

MEP ASSET DATA

- **EMSD Standardised MEP Asset Data Templates**
- **Manage Shared Parameters**
- **Asset Information Management Platform (AIMP)**
- **Data Import through COBieLite**
- **Asset Relationship**
- **O&M Document and Upload Procedure**

Asset Information Requirement for EMSD BIM-AM:

- List of asset information requirement per equipment type.

[illegible]

- ▶ [BIM-AM Standards and Guidelines Version 2.0](#) [PDF format (3.14MB)]
 - ▶ [Appendix A - Building Code](#) [Excel format (183KB)]
 - ▶ [Appendix B - Asset Information Requirement](#) [ZIP format (2.63MB)]
 - ▶ [Appendix C - Asset Information Input Tool \(AIIT\) User Manual](#) [PDF format (5.18MB)]
 - ▶ [Appendix D - Shared Parameter File for EMSD BIM-AM](#) [TXT format (80KB)]
- ▶ [Major Changes between BIM-AM Standards and Guidelines v1.0 and v2.0](#) [PDF format (233KB)]

Equipment Specific Attribute

Remarks:

M/O: Mandatory / Optional
L1: Level 1 equipment
L2: Level 2 equipment

EMSD Standardised MEP Asset Data Templates

Shared Parameters File for EMSD BIM-AM:

- Common Parameters and Equipment Specific Parameters have been included inside the BIM-AM System.

BIM-AM Standards and Guidelines

BIM-AM Standards and Guidelines Version 2.0



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- ▶ [Major Changes between BIM-AM Standards and Guidelines v1.0 and v2.0](#) [PDF format (233KB)]

- Appendix D - Shared Parameters File for EMSD BIM-AM v2.0.txt

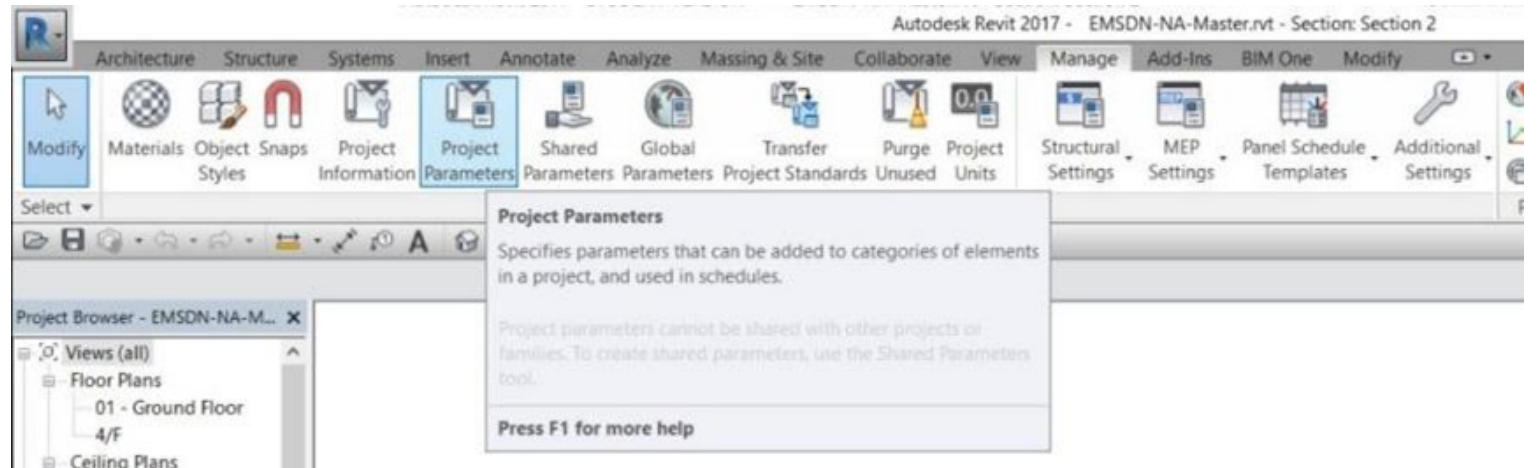
EMSD Shared Parameters 2.0.txt - Notepad

```
File Edit Format View Help
# This is a Revit shared parameter file.
# Do not edit manually.
*META VERSION MINVERSION
META 2 1
*GROUP ID NAME
GROUP 1 Common
GROUP 2 Lift and Escalator
GROUP 3 LV Switchboard
GROUP 4 Emergency Generator
GROUP 5 HVAC
GROUP 6 Boiler System
GROUP 7 Filtration Plant
GROUP 8 FS Installation
GROUP 9 Uninterrupted Power Supply
GROUP 10 Burglar Alarm
GROUP 11 Radar and Navigation System
GROUP 12 Microwave Link System
GROUP 13 Timing & Display System
GROUP 14 Audio Video Systemre
GROUP 15 Audio Electronics Installation
GROUP 16 Radio Electronics Installation
GROUP 17 Closed Circuit TV System
GROUP 18 Broadcast Reception
GROUP 19 Lighting
GROUP 20 Electrical Distribution
GROUP 21 BIMConnect
GROUP 22 Medical Gas System
GROUP 23 Pneumatic Tube Transport
*PARAM GUID NAME DATATYPE DATACATEGORY GROUP VISIBLE DESCRIPTION USERMODIFIABLE
PARAM 9dae2100-07e4-4bc3-8362-a4bc3a7b3958 EMSD.FS.Total capacity TEXT 8 1 1
PARAM 8b58d400-6bcf-41b5-ae9a-68e4ff1c74bd EMSD.LIFT.Application TEXT 2 1 1
PARAM 7a5e0a01-a3d3-44b4-a8ad-f2d758a1ddb9 EMSD.Filtration.Analyser Model No. TEXT 7 1 1
PARAM a8f6f801-671f-4963-b496-a6b23361b2d1 EMSD.HVAC.Water Flow PIPING_FLOW 5 1 1
PARAM e6d4b702-4b74-4d76-85d2-e7ea945537a5 EMSD.FS.Water Flow PIPING_FLOW 8 1 1
PARAM bd99a303-9af8-484e-bd38-1021cc33101c EMSD.Radio.Console Software TEXT 16 1 1
PARAM f120a403-f262-43f2-803e-0e77b1a4af5e EMSD.UPS.Phase TEXT 9 1 1
PARAM ea68ed03-10a0-4774-948a-23haf1263fca FMSD.IV.Tvne TEXT 3 1 1
```

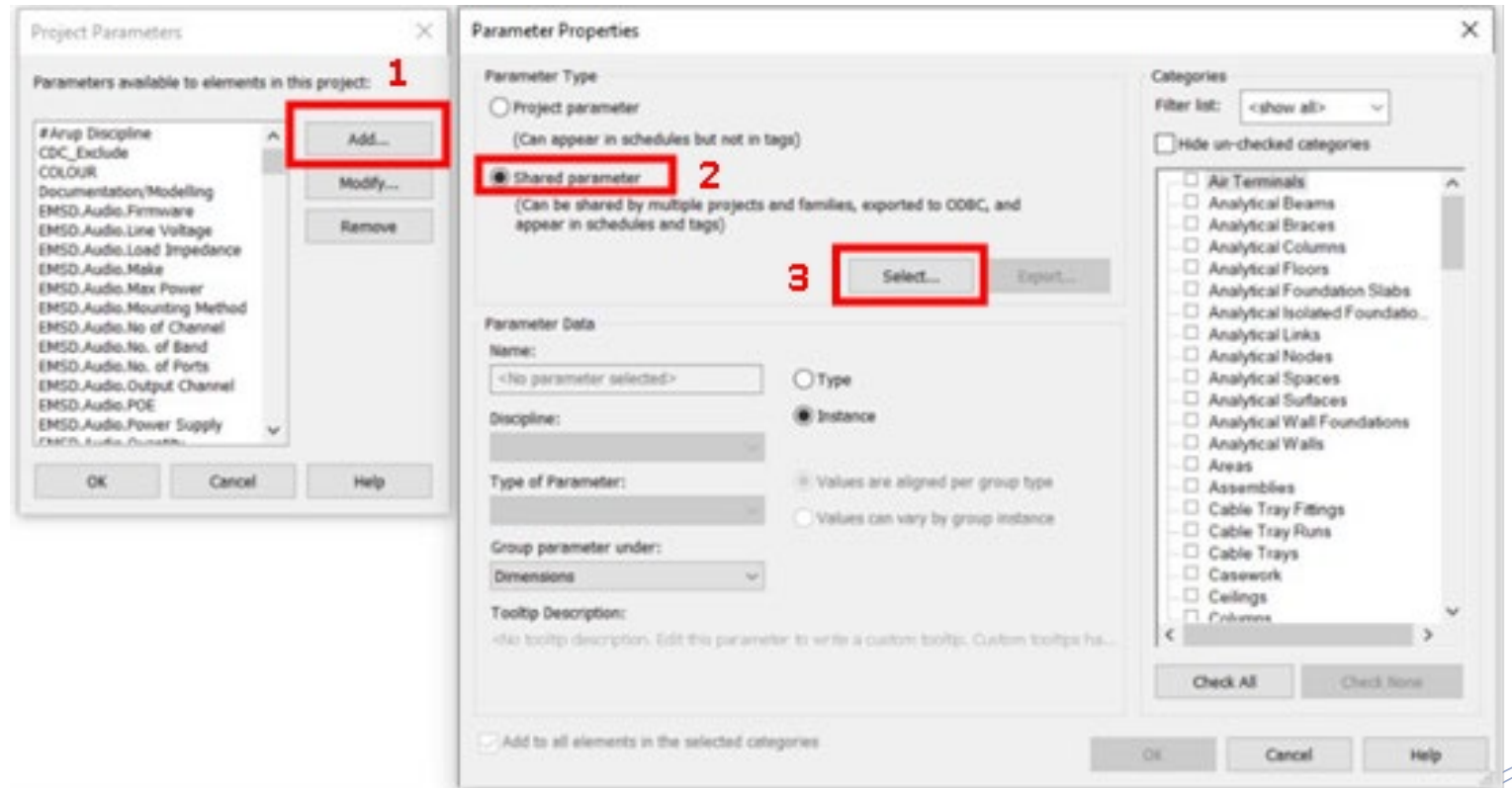
Ln 1, Col 1 100% Windows (CRLF) UTF-16 LE

Manage Shared Parameters

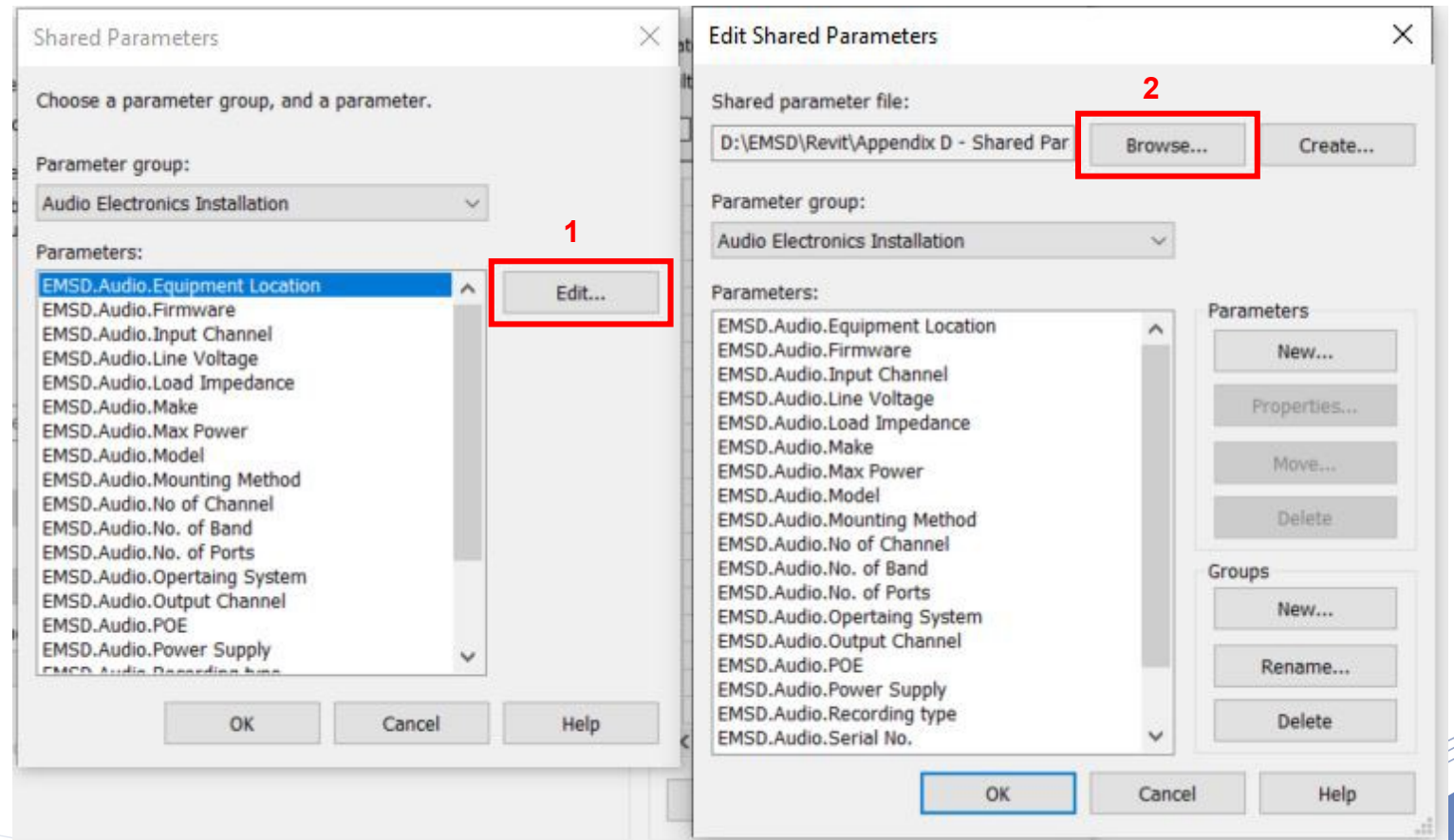
- Open the Master file or Specific MEP Revit File
- >Manage
- >Project Parameters



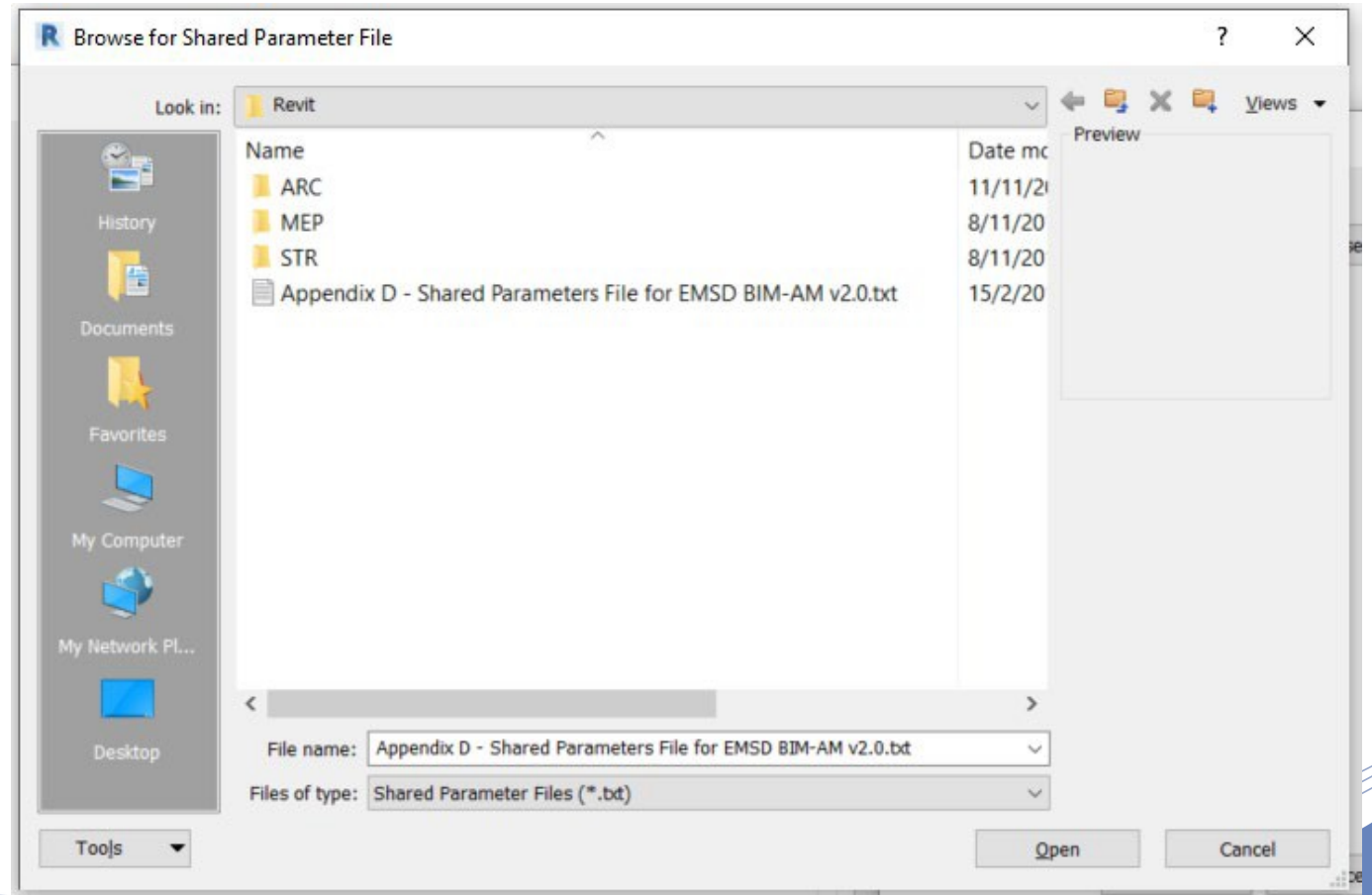
- Project Parameters Dialogue Box Open
- >Add
- >Parameter Properties Dialogue Box Open
- >Shared parameter
- >Select



