Railways Reform
Toolkit for Improving Rail Sector Performance

Washington- March 31, 2011
Content

• Why is the World Bank interested in the railway sector?

• Why is necessary a Railway Reform Toolkit?

• The structure and main components of the Toolkit

• Short Demo on using the Toolkit
The World Bank Railways Portfolio is Increasing
IBRD and IDA Lending by Sector | Fiscal 2010
Share of Total Lending of $58.74 Billion

- Transportation, 15%
- Energy & Mining, 17%
- Water, Sanitation & Flood Protection, 7%
- Health & Other Social Services, 12%
- Finance, 16%
- Information & Communication, 1%
- Law, Justice & Public Administration, 18%
- Industry & Trade, 2%
- Education, 8%
- Agriculture, Fishing & Forestry, 4%
Yearly Active Railway Portfolio

US$ Million

<table>
<thead>
<tr>
<th>FY02</th>
<th>FY03</th>
<th>FY04</th>
<th>FY05</th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECA</td>
<td>AFR</td>
<td>EAP</td>
<td>LCR</td>
<td>MNA</td>
<td>SAR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THE WORLD BANK
Why is the World Bank interested in railways?

• Investment in modernizing railway assets in those places where rail has a competitive advantage that can contribute to economic development and growth,

• Assistance of public railways to become more commercial and market oriented,

• Support sustainable transport
Railways are Friendly to Environment and Safe
Green Gas Emissions (GHG) by Sector in EU-27

Transport – The Only Growing Sector

Source: EC Statistics - 2010
Railways and Greenhouse Gas Emissions

- US Freight Railways move a ton of freight 480 miles per gallon (four times more fuel efficient than trucks, on average).
- One train does the work of 280 or more trucks.

Source: AAR Statistics - 2010

Source: EC Statistics - 2010
Railway Safety

**Total Number of Fatalities**

- **Road**: 38,875
- **Rail**: 83

**Fatalities/10 Billion Pass-km**

- **Road**: 73.74
- **Rail**: 2.02

*Source: EC Statistics - 2010*
Railways are Complex Systems
Segregated Infrastructures and Transport Services in the Competing Modes of Transport

- Different entities
- Different ownership
- Independent financing

Financing a road, a port or an airport is always based on estimated volume of traffic, but the efficiency of operating transport services by using the infrastructure is never considered.
Railways Integrate Infrastructure and Transport Services in One Single System

Railway Stations
Railway Track
Signaling System
Train Detectors
Rolling Stock
Speed Control Equipment & Emergency Breaking
Telecommunication Network
Traffic Management System
Positioning of the Train
Secure Safe Pathway of Trains

Telecommunication Network
Challenging Management Tasks

• Manage different types of activities:
  – Operation of infrastructure and safety systems
  – Operation of rolling stock
  – Provision of passenger transport services
  – Provision of freight transport services

• Planning and execution of maintenance and investments for all components of the system

• Generate sufficient revenue to cover all costs of infrastructure and operations

Being a complex integrated system, railways are very sensitive to poor management and bad governance
The Permanent Need of Railway Reform

• All railways across the globe suffer ever stronger competition from trucks, cars, buses, airplanes – in order to resist must be run as a business
• State ownership of railways will continue to exist a long period of time in many countries
• The financing of transport infrastructures and the charges for usage of infrastructures will continue to be a complex issue for many governments
• The best PPP in railways is still to be defined

Responsiveness to the frequently changing market demands requires an continuous process of reform
The Objectives of the Railway Reform Toolkit

- To provide a “one stop shop” for best practice information on railway industry
- To make more accessible the rich base of previous studies and intellectual work in the railways
- To develop and provide new resources not available before:
  - A logic structure for how to choose the reform path
  - A guide to governance of the railways
  - A high quality financial model
  - A set of case studies and references to other relevant documents on railways
The Targeted Users of the Railway Reform Toolkit

