

Sustainable Financing of Infrastructure in Emerging Economies

- *Closing the Gap* -

G24 Meeting

Addis Ababa, February 27 and 28, 2016



Sustainable Financing of Infrastructure Outline

- I. Infrastructure in development
- II. Infrastructure spending worldwide – the state of play
- III. Infrastructure financing in emerging economies – needs and sources
- IV. The role of the private sector
- V. Tapping private savings through institutional investors
- VI. The way forward

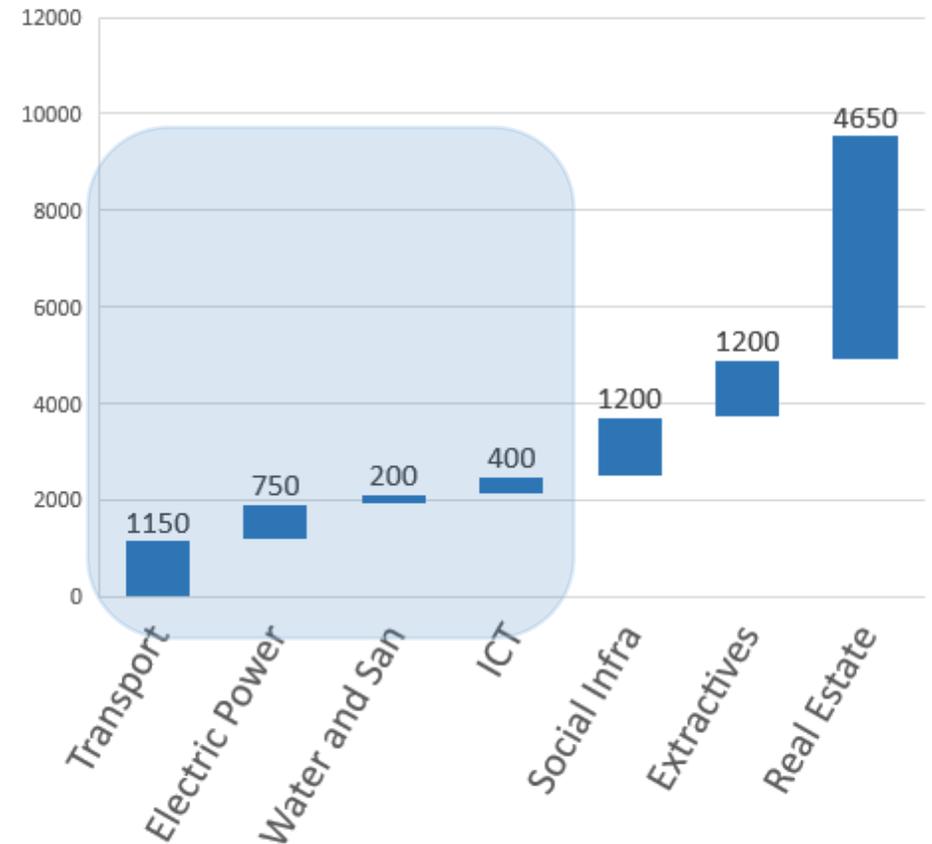
What do we mean by “infrastructure”?

- Transport
- Electric power
- Water and sanitation
- ICT

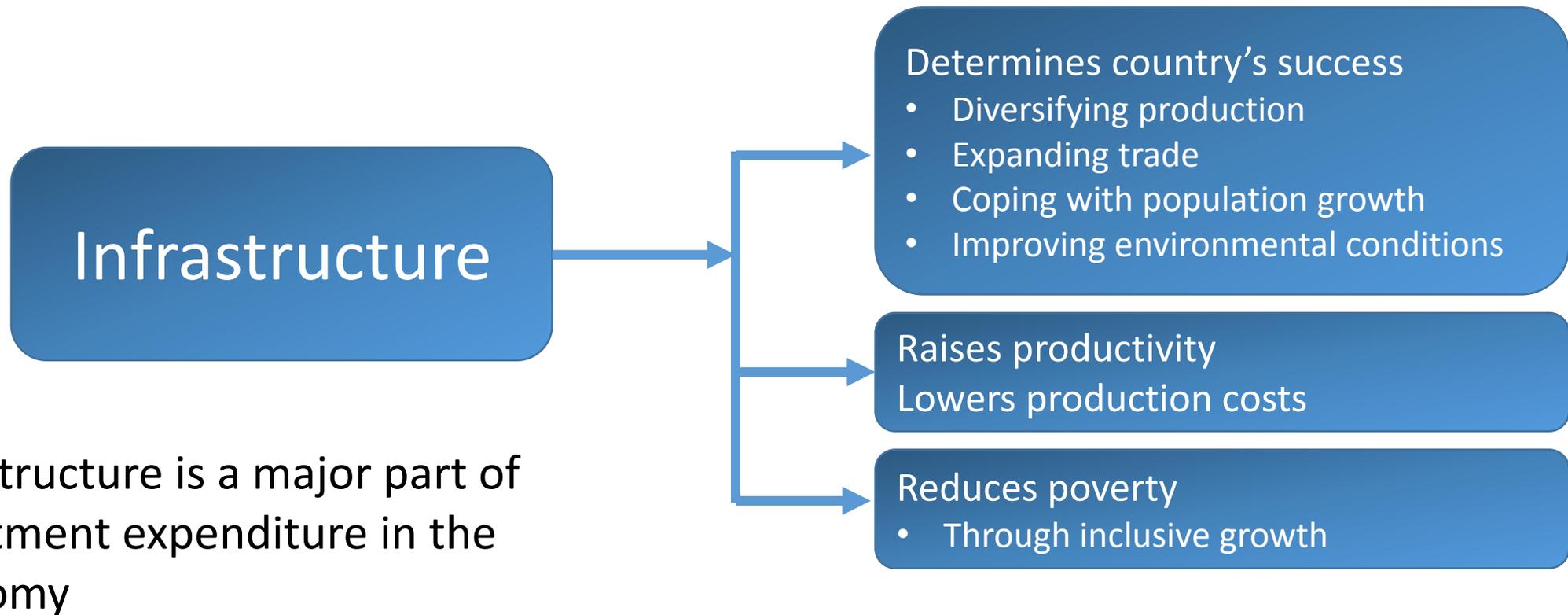
Hard Infrastructure
= \$2.5 trillion/year