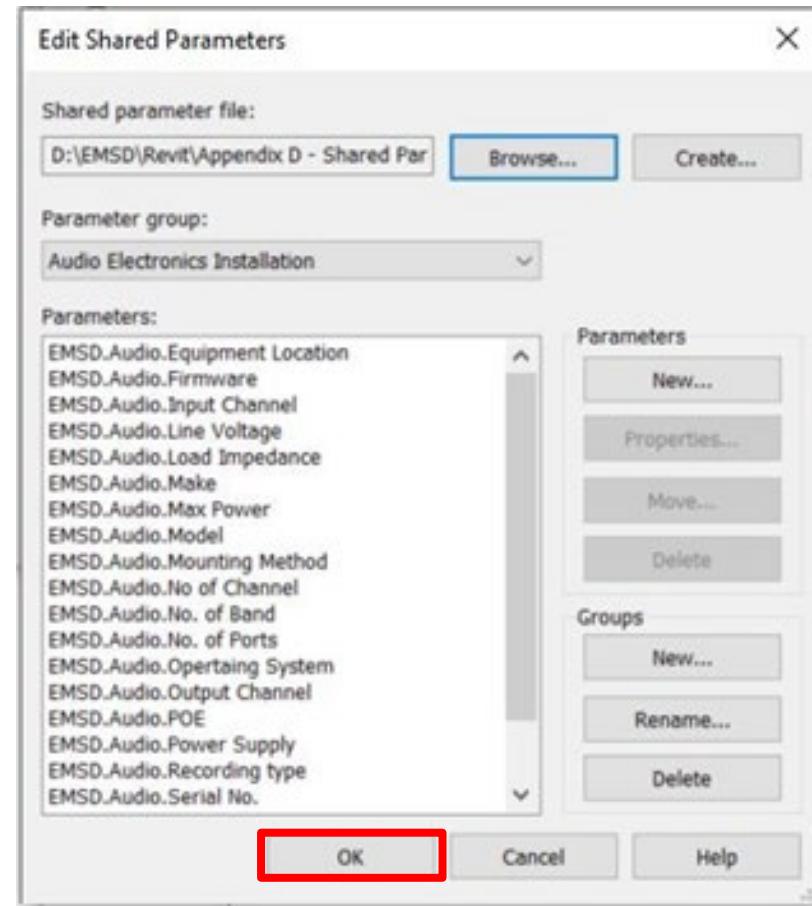
- Shared Parameters Dialogue Box Open
- >Edit
- >Edit Shared Parameters Dialogue Box Open
- >Browse



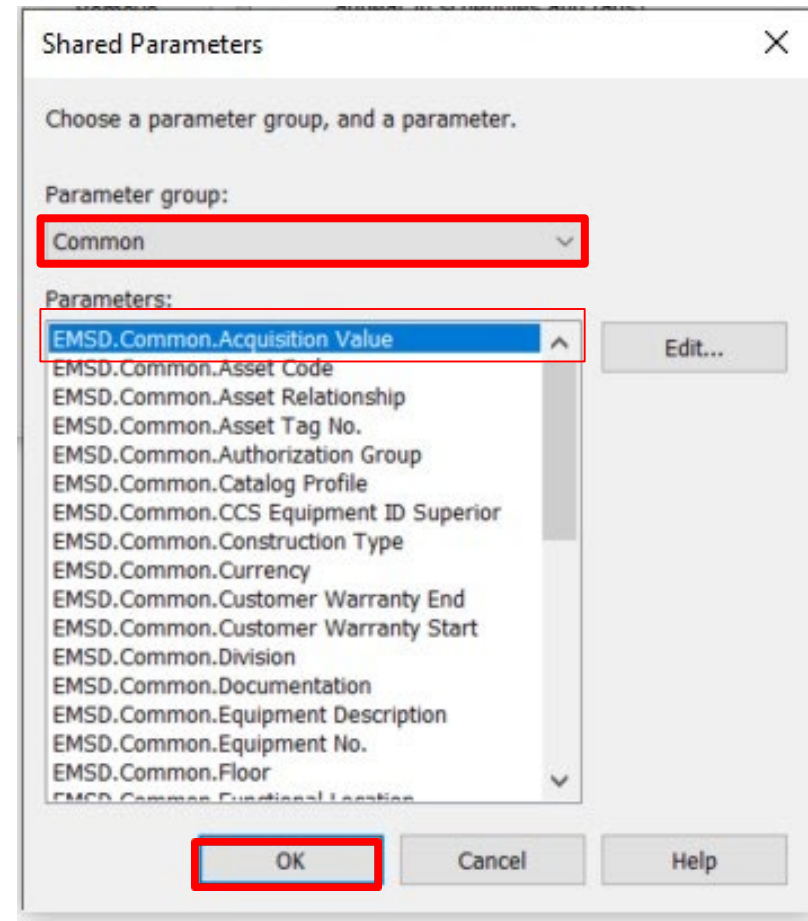
- Select the downloaded “Appendix D - Shared Parameters File for EMSD BIM-AM v2.0.txt” file>Open



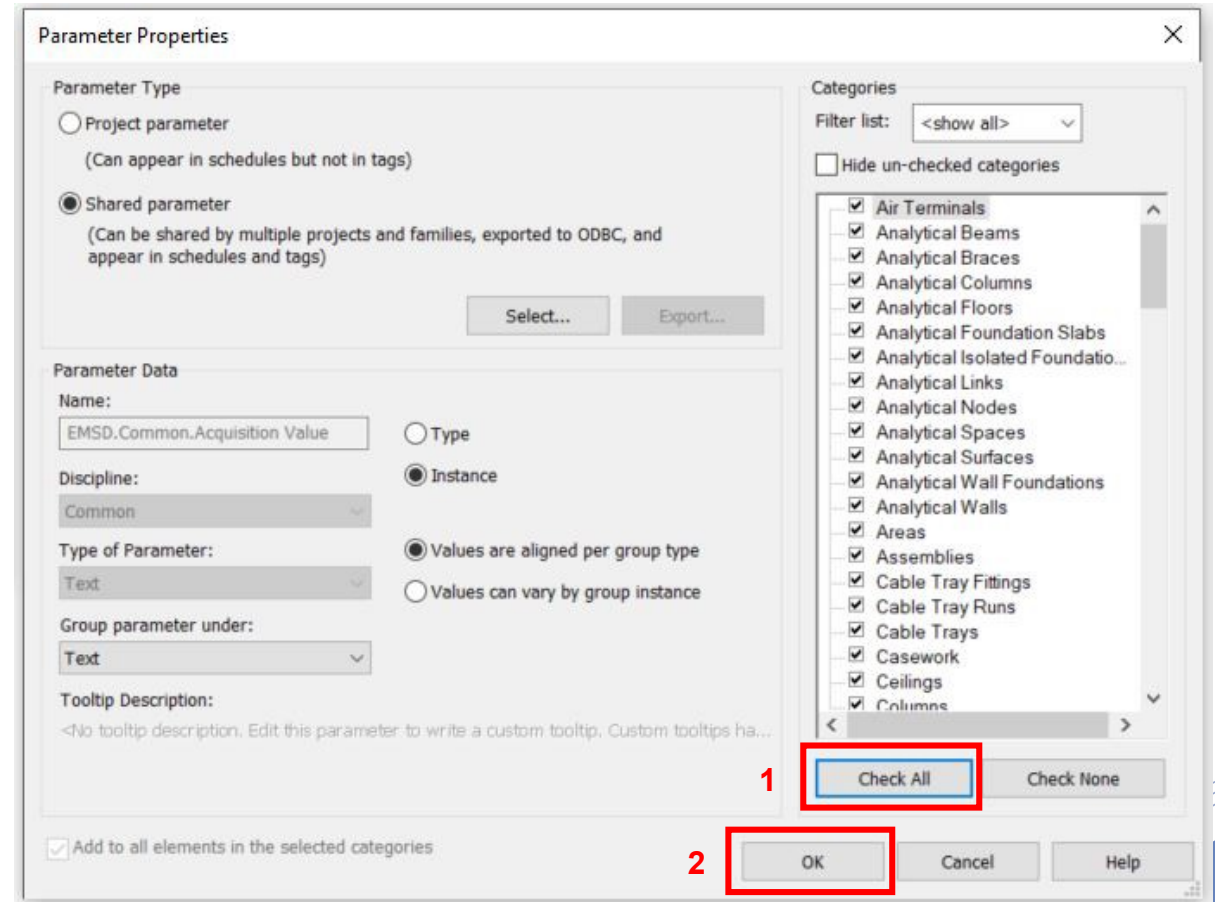
- Click OK



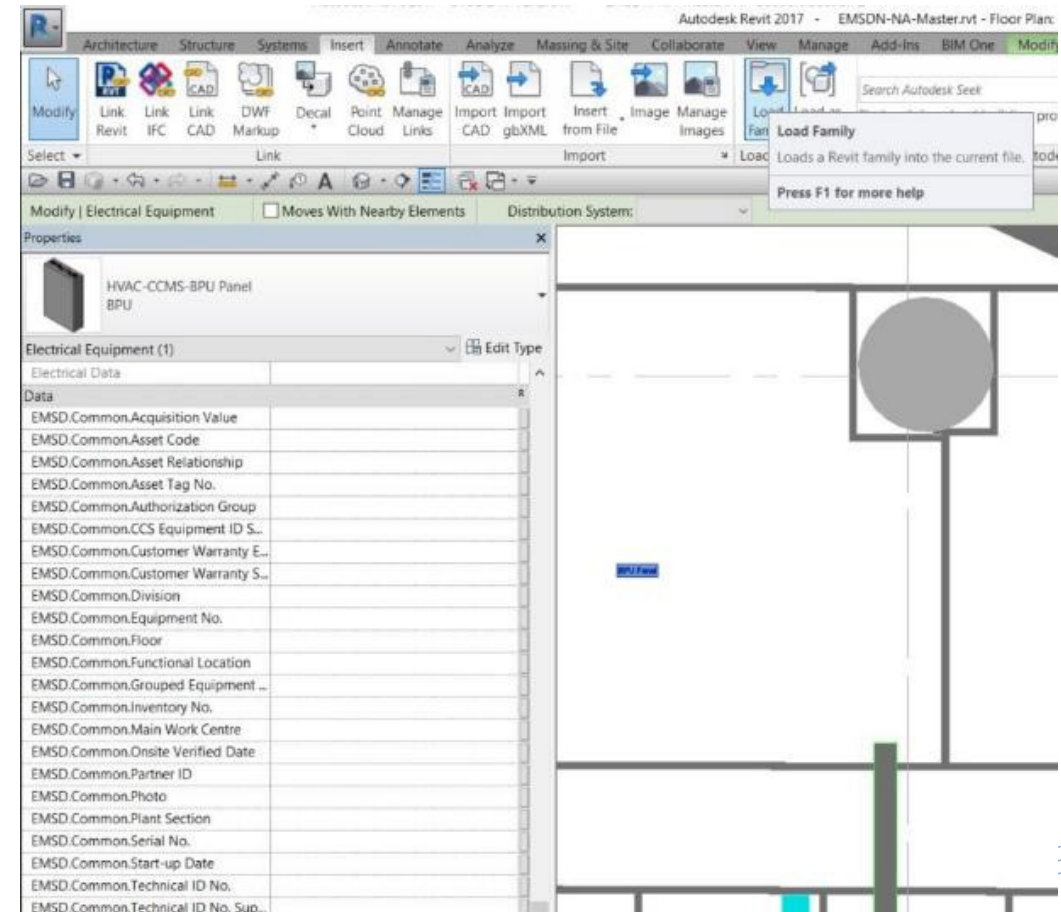
- Back to Shared Parameters Dialogue Box
- In the Parameter group part
- >Select Common
- >In the Parameters part
- >Select the parameter need to be added
- e.g. EMSD. Common. Acquisition Value
- Click OK



- Back to Parameter Properties Dialogue Box
- > Parameter would be added under Parameter Data
- > Check All in the Categories (to make sure this parameter add in the specific Revit Family Categories)
- > OK



- Open the Revit File
- >Insert Load Family
- >Select the family of specific MEP System
- > put the Family inside the model.
- After Common parameters have been added, parameters would be appeared at Properties when you click on the family.



Asset Information Management Platform (AIMP)

Purpose:

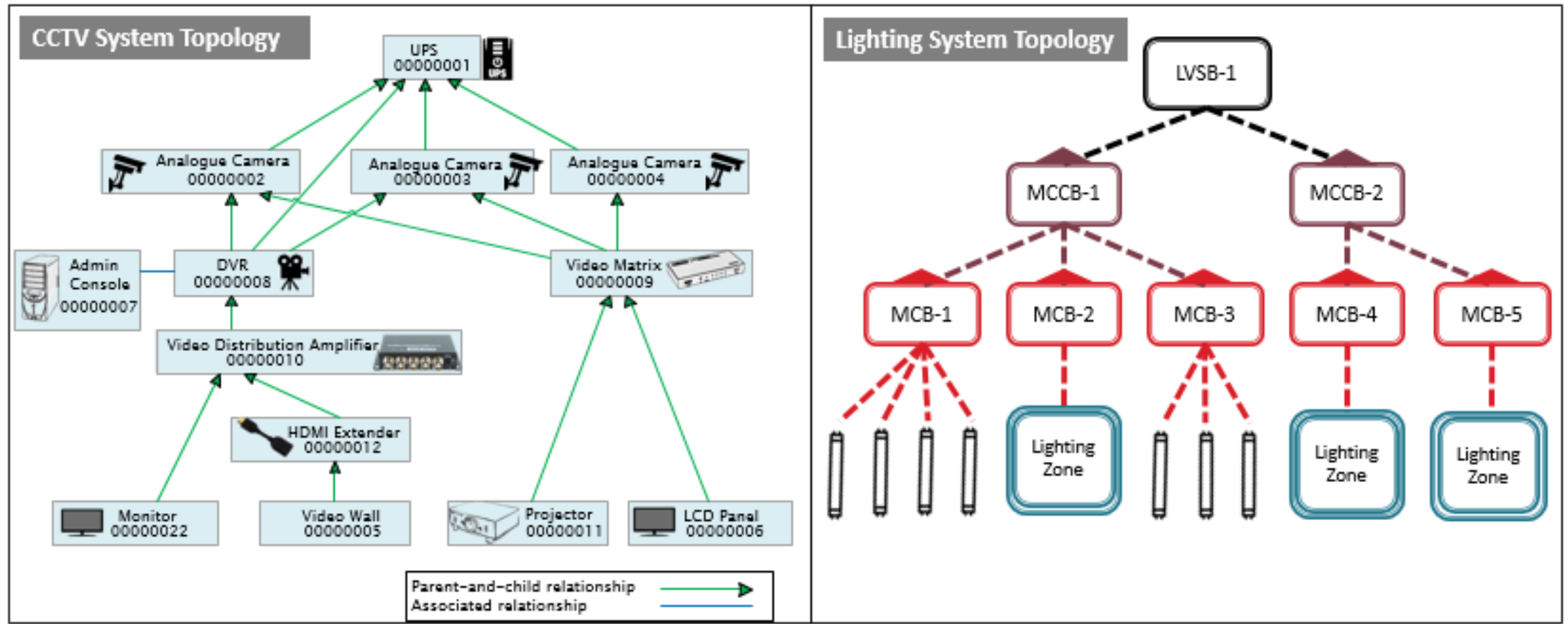
- Background & Purpose
- Web-based system developed by EMSD
- Manage asset information
- Create corresponding asset relationship for BIM-AM system
- Makes use of the COBieLite to exchange information with BIM models and BIM-AM systems

Goals:

- Create asset relationship (i.e. system topology) in AIMP
- Validate the asset data input and format
- Upload all the documents including testing and commissioning reports, catalogues, drawings, certificates and O&M manuals etc., under a zip file for each Level 1 System.
- Assign the document path of dedicated files, e.g. PDF, words etc., in the zip file to corresponding Level 2 assets.

