



Manila, 29-30 August 2017

# *Improving public investment efficiency for infrastructure development*

Mr Mathieu Verougstraete

---

Economic Affairs Officer

**UNESCAP – Financing For Development**

## ■ Infrastructure Needs in South-East Asia

= approx. **\$157 billion** per year (4.1% of GDP))

↗ by around **1.5%** of GDP

## ■ Tight fiscal constraints

Need to prioritize investment / Maximize value-for-money

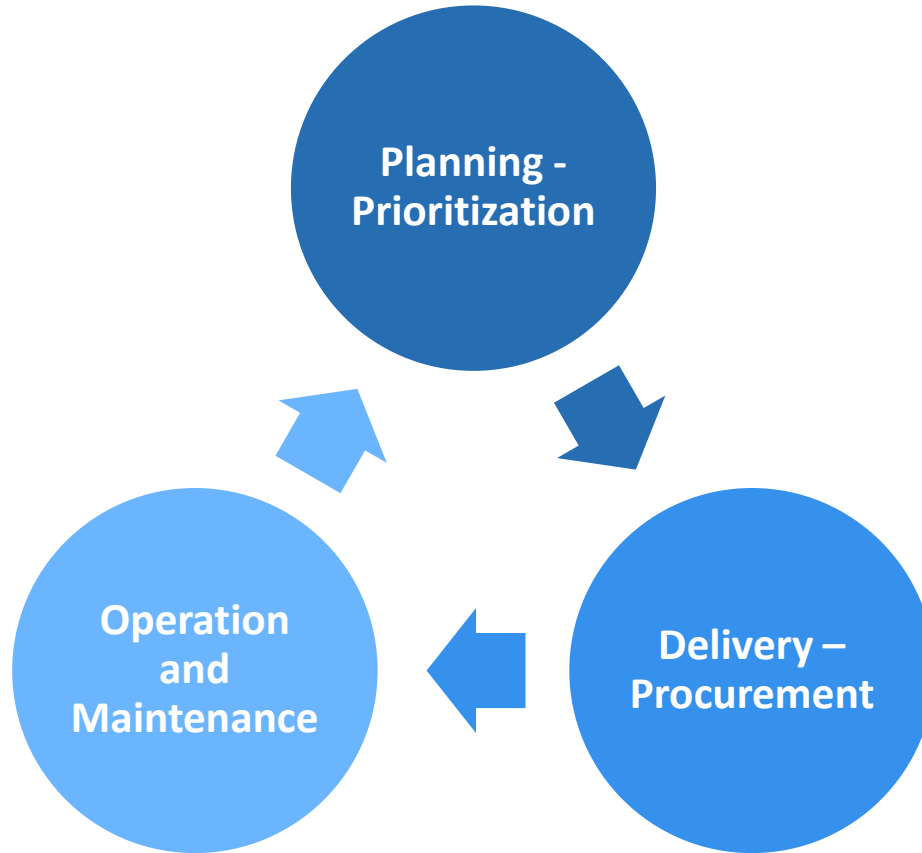
## ■ Typical issues with infrastructure projects

- Poor project selection (e.g. based on political considerations)
- Delays in design and completion of projects
- Corrupt procurement practices
- Cost over-runs / Incomplete projects
- Failure to operate and maintain assets effectively



