

CITA Dublin Digital Transformation

Procurement, Contracts and Risk Management – What needs to change?

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What is wrong with prevailing procurement practices ?

- *‘Clients tend to fixate on lowest initial tendered prices and this is often perpetuated by their advisers, who, in a traditional procurement model, are implicitly employed (at least partly) to manage a fixed and adversarial transactional interface between clients and industry’ - Mark Farmer, ‘Modernise or Die’ (2016)*
- McKinsey Global Institute (2017) recommended that poor productivity in the construction sector means we need to *‘rewire the contractual framework’*
- The Hackitt report *‘Building a Safer Future’* (2018) urged an overhaul of procurement systems to avoid a *‘race to the bottom’* where *‘the primary motivation is to do things as quickly and cheaply as possible rather than to deliver quality homes which are safe for people to live in’*

What are the causes of disputes?

➤ Kumaraswamy, M. (1997)

- *'Inaccurate design information*
- *Inadequate design information*
- *Inadequate site investigations*
- *Slow client response (decisions)*
- *Poor communications*
- *Unrealistic time targets*
- *Inadequate contract administration*
- *Uncontrollable external events*
- *Incomplete tender information*
- *Unclear risk allocation'*

➤ The risk of most causes arising can be avoided or reduced by sharing and evaluation of data using early contractual appointments and BIM

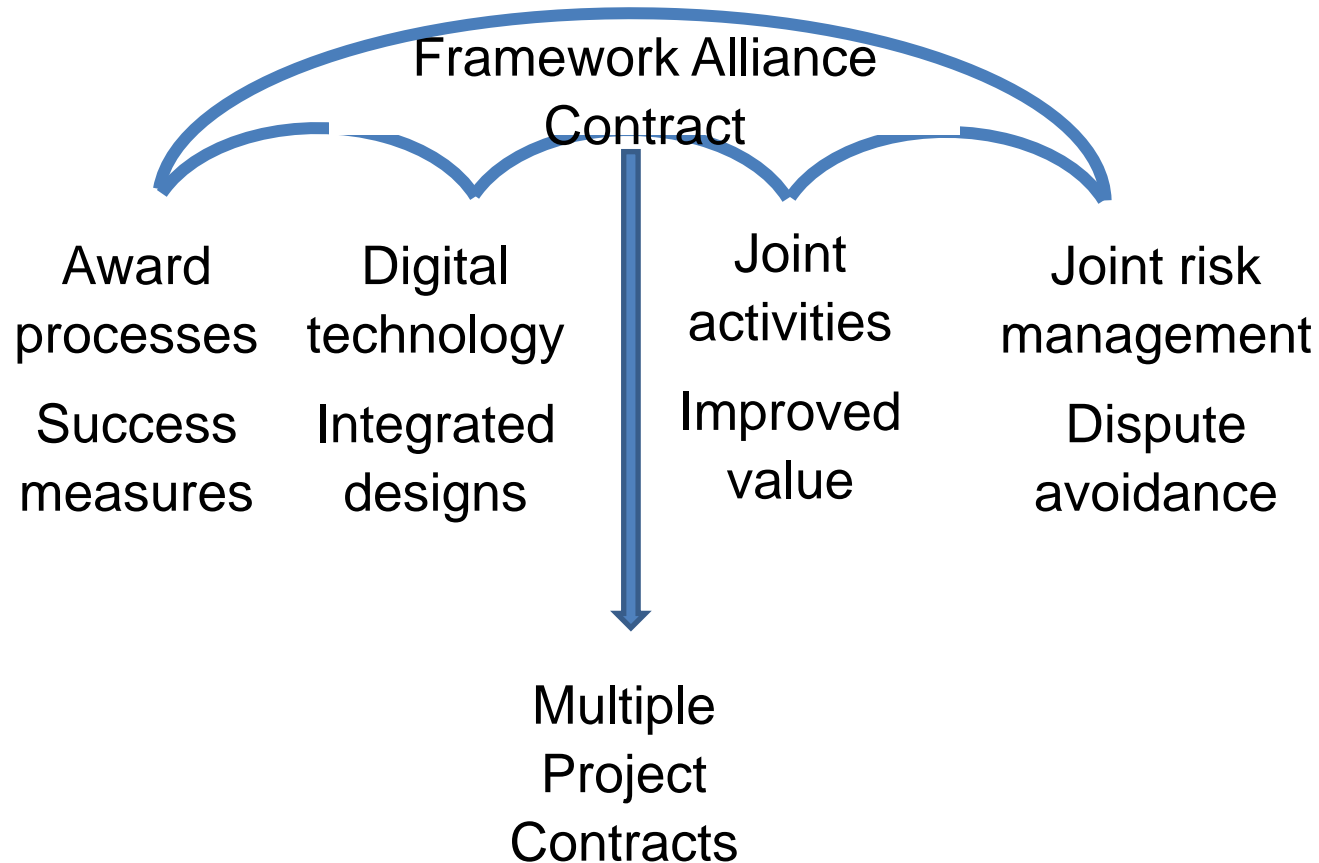
What is collaborative procurement?