Asset Information Management Platform

- Examples of asset relationship are illustrated.



Exchange Information

COBie:

- COBie - Construction Operations Building Information exchange.
- An information exchange specification for the life-cycle capture and delivery of information needed by facility managers.
- Defines how the information is structured and formats that can be used.
- A format of building data for the publication of a subset of building model information
- In the format of excel spreadsheet for construction handover between lifecycles.

COBieLite:

- XML format of COBie files.
- Integrate the data in BIM model into EMSD's Asset Management System.
- The COBie xml file contains both COBie and EMSD parameters.
- A parameter template in JSON format is adopted to eliminate the unused COBie parameters before exporting the COBieLite files for data exchange.

Data Exchange from BIM models for Asset Management

Export the information from BIM in COBieLite format for Asset Management

BIM Data for MEP Equipment Schedule

BIM Data Export in COBieLite Format for Asset Management

Properties Panel:

PAU-Cold_Magic
CW047-6

Mechanical Equipment (1) Edit Type

Phasing

Phase Created New Construction

Phase Demolished None

Data

EMSD.Common.Acquisiti... By EMSD

EMSD.Common.Asset Code KT-EMSDN-004-CSC-HVAC-PAU-001

EMSD.Common.Asset Rel... PAU

EMSD.Common.Authoriza... By EMSD

EMSD.Common.CCS Equi... By EMSD

EMSD.Common.Customer... 15.03.2019

EMSD.Common.Customer... 16.03.2018

EMSD.Common.Division By EMSD

EMSD.Common.Equipme... 4/F

EMSD.Common.Equipme... HVAC-PAU-004-001

EMSD.Common.Floor 4th Floor

EMSD.Common.Functiona... CSC

EMSD.Common.Grouped ... NA

EMSD.Common.Inventory... By EMSD

EMSD.Common.Main Wo... By EMSD

EMSD.Common.Partner ID By EMSD

EMSD.Common.Plant Sec... By EMSD

EMSD.Common.RFID Tag ... EMSDN-0400000001

EMSD.Common.Serial No. N/A

EMSD.Common.Start-up ... 16.03.2018

Properties help

Project Browser - KT-EMSDN-004-MEP3-AC.rvt Properties

Click to select, TAB for alternates, CTRL adds, SHIFT unselects.

3D Model:

Schedule/Quantities Window:

Modify Schedule/Quantities

Project Browser - KT-EMSDN-004-...

Views (EMSD)

Documentation

500_AB-As Built

3D View: (3D)

Legends

Schedules/Quantities

Duct Accessory Schedule

Mechanical Equipment Sch

Pipe Accessory Schedule

Sheets (全部)

Families

Air Terminals

AC-Return_Air_Grile

AC-Supply_Air_Grile

AC-TBD

AC-TBD-004 Type1

AC-TBD-Type1

AC-TBD-004 Type1

AC-TBD-Type2

AC-TBD-004 Type2

AC-TBD-Type3

AC-TBD-004 Type3

Annotation Symbols

Automatic Up/Down Dir

Fixed Up Direction

Standard

M_Detailing Drawing

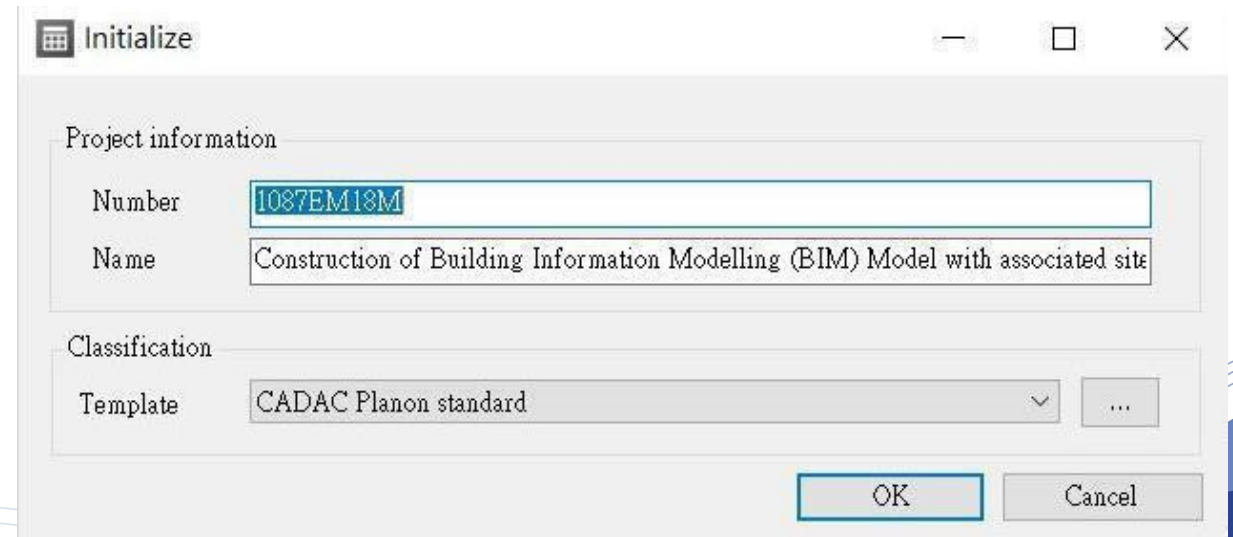
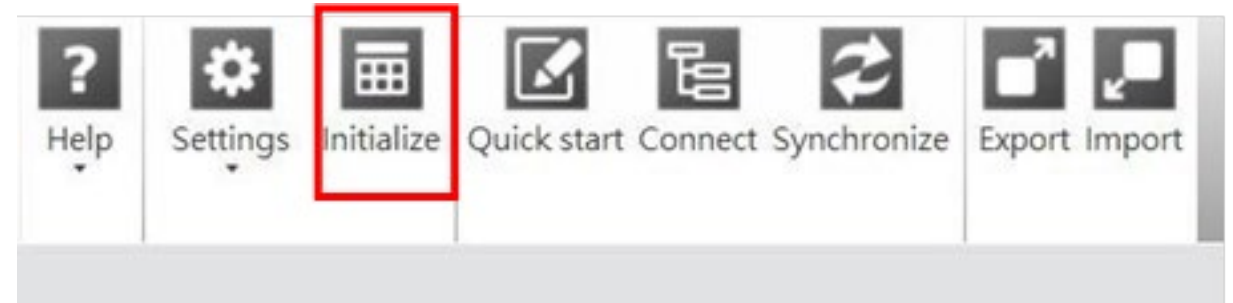
A	B
Family	Type
DXU-Indoor_Unit-York	YEEJ24
DXU-Outdoor_Unit-York	YEDJ24
EAF-Cabinet_Fan-Panasonic	FV-23NL3H
EAF-Cabinet_Fan-Panasonic	FV-25NS3H
EAF-Duct_Fan-Rosenberg	EKA0315-4
FCU-Centrifugal_Fan-Sinko	TCR_1200HW
FCU-Centrifugal_Fan-Sinko	TCR_600HW
FCU-Centrifugal_Fan-Sinko	TCR_400HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1200HW
FCU-Centrifugal_Fan-Sinko	TCR_600HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_1000HW
FCU-Centrifugal_Fan-Sinko	TCR_600HW
PAU-Cold_Magic	CW047-6
PMP-Sump_Pump-Wilo	TS40/14
PMP-Sump_Pump-Wilo	TS40/14
PMP-Sump_Pump-Wilo	TS40/14
PMP-Sump_Pump-Wilo	TS40/14

COBieLite XML Output:

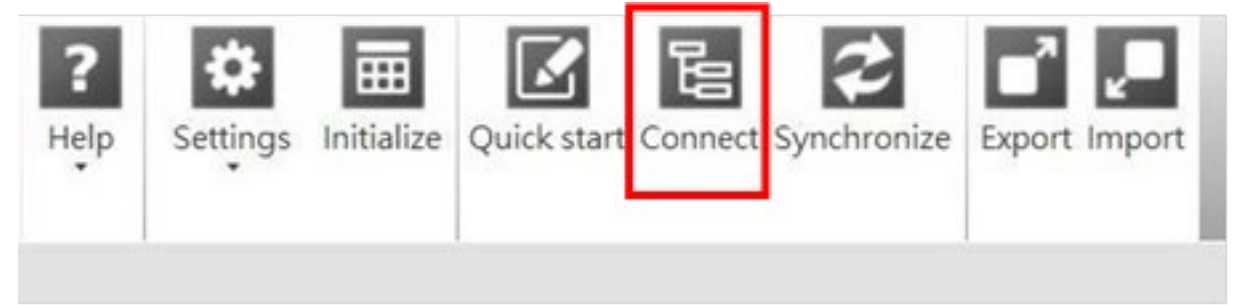
```
<?xml version="1.0" encoding="UTF-8" standalone="true"?>
<Facility
  xmlns="http://docs.buildingsmartalliance.org/nbims03/cobie/cobielite"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  externalID="b8157dc3-3951-4ec6-b72f-cc12d9372f2f">
  <FacilityDescription>Construction of Building Information Modelling
    (BIM) Model with associated site survey and asset information
    inputting</FacilityDescription>
  <FacilityName>1087EM18M</FacilityName>
  <FacilityAttributes>
    <Attribute>
      <AttributeName>DateOfExport</AttributeName>
      <AttributeValue>
        <AttributeDateValue>2019-07-
          15T09:55:17</AttributeDateValue>
      </AttributeValue>
    </Attribute>
  </FacilityAttributes>
  <Floors>
    <Floor externalID="e3e052f9-0156-11d5-9301-0000863f27ad-
      00000137">
      <FloorName/>
      <FloorCategory>Floors</FloorCategory>
      <FloorDescription/>
      <FloorElevationValue>
        <DecimalValue>0</DecimalValue>
        <UnitName>meters</UnitName>
      </FloorElevationValue>
      <FloorAttributes>
        <Attribute>
          <AttributeName>PLN_FloorCode</AttributeName>
          <AttributeValue>
            <AttributeStringValue/>
          </AttributeValue>
        </Attribute>
        <Attribute>
          <AttributeName>PLN_FloorName</AttributeName>
```

Export COBieLite Files(.xml) & Limitation:

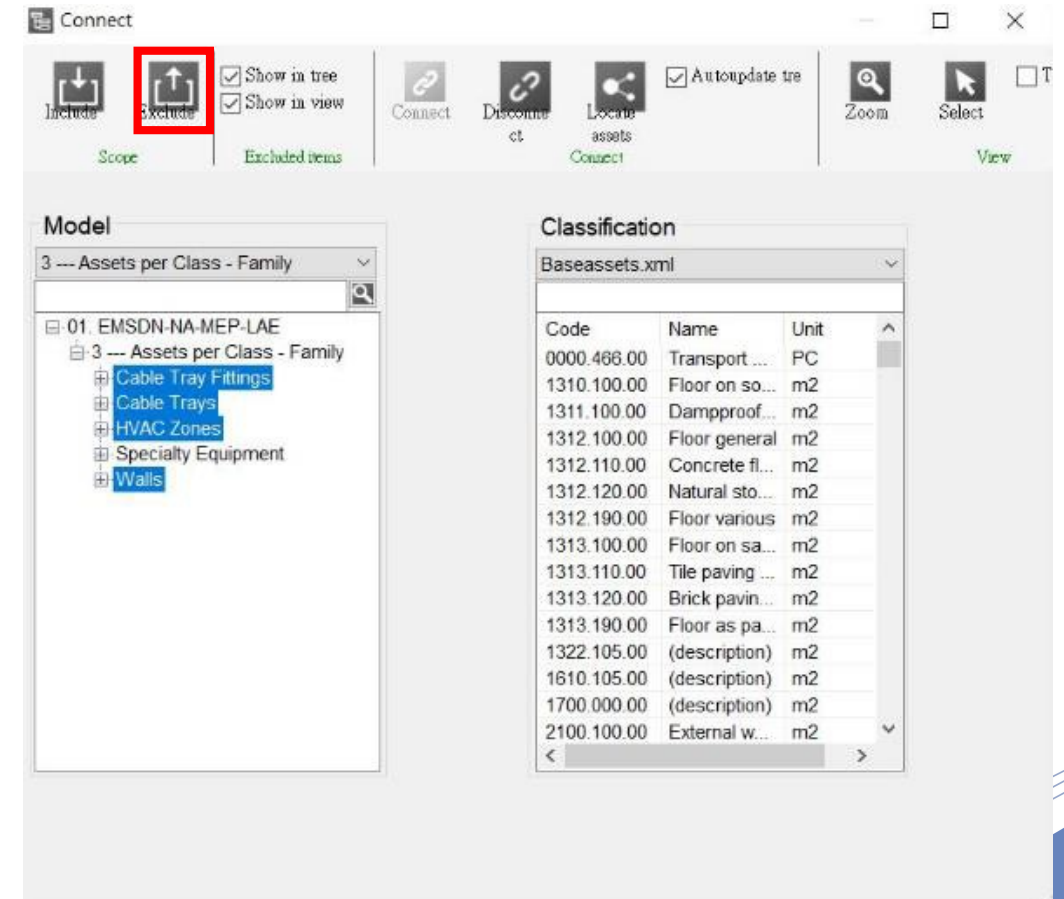
- Open the specific MEP Service Revit Model
- Click on the plug-in in EMSD Computer
- Click on the “Initialize” Button
- Initialize dialogue box would be opened, please click OK



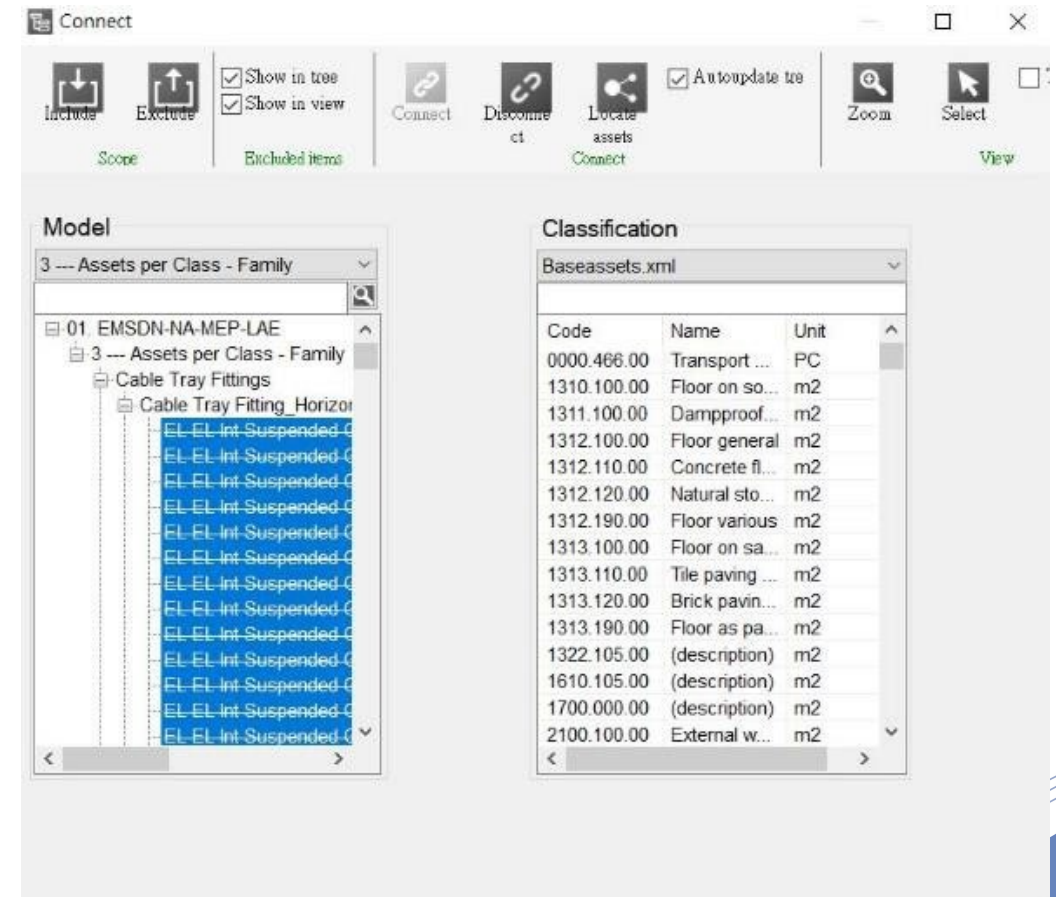
- Return to the plug-in section, click “Connect”



