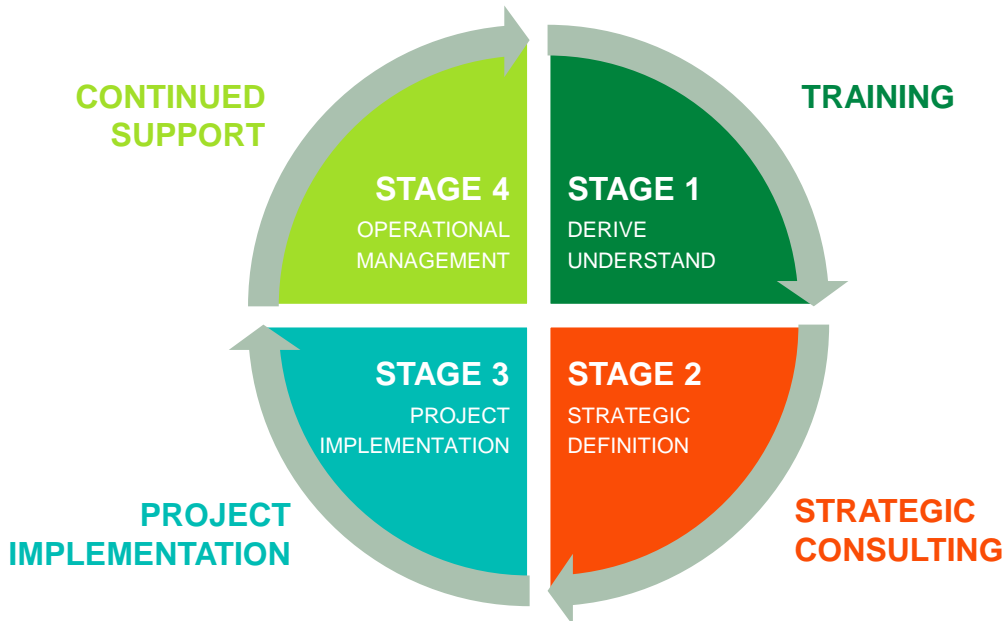


WHAT IS BIM CONSULTANCY?

The Ridge BIM Consultancy service bridges the information gap between design, construction through to operation, delivering our clients reduced costs and improved efficiencies via a whole life cycle BIM Strategy and Delivery model. There are 4 distinct stages to Ridge’s BIM service:



This service will support our clients in understanding where the value is for them and how BIM will act as a catalyst in being able to achieve their targets.

The Ridge BIM function has the vision of being the leading UK provider of BIM consultancy services.

We will achieve this aspiration by focussing on forming strategic relationships with our clients that work to understand their true challenges and needs, moving away from the current industry approach of project led BIM implementation. We will give our clients further credibility by committing to ensuring we become fully accredited by the leading industry bodies in BIM certification by 2017.

The BIM offering demonstrates Ridge’s desire to continually improve our existing expert knowledge base and Ridge & Partners LLP truly believe that BIM, with its increased collaboration and project transparency, will further enhance our ability to serve our clients.



“We shouldn’t be trying to adopt BIM for BIM’s sake but we should be asking ourselves, where’s the value for our clients and how can BIM be used as a delivery mechanism to enable our clients to achieve these goals?”

Andrew Stanford



“As a design and delivery aid, the benefits of adopting BIM processes are tangible. Of greater importance and value though is extending the benefits beyond the life of the project in order to realise whole-lifecycle efficiencies.”

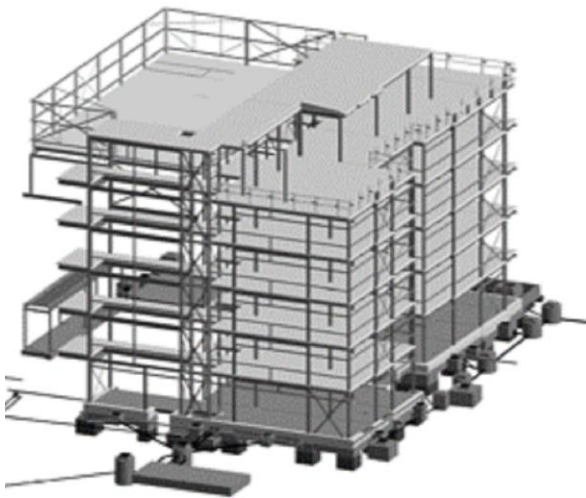
Brent Rees

1

**DERIVE
UNDERSTAND**

- Facilitates our clients in becoming Active adopters of BIM
- Continuous support in the upskilling of workforces

Providing dedicated resource to support our clients in examining what BIM is and how it can be of benefit to their individual organisation.