# Project Cycle

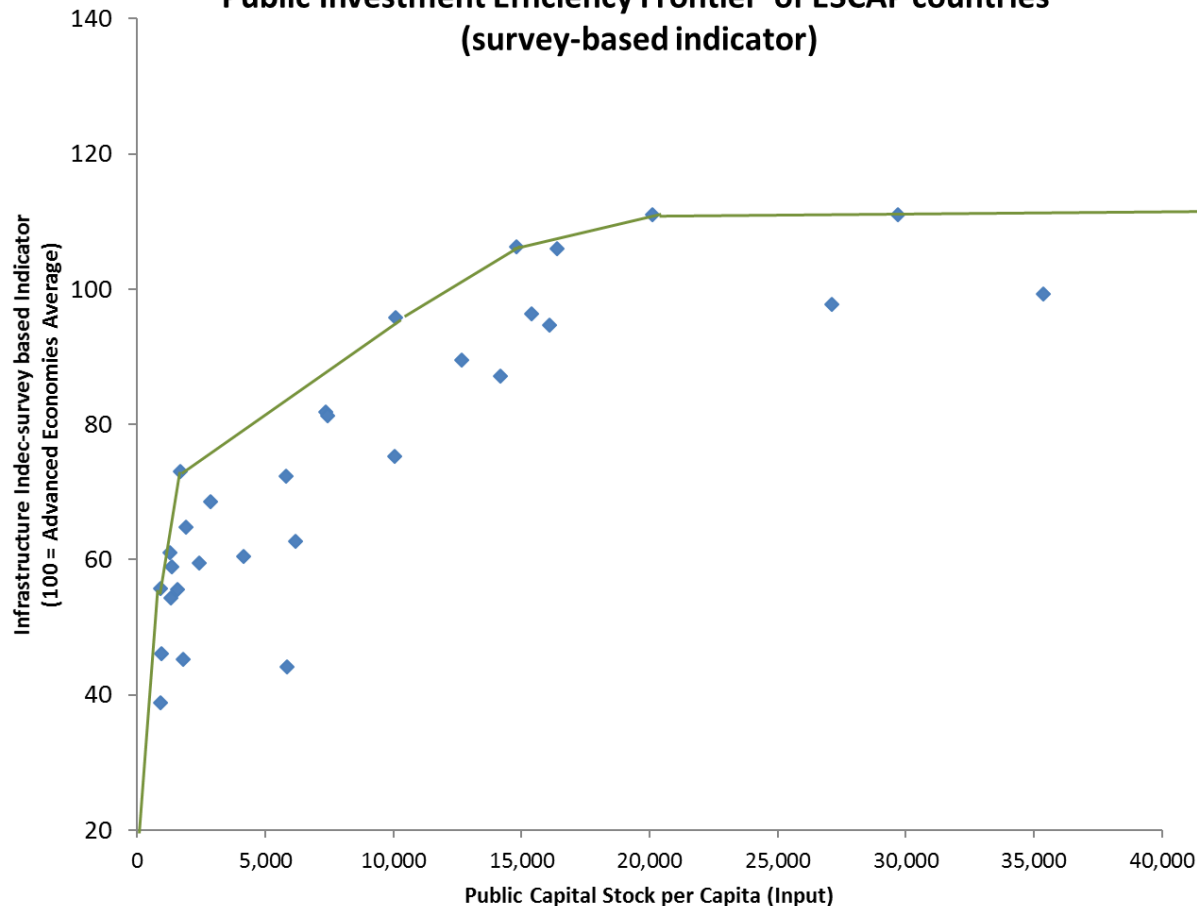
*Improving efficiency throughout the project cycle*



# Why is public investment efficiency important?

*A \$125 billion opportunity in the region*

**Public Investment Efficiency Frontier of ESCAP countries**  
(survey-based indicator)



Some countries achieve the same level of infrastructure quality with less investment

→ Efficiency Gap estimated to **10%** (South-East Asia)

→ Potential savings ~ **\$16 billion per year**

Boosting productivity can reduce infrastructure spending by **40%** according to McKinsey



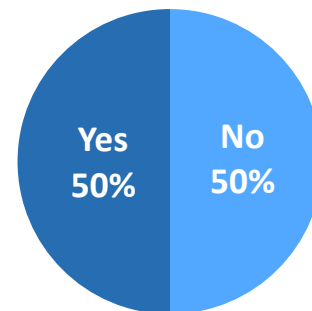
- ✓ Strengthening Planning and Prioritization
- ✓ Streamlining infrastructure project delivery
- ✓ Making the most of infrastructure assets



# Strengthening Planning and Prioritization

## *Infrastructure Plan*

- ✓ Does the country have a National or Sub-National Infrastructure Plan?
- Align investment with countries priorities / development objectives (e.g. SDG)
  - Provide a long-term vision (infrastructure assets can last 50 years)
  - Assess infrastructure deficiencies
  - Coordinate different infrastructure sectors
  - Identify the possibility of charging users
  - Highlight policy reforms required (e.g. tariff)
  - Develop in consultation with stakeholders



Source: GIH Compass based on 48 countries

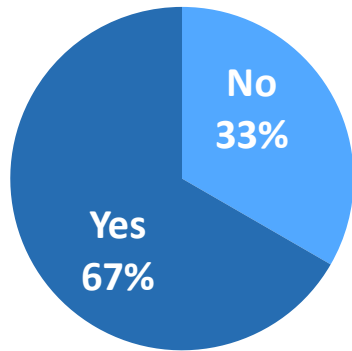


# Strengthening Planning and Prioritization

## *Appraisal Guidelines*

### ✓ Does the country have guidelines for the appraisal of infrastructure projects?

- Ensure investment decisions based on realistic priorities and cost estimates



Source: GIH Compass based on 48 countries (guidelines are only at the sector level for some countries)

- Define the minimum level of information required
- Ideally detailed project-level information (full-fledge feasibility studies) and quantification of social, environmental and economic effects (i.e. **social cost-benefit analysis** )

= good basis for prioritization but ...

