Implementing New Models of Construction Procurement

The annual report of the Trial Projects Working Group to the Infrastructure and Projects Authority

March 2017

Final version as submitted to IPA

Foreword

"The Infrastructure and Projects Authority (IPA) welcomes the work of the Trial Projects Working Group and thanks its members and supporting organisations for their well-considered advice and considerable investment of time and goodwill. These members and their supporting organisations are shown at Annex A.

After 4 years of continuous support the time has come to refocus on other ministerial priority areas.

- The New Models of Construction Procurement are applicable across the housing, buildings and infrastructure sectors. They support the objectives of the Government Construction Strategy 2016-2020 and industrial strategy Construction 2025.
- Two new models of construction procurement (Two-Stage Open Book, Cost-Led Procurement) have delivered positive outcomes for public sector clients, in terms of value, cost (savings of 6%-20%+), time, quality, sustainability and social value as well as improved productivity. They are recommended for continued widespread use in the public sector.
- A third new model (Integrated Project Insurance) shows promise, and we will continue to review the evidence of trial projects of this model as it develops, to build the evidence base from which to inform future recommendation.
- Clients wishing to consider any of these three new models should follow the guidance available on the IPA website¹, which is accompanied by a range of case studies. The government's Crown Commercial Service has included capability in the new models as one of the core competencies expected of tenderers for its latest frameworks², they are also included in our Project Initiation Toolkit.
- We welcome the commitment of the industry organisations who have agreed to resource its
 work moving forward. We will keep their evidence of effective new models under regular
 review, and to formalise this we have asked for an annual report to the Government
 Construction Board on new models of procurement, emerging lessons and
 recommendations for further improvement."

¹ https://www.gov.uk/government/collections/new-models-of-construction-procurement

² https://www.contractsfinder.service.gov.uk/Notice/0a5bc66e-be4d-4500-a11a-2bac7ea432af?p=@T0=MjdNT08=UFQxUIRRP

Executive Summary

- 1. This report is submitted to the Infrastructure and Projects Authority (IPA) after a four-year programme of work.
- 2. The Trial Projects Working Group has measured the following benefits of two new models of procurement, Two-Stage Open-Book and Cost-Led Procurement:
 - 2.1 Capital cost savings in the typical range 10% 20%+,
 - 2.2 Quantified outcomes for the client including faster delivery, better quality and value in use, lower whole life costs, higher client satisfaction, environmental benefits, and social value including more apprenticeships.
 - 2.3 Supply chain benefits including local employment, fair payment, supply side satisfaction with client performance, improved project team relationships and job satisfaction, better/more reliable risk management, better workloads, profitability and reputation.
 - 2.4 Process benefits including better collaboration, early involvement, innovation, and BIM deployment to 'Level 2'.
- 3. A third new model, Integrated Project Insurance, remains under trial, and its first project at Dudley College is well under way with an integrated project team appointed, inception of the insurance policy achieved, and a design with fully-compliant 'Level 2' BIM well underway. To date the trial is progressing well, with savings of about 6.5% 'locked in' under the insured target cost.
- 4. Based on these findings, which are examined in detail in this report, the group recommends:
 - 4.1 Widespread adoption in the public sector of the two proven new models;
 - 4.2 Continued review of trials of the third model Integrated Project Insurance;
 - 4.3 That adoption of these new procurement models which feature early involvement and collaboration is an essential pre-requisite for the successful implementation of BIM and other client and supply chain initiatives aimed at delivering mutual improvement.
- 5. The group will reconstitute in 2017 under the auspices of Constructing Excellence to continue to help the public and private sector client base embed these new procurement models, and to continuously improve them. The group will report annually to the Government Construction Board on modern models of procurement, emerging lessons and recommendations.