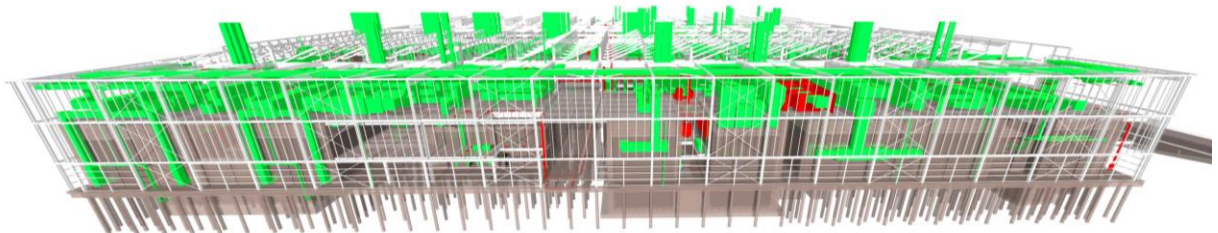


Ridge will provide on site training that will enable our clients to define how BIM can assist them in achieving their aspirations of:

- ✓ Reducing cost by delivering a more efficient estate
- ✓ Reduce waste by enabling asset maintenance to be maximised
- ✓ Increase efficiency of delivering capital building projects
- ✓ Increase operational efficiency by improving space utilisation

This training will also highlight the considerations that need to be taken into account around whether our clients have a desire to become passive or active BIM users, the difference being whether an estate level strategy for BIM is developed or whether it remains a project by project business case approach.

The goal of this stage is to put our clients in an outward facing position on BIM where they have a secure understanding of what BIM means and the ability to be able to articulate internally on how they want to implement it.



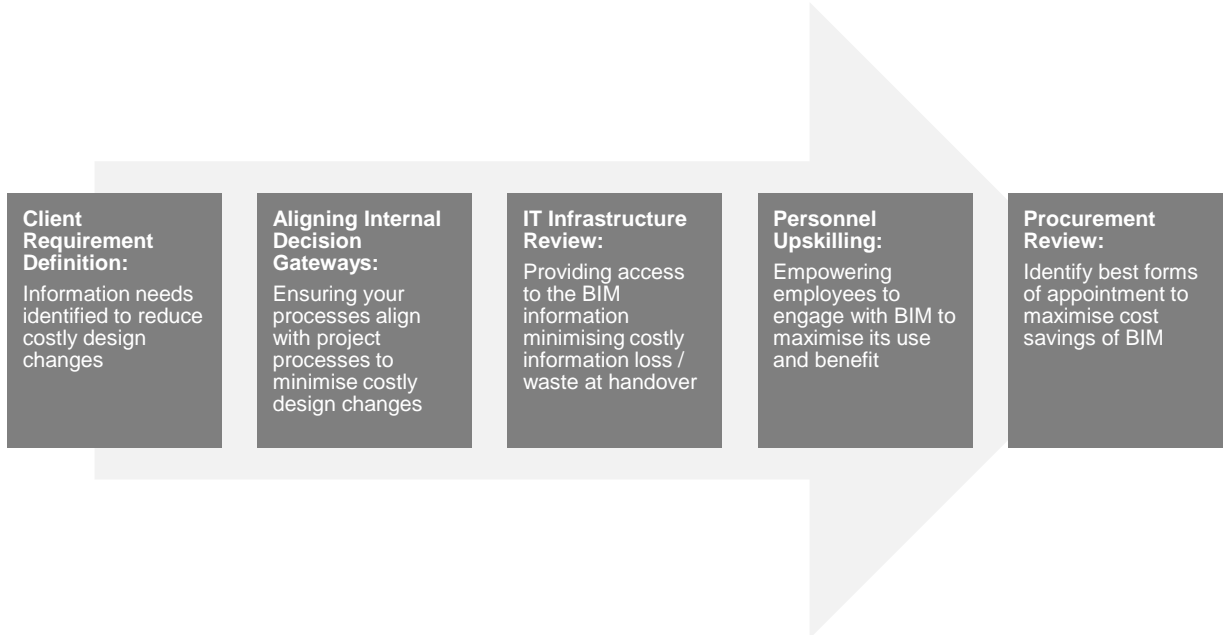
2 **STRATEGIC DEFINITION PROGRAMME FUNCTION**

- Ensure consistent information delivery across projects
- Develop project delivery templates to automate population of project information requirements thereby reducing current inefficiencies in manual requirement checks and verification
- Develop tiered range of information requirements to cover multiple project types
- Advise on technological infrastructure capability

Our BIM Strategic Consulting offer, which will not only develop a scope of services for clients, service professionals and contractors but will also offer evaluation of supply chain capabilities, assist with the appointment of a design team, develop COBie / Asset Register requirements and investigate the use of soft landings.

