Enterprise asset life cycle challenges and EY’s tailored suite of services
Planning and forecasting

Key questions

- Do we have complete and accurate visibility on inventory across circles and operating companies (opcos)?
- Does our fixed-asset register match the physical material at sites?
- Are our policies consistent across all circles and opcos?

Key ERP features to support EAM*

- Bill of material (BOM)
- Material master

Leveraging EAM

- Standardized BOMs and material master

Benefits delivered

- Identification and deletion of duplicate material codes to avoid redundant ordering
- Vendor-level Class A material differentiation by capturing supplier part number
- Increased compliance with financial reporting requirements through refreshed Fixed Asset Register (FAR)

Key outcome

- Integrated planning and forecasting and informed decision-making

What we provide

- Discussions with network vendors and technical and supply chain teams
- Data duplication and redundancy validation
- Normalized attributes and enriched BOMs and material descriptions
- Cost breakup percentage against items in BOM
- Master data management team creates BOM in ERP*

*EAM: enterprise asset management; *ERP: enterprise resource planning
Procurement of material

**Key questions**

- Does the system define a standardized vendor code or procurement level?
- Are standard bills of quantities with rates defined?
- Are checks completed to identify gaps in local and central procurement?

**Key ERP features to support EAM**

- Controls around PR* and PO*

**Key processes**

- Procurement to plan
- Demand management and fulfillment
- Spare parts procurement

**Separate PR and PO on ERP for capex and opex items**

**Definition of PR release strategy based on material group and type of procurement**

**Stock availability check at the time of PR creation**

**Shortages in delivery identified regarding agreed-upon BOMs**

**Alternate and substitute items updated in the BOMs**

**What we provide**

*PR: purchase requisition; PO: purchase order; BSC: base station controller

**Leveraging EAM**

- Establishing effective controls on the PR and PO process

**Benefits delivered**

- End-to-end view on opportunity loss due to procurement as parent instead of child items
- Visibility into differential pricing for the same set of child items in the BSC* installation kit
- Easier identification of technologically phased-out items to avoid further procurement

**Key outcome**

- Visibility into network inventory and its value
Key questions

- Is there a standard method for material identification, accounting and verification?
- Is there a policy on cannibalization?
- Do we have complete and accurate visibility into warehouse inventory?

Key ERP features to support EAM

- Receipt and issue controls
- Cannibalization controls

Key processes

- Inbound and outbound logistics
- Intercompany and intracompany transfer
- Cannibalization at warehouse

Benefits delivered

- Wall-to-wall physical verification of warehouse inventory
- Visibility into different agreed-upon prices with vendors due to nonstandard material descriptions
- Clear visibility into unused child items at warehouse
- Accurate stock reporting with staging database

Key outcome

- Enhanced utilization and deployment of unused and cannibalized assets

What we provide

- Physical stock verification of entire circle inventory
- Auto-generated batch number and EAM serial number for the parent item at the time of GRN* posting
- Material is picked on a first-in, first-out basis, with aging kept in mind
- Picking list is generated against approved MRN* with suggestive serial number
- Parent item is removed, and child items are visible after cannibalization

*GRN: goods receipt note; MRN: material request note
Network field operations

Key questions

► Is the data across all the systems available at the same level of detail?
► Are our systems capable enough to reflect equipment status at sites?
► Are FAR* controls fairly automated or manual?

Key ERP features to support EAM

► Location master
► EY mobile app

Leveraging EAM

► Effective capture of material movement to and from the site

Benefits delivered

► Physically verified sites with real-time monitoring of data capture quality
► Specific field to capture district and province information to cater to movement reports for tax purposes
► Use of mobile app by field engineers to initiate site-to-site transfers and returns to storage location

Key outcome

► Enhance matching rate between FAR and physical assets

What we provide

- Location ID updated with standard details in EAM system
- Location ID captured as part of MRN execution
- Real-time updates with EY mobile app on material movement and status at site
- Ability to track transaction and equipment status change history
- Reconciliation of FAR database with parent- and child-level asset count and value

*FAR: fixed assets register
Asset transfer and retirement

Key questions

► Is the asset management process automated?
► Do we have complete visibility into material lying at a vendor for repair and return (R&R)?
► Is there a defined policy for identification and disposal of scrap?

