Gathering21

Construction Innovations
for Future Generations

CitA

WELCOME

to virtually, the most important conference in Irish Construction this year

5th CitA BIM Gathering Virtual Conference

21 - 23 September 2021

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Keynote Speaker

May Winfield

Global Director of Commercial, Legal and Digital Risks at Buro Happold

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Legal and Contractual BIM for Non-Lawyers

5th CitA BIM Gathering Virtual Conference

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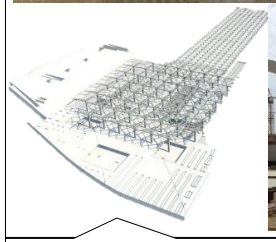
May Winfield

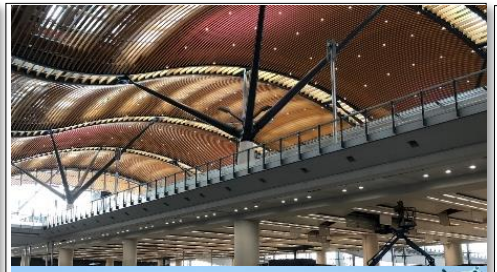
Twitter: Buildlaw_Arttea

Senior construction lawyer qualified over 17+ years	Specialist in BIM and construction technology	Spoken on construction technology worldwide
Member of ISO 19650 UK Transition Guidance Working Group	Led drafting teams of BS EN ISO19650-compliant BIM Protocol and BS EN ISO19650 Guidance legal section and JCT BIM Practice Note	Chair of BIM4Legal and Core Team Member of BIM4D Group
Member of CDBB Digital Twin Roadmap Working Group	Member of CDBB Digital Twin Toolkit Working Group	UK BIM Alliance Ambassador

Brief Introduction to BuroHappold



Haramain High Speed Rail (Mecca, Medina, Jeddah, KAEC stations)

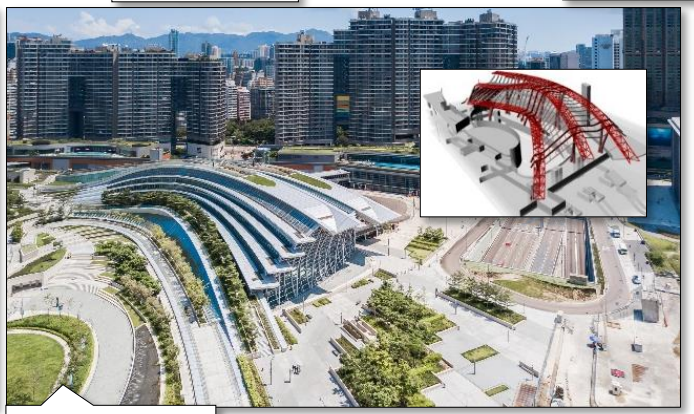


Boundary Crossing Facility HK

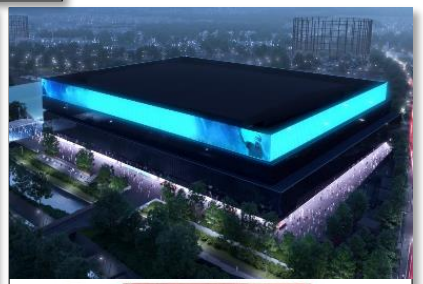
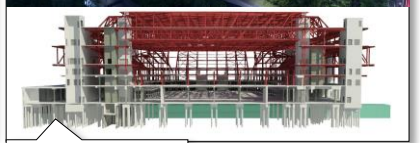
Olaya Metro Station

