ASSET MANAGEMENT: INTERFACE BETWEEN THE BUSINESS AND THE SYSTEM YOU USE

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WHY ASSET MANAGEMENT FAILS

- Big gap between financial and asset management systems.
- Financial decisions taken without considering impact on assets.
- Lack of focus on asset technical master data.
- Too much theory and too little practice.
WHY ASSET MANAGEMENT FAILS (Contd …)

- Need asset management system due to data volume and complexity
- Thorough system understanding required before implementation
- You can buy the best system in the world, but if you don’t understand the building blocks, you will fail!
PRACTICAL EXAMPLE OF BAD ASSET MANAGEMENT
KEY ELEMENTS OF SUCCESS

- Framework
- Processes
- Data
- Staff

Asset Management
OPERATIONAL / ASSET STRUCTURE

HIGH VOLTAGE SECTION

- Transmission Lines
- Underground Cables
- Substation 132 / 66 / 11kV

DISTRIBUTION SECTIONS

- 3 x Areas
  - 4 x Districts
  - 4 x Districts
  - 4 x Districts
## DISTRICT DATA

<table>
<thead>
<tr>
<th>Area</th>
<th>Districts</th>
<th>Demand MW</th>
<th>Protected Sub</th>
<th>Unprotected Sub</th>
<th>Minisubs</th>
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<td>South</td>
<td>Mitchells Plain</td>
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<td>Parow</td>
<td>162</td>
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<td>597</td>
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<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>1996</strong></td>
<td><strong>984</strong></td>
<td><strong>2660</strong></td>
<td><strong>5076</strong></td>
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</table>
WHAT IS THE KEY TO A SUCCESSFUL INTERFACE?

- Management must be involved
- Clear-cut framework
- Knowledgeable team
  - Specialists within business and system
- Business must own and use the system
- System must reflect business
- Support teams constantly monitor system - importance of accountability
- Competence level - same across field
## FRAMEWORK –

### Key Elements

<table>
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<tr>
<th>Asset Hierarchy</th>
<th>Condition Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Asset Classes</td>
<td>Spares List</td>
</tr>
<tr>
<td>Nameplate Data</td>
<td>Task List</td>
</tr>
<tr>
<td>Doc Links to Technical Objects</td>
<td>Maintenance Plans</td>
</tr>
<tr>
<td>GIS Integration</td>
<td>Business Process Management</td>
</tr>
<tr>
<td>Failure analysis</td>
<td>Role Definition/Mapping</td>
</tr>
</tbody>
</table>
ASSET HIERARCHY

- Characters make up Asset Hierarchy Level
- Structured for Vertical Reporting
- Components follow after structure

EDMCE101/P001=PSW01-CB

- Electricity
- Distribution
- Medium Voltage
- Area
- District
- Operational Area
  - Number of Asset
  - Asset Group Type
  - Number of Asset Group Type
  - Asset Group Type Sub-Type
  - Protected Sub
CLASSES

For horizontal reporting

...PSW01-CB

EDMBR1 (SF6)
EDMBR2 (Oil)
EDMBR3 (Vacuum)

PLANT TYPE:
EDG – Facilities
EDM – Medium Voltage
EDL – Low Voltage
EDS – Secondary Plant
### CLASSIFICATION (Nameplate Data)

- Critical for life-cycle costing
- Replacement policy
- Condition Assessment

<table>
<thead>
<tr>
<th>Object Class</th>
<th>Type</th>
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<tbody>
<tr>
<td>Technical Object Description</td>
<td>Single/Double busbar</td>
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<tr>
<td>Functional Location Number</td>
<td>Internal Arc Rated (Yes/No)</td>
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<tr>
<td>Manufacturer</td>
<td>Internal Arc Rating (kA)</td>
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<tr>
<td>Serial No.</td>
<td>Accessibility (AFLR/AFL)</td>
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<tr>
<td>Manufacturer Date</td>
<td>Panel heaters fitted (Yes/No)</td>
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<tr>
<td>Commission Date</td>
<td>Panel heaters wattage (40/100)</td>
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<tr>
<td>Commissioned By</td>
<td>Remote Switching facilities fitted (Yes/No)</td>
</tr>
<tr>
<td>GPS Co-ordinates</td>
<td>Phasing facilities installed (Yes/No)</td>
</tr>
</tbody>
</table>
TASK LIST / MAINTENANCE PLANS

- Preventative Maintenance Schedules
- Use NRS Specifications
- Key for: Cost / Budgets / Staff Requirements / Material Requirements
TASK LIST / MAINTENANCE PLANS

Maintenance Staff Policy  Manpower Skill Requirement

Material Inventory Requirement  Procurement Policy

Maintenance Budget

Skill x Duration = Cost  Material x Quantity = Cost

Task Lists

Equipment Register  Master Data
Move away from “we fix it when it breaks”

Visibility of budget requirements

Optimise maintenance tactics – real-time processing

Measure asset management performance

Stability on core system

Reduce future change management efforts
Immobilization

Denial
  - Defense against unacceptable reality

Anger
  - Fighting to regain control

Bargaining
  - Trying to negotiate a Compromise

Depression
  - Frustrated, Sense of loss not Coping

Testing
  - Exploring the new Alternatives

Acceptance
  - Realistically responding to Change

Emotional Response to Change

Fear, confused, overwhelmed
Thank you

- ERP Team
- Maintenance Planners