Data Needs for Efficient Rail Network Investment Assessment

OECD Workshop

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RÉSEAU FERRÉ DE FRANCE

Outline

1. Objective and perimeter
2. Organizational context
3. Toward an asset management approach
4. Data availability and needs

1. Objective and perimeter

- To share rail sector experience in project assessment, data limitations and needs
- The organisation of the rail sector differs from country to country and is a factor in determining project evaluation methods and their evolution.
- The observations which follow are primarily based on the experience of RFF in managing a rail network of approx. 30,000 km (including some 1,800 km of HSR lines), supporting both freight and passenger trafic.

2. Organizational context (a)

- **Created in 1997 (decree 97-135), RFF is the legal owner of France's rail infrastructure which was formerly managed by SNCF. In counterpart of these assets, RFF inherited some 20bn€ of debt.**
- **In its capacity as IM, RFF traditionally delegates its maintenance activities to SNCF.**
- **RFF also has a client/contractor relationship with SNCF for investment projects, while seeking to promote competition from other firms for these activities.**

2. Organizational context (b)

- **Prior to the signing of its Performance Contract with the government in Nov. 2008, RFF received earmarked subsidies for renewal projects. User charges were to cover maintenance costs. As for development projects, funding provided by RFF was dependent on expected project return.**
- **In parallel, maintenance cost increase agreements were signed with SNCF. Usage charge increases were decided by the government.**
- **The distinction between funding sources translated into separate assessment approaches for development, renewal and maintenance projects.**

2. Organizational context (c)

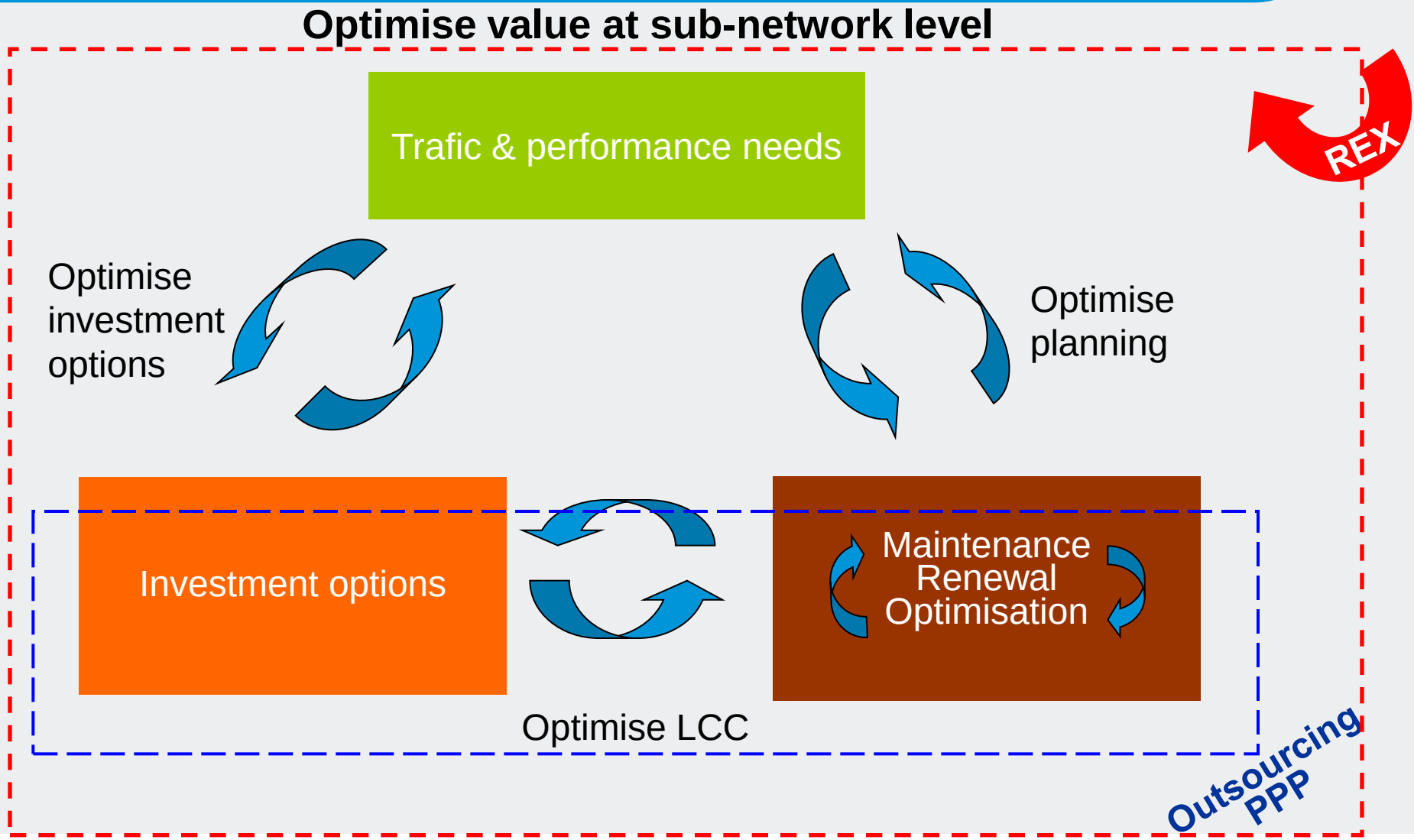
- **Today, under its Performance Contract with the State, RFF's infrastructure subsidies are no longer earmarked.**
- **RFF's objective is to manage and minimize costs for specific performance goals in line with public expectations => Asset management approach**
- **In 2010 the rail Regulator (ARAF) and an independent entity for traffic management (DCF) were established.**
- **Recent developments also include PPPs for HSR projects.**
- **In this new context, evaluation methods and data needs are evolving.**