- Lack of capacity to provide extensive economic analysis
- Limited information on project proposals / Data availability

→ A pragmatic evidence-based selection system is needed to compare projects / analyze project at the portfolio level

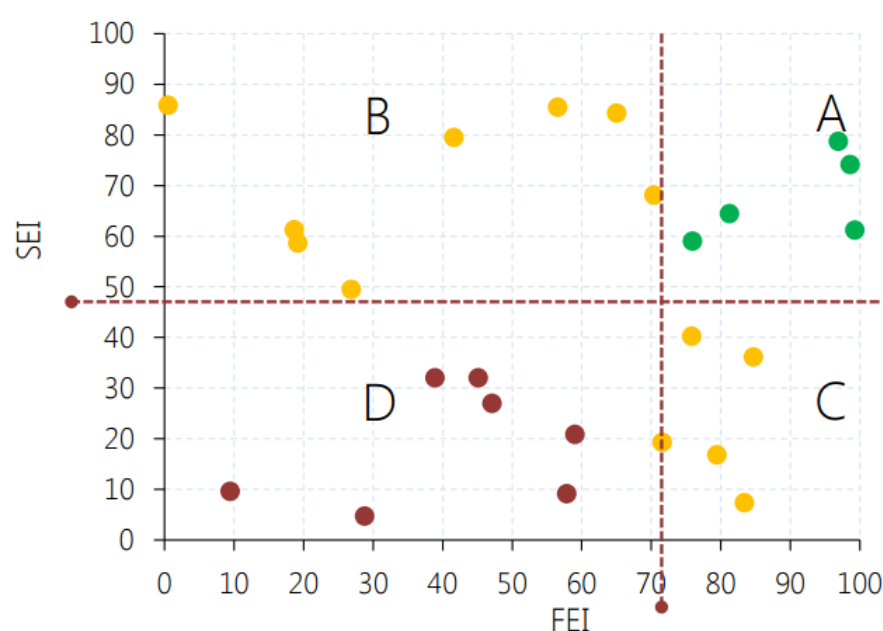


# Strengthening Planning and Prioritization

## *Multi-criteria approach*

### *Example: World Bank's Infrastructure Prioritization Framework (IPF)*

- Multi-criteria decision approaches formalize the inclusion of non-monetary and qualitative factors into decision analysis
- IPF synthesizes project-level indicators into 2 indices: social-environmental and financial-economic



- A Higher priority
- B Higher social/environmental priority
- C Higher financial/economic priority
- D Lower priority

- ✓ No need to monetize all benefits and costs
- ✓ Designed for application within only one sector





# Strengthening Planning and Prioritization

## *Gender Considerations*

**Target 5.4:** Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies ...

- Infrastructure projects cannot be assumed to deliver benefits to men and women equally



### ***Gender mainstreaming in infrastructure (conscious approach / explicit)***

- Gender involvement in consultation
- Supporting women employment in the project
- Key performance indicators with regard to female benefits
- Monitor against gender impact → Lack of sex-disaggregated data is an issue



# Agenda

- ✓ Strengthening Planning and Prioritization
- ✓ Streamlining infrastructure project delivery
- ✓ Making the most of infrastructure assets