- Social infrastructure (hospitals, prisons)
- Extractives (oil, gas and mining)
- Real estate

Worldwide spending on infrastructure
(\$ billion)



Infrastructure is essential for development

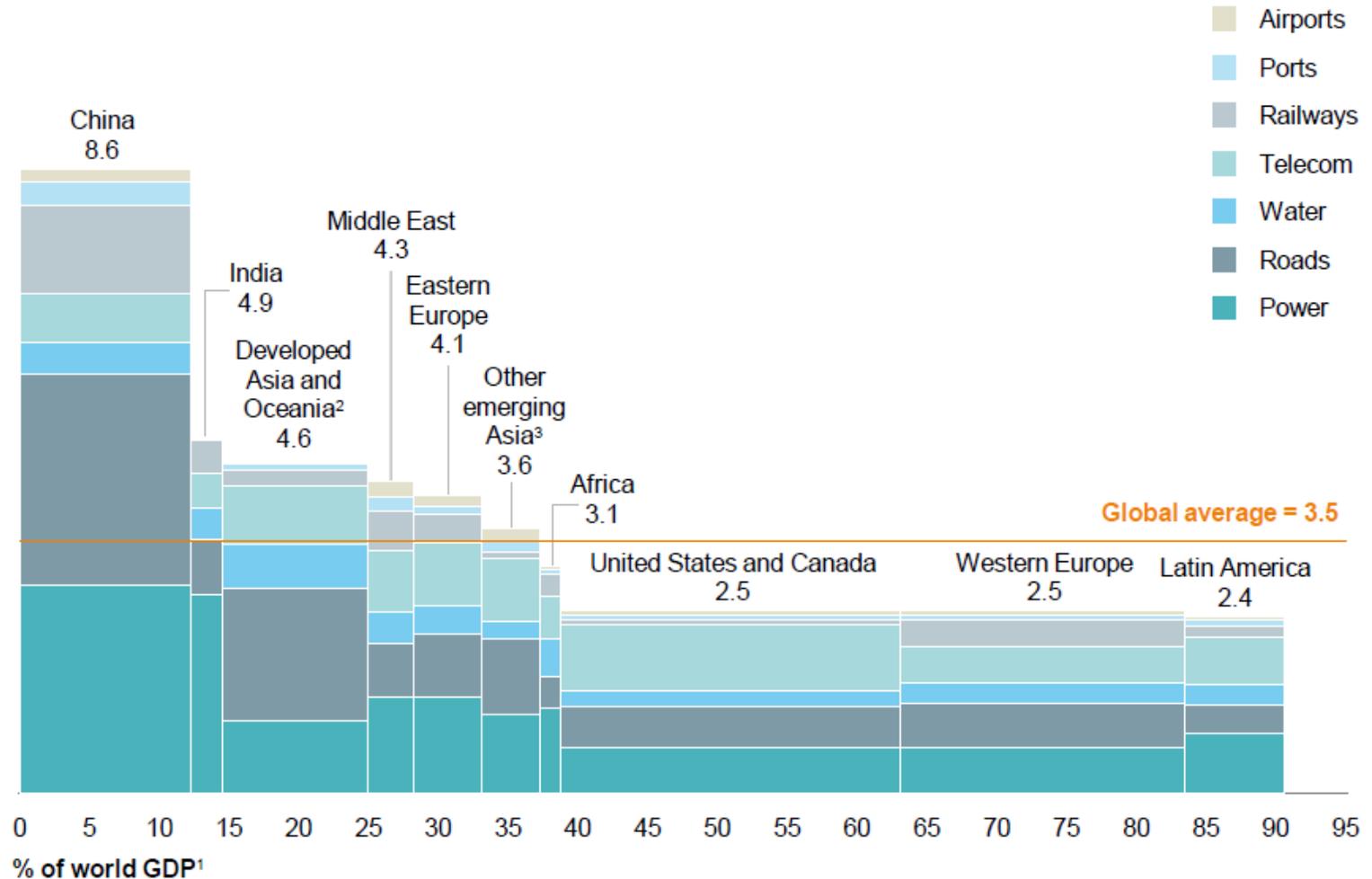


Infrastructure Spending Worldwide 1992-2013 (Annual average as % of GDP)