- World Bank staff interested in developing railway projects
- Governmental officials having responsibilities in defining policies for railways or coordinating railways activities
- Railways managers and staff interested in improving the operational and financial performance of their company
- Students and professors studying railway industry
- Mass-media, NGO’s, and general public interested to understand the specific issues of developing railway transport services in the benefit of communities
The Structure of the Railway Reform Toolkit

• Railway Basics
  – Rail Markets (freight and passengers)
  – Rail Technology
• Economics and Finance
  – Pricing, Costing
  – Financial Sustainability
  – Benchmarking
  – Financial Model
• Reforming Industry Structure
  – Business organization
  – Competition
  – Options for structure
  – Non-core activities
• Role of the Government
  – Owner, Client, Policy Maker
  – Regulatory Framework
• Commercial Management
  – Corporate Governance
  – Organizational Structures
  – Human Resources
• Private Sector Participation
  – Concession Contracts
  – Service Contracts
• Case Studies
• Links to other railways documents
How to access the Railway Reform Toolkit?

• Limited number of copies of complete document on flash memory

• Free access to the World Bank website where the document will be soon available with many options for reaching the desired information
What’s Next?

- Finalization of the website design
- Dissemination to users
- Translation in French, Spanish (??)
- Including railway database
- Permanent update with new ideas and new links (??)
Highlighting Ideas of Railway Reform Toolkit
“Success has many parents...”

Coordinating Team
Martha Lawrence
Vasile Olievschi
Vickram Cuttaree
Jukka Pekka Strand

Authors
Paul Amos; Karim Jacques Budin; Jeremy Drew; Henri Kuitunen; Martha Lawrence; Pedzisaya Makumbe; Vasile Olievschi; Robert Phillips; Jukka Pekka Strand; Louis Thompson; John Winner

Railway Expert Team
Railway Experts from all World Bank regions and retired, UIC and CER; Victoria Delmon; Anita Shrestha; Clemencia Torres de Mastle (PPIAF); Jacqueline Dubow (TRS)
Economics & Finance
Cost Structure

Railway Infrastructure-Costs

- **Fixed Cost**
- **Variable Cost**
- **Average Unit Costs**

Traffic Units (Millions)

Total Cost

Unit Costs

THE WORLD BANK
Pricing

• How to cover the fixed costs, without distorting the market?
• Ramsey pricing
• Government pays
Market Structure

- Rail-rail competition

- Above rail competition

- Competition for the market
Financial Sustainability

Revenue

Capital Grants and Borrowing
Operating Grants and Subsidies
Operating Revenue

Expenses

Financial Costs
Depreciation
Operating Costs
Benchmarking

Benchmarking Locomotive Operating Costs

RAILWAY

WAGE RATES

STAFF PRODUCTIVITY

LOCO PRODUCTIVITY

BENCHMARK
Cost Analysis

Figure 1: Typical Process for Service Costing & Profit Measurement System

1. Load Cost Data
2. Cost Driver & Variability Master File
3. Load Traffic & Revenue Data
4. Calculate Physical Factors
5. Compute Costs for Traffic Movements
6. Match Costed Movements to Revenues
7. Prepare Cost & Profitability Reports; Provide Cost Data To Other Applications
### Financial Results

<table>
<thead>
<tr>
<th>Category</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Average</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating profit margin</td>
<td>-18%</td>
<td>22%</td>
<td>9%</td>
<td>12/31/2009</td>
</tr>
<tr>
<td>Net profit margin</td>
<td>-67%</td>
<td>20%</td>
<td>5%</td>
<td>12/31/2011</td>
</tr>
<tr>
<td>DSCR</td>
<td>0.0</td>
<td>1979626.2</td>
<td>904263.3</td>
<td>12/31/2011</td>
</tr>
<tr>
<td>Working ratio</td>
<td>66%</td>
<td>97%</td>
<td>78%</td>
<td>12/31/2009</td>
</tr>
<tr>
<td>Current ratio</td>
<td>0.5</td>
<td>2.5</td>
<td>1.8</td>
<td>12/31/2010</td>
</tr>
</tbody>
</table>