Introduction

6. The Working Group was tasked in the Government Construction Strategy 2016-2020 as follows, and as such this report covers four years of work:

"New models of construction procurement were trialled under GCS 2011-15 to explore the potential to drive better value and affordability in the procurement process. The new models include the principles of early supplier engagement, transparency of cost, and collaborative working to deliver a value for money outcome. Alongside the potential for efficiencies, the models can support improved relationships across clients and the supply chain, increased supply chain innovation, and reduced risk. Case studies of the trial projects demonstrate that the new models can help realise efficiencies. The Trial Projects Working Group will continue

to encourage the use of new models of construction procurement and the Project Initiation Routemap.

The Government, with support from industry, will continue to establish trials of the new models of construction procurement outlined in GCS 2011-15 (Cost Led Procurement; Integrated Project Insurance; Two Stage Open Book). The trials will be monitored by the Trial Projects Working Group and will form part of the growing evidence base to inform their adoption".

7. Participation in the 2016 group is as listed in Annex A. We put on record our thanks to the civil servants in the Cabinet Office and IPA who supported and encouraged our work, the many project teams who undertook trial projects and co-operated so positively with our monitoring, and the many others in the public sector and the industry who helped us deliver.

Aims and Objectives

- 8. Our aim was to support the government's forecast efficiency savings by ensuring that all public sector construction clients take up these new models where appropriate to improve delivery of projects to clients' value criteria.
- 9. Our objectives were to embed the <u>proven</u> new models as business-as-usual in central government, with a default position that public sector clients will use them unless there is compelling evidence that other approaches would be more effective, and to trial the most promising <u>unproven</u> models to assess their capability to deliver value as above.
- 10. High-level goals included to trial new models and collate and report the evidence, to provide and promote guidance and training/education material, to measure uptake, and to ensure the new models are integrated with and support and enable IPA and other government initiatives such as Client Capability, Fair Payment, BIM, Government Soft Landings and visa versa, since procurement models which feature early involvement and collaboration are recognised as essential to enable these other improvements.

About the three new models

11. The three new models are summarised in the Government's 2014 report "New Models of Construction Procurement" ³:

Two Stage Open Book

12. A client invites prospective integrated teams to bid for a project based on their ability to deliver an outline brief and cost benchmark. Following the first stage competition, the appointed team works alongside the client to build up a proposal, the construction contract being awarded at the second stage.

Cost Led Procurement

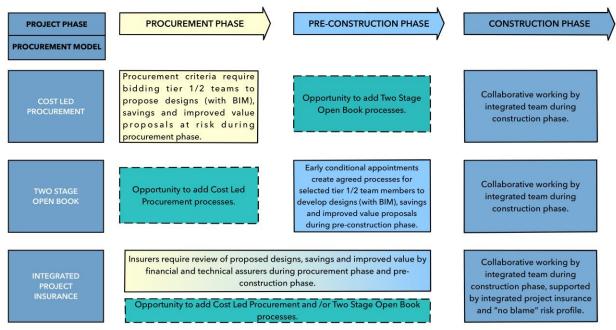
13. A client uses their knowledge of costs to set a challenging cost ceiling and output specification against which the supply chain can bring experience and innovation to bear in a competitive framework environment. On frameworks with a series of similar capital projects, CLP provides

³ https://www.gov.uk/government/publications/new-models-of-construction-procurement-introduction

the opportunity to continually improve on the unit costs of the programme working collaboratively with the supply chain.

Integrated Project Insurance

- 14. This creates a holistic and integrated project team (an "Alliance Board") to eliminate the 'blame/claim' culture. The innovative insurance package limits the risk for the individual members of the team, fosters joint ownership of the project, and thereby reduces the likelihood of overrunning in terms of cost and time.
- 15. The three new models each have particular features but are not mutually exclusive and each feature similar post-Award processes to ensure supply chain integration and collaboration in delivery, as illustrated in this chart:



NB, this diagram needs to be edited: "at the meeting on 6 Dec 2016, it was agreed that the words in the bottom central rectangle should be changed to "Some processes from CLP and 2SOB may be compatible".

16. The models are applicable across the housing, buildings and infrastructure sectors, and all have at their heart collaboration and early engagement, key to which is the early formation of an integrated project team of designers, contractors and supply chain. The models thus embrace and rely on the procurement of consultants as much as of contractors and supply chain.

