

BIM, **Legal &** Procurement

*L4 Viable Options –
Encouraging Collaboration
& ‘No Blame’*

L4

BIM IN PRACTICE



Australian
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L4 Viable Options – Encouraging Collaboration & ‘No Blame’

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**L4 Viable Options – Encouraging
Collaboration and ‘No Blame’**

L4 Viable options – encouraging collaboration & no blame [Version 1 – August 2012]

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INTRODUCTION

Traditional approaches to project procurement (such as design, bid-build) do not necessarily allow project teams to tap into the full potential of collaborating in BIM. Is it possible to create a legal instrument that binds the design and construction team behaviour and encourages shared liability and a 'no blame' culture? This information provides a response to the above question by investigating legal and procurement factors that can contribute to a more integrated way of delivering projects across the building lifecycle.

RISK SHARING & NO BLAME CULTURE

Many hope that BIM will be part of a new, more collaborative working style, which is only to be encouraged. However, terms such as 'risk sharing' and 'no blame' should be used cautiously, if at all.

Setting up formal risk sharing or no blame agreements requires careful preparation and advice. Otherwise, the safer approach is not to use terms like 'risk sharing' or 'no blame'.

For a more collaborative working relationship, there are two very different alternatives to consider:

- Collaboration (including collaborative umbrella agreements, strategic partnerships and framework agreements) – a collaborative agreement on a single project or across many projects where the parties agree to work collaboratively but with each party remaining liable only for its own work and risks.
- Alliance contracting – a different form of project procurement where the parties to a single project agree to share risk and reward under a painshare/gainshare arrangement, so that each party shares the risk of the other parties' errors.

COLLABORATION

The aim is for risk to be managed collaboratively by the whole project team and when a problem is encountered, the whole project team works together to resolve or mitigate that problem. (However, this does not change the ultimate liability of team members if the problem is not resolved or mitigated.) Effective collaboration depends upon client leadership, selection of project partners, collaborative forms of contract and suitable commercial arrangements, including early supply chain engagement.

Collaborative umbrella agreements, strategic partnering agreements and framework agreements set out mandatory consultation and collaboration processes, but they do not usually impose a formal system of risk sharing, and each party usually remains liable only for its own work and conduct. These forms of working would therefore usually remain within the terms of standard professional indemnity insurance policies and would not require special arrangements.

Collaborative umbrella agreements:

A collaborative umbrella agreement is an overarching formal commitment that sits above the main contract and Professional Service Agreements. The collaborative umbrella agreement commitment includes:

- Outline the collaborative values the project team wishes to work to
- Identifies common goals and objectives
- Creates a common sense of purpose and shared vision
- Aligns the behaviours of individuals
- Promotes transparency and trust
- The commitment is signed by each design/project team member

This partnering ethos provides assurance to all involved and is essentially useful in maintaining and binding team efforts.

Strategic partnering/framework agreements:

Refer to the UK *Strategic Forums Collaborative Tool Kit* (ie: candidate selection, evaluation and appointment)

The creation of team partners and a truly collaborative culture is essential to the success of a collaborative approach. The key to partnering is quality of leadership, transparency, clarity and cooperation.

- A partnering structure which allows greater collaboration between key parties often produces greater efficiency and productivity gains.
- Partnering ensures a shared value system, pre-arranged management plans and collaboratively developed processes, tools, systems and practices.
- These agreements are negotiated with individual companies to establish an agreed method of working together and a commitment to first work opportunities.
- Partnerships usually include one senior individual being the direct group contact in the event of a performance or compliance failure. (Again, this collaboration does not alter the ultimate allocation of responsibility and liability for the consultant's own contribution.)

Early supply chain engagement:

Early supply chain engagement (two-staged, negotiated, framework/alliancing or design portion) allows the preferred supply chain to actively engage in the design process from the earliest design stages.

- The preferred supply chain can initially advise on: a) cost, b) buildability, c) innovation, d) prototypes, e) detailed design, f) risk and value management, and g) safety in design.

The supply chain is encouraged to take early design documentation responsibility to:

- Remove duplication in the design process.
- Minimise omissions, errors, defects and potential onsite redesign.
- Streamline information into CAD/CAM automated fabrication and manufacturing process.

Early supply chain involvement must be carefully mapped out with clear definition of design consultants' handover and ongoing responsibilities, including design liability risk. Early supply chain engagement is the key to single point insurance, as it can reduce overall project cost.