#### Operating profit

![Operating profit chart](chart)
FINANCIAL MODEL - USEFUL INSTRUMENT FOR MANAGEMENT OF RAILWAYS
Useful for TTLs and Clients

- Model created by transport team in ECA
- Audited by professionals
- Tested in two Bank operational projects (railway DPL and SIL)
- Ready to be used with any railway type
- User needs basic operational and financial data to enter assumptions
Logical Structure

Figure 1 Basic model structure

- Assumptions
  - General
  - Freight
  - Passenger
  - Infrastructure
  - Consolidated

- Calculations
  - Freight
  - Passenger
  - Infrastructure
  - Consolidated

- Financial statements
  - Balance sheet
  - Income statement
  - Cash flow statement

- Charts
  - Consolidated
  - Freight
  - Passenger
  - Infrastructure

- Results
  - Assumptions summary
  - Output summary
  - Ratios

- Scenarios
  - Consolidated
  - Freight
  - Passenger
  - Infrastructure

Source: Authors
Intuitive User Interface

Figure 2: Basic Steps In Using The Financial Model

**Step 1:** Define model scope
Go to “Assumptions – General”

**Step 2:** Enter operational and financial assumptions
Go to applicable “Assumptions” worksheets

**Step 3:** Review financial statements
Go to “Balance sheet,” “Income statement” and “Cash flow statement”

**Step 4:** Review charts, inputs, outputs, and ratios
Go to “Charts” and “Results”

**Step 5:** Run sensitivity and scenario analysis
Go to applicable “Scenario analysis” worksheets

*Source: Authors*
User-defined Assumptions

### Public subsidy assumptions for Ruritania Freight Rail Company

<table>
<thead>
<tr>
<th>Operational subsidy</th>
<th>yes/no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a public subsidy available?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Subsidy in first year</td>
<td>FI Millions</td>
</tr>
<tr>
<td>Let model calculate change in subsidy or enter it manually?</td>
<td>Select</td>
</tr>
<tr>
<td>If calculated, grow subsidy by inflation rate after year 1?</td>
<td>yes/no</td>
</tr>
<tr>
<td>If yes, proportion of inflation indexation after year 1</td>
<td>%</td>
</tr>
<tr>
<td>Enter additional annual change</td>
<td>%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital subsidy</th>
<th>yes/no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a public subsidy available?</td>
<td>yes/no</td>
</tr>
<tr>
<td>Subsidy in first year</td>
<td>FI Millions</td>
</tr>
<tr>
<td>Amortization of grant in first year</td>
<td>FI Millions</td>
</tr>
<tr>
<td>Let model calculate change in subsidy or enter it manually?</td>
<td>Select</td>
</tr>
<tr>
<td>If calculated, grow subsidy by inflation rate after year 1?</td>
<td>yes/no</td>
</tr>
<tr>
<td>If yes, proportion of inflation indexation after year 1</td>
<td>%</td>
</tr>
<tr>
<td>Enter additional annual change</td>
<td>%</td>
</tr>
</tbody>
</table>

### New debt 1

Debt bond funding source (name of lender/capital markets)

<table>
<thead>
<tr>
<th>Test</th>
<th>Year (between 1 and 30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD millions</td>
<td>Select</td>
</tr>
<tr>
<td>USD millions</td>
<td>Select</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>% of principal</td>
<td>% of committed principal</td>
</tr>
</tbody>
</table>

Local bank

| USD | 50 |
| Variable | 5% |
| 2% | 15 |
| 0.25% | 0.00% |
Results in Numbers and Graphs
Allows Scenario Analysis

