

Presentation on

Building Information Modelling
(BIM)

To

ACEI, ISE and Engineers Ireland

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Current BIM Software Used:

- IES Solutions Virtual Environment VE-Pro
- DIALux
- Autodesk Ecotect Analysis
- EDSL TAS 9

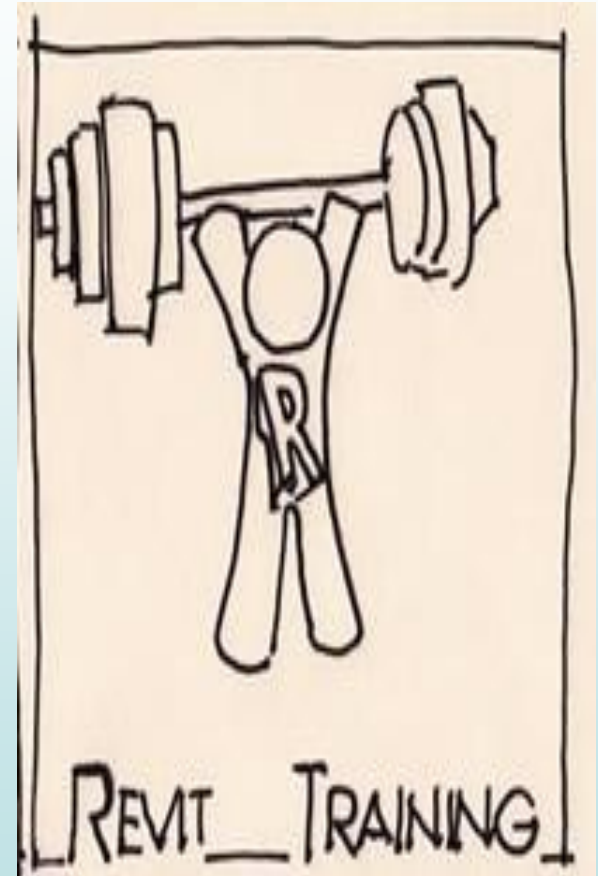


Software Chosen for this Project (in addition to above):

- Autodesk Revit MEP 2012
 - Link
 - Ease of Transition
 - Unfamiliarity with other products



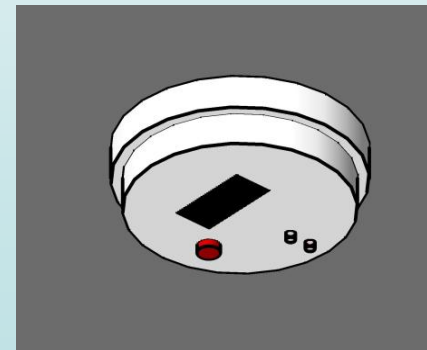
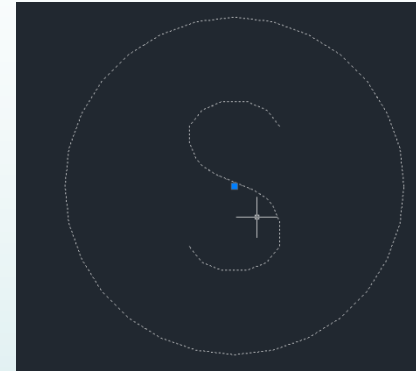
- Training is essential to use product
 - First stage involves familiarity of product using default set ups.
- Training required for setup of company specific Template
- Template Creation
 - Worksets-According to National Standard Building Element
 - Project Flow – Folder Structure (AEC-UK)
 - Project Numbering-(A Standard & Guide to – BS1192-BSI)
 - Families to be included
 - Match CAD manual in terms lineweights, etc
 - Titleblock
 - Continuous process
- Linking Strategy