Trial projects programme

17. Government Departments and other public sector bodies were approached to put forward Trial Projects for the three new procurement models. The list of projects is as follows, more detail is at Annex B. In summary, 15 projects were monitored, covering central and local government projects with a total value of £2.2B. We are grateful to all those in the project teams for their cooperation.

Trial projects

Rye Harbour Property Services Cluster – IESE

Circle Housing Supply Chain Management Group (SCMG)

Upper Mole Anchor Property

RM Lympstone Dudley College Advance II

Cookham Wood Connect Plus

Archbishop Beck St Nicholas Primary School New Prison North Wales Shakespeare Primary

Project Horizon

18. The monitoring programme was managed and funded by Constructing Excellence. Entry to the programme was triggered by submission of an application form capturing basic information on the project, and the Cabinet Office on advice from the working group decided whether to accept the project into the programme. Constructing Excellence then appointed an 'academic partner' expert in the relevant procurement approach and held a kick-off/induction meeting with key project team members, the academic partner and a project 'mentor'.

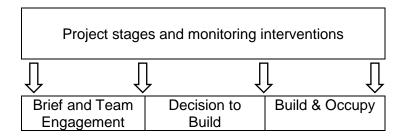
Mentors

Each procurement model had a lead champion and specialist 'mentor' as follows:

- 2SOB David Mosey (Kings College)
- CLP Vaughan Burnand (VEB Lean)
- IPI Martin Davis (IPInitiatives).

Their role was independent of the project team, to aid the project team to understand the requirements of the new procurement model under trial and to ensure rigorous implementation. The role was remunerated by each project. Mentors also, unremunerated, sat on the working group, supported recruitment of trial projects, authored or edited draft guidance and case studies, and supported dissemination events including several hosted by the Cabinet Office.

19. The monitoring process proceeded with knowledge capture meetings at the end of each project stage for the project team and academic partner to work through assessment questions, metrics and KPIs, and lessons learned file.



20. Reports of each assessment were compiled, and a summary 'case study' was prepared for publication by Constructing Excellence once all parties had confirmed their consent. All published case studies and guidance are available on the .gov.uk website⁴. Events to facilitate shared learning across projects, including interface with other industry bodies, were held, and many other platforms taken to promote the programme and its impact.

⁴ https://www.gov.uk/government/collections/new-models-of-construction-procurement

Measured benefits

21. The three models have yielded typical capital cost savings in the range of 6%-20% as shown in the table, with additional benefits and value as illustrated further below.

Procurement model	Range of savings
Cost Led Procurement	6%-35%
Two-Stage Open Book	8-26%
Integrated Project Insurance	6.5% 'locked in' to date, forecast to lead to 20%+

Two Stage Open Book

- 22. The seven Trial Projects demonstrated powerfully how the collaborative systems of Two Stage Open Book and Supply Chain Collaboration generate agreed savings and other improved value, and also demonstrated how they are a natural fit with BIM. The results included:
 - Reduced bid costs
 SCMG analysis by a tier 1 contractor showed that "Bid costs on a procurement supported by
 Two Stage Open Book under SCMG were far lower than the bid costs they incurred under a
 comparable single stage procurement, specifically £719 per £1 million of turnover (under
 SCMG) as against £4,808 per £1 million of turnover (under the comparable traditional bid)".
 - A collaborative culture
 Project Horizon showed how "Two Stage Open Book enabled a culture of collaborative working at all levels of the supply chain as well as the creation of integrated project teams with better defined roles for individuals employed by the client, Tier 1 contractor and Tier 2/3 supply chain members".
 - Cost and time savings
 Significant and transparent, e.g. 20% at Cookham Wood where "A fully integrated team have
 worked to a tight timescale to commence delivery on site of a new build Young Offenders
 Institution that to date has exceeded cost saving targets".
 - Granular cost savings in exchange for new working practices Project Horizon achieved 15% cost savings through: "Elimination of duplicated roles in an integrated team, visibility and continuity of pipeline of work through larger scale, longer term work offered to Kier by Surrey and in turn to Marshalls Surfacing and Aggregate Industries, advance planning of work on each annual cycle, prompt payment of Marshall Surfacing and Aggregate Industries by Kier, closer involvement in the design and planning of individual tasks within the programme, and availability of storage facilities in depots."
 - Improved quality of design and construction
 For example, Cookham Wood: "To address the need for lighting to be indestructible in the Education block, EMCOR provided a bespoke alternative lighting proposal. This solution reduced the amount of trunking and ensured that lighting was located in the centre of the rooms, achieving a significant cost saving and a better lighting solution."