Museum of the Future

KAFD Metro Station



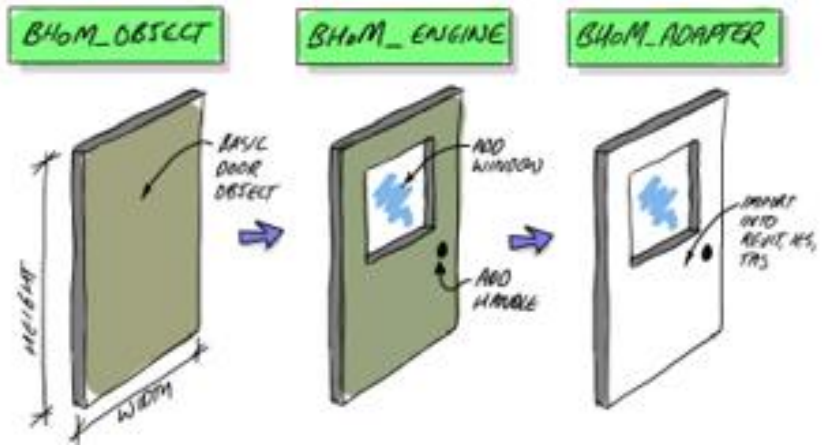
XRL Terminus HK

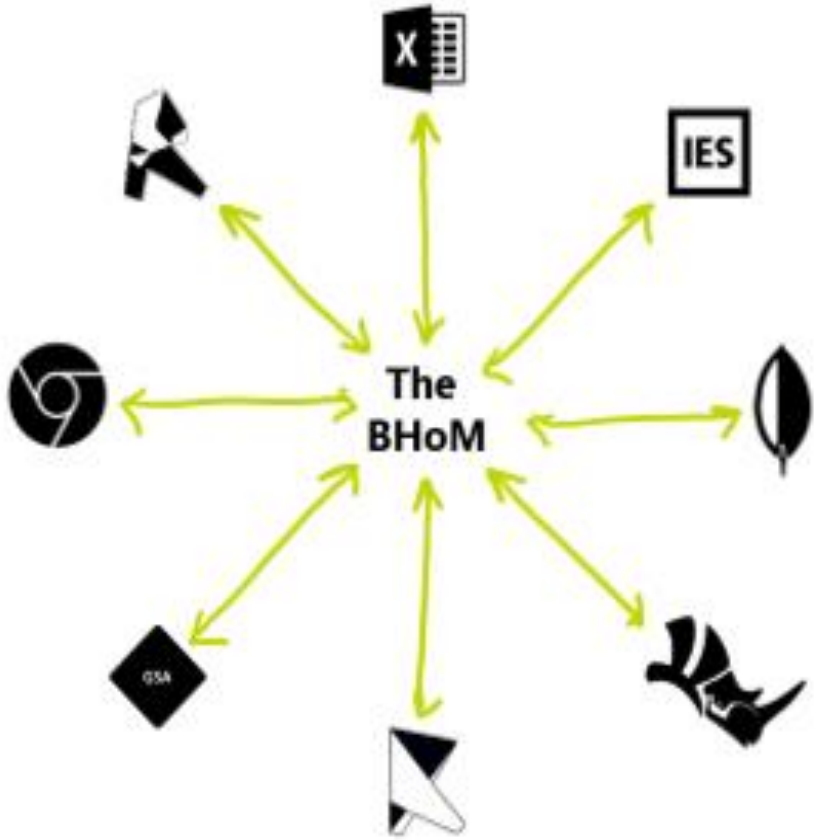



OVG Manchester

BHoM – Buildings and Habitats Object Model

- Open-source model for project architecture, co-creation and planning.
- Collaborative computational development project
- https://github.com/BHoM/documentation/wiki





Average Value of UK disputes 2020 = **US$38.6m**

Disputes Top 2 Causes 2020:

1. Owner/contractor/subcontractor failing to understand and/or comply with its contractual obligations

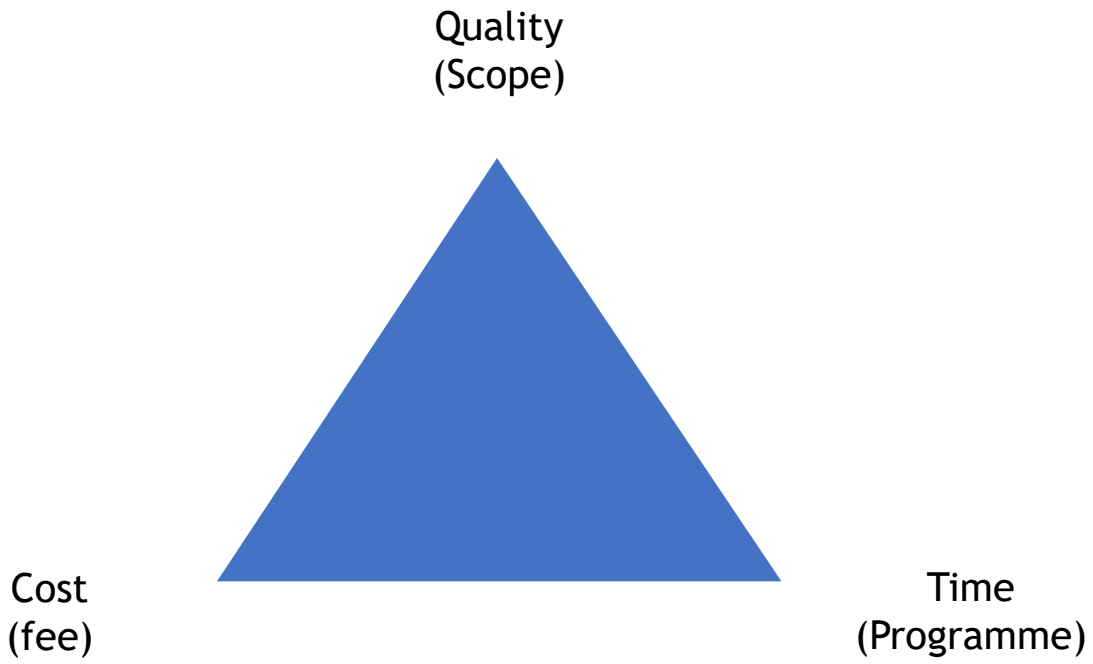
2. Owner-directed changes

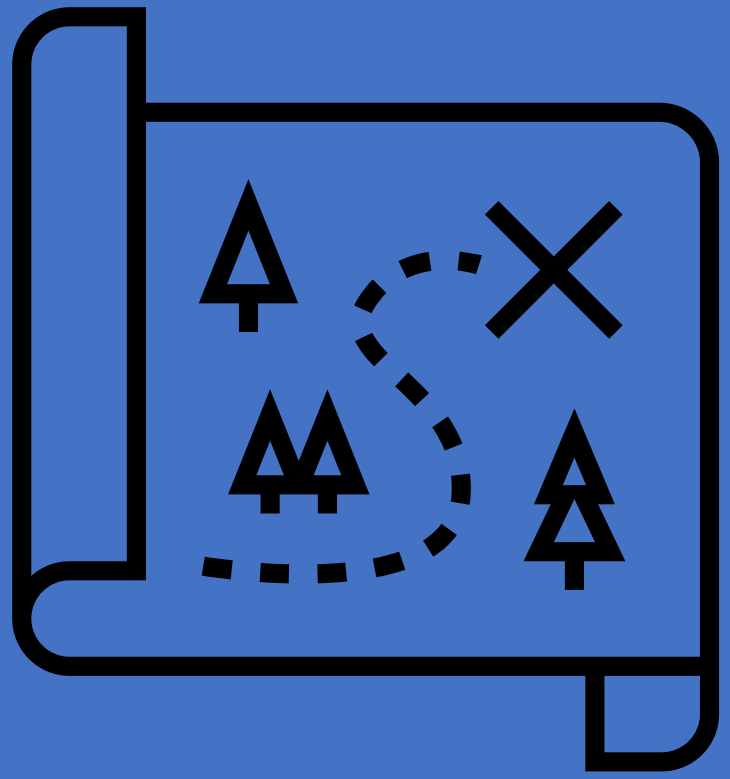
Arcadis Global Construction Disputes Report 2021

BUT…WHAT IS A CONTRACT ANYWAY?

“A contract is written between two parties who don’t trust each other”

A fair allocation of risk and reward:





“A contract is a road map that shows where you want to go and how you are planning to get there”

- Which bits are binding and enforceable?