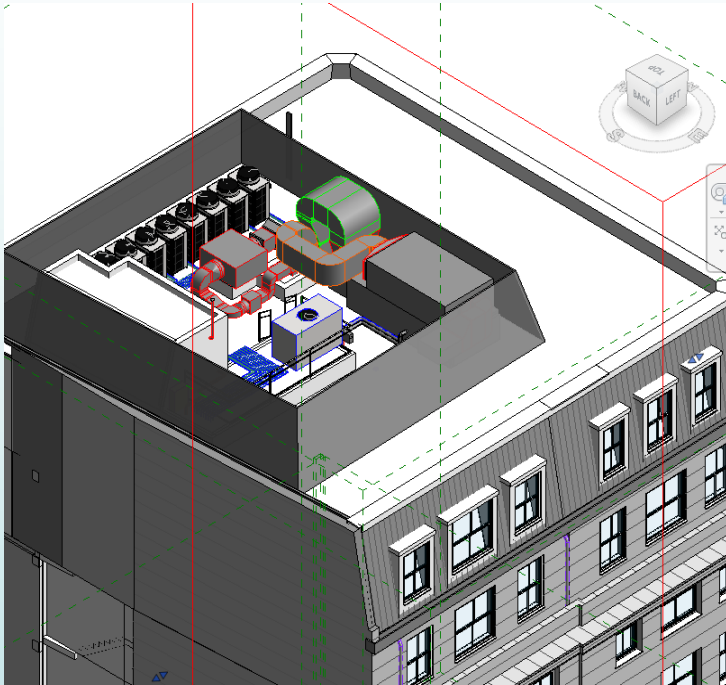


- Office Block/Mixed Use Development (retail units trading during construction)
- TPE Project (International Joint Venture Company)
- Refurbishment of Existing Building
- No Architect/Structural Engineer Revit Involvement
- 4576m²
- Building over 11 Storey's (9 levels above ground with 2 basement levels)

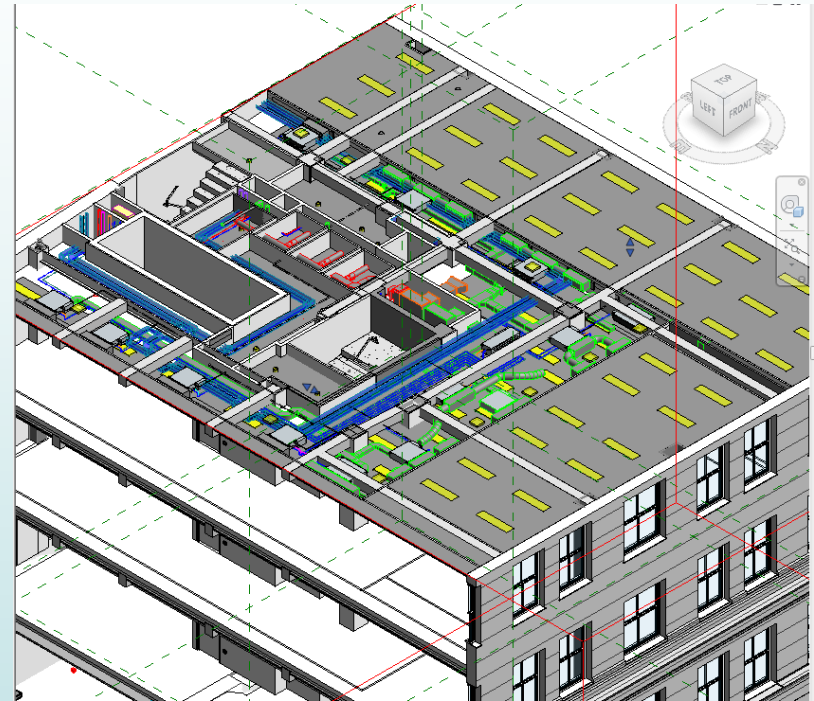


- Family Availability For Irish/UK Market
 - Web Search-Limited Number
 - Poorly created families (host/connectors)
 - Suppliers-Virtually None
 - Industry lagging behind
- Creation
 - Cad Symbols to Revit Families
 - Over 50 created
 - 60 minutes average per element