Extended warranties and more sustainable solutions
 Project Horizon achieved "Improved whole life value including agreement of ten year warranty for material and pavement design." "Analysis of the first eight months of work on site showed 96% of all schemes delivered with a ten year supplier warranty."

Stakeholder engagement

A combination of Two Stage Open Book and BIM provided "improved design coordination and change management at an early stage prior to construction, including liaison with the governor of HMYOI Cookham Wood."

- Opportunities for SMEs and local businesses, increased employment/training commitments SCMG established "Early joint appointment of comprehensive range of SME Tier 2 and Tier 3 supply chain members" and created "New opportunities for SME subcontractors and suppliers."
- Supply chain benefits

Benefits for consultants, contractors, suppliers and other supply chain members:

- Separation of profit and overheads from other costs so as to ensure that cost savings do not erode margins.
- Joint working that enables influence over design, robust programming and early risk
 management so that projects proceed on an agreed basis supported by maximum
 information with reduced likelihood of misunderstandings or disputes. For example,
 under the IESE Framework, "During the pre-construction period the design was
 challenged by the project team during design team meetings where the planners,
 estimators and entire project team identified alternatives that would potentially save time
 and/or money. The supply chain also offered better value options including significant
 savings".
- An environment in which supply chain members can demonstrate savings and other improved value in order to obtain the benefit of additional work, contract extensions and other agreed incentives such as shared savings. For example, under the SCMG Framework Alliance, "new lines of client contact are established with tier 2 and tier 3 supply chain members at an early stage in the preconstruction process so that they can make maximum contributions to design, resident consultation, surveying and programming and can work in conjunction with the client and tier 1 contractors"

Cost Led Procurement

23. The three Trial Projects demonstrated results including:

• Thin client

Clients able to adopt a 'light touch' approach to management where nearly all activity is undertaken by the supply chain

Roll out

Anchor replicated the approach across the whole estate by way of a five-area procurement exercise. Other local authority clients are considering the approach in other departments.

Organisational transformation

Anchor's programme included job redesign and a training programme with nationally-recognised qualifications for all property staff in the key areas of collaborative working.

Programme saving

Due to tight timeframes a key driver was the potential to reduce the delivery schedule. The

clients were able to streamline up-front processes, and allied to early involvement to facilitate supply chain innovation, project programmes were as much as halved.

Integrated Project Insurance

- 24. Early results from the live Trial Project at Dudley demonstrate process benefits including:
 - Design process and BIM
 The strategic commitment to utilise BIM from the outset has put the industry norms and associated software tools to challenging practical test. Because the alliance has embraced all the key parties from the outset, a single BIM Execution Plan was able to be produced for the whole supply chain process.
 - Early appointment

 Key suppliers were selected as soon as it was recognised that their products and contributions to the design were what was required.
 - Reduced documentation
 The need for tender drawings and specifications to prescribe what the constructors are required to deliver is largely redundant as they were involved in arriving at the design solution. Under the Alliance Contract all partners waive their right to make claims against or sue each other, save in the case of "wilful default", so documentation is not required to protect against liability, and BIM can be used without the liability constraints under traditional contracts.