- Connect dialogue box would be opened, in the left-hand part Model section. Select the multiple Revit family Categories which did not include Asset Code. Click “Exclude”



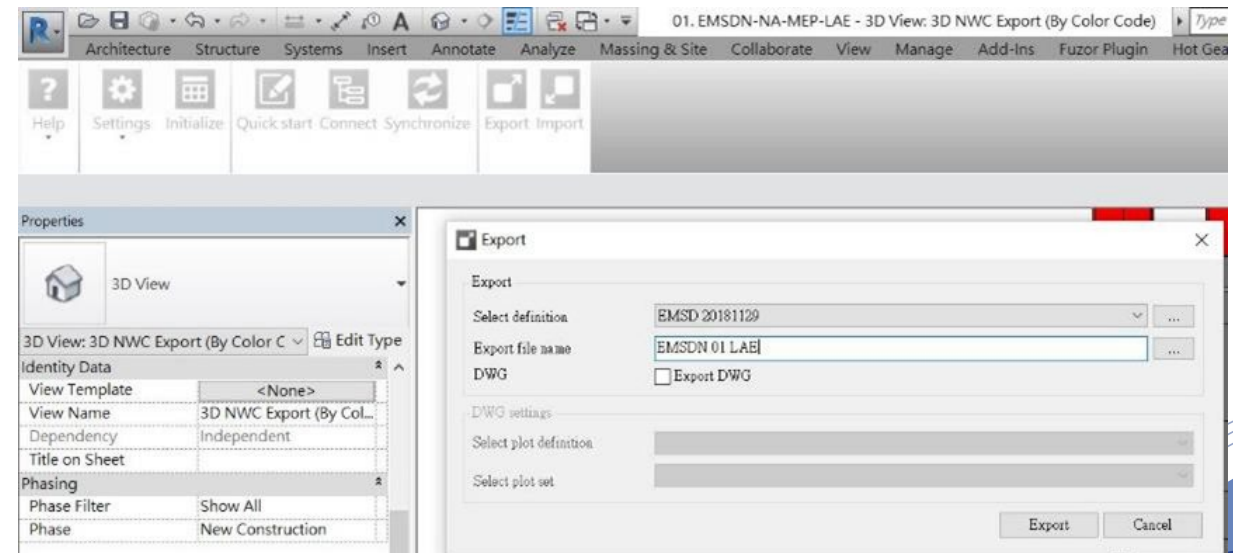
- After the above Revit family Categories had been excluded, each catalogue would be expanded and specific elements would be cancelled.



- Return to the plug-in section, click “Export” Button

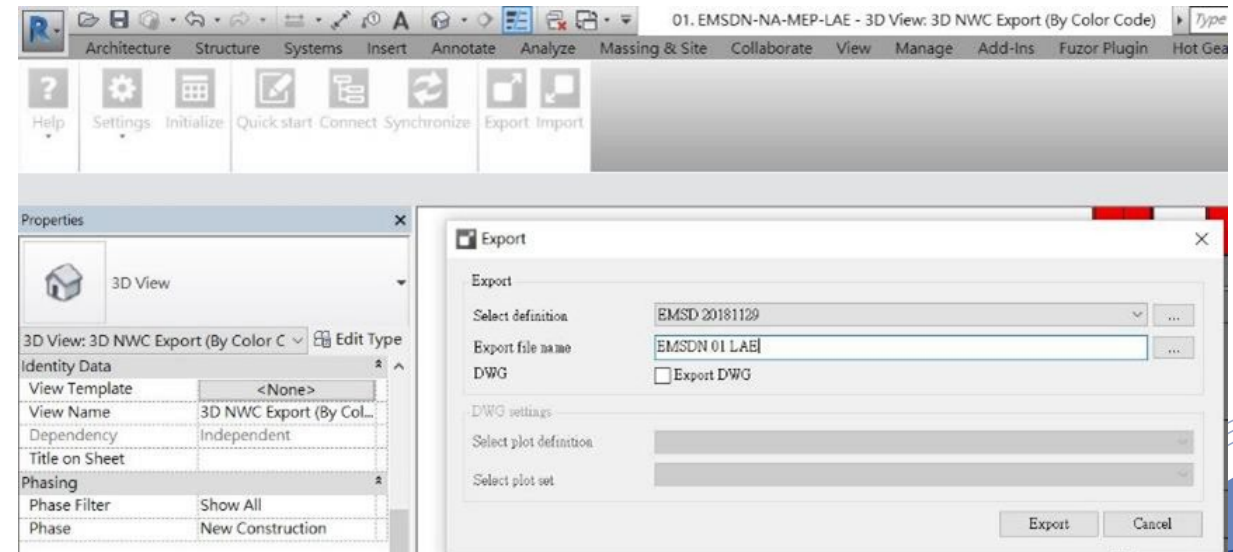


- Export dialogue box would be opened.
- **Select definition: *EMSD 20200318***
(Correct Jason File)
- Export file name: Building Code + System No. + System Name (Suggest form)
- e.g. ZCBT 04 HVAC

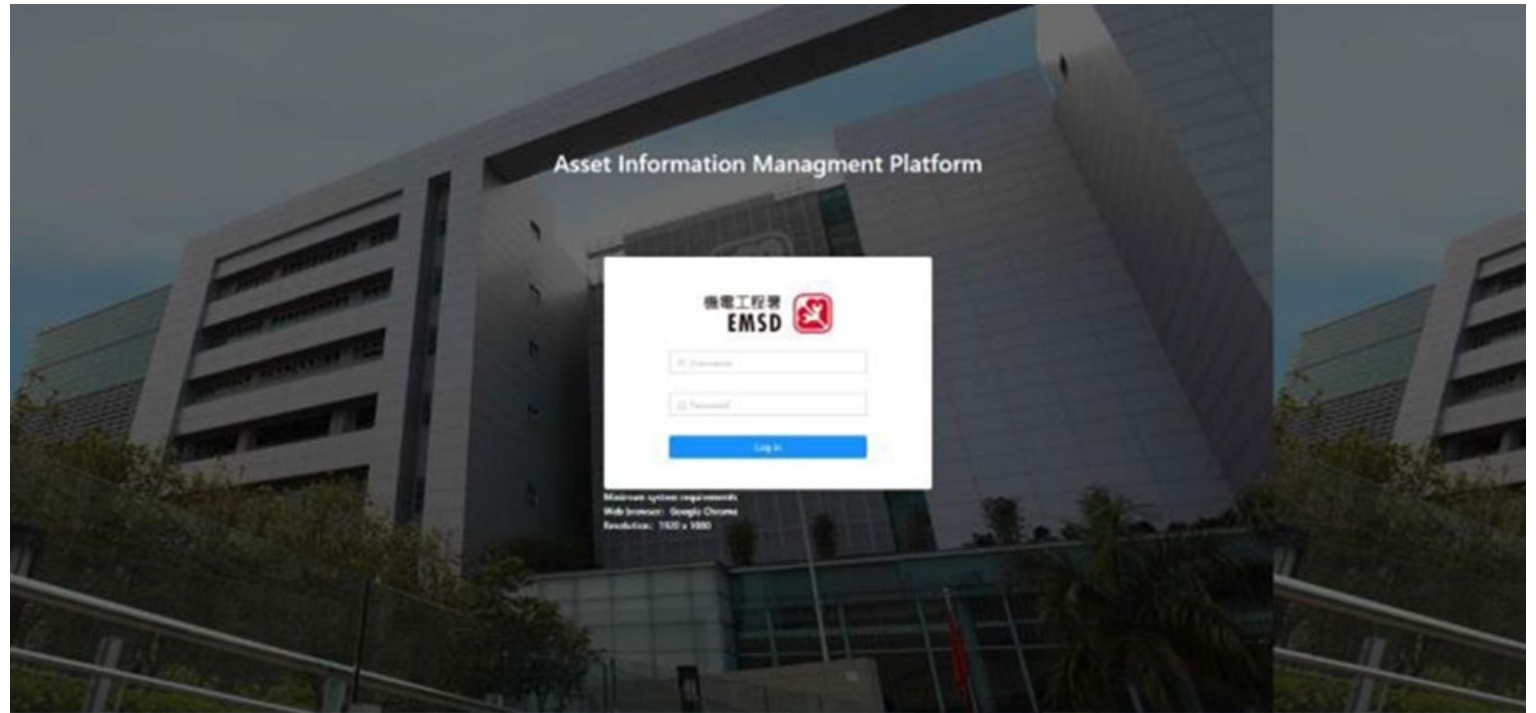


Classwork

- Export file name: Building Code + System No. + System Name (Suggest form)
- e.g. ZCBT 04 HVAC



- Log in to EMSD AIMP System
- AIMP Login Page:
<https://utils.bim.emsd.gov.hk/aimp/index>
- Username: train1~40
- Password: train1~40

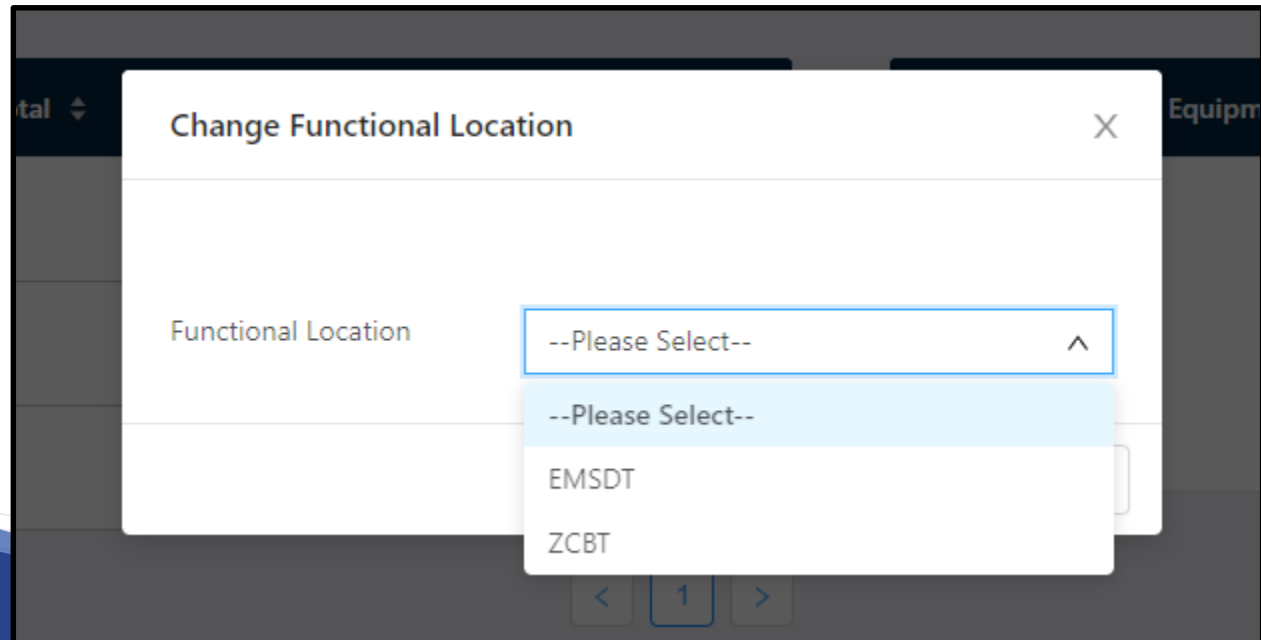


Import COBieLite to AIMP System:

- Please zoom out the Chrome to or less than 67% first to ensure to see the whole page of AIMP



- Log in to EMSD AIMP System
- Select Functional Location



- When first login to AIMP System, the default selection on the left-hand corner would be “**Dashboard**”. The Area highlight in **RED** would be the **Level 1** Asset and the Area Highlight in **Blue** would be the **Level 2** Asset import.

機電工程署 EMSD Asset Information Management Platform train1 (EMSDT) Sign Out

Dashboard

Asset

Import

Export

Synchronize

File Management

CCS Asset	Equipment Name	Total	Topology	Invalid	Interface
ZAC011	Air Side	0	0	0	0
ZEL011	Generator & Accessories(NEW)	2	0	2	0
ZFP011	Filtration Plant System	0	0	0	0

Total Count : 3

CCS Asset	Equipment Name	Total	Topology	Invalid	Interface
AC1101	DX Unit	16	0	16	0
AC1102	AHU	2	0	2	0
AC1103	PAU	0	0	0	0
AC1104	Heat Wheel	0	0	0	0
AC1105	FCU	28	0	28	0
AC1106	Fire Damper	0	0	0	0
AC1107	Fresh Air Fan	0	0	0	0
AC1108	Exhaust Air Fan	0	0	0	0
AC1109	VAV Box	0	0	0	0
AC110S	Local Control Panel	1	0	1	0

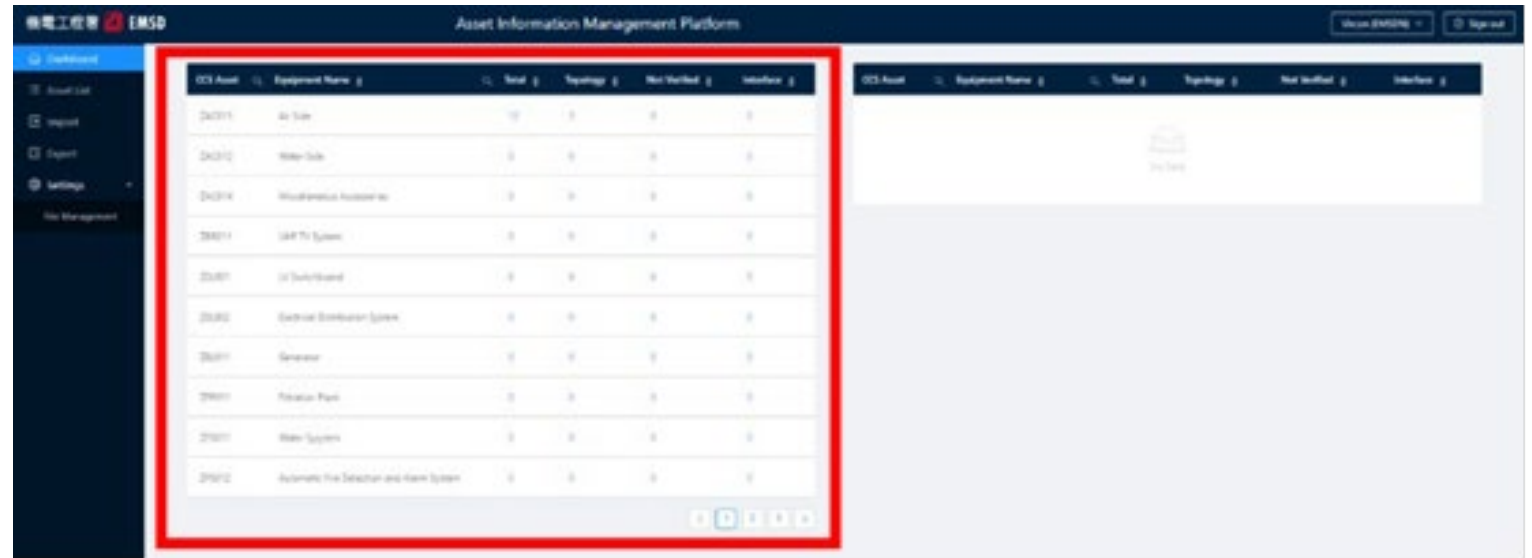
Total Count : 11

Create/ Remove/ Edit Asset:

- manually input at AIMP
- import COBieLite files
- import the asset templates (.xlsx)

