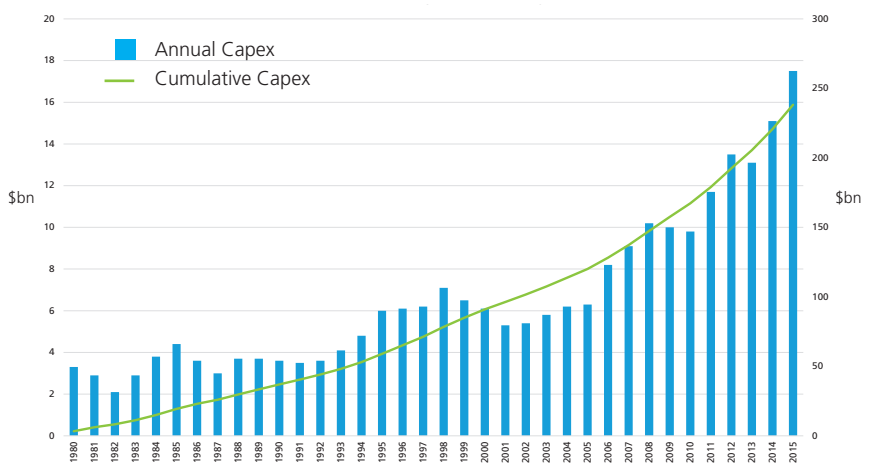
Sector	ASCE Grade	Public	Private
<b>Utilities</b>			
Electric Utilities	D+	15% Government owned	70% privately, 15% rural co-ops
Gas Utilities	D+	Small amount local government	Vast-majority privately owned
Water Utilities	D	85% local government owned	15% privately owned
Waste	C+	25% local government	75% privately
<b>Transportation</b>			
Roads	D	Local, state & federal owned	20 privately owned toll roads
Airports	D	Local, state & federal owned	San Juan (PR) & several PPP
Sea Ports	C+	Port authorities owned by local & state governments	Terminal management private sector
Freight Rail	B		All private owned
Passenger Rail	D-	Amtrack (Fed), plus local and state metro trains	Several small PPPs
<b>Oil &amp; Gas Distribution</b>			
Energy Pipelines	-NA-		All privately owned
<b>Communications</b>			
Telecom Towers	-NA-		All privately owned
Satellites	-NA-	Small number federal government	Majority privately owned

Source: Industry Associations, ASCE & CFSGAM estimates

In addition, and to compound the issue, US infrastructure needs have also evolved. Today, the definition of infrastructure has broadened to include information technology, renewable energy and improved urban transportation. Looking forward, these developments will accelerate, and integration of technology will play a central role. Modernizing US infrastructure requires a significant investment in technology – such as variable lane highway pricing models and GPS-based air traffic control systems – an area where the private sector has traditionally been more adept than the public sector.

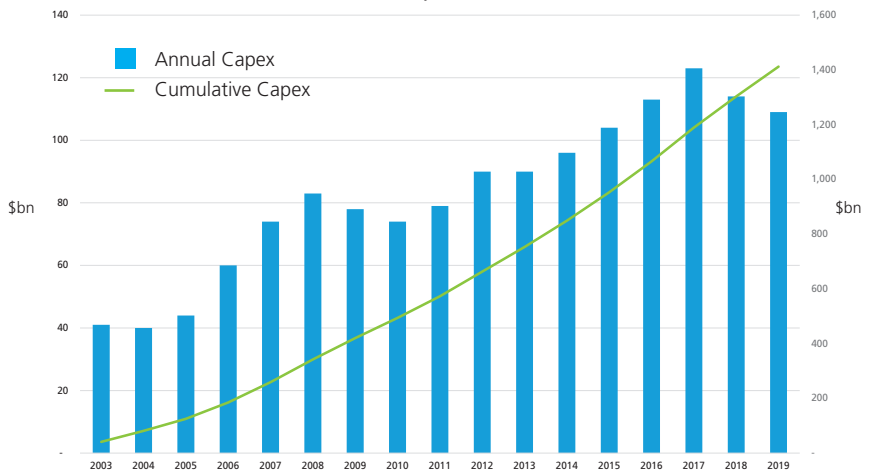
The US infrastructure landscape is divided between privately owned assets which on the whole work well, and government-owned sectors/assets which have suffered from chronic underinvestment from decades low-tax government policy as previously mentioned. The American Society of Civil Engineers (ASCE), overall, scores the US infrastructure D+, which they define as ‘poor, at risk’. Figure 2. shows that the ASCE estimates that the ‘funding gap’ is \$2.1tn to 2025. Figure 3. compares the ownership structure of infrastructure sectors in the US economy plus highlights the individual sector grade for US infrastructure.

