

Building Information Modelling

Operational Readiness



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Section 1

Introduction

Introduction

UBS is a global firm providing financial services to private, corporate and institutional clients

Globally

- Headquartered in Switzerland
- Present in all major financial centres and offices in over 50 countries
- Employs more than 65,000 people around the world

Within the UK

- UBS employs around 7,500 people
- UBS as a property portfolio of 7 buildings in the London area
- A portfolio that equates to approximately 1,000,000 ft²



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- 700,000 ft² pre let development by BlueButton properties
- Tenant (UBS) engaged from the outset
- Separate design teams for the Base Build / Fit Out with no requirement for Bim in the basebuild deliverable

Section 2

The Project

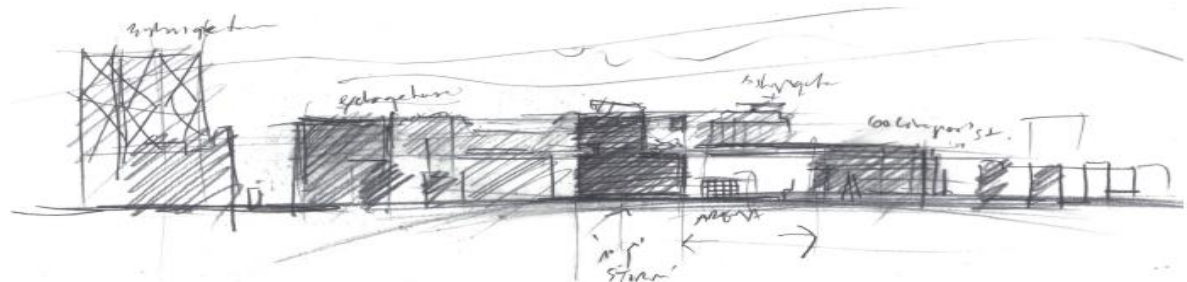
Project

Delivering a flexible world-class office facility for the integrated Firm

A building specified in 2009 for occupation in 2016 :

Specific aims...

- Maximum **flexibility and cost efficiency** for London real estate portfolio
- Enhanced **client experience** through world-class facilities
- Productive and flexible **working environment** for our staff
- Secure and reliable **infrastructure** to minimise operational risk
- Excellent **sustainability** characteristics and **energy** efficiencies



Project

"We cannot develop a new London building without a Bim model for ongoing operational use"



Background

- There is a strong trend across the property industry to adopt BIM based design as standard.
- Asset based software tools have advanced towards BIM integration.
- Signs of adoption into design practices, construction and operational teams

UBS

- Currently manage all aspects of the on-going building operation and maintenance in 2-D CAD format
- Stored in multiple data repositories with 1 time data drops
- Digital operations and maintenance manuals.

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- Business case approved during the fit out design (stage D – E).
- Some design team were not ready for Bim but used the opportunity as the catalyst for change.
- M&E design deferred to a Trade Contractor deliverable.

Project

5BG building information modelling journey

The BIM model is required to interface with multiple operational platforms

Design

- Internal Architectural and Structural fit out design developed using BIM from Scheme Design (pre stage E).
- Building services deferred to the Construction Manager deliverable.
- Use basebuild 3D models where available.

