

## 7. Database Structure and Set-up

### 7.1 The Structure

The Database hierarchy for equipment locations is:

Plant

    Unit

        Functional Area

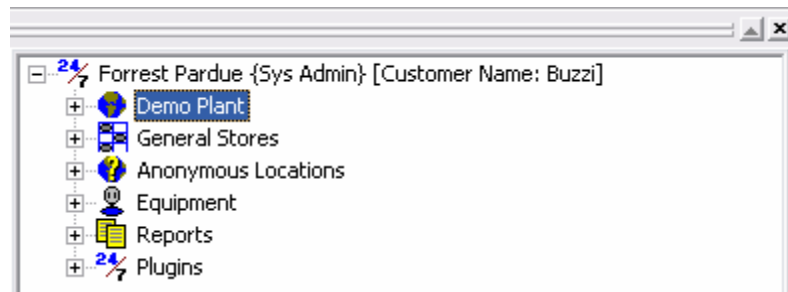
            Asset

                Component

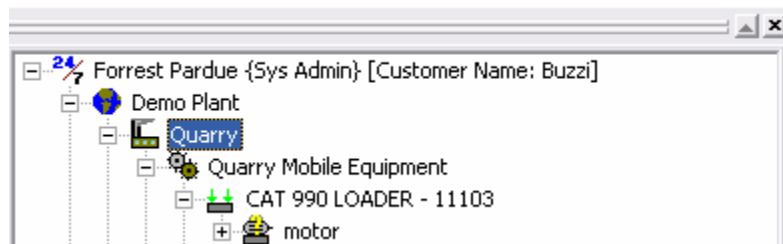
Often the plant has an existing location structure defined in its CMMS. If this structure is desired as the Tango structure, exporting the location structure from the CMMS and importing this structure into Tango will build the Tango location database. Section 7.2 defines this location import process.

If the plant location structure is to be developed for Tango, the user has several structural options for each level. Some possibilities are:

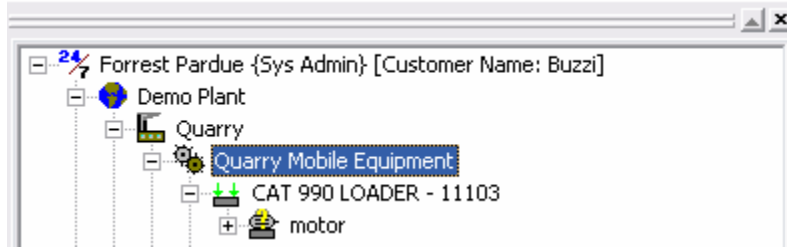
**Plant:** The manufacturing facility where TANGO is being utilized, also the top of the database hierarchy.



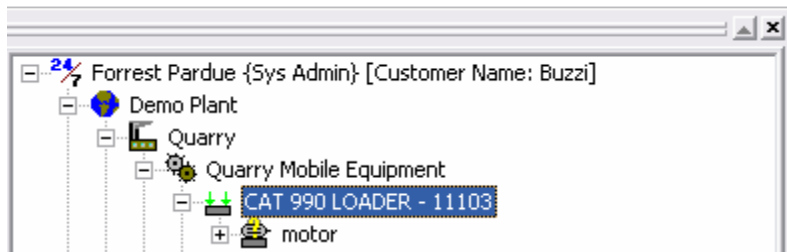
**Unit:** A plant is broken down into units; which can be anything within the plant, from buildings to entire production sections.



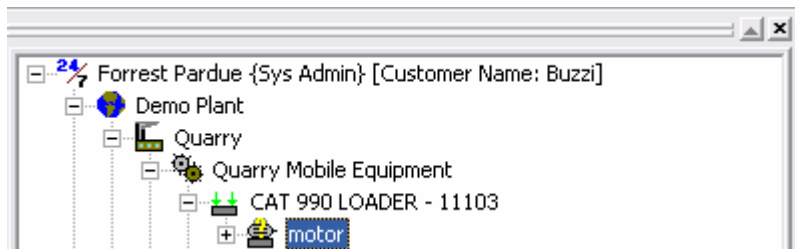
**Functional Area:** A recognizable sub section of a unit. This could be equipment functions such as “Boiler Feed Pumps,” “Air Compressors,” or it could be process areas such as “Brine Area” or “Glycol Area.”



Assets: This is typically the name of the most critical component in the machine train – such as “Booster Pump” or “80 # Air Compressor.”



Component: The specific component in the train – such as Motor, Pump, Turbine, Compressor, etc.

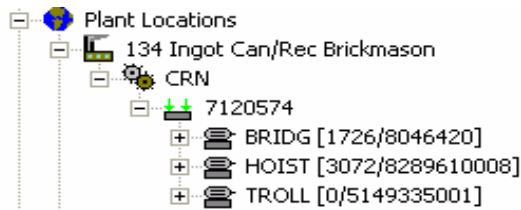


Often it is easier to visualize the location structure from the bottom-up. Start at the component and name the location structure above the component level.

## 7.2 Importing Tango Locations

The key in importing locations from your current system into Tango is to start with good data in the correct format. To help you achieve this we have developed a template document that you can use to ensure a successful import. Your data will be transformed from the tabular output of your current system into a hierarchical format that Tango will display as a tree.

We are going to use a sample database to help demonstrate how to fill out the template. The first location in our database looks like this:



Unit                    134 Ingot Can/Rec Brickmason  
 Function                CRN  
 Asset                    7120574  
 Asset Component        BRIDG  
 Asset Component        HOIST  
 Asset Component        TROLL

To represent this in our excel template would look like this:

	A	B	C	D	E	F	G	H
1	Plant	Unit	Function	Asset	AssetUsageType	Compone	Location State	Equipment Type
2	Plant							
3		134 Ingot Can/Rec Brickmason						
4			CRN					
5				7120574	Installation			
6						BRIDG	Occupied	Motor - AC Induction (Motors)
7						HOIST	Occupied	Motor - AC Induction (Motors)
8						TROLL	Occupied	Motor - AC Induction (Motors)

The options for AssetUsageType, Location State, and Equipment Type are dropdown lists in the Excel spreadsheet.

**Asset Usage Type** lets you indicate whether a location is used for Installation, Spare, Scrap, or Repair.

**Location State** simply indicates whether a location has a piece of equipment in it at the current time or is an empty location.

**Equipment Type** allows you to choose what type of equipment is at this location. There will be only 1 Plant in the database. To add the second Unit you would enter the Unit on the next blank cell under unit, in this case, B9.

There are several alias columns included in the template. To include information about a location in a predefined Alias, list the information under the corresponding heading. If no heading exists, use the next column. Name the column whatever you want the alias to be in Tango. Before the data is imported we will add another alias to the database.

Locations may also be added one at a time in the Tango program. To add a location such as a unit, function, asset, or asset component right click on the tree level above the level that needs to be added. For example if an asset component needs to be added right click

on the asset then select 'Insert Asset Component' or if a asset needs to be added right click on the function and select 'Insert Asset.'