3. Toward an asset management approach (a)

Asset management approach:

- **Define the global network strategy in coherence with national and supra-national transport policies**
- **Rail networks are complex, translate the network strategy to the sub-network level**
- **Optimise value at the sub-network level taking into account trafic demand and performance requirements, investment options, maintenance strategies and risks**
- **Analyse results to improve future decision making**

3. Toward an asset management approach (b)



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3. Toward an asset management approach (c)

Questions:

- **How do we define and mesure network performance?**
- **What performance for what cost?**
- **How can performance critical assets be identified? How can their identification improve performance?**
- **What is the impact of new investment, a new timetable, organizational changes, etc.? How do we evaluate and compare the benefits of alternative options?**
- **What data are needed? In what format? How best to acquire them?**

3. Toward an asset management approach (d)

- **The complexity of rail networks renders difficult the assessment of project performance with respect to initial objectives.**
- **Failure impacts can be dependent on numerous factors, including when and where the failure occurs.**
- **Causality relationships are difficult to discern. What is the repercussion of an incident in one sector on other sectors? How do we determine the perimeter of impact?**
- **Reporting of indicators at an aggregate level often provides insufficient information for in depth analyses.**
- **Passage from performance indicators to economic impacts difficult.**
- **International comparisons require better understanding of the context in each country. Normative international standards may facilitate benchmarking in some cases.**

4. Data availability and needs (a)

With respect to other IMs, RFF lags in terms of integration and consolidation of its databases. However, a complete overhaul, with innovative approaches, is underway.

- **Traffic: Multiple data sources; Limited information on equipment type, transported tonnage. Traffic by line (not by track). No information on axle charge, rolling stock condition.**
- **Performance indicators: Reporting required for various activities (traffic control, maintenance, PPP, etc.); Indicators concern safety, reliability, availability, maintainability and comfort. However, in certain cases the reporting is at an aggregate level (e.g., by groups of UIC line categories).**
- **Infrastructure: Existing, detailed, inventory of assets being updated (e.g., age/condition) with improved user interface.**
- **Costs: Detailed cost reporting template for investments, applicable to all projects and contractors, has been recently introduced.**

4. Data availability and needs (b)

Work in progress

- **Unified database combining various dimensions of infrastructure management processes while meeting regulatory needs:**
  - **Client train slot reservation through billing**
  - **Traffic management and control**
  - **Capacity management**
  - **Maintenance planning**
  - **Investment projects**
  - **Asset inventory and condition …**
- **Geospatial analysis: Network analysis, surface analysis, geovisualization**
- **Multi-period approach: Availability of both historical and projected data**

Thank you for your attention