What drives successful metro systems?

OECD, ITF Side event,
Leipzig, 31 May, 2017
Thank you and acknowledgements

Community of Metros
CoMET

Australian Aid

UKaid
Department for International Development
Summary

1. Introduction
2. Examples of key challenges Operators face
3. Examples of what governments can do
4. Panel discussion and Q&A
The big picture – urbanisation

A look at India’s urbanisation

<table>
<thead>
<tr>
<th># of urban agglomerations by category</th>
<th>India 1970</th>
<th>India 2015</th>
<th>India 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mil. to 2 mil. people</td>
<td>5</td>
<td>36</td>
<td>32</td>
</tr>
<tr>
<td>2 mil. to 4 mil. people</td>
<td>2</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>4 mil. to 6 mil. people</td>
<td>1</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>6 mil. to 8 mil. people</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8 mil. to 10 mil. people</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>greater than 10 mil. people</td>
<td>4</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

Clients look to metros **BUT** how to ensure success?
1. Financial Sustainability

2. Integration

3. Capacity and Future-Proofing
Farebox Ratios for the Community of Metros

Source: © Community of Metros / Imperial College London

Am = American metro  Eu = European metro  As = Asian metro
“There are only two types of metros in the world. There are metros that are empty, and metros that are full… If you can enmesh yourself into the city, you want every bit of capacity you can get. And if you’re not doing that, don’t build a metro!”
Maximum Metro Line Capacity

Peak Period Capacity: Passengers Per Hour Per Direction

Am = American metro  Eu = European metro  As = Asian metro

Source: © Community of Metros / Imperial College London
Train regulation software decides which terminal should be used when trains pass the decision points. Incoming trains have multiple options for turnaround, maximising capacity.

Good practice station and terminal design:
Sao Paulo
Commitment to Safety and Security
Operationally Excellent
Customer-centric
Continuous Improvement Culture
Effective Business Strategies
Managing Major Projects
Commitment to Safety and Security
Continuous Improvement Culture
Operationally Excellent
Effective Business Strategies
Customer-centric
Managing Major Projects
The Operator

Financing regime

Fares policy

Funding regime

Taxation regime

Current land use

Transport policy

Future land use planning

Industry structure

Civil service laws

Unions & labor relations

Intra-government relations

Political factors

Proc. laws & regulation

Industrial policy

Safety regulation

Electricity / other utilities

Govt. approvals process

Legacy of prior decisions

Natural conditions

Service delivery & customer experience
Clear objectives

Understanding risk

Able to recruit and reduce staff

Ownership of corporate strategy

Control over operating costs and revenues

Predictable financing

Able to borrow

Procure projects efficiently

Influence major projects
Impact of Operator Effectiveness and its Authority-Enabled Environment on Operational Sustainability
Create an **Effective Governance** Regime

Identifying and Developing the **Right Metro System**

Establishing the Operator with the **Capacity to Succeed**

Proactively **Engaging** with the Operator

Embedding the Metro in its City Development and Transport System

Outsourcing and **Private Sector Participation** With Great Care
The graph illustrates the development of project efficiency over different time periods:

- **1980-1990**: Project efficiency is increasing.
- **1990-2000**: Project efficiency is at its peak. This period is labeled as "Famine" - No Projects.
- **2000-2010**: Project efficiency decreases. This period is labeled as "Feast" - Multiple Projects.
- **2010-2020**: Project efficiency is declining further, with a question mark indicating uncertainty or a need for further investigation.

The vertical axis represents project development efficiency, while the horizontal axis represents network development over time.
Thank you

A copy of our **Emerging Findings report** can be found here:

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