By forging a strategic partnership Ridge will firstly define our client’s BIM business case and strategy, we will then develop the delivery processes and templates (in accordance with the latest UK standards) to achieve their aspirations.

By empowering our clients we will lead them from being passive BIM users on projects to active users across their estate. There is no single industry approach to this, but Ridge have developed a standard process that will define our clients individual requirements



The strategy for our clients to adopt and implement BIM is crucial in ensuring complete, relevant and verified information is generated to support internal decision gateways, with the potential to improve programme and reduce costs for our clients. To start this journey we will initiate the above process to ensure our clients are ready to implement BIM processes on a project.

3

**PROJECT IMPLEMENTATION
PROJECT FUNCTION**

- Communicate progress via bespoke BIM dashboards
- Provide accurate data which reduces manual O&M data capture costs
- Handover of complete information allows faster analysis times driving increased asset performance
- Integration with current BMS reduces issues with interoperability and associated costs

Our BIM project delivery offer enables Ridge to act as a trusted partner in an Information Management role to ensure project compliance against BIM processes and deliverables.

Acting on our clients behalf, whether that be an owner or contractor to manage the project team to ensure the stage 2 strategic objectives are met. We will assist with COBie / Asset register population and monitor change management / model development throughout.

What sort of changes can our clients expect during the BIM process? The below maps out some additional functionality of the design and build process to improve delivery mapped against the RIBA Plan of Work Stages, we will also produce an end of stage report to monitor progress after each of the RIBA stages:

Stage 0: Strategic Definition – BIM enables capital projects to be analysed at a far earlier stage meaning greater predictability through due diligence resulting in savings / certainties which enable projects that would otherwise be deemed too risky to proceed.

Stage 1: Preparation and Brief – Improvement of task allocation for each discipline enables our clients to improve the definition of responsibilities, standards and workflows.

Stage 2: Concept Design – Our clients will see improved stakeholder engagement with the use of visualisation and early time and cost estimates made available to ensure more informed decisions.

Stage 3: Developed Design – The buildability of a design will be proven, while clashes between disciplines will be highlighted reducing contingency costs that would ordinarily be built into project fees / programme.

Stage 4: Technical Design – Supplier design information will be included to remove clashes and promote more off site construction in turn speeding up the programme.

Stage 5: Construction – ‘What-if’ simulation analysis can be undertaken to prepare for complex work sequences, the increased use of offsite manufacturer will ensure components fit thereby reducing waste. More automated robotics in the future can be programmed to construct quicker and safer.

Stage 6: Handover and Close-out – BIM ensures defect free handover / occupation with immediate access of information for FM operations.

Stage 7: In Use – Continued support in operation ensures asset performs as specified.

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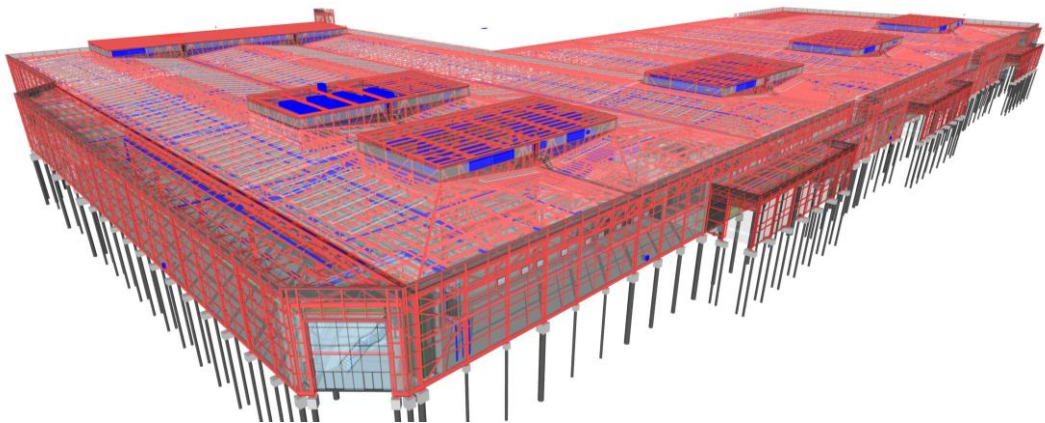
**OPERATIONAL MANAGEMENT
FULFILMENT FUNCTION**

- Project handover familiarization with information model
- Post project review
- Maintaining the information model
- Ensure FM function is at the leading edge of BIM technologies

Our continued support part of our BIM offer provides our clients with continuous support and innovation in the use of an Information Model while identifying future savings potential and systematically completing the feedback loop embedding lessons learnt across future projects.