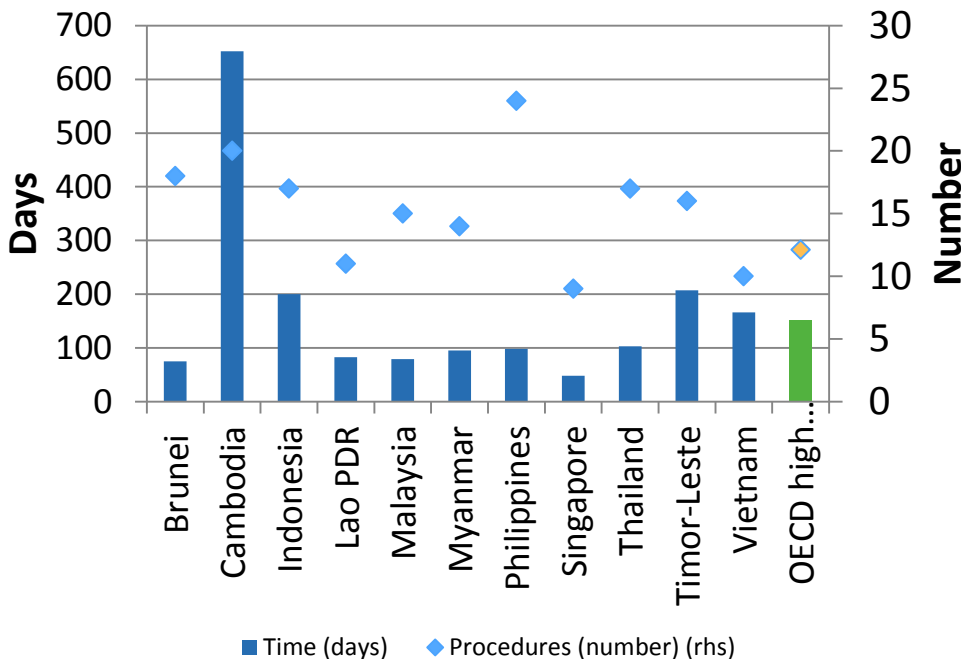


# Streamlining infrastructure project delivery

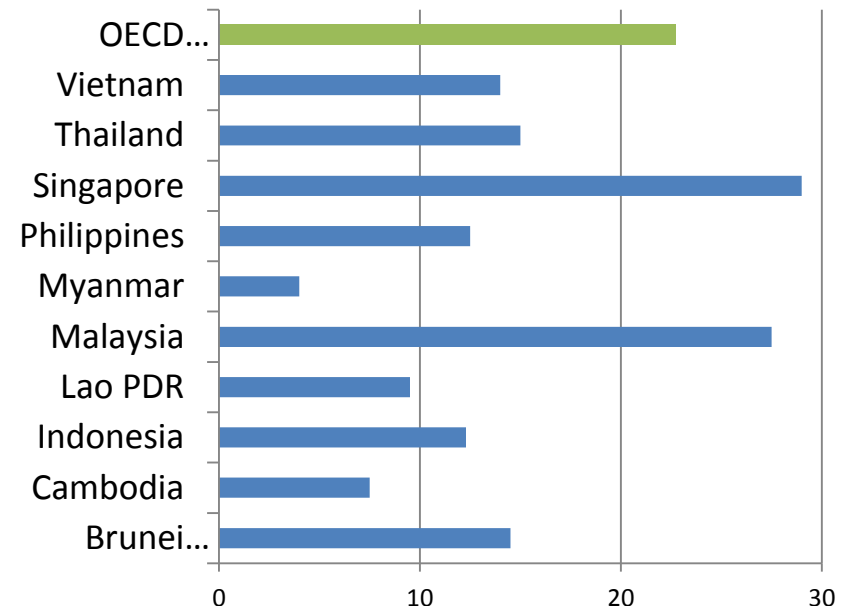
## *Accelerating permit approvals and land acquisition*

*In India, 70 to 90% of road projects suffer a 15 to 20% delay due to challenges in land acquisition*