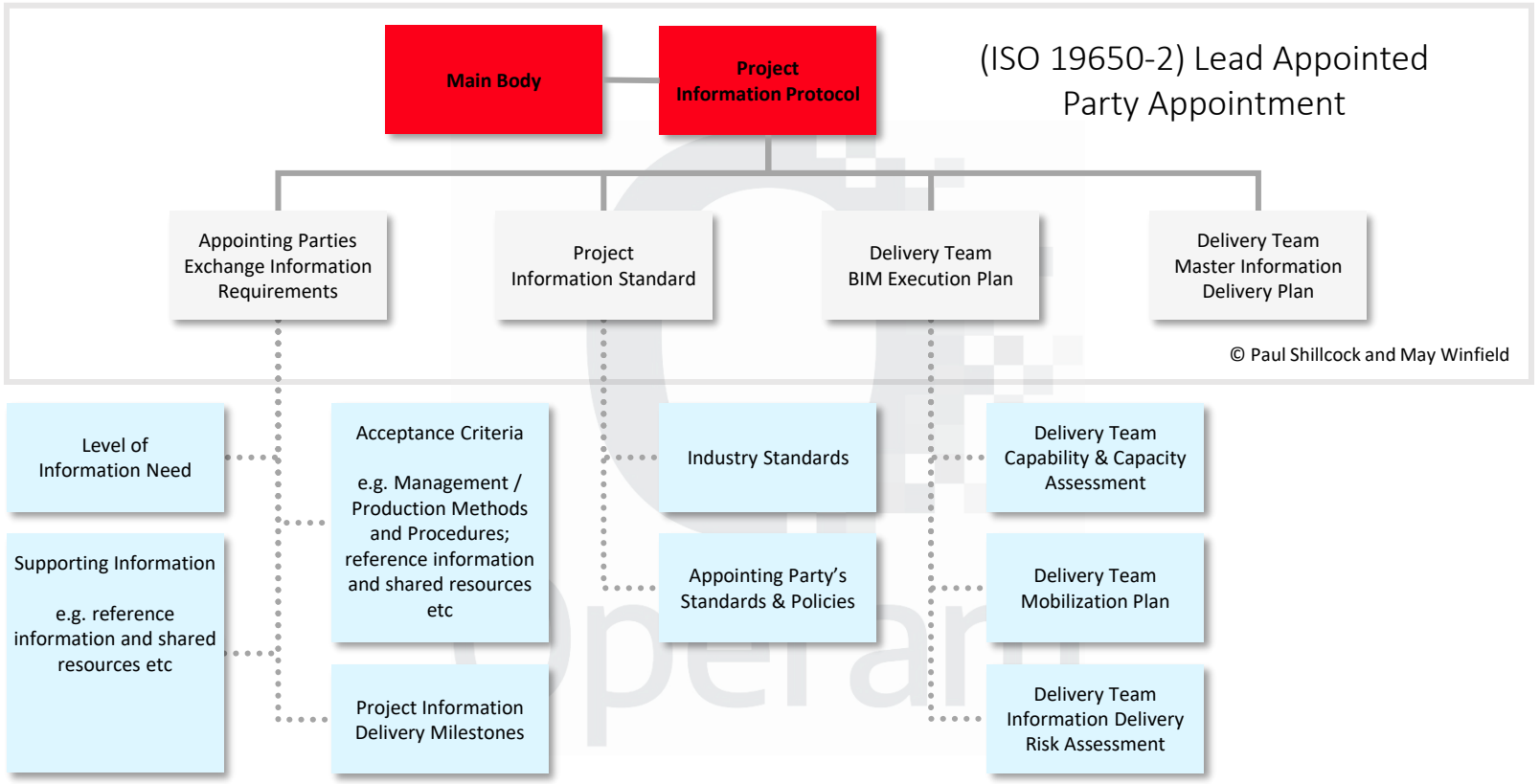
…Why does that matter?

- May not be in writing
- Agreement –v- legally binding agreement = Not every agreement is a contract

Get professional advice!