Fundamental to the adoption of BIM is the notion of whole life cycle design, to move away from the current process of walking away when a project is delivered. The UK Government has introduced Soft Landings which is a prolonged period of time post completion where members of the design team maintain a contractual link with the building owners and ensure optimum operation of that asset is achieved.

There will be no end of changes to how an asset is altered post completion, and with all the upfront work and investment in setting up an Asset Information Model (AIM), it defeats the purpose of gathering this data through design and construction to then allow this to become obsolete.



If the AIM is not kept up to date either graphically or in terms of its associated information, our client will be missing out on the benefit of reusing the data for refurbishment, extension, or demolition of the asset. If the AIM is not up to date then its surplus to requirements for the purpose of analysing existing assets, and a re-survey is likely to be required, but why? Ridge will partner with FM providers and ensure the AIM is continually kept up to date to ensure the information is fit for purpose when required.

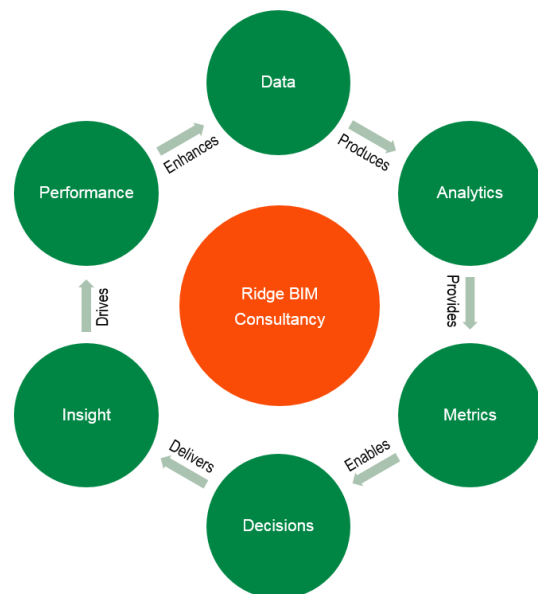
Further to the continued support with the technical aspects of BIM, Ridge also offers continued general support in terms of technical assistance and guidance on future industry developments.

Ridge will also support a 'lessons learnt' feedback process and advise on how to implement best practice principles on future projects. This will ensure our clients do not re-invent the same inefficiencies on other projects and instil the feedback loop into the respective project teams.

OWNER OPERATORS

Owner operators are favourably positioned to capitalise on any potential benefits of BIM. They are a prime example of a client who not only inputs significant investment into large capital projects for their estate development, but they also have a significant interest in how that estate is then managed during occupation.

BIM at its core is about capturing complete and reliable information during construction which can then be seamlessly integrated into operational software, moving away from the current process which often provides incomplete and inconsistent information. Ridge BIM Consultancy has developed the below model which shows how we strive to improve the quality of data to increase asset performance.



Benefits owner operator clients could expect from BIM are:

Reduce cost by improving overall estate by delivering more efficient projects:

- Detailed Feasibility studies by progressive build up of data will enable future projects to be procured with a better understanding of outcomes
- Change capital delivery mind-set from producing a series of documents to delivering data that will need to be referred to for future work

Reduce waste by enabling asset maintenance to be maximised:

- Single system / database of appropriate and reliable data informing all building decisions, reducing complexity and manual data inputs
- Create a bi-directional information exchange between capital project team models and FM platform
- Bring all existing building information into a single common data environment (CDE) (drawings, schedules, warranties etc.)
- Soft landings approach which ensures projects are handed over as specified

Increase efficiency of delivering capital building projects by:

- Reducing cost
- Providing a direct transfer of data through to FM activities
- Improving stakeholder engagement
- Reduce defects by enabling significantly improved project compliance monitoring and auditing

Increase operational efficiency by improving space utilisation:

- Model allows improved communication for recording room information
- Better internal stakeholder management in relation to requests to change department accommodation
- Extractable estate information for internal reporting