### Construction Permits



### Quality of the land administration index (0-30)



Source: World Bank Doing Business

✓ “one-stop-shop” permitting and clear allocation of responsibilities

✓ Quick dispute resolution mechanisms, and land titles register



# Streamlining infrastructure project delivery

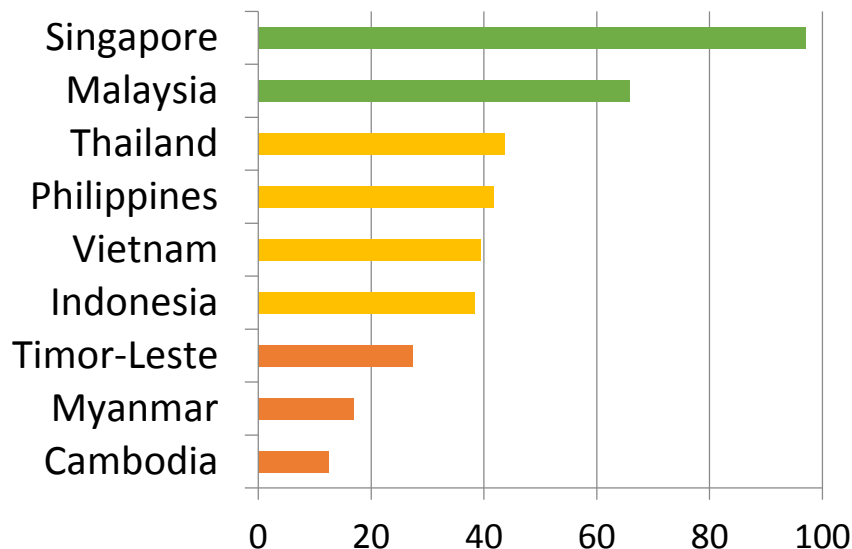
## *Enhancing governance*

### ✓ Internal controls / Audits

*86 % of public infrastructure projects are above budget*

### ✓ Reducing corruption

Perceived Control of Corruption in SEA  
(Percentile Rank – 2015)



Source: World Bank

Source: Flyvpjerg et al. / data: 258 Infra Projects over 1910-2000 (Europe / USA / Japan)

*Estimated globally at between 5 to 20 per cent of construction costs*

Source: Kenny, C. (2006). WB Working Paper 4099

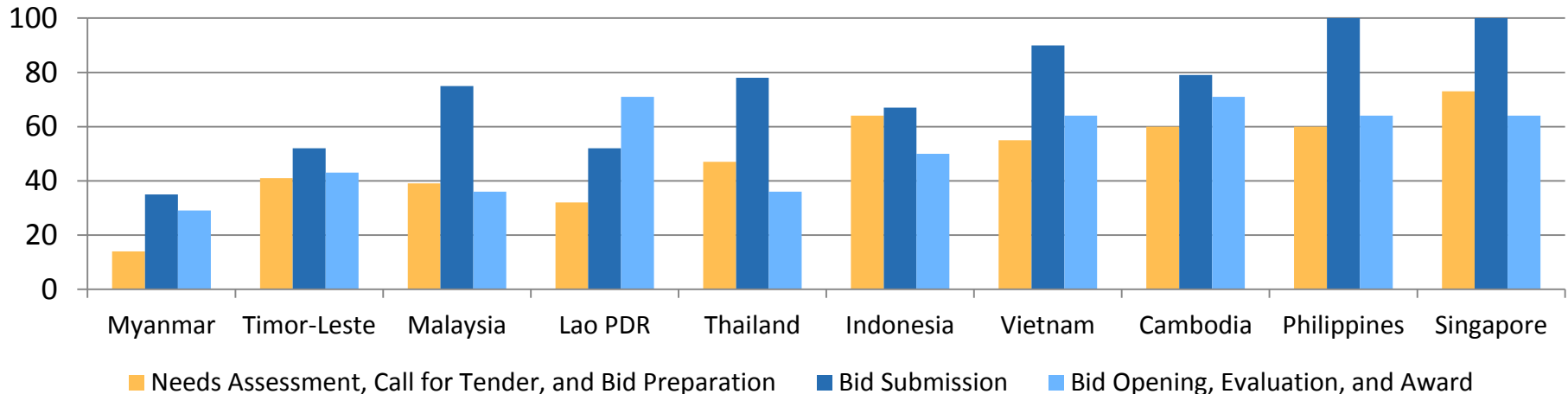
*Possible measures: Income and asset declaration of government officials (financial disclosure and conflicts of interests)*



# Streamlining infrastructure project delivery

## *Improving Public Procurement*

### ✓ Benchmarking of Public Procurement in the region



Source: World Bank (<http://bpp.worldbank.org/data/exploreindicators/procurement-life-cycle>)

- ✓ Using e-procurement systems / blacklisting companies with poor performance
- ✓ Selecting the best procurement routes (e.g. design-bid-build vs. design-build / EPC (Engineer-Procure-Construct) vs. Public-Private Partnerships)
  - Differences include Complexity, Scope for Innovation, and Risk Allocation
  - Cheaper construction costs vs. Cheaper lifecycle costs



# Agenda

- ✓ Strengthening Planning and Prioritization
- ✓ Streamlining infrastructure project delivery
- ✓ Making the most of infrastructure assets