Figure 4: Capital Expenditure on US Freight Railroads



Source: Association of American Railroads

Figure 5: Capital Expenditure on Electric Utilities



Source: Edison Electric Institute, 2017

## Such an asset-recycling model could create a self-regenerating source of capital for infrastructure development.

### Using Private Capital to Deliver Essential Investment

Private capital brings a set of advantages to meet the challenge for new infrastructure investment. When private capital acquires the right to build and operate infrastructure through a government-granted concession, the initial investment is subject to an economic viability test through the underwriting and bidding process, ensuring that infrastructure spending is focused on economically necessary projects.

Further, a profit motive encourages operational efficiency and the conditions of the government-granted concession make the private owner/operator accountable to the public for high quality outcomes. Such 'Public Private Partnership' models have historically been used successfully to meet many of the infrastructure challenges that have faced the US. The construction of much of the US national railway network is a prime example. As indicated in Figure 3, two large US infrastructure sectors, US freight rail and electric utilities, are largely owned privately. Both sectors have proven track records at attracting and deploying capital.

Figures 4. & 5. highlight the private capital expenditure in these two essential US infrastructure sectors over the long term. The capital is used to maintain and grow asset bases. Companies are motivated to invest efficiently, as capital markets and regulators review their strategic decisions.

It is important to remind ourselves that privately owned utilities remain subject to state and federal regulation. Subsequently, their rate of investment tends to be linked to state-based public policy objectives and is linked, and constrained, by the impact on customers/voters' energy bills. It is worth noting that the shale energy revolution has kept utility fuel costs low in recent years. This has enabled regulators and utility companies to focus capital expenditure on maintaining and

enhancing aged transmission, distribution and generation assets, without the need to sharply pass the cost to the end consumer.

Although not ranked in the ASCE report card, it is generally viewed that the oil & gas pipeline and telecom infrastructure sectors would score favorably in terms of asset quality and capital expenditure. It is worth mentioning that the three largest US telecom infrastructure companies, American Tower, Crown Castle and SBA Communications, all operate successfully under US REIT legislation.

By attracting a liquid pool of private capital, the local, State and Federal governments will have far more opportunity to plan for and fund new development projects. Imagine if US policy/regulation could create the conditions to attract a deep pool of competitively priced private capital to purchase (or purchase a share of) existing mature government-held assets that require modernization. Subsequently, locked-up capital is freed and available for redeployment into new projects. In other words, capital from infrastructure asset sales could be ring-fenced for new infrastructure investment, which in turn could be offered into the private sector once stabilized (in a solid vehicle for long-term pension fund investors – for example). Such an asset-recycling model could create a self-regenerating source of capital for infrastructure development.

A common argument against private investment in infrastructure is that it will increase costs to the end-user simply misses the fact that US infrastructure is not actually 'free' in the first place. US infrastructure is a capital-intensive basic requirement that is currently (under) funded by the US tax system. To carry out the essential upgrades will require tax increases if private capital is not engaged effectively. Unfortunately, the historic performance of publicly-built and operated infrastructure assets, which

are not subject to market forces, have tended to suffer from wasteful spending and inefficiency. This is highlighted by the ASCE scorecard. It is also worth noting that private infrastructure ownership management is also encouraged to adhere to international ESG standards by institutional investors. We believe this leads to a more responsible long-term deployment of capital.