Global spend: 3.5% of world GDP

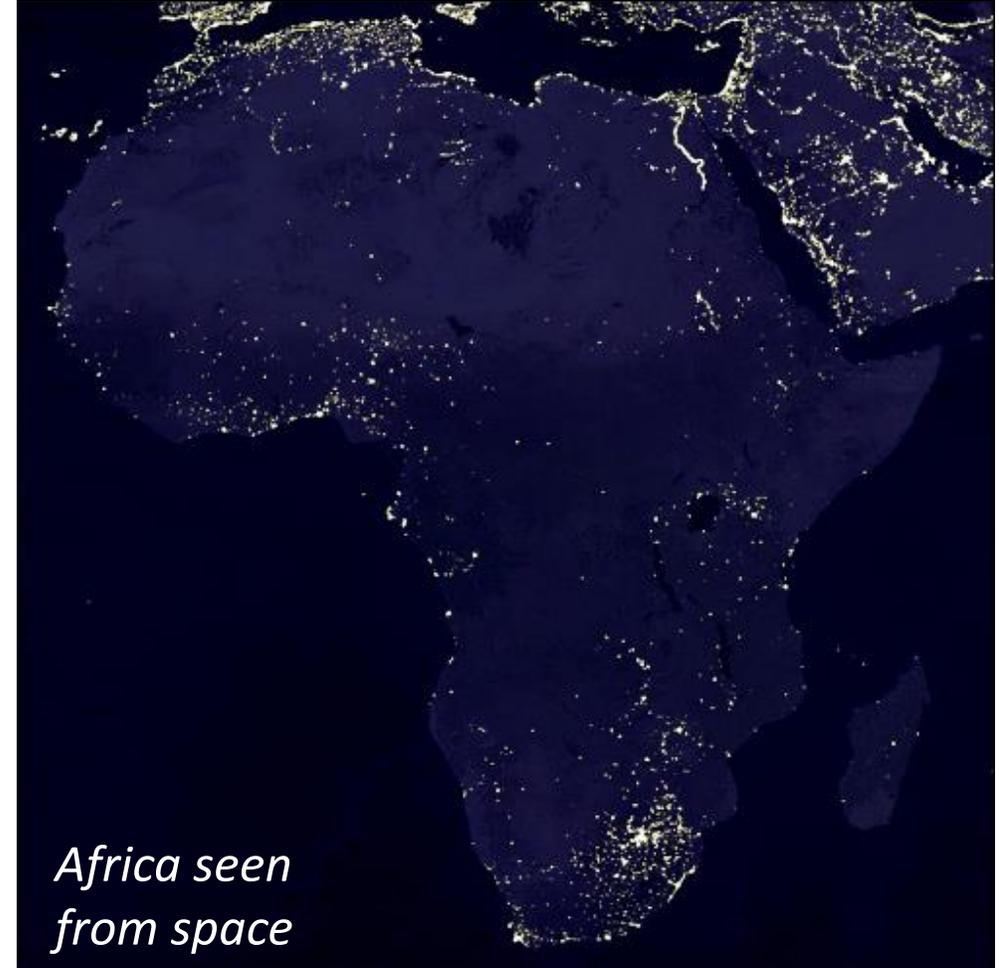
India: 4.9%
Emerging Asia: 3.6%
Africa: 3.1%
Latin America: 2.4%

