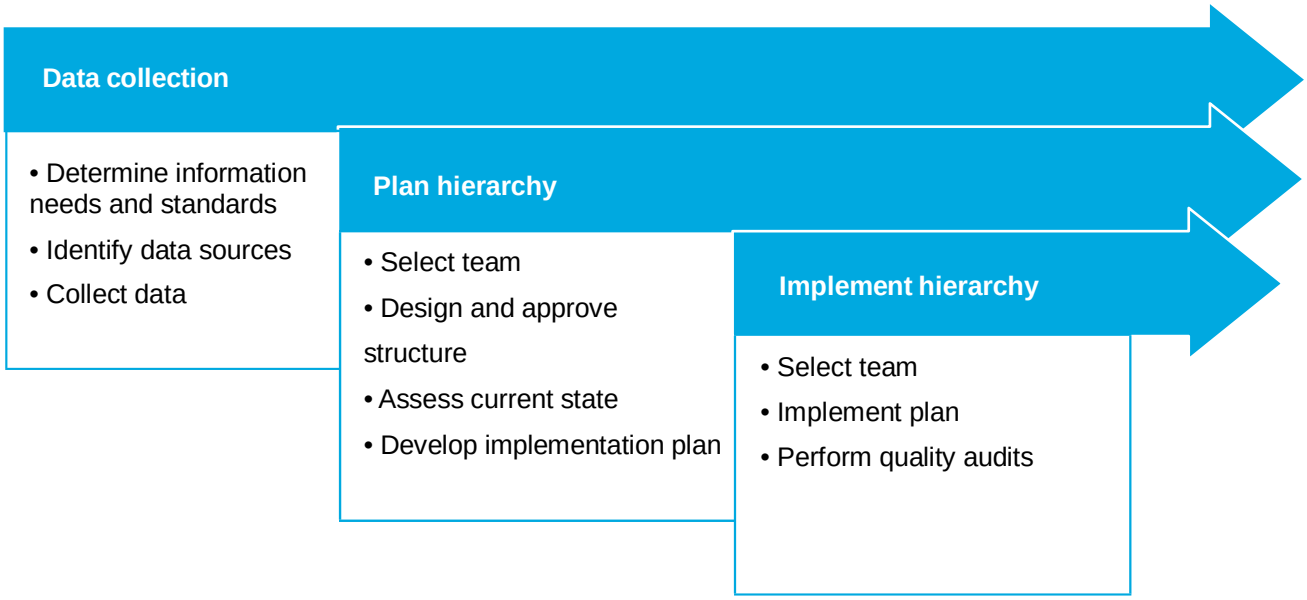
Hierarchy Development Action Plan

This document contains a checklist to help you follow an asset hierarchy development process. The checklist is composed of items to consider having in place before developing your asset registry.

To practice what you learned about Asset Hierarchies, use the checklist to:

1. Verify your current hierarchy organization and accuracy, or
2. Sketch a new hierarchy for a critical system at your site using one of the 3 hierarchy structures (functional, equipment, location).

Build an Asset Hierarchy



Plan Asset Data Collection

- Determine information needs and standards:
- Define criteria for ‘asset’ vs. ‘component’:
- Determine equipment data to collect. Suggested data from ISO 14224:

Main Category	Definition	Examples
Identification	Equipment location	Location tag number Equipment number
	Classification	Equipment unit class, e.g., compressor Equipment type Application
	Installation data	Installation code, category Operation category Area
	Equipment unit data	Equipment unit description Serial number Subunit redundancy
Design	Manufacturer’s data	Manufacturer’s name Model number
	Design characteristics	Relevant for each equipment class, for example: Capacity rating, RPM, power consumption rating, lube/oil capacity, voltage, amps, flow rate
Application	Operation (normal use)	Equipment unit redundancy Mode (continuous running, intermittent, etc.) Installation or production start-up date Surveillance period and accumulated operating time Operating parameters relevant for each equipment (e.g. operating power, speed)
	Environmental factors	Ambient conditions (severe, moderate, benign) Interior environment (severe, moderate, benign)
Remarks	Additional information	Additional information in free text and data source

Determine Financial and Reliability Data to Collect

- What is its remaining useful life?
- What is its remaining economic value?
- What is the asset's total cost of ownership?
- What is the current condition (mean time between failures, mean time to repair)?

Identify Data Sources

Design drawings, manufacturer manuals, bid documents, Operations and Maintenance staff, photos and other media, work order history

Collect Data

- Prepare plan for data collection
- Assemble team to collect data

Plan the hierarchy

Select hierarchy development team

- Bring together a peer review and approval group
- Define data rules and naming conventions

Design the hierarchy structure

- Define and approve hierarchical structure

Assess current state

- Look at a building diagram - what natural asset/system groupings do you notice?
- Where are your power sources?
- Is there anything about the natural geography that drives your decision making?
- Identify similar assets, assets from the same manufacturer, assets with similar power consumption ratings, etc.

Develop Implementation Plan

Seek approval from management

Implement the Hierarchy

Select team

- Implement the plan
- Perform quality audits (use Implementation quality audit form below)

Implementation Quality Audit Form

Asset data entry:

- ☐ 1. Are guidelines being used to determine if the item is a maintainable asset?
- ☐ 2. Was the CMMS searched for existing asset data?
- ☐ 3. Was the existing asset data reviewed for any gaps or missing data?
- ☐ 4. Were asset characteristics determined for each asset type?
- ☐ 5. If manual entry used, was a plan created for entering info into CMMS/EAM?
- ☐ 6. Was the CMMS administrator consulted when creating the asset data requirements and/or the CMMS upload spreadsheet?
- ☐ 7. Was data reviewed/audited for completeness and accuracy prior to input into the CMMS/EAM?
- ☐ 8. Is all required information being entered in the CMMS/EAM?

Asset hierarchy entry:

- ☐ 9. Were defined rules utilized to identify the difference between Location, Equipment, and Component?
- ☐ 10. Was a structured identification used for the Location ID?
- ☐ 11. Did hierarchy subdivision continue until the point at which discrete/maintainable items were identified?
- ☐ 12. Was hierarchy structure peer reviewed, and was approval received from leadership?
- ☐ 13. Was data reviewed/audited for completeness and accuracy prior to input into the CMMS/EAM?
- ☐ 14. Is all required information being entered in the CMMS/EAM?