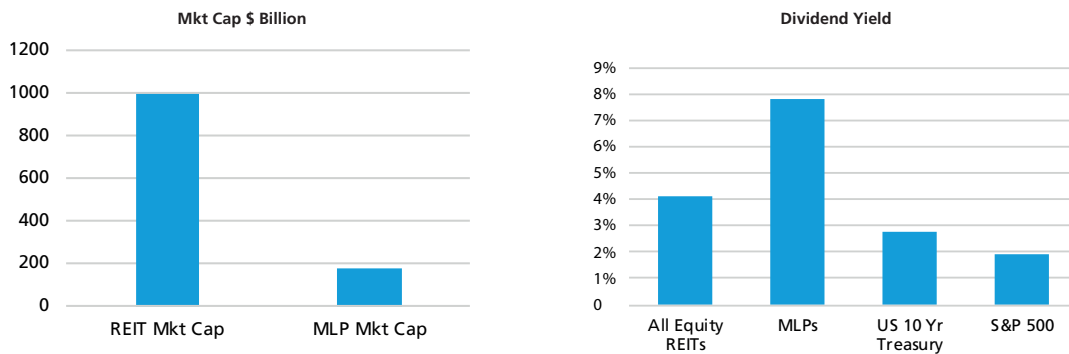
### IIT's a solution to the US Infrastructure Funding Gap

One viable option to create a broadly owned infrastructure investment opportunity set would be to learn from the successful experience of the US REIT. By adopting the principles and rules of US REIT legislation and adapting for infrastructure assets, the US has the foundation to create a clearly defined purpose-built vehicle – an Infrastructure Investment Trust (IIT) – built on successful elements of the REIT, but specifically focused on infrastructure investment. Moreover, the global investment community has a long history of investing in REIT-like structures, so a similar clearly defined structure for infrastructure will require very little investor education.

Infrastructure is a young but rapidly growing asset class. According to the 2018 Preqin *Global Infrastructure Report*,<sup>5</sup> there was \$150bn waiting to invest (dry powder) in infrastructure assets in 2017. Put simply, investors are struggling to buy infrastructure assets directly. To compound this issue, over 50% of institutional investors surveyed in the Preqin report plan to allocate more capital to infrastructure over the longer term. Overall, global institutional investors are well under their target allocations to infrastructure.

Creating an IIT structure, coupled with the pent-up global demand for targeted infrastructure investment could open the floodgates of private capital. The conditions are in place to attract investment into US mission-critical transportation and utility infrastructure assets. From an investment perspective, the steady cash flow characteristics of infrastructure projects would also mean that the IIT could be used as part of a stable, lower-volatility, yield-oriented investment allocation. This type of asset class is in high demand by investors. >

Figure 6: Vehicles for Private capital to fund Public Assets



### IITs increasing the Tax Base

The introduction of an IIT should act to increase the tax base. Currently, publicly owned infrastructure competes with private business but is not part of the tax pool (i.e. private airlines vs. government-owned rail). If owned privately, these assets could then contribute to the tax base – for example in the case of an airport, states and municipalities could benefit from an increase in property taxes, dividend payments and capital gains could also be taxable.

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For those infrastructure assets that are already privately owned, there would be very little change in the effective rate paid by most corporate structures, plus any dividends paid to investors would remain part of the income tax base. For instance, the midstream energy space already avoids double taxation through the MLP structure; the utility industry in the US, through a combination of accelerated/bonus depreciation, renewable tax credits, and net operating losses from existing business lines, is already a negligible cash taxpayer relative to statutory rates; cell towers

*We believe the creation of an infrastructure investment vehicle would lead to a net addition to the existing tax base.*

are largely concentrated in the hands of businesses already structured as REITs; and airports, seaports, bridges, and toll roads are almost entirely held by state and municipal entities, placing them outside of tax base for most calculations. As a result, we believe the creation of an infrastructure investment vehicle would lead to a net addition to the existing tax base.