Apart from India, G24 invests less than the global average



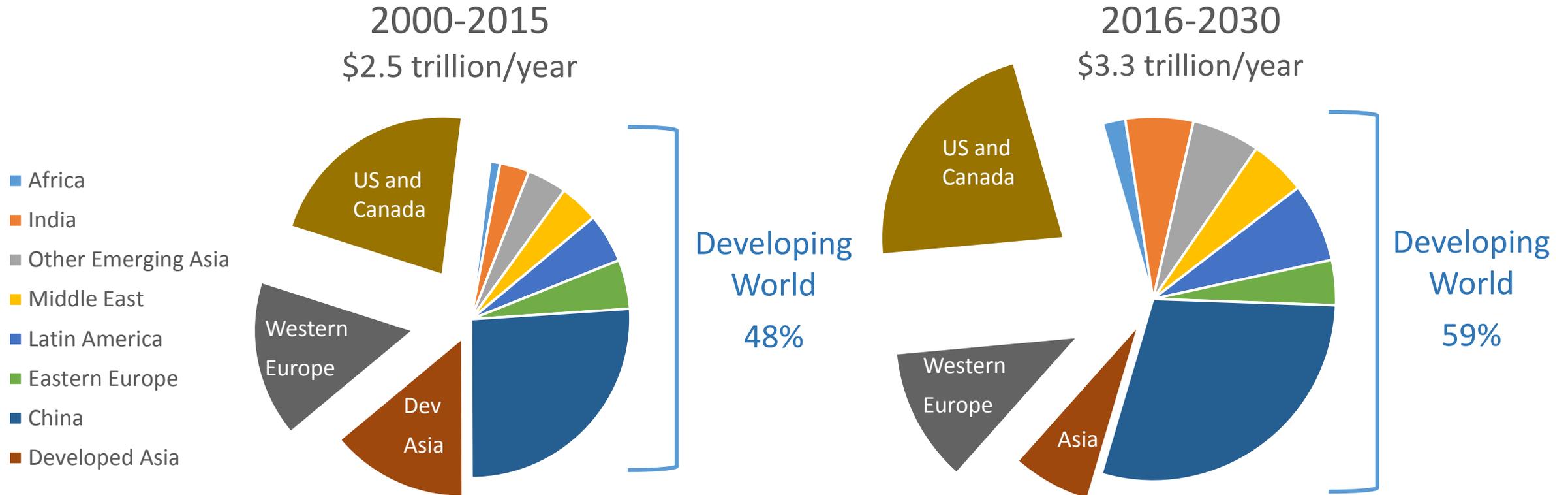
Some regions are dramatically under-endowed -- Africa literally a continent in the dark

- Africa has 15% of world population but only 3.2% of world generating capacity
- Only one in three Africans have access to electricity
- More than half the world's people without electricity are Africans
 - *635 million out of 1.2 billion worldwide*





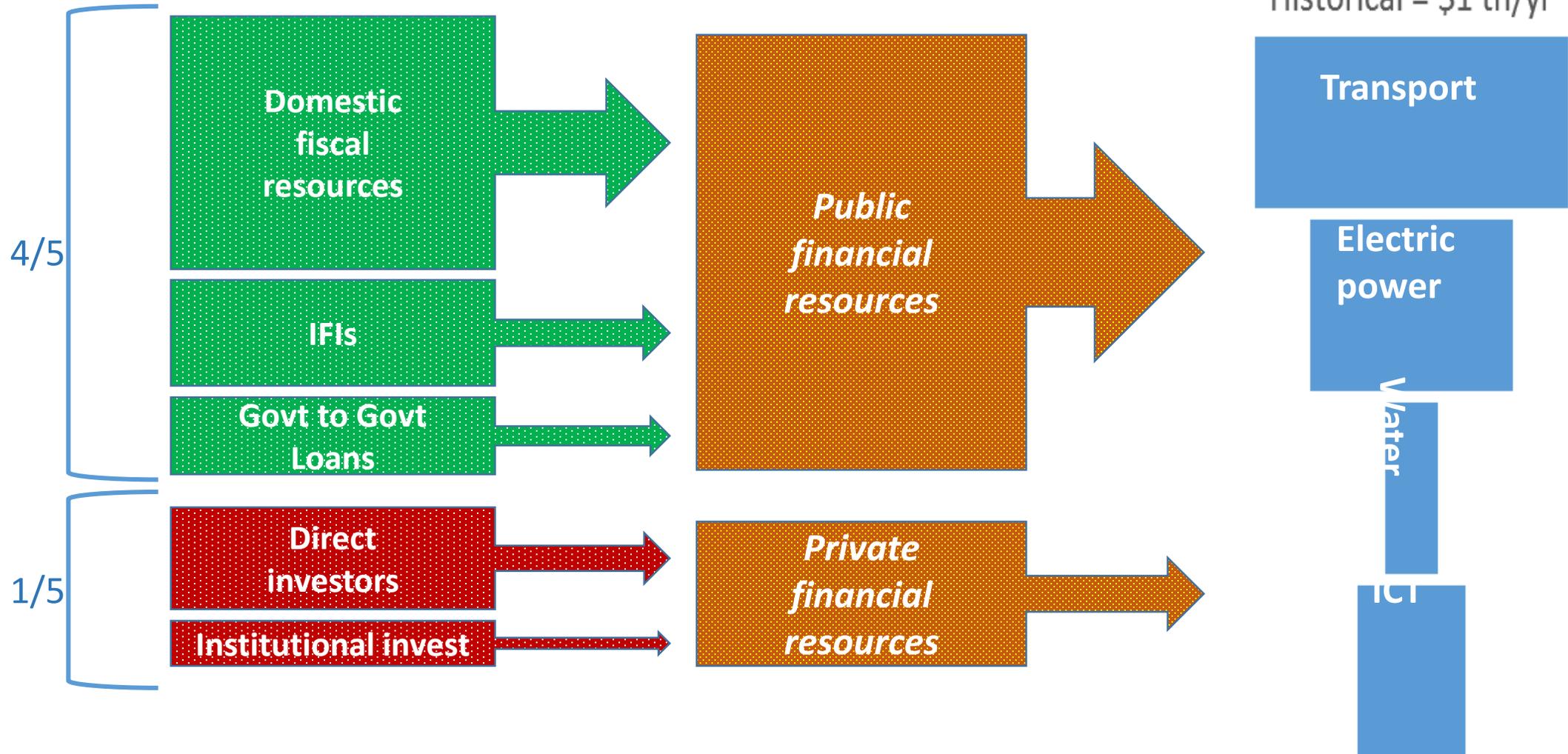
Worldwide infrastructure spending, 2000-2030