### Scenario Analysis

Ruritania Freight Rail Company

All units in R$ millions unless otherwise stated

#### Operating profit

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating revenues</th>
<th>Operating costs (incl. depreciation)</th>
<th>Operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>100</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>2011</td>
<td>110</td>
<td>45</td>
<td>65</td>
</tr>
<tr>
<td>2012</td>
<td>120</td>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>2013</td>
<td>125</td>
<td>55</td>
<td>75</td>
</tr>
<tr>
<td>2014</td>
<td>130</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>2015</td>
<td>135</td>
<td>65</td>
<td>75</td>
</tr>
<tr>
<td>2016</td>
<td>140</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>2017</td>
<td>145</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>2018</td>
<td>150</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>2019</td>
<td>155</td>
<td>85</td>
<td>75</td>
</tr>
<tr>
<td>2020</td>
<td>160</td>
<td>90</td>
<td>70</td>
</tr>
<tr>
<td>2021</td>
<td>165</td>
<td>95</td>
<td>75</td>
</tr>
<tr>
<td>2022</td>
<td>170</td>
<td>100</td>
<td>70</td>
</tr>
<tr>
<td>2023</td>
<td>175</td>
<td>105</td>
<td>75</td>
</tr>
<tr>
<td>2024</td>
<td>180</td>
<td>110</td>
<td>70</td>
</tr>
<tr>
<td>2025</td>
<td>185</td>
<td>115</td>
<td>75</td>
</tr>
<tr>
<td>2026</td>
<td>190</td>
<td>120</td>
<td>70</td>
</tr>
<tr>
<td>2027</td>
<td>195</td>
<td>125</td>
<td>75</td>
</tr>
<tr>
<td>2028</td>
<td>200</td>
<td>130</td>
<td>70</td>
</tr>
<tr>
<td>2029</td>
<td>205</td>
<td>135</td>
<td>75</td>
</tr>
</tbody>
</table>

#### Run scenario analysis on variable?

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tariff multiplier</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Tariff growth rate</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Traffic multiplier</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Traffic growth rate</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>Staff multiplier</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>CAPEX multiplier</td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>

#### Current scenario values

<table>
<thead>
<tr>
<th>Base Case Values</th>
<th>Current Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (R$/Ton-km)</td>
<td>2.91%</td>
</tr>
<tr>
<td>40000 (net ton-km)</td>
<td>0.32%</td>
</tr>
<tr>
<td>19433333330 (staff count)</td>
<td>7965 (R$ millions)</td>
</tr>
<tr>
<td>15000 (staff count)</td>
<td>7965</td>
</tr>
</tbody>
</table>

#### Base case values

<table>
<thead>
<tr>
<th>Base Case Values</th>
<th>Current Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (R$/Ton-km)</td>
<td>2.91%</td>
</tr>
<tr>
<td>40000 (net ton-km)</td>
<td>0.32%</td>
</tr>
<tr>
<td>19433333330 (staff count)</td>
<td>7965 (R$ millions)</td>
</tr>
<tr>
<td>15000 (staff count)</td>
<td>7965</td>
</tr>
</tbody>
</table>
## Comes with Guide Book

### Figure 3  Integration of entities

| General Principles Of Integration | • Enter separate revenue, subsidy, and cost assumptions for each entity.  
• Results are shown only in a consolidated form. |
| All Entities Integrated           | • Enter fixed asset and financing assumptions (including debt, equity, working capital, taxes, dividends and other long-term assets and liabilities) **only once under the freight entity only**. |
| Freight And Passenger Integrated | • Enter fixed asset and financing assumptions (including debt, equity, working capital, taxes, dividends and other long-term assets and liabilities) **only once under the freight entity**. |
| Freight And Infrastructure Integrated | • Enter fixed asset and financing assumptions (including debt, equity, working capital, taxes, dividends and other long-term assets and liabilities) **only once under the freight entity**. |
| Passenger And Infrastructure Integrated | • Enter fixed asset and financing assumptions (including debt, equity, working capital, taxes, dividends and other long-term assets and liabilities) **only once under the infrastructure entity**. |

*Source: Authors*
Creating the Industry Structure
What to reform?

- Industry Structures
- Policy
- Governance
- Incentive Structures
- Management Practices
- Regulation
Railway Archetype

• Public ownership

• Department of or supervised by a Ministry

• Provides both passenger & freight services

• Vertically integrated

• Engaged in non-core activities

Photo by Tom Curtis
Restructuring Options
How business-like should delivery entities be?

Main forms of business organization

- State-owned enterprise
- State-owned company
- Privately-owned company
Market Competition

How competitive should rail markets be?