Lessons learned

Two Stage Open Book

25. The Trial Projects demonstrated the following requirements for success:

- Client leadership and commitment to early creation of an integrated team including consultants, tier 1 contractor(s) and tier 2/3 subcontractors and suppliers
- A contract structure that empowers and supports an integrated team- on all seven Trial Projects this included a framework or alliance and a project preconstruction phase agreement
- Agreed activities throughout the preconstruction phase describing the roles and contributions of team members in relation to each work/supply package
- Appropriate individuals representing all team members who are briefed and trained to work together
- Co-location, workshops and other techniques to build a collaborative culture and eliminate adversarial or opportunistic behaviours
- Construction phase appointments that are strictly conditional on the team together developing pre-construction phase proposals that meet the project brief and project budget
- Commitment to binding deadlines for all preconstruction phase activities including joint design, costing, risk management and programming
- Separate agreement of fees/profit/overheads of consultants, of tier 1 contractor(s) and where
 possible of tier 2/3 specialist contractors and suppliers, so that agreed cost savings do not
 erode margins.

Cost Led Procurement

26. The key lessons learned for this model focus on achieving a credible and client-understood target cost:

- Allow more time up front to achieve agreement on the target cost
- Access cost data in order to develop a robust benchmark cost database (a Project Cost Tool).

Integrated Project Insurance

27. It remains relatively early days, but significant lessons learned to date include the need for:

- Improved initial project documentation for project partners covering key operating issues (e.g. a collective Communication protocol; Project Bank Account arrangements)
- A smoother Alliance Board reporting process (formatting & techniques)
- A smoother supplier engagement process (i.e. covering the timing, content and mode of engagement)
- Better integration of project Opportunities & Risks with design development (including improved arrangements for financial interrogation)
- More robust decision and action taking by the Integrated Project Team and other suppliers
- Improved frequency and timing of IPI coaching sessions, especially in the early stages of team formation and design development
- More frequent peer-review of project arrangements, including those covering cost accounting in the Alliance (e.g. people costs)
- Managing decision-making so that individual project partners do not take action that can be
 detrimental to the collective ethos of the IPI 'philosophy' (e.g. ensuring that the members of
 the Integrated Project Team collaborate on all key aspects of design).

Guidance and case studies

28. The working group produced the following outputs, which are available on the IPA website⁵:

- Procurement guides (4 no.):
 - Introductory guide
 - Two-Stage Open Book procurement
 - Cost Led procurement
 - o Integrated Project Insurance procurement
- Case studies (13 no.) see Annex B.

Current uptake (to end 2016)

29. In addition to our trial projects programme, covering central and local government projects with a total value of £2.2B, our assessment of take-up by central government and local government of these new procurement models as of late 2016 was as follows:

⁵ https://www.gov.uk/government/collections/new-models-of-construction-procurement

Sector	Current uptake
Health (DH)	National framework Procure 21+ worth £650-£750m which
	enables early engagement and integrated supply chains for
	some years now. Shares and informed many of the features of
	the new models, as will the replacement Procure 22.
Education (EFA)	EFA is procuring over £5B through the Priority Schools
	Building Programme using National, Regional and Modular
	Frameworks, they have effectively used CLP and achieved
	like-for-like savings of up to 35% which could be considered as
	high as 50% when area considerations are included. Two trial
	project schools in the local government sector in Beverley and
	Leeds are both achieving significant savings. Other authorities
luction (MOI)	are looking to join in.
Justice (MOJ)	£900M national and regional framework alliances using Two Stage Open Book - plus trial projects also integrating BIM
Homes (HCA)	CLP trial project in the 'sheltered sector with Anchor Trust,
Homes (HCA)	13% saving on refurbishment of old persons homes. 2SOB trial
	project with Hackney Homes/Homes for Haringey, 14%
	savings on housing refurbishment. Widespread use by RSLs.
Defence (DIO)	Trial Project of 2-Stage Open Book through the Southern
	Construction Framework. The DIO National and Regional
	frameworks are suitable for CLP and BIM integration.
Environment Agency	Currently using CLP on a flood alleviation scheme on the
	Upper Mole and is nominating another which will be their 3rd.
Highways England	Widespread use of early contractor involvement, which shares
	and informed many of the features of the New Models.
Local government	Take-up in the local government sector is more widespread -
	we identified projects being delivered under frameworks using
	the recommended principles worth £1.5B in the last two years
	alone ⁶ . Furthermore, Cabinet Office auditors verified added
	value benefits and savings delivered by the Southern
	Construction Framework using the two-stage open book
	approach worth £31.24m for 2014-15, and £38.91m for 2015-16 ⁷ .