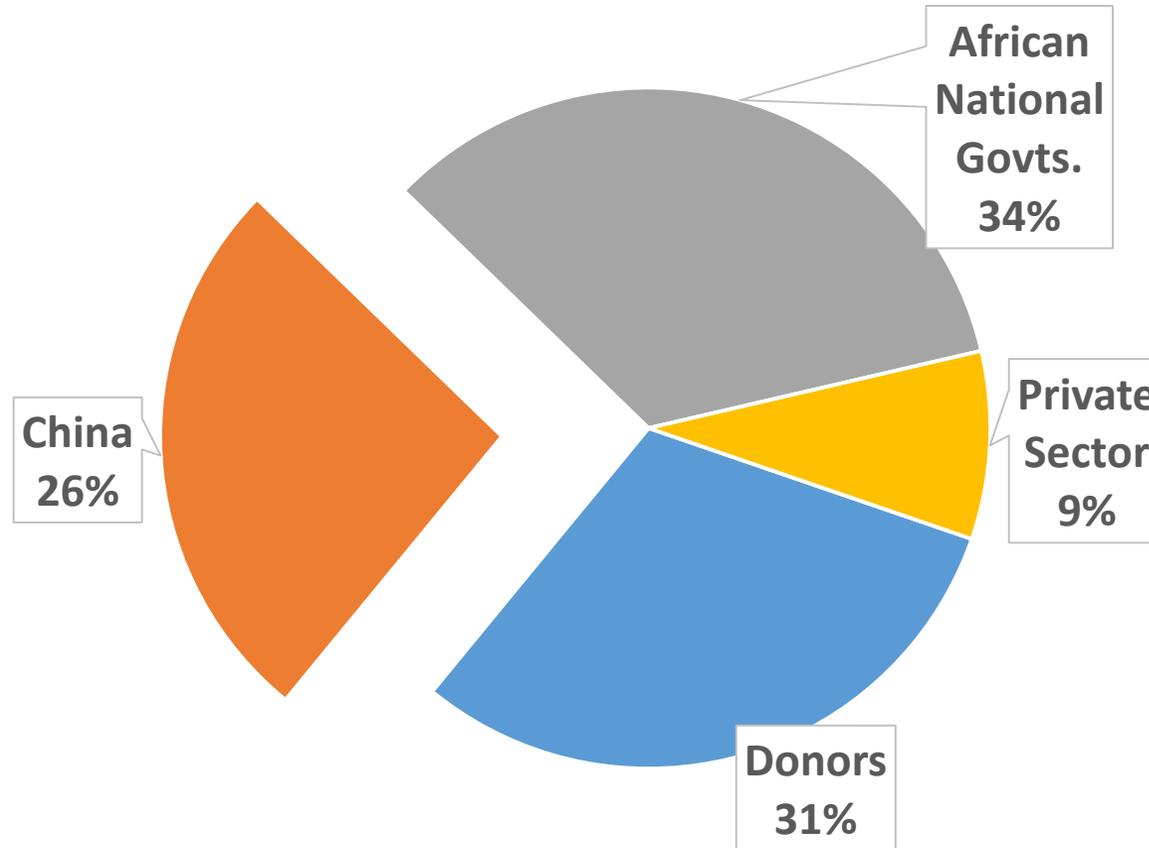
Developing countries will need to nearly double annual investment over 2016-2030 to \$1.9 trillion per year

Source: McKinsey Global Institute (2016)