Add & Remove Level 1 Asset:

- When first login to AIMP System, the default selection on the left-hand bar would be “**Dashboard**”, and the Area highlight in **RED** would be the Level 1 Asset



OCS Asset	Equipment Name	Total	Topology	Not Verified	Interface
240015	Air Side	10	0	0	0
240012	Water Side	0	0	0	0
240014	Refrigeration Equipment	0	0	0	0
250014	GAFT System	0	0	0	0
250011	CU Turbofan	0	0	0	0
250012	Electrical Distribution System	0	0	0	0
250011	Sensor	0	0	0	0
250011	Firearm Pump	0	0	0	0
250011	Water System	0	0	0	0
250012	Automatic Fire Detection and Alarm System	0	0	0	0

- Zoom in View>Bottom Right Hand Corner access different page of Level 1 Asset Click on the number to access specific Level 1 Asset List

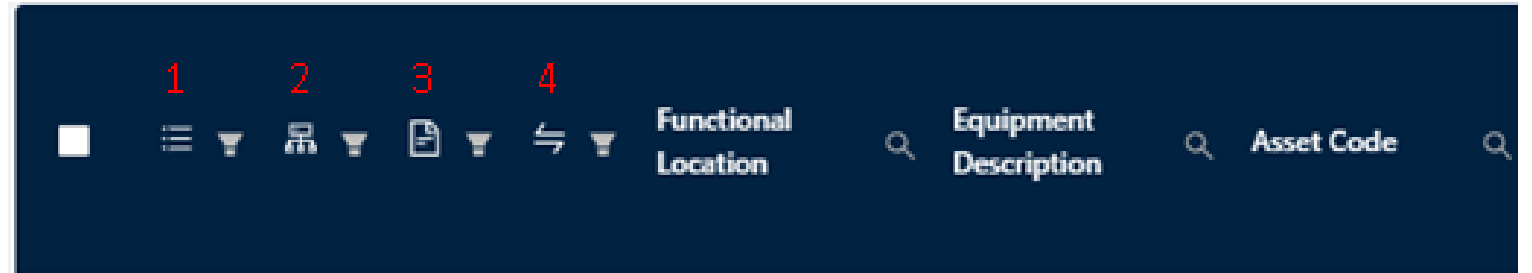
CCS Asset	Equipment Name	Total	Topology	Not Verified	Interface
ZAC011	Air Side	12	6	0	0
ZAC012	Water Side	0	0	0	0
ZAC014	Miscellaneous Accessories	0	0	0	0
ZBR011	UHF TV System	0	0	0	0
ZEL001	LV Switchboard	6	6	6	0
ZEL002	Electrical Distribution System	0	0	0	0
ZEL011	Generator	0	0	0	0
ZFP011	Filtration Plant	0	0	0	0
ZFS011	Water Sysytem	0	0	0	0
ZFS012	Automatic Fire Detection and Alarm System	0	0	0	0

[<](#)[1](#)[2](#)[3](#)[>](#)

- Access to the Level 1 List

The screenshot displays the 'Asset Information Management Platform' interface. On the left is a sidebar with navigation links: Dashboard, Asset List (highlighted), Import, Export, Settings, and File Management. The main content area features a search bar at the top with the text 'Search assets (filter by Functional Location)'. Below the search bar are three buttons: 'Add', 'Attributes Settings', and 'Export to CCS template'. The central part of the interface is a table with the following columns: Functional Location, Equipment Description, Asset Code, Information Group, Weight (enter the quantity of equipment), Inventory No. (JMS/CMMIS No.), Start-up Date (leave it blank if unknown), Technical ID No., and Construction Type (Material BOM). The table lists 12 assets, including items like 'Air Side', 'DK Unit', 'AHU', 'Free Chiller', 'Fresh Air Fan', 'Exhaust Air Fan', 'VAV Box', 'Local Control Panel', 'VRV-ODU', 'Cooling Tower', 'Pump', 'CCMS', 'Refrigerator (other than DA)', 'Ch Amplifier/ Amplifier', 'LV Switchboard', 'RCBO', 'Fuse switch & Switch Fuse', 'Isolating Switch', 'Distribution Board', 'MCR', 'MCCB', 'Example', 'Harmonic', and 'Switchgear'. At the bottom of the table, it indicates 'Total Count: 12'. On the far right, there are navigation controls for the table, including arrows and page numbers (1, 2, 3).

- 01. Data Verification
- 02. System Topology
- 03. O&M Manual
- 04. Asset Relationship Interface



- Zoom in View
 - Top Left-Hand Corner (Add)
- >Add Level 1 Asset

Add	Attributes Settings				Export to CCS template		
					Functional Location	Equipment Description	Asset Code
<input type="checkbox"/>	✓	✓	✗	✗	EMSDN	AHU G-1 System	KT-EMSDN-NA-000-HVAC-AS-0001
<input type="checkbox"/>	✓	✓	✗	✗	EMSDN	Air Side System G-01	KT-EMSDN-NA-000-HVAC-AS-0002
<input type="checkbox"/>	✓	✓	✗	✗	EMSDN	Air Side System G-02	KT-EMSDN-NA-000-HVAC-AS-0003
<input type="checkbox"/>	✓	✓	✗	✗	EMSDN	Air Side System G-03	KT-EMSDN-NA-000-HVAC-AS-0004

Total Count : 12

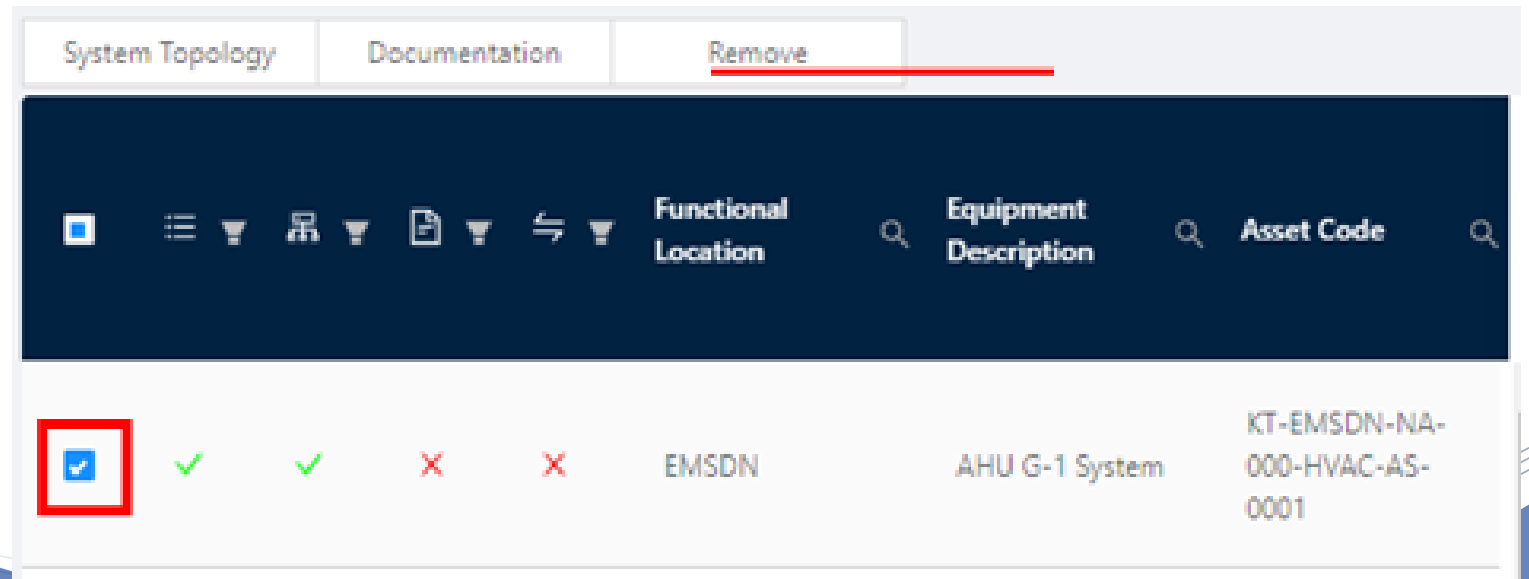
- Make sure to fill in “*”
Mandatory Items> Save

Add Asset

Functional Location	Please input Functional Location	*
Equipment Description	Please input Equipment Description	*
Authorization Group	Please input Authorization Group	
Weight	Please input Weight	
Technical ID No.	Please input Technical ID No.	
Construction Type	Please input Construction Type	
Plant Section	Please input Plant Section	
Room/Floor	Please input Room/Floor	
Planner Group	Please input Planner Group	
Main Work Centre	Please input Main Work Centre	
Catalog Profile	Please input Catalog Profile	
Customer Warranty Start	Please input Customer Warranty Start	
Customer Warranty End	Please input Customer Warranty End	
Vendor Warranty Start	Please input Vendor Warranty Start	
Vendor Warranty End	Please input Vendor Warranty End	
Manufacturer	Please input Manufacturer	
Model No.	Please input Model No.	
Manufacturer Serial No.	Please input Manufacturer Serial No.	
Acquisition Value	Please input Acquisition Value	
Asset Code	Please input Asset Code	*

SaveCancel

- Select 1 or more than 1 Items>click remove to delete Asset



Add & Remove Level 2 Asset:

e.g. ZAC011 Air Side

Click on
Empty
Space on
the Level
1 Asset

CCS Asset	Equipment Name	Total	Topology	Not Verified	Interface
ZAC011	Air Side	12	6	0	
ZAC012	Water Side	0	0	0	
ZAC014	Miscellaneous Accessories	0	0	0	
ZAC017	URS IT System	0	0	0	
ZAC001	OT Switchboard	0	0	0	
ZAC002	Electrical Distribution System	0	0	0	
ZAC011	Generator	0	0	0	
ZAC013	Filtration Plant	0	0	0	
ZAC011	Water System	0	0	0	
ZAC013	Automatic Fire Detection and Alarm System	0	0	0	

CCS Asset	Equipment Name	Total	Topology	Not Verified	Interface
ACT101	DR Unit	30	0	0	
ACT102	APU	3	2	1	
ACT103	Boiler	0	0	0	
ACT104	Heat Wheel	0	0	0	
ACT105	Run Cell Unit	0	0	0	
ACT106	Fire Damper	01	0	10	
ACT107	Regd. Air Fan	30	0	40	
ACT108	Foreheat Air Fan	00	4	00	
ACT109	NGV Burner	0	0	1	
ACT106	Local Control Panel	100	0	100	

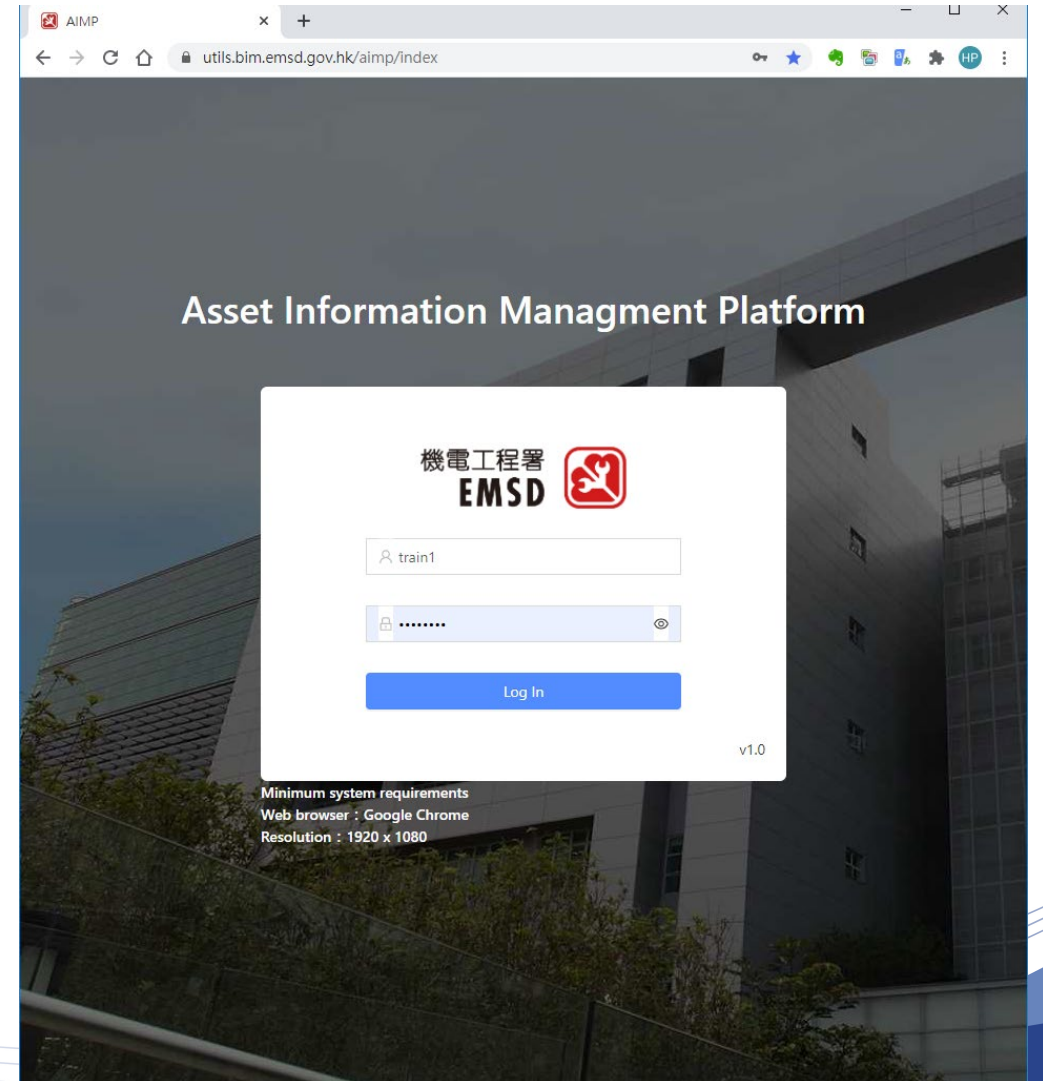
- Zoom in View>Bottom Right Hand Corner access different page of Level 2 Asset Click on the number to access specific type of Level 2 Asset.
- Add or Remove Asset similar as Level 1 Asset.