Main modes of rail market competition

- Competition within the rail market
- Competition for the market (bidding for exclusive rights to operate)
Figure 6.4 Paths to Competition

Paths to contestability in rail transport services

- In-market competition (usually freight)
  - Route competition by vertically integrated railways
    - With negotiated track access agreements to increase market reach to terminals
  - Direct competition through statutory, track access rights
    - With limited statutory track access rights to increase market reach to terminals
- For-market competition (freight or passenger)
  - Longer-term vertically integrated concessions (typically freight)
    - With or without contractual track access obligations to 'moderate' exclusivity
  - Shorter-term train operating concessions (typically passenger)
Separability

How separate should the core functions be?

Main dimensions of separability

- Horizontal separation into business enterprises matched to geography or market function
- Vertical separation into infrastructure and train operating functions
GOVERNMENT’S ROLE – MANDATORY COMPONENT OF SUCCESSFUL RAILWAY REFORM
Challenges for the Government

• In order to remain competitive on the market railways must be reorganized as commercial entities

• State railway administrations must evolve into:
  – State-owned enterprises,
  – Fully privatized enterprises
  – Private enterprises operating under concession agreements,
  – Partial private/public corporations

• This section analyzes options to segregate decision making and oversight duties between government and state-owned railway enterprises
Common mistakes of the Governments

• Using railways as a large-scale source of good jobs for reducing national unemployment
• Railways forced to buy poor-quality products and services supplied by other government enterprises
• Railways providing below-cost transport services for providing social services or for subsidizing production of other government enterprises
• Railways – source of high-level jobs for political appointees, who frequently lack railway experience or business qualifications
• Political support from trade unions in exchange of imposing railways to adopt salary system unrelated to employee performance and financially unaffordable for railways
Governance Principles for State-Owned Railways

• Many countries that are reforming the corporate governance of state-owned enterprises agree that this should address two major challenges:
  – The state should actively exercise ownership functions such as nominating and electing the board of directors, but refrain from imposing political interference in company management.
  – The state must ensure markets have a level playing field if private sector companies are competing with state-owned enterprises, and ensure that governments do not abuse their regulatory or supervisory powers to distort competition.

• A common trap is the practice of setting up railways organized as state-owned companies, but failing to respect essential governance and independence issues.
Segregation of Duties

• Railways should act as transport service providers with the same rights and obligations in the market as any other similar state-owned or private entity.

• Government must play multiple roles without meddling in daily railway management:
  – *Policy maker* for the transport sector;
  – *Regulator* for safety standards, infrastructure access, and sometimes prices;
  – *Owner* of some railway assets (some infrastructure, perhaps rolling stock, stations, freight and passenger facilities),
  – *Client* for contracted social transport services.
The Challenging Attempt

- There are few examples of state-owned railways fully compliant with the governance principles.
- Even in the developed countries, where railways are organized as separate, publicly owned corporations, they are not always arm’s length from politicians.
- As long as there is public money, for whatever reason, there will always be risk of political interference.
- The implementation of the role of the state as an owner according to the principles presented in the current chapter requires strong political will to minimize the influence of the state.
Setting up the Legal and Regulatory Framework

• Separate by law the state ownership function from market regulation

• State-owned railways’ public service obligations clearly mandated in publicly disclosed regulations and cost covering through contracts;

• Competition in accessing finance; transparent and commercially based rapports with state-owned entities (banks, financial institutions, companies)

• Access to efficient recourse of stakeholders, including competitors if their rights are violated. Creditors allowed by law to press claims or initiate insolvency proceedings.
The State as Owner

- Transparent and accountable governance:
  - How to set up and follow broad, clear, and consistent objectives over the longer term, without meddling in the daily management of railways;
  - How could the management remain independent as long as they are not allowed to set objectives that contradict the objectives of the state as owner;
- The roles of the Board of Directors and of the Ownership Entity (Supervisory Board) if two layers management solution is chosen
- Staffing of the Ownership Entity with skilled professionals with legal, financial, economic and management expertise
- How to select the Board of Directors independent of political influence, exclusively based on skills and competencies
- How to appoint the CEO
- Separating the Board Chairman from CEO if one layer management solution is adopted
RAILWAYS GOVERNANCE AND NEW CULTURE OF THE COMPANY
New Corporate Governance and Management Structures Needed