Expected BIM Contractual Documents

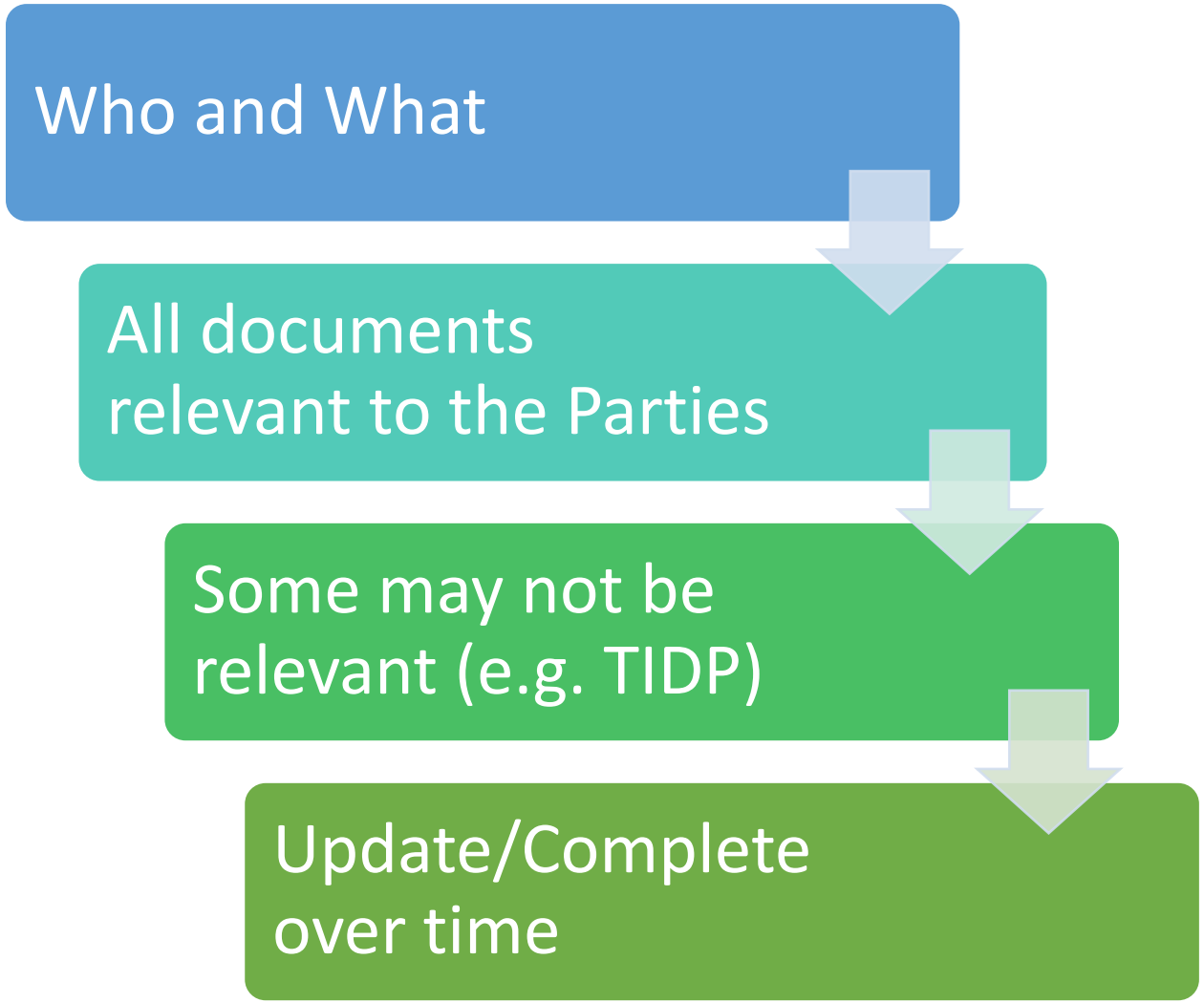
- Employer's/Exchange Information Requirements
- BIM Execution Plan
- Master Information Delivery Plan
- BIM Protocol