ALLIANCE CONTRACTING

Alliance contracting is a different form of procurement which may be adopted for a single project. Because of the very different risk, and the liability and insurance implications, 'shared risk', 'no blame' or alliance contracts should only be entered into after specific legal and insurance advice has been sought. The parties to an alliance (eg, a government client, a building contractor and a lead design consultant) enter into a single contract, usually including a painshare/gainshare regime and a formal agreement to share risk and a legally binding 'no blame' agreement. Because risk sharing means that each party undertakes joint liability for other parties' work and conduct, liability under an alliance agreement will usually not be covered by each party's own professional indemnity insurance.

On any alliance project, a single project insurance policy tailored to the alliance should be obtained (see the section headed 'Single project insurance' under **L2 - Professional indemnity Insurance**).

Alliance contracting is likely to be suitable only for large projects for government clients, as it requires a high level of legal advice to set up and the premiums on first-party insurance are usually also high.

Consultants on alliance projects would also need to consider issues such as:

- whether they are in the alliance or are sub-consulting to one of its participants
- whether they have the protection of a no-blame agreement
- whether the terms of the policy provide them adequate protection (project specific policies of this kind typically provide cover only for a fixed period, such as seven or 10 years)

- the risk of claims by third parties, for which the alliance participants cannot contractually exclude liability, such as liability to a person injured on the project which is due to a design or other negligent error on the part of project participants

On an alliance project eg, Public Private Partnership (PPP), there is still a requirement to agree between the team members most of the aspects of the early supply chain engagement.

Even though the parties are brought together to collectively put in a project bid, they are engaged using the traditional processes, and the demarcation and responsibilities for the respective parties remain the same.

It also needs to be remembered that the procurement by the builder will likely be along traditional lines. The reality of our market place is that whilst a builder can lock in a design team consortium for a bid, they are unlikely to be able to lock in sub-contractors. There simply are not enough to go around. Hence for myriad reasons, the construction part of alliance will not be subject to any single project insurance policy. It may be subject to a separate alliance and shared risk agreement. If that is the case there will be an interface and demarcation to agree between the two alliances, which in some cases will have organisations in common with both.

HOW DO WE SET UP COLLABORATIVE TEAMS TO ENSURE THERE IS A COLLABORATIVE CULTURE?

How do we make existing procurement systems work for collaborative working in BIM?

Client and senior management buy-in is required and a client's ability to deal with a change in risk profile must be established from the outset. Business objectives and value systems must clearly define a commitment to collaborative working. Internal legal teams must first assess the group's collaborative risk profile and arrangements must be agreed with external insurance companies. Solicitors must be engaged to draft contracts, especially on alliance projects. The following is a list of success factors in establishing any collaborative environment.

Hierarchy of documents:

Collaborative work practice, supporting a collaborative culture, is set out in a hierarchy of documents promoting trust and transparent relationships:

- Collaborative umbrella agreement
- Framework Agreements/Professional Service Agreements
- Scope of service and responsibility matrix
- BIM Management Plans
- Tools and processes

Collaborative main contract clauses – BIM:

- BIM is an enabler of collaboration in the way in which information and data is presented in a highly transparent manner.
- Key areas of BIM risk and liability need to be identified in main contracts. Contracts should include issues or restrictions that may exist in terms of interoperability for integrated data being exchanged. (Electronic data management platforms allow for the open exchange of data and reduce the need for co-location of design/project teams.)
- Highly collaborative contracts with proper risk allocation and commercial incentivisation, need to take advantage of:
 - New interoperability and high functionality of available technologies
 - Collaborative BIM Management Plans, protocols and standards

Transparent 5D cost models provide a high level of transparency and clear cost structures. Therefore the client has the power to interrogate cost breakdowns and to see if this relates to the allocation of resources and work plans. This provides new levels of assurance around project management. This will only work if the modelling requirements to support 5D have been defined at the outset (in a BIM Management Plan).

- Changes in vocabulary, copyright, ownership of objects in 3D libraries, ownership of the model, software provision and training, may be addressed.
- Contracts need to reflect the intention to work collaboratively. This promotes and permits collaborative consultation and resolution of risk. (An example of a collaborative contract is found the UK NEC National Engineering Contract, with extensive risk management activities)

Two-staged collaborative Professional Service Agreements:

- Professional Service Agreements should be established in two-stages. Initially in a simple agreement or modified short form, to cover the team while the following is collaboratively formulated and agreed: a) scope of service and responsibility matrix, b) BIM Management Plan, c) collaborative tools and processes and d) collaborative workshops.
- A two-staged procurement of professional services provides the whole team sufficient time and information to assess their risk and buy-in to project delivery, ensuring long term ownership of project outcomes.
- The short form is subsequently replaced with a standard retrospective Professional Services Agreement reflecting the collaborative values and wording set out in the overarching collaborative umbrella agreement, including procedures for collaborative working. (An example of a collaborative Professional Services Agreements is found in the UK NEC National Engineering Contract suite.)