Historical sources of infrastructure finance in developing world



African infrastructure is a special case -- Role of China

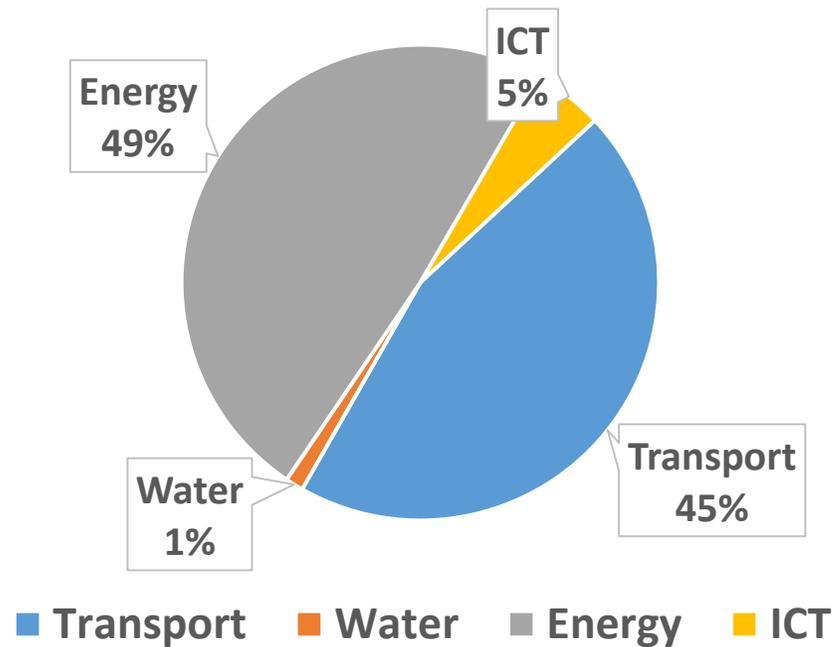


Source: ICA 2016

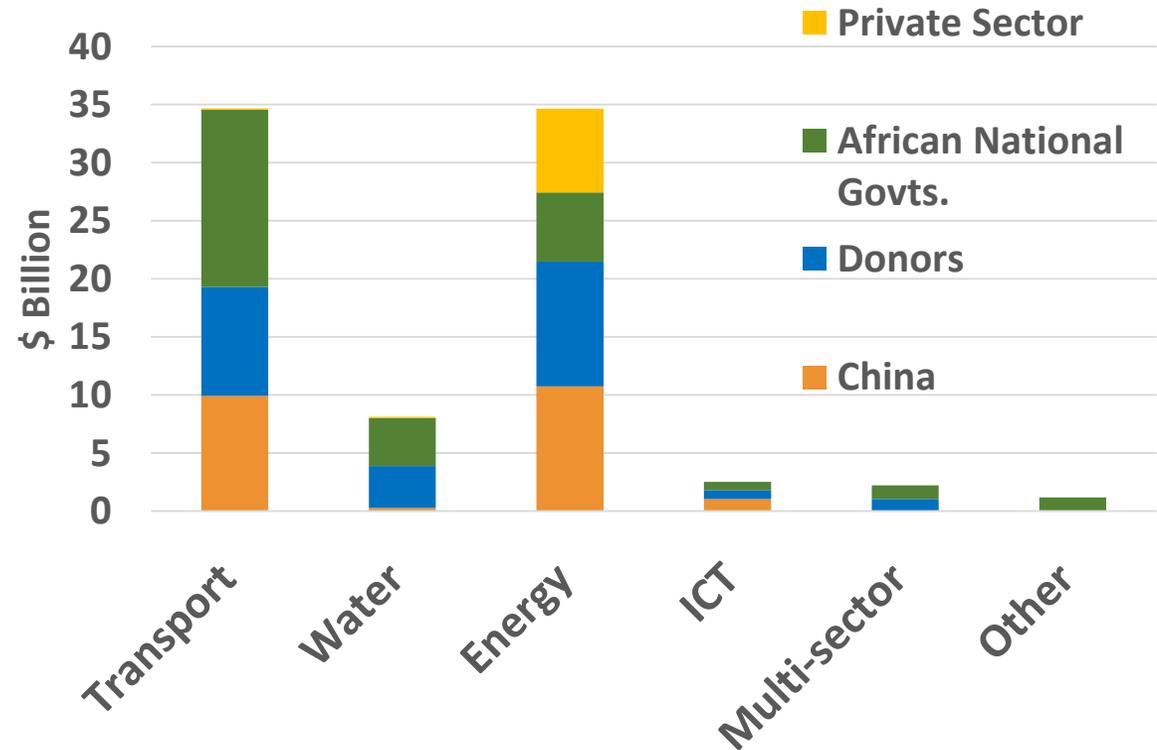
Total Spending 2015: \$83.4 billion

African Infrastructure – Where China puts its Money

Breakdown of Chinese Investment in Africa (2015)



Source of African Infrastructure Investment (2015)



Source: ICA 2016

Chinese mega-projects in Africa (Transport)

Tanzania Bagamoyo Port – Will become Africa's largest port (20 million containers per year). The project is worth \$7 billion, funded by China Merchants Holdings International and State Government Reserve Fund of Oman. Construction started in October, 2015, but was halted earlier this year due to financial constraints.



Kenya Standard Gauge Railway – The biggest infrastructural project in Kenya since independence, worth \$3.8 billion. China Exim Bank has funded 85 percent of the project (about \$ 3.1 billion). Construction on the 609 km rail line began in October 2013. The first phase connecting the port city of Mombasa to the capital Nairobi is set to be complete by December, 2017.



Ethiopia-Djibouti Railway – Replaces the out-of-use metre-gauge railway which opened throughout in 1917. The Ethiopian section was inaugurated on 5 October 2016, and the Djibouti section was inaugurated on 10 January 2017. The railway has reduced cargo transit times from 3 days by road to 12 hours by train.