Main Body
Project Information Protocol
(ISO 19650-2) Lead Appointed Party Appointment
Appointing Parties Exchange Information Requirements
Project Information Standard
Delivery Team BIM Execution Plan
Delivery Team Master Information Delivery Plan
© Paul Shillcock and May Winfield
Level of Information Need
Supporting Information
e.g. reference information and shared resources etc
Acceptance Criteria
e.g. Management / Production Methods and Procedures; reference information and shared resources etc
Project Information Delivery Milestones
Industry Standards
Appointing Party's Standards & Policies
Delivery Team Capability & Capacity Assessment
Delivery Team Mobilization Plan
Delivery Team Information Delivery Risk Assessment
Appointment Documents
Appointment Schedules
Referenced Documents
Appended
Referenced
The purpose of this diagram is to show the relationship between the various information management documents within an appointment and is not intended to be legal guidance.
Not all contracts have schedules; for example the schedules contents would be contained in NEC3/4 Z-clauses and Works Information/Scope instead. Legal advice should always be sought when preparing appointments.

ISO19650 – compliant Information Protocol

https://ukbimframework.org/standards-guidance/

Just one page to fill in:
Information Particulars



Clear Up Confusion:

Are You *A* or *B* AND

Are you *C*, *D* or *E*

A. Appointor (doing the appointing/paying)

B. Appointee (getting appointed/paid)

C. Appointing Party

D. Lead Appointed Party

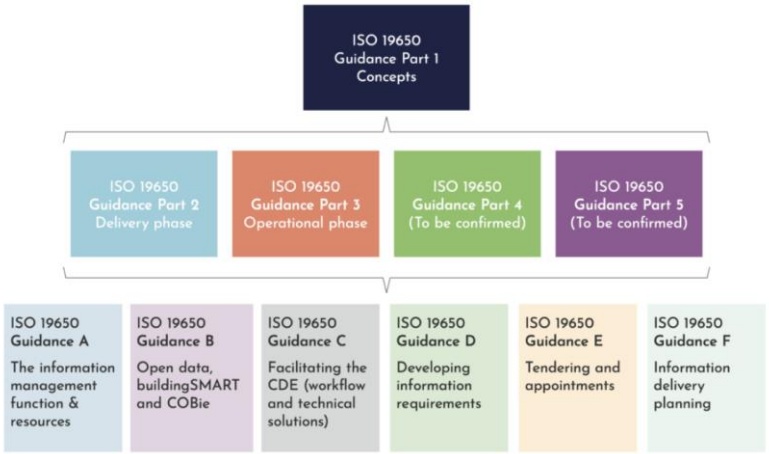
E. Appointed Party

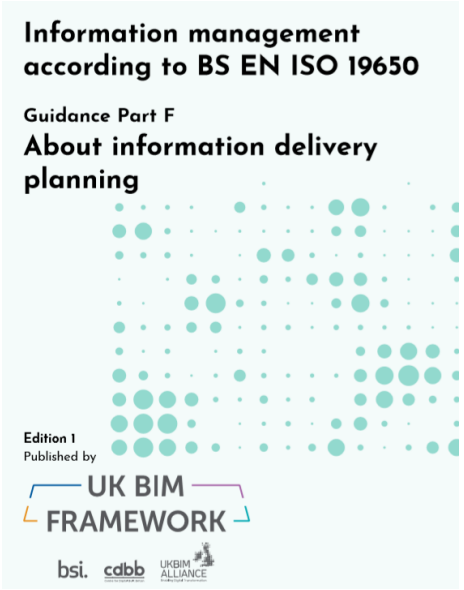
Appointment-agnostic
Good for standard forms, bespoke, two-party, alliancing and multi-party

See Guidance: one simple clause to ensure clarity if used for a multi-party appointment

Read the Complimentary Guidance

https://ukbimframework.org/standards-guidance/





3.5.2 *Master information delivery plan vs detailed responsibility matrix*

The detailed responsibility matrix supports the production of the TIDPs and MIDP. It informs the scope requirements of each task team so that they can adequately define their outputs as part of their TIDP.