### Structuring an Infrastructure Investment Vehicle

Structuring a listed infrastructure investment vehicle has a few options. All options have the potential to be included in future infrastructure-related legislation at no cost to the tax payer, as we outline below.

#### Option 1: Expand the Scope of the REIT, or MLP Structures

The success of REITs and MLPs, which have led to over \$1tn of new investment, including infrastructure-related projects like pipelines and telecom infrastructure, could be leveraged by expanding the scope of these vehicles to encompass a broader range of essential infrastructure. Figure 6. highlights key aspects of each vehicle. To do this, there are primarily two issues to address to implement this approach – the current definition of REIT and MLP “qualifying assets” (the type of assets that can be owned) and “qualifying income” (the need to structure income streams as rent payments).

Solving the criteria for qualifying assets may be reasonably straightforward. The REIT and MLP models already allow for the ownership of “real property” which includes land and structure, and hence allows infrastructure ownership. However, the definition of “qualifying income” is a more complex issue.

The REIT structure requires qualifying income to be in the form of a rent payment, and MLPs require either a rent payment or commodity-related income. This challenges the efficiency of owning infrastructure assets through REITs or MLPs, given the broader scope of infrastructure, the conventional pricing models for infrastructure assets, and the current interpretation of “rent” by regulators. Infrastructure involves more than simply commodity infrastructure and pricing for the use of these assets is often articulated as a toll or a fee, which traditionally has not been viewed as a rent payment.

However, it is arguable that payments made to use infrastructure represent a rental payment for use of the assets, irrespective of the exact pricing model and language used to describe it. For instance, in the case of an airport approximately 50% of revenue comes from gate charges and passenger ticketing fees (the remaining 50% is traditional rents from retail activities and parking). Few would argue that an airport is not “real property” – it derives its value from the land, the foundations of

**Figure 7: Extended REIT or Proposed IIT Comparison**

	REIT (Extended)	IIT (Proposed)
Purpose	Allow broad access to income producing real estate	Allow broad access to income producing infrastructure and development
Legislative formation	REIT Act contained in Cigar Excise Act extension of 1960. REIT Modernization of 1999.	De novo structure per infrastructure bill, or evolution of REIT or even MLP structure
Distribution	90% plus of taxable net income to shareholders	No distribution requirements to allow incentivized investment
Qualifying Assets	>75% of assets in real estate (real property or loans secured by property)	Transportation, utilities, energy distribution, communications infrastructure assets <sup>6</sup>
Qualifying Income (existing)	>75% of gross income from real estate (rents or interest from mortgages), no more than 25% of assets invested in stocks of taxable REIT	-NA-
Qualifying Income (proposed)	Broaden the accepted definition of rent to include any payment for use of real property including fees and tolls (to encompass infrastructure)	90% of gross income derived from qualifying income from transportation, utilities, energy distribution and communications infrastructure
Ownership	Minimum 100 shareholders, no more than 50% of shares held by five or fewer individuals	Widely held
Taxation	Dividend paid deduction means up to 100% of earnings not taxed at the corporate level, distributions include pass through of depreciation	Dividend paid deduction means up to 100% of earnings not taxed at the corporate level, distributions include pass through of depreciation; up front infrastructure development can be offset against ordinary income

Source: NAREIT, GLIO

the airport, the runway and the terminal. It logically follows that all fees and other charges paid by airlines and passengers are in fact to rent the use of this real property for a designated purpose and period-of-time. In the case of a gate charge, this is paid to give the airline the right to land its plane on the airport's runway and rent the gate to disembark passengers. In the case of passenger fees, these payments are made to afford the passenger the right to use the terminal from the gate to the taxi line or parking garage. Similarly, in the case of a road, this is also "real property" for which a tenant (driver) pays a rent payment (toll) to lease the property (the road) from the time it takes to move from point A to B.