- Collaborative procurement comprises a set of processes and relationships through which team members (including contractors, subcontractors, manufacturers and operators) can develop, share and apply information in ways that improve the design, construction and operation of their projects
- King's College London researched over 50 case studies of successful (and some unsuccessful) collaborative procurement projects, many using alliance contracts
- Collaborative procurement includes contractual commitments to undertake preconstruction phase joint reviews of design, cost, time and risk within agreed deadlines, with support from named individuals comprising a '*Core Group*' (e.g. **PPC2000**; **FAC-1**) or '*Alliance Board*' (e.g. **NEC4ALC**)

How does an alliance contract support collaborative procurement?

- An alliance contract integrates the contributions of clients/ consultants/ contractors/ subcontractors:
 - In a standalone multi-party contract in place of multiple two party contracts, preferably with early conditional preconstruction phase appointments (e.g. **PPC2000**; **NEC4ALC**)
 - In an overarching contract (e.g. **FAC-1**) that integrates multiple two party appointments and construction contracts connecting:
 - a programme of multiple projects
 - the elements and phases of a complex project
 - the contributions to a project using BIM

FAC-1 as an umbrella contract integrating other contracts



What should an alliance contract clarify?

- Why is the alliance created, how long will it last and how can it be terminated? (**FAC-1** *Objectives/ Targets* and agreed consequences of not achieving them)
- How will work be awarded? (**FAC-1** *Direct/ Competitive Award Procedures*, agreed *Project Contract* forms and other *Template Project Documents*)
- How will members work together to improve value? (**FAC-1** *Alliance Activities*, joint *Register Management*, *Timetable*)
- How will the members' work be integrated? (**FAC-1** *Alliance Manager*, agreement of shared data, intellectual property and *BIM*, *Core Group* governance)
- What are the members' rewards? (**FAC-1** *Incentives* and payment provisions)

Alliances and joint risk management (JRM)

ISO 44001 describes joint risk management as follows:

- *‘The joint risk management team shall establish and record the process to be used for joint risk management within the relationship, recognising the links into each organisations’ existing risk management processes’*
- *‘The joint risk register shall be reviewed at planned intervals as defined under the governance structure and appropriate actions addressed’*
- *‘The term “joint” implies that each partner makes a contribution to all of the risk management activities’*
- *An effective collaboration is one where the parties share responsibility as far as is practical in supporting the individual risk of the partners’*

JRM on the Hampstead Heath Ponds



JRM on the Hampstead Heath Ponds

- **PPC2000** project alliance contract with risk management workshops throughout project and an evolving *Risk Register*
- Agreed that clay from site would be used as part of dam construction but ground investigation revealed that some clay weathered and not fit for this use:
 - Agreed to assume usable level of 1 metre with a 50% pain / gain share where usable clay was above or below that level
 - Avoided re-measurement and worked well on one clay bed but more difficult to apply on another where 50/50 split was agreed to be an over-simplification
- Contractor (BAM) attended early stakeholder meetings, crucial in explaining to interested parties how impact of works would be minimised: introducing key individuals at an early stage, carried forward to construction phase so as to ensure continual building of relationships
- BAM reversed proposed order of pond works, so that the riskiest pond should be worked on first, in order to create float for later phase of the works: this significantly de-risked the project programme