For example, a detailed responsibility matrix may define that the "above ground drainage" information is the responsibility of the drainage contractor but the "below ground drainage" is the responsibility of a civil engineer. This communicates to the drainage contractor that their scope is above ground drainage only. When this drainage contractor develops their TIDP to detail out the specific deliverables such as "drainage layout plans", they will be doing this just for above ground drainage. The MIDP compiled by the lead

Retrievable information within files-based TIDP

Information Container Name	Information Container Description
All party wall interface detail	Detail of the north party wall at a scale of 1:20
Partition plan for the whole first floor	Plan defining partition types and acoustic ratings
Fire strategy for the first floor	Fire strategy defining wall and door fire ratings, equipment and escape routes

Figure 13: Non-file-based TIDP approach

3.3 High level responsibility matrix contents

As part of their tender response, the prospective lead appointed party filters out the information deliverables they expect to fulfil in consideration of the appointing party's exchange information requirements. This ensures there is no overlap with other delivery teams and clarifies what, at high level, they expect to deliver. For example, a main contractor who is tendering for construction works, and has some contractor design portion works within their scope, needs to make it clear where their scope starts and ends, especially if there is some overlap with another lead appointed party.

The structure of the high level responsibility matrix is often determined by the agreed container breakdown structure as noted in section 3.1 but now includes the WHO.

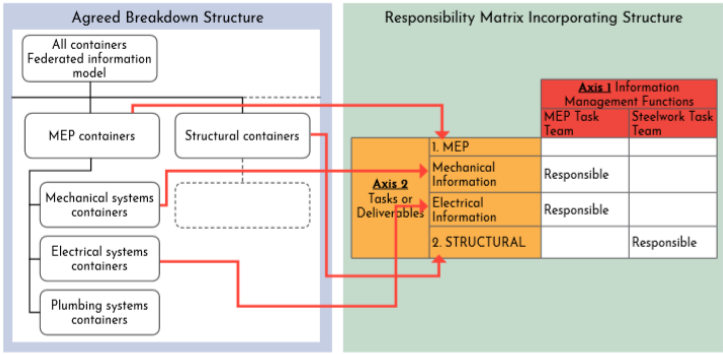


Figure 5: Example of a high-level responsibility matrix incorporating agreed breakdown structure

File-based TIDP

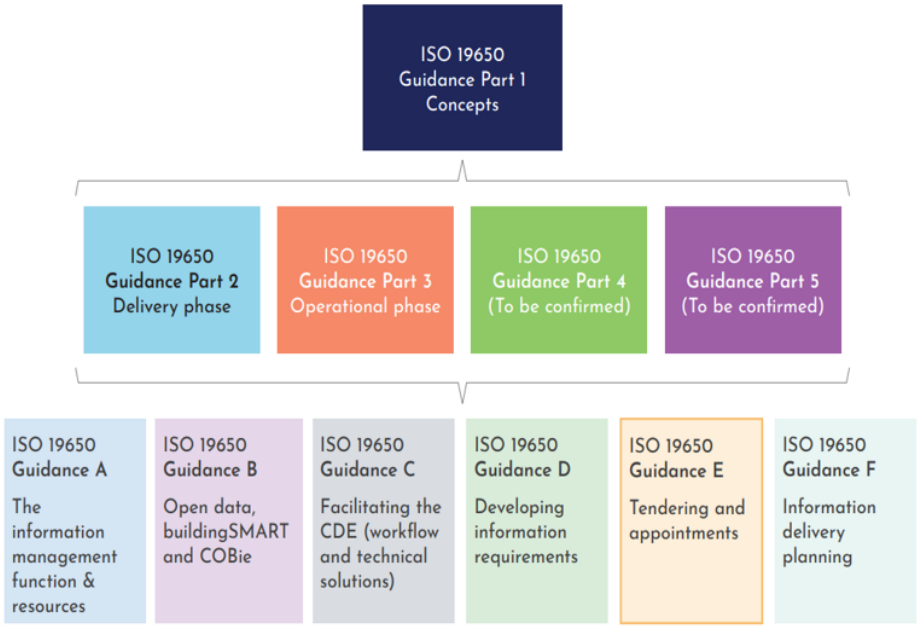
Information Container Name (File ID)	Information Container Description
HC101-SSI-ZZ-DR-A-0001	Party Wall Interface Detail
HC101-SSI-ZZ-DR-A-0002	Partition Setting Out Plan - First Floor
HC101-SSI-ZZ-DR-A-0003	Fire Strategy Layout - First Floor