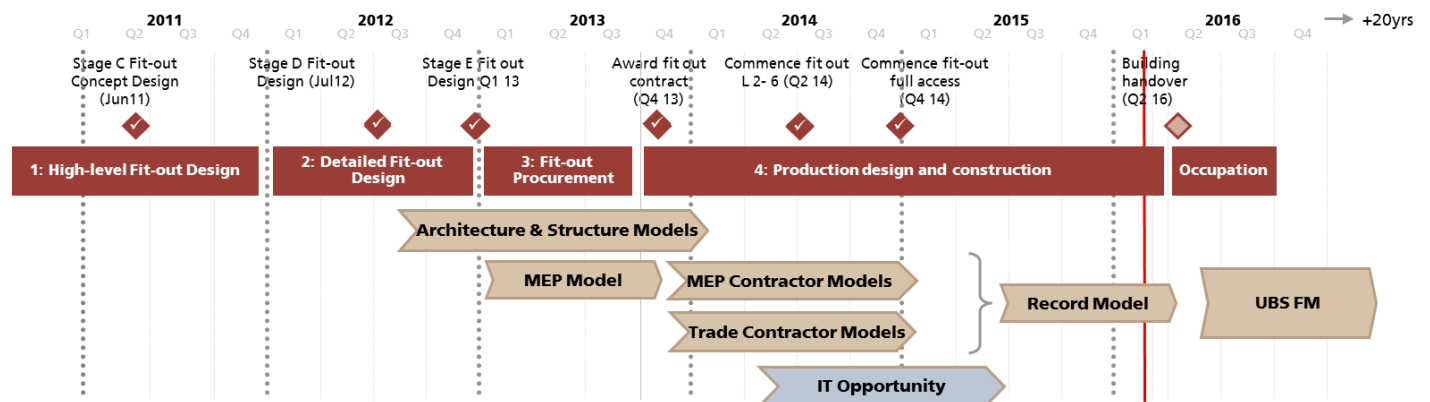
Construction Manager

- Jointly developed project implementation plan with ISG/ARC:MC
- Pre tender engagement of IBSECAD to create the services model.
- Laser Scanning of basebuild interfaces.

Trade Contractors

- Reluctance to use Revit or other design based tools.
- Differing capabilities in their own journey and assistance provided where necessary.

The right Trade Contractor isn't always Bim capable



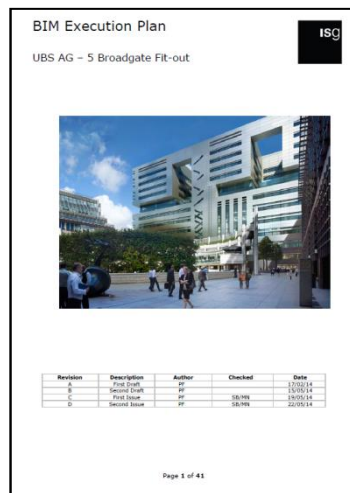
Section 3

Building Operations

Building Operations

Early engagement of the building operation team is essential

The building information and soft landing "ready for operation strategy" must be one in the same



Asset Management

- Mapping of existing database fields in daily use
- Strategy and structure for operations and maintenance manuals
- Understanding of your asset management tools
- Mapping all of your existing operational processes

UBS

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- Detailed analysis of our CMMS, O&M and space planning tools.
- Six Sigma style review of our existing processes for projects and operations.
- Asset strategy for all assets, not just M&E.
- Bim operational working group formed.

Building Operations

Other opportunities of using Bim in Operations

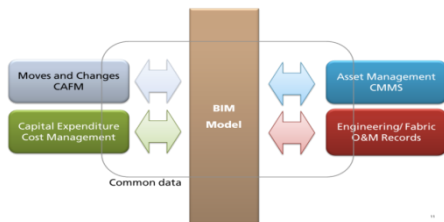
Opportunity to operate within a common data environment, aligned assets management processes and intelligent building solution

Asset Tools

- Physical Security Information Management PSIM Systems
- Business Unit (BU) cost /HR database
- Asset management hand held technology
- Management Information Systems MIS
- Graphical User Interface GUI
- Cable management platforms

Additionally

- Benchmarking costs, energy efficiencies and lifecycle modelling
- Staff training tool for maintenance, health, safety and security
- Parametric data make physical change management more efficient



Conclusion

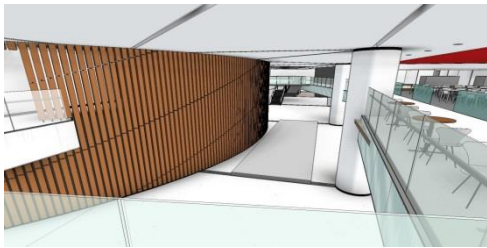
Challenges still to overcome

Challenges

- Maturity of the FM industry and Creating the Pull factor.
- Industry experience of full BIM use through projects into operation is still evolving.
- Staff 'up-skilling' needs to be planned carefully and costs need to be mitigated.
- Hosting system needs to be selected, implemented, must be straightforward to use, secure and cost effective.
- Model scope and processes re engineering for operations.
- Installation needs to reflect the model and incorporate change.

Next Steps

- ~~Cost~~ Making the business case work.
- Identify operational champions and model ownership and workflow.
- Handover model validation – point cloud surveys.
- Identify and re engineer existing processes.
- Up skill resources and understand the true cost in operations.



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