### Option 2: IITs creation

A new purpose-built, Infrastructure Investment Trust (IIT) could leverage much of the success of REITs and provide a clearly defined path for inward bound infrastructure investment. An IIT structure could be designed to be specifically tailored to the characteristics of infrastructure assets, including the nature of qualifying assets and qualifying income.

Figure 7. compares the main elements of an extended US REIT and a proposed purpose-built IIT.

Specifically, an IIT would define qualifying

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income to include revenues derived from the transmission, transportation, and/or distribution of:

- 1) energy,
- 2) power,
- 3) data, and
- 4) vehicles (air, sea, road, rail).

This definition would cover the ownership of electric, gas, and water utilities, telecommunication/data physical architecture, and both freight and passenger railways, airports, seaports, bridges, and toll roads.

Much of US infrastructure investment requires new construction projects. This involves a period of no income and, in fact, losses from upfront investment. An IIT would need to capture the tax loss pass-through benefits of a private partnership structure, which cannot be captured in current REIT rules. An IIT that includes the ability to pass through tax losses to offset an investor's ordinary income would

create a powerful investment incentive from a broad base of long-term global investors. The effect of such a measure on stimulating new construction has precedent in the 1980s construction boom in commercial real estate.

### Conclusion

New and the upgraded infrastructure is essential for the US to maintain its competitive position in the global economy. While the US leads the world in innovation, business sophistication, financial markets and higher education, it alarmingly lags behind in basic economic requirements of which infrastructure forms a pillar. Imagine what upgraded infrastructure would mean for the US economy's long-run potential growth rate and competitiveness.

The challenges of funding and operating infrastructure in today's economy require an enlightened approach to attracting private capital through the widest possible global investor base. >

<sup>6</sup> Transportation/distribution of energy, power, data, vehicles (air, sea, road), including the ownership of: 1) electric, gas and water utilities; 2) Communications infrastructure; 3) Freight and passenger railways, airports, seaports, bridges and toll roads.

**Table 1: Top 10 Global Airports 2017 in terms of 'Quality'**

Rank	Airport	Ownership
1	Singapore	Government
2	Tokyo Haneda	Listed/Private
3	Incheon International	Government
4	Munich Airport	Government
5	Hong Kong International	Government
6	Doha Hamad International	Government
7	Centrair Nagoya	Listed/Private
8	Zurich Airport	Listed/Private
9	Heathrow Airport	Listed/Private
10	Frankfurt Airport	Listed/Private

Source: Skytrax World Airports Awards, Company websites, ACI

**Table 2: Top 20 Global Airports in passenger numbers**

Rank	City (Airport)	Passengers 2016 (Millions)
1	Atlanta GA, US (ATL)	104
2	Beijing, CN (PEK)	94
3	Dubai, AE (DXB)	84
4	Los Angeles CA, US (LAX)	81
5	Tokyo, JP (HND)	80
6	Chicago IL, US (ORD)	78
7	London, GB (LHR)	76
8	Hong Kong, HK (HKG)	70
9	Shanghai, CN (PVG)	66
10	Paris, FR (CDG)	66
11	Dallas/Forth Worth US (DFW)	66
12	Amsterdam, NL (AMS)	64
13	Frankfurt, DE (FRA)	61
14	Istanbul, TR (IST)	60
15	Guangzhou, CN (CAN)	60
16	New York NY, US (JFK)	59
17	Singapore, SG (SIN)	59
18	Denver CO, US (DEN)	58
19	Jakarta, ID (CGK)	58
20	Incheon, KR (ICN)	58

Source: Airports Council International (ACI)

*The US IIT has the opportunity to satisfy long-term investor demands for attractive yielding stable income, plus offer shareholder and regulatory transparency.*

A listed infrastructure investment vehicle, either through a de novo clearly-defined Infrastructure Investment Trust (IIT), or through the extension of the current REIT structure, can provide global investors with a familiar, easily understandable and liquid exposure to infrastructure.

