



Cabinet Office

# New Models of Construction Procurement

Introduction to the Guidance for Cost Led  
Procurement, Integrated Project Insurance and  
Two Stage Open Book

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# FOREWORD

As Government Chief Construction Adviser, I welcome this guidance for these three models of construction procurement, Cost Led Procurement, Integrated Project Insurance and Two Stage Open Book. These models encompass principles of early supplier engagement, transparency of cost, integrated team working and collaborative working. They are fully consistent with the objectives of the Government Construction Strategy (May 2011) and the ambitions of the Industrial Strategy for Construction, *Construction 2025* (July 2013). Their adoption will contribute considerably to the reductions in the cost of construction that both Government and industry are seeking.

In introducing these models, our aim is to provide cost certainty, which is an essential element of providing better long-term value from the delivery of construction projects. It is vital that clients enter the procurement process knowing what their projects *should* cost and that the procurement vehicle adopted provides them with confidence of what their projects *will* cost.

I therefore commend the models as vehicles for implementing these best practice principles on construction projects, in central Government departments and agencies, in the wider public sector and in the private sector. I look forward to them being adopted widely over the coming years.

**Peter Hansford**

***Government Chief Construction Adviser***

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# INTRODUCTION

In 2011 the [Government Construction Strategy](#) set out to achieve savings in construction procurement of up to 20% by making efficiencies through reforming procurement practices and effecting behavioural and cultural change. This was reinforced in 2013 by the industry's own ambitions as set out in the Industrial Strategy for Construction ([Construction 2025](#)).

In 2012, Government with the support of industry, established a programme to trial three new models of procurement proposed by industry (Cost Led Procurement; Integrated Project Insurance; Two Stage Open Book) that were incorporated within the Strategy. These models draw together and utilise a range of common principles (which are described on page 7), together with specific features, in changing the way government buys construction services.

Government promotes the adoption of these common principles, which are encapsulated by each of the three new models of procurement that sit within a range of appropriate procurement models available for clients to adopt. If clients and suppliers want to achieve the same level of outcomes demonstrated by the trial projects, then the steps and techniques set out in the guidance will help them to achieve this.

The models bring together existing effective practices and behaviours that leading practitioners are already using to help generate savings reported by Government (£447m in FY 2012/13 savings and £840m in FY 2013/14)<sup>1</sup>. These guidance documents are intended to further spread the benefits available to public bodies from the adoption of best practice techniques. They are to be read in conjunction with other recent Government guidance addressing procurement reform (See Annex B for examples).

The models seek to change the way public sector clients buy construction to a process where the supply chain responds to an outline client requirement and declared budget. This contrasts with the historical process of the supply chain building up a price against a detailed client requirement without understanding what the client can afford.

The models represent evolution rather than revolution and establish clearly defined client-led collaborative processes developed from existing best practice. They are intended to achieve

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<sup>1</sup> *Government Construction: Construction Cost Reductions, Cost Benchmarks & Cost Reduction Trajectories to March 2014*

efficiency gains that can be released for additional work, create new employment and industry activity, make projects more affordable and fundable, and make the UK construction industry more competitive.

This initiative is the result of the efforts of a number of significant contributors from within both the public and private sectors. A delivery group, support group and trial project mentors have been overseeing the programme of trial projects to test out these models. They have monitored progress and have gathered evidence of outcomes. Annex A provides a list of contributors who have been closely engaged with this initiative to ensure its progress and success.

[Case study reports](#) are an output of this process and the draft guidance documents were produced by the mentors drawing on this evidence. The guidance documents provide practical support to clients and suppliers wanting to replicate the benefits achieved by leading practitioners.

These documents represent the next step in the journey to achieving transformation and embedding best practice in conjunction with the implementation of Infrastructure UK's Infrastructure Routemap and Building Information Modelling Level 2. They are also consistent with the principles in BS 8534: *Construction procurement policies, strategies and procedures: Code of practice*.

A list of other relevant publications and guidance is set out in Annex B.