JRM on the Bewick Court project



JRM on the Bewick Court project

- **PPC2000** project alliance contract with early appointment of main contractor (Kendall Cross) and cladding specialist (Allscott)
- After start on site, Allscott went into administrative receivership, with team aware that no comparable cladding specialists were available within a wide geographical radius
- Main contractor put alternative proposals to *Core Group* and offered to take on direct liability for cladding, by recruiting insolvent specialist's workforce and acquiring required materials from administrative receiver: 4 week delay and additional costs of £7,352
- Later, when mobile phone companies delayed shutting down their aerals on the roof, main contractor agreed at a *Core Group* meeting to identify savings that could fund the costs of suspension, and client agreed that compensation from mobile phone companies would be spent on the project: £40,000 of compensation spent on improved window-cleaning system

MoJ, HMP Berwyn: FAC-1 prototype +BIM



£157 million HMP Berwyn- substantial savings and improvements agreed prior to start on site, with framework alliance incentivising improved value during a 38 week preconstruction appointment under **PPC2000** http://constructingexcellence.org.uk/wp-content/uploads/2015/12/Trial-Projects-North-Wales-Prison-Case-Study_Final.pdf

HMP Berwyn JRM and improved value

- Innovations proposed by main contractor **Lend Lease** and sub-contractors such as **Crown House** (M and E) included value engineered lighting (from another alliance project), review of building footprints (from another alliance project), environmental benefits and reprogramming to make up for delayed start on site
- Overcoming significant risks and challenges, including shortage of precast suppliers and site contamination including remnants of an old munitions factory
- Savings included £4 million resulting from asbestos mitigation on site
- Small/medium enterprises (SMEs) used on £30 million of work packages, and 77% of people on site were local
- First prison project to earn **“Skills Academy”** status supporting new apprenticeships

FAC-1 : Managing risks and resolving disputes

- *Risk Management* actions under the **FAC-1 Risk Register** can enable *Alliance Members* to reduce risks, to share risks as agreed and to price more accurately any risks that cannot be reduced or shared
- **FAC-1** provides for non-adversarial dispute avoidance and dispute resolution by means of:
 - *Early Warning* as soon as an *Alliance Member* is aware of any dispute
 - Consideration by the *Core Group*
 - Options for *Independent Adviser, Conciliation* and *Dispute Board*
- Hackney Homes and Homes for Haringey (SCMG) housing alliance, **FAC-1** prototype– the *Core Group* resolved ‘*potential disputes with the benefit of full cost and time information plus the motive to retain long-term relationships*’

JRM on Liscate School: FAC-1 + BIM



JRM on Liscate School: FAC-1 + BIM

- Liscate Municipality in Milan led the first **FAC-1** alliance in Italy, governing procurement of a £5 million school
- **FAC-1** was explained to bidders, and the alliance members included the client, contractor, design team, construction manager, safety coordinator, subcontractors and suppliers
- **FAC-1** joint *Risk Management, Early Warning* and *Core Group* systems enabled:
 - Rapid problem-solving in relation to data discrepancies
 - Subcontractor contributions to timber construction on site, leading to agreed cost savings and improved fire prevention
 - Agreed enhancement of site safety measures for workers and occupants

Further information on alliances

- **FAC-1** website www.allianceforms.co.uk
- *'Collaborative Construction Procurement and Improved Value'* (April 2019), David Mosey with 10 co-authors; over 50 case studies; explanation of selection, joint planning and joint risk management processes; analysis of NEC4ALC and FAC-1
- *'What is the Impact of FAC-1 on Construction?'*
youtube <https://www.youtube.com/watch?v=NmvETRmJFEE>
- *'Delivering a BIM Alliance in Milan'* - youtube
<https://www.youtube.com/watch?v=g1hLNEAVOLU>

What can standard form alliances offer?

- Contracts that are widely accepted and that save the public sector/industry time and cost spent on bespoke forms
- An alternative to the defensive and fragmented culture caused by fear of disputes and failure to share information
- Improved integration among design consultants, contractors, subcontractors and manufacturers
- Clearer involvement of users and other stakeholders
- The means to get the best out of digital technology
- Motivation for improved performance
- A strong basis for integrated working combined with clear legal rights and obligations