As the global infrastructure asset class grows, it is paramount that governments create the conditions for the efficient deployment of capital to maintain

and upgrade national infrastructure. In addition, governments need to proactively encourage the development of new infrastructure projects that offer long-term economic benefits and that are constructed under the eye of an environmentally aware global investment community. We believe that the estimated \$150bn of 'dry powder' currently searching for infrastructure exposure is only at the beginning of a long-term trend to increase target allocations to the infrastructure asset class.

*By 2025 these projected infrastructure investment shortfalls may cause the loss of nearly 257,000 jobs and \$337bn in lost GDP.*

The climate is right for the US take the global lead and create the legislation to attract a deep liquid pool of private capital through an IIT, as it did for real estate through the REIT over 50 years ago. The US IIT has the opportunity to satisfy long-term investor demands for attractive yielding stable income, plus offer shareholder and regulatory transparency. Moreover, an IIT will contribute in the long-term upgrade and development mission-critical US infrastructure, without increasing the tax burden on the US population. 🌍

### US Airports – 5-minute case study

The Airport Privatization Pilot Program (APPP) which was established in 1999 has been a largely a failure. The aim of the program was to access sources of capital for airport development and to make airports more efficient, competitive and financially viable. Today, the bulk of US Airports remain local, state or federal owned. These are underperforming assets in a global context, and a drain on taxes.

Of the top 100 airports globally, ranked by the Skytrax World Airports awards in 2017, only five US airports make the top 50 ranking. The highest ranked US airports Cincinnati/Kentucky and Denver are ranked 26 and 28 respectively. Perhaps it is no coincidence that listed infrastructure company Ferrovial is leading the \$800m Denver International PPP (34-year concession). Ferrovial owns a major stake in London Heathrow Airport. Of the top 10 in Table 1, five are privately owned.

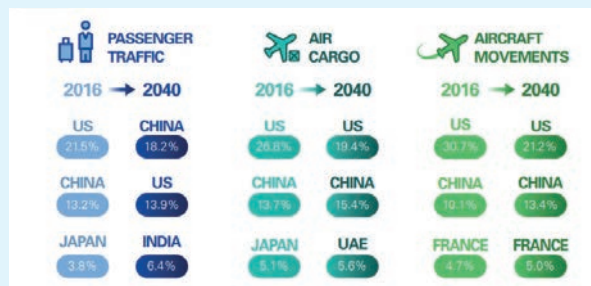
In terms of passenger numbers, as ranked by the ACI, US airports are heavily represented in the top 20 list for 2016. Atlanta, Los Angeles, Chicago, Dallas/Forth Worth, New York JFK and Denver serve approximately 450 million passengers (or

Table 3: GLIO Coverage Airports, Annualized Total Returns, as at June 29, 2018

Company	Country	MC \$Mn	FF MC \$Mn	FF Wght	Yield	Beta	3 Yrs	5 Yrs	7.5 Yrs	10 Yrs	12.5 Yrs	15 Yrs	17.5 Yrs
Aena	Spain	27,233	13,344	22.2%	4.2%	0.72	21.1%						
Sydney Airport	Australia	11,920	9,893	16.4%	5.1%	0.58	18.3%	22.1%	22.9%	24.5%	17.0%	21.3%	
Airports of Thailand	Thailand	27,166	8,150	13.5%	1.4%	1.05	29.6%	32.5%	47.4%	32.9%	25.7%		
Aeroports de Paris (ADP)	France	22,381	6,267	10.4%	1.8%	0.71	26.8%	23.6%	20.1%	15.3%			
Auckland Intl Airport	NZ	5,520	4,306	7.2%	3.1%	1.26	15.1%	24.4%	24.1%	20.4%	16.9%	17.2%	18.3%
Zurich Airport	Switzerland	6,258	3,880	6.5%	3.2%	0.90	15.5%	19.5%	17.0%	13.2%	14.8%	27.9%	9.7%
Fraport	Germany	8,935	3,574	5.9%	1.8%	0.62	15.7%	14.7%	10.6%	9.7%	7.8%	12.9%	
Grupo Aero Pacifico (GAP)	Mexico	4,461	3,301	5.5%	5.4%	0.70	23.9%	26.8%	22.9%	24.6%			
Aero del Sureste (ASUR)	Mexico	4,445	3,245	5.4%	2.2%	0.84	14.4%	19.8%	25.7%	23.4%	23.0%	25.5%	22.5%
Aero del Centro Norte (OMA)	Mexico	1,770	1,770	2.9%	3.9%	0.99	15.2%	23.4%	25.9%	21.7%			
Beijing Cptl Intl Airport	China	1,981	1,545	2.6%	3.6%	0.57	-0.9%	13.0%	11.8%	4.1%	8.8%		
TAV Havalimanlari	Turkey	1,779	872	1.4%	5.0%	0.59	4.6%	19.8%	20.1%	16.8%			
<b>Grand Total</b>		<b>123,850</b>	<b>60,147</b>	<b>100.0%</b>	<b>3.4%</b>	<b>0.79</b>							