To receive further information, obtain support or to attend future events relating to these guidance documents, please get in touch with us at:

[GovernmentConstructionTeam@cabinet-office.gsi.gov.uk](mailto:GovernmentConstructionTeam@cabinet-office.gsi.gov.uk)

## WHY READ THE GUIDANCE DOCUMENTS?

The purpose of these guidance documents is to assist clients, consultants, Tier 1 contractors and Tier 2/3 subcontractors and suppliers to understand and adopt a consistent approach to the procurement and delivery of the Cost Led Procurement, Integrated Project Insurance and Two Stage Open Book models.

The new procurement models are based around delivery by integrated project teams working collaboratively. Along with reducing costs, the models are expected to: contribute to improved programme certainty, reduce risk, encourage greater innovation, and improve relationships across clients and the supply chain. The models do not deliver the cheapest construction project, but will deliver the most cost effective and value for money outcome.

The guidance documents will give clients the greatest opportunity to repeat the outcomes of other successful projects. It will also enable clients to deliver:

- consistent application of leading practices / behaviours;
- consistent effective behavioural change; and
- continuous improvement and performance management.

This document describes the common features applicable to the three new models of procurement. It also summarises their unique features. Each set of guidance also highlights the benefits of adoption at each stage, details the core processes and principles and provides step by step support through the model, and addresses key client and industry questions. The trial projects demonstrated how to obtain the maximum benefits from the new models, and that forms the basis of the guidance. These can be used by clients and their integrated teams as the basis for further briefing, training and support when procuring and delivering any project or programme of work.

**If clients and suppliers want to achieve the same level of outcomes demonstrated by the trial projects, then the steps and techniques set out in the guidance adopted as a whole will help them to achieve this. The outcomes demonstrated in the trials are a result of the whole process of the model rather than a selection of elements.**

**The clients leading the trial projects used processes and systems that are easily adaptable to any project or programme of work. In publishing this guidance, it is assumed that the models will be applied by individuals skilled in construction procurement. This skill combined with these guidance documents will generate the**

**successful outcomes described. The guidance documents focus on the specifics of the new procurement models rather than the generalities of best practice in construction procurement.**

# THE NEW MODELS OF PROCUREMENT

## Common Principles

The presumption for all the new models of procurement is that high levels of supply chain integration, innovation, and good working relationships between client and industry will lead to a significant change in the costs and risks of construction projects.

All three models are designed to considerably reduce the commercial risk of construction procurement, execution and commission. The models all require clients to:

- Clearly define the desired functional outcome including specific requirements, e.g., carbon reduction, use of apprentices etc.
- Identify typical costs and delivering the outcomes based on available data, benchmarking and cost-planning work. This will enable the client to set a realistic yet challenging cost ceiling, that would be achieved or bettered, and costs would be further reduced over a series of projects or programmes of work.
- Engage with the supply chain that embraces the principles of Early Contractor Involvement (ECI) and a high level of supply chain integration; and ensure that on completion of the capital phase the specified output performance is achieved.
- Apply a robust review process to ensure appropriate scheme definition, create commercial tension, monitor scheme development and address any unnecessary scope, risks and potentially missed opportunities.
- Take steps to ensure that those appointed to carry out the processes of the models, whether internal or external to the client organisation, have the skills to do so effectively.

The specific features of each of the new models of procurement are described below.

## Cost Led Procurement (CLP)

The client selects one or more integrated supply chain teams from a framework. Teams are selected on their ability to work in a collaborative fashion to deliver below the cost ceiling on the first project, and achieve cost reductions on subsequent projects while maintaining the required quality outcomes.



In competition, two or three integrated framework supply teams are then given the opportunity early in the life of projects to develop their bids with the client team, allowing them to bring their experience to innovate and drive cost reductions. Provided at least one of the supply teams can beat the cost ceiling, it will be selected on the relative scored attractiveness of its commercial and physical proposition and of its team members before being awarded the contract to deliver the project.

Should none of the teams be able to deliver the work within the affordable budget, the project is offered to suppliers outside the framework. The expectation is that this would be unusual on a well-managed framework delivering similar types of projects, where the client and suppliers have an excellent understanding of cost.

If the scheme price cannot be matched or bettered, it should not proceed. Under these circumstances the client may have to reconsider its budget or specification. There is a burden on the client to select a realistically challenging price, and work to enable its achievement by the industry supply chain.

## **Integrated Project Insurance (IPI)**

This approach incorporates many features common to the other two models, together with the introduction of an innovative project insurance product. It is being trialled for the first time by Ministry of Defence and the outcomes from its adoption during the pre-procurement stages on the RM Lympstone project are the subject of an initial case study published alongside this document. The outcomes from the MoD trial project will continue to be monitored and reported, and guidance has been published with this document to permit full consideration of the merits of this innovative approach by those interested to trial its adoption.

In implementing Integrated Project Insurance, the client holds a competition to appoint the members of an integrated project team (IPT) who will be responsible for delivering of the project. Scoring may include elements assessing competence, capability, proven track record, maturity of behaviours, proposals for removing waste and inefficiency, and fee declaration.

The chosen team then works up a preferred solution that will deliver the outcome defined by the client, with savings against existing cost benchmarks.

The difference between this and existing procurement models is the adoption of a single (third party assured) insurance policy to cover risks associated with delivery of the project. This policy packages up all construction-related insurances currently held by the client and supply chain

members. It also takes a top slice of commercial risks, covering any cost overruns on the project above and beyond a “pain-share” threshold which is split transparently between client and the contracted parties (including any key members of the supply chain).

The model introduces third party independent facilitation and assurance of the scheme through a series of gateways. The facilitation helps ensure good value for money and that a wholesome, balanced commercial position has been struck which an insurer can take on board.

With excess cost overruns (up to a “cap”) covered by this policy, it removes the potential for a blame culture to try to pass on liability within the team. Payment of claims is based on the demonstration of loss not the assignment of blame. Yet in order to secure the insurance in the first place, the team will have to prepare a credible proposal, validated by the independent expert assurer to ensure that the commercial tension is maintained, and that the insurer is comfortable that it can be delivered.

## **Two Stage Open Book (2SOB)**

The Two Stage Open Book<sup>2</sup> model sees the client invite prospective team members for a single project or from a framework to bid for a project based on an outline brief and cost benchmark. A number of contractors and consultant teams compete for the contract in a first stage with bidders being chosen based on their capacity, capability, stability, experience, strength of their supply chain, and fee (profit plus company overhead). As a second stage, the successful contractor and consultant team are appointed to work up a proposal on the basis of an open book cost that meets the client’s stated outcomes and cost benchmark.

The Two Stage Open Book differs from Cost Led Procurement in reducing industry bidding costs, enabling faster mobilisation and in providing the opportunity for clients to work earlier with a single integrated team testing design, cost and risk issues ahead of start on site on award at the end of the second stage.

At the heart of this model is a systematic approach to early contractor/subcontractor engagement. The model includes deadlines for their design and risk contributions during the first stage, and has an agreed fixed price and clear risk profile before the client authorises the construction stage.

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<sup>2</sup> There are other forms or variants of two stage open book that are used. The form described in this document and the accompanying guidance is the one defined and recommended by the Procurement/Lean Client Task Group Report and informed by the evidence from the procurement trial projects.

## **Supply Chain Collaboration<sup>3</sup>**

In conjunction with Two Stage Open Book, or other early contractor involvement options, a framework/alliance or project team can use a Tier 2 supply chain intervention. The bidding Tier 1 contractors propose their preferred supply chains. The client, with other team members, then works with the appointed Tier 1 contractor to re-engineer that supply chain to ensure best value. This is not Tier 2 nomination by clients; it is the use of the preconstruction phase for a systematic joint review process.

This process ensures earlier involvement and better understanding by Tier 2 supply chain members, and potential sharing of supply chain members among more than one Tier 1 contractor on more favourable common terms. In both cases it leads to proven substantial cost savings.

## **Selecting which of the models to adopt**

At the point of preparing a business case for any project or programme of work, and developing this into a project brief, a client will need to decide which procurement model best fits the project or programme and the capabilities of the client and supply chain. This will be based on the client's required resource commitment, the benefits, and the client's requirements and objectives. If a client wishes to adopt a procurement approach that reflects the Common Principles set out in this document, then the three models described here provide methodologies for doing this.

A useful tool in the pre-procurement planning process is the Infrastructure UK Routemap<sup>4</sup> which will be re-launched in July this year. This will also assist clients in choosing the appropriate procurement model.

## **Choices being made in selecting each model**

As highlighted above, the models require clients to adopt the common principles outlined on page 7 of this document. However, each model has distinguishing characteristics that mean that a set of choices is being made in selecting a particular model. The choices being made are outlined in Table 1 below, which clients should consider in relation to their existing or planned capability and capacity. Though not essential, the implementation of Cost Led Procurement (CLP), Integrated Project Insurance (IPI), Two Stage Open Book (2SOB) or Supply Chain Collaboration (SCC) is also particularly suited to call off procurement frameworks.

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<sup>3</sup> With recognition that some Tier 1 contractors offer self delivery.

<sup>4</sup> <https://www.gov.uk/government/organisations/infrastructure-uk>

<b>Table 1: Choices being made in selecting each model</b>		
<b>Key considerations</b>	<b>Choices being made</b>	
Selection of integrated team on its ability to deliver the project's objectives	Down select to 2-3 bidders <b>CLP</b>	Down select to single alliance or partner <b>IPI / 2SOB</b>
Maintenance of competitive tension	Mini competition (selection on basis of tender price and design) <b>CLP</b>	Mini competition (selection on ability to deliver <sup>5</sup> ) followed by open book accounting <sup>6</sup> <b>IPI / 2SOB</b>
Overall programme duration : design development stage	2-3 designs worked up during mini competition <b>CLP</b>	Single design worked up following 1st stage selection <b>IPI / 2SOB</b>
Integrated team remuneration during early supply chain involvement stage	Winning bidder recovers pre-contract costs through construction contract <b>CLP</b>	Stage 1 client engagement covers costs of early involvement / preconstruction phase <b>IPI / 2SOB</b>
Form of contract	Suitable collaborative forms <sup>7</sup> <b>CLP</b>	Alliancing forms (with option of suitable collaborative forms) <sup>8</sup> <b>IPI / 2SOB</b>
Allocation of risk	Key risks identified during early supplier involvement with allocation and mitigation defined by contractual arrangements and establishment of appropriate joint risk pot <b>CLP / 2SOB</b>	Client and integrated project team covered by "no blame" integrated project insurance product throughout with predetermined sharing of capped benefit and risk <b>IPI</b>

<sup>5</sup> Evaluation would also include criteria relating to the assessment of the Most Economically Advantageous Tender (MEAT).

<sup>6</sup> In addition 2SOB relies on Tier 2/3 mini competitions run by the Tier 1 Contractor during the preconstruction phase.

<sup>7</sup> For example, **CLP**: any of JCT, NEC or PPC.

<sup>8</sup> For example, **IPI**: bespoke multi party alliance, JCT/CE or PPC suitably amended for IPI; **2SOB**: PPC or a JCT/NEC with the addition of a conditional preconstruction phase agreement.

<b>Table 1: Choices being made in selecting each model</b>			
<b>Key considerations</b>	<b>Choices being made</b>		
Promotion of close collaboration / integration <sup>9</sup>	Target cost with appropriate gain-pain share  <b>CLP</b>	Independent facilitation is employed to support “ <i>no blame</i> ” insurance product, together with appropriate target cost gain-pain share.  <b>IPI</b>	Direct client engagement with all tiers, with option of target cost gain-pain.  <b>2SOB<sup>10</sup></b>
Incentivisation of efficiency	Through appropriate gain-pain share mechanism  <b>CLP / IPI / 2SOB</b>	Option of lump sum OHP  <b>2SOB</b>	
Independent validation	Option of independent technical and financial validation  <b>CLP / 2SOB</b>	Risk assurers are employed to give independent technical and financial validation permitting inception of “ <i>no blame</i> ” insurance product  <b>IPI</b