CCS Asset	Equipment Name	Total	Topology	Not Verified	Interface
AC1101	DX Unit	30	0	0	0
AC1102	AHU	3	2	2	0
AC1103	PAU	0	0	0	0
AC1104	Heat Wheel	0	0	0	0
AC1105	Fan Coil Unit	0	0	0	0
AC1106	Fire Damper	81	3	81	0
AC1107	Fresh Air Fan	50	0	49	0
AC1108	Exhaust Air Fan	69	5	44	0
AC1109	VAV Box	6	6	5	0
AC110S	Local Control Panel	169	0	169	0

< 1 2 >

Classwork

- Level 1
 - LV Switchboards
- Level 2
 - Switchgear

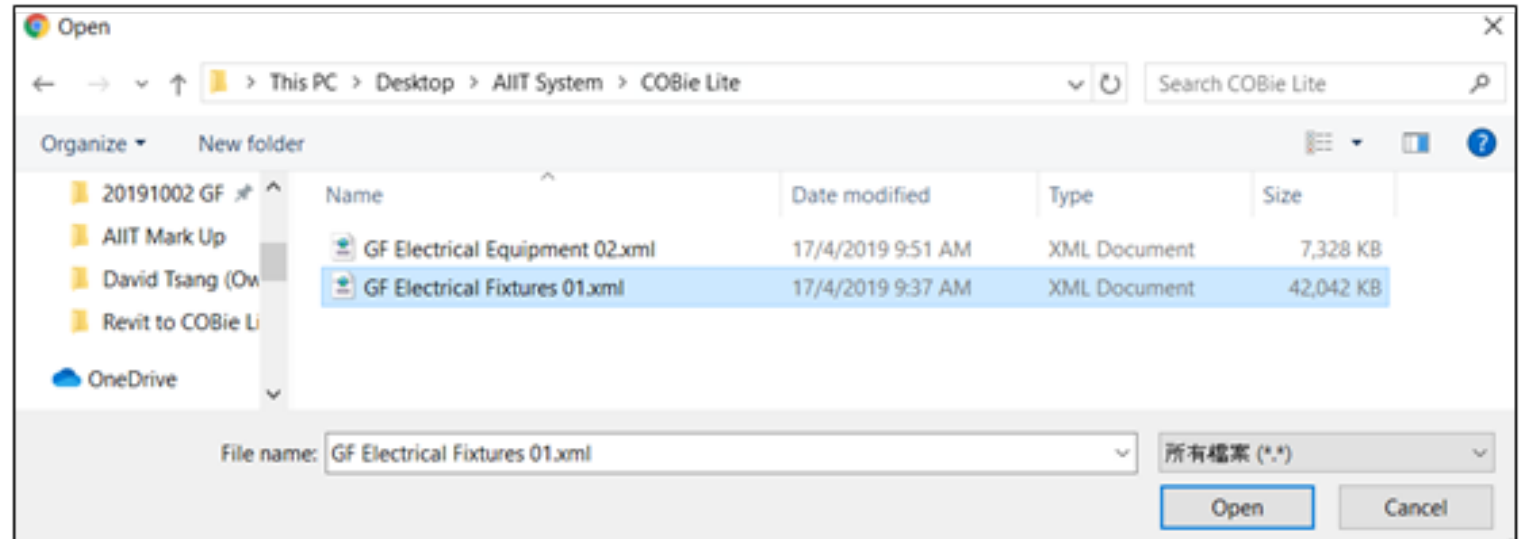


- Import COBieLite file
 - >Left Hand Corner
 - >Select COBieLite (GUID)
 - >Select File
 - >Click to Import

The screenshot displays the 'Asset Information Management Platform' interface. The left-hand navigation menu includes 'Dashboard', 'Asset', 'Initialize', 'Import', and 'Export'. The 'Import' option is highlighted with a red box. The main content area features a header with the EMSD logo and a dropdown menu set to 'COBieLite (GUID)', also highlighted with a red box. To the right of this dropdown is another dropdown set to 'ALL'. Further right is a 'Select File' button with a red box around it, followed by a 'Select Uploaded File' button and a 'Click to Import' button. Below these controls is a table with the following data:

Operation ID	Operation Type	Status	Start Time	End Time	Success Count	Partial Success
2179	Import CCS	Complete	2020-10-29 16:00	2020-10-29 16:00	1	0

- Select different MEP .xml File



- Import Asset Template
 - >Left Hand Corner
 - >Select CCS
 - >Select File
 - >Click to Import

The screenshot displays the EMSD (機電工程署) Asset Information Management interface. The left-hand navigation menu is visible, with the 'Import' option highlighted in blue. The main content area features a header with the EMSD logo and the title 'Asset Information Management'. Below the header, there are two dropdown menus: the first is set to 'CCS' and the second is set to 'ALL'. To the right of these dropdowns is a 'Select File' button with a download icon, and a 'Click to Import' button. Below these controls is a table with the following columns: Operation ID, Operation Type, Status, Start Time, End Time, and Success. The table contains one row of data.

Operation ID	Operation Type	Status	Start Time	End Time	Success
2179	Import CCS	Complete	2020-10-29 16:00	2020-10-29 16:00	1

- Template download (equipment type)

機電工程署 EMSD

Asset Information Management Platform

emsd (ALL) Sign

DashboardAssetInitializeImportExportSynchronizeFile ManagementSettings

Search asset template (>= 5 characters)

AddAttributes SettingReport to CCS Template

(ZAC011) Air Side

(AC1101) DX Unit

(AC1102) AHU

(AC1103) PAU

(AC1104) Heat Wheel

(AC1105) FCU

(AC1106) Fire Damper

(AC1107) Fresh Air Fan

(AC1108) Exhaust Air Fan

Functional Location

Equipment Description

Asset Code

Acquisition Value

Asset Relationship

Asset Tag No.

Authorization Group

Catalog

<input type="checkbox"/>	X	✓	X	✓	EMSDN	Chiller	KT-EMSDN-NA-001-HVAC-CHR-0001	N/A	DETAILS	N/A	N/A	N/A
<input type="checkbox"/>	X	✓	✓	✓	EMSDN	Chiller	KT-EMSDN-NA-001-HVAC-CHR-0002	N/A	DETAILS	N/A	N/A	N/A

機電工程署 EMSD

Asset Information Management Platform

train1 (EMSDT) Sign Out

DashboardAssetImportExportSynchronize

Search asset template (>= 5 characters)

Common AttributesSpecific Attributes

(ZAC011) Air Side

(AC1101) DX Unit

(AC1102) AHU

(AC1105) FCU

(AC1105) Local Control Panel

(ZFL011) Generator & Accessories

Attribute NameTypeMandatory?Min LengthMax LengthUnitFormat/OptionsHints

Acquisition Value	Number	No	0	1000000000000			Please input Acquisition Value
-------------------	--------	----	---	---------------	--	--	--------------------------------

Template DownloadBack

Add, Modify & Delete System Topology (Manually):

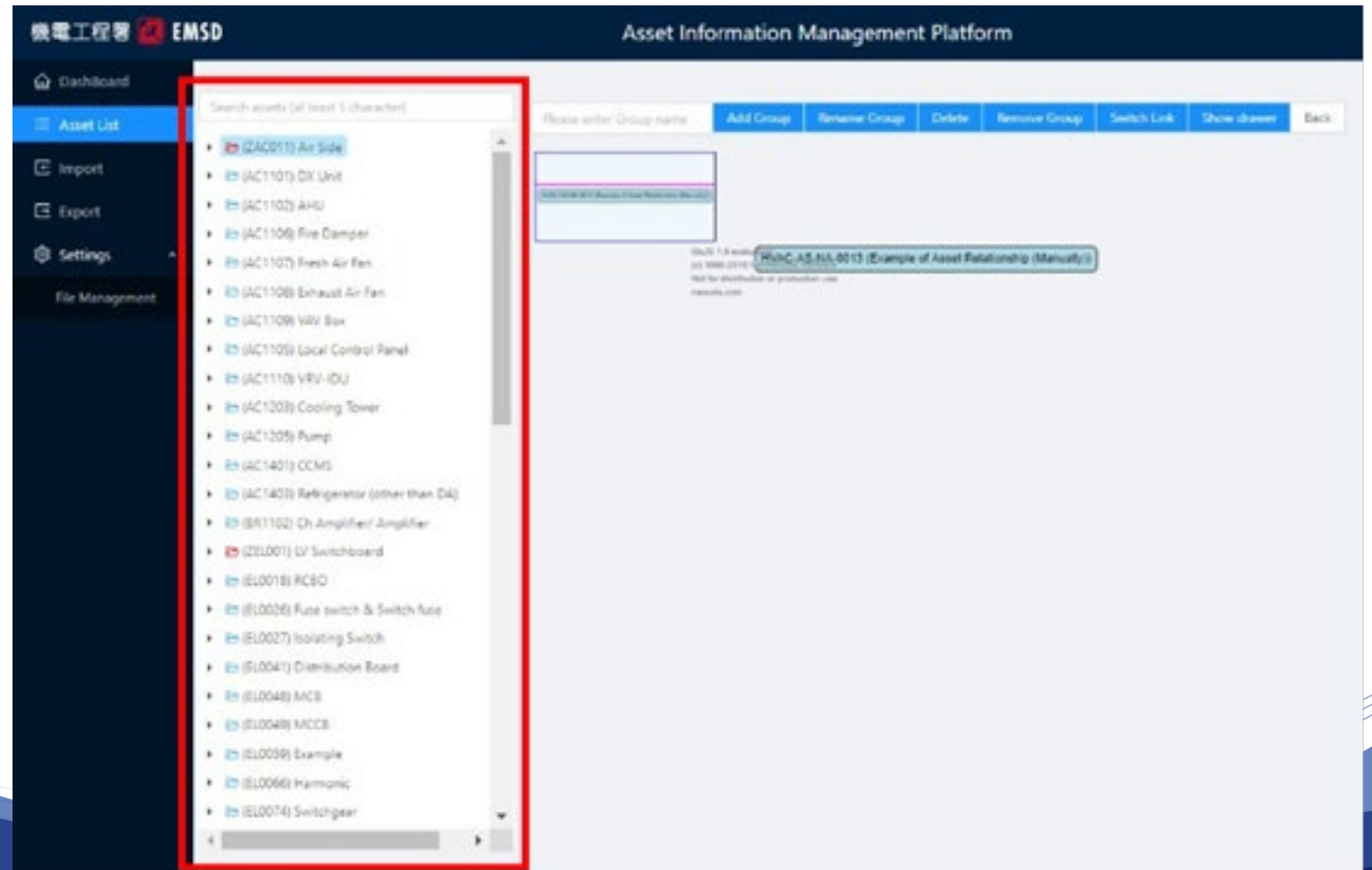
- after you access the specific Level 1 Asset
- >Tick on the specific Level 1 Asset
- >Click System Topology

System Topology

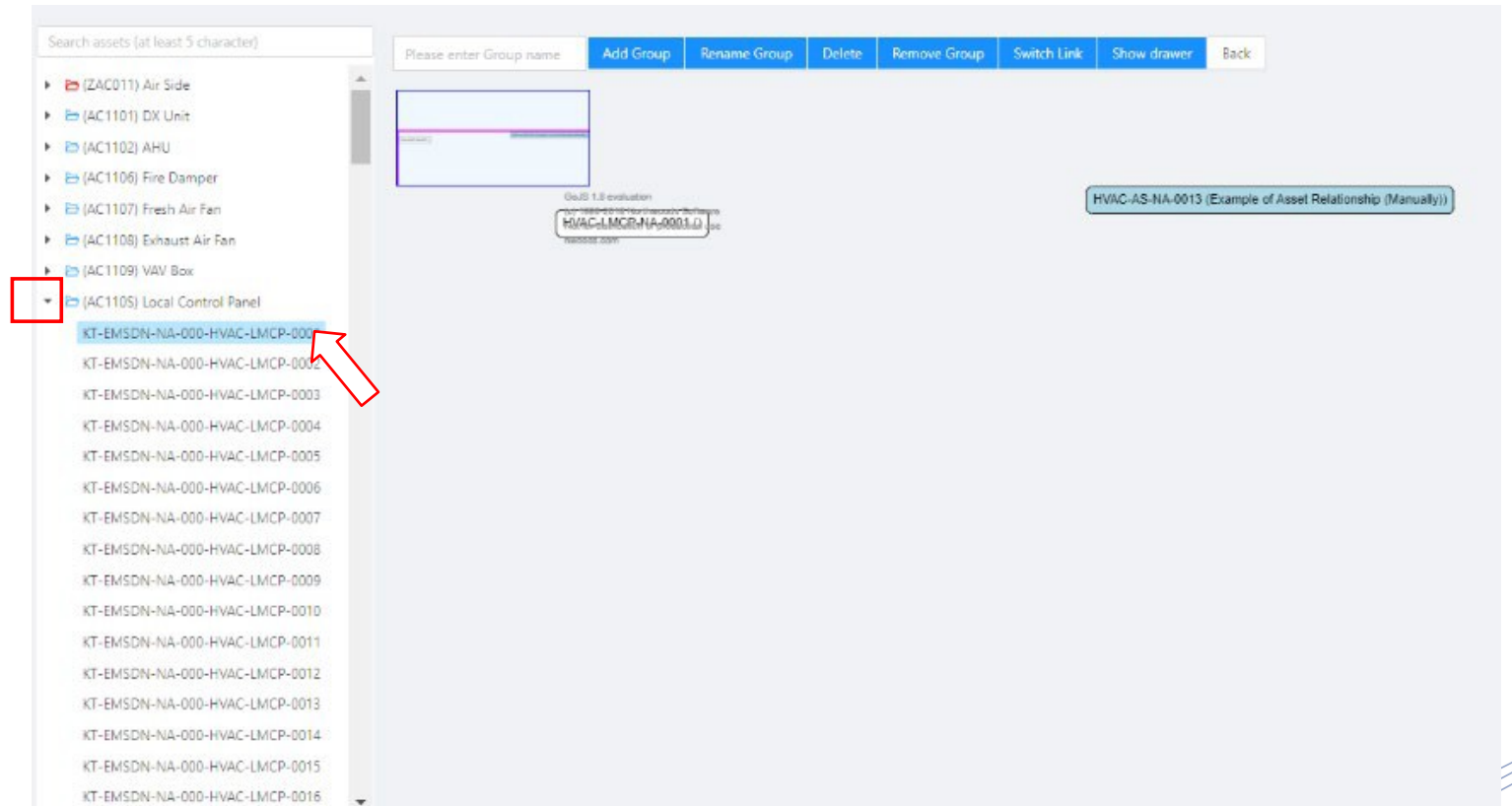
Documentation

Remove

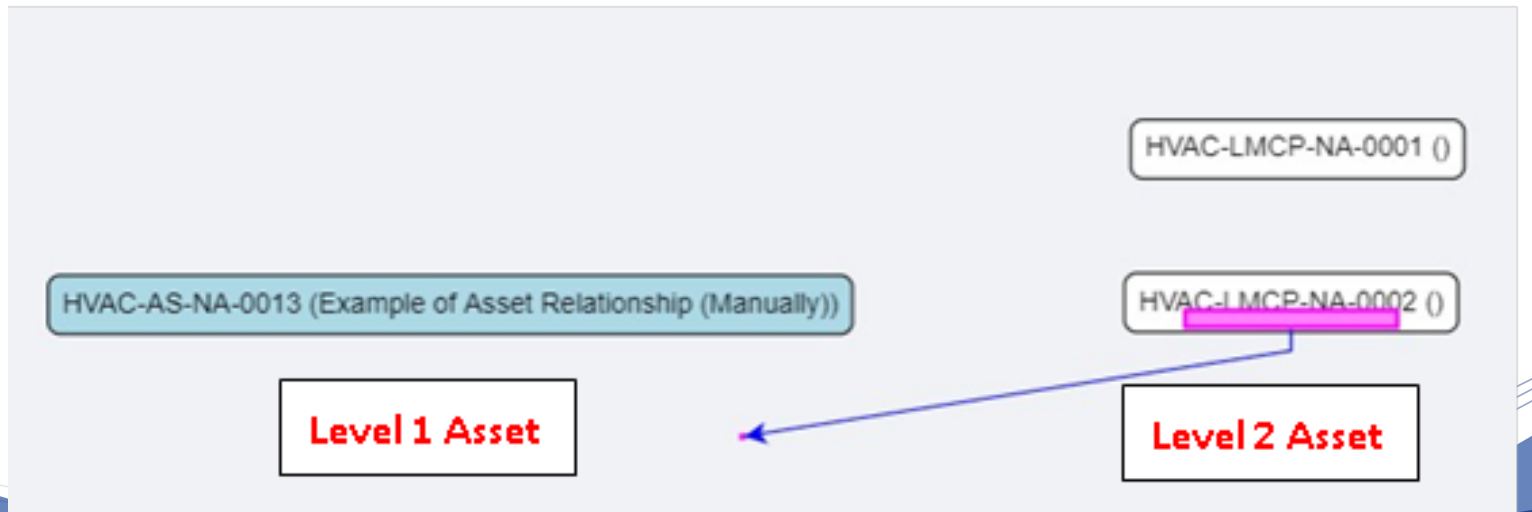
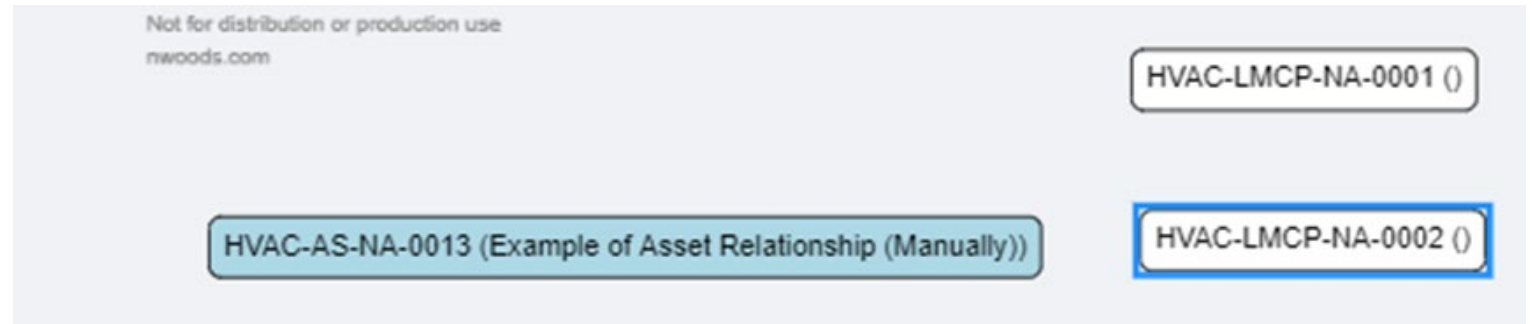
- The default selection on the left-hand bar would be “**Asset List**” which all the Level 1& Level 2 Asset would be inside the Asset List highlighted in RED