Source: Reuters

Diagram 1: World Airport Traffic Forecasts 2017-2040



Source: Airports Council International (ACI)

approximately 6% of global traffic) – a truly immense statistic. Global air traffic reached 7.7 billion in 2016. Importantly, global passenger traffic forecasted growth is expected to be 4.5% to 2040. North America is forecast at a much slower +2.8%. By 2029 global passengers will double to 14 billion. North American market share of passenger and cargo traffic is forecast to fall significantly over this period – see Diagram 1.

It is clear US airports need to remain competitive in a global marketplace going forward. To do this requires huge investment. ASCE's *Failure to Act* economic study released in 2016 projects that the average annual investment gap for airports through 2025 is expected to decrease from \$4.6bn to \$4.2bn. However, by 2040, the cumulative gap is expected to slightly increase from a per year average of \$3.3bn to \$3.5bn in 2015 dollar terms – leaving a total investment gap of \$88bn. By 2025 these projected infrastructure investment shortfalls may cause the loss of nearly 257,000 jobs and \$337bn in lost GDP. Given the fact that long-term investment planning can take 20-25 years according to the ACI, something needs to be done now if the US has any hope of remaining as competitive in the future.

The creation of a US Airport IIT could provide an investment vehicle to address many of these issues. Local and State governments can free capital through a total, or part sale, to wide-ranging private investors including US pension funds and savings schemes. For example,

the top six US airports by passenger numbers have an estimated IPO valuation between \$50-65bn.<sup>7</sup> The top 15 US airports have an estimated IPO valuation between \$100-125bn. It is further estimated that any airport in the US with over 3-4 million passengers per year is large enough for IPO. In the US this equates to the top 60 airports by passenger numbers, simply huge potential.

Newly freed capital can be used for much needed upgrades, or development as highlighted by the ASCE. The role of the Airport IIT management is to operate the airport efficiently, generate stable cash flows for maintenance, expenditure, dividends and attract private capital when expansion and development is required. Listed Spanish airport owner AENA (IPO 2015), whose Government maintains a 51% stake, offers a good and recent working example. Other longer-term successful examples are Sydney Airport (2002 IPO), Zurich Airport (IPO 2002) and Japan Airport Terminal (IPO 1990). Table 3. highlights GLIO Coverage airports with country of listing, full market capitalization, and very attractive compound total returns over a variety of mid-to-long term investment periods.



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 Fraser Hughes is founder and CEO of the Global Listed Infrastructure Organisation (GLIO). He founded GLIO in July 2016. Previously, he was Deputy CEO at EPRA. EPRA successfully increased investor awareness in the global listed real estate sector and successfully lobbied national governments in Europe to introduce REIT legislation. Previously, he worked in a variety of investment positions in the City of London, including a period developing FTSE's global index range. Hughes holds a MSc Investment Management from CASS Business School London. He has attended Executive Leadership courses at London Business School (LBS) and the International Institute for Management Development (IMD) in Switzerland.  
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<sup>7</sup> Calculation based on total passenger number on annual basis x \$10 EBITDA per passenger valued on an IPO multiple of 11-14x.