

ASSETS MASTER DATA

Presentation

Crea provides technical assistance in the developing of **Assets Master Data**, with special focus on **Maintenance and Asset Integrity Related Information**. The service also includes **Extract Transform and Load (ETL)** of information from legacy systems to target CMMS.

Master Data Types

Most important **Master Data Types** are:

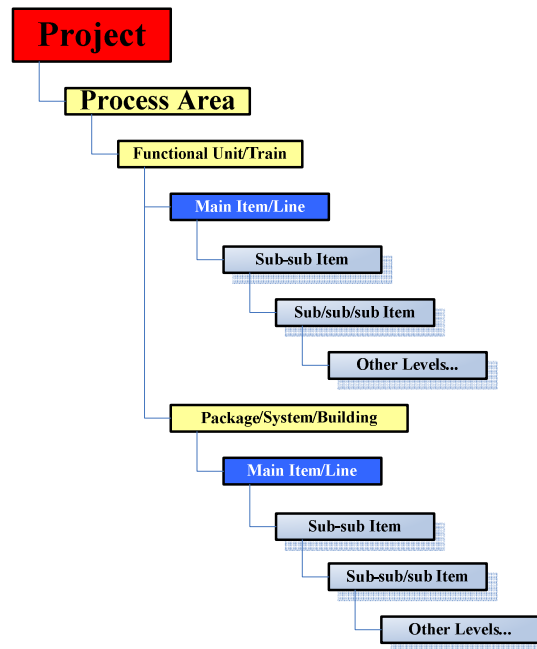
- ✦ **Asset Information** with particular reference to Equipment and Materials, including:
 - *Data sheets*
 - *Bill of Materials*
 - *Reference Documentation*

- ✦ **Functional Locations** with particular reference to Process Functional Locations, including:
 - *Data sheets*
 - *Loops/Systems*
 - *Joints, Nozzles, Pipe Classes*
 - *Bill of Materials*
 - *Reference Documentation*

- ✦ **Building/Locations**

- ✦ **Substances**

- ✦ **Documentation**



Functional Locations

The fundamental point, in developing a **Maintenance System**, is the creation of a register of all **Functional Locations** (usually called *Tags* or *Flocs*) which describes with details the logical organization of all pieces of equipment of which the plant is composed.

The organization of such a register is usually very depending from the **Corporate Specifications**, in particular *Item & Numbering Procedure*, *Material Numbering Procedure* and *Document & Numbering Procedure*. Functional Location attributes have the following characteristics:

- * Shall be Location **dependent**
- * Shall be Process **dependent**
- * Shall be Equipment **independent**

While **Functional Location** identifies logical position in the plant process, the *Equipment* describes the physical objects itself installed in that position. **Functional Locations & Equipment** can be organized in hierarchy. Equipment Attributes shall not be Location Dependent but **Manufacturer Make specific**.

A relevant aspect is the need of defining **descriptions** in such a way they can fulfil their primary goals, which can be summarized as follows:

- ✱ **to allow** a quick and correct identification of the object (ex. Asset, Equipment, Material, Document, Maintenance Plan, Task List, etc.)

- ✱ **to allow** a quick and easy definition of search criteria (ex. selecting class of items, types of documents, etc.)

Unfortunately, there are also situations in which it is necessary to use a short description instead of a more detailed but longer description.

In order to properly create short intelligible descriptions, it is necessary:

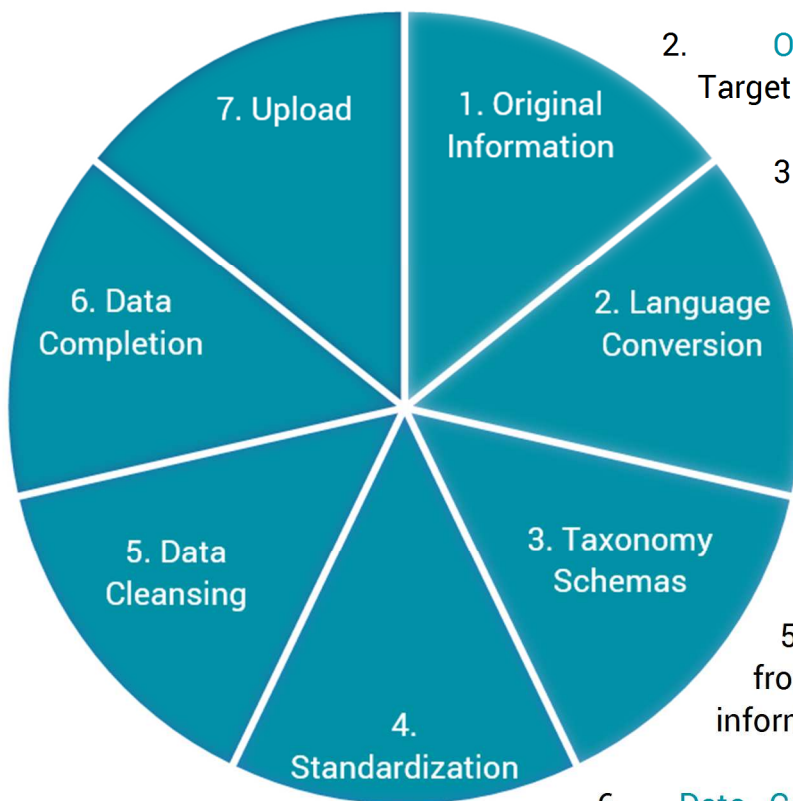
- ✱ **to format** long description in a way suitable for text parsing

- ✱ **to shorten** long formatted description applying rules specific to the type of text.

The Information Cycle

The information cycle can be summarized as follows:

1. **Original Information management** i.e. the information coming from contractors and/or manufacturers and/or from legacy systems is analysed.



2. **Original Language conversion** into the Target Language.

3. **Taxonomy Schemas** i.e. the identification of grouping classes like valves, pumps, compressors, turbines, etc.

4. **Standardization of attributes** (like pressure, temperature, viscosity, etc.) using accepted definitions and unit of measure and standardization of free format descriptions.

5. **Data Cleansing** i.e. the removing from the set of non-conforming or not useful information.

6. **Data Completion** i.e. the addition of missing information provided by suppliers or deriving from site surveys.

7. **Upload** into the target system like a CMMS.

Assets Master Data

The development of a standardized and complete Assets Master Data:

- * **Facilitates** bulk master data import from legacy systems (CMMS, EDMS, Data Warehouses, etc.) and data cleansing and completion.
- * **Reduces** Master Data Build-up Costs and time schedule.
- * **Facilitates** standardization of Master Data Build-up Information with particular reference to descriptions.
- * **Facilitates** sharing of master data and improves efficiency of master data querying in particular during engineering and commissioning phases.
- * **Facilitates** data upload into Corporate CMMS or other Information System.

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