Source: AFK Insider, others

Chinese mega-projects in Africa (Energy)

- **China invested \$13 billion** between 2010 and 2015, financed largely through public lending
- **Responsible for 30% of new capacity** in 2010 to 2015 (more than 200 greenfield power projects contracted to Chinese companies over the period)
- **17 GW of generation capacity between 2010 to 2020** currently built or are currently contracted to build, equivalent to around 10% of existing installed capacity
- **Focus on hydropower.** In fact, renewable sources account for 56% of the total capacity added by Chinese projects between 2010 and 2020, including 49% from hydropower



Emerging Economies – additional \$900 billion per year needed

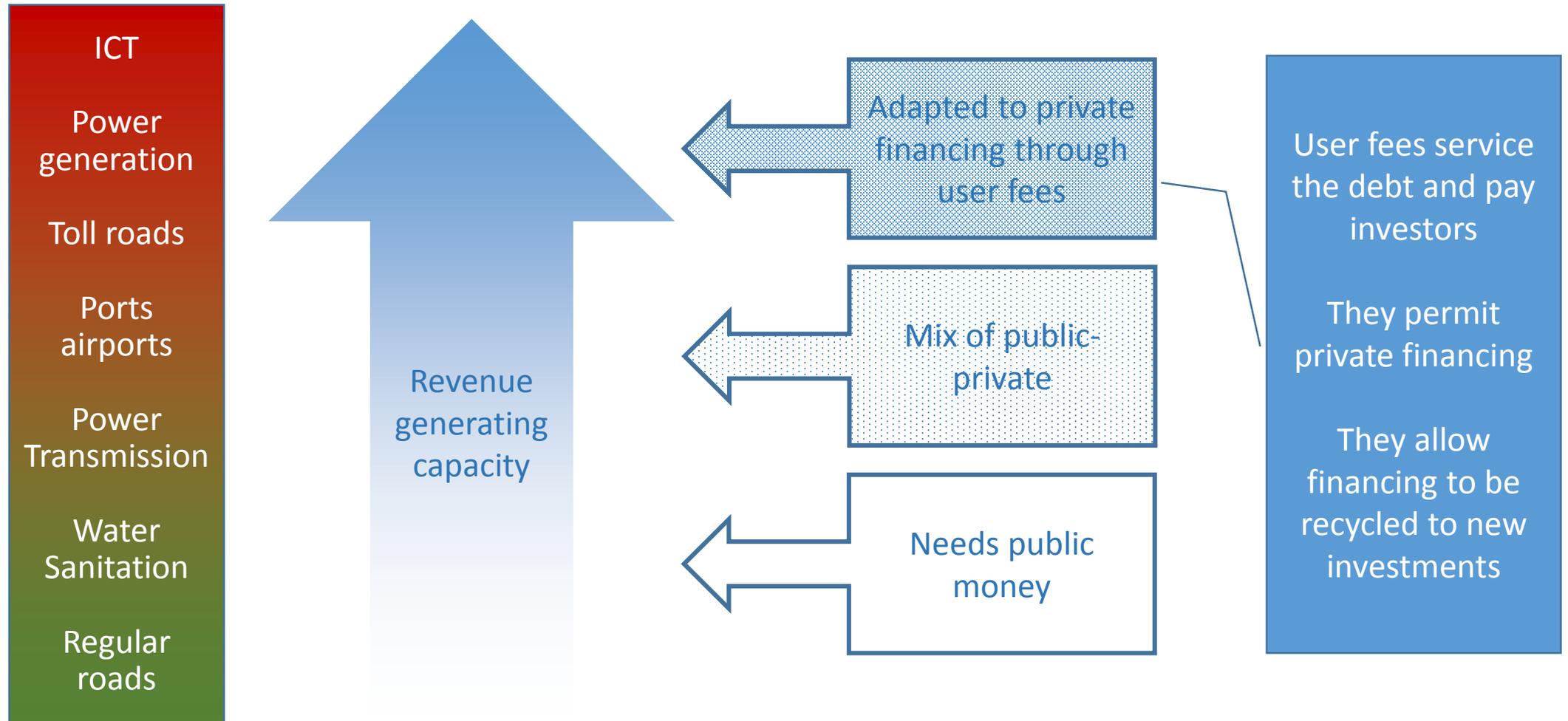
- **Public sources of finance cannot close the gap**
 - Domestic tax revenue is difficult to raise
 - Other worthy uses exist (education, health, security)
 - IFIs and state-to-state loans are maxed out
- **Private sources of finance will have to add a significant portion of funding**
 - Direct investors (PPPs, concessions)
 - Institutional investors
- **Closing the gap will need direct private financing and institutional investors**

INSTITUTIONAL INVESTORS

- **Manage long-term savings for pension funds and insurance companies**
 - \$30 to \$40 trillion in assets in developing world*
- **Need long-term investments with steady revenue streams, manageable risk**
- **Invest in traded securities (stocks and bonds) and real estate**
- **Don't invest in infrastructure in developing world**

*Guestimate

Not all infrastructure can be financed by the private sector— importance of user fees



Project with private sector financing

Lake Turkana Wind Farm (Kenya)

- 310MW wind power to national grid, (18% of current installed capacity)
- \$650 million investment
- IFI support (African Dev Bank)
- Risk mitigation
 - Kepco (power utility) restructuring
 - Payment risk covered by letter of credit
 - AfDB partial risk guarantee
 - AfDB B-Loan



Project with financing from institutional investors

Carreterra Samara Toll Road (Dominican Republic)



- Existing infrastructure asset refinanced with lower cost bond
- Asset received risk mitigation (PRI cover from MIGA)
- Bond rated by agencies
- Asset-backed bond issued on stock market
- Initial financing recycled into new projects

How to ensure affordability?