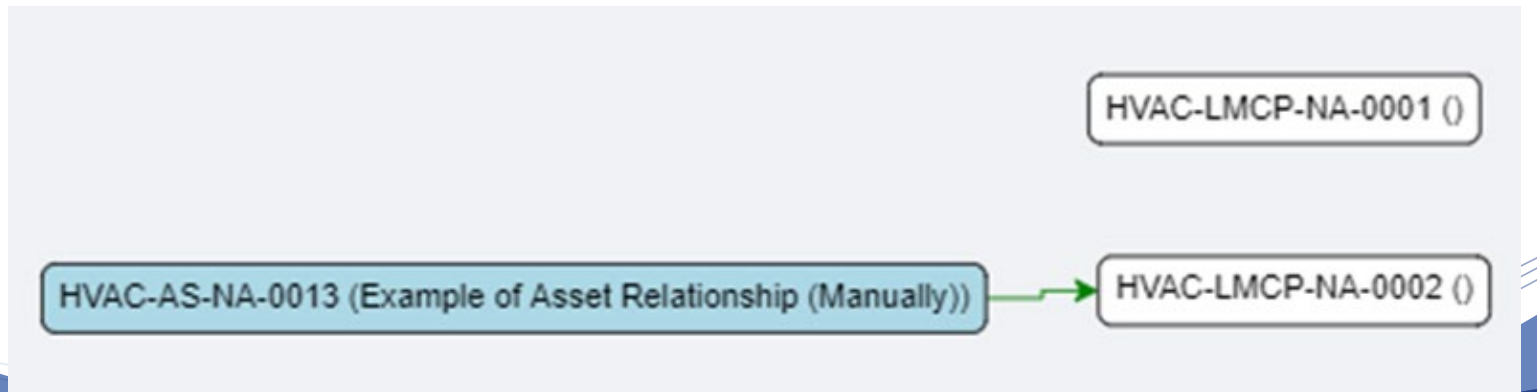
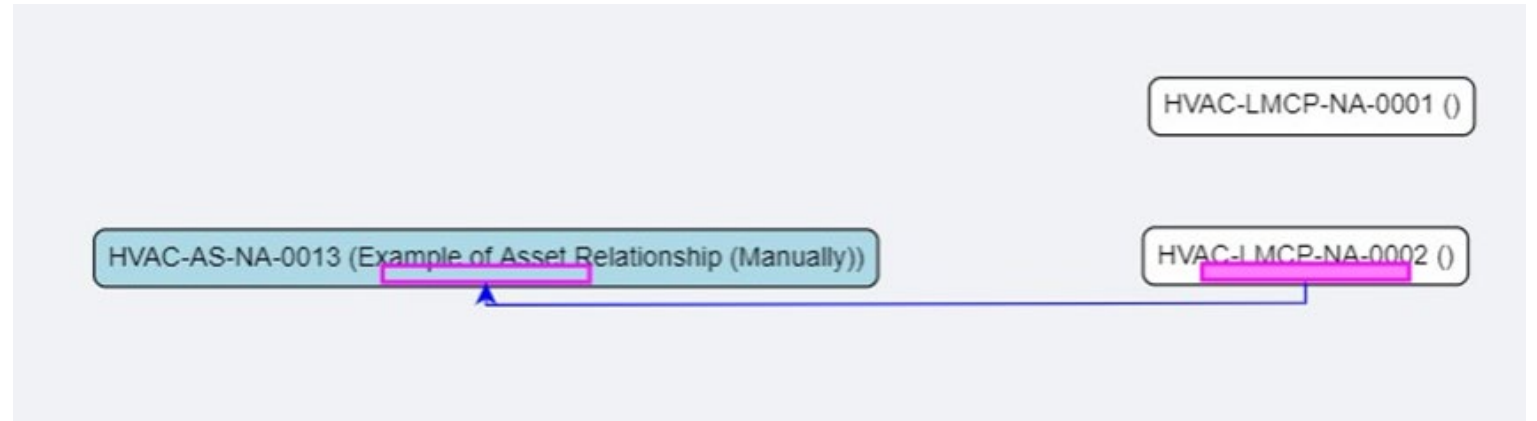
- Open the Triangle of the specific Level 2 Asset Type (Highlight in **RED**)
- >Click on the Level 2 Asset
- >Asset would be added inside the system Topology automatically
- > Add all the Level 2 Asset you needed inside the System Topology



- Click on the Level 2 Asset
- > Highlight in **Blue** Border
- > Drag the Asset to any location you want
- Click on the empty space to deselect the Asset
- > Move the mouse to the Top or Bottom part of Level 1 Asset

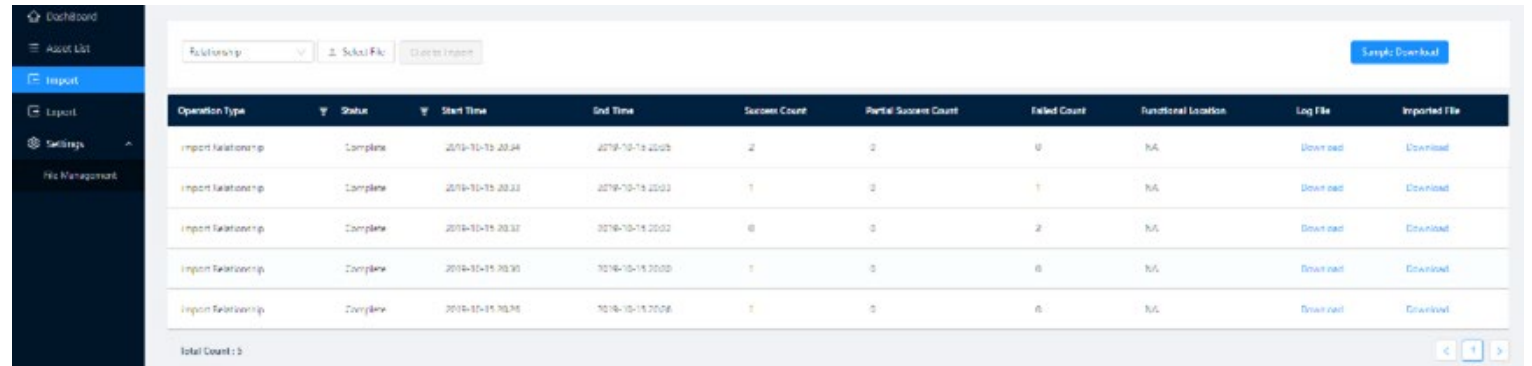


- >Drag the blue arrow from Level 1 Asset purple area to Level 2 Asset purple area
- >Green arrow would be appeared after Asset Relation has been formed between Level 1 & 2 Asset.
- >the arrow should be “child to parent “



Add & Replace System Topology (Automatically):

- Click on the “Import” selection on the left-hand bar



Operation Type	Status	Start Time	End Time	Success Count	Partial Success Count	Failed Count	Functional Location	Log File	Imported File
Import Relationship	Complete	2019-10-19 20:04	2019-10-19 20:05	2	0	0	NA	Download	Download
Import Relationship	Complete	2019-10-19 20:03	2019-10-19 20:03	1	0	1	NA	Download	Download
Import Relationship	Complete	2019-10-19 20:02	2019-10-19 20:02	0	0	2	NA	Download	Download
Import Relationship	Complete	2019-10-19 20:00	2019-10-19 20:00	1	0	0	NA	Download	Download
Import Relationship	Complete	2019-10-19 20:00	2019-10-19 20:00	0	0	0	NA	Download	Download

Total Count: 5

- On the top right-hand corner, click the “**Sample Download**” Button.
- Download the “relationship_import_sample.xlsx”

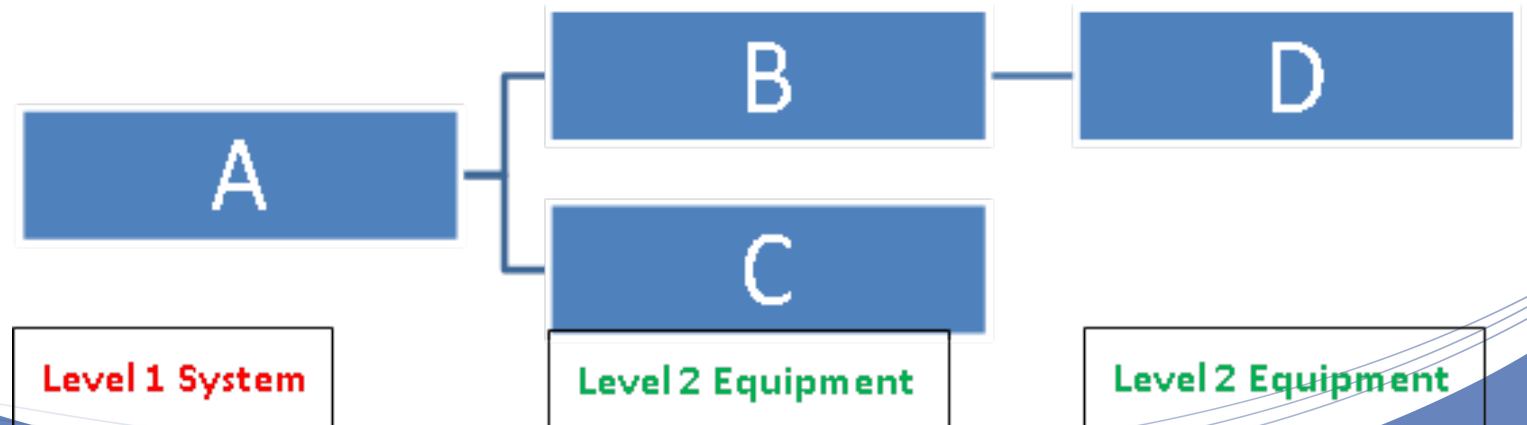
Sample Download		
Functional Location	Log File	Imported File
NA	Download	Download
NA	Download	Download
NA	Download	Download
NA	Download	Download
NA	Download	Download
<div><1></div>		

- Original Example
- Target

relationship_import_sample (4).xlsx

	A	B	C	D
1	asset code	parent	asset child	asset child child
2	KT-CCC-008-RXXX-HVAC-AS-003	KT-ZCB-NA-B00-HVAC-HW-001	KT-CCC-008-TLT2-HVAC-FD-001	ST-DSD01-000-LOB-BS-BFD-013



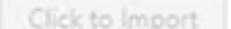
- Modify the Data in Excel
- > Save




- Select “import” on the left-hand bar
- > Select Relationship
- >Click on the “Select File” button
- >Select the revised Excel File
- >Click to import

機電工程署 EMSD Asset Information

Dashboard
Asset List
Import
Export
Settings
File Management

Relationship   



Operation Type	Status	Start Time
import Relationship	Complete	2019-10-15 20:34
import Relationship	Complete	2019-10-15 20:33
import Relationship	Complete	2019-10-15 20:32
import Relationship	Complete	2019-10-15 20:30
import Relationship	Complete	2019-10-15 20:26

Total Count : 5

- Record would be generated under “Import History” and Asset Relationship would be generated inside the related System Topology.

Operation Type	Status	Start Time	End Time	Success Count	Partial Success Count	Failed Count	Functional Location	Log File	Imported File
Import Relationship	Complete	2019-10-15 20:34	2019-10-15 20:35	2	0	0	N/A	Download	Download
Import Relationship	Complete	2019-10-15 20:33	2019-10-15 20:33	1	0	1	N/A	Download	Download
Import Relationship	Complete	2019-10-15 20:32	2019-10-15 20:32	0	0	2	N/A	Download	Download
Import Relationship	Complete	2019-10-15 20:30	2019-10-15 20:30	1	0	0	N/A	Download	Download
Import Relationship	Complete	2019-10-15 20:26	2019-10-15 20:26	1	0	0	N/A	Download	Download

- Record would be generated under “Import History” and Asset Relationship would be generated inside the related System Topology.

Operation Type	Status	Start Time	End Time	Success Count	Partial Success Count	Failed Count	Functional Location	Log File	Imported File
Import Relationship	Complete	2019-10-15 20:34	2019-10-15 20:35	2	0	0	N/A	Download	Download
Import Relationship	Complete	2019-10-15 20:33	2019-10-15 20:33	1	0	1	N/A	Download	Download
Import Relationship	Complete	2019-10-15 20:32	2019-10-15 20:32	0	0	2	N/A	Download	Download
Import Relationship	Complete	2019-10-15 20:30	2019-10-15 20:30	1	0	0	N/A	Download	Download
Import Relationship	Complete	2019-10-15 20:26	2019-10-15 20:26	1	0	0	N/A	Download	Download

Document Upload

BIM-AM Standard > folder_structure			搜尋 folder_structure
名稱	修改日期	類型	
301 Lift & Escalator	29/10/2019 15:26	檔案資料夾	
302 LV Switchboards	29/10/2019 15:26	檔案資料夾	
303 Emergency Generator	29/10/2019 15:26	檔案資料夾	
304 HVAC	29/10/2019 15:26	檔案資料夾	
305 Boiler System	29/10/2019 15:26	檔案資料夾	
306 Filtration Plant	29/10/2019 15:26	檔案資料夾	
307 Fire Services Installation	29/10/2019 15:26	檔案資料夾	
308 UPS	29/10/2019 15:26	檔案資料夾	
309 Burglar Alarm & Security Installation	29/10/2019 15:26	檔案資料夾	
310 Radar & Navigation System	29/10/2019 15:26	檔案資料夾	
311 Microwave Link System	29/10/2019 15:26	檔案資料夾	
312 Timing & Display System	29/10/2019 15:26	檔案資料夾	
313 Audio Video System	29/10/2019 15:26	檔案資料夾	
314 Audio System	29/10/2019 15:26	檔案資料夾	
315 Radio System	29/10/2019 15:26	檔案資料夾	
316 Closed Circuit TV System	29/10/2019 15:26	檔案資料夾	
317 Broadcast Reception Installations	29/10/2019 15:26	檔案資料夾	
318 Lighting System	29/10/2019 15:26	檔案資料夾	
319 Electrical Distribution System	29/10/2019 15:26	檔案資料夾	
320 Medical Gas System	29/10/2019 15:26	檔案資料夾	
321 Pneumatic Tube Transport	29/10/2019 15:26	檔案資料夾	
A1 Plumbing System	29/10/2019 15:26	檔案資料夾	
A2 Drainage System	29/10/2019 15:26	檔案資料夾	
A3 Water Leakage Detection System	29/10/2019 15:26	檔案資料夾	
A4 Water Leakage Detection System	29/10/2019 15:26	檔案資料夾	
DSD DSD	29/10/2019 15:26	檔案資料夾	

folder_structure > 304 HVAC			搜尋 304 HVAC
名稱	修改日期	類型	
Catalogues	29/10/2019 15:26	檔案資料夾	
O&M	29/10/2019 15:26	檔案資料夾	
Others	29/10/2019 15:26	檔案資料夾	
T&C	29/10/2019 15:26	檔案資料夾	

