Improving Performance through Lasting Infrastructure Cost Benchmarking (LICB)

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Session Data, tools and models – 13 October 2015
Agenda

- LICB at a glance
- Expenditures considering steady state
- Benefits of LICB today
- Peer group and development
- Future study areas and goals
LICB at a glance

Maintenance & renewal expenditures

Network utilisation

Key work activities

Asset performance
Comparison of normalised maintenance and renewal expenditures

LCC fully normalised, 2013
(cost index per main track-km)
[Normalisation methodology: Standard methodology]
Consideration of steady state

Annual M&R

Are we reducing an investment backlog?

Annual asset renewal volumes

Are we running into an investment backlog?

Which period of the life cycle is covered in LICB?
Comparison of expenditures considering steady state

LCC fully normalised, 2013
(cost index per main track-km)
[Normalisation methodology: New methodology incl. steady state]
## Benefits of LICB today

<table>
<thead>
<tr>
<th></th>
<th>Long-term monitoring of annual expenditures for maintenance and renewals</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Input for discussion about the &quot;right&quot; balance between maintenance and renewals</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>Fair comparison with other infrastructure managers considering different structural and operational conditions</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>Identification of gaps, serving as a starting point for target setting of cost improvements</td>
<td>✓</td>
</tr>
<tr>
<td>5</td>
<td>Negotiation of funding levels with the ministry</td>
<td>✓</td>
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</tbody>
</table>
Peer group

Current peer group
Former members
One-time participants

USA
Hong Kong
Japan

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# Development

<table>
<thead>
<tr>
<th>InfraCost</th>
<th>UIC LICB</th>
<th>LICB refresh</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cost Driver Analysis</td>
<td>• Annual updates of existing database</td>
<td>• Improvement of cost normalisation methodology</td>
<td>• Expand scope</td>
</tr>
<tr>
<td>• Normalisation methodology</td>
<td>• Evaluation of trends</td>
<td>• Consideration of steady state</td>
<td>• Further extension of peer group</td>
</tr>
<tr>
<td>• Toolbox of good practices</td>
<td>• Brief summary reports</td>
<td>• Integration of asset performance</td>
<td>• ...</td>
</tr>
<tr>
<td>• Linking costs with condition, quality and reliability</td>
<td>• 10 years report</td>
<td>• LICBweb tool</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• 15 years report</td>
<td></td>
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</tbody>
</table>

Future study areas

Network differentiation

- Total network
  - Long distance
    - ... (indicated as ...)
  - Commuter

Effectiveness

Asset groups

- Renewals
  - Activity
    - Rails: 158 km
    - Sleepers: 149 km
    - Ballast: 39 km
    - ... (indicated as ...)
  - Units
    - ... (indicated as ...)
  - Costs
    - ... (indicated as ...)

- Maintenance
  - Activity
    - Tamping: 1.522 km
    - Grinding: 1.054 km
    - ... (indicated as ...)
  - Units
    - ... (indicated as ...)
  - Costs
    - ... (indicated as ...)

Quality

- Indicator
  - Track geometry
    - Speed restrictions
    - ... (indicated as ...)

**Network differentiation**

- Asset groups
  - Rails: 158 km
  - Sleepers: 149 km
  - Ballast: 39 km
  - ... (indicated as ...)

**Effectiveness**

- Activity
- Units
- Costs

**Total network**

- Long distance
  - ... (indicated as ...)
- Commuter

**Quality**

- Indicator
  - Track geometry
    - Speed restrictions
    - ... (indicated as ...)

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Future goals

- More root cause analyses to explain different maintenance and renewal expenditure levels
- Integration of more performance and output oriented indicators
- Link with ongoing activities of the Asset Management Working Group's cost driver analysis
- Large peer group of active participants
Thanks for your attention!

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