- Every jurisdiction is different
- General form includes
  - Shareholder (or rep)
  - Independent Board
  - CEO
  - Auditors
Toolkit Describes How New Governance Structures Work

- Role of Shareholders
- Selection and qualifications of board members
- Selection and qualifications of Chairman
- Functions of the Board of Directors
- Role of External Auditors
- Selection of CEO and relationship with Board
It Also Reviews the Role of Company Governance Structures

- Role of the CEO vs the Board of Directors and its Chairman
  - CEO should not be Chairman
  - Outside but knowledgeable board members
- Strategy, financial oversight vs day-to-day management
- The need for transparency in organization, financial issues, human resources, investments
- Decision making frameworks for Board and Management
- Performance measurement and compensation systems
Principal Functions for Company Management Structures

- Finance and Risk Management
- Human Resources Management
- Legal Affairs
- Communications
- Operations, Technical and Engineering
- Commercial and Market Management
- The role of business units in railway management structures
• Old structures had many direct reports, were focused on government
• Used management boards which delay decisionmaking
• Bureaucratic structures distributing accountability and responsibility, stifling change and innovation
Describes Typical New Structures

• New Structures eliminate the old management board
• Profit Centers focus decision making and accountability
• Designed around and focused on markets and customers
Both Board and CEO Must Create Culture Change

• Board helps set the tone and culture of the organization
• Makes selection of the CEO important
• Incentive schemes can help refocus management and staff
• Corporate vision, mission and core values statements are not empty platitudes
• But the Board and CEO must make it so
PRIVATE SECTOR – HOW IT CAN MAKE THE DIFFERENCE IN THE RAILWAYS
Railway Reform Measures Must Start With Understanding

• Before starting railway reforms, the government must:
  – **Understand its objectives**: Reduce subsidy needs? Reduce investment needs? Improve functioning of railway?
  – **Understand how these objectives might be achieved**: Improve productivity? Find private investors?
  – **Understand the political implications of actions**: Large reductions in staff; more flexibility in pricing; selling internal units; reductions in loss-making services
Most Reform Measures Aim to Increase Private Participation

• The toolkit describes and defines various forms of private sector participation
  – Service Contracts
  – Concessions and Franchising
  – PPPs
  – Potential for privatization
Many Forms of Private Participation Work With State-Owned Railways

• Private equipment ownership and leasing
  – Requires a market for rail cars – many customers or other entities own them
  – Requires sufficient discounts in transport tariffs to pay for private risk capital
  – Requires supporting eco-structure including private depots, transparent equipment standards, multiple builders, resale market

• Private Operators
  – Can be as in Russia – forwarders with rolling stock; or can be more like EU with competing operating companies; or it can start slow with industrial railways and customers moving their own goods
  – Requires an access regime, fair pricing structures, transparent access rules
Sale of Non-Core Businesses A Key Element in Private Participation

- Many state-owned railway units are monolithic and want to stay that way
- Important to focus the reformed railway on its core businesses so sale of ancillary services is important
  - Sleeper manufacturing plants
  - Construction and maintenance services
  - Cleaning, building maintenance, catering, retail sales of tickets
  - Unnecessary buildings
  - Employee health and education facilities
Toolkit Describes Key Attributes of Successful PPP Structures

• Successful PPP structures depend on defining commercial risks and how they will be shared
• Must be sufficient clarity to permit bankers and investors to do due diligence – not whimsical
  – Land Rights
  – Revenue Risks
  – Construction and maintenance cost risks
  – Regulatory risks
• PPPs must be structured with private sector investors in mind
  – Rewards commensurate with risks
  – Some assurance that the rules won’t change
DEMO
USING THE TOOLKIT WEBSITE
Thank you for the kind attention!