Key ERP features to support EAM

► R&R controls
► Scrap management controls

Leveraging EAM

► Establishing controls to record movement of material for R&R, scrap and replacement

Benefits delivered

► Easier identification and disposal of scrap after physical verification
► Improved visibility into usable site return inventory at the warehouse, leading to priority deployment
► Improved space utilization at warehouses and streamlined asset retirement

Key outcome

► End-to-end life cycle tracking of assets

What we provide

Functionality to capture stock sent out for R&R
Visibility into stock at vendor premises and provision for replacement against serial number
Scrap type and category defined and maintained in EAM module
Accounting entry posted based on written-down value of asset
Scrap disposal allowed only against approved recyclers

Repairable and non-repairable warehouse returns
Intercompany and site transfers
Asset disposal and retirement
Asset management driven by Internet of Things (IoT)
## Intelligent EAM

### IoT: the next evolution of the internet

- IoT is an evolution of mobile, home and enterprise assets that are being connected to the internet to integrate greater computing capabilities and use data analytics to extract meaningful insights.
- IoT presents:
  - A cost-driven business case
  - A revenue-driven business case
- The International Data Corporation (IDC) expects to see nearly 30 billion connected devices by 2020 and service revenues of US$7.1 trillion, with a compound annual growth rate of about 20%.

### Asset management driven by IoT

- Across industry sectors, IoT-powered asset management techniques are being adopted to build capabilities including:
  - Next-generation operational intelligence to facilitate better decision-making in terms of capex on asset acquisition.
  - Asset performance management through the monitoring of key performance indicators and the use of predictive analysis to initiate preventive maintenance activities for stressed assets.

### Low-power, wide-area (LPWA) networks

- Communication service providers are setting up IoT-dedicated networks in collaboration with telecom operators.
  - Samsung has partnered with SK Telecom to implement the world’s first commercial LPWA network to support IoT devices in health care.
  - Orange telecom is implementing LPWA to supplement its cellular infrastructure and support IoT.

### Smart-city initiatives

- One initiative includes converting every vehicle into a smart asset capable of connecting with other smart assets, creating a system of smart assets.
  - As real-time data is gathered, algorithms are designed to monitor the movement of assets to analyze traffic and to solve certain pandemic problems, such as theft.

### Powering a world of opportunities for telecom operators through the IoT

- The IoT ecosystem offers a new wave of opportunity for the telecommunications industry to extend its core capability into new areas and optimize its current state, especially asset management.
- Connected assets offer the operator key indicators of preventive maintenance and control around asset movement (site to warehouse, site to site and warehouse to site), improving financial reporting (accurate fixed-asset registers) and performance level (traffic monitoring).
- Current challenges for telecom operators in IoT implementation include high capex due to the cost of tracking and sensing devices; however, an increased quantum of consumption will eventually reduce the price.
- Telecom operators can build a truly efficient and intelligent network when assets communicate with each other.
Benefits of EAM implementation
Key changes

1. Improved visibility into the stock or asset base at each location, including “fresh” and “returned” stock

2. Better deployment and utilization of inventory and assets — before fresh stock is “ordered”

3. Better match rate between the physical inventory or asset base and books of account

4. More accurate representation of asset and inventory values in books of account

5. Verification against standard BOM and packing lists at the time of delivery (no short deliveries)

6. Improved descriptions and use of supplier part numbers, clarifying inventory management (no excess or incorrect ordering)

7. Reduction in unique material codes for better control during inventory management and material ordering

Expected benefits from implementing EAM
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