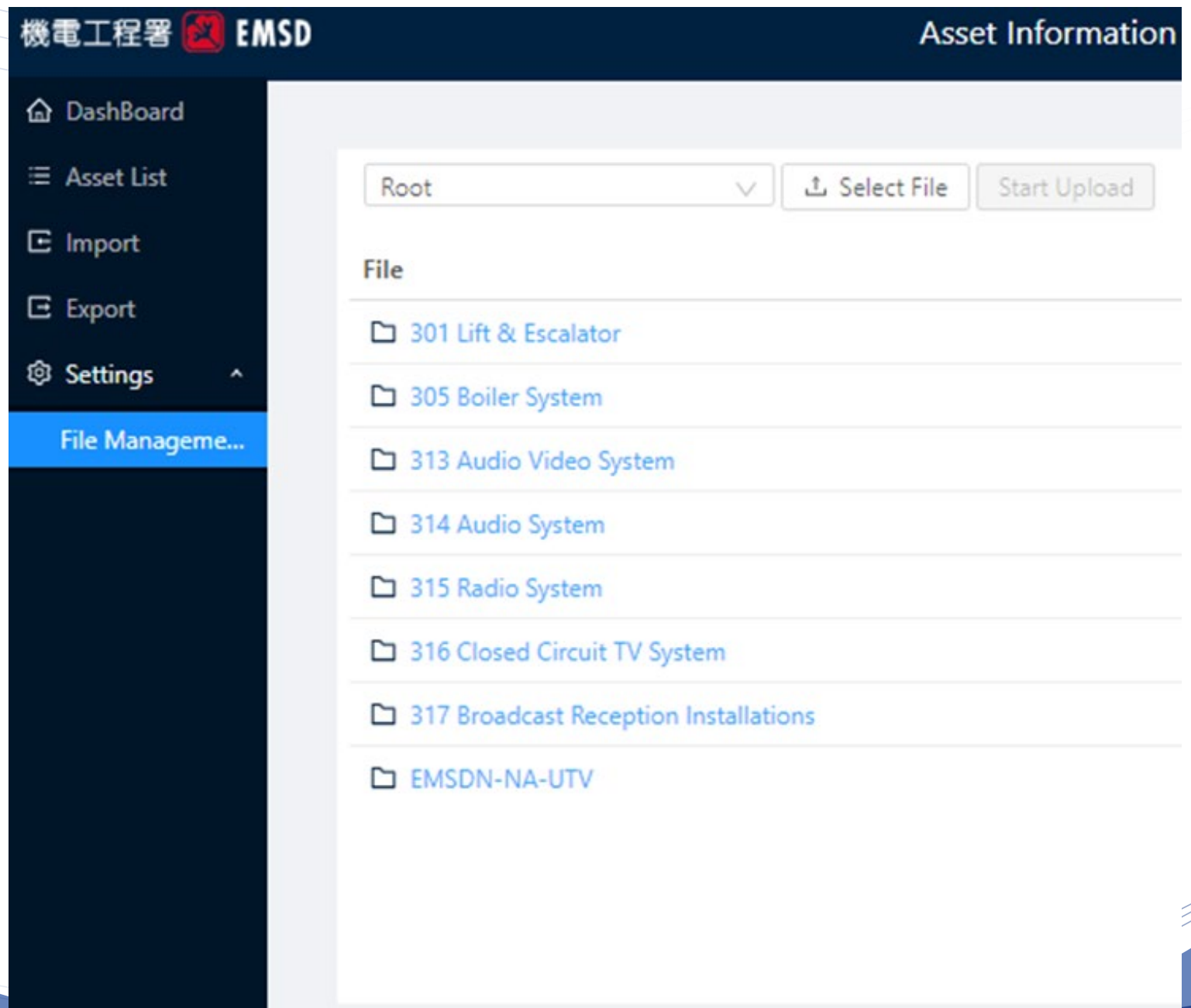
ire > 304 HVAC > Catalogues			搜尋 Catalogues
名稱	修改日期	類型	
HVAC-AHU	23/10/2019 2:15	檔案資料夾	
HVAC-AS	23/10/2019 2:15	檔案資料夾	
HVAC-ASR	23/10/2019 2:15	檔案資料夾	
HVAC-CCMS	23/10/2019 2:15	檔案資料夾	
HVAC-CHR	23/10/2019 2:15	檔案資料夾	
HVAC-COT	23/10/2019 2:15	檔案資料夾	
HVAC-CRM	23/10/2019 2:15	檔案資料夾	
HVAC-CRMS	23/10/2019 2:15	檔案資料夾	
HVAC-DXU	23/10/2019 2:15	檔案資料夾	
HVAC-EAF	23/10/2019 2:15	檔案資料夾	
HVAC-FAF	23/10/2019 2:15	檔案資料夾	
HVAC-FCU	23/10/2019 2:15	檔案資料夾	
HVAC-FD	23/10/2019 2:15	檔案資料夾	
HVAC-HEX	23/10/2019 2:15	檔案資料夾	
HVAC-HPC	23/10/2019 2:15	檔案資料夾	
HVAC-HW	23/10/2019 2:15	檔案資料夾	
HVAC-IDU	23/10/2019 2:15	檔案資料夾	
HVAC-LMCP	23/10/2019 2:15	檔案資料夾	
HVAC-MCC	23/10/2019 2:15	檔案資料夾	
HVAC-MIS	23/10/2019 2:15	檔案資料夾	
HVAC-PAU	23/10/2019 2:15	檔案資料夾	
HVAC-PMP	23/10/2019 2:15	檔案資料夾	
HVAC-PWS	23/10/2019 2:15	檔案資料夾	
HVAC-RCR	23/10/2019 2:15	檔案資料夾	
HVAC-RFR	23/10/2019 2:15	檔案資料夾	
HVAC-TBS	23/10/2019 2:15	檔案資料夾	
HVAC-VAV	23/10/2019 2:15	檔案資料夾	
HVAC-WS	23/10/2019 2:15	檔案資料夾	
HVAC-WTS	23/10/2019 2:15	檔案資料夾	

O&M Document and Upload Procedure

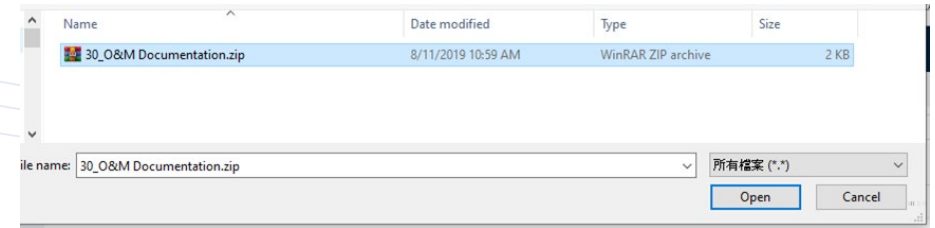
Document Upload:

- EMSD BIM-AM Standards and Guidelines v2.0.pdf” (p.7)
- O&M Manual should follow the above folder structure. Related PDF should be classified to specific E&M System folder.
- O&M Manual could be zipped by whole “O&M Documentation” Folder or specific E&M System

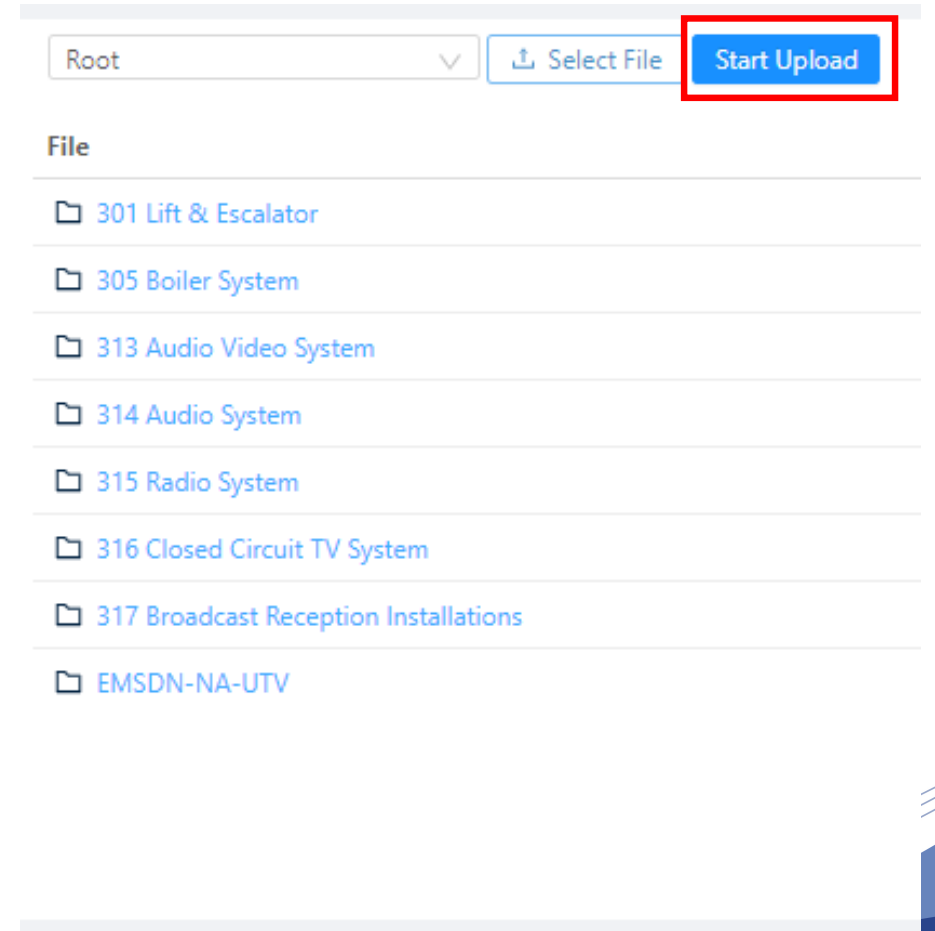
- Select “import” on the left-hand bar
- >Select File Management
- >Click on the “Select File” button
- >Select the O&M Zip File
- >Click to import



- Open

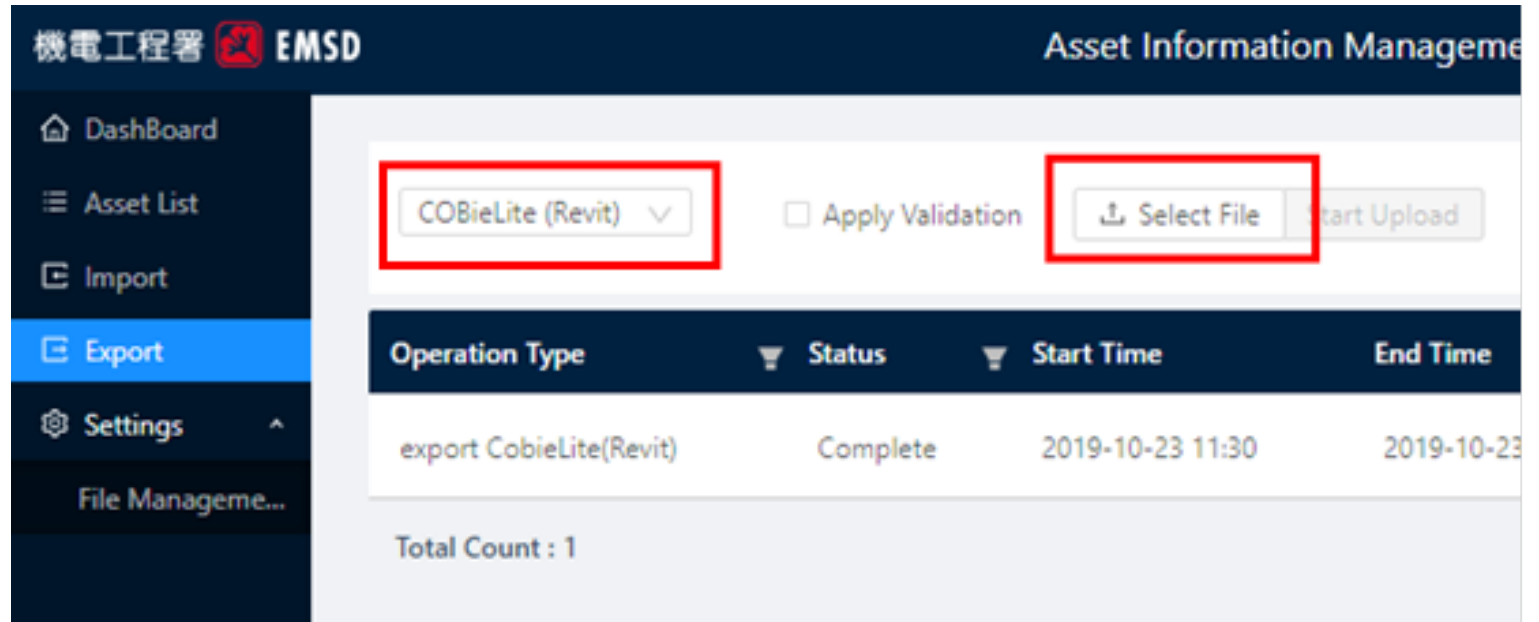


- Start Upload
- >Related O&M Documentation would be connected to specific Asset by E&M System automatically.

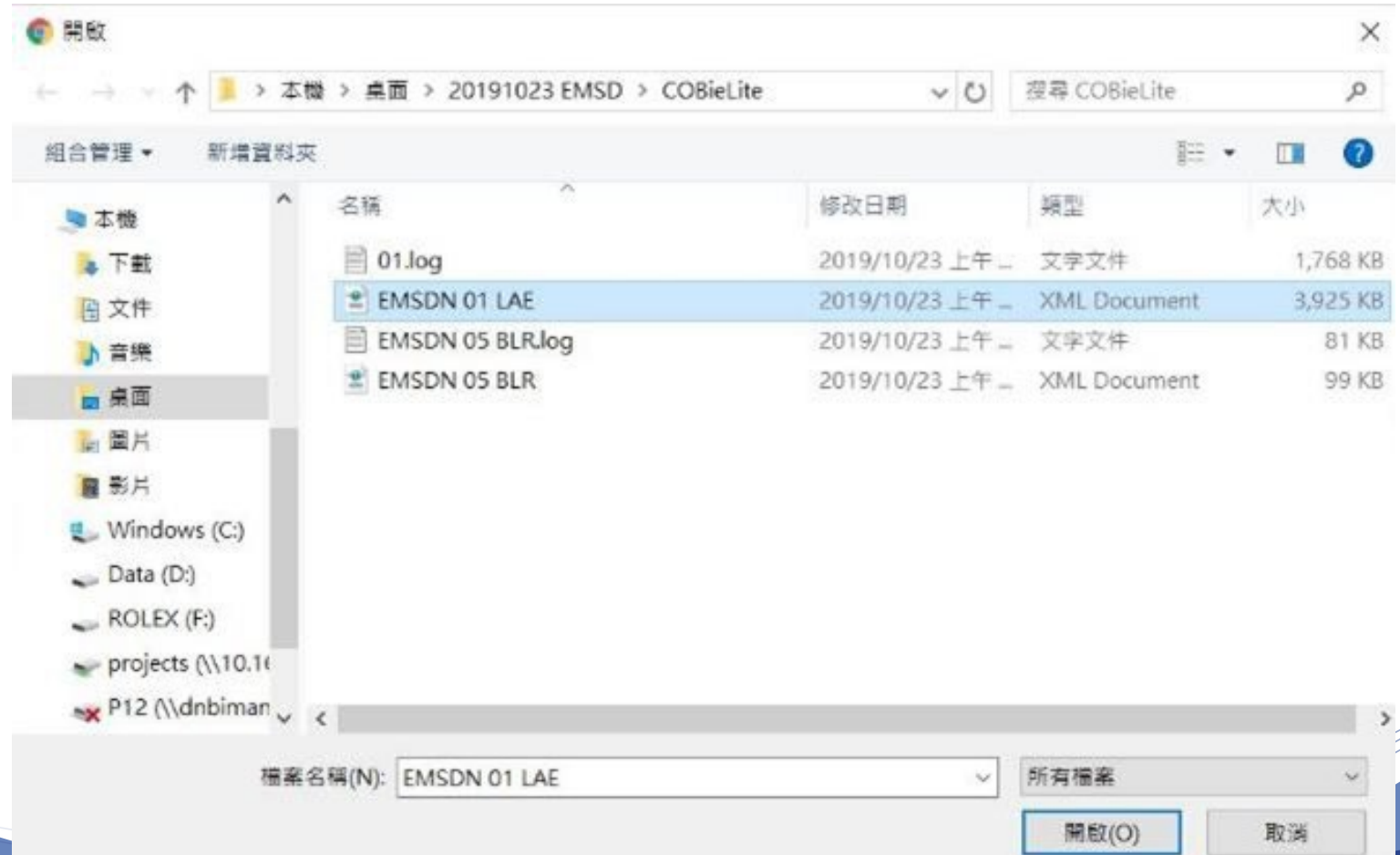


Export COBieLite .xml file and import back to BIM Model:

- After the completion of Asset Relationship Diagram& O&M Documentation
- Select “Export” on the left-hand bar
- >Select COBieLite (Revit)
- >Click on the “Select File” button



- Select the Original COBieLite File (.xml)
- >Open



- >Start Uploaded
- >Click to Export

COBieLite (Revit) ▾

☐ Apply Validation

Select File



Start Upload

Click to Export

Operation Type	Status	Start Time	End Time	Success Count
export CobieLite(Revit)	Complete	2019-10-23 11:30	2019-10-23 11:45	0

Total Count : 1

- Another COBieLite File (.xml) would be generated, the later part would be random Letter & Number.

Name
 30_O&M Documentation.zip
 EMSDN 01 LAE_8d9f4e79ae87457996e83504e1b8b888.xml

- Open the specific MEP Service Revit Model
- Click on the plug-in in EMSD Computer
- Click import
- >select the above COBieLite File (.xml)
- >click import