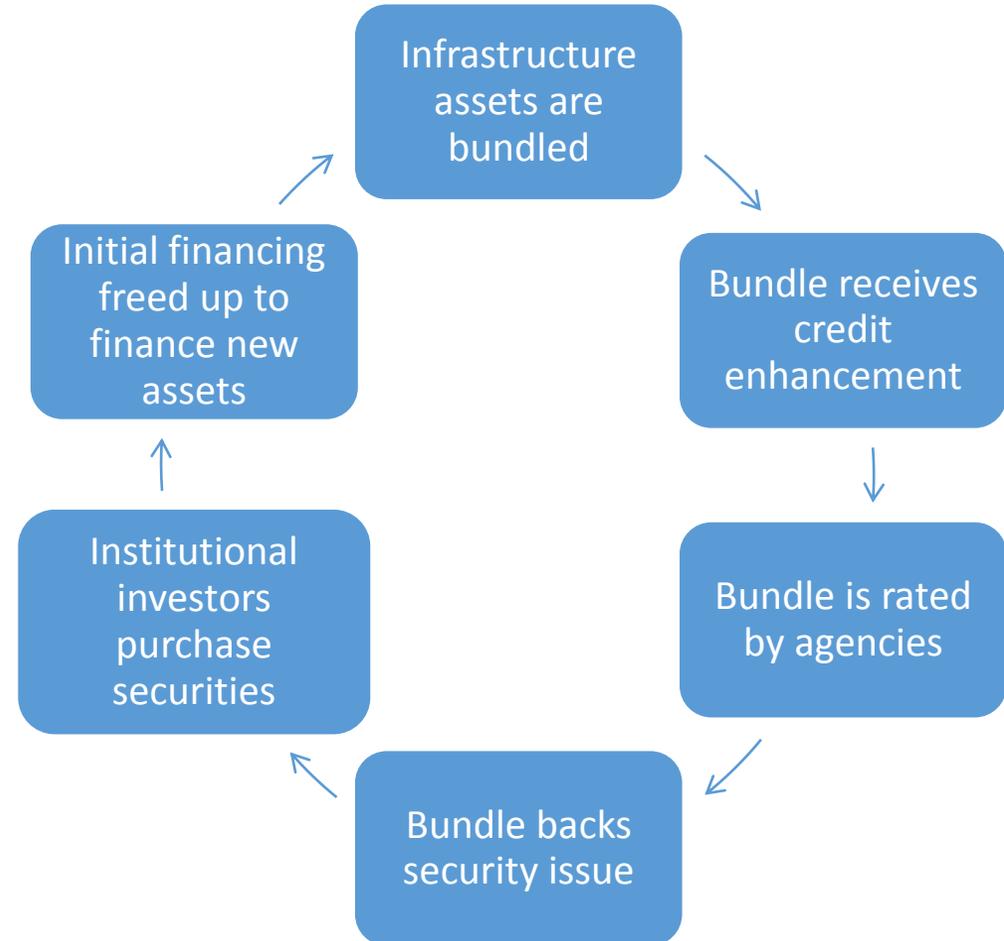
- Private investors can mean costly financing and high tariffs if risks are too high
 - Non-payment risk
 - Utility is insolvent
 - government doesn't pay
 - tariffs are too low
 - Country risk
 - Contractual risk
 - Regulatory risk
 - War and civil disturbance
 - Market risk
- Financing costs can be brought down significantly by risk mitigation

RISK	MITIGANT
Non-payment	<ul style="list-style-type: none"> • Governments must restructure insolvent utilities • Governments must pay for their usage • Tariffs must be adjusted • Smart payment mechanisms (prepaid cards) • Guarantees from an IFI
Country risk	<ul style="list-style-type: none"> • Political Risk Insurance (MIGA)
Market risk	<ul style="list-style-type: none"> • Contract structure • Partial government support

Un unserved rural consumer would be willing to pay for electricity from a private supplier, which is much cheaper than the alternative: batteries and candles

Tapping institutional investors

- Institutional investors have investment requirements
 - Stable cashflow
 - Moderately low risk
 - An asset that holds a credit rating (Investment grade)
- They prefer to purchase securities on markets if possible
- To tap their resources, existing infrastructure assets need to be bundled and issued as a security
- Freed-up funding can be recycled into new infrastructure projects



Conclusion

- Developing world needs more infrastructure
- Infrastructure investment must nearly double to close the gap
- Additional financing of \$900 billion per year is required
- Financing from the private sector must be tapped, notably institutional investors
- To manage costs, users must pay and risks must be mitigated
- Infrastructure asset-backed securitization can tap considerable financing resources from institutional investors, and free up financing for new projects

Thank You