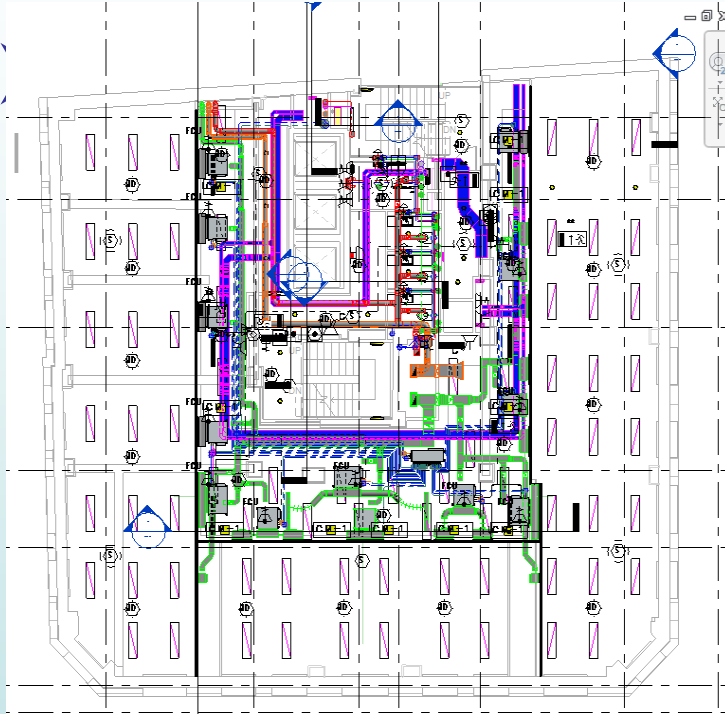




Plant Space



Section Through Typical Floor Plate

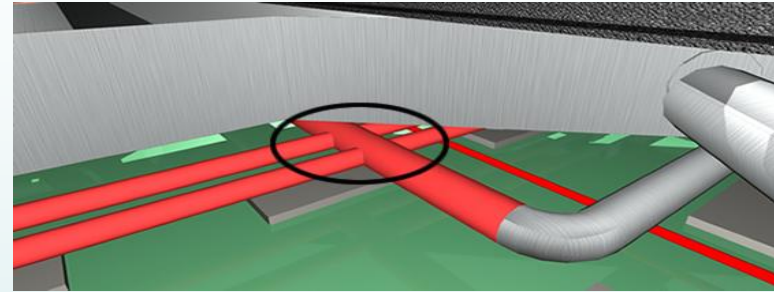


2-D Representation



First Floor View

- Soft Landing for Client.
- Clash Detection.
- Allows for timely conflict identification and resolution.
- Spatial awareness of M & E Services for other members of the Design Team.
- Produce Schedules-Cost Savings.



- Steep learning curve.
- Software upgrades.
- Hardware upgrades.
- Productivity loss.
- Lack of Supplier Families



- Electrical Design features needs to be modified to be better suited to the Irish/UK market, currently US centric.
- Revit releases not backward compatible (family creation/other team members)

- *Achieve full intelligent model design through the use of Revit MEP.*
 - In house validation of design elements of software required. (thermal loads, duct sizing, pipe sizing, lighting design).
 - Modification of electrical design tools to better suit Irish/UK procedures (e.g. Further enhancements to Distribution Board schedules better customisation).
 - Setup of family library for Irish Market.
 - Currently no bi-directional link to Dialux (this feature has existed in Autodesk MEP (ABS) since 2006) Currently on a Wish list.

- Public Procurement Limitations.
- Industry/Suppliers keeping pace with advancement in the technology.
- Ownership/Sharing of Model-Potential Design Liabilities/Legal Issues