(a) Collaborative scopes of service and responsibility matrix

- BIM Management Plan
- The production of a collaborative BIM design solution affects roles and responsibilities, resources and fee payment structures.
- Scopes of service crucially establish complete clarity and understanding of the new roles and responsibilities within the BIM modelling team (ie, who does what).
- New levels of resources or responsibility may be needed in the early stages in order to ensure integrity of information. As a generic statement, the scope of service should ideally reflect changes in design activities necessitated by a rapid BIM design process (eg, order and sequence of work, consultant engagement, deliverables requirement, program durations, compliance verification, management and change management processes, etc)
- A matrix of responsibility transparently identifies roles and responsibilities and must be collaboratively agreed with the team. The matrix must incorporate new BIM roles and job titles, vocabulary, activities (eg, clash detection versus coordination, or responsibility for generating a federated BIM model etc).
- Only by bringing a suitably balanced team together can a client expect to succeed.
- Consider how these roles extend through the construction process into the federated model handover.

(b) BIM Management Plans

- The BIM Management Plan, project BIM plan, design management plan and project execution plan should all communicate the same message and outline collaborative activities and strategies that support a collaborative culture. This requires greater focus on risk management by the team as an entity.
- The BIM Management Plan with project standards and protocols strengthens and augments the spirit of coordination and provides many of the tools to ensure success.

(c) Collaborative tools & processes

- Each tool, process or standard used to monitor, manage, record, approve or check for compliance within the design process, must be aligned with the collaborative value system, collaborative activities, roles and responsibilities and plans of work.

(d) Collaborative workshops

- A key milestones workshop should be arranged to ensure the whole project is fully reviewed by multi-disciplinary consultants, specialist knowledge, supply chain and delivery team, clients, stakeholders, authorities, operators, facilities manager, third parties and end users. This permits:
 - timely decision making in a rapid 3D design process
 - timely risk and value management
- overall transparency to ensure the whole project team is aware of and addresses the same issues at the same time (ie, right information at right time)
- effective change management, to ensure the whole project team understands why decisions are made (ie, less likely to make unnecessary changes at a late stage)

CONCLUSIONS

The main theme of this paper is to consider collaboration as the key to viable options for BIM enabled procurement processes. It has considered the legal and procurement factors that can contribute to a more integrated way of delivering projects across the building lifecycle using BIM. There are two alternatives to be considered. The first being collaboration (including collaborative umbrella agreements, strategic partnerships and framework agreements) and the second less common approach is alliance contracting with each party sharing the risk of the other parties' errors.

Collaborative agreements include collaborative umbrella agreements, strategic partnering/framework agreements and early supply chain engagements with the key success factor in each being to establish the ground rules early and generating a culture and willingness to collaborate as part of a team. Alliance agreements are based on parties to an alliance (eg, a government client, a building contractor and a lead design consultant) entering into a single contract, usually including a painshare/gainshare regime and a formal agreement to share risk and a legally binding 'no blame' agreement. This model is considered applicable to very large projects.

Regardless of the procurement options used, client and senior management buy-in is required and a client's ability to deal with a change in risk profile must be established from the outset. Business objectives and value systems must clearly define a commitment to collaborative working.

Summary

- Traditional approaches to project procurement (such as design, bid-build) do not necessarily allow project teams to tap into the full potential of collaborating in BIM.
- For a more collaborative working relationship, there are two very different alternatives to consider:
 - Collaboration – a collaborative agreement on a single project or across many projects where the parties agree to work collaboratively but with each party remaining liable only for its own work and risks
 - Alliance contracting – each party shares the risk of the other parties' errors
- Client and senior management buy-in is required and a client's ability to deal with a change in risk profile must be established.
- Success factors to consider for any collaborative arrangement:
 - Hierarchy of documents
 - Collaborative main contract clauses – BIM
 - Two-staged collaborative Professional Service Agreements including collaboratively formulated and agreed: a) scope of service and responsibility matrix, b) BIM Management Plan, c) collaborative tools and processes and d) collaborative workshops.