Figure 12: File-based-only approach to listing information containers within a TIDP

https://ukbimframework.org/standards-guidance/

Resources

- Plain Language Legal Questions, Appendix to Winfield Rock Report: https://www.ukbimalliance.org/wp-content/uploads/2018/11/The-Winfield-Rock-Report.pdf
- ISO19650-compliant Information Protocol for delivery stage: Information-Protocol-to-support-BS-EN-ISO19650-2.pdf (ukbimframework.org) (Information Protocol for operation stage coming soon!)
- ISO19650 Concept Guidance - Annex C: Legal and Contract Guidance Note: Information-Management-according-to-BS-EN-ISO-19650_-Guidance-Part-1_Concepts_2ndEdition.pdf (ukbimalliance.org)



Start with a List to Avoid Gaps

What	Who	How	Size
• Process • Tasks • Could go wrong	• Should bear risk/liability • Should mitigate	• Process • Records • Insurance • That’s their problem	• Unlikely or likely risk • Large or small loss

3 Key Issues for today:

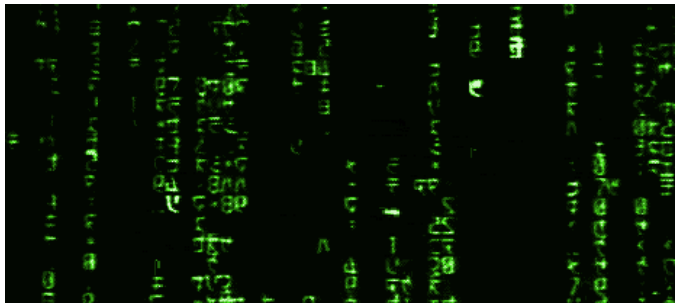
Copyright

Risk Allocation

Responsibility

Copyright and Intellectual Property

Objects

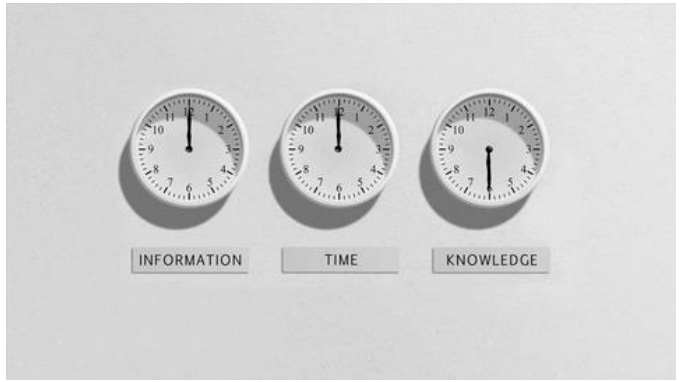


Existing and
New Data

Models

Risk Allocation

Software/
Interoperability



Integrity of Data/
Checking of Data

Process, e.g.
Programme, File
Naming and Format

Contractual responsibility

Terminology

Scope

Deliverables

Final Thoughts

Whose fault is it anyway – some things to think about:

- Who agreed to what
- Are there any gap/discrepancies/scope for argument
- What happened – who caused it

= Importance of clarity and records

Useful Links

- UK BIM Framework: https://www.ukbimframework.org/
- ISO19650 basics (videos): https://www.youtube.com/c/UKBIMAlliance/videos
- Winfield Rock Report: https://www.ukbimalliance.org/wp-content/uploads/2018/11/The-Winfield-Rock-Report.pdf
- Enabling BIM Through Procurement and Contracts: https://www.kcl.ac.uk/construction-law/assets/bim-research-report-1-jul-2016.pdf
- Article on the Construction Playbook: https://aecmag.com/construction/construction-playbook/
- BIM news and views: https://www.bimplus.co.uk/
- Cool BIM videos: https://www.theb1m.com/
- *COMING SOON:* buildingSMART White Paper on how openBIM can support clients for Asset Management

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