Barriers to further take-up

- 30. Levels of awareness of the new models are low, let alone the benefits they offer, this is the major barrier prohibiting greater take-up. Other barriers to change need to be addressed before wider roll-out can be achieved. The group considers key ones to be as follows:
 - Clearer government policy
 More robust, unequivocal and overt recommendations are required in the Government
 Construction Strategy and from Government Construction Board and the Construction
 Leadership Council for these new models.

⁶ As reported by members of the National Association of Construction Frameworks

⁷http://www.southernconstructionframework.org.uk/docs/SEaL%202015%20End%20of%20Term%20report%2 0web.pdf

- Lack of private sector take-up
 - Ministers often look to the private sector for validation, and we have identified many informed clients in the private sector who use the models or variants with many of the same features, eg water utilities, rail, Heathrow Airport, and some property developers. However, the group would argue that such comparison may be simplistic in any case, as the drivers for procurement in the public sector are quite different to those in the private sector, with factors such as a focus on the longer term, social value (eg local employment), and reputational risk when tax-payers' money is spent badly. Consequently, different models of procurement may well be more appropriate and local government has pointed the way in this regard.
- Client capability

This requires engagement in the 'demand chain' long before the procurement phase, starting with client leadership, a focus on outcomes, aligning policy and departmental procurement teams. The Infrastructure and Projects Authority is embarked on a major programme of upskilling in this regard through the Major Projects Leadership Academy and other initiatives.

- Procurement policies, processes & capability
 Identify barriers to formation of an integrated project team (IPT) at the earliest possible stage, including when to make key decisions. The Gateway Process, Digital Plan of Work, BS8534 (Construction Procurement), BS11000 (Collaborative Business Relationships) inter alia all need to be aligned and consistent with each other. An unequivocal statement is required with high-level government endorsement that the models are fully compliant with OJEU and other procurement law a fact which was confirmed by advisors to all the trial projects.
- Existing frameworks

If these do not explicitly refer to use of the new models, advisors may feel that they cannot adopt their use. Crown Commercial Services (CCS) have shown the way in including them in their latest frameworks, and this should be emulated by all other frameworks as they renew. Another tool to consider, which will further facilitate the new models, is the Association of Consultant Architects' (ACA's) FAC-1 and TAC-1 Framework and Term Alliance Contracts⁸, launched in 2016 and adopted already on procurements with values ranging from £7.5 million to £2.8 billion in the public and private sectors.

Professional Institutions

Better engagement is required with the professional institutions, consultants and professional advisers who can appear to have an agenda which favours old models.

• Evidence
Further evidence and clarity of the benefits of the IPI model is required.

Next steps

- 31. Having conducted its own SWOT analysis of Strengths, Weaknesses, Opportunities and Threats, the group proposes the following goals for 2017 and beyond the tactics proposed in the forward programme of work are set out in Annex C.
 - Embed proven new models in central Government
 - Trial other models
 - Guidance and training
 - Measure uptake of new models and the benefits

⁸ www.allianceforms.co.uk

• Integrate new procurement models with other policies, eg BIM, fair payment etc.

Marketing & Communications

- 32. Key marketing and comms objectives in support of this strategy will be to:
 - Communicate the learning from trial projects and other sources;
 - Raise awareness in government and industry of the new models and their benefits:
 - Send the report to key market decision-makers especially in central Government Departments tasked with delivering efficiency savings and engage them in follow-ups;
 - Support with easily-navigable web pages and a helpline if possible to answer FAQs and provide sensible advice, "to clear up a few points that aren't clear".
- 33. Messages to be packaged for target audiences with supporting collateral including hard copy and slide decks with targeted PR and social media include:
 - **Benefits for clients** including cost and time savings and quality gains, good competition on the basis of quality and value not illusory lowest tender price:
 - Benefit for policy makers in enabling other initiatives such as BIM, fair payment, etc;
 - **Benefits for industry** less variation less risk, efficiency/productivity gains, better and repeat business, establish environment for successful BIM, improved quality/reduced rework, improved staff commitment/satisfaction, improved sector reputation and image;
 - **Benefit for society** better outcomes from social infrastructure investment, better value for money for the tax payer.
- 34. Key partners for this programme will include the IPA and Government Construction Board to reach Government stakeholders, as well as the Construction Leadership Council. Key industry partners will include Constructing Excellence, the Strategic Forum for Construction, professional institutions and trade associations starting with those represented on the working group.

Call to action

- 35. The above action plan will require resourcing from industry organisations and support and facilitating actions from the IPA and other parts of government. With a commitment to the necessary level of resourcing and support, we believe the following targets are achievable:
 - Adoption
 - by central government clients 25% by March 2019.
 - o by local government clients 50% by March 2019.
 - Impact

Savings by central and local government clients – 10%-20% of spend by adopters.

- Wider value social benefits including local employment, better supply chain profitability.
- 36. As such these new procurement models will make a major contribution to the achievement of savings under the Government Construction Strategy, to the government's industrial strategy for construction and its targets for 30-50% improvement, and the Construction Leadership Council's focus on Smart, Digital, and Through-life performance⁹.

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⁹ http://www.constructionleadershipcouncil.co.uk/

37. The group therefore calls on:

- all public sector clients to review their procurement strategies against these proven new
 models of procurement billions of pounds are already being spent this way to achieve
 better outcomes, why wouldn't all adopt these models going forward;
- **industry suppliers** to provide clients with advice on the benefits of the new models, and to upskill to be able to deliver the new models successfully with benefits for all; and
- the Construction Leadership Council and Strategic Forum for Construction to champion these new models, report on their uptake, and support efforts to secure take-up.

Trial Projects Working GroupMarch 2017

Annex A. Members of the working group

A new governance structure was agreed by the Government Construction Board in 2015, renaming the group and aligning its governance and Terms of Reference to support better the objectives of GCS 2015-20.

The group met five times in 2016 with participation as follows - note the increased representation of supply side organisations to support implementation.

Role	Name	Job Title	Organisation	
Chair	Don Ward (Chair)	Chief Executive	Constructing Excellence	
Mentor	David Mosey	Director, Centre of Construction Law and Dispute Resolution	Kings College London	
Mentor	Vaughan Burnand	Managing Director	VEB Lean Ltd	
Mentor	Martin Davis		Integrated Project Initiatives	
Client	Rob Taylor	Commercial Services Manager	Environment Agency	
Client	David Wharton		Crown Commercial Service	
Client	Charles Mills		London Underground	
Client	Keith Heard	Chair	National Association of Construction Frameworks	
Industry	Mark Taylor	Group Commercial Director	Osborne / Build UK Main Contractor rep	
Industry	Alasdair Henderson	Operations Manager	Bam Ritchies / BuildUK Specialist Contractor rep	
Industry	Alan Muse	Global Director of Built Environment Professional Groups	RICS (and Construction Industry Council)	
Industry	Peter Caplehorn	Deputy Chief Executive & Policy Director	Construction Products Association	
Industry	Trevor Hursthouse	Chairman, Specialist Engineering Contractors' Group	Lingwood Management services	
Academic	Rob Garvey	Senior Lecturer	University of Westminster	

Annex B. Listing of trial projects

15 projects have featured in the trials programme to date, covering central and local government projects with a total value of £2.2B.

Eight trial projects assessed Two-Stage Open Book model and the related systems of supply chain collaboration. Three of these also included a focus on BIM. Five projects assessed Cost Led Procurement, two of which are at an early stage in reporting, and two assessed Integrated Project Insurance although only one of these proceeded to construction.

Trial Project	Procurement model	Trial phase	Cost Saving	Basis of saving	Year published	Value (£M)
Rye Harbour	Cost Led Procurement	Build and Occupy	6%	Outturn cost	2013	9.6
Circle Housing	Two Stage Open Book	Decision to build	15%	Award cost	2013	1200.0
Upper Mole	Cost Led Procurement	Decision to build	15%	Award cost	2013	5.4
RM Lympstone	Integrated Project Insurance	Kick off meeting	15-20%	Outline saving aspiration	2014	8.0
Cookham Wood	Two Stage Open Book	Build and Occupy	20%	Outturn cost	2014	20.0
Archbishop Beck	Two Stage Open Book	Decision to build	20%	Award cost	2014	15.9
New Prison North Wales	Two Stage Open Book	Brief/team engagement	26%	Challenging cost target	2014	157.0
New Prison North Wales (v2)	Two Stage Open Book	Decision to build	26%	Award cost	2015	
Project Horizon	Two Stage Open Book	Build and Occupy	17%	Outturn cost	2014	100.0
Project Horizon (v2)	Two Stage Open Book	Build and Occupy	14%	Outturn cost	2015	
Property Services Cluster – IESE	Two Stage Open Book	Decision to build	14%	Award cost	2014	119.0
Supply Chain Management Group (SCMG)	Two Stage Open Book	Build and Occupy	14%	Outturn cost	2014	202.1
Anchor Property	Cost Led Procurement	Build and Occupy	9%	Outturn cost	2015	3.4
Dudley College Advance II	Integrated Project Insurance	Brief/team engagement	15-20%	Challenging cost target	2015	11.7
Dudley College Advance II (v2)	Integrated Project Insurance	Decision to build	15-20%	Award cost	2016	<u> </u>
Connect Plus	Two Stage Open Book	Build and Occupy	8%	Outturn cost	2015	350.0
St Nicholas Primary	Cost Led Procurement					
Shakespeare Primary	Cost Led Procurement					

Annex C. Programme of work for 2017 and beyond

GOAL	TACTICS			
	Short-term (2017)	Longer term (2018+)		
Embed proven new models in central and local Govt	 Collate comms pack (guidance, case studies, standard slide deck, website etc) Add criteria/decision tree on which to choose Improve links in eg IPA Routemap 1:1 meetings with each Govt Dept at senior-most level to understand current positions and including direct engagement at further appropriate levels to engage champions Influence Crown Commercial Services and Govt Category Board Support NACF meetings with key clients 	 Continuously review and improve short-term tactics Annual report to Government Construction Board Target top 100 projects of 'applicable spend' in Pipeline Target Departments' existing frameworks renewal processes to include new models as option 		
Trial other models	Secure and monitor further trial projects as required (esp IPI) through direct contact with Government Departments and support of key bodies such as Government Construction Board, Construction Leadership Council.	 Establish process for 'horizon scanning' Trial further new models if identified 		
Guidance & training	 Publish overview introduction to the new models including 'decision tree' Publish definitive guidance/'legal opinion' on compliance with OJEU Develop and promote training package Arrange programme of industry events and Govt client events Review new (IPI) toolkit and consider adoption as generic procurement toolkit 	 Branded CPD sessions supported by IPA Embed references in Major Projects' Leadership Academy etc Develop 'train the mentors' programme Refresh core guidance docs (see feedback paper) Consider maturity matrix 		
Measure uptake of new models and the benefits	 Establish reporting process for collecting data on take-up Agree KPIs to be measured on all projects Better analysis and reporting of benefits monitored in trial projects Track hits and downloads of key guidance Consider survey of awareness amongst key stakeholders 	Establish reporting process for benefits realised across the estate (not just trials)		
Integrate new models with other initiatives	 Mutual/cross-representation on other key govt working groups (eg BIM, Project Intitiation Routemap) Common messaging about new procurement models as the foundation for facilitating other govt initiatives (BIM etc) Private sector, eg Institute for Collaborative Working, Collaboration for Integration project, CE exemplars 	Improve positioning and content in Project Initiation Toolkit, BIM guidance etc		