Perspectives on Asset Management

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12 October 2015
AMWG Members

- Austria (OBB)
- Belgium (InfraBel)
- Finland (FTA)
- France (SNCF)
- Ireland (Irish Rail)
- Italy (RFI)
- Norway (JBV)
- Spain (ADIF)
- Sweden (Trafikverket)
- UK (Network Rail)
Outline

• What is the motivation for investing time and effort in asset management?

• What activities has the AMWG undertaken and what have we learnt from them?

• What are the prospects for the effective implementation of asset management in European railways?
What motivates AMWG members?

Size of investment

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewals</td>
<td>£12.1 bn</td>
</tr>
<tr>
<td>Enhancements</td>
<td>£12.4 bn</td>
</tr>
<tr>
<td>Maintenance</td>
<td>£5.3 bn</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>£29.8 bn</strong></td>
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</tbody>
</table>

Importance of output

- **Driver of economic growth**
  - 1.7bn passenger journeys per year
  - 100m tonnes of freight
  - One of safest forms of transport
  - One of greenest forms of transport

The ultimate cost – benefit challenge?
What could you buy for £29.8bn?

- One Olympic Games: £9bn
- 100 schools: £6bn
- 20 Superjumbos: £1.5bn
- 20 hospitals: £4bn
- One aircraft carrier: £2bn
- Man Utd, Barcelona and Real Madrid: £5.5bn
Activities undertaken by AMWG

• Achieving a common understanding of asset management
• Comparing costs and performance
• Measuring asset management capability
• Sharing good practices
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Some key questions

• What is the scope of asset management for a railway infrastructure company?

• Who should undertake the role of asset manager?

• Where does asset management sit in the organisational structure?
Development of AM Guidelines

• Initial interpretation of AM for railway infrastructure managers in 2010

• Consistent with PAS 55

• Defined the scope of the asset management system

• It has been a useful reference for AMWG but is now ready for review to align with ISO 55000
## Core processes and activities

### Network Strategy

<table>
<thead>
<tr>
<th>Asset Strategy</th>
<th>Operational Strategy</th>
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<tbody>
<tr>
<td>Route Asset Plans</td>
<td>Route operational plans</td>
</tr>
<tr>
<td>Route Delivery Plans</td>
<td>Timetable and access Planning</td>
</tr>
<tr>
<td>Execution of Work</td>
<td>Network Operation</td>
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</table>

### Implementation

#### Strategy
Completing the framework

Enabling mechanisms

Asset information
Risk management
LCC tools
Business processes
Competencies
Supply chain management

Core decision and activities.

Asset Strategy
Route Asset Plans
Route Delivery Plans
Execution of Work

Operational Strategy
Route operational plans
Timetable and access Planning
Network Operation

Operational component

Audits
KPIs
Management reviews
Corrective actions

Reviewing mechanisms.
Who should undertake the role of asset manager?

- No job description can contain all the accountabilities of asset management
- Effective asset management will need a much larger group of people with specialist skills AND an ability to work across functional boundaries
Where does AM fit in the organisational structure?

- Asset management activities take place in most functions
- AM is by definition a coordinating mechanism
- Should not be identified with a single function
- There are similarities with other cross-functional disciplines e.g. risk management

Generic corporate functions

- Finance
- HR
- IT
- Procurement
- Safety & Environment

Rail specific functions

- Strategy & Planning
- Engineering
- Major Projects
- Maintenance
- Operations
Activities undertaken by AMWG

• Achieving a common understanding of asset management

• Comparing costs and performance

• Measuring asset management capability

• Sharing good practices
Even simple comparisons are difficult

- UIC LICB has the most comprehensive cost dataset in Europe – 14 participating railways since 1996 (see Frank Zschoche presentation)
- Difficult to normalise to take account of different infrastructure characteristics
- Currently compares only costs, not infrastructure outputs
Taking a more holistic view

• Better characterisation of cost drivers
  – Cause an intervention to take place e.g. degradation due to tonnage, speed
  – Determine how many interventions e.g. number of assets
  – Affect the cost of an intervention e.g. length of possession

• Inclusion of outputs
  – Safety of passengers, workers, members of the public
  – Punctuality of train services

OXAND report for UIC AMWG
Final draft July 2015
Activities undertaken by AMWG

• Achieving a common understanding of asset management
• Comparing costs and performance
• **Measuring asset management capability**
• Sharing good practices
UIC Asset Management Maturity Model

- Based on core processes in UIC Asset Management Framework
- Enables self-assessment by AMWG members
- Supports initial comparisons between companies
- Can be adapted to ISO 55000
- See presentation by GianPiero Pavirani
Activities undertaken by AMWG

• Achieving a common understanding of asset management
• Comparing costs and performance
• Measuring asset management capability
• Sharing good practices
# AMWG good practice examples

<table>
<thead>
<tr>
<th>Asset Information System</th>
<th>Asset Strategies and KPIs</th>
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<tbody>
<tr>
<td>Maintenance management</td>
<td>Bridge inspection quality</td>
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<tr>
<td>Track M&amp;R planning</td>
<td>Asset data management</td>
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<tr>
<td>LEAN implementations</td>
<td>Timetabling and access planning</td>
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<td>Asset degradation models</td>
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<th>LCC Tools</th>
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Looking forward

- What is the motivation for investing time and effort in asset management?

- What activities has the AMWG undertaken and what have we learnt from them?

- What are the prospects for the effective implementation of asset management in European railways?
Status of AM in European railways

• Lots of evidence of good practice in specific areas of asset management

• Majority recognise asset management as a worthwhile discipline

• Few if any railways driving asset management from the top

• Formal adoption of asset management very limited

• **What are the reasons and what can be done about it?**
Barriers to embedding asset management

• Until recently, there has been a lack of a global standard

• Benefits of adoption difficult to isolate and quantify – business case difficult to justify

• Little perceived difference between asset management and company management – scope too big

• Long term commitment - limited potential for quick wins
What the AMWG can do

• Make ISO 55000 practical to implement in our own organisations *(See David McLeish presentation)*

• Support the development of the LICB framework so that it becomes a trusted comparator of costs and performance *(see Frank Zschoche presentation)*

• Help railway organisations assess their maturity in asset management based on ISO 55000 *(see Gian Piero Pavirani presentation)*

• Collect and publish case studies from rail and other sectors to support the business case for asset management improvements *(see Tim Kersley presentation)*
Conclusions

• The anticipated revolution in asset management hasn’t happened and probably won’t

• The case for asset management in railways is still strong

• Progress can be best made through marginal gains and aligning activities

• Asset management provides the best framework for directing, prioritising and coordinating improvements
Thank you