

excitech

BIM 360 Glue

Project X

Navisworks

Autodesk Buzzsaw

The common data environment

Rob Hartwell. Wales Region Manager. Excitech.

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Some questions to ask ourselves

- How many common sources of data do we manage?
- When are they used and who manages them?
- Who needs them and when?
- Why are we ultimately doing this ??? Who are we managing this for ?

What are we being asked for ?

- “Level 2 A managed 3D environment held in separate discipline 'BIM' tools with data attached. Commercial data will be managed by enterprise resource planning software and integrated by proprietary interfaces or bespoke middleware. This level of BIM may utilise 4D construction sequencing and/or 5D cost information”

Q: Is this a pain or an opportunity ?



The cost ratio

The cost of designing, constructing and operating a building can be expressed as the ratio **1:10:100** for a typical 30 year lifespan.

If the lifespan is longer (i.e. for a historic building) then the ratio changes to **1:1:200**

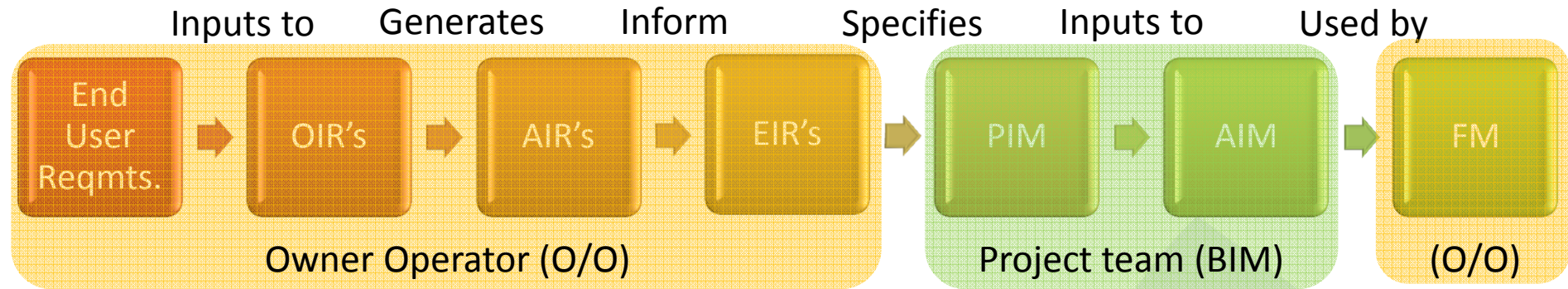
In either case, the operating costs far outweigh the design and construction costs.

DESIGN

CONSTRUCT

OPERATE

Wrap up – Start with the end in mind



- OIR's – Organisational Information Requirements (questions)
- AIR's - Asset Information Requirements (required answers)
- EIR's – Employers Information Requirements
- PIM – Project Information Model (informed by BIM)
- AIM – Asset Information Model

Communicate using:

- COBie – Construction/Operation Building information exchange
- IFC – Industry Foundation Classes
- Project eXcitech

Buzzsaw

- Replicated server based.
- 25 user minimum
- 128 bit data encryption (compressed)
- 99.99% up time
- Desktop / web client / mobile
- Free 30 day trial.

- Document management to included :
 - Version control
 - Check-in / check out
 - Email notification
 - File locking
 - Audit
 - Search



BIM 360 Glue

- Buzzsaw and Navisworks in the cloud inc clash reports.
- Min 5 users
- Desktop, Web client, mobile.
- Recent enhancements :
 - Bi-directional links to Navisworks manage
 - Assign clash status – Open, close, review, resolve.
 - Clash notification – see who is working on a clash
 - Add or remove models from a clash test
 - Measure, shortest distance and save measured views
 - Save marked up views
- [5-BIM-360-Glue-workflow-clash-detection.mp4](#)

Project X – The modules

- Federation and version control of models (this will give the ability to track, monitor and report on progress of models) – native Revit and IFC.
- Validation of Models (rule based validation that can be measured against BEP & AIR)
- Mobile data collection (site data collection that will be linked to the graphical models)
- 2D & 3D viewing (our own viewing technology that doesn't require browser plug ins)
- Data export (schema based to SQL or FM systems and COBie)

Projects | The Scalpel | MP1 Elephant & Castle | T5

- Scalpel- Excitech were appointed by EC Harris on behalf of WRBC Development to provide Building Information Modelling (BIM) management and consultancy services for The Scalpel, a £500m commercial office development at the confluence of Lime Street and Leadenhall in the City of London.
- The landmark building is a single tower with 35 office storeys above ground level, roof plant levels and two basements totalling over 50,000m sq. The project is designed by Kohn Pedersen Fox and Arup, with the main contractor being Skanska.
- Excitech's appointment included the creation of BIM documentation, publishing of federated models and clash resolution workshops. The combined effect of these enabled effective BIM processes and standards to improve project delivery quality through all stages of design, construction, handover and Facilities Management.
- As the Project BIM Manager, Excitech's role included being the employer's single point of contact for BIM, taking a key role in the setup of BIM, producing and maintaining the BIM Execution Plan (BEP) alongside associated documents as well as federating, auditing and integrity checking models on a regular basis.

- MP1- Excitech were appointed by Lend Lease to provide Building Information Modelling (BIM) consultancy and management services for "MP1", the first phase of a £1.6bn urban regeneration program for the Heygate Estate in Elephant and Castle, London. The engagement commenced at Stage E (CIC stage 4) and continued through construction and to Facilities Management (FM).
- consultants provided BIM documents that included employer's information requirements (EIR), BIM execution plan (BEP), file naming standards, model element table (MET), clash detection matrix, BIM Technical Protocols and model audits.
- In addition, Excitech were tasked with carrying out federation and clash detection of design and supply chain models for buildings, plots and sites to assist in virtual model review and coordination by the project team.

Project X scope :

- This fundamental approach enables all parties to be able to:
 - Share their own discipline specific models and data
 - See other discipline specific models and data
 - Bring all or some models and data together in one common place (aka federation)
 - Create and use on site surveys such as construction progress, snagging, deliveries, health and safety checks etc.
 - use mobile technology.
 - Validate geometry and data by applying checks to the data available
 - Add additional data which would not normally be included in the Revit models such as manufacturer's data sheets, installation and commissioning instructions, certificates of conformity, electrical and other mandatory certificates etc.
- **Offer all of the above to the project client as a handover instead of a traditional operation and maintenance manual (O&M) or COBie.**

Information workflow