# Making the most of infrastructure assets

*Moving away from Build, Neglect, and Rebuild paradigm*

- ✓ Set aside funds for maintenance

*Every dollar spent on regular road maintenance can save more than \$5 on refurbishing and rebuilding of road...*

Maintenance budgets often cut (no immediate consequences)

→ *Dedicated funds (from user taxes and user charges) decouple maintenance resources from annual appropriation discussion*

- ✓ Decisions take into account immediate capital + future operation and maintenance costs

*Sector Medium-Term Plan*

- ✓ Regularly assess and catalog the condition of infrastructure

*Modern maintenance techniques such as remote asset inspection , feedback systems from users, etc.*

- ✓ Extend asset life by integrating resilience considerations

*Resilient design codes – protective barriers*



# Making the most of infrastructure assets

## *Avoiding political bias towards new infrastructure projects*

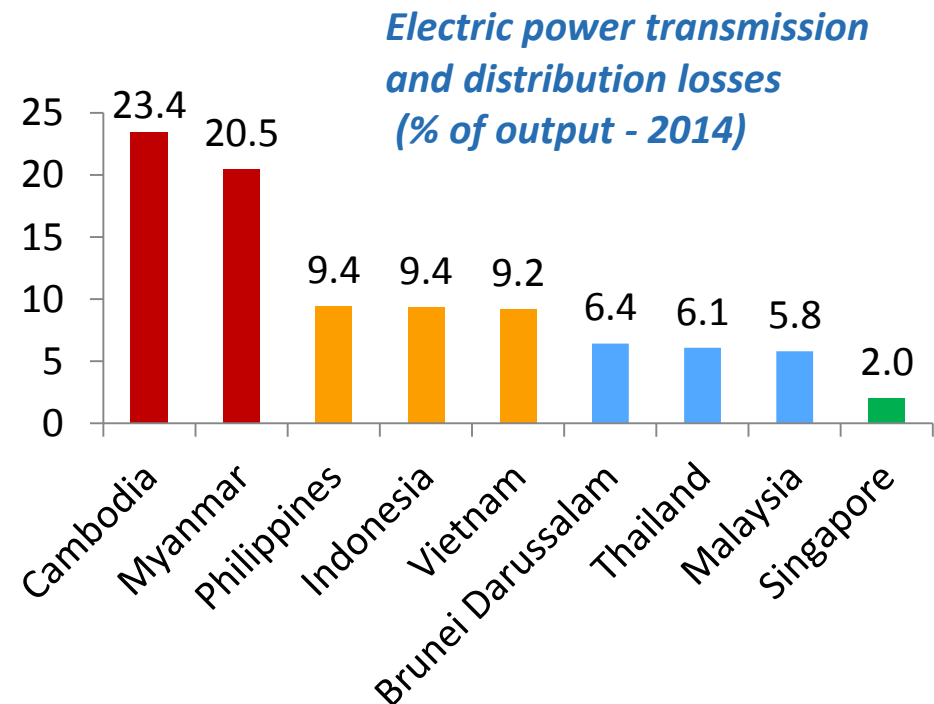
- ✓ **Demand management** techniques to reduce the need for additional infrastructure by smoothing the demand and shifting load off-peak

(e.g. congestion charges, energy efficiency standards, peak pricing, water education programme)

- ✓ **Reducing** transmission and distribution **losses** in water and power

Need to realize the magnitude of the issue and address it (e.g. performance incentives)

often costs less than **3%** of adding the equivalent in new production capacity + faster





# Making the most of infrastructure assets

## *Optimizing usage*

### ✓ **Maximizing asset utilization**

Intelligent transport systems can reduce headways between vehicles (e.g. airport and port capacity can double or triple for a fraction of the cost) and address specific bottlenecks (e.g. road e-tolling)

Measure to encourage users to use the full capacity (e.g. high-occupancy lanes)

### ✓ **Leveraging additional source of revenues**

Some airports realize more than 50% of their revenues from retails, hotels, etc.



# Conclusion

Significant savings can be achieved by

- Improving project selection and introducing sustainability as well as gender considerations
- Streamlining infrastructure project delivery, improving governance and allocating sufficient funding to maintenance
- Maximizing the use of existing assets by managing demand and leveraging additional sources of revenues





# *Th@nk you*

website: <http://www.unescap.org/our-work/macroeconomic-policy-financing-development/infrastructure-financing-and-public-private-partnerships>

Info.: [verougstraete@un.org](mailto:verougstraete@un.org)