Experience in applying an Asset Management in RFI

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RFI: National Railway Infrastructure Manager

**Company and Mission**
RFI is the company of the FS Group, which has the role of the National Railway Infrastructure Manager. It is responsible for lines, stations and installations. Ensures rail companies access to the network, secures safe maintenance and circulation on the entire infrastructure, manages investments to upgrade the development of lines and railways and develops systems and materials technology.

On the international front, RFI promotes the integration of Italian infrastructure into the European Rail Network. Currently operating lines extend for 16,727 km of which 11,902 km electrified and 7,537 km dual track. The stations with travel service are about 2,300.

**Total staff**  
*about 25.000*

**Line:**  
- **16.727 km**
- **Dobble track:** 7.537 km
- **Single track:** 9.190 km
- **Elettrified lines:** 11.902 km (71 %)

**Security Technologies**
- **SSC – SCMT:** 16.086 km
- **ERTMS:** 641 km
- **GSM-R:** 9.000 km

**RFI in numbers**

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridges</td>
<td>17,000</td>
</tr>
<tr>
<td>Over pass</td>
<td>7,000</td>
</tr>
<tr>
<td>Tunnel (l. &gt; 500m)</td>
<td>1,300 km</td>
</tr>
<tr>
<td>Main track</td>
<td>24,000 km</td>
</tr>
<tr>
<td>Main switch</td>
<td>26,000</td>
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<tr>
<td>Energy power</td>
<td>370</td>
</tr>
<tr>
<td>HS lines</td>
<td>~ 1,000 km</td>
</tr>
<tr>
<td>Metropolitan nodes</td>
<td>~ 950 km</td>
</tr>
<tr>
<td>Main lines</td>
<td>~ 2,900 km</td>
</tr>
<tr>
<td>Integrative lines</td>
<td>~ 3,900 km</td>
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<tr>
<td>Secondary lines</td>
<td>~ 7,950 km</td>
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</tbody>
</table>

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16.727 km

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This Organizational Communication aims to introduce the principles in
corporate Asset Management, in line with the international standards ISO
55000 (Overview on the Asset Management and Terminology), ISO 55001
(Requirements for Asset Management System) and ISO 55002 (Guidelines
useful to apply ISO 55001), defining their objectives and activities, as well as
related roles and responsibilities.
AM in RFI

The activities are divided into the following phases:

- **Detection business objectives** and long-term performance of the Asset Management indicators, depending on "the creation of value by the Asset";

- **Mapping of processes** aimed at these objectives;

- Analysis of the **integration processes** in relation to the objectives;

- Measuring **process maturity**;

- Verification of process **support tools**, procedures and information systems, and identification of actions’ improvement;

- Proposal to top management of conflict resolution through the new internal culture and the **improvement of performance** in the management system.
AM in RFI

….. Asset Management analyzes business process and it’s focused on:

"asset centric" management to ensure the orientation of business processes to the new way of seeing the Asset.

- **life cycle**, which involves a vision not only focused on the acquisition costs of the goods, but also on the effects of their management with respect to the business, optimizing the life of the plants;

- **systemic**, requiring the integration of the asset management processes with the functional management processes organization, such as finance, human resources, information systems and logistics;

- **risk**, which depends on good management based on finding the right balance between performance, cost and risk;
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What is a good asset management?

Think of a new asset

Take advantage of them" at full capacity

Take care of the design and installation phase

Maintenance
Asset Management Approach

Stakeholder interests
Management Economics

Good management

create value from the asset

Technique Approach

Technique

Asset Management Approach

€
Implementation strategies of AM

The implementation of AM in an organization is not a fixed process: should be adapted in function of the needs of the organization and its maturity
Level of application

1. **Alignment:**
Analyze existing processes; updating current procedures than the standard with respect to the organizational changes, structural and environmental known internally, with a verification method and definition of the most critical procedures and more valuable.

2. **Compliant:**
develop a management system conforming to ISO without reaching certification.

3. **Certification:**
proceed with the full certification process by an accredited certifier.
DEFINITION:
A business process is an organized and coordinated set of repeatable activities.
Through the use of available resources, is designed to create an output for the customer, and to which it assigns a well-defined value.
What is a process?

Process (set of activities)

Input:
- Materials
- Components
- Data

Output:
- Semi-finished
- Products
- Services
- Information
- Knowledge

Resources:
- Human
- Infrastructural
- Technological (ICT)
- Energy
- Capital

Constraints and rules:
- Information
- Procedures
- Economic, financial and organizational constraints

Objectives:
- Economic
- Financial
- Business
- Social
- Technical

Trigger

Process owner
Process model (what to map?)

- Objective
- Reason why it exists
- Process
  - Sub-process
  - Task
- It's set
- Procedure
- Organization
- It is supported
- IT system
- involves
How to Know Business Processes

▲ Interviews with the staff involved

▲ Examination of business documentation (procedures, manuals, etc.)

▲ Analysis of business systems

▲ Process Relationship Analysis
## Collection of information

### Objective
Goals and missions are reported

### Who
Who is the process owner

### Process
It describes the process, subprocess and task

### Connections with other Departments
Reporting the official document overseeing the process

### Tools Maturity
Defining the degree of maturity

### Objective
<table>
<thead>
<tr>
<th>Objective</th>
<th>Mission</th>
<th>Department/Structure</th>
<th>Process</th>
<th>Under process</th>
<th>Task</th>
<th>Description</th>
<th>Input</th>
<th>Output</th>
<th>Connections with other Departments</th>
<th>Title</th>
<th>encoding</th>
<th>validity date</th>
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The maintenance process
The maintenance process

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Asset Management maturity refers to the capability of an organisation’s people, processes, technology, leadership and culture to derive and deliver value from its assets to meet the needs of the organisation and its stakeholders in a sustainable manner.

Asset Management maturity is generally assessed against known best practice in Asset Management.
Definition of framework components

❖ **Components** of framework are macro elements of analysis.

❖ The **framework** reference is defined on Guidelines published by UIC.

❖ Framework components have a logical order
The Tool

A form to manage input and output data

Input Buttons

Output Buttons
A form multipage for read the questionnaire and evaluate your answers
Graphical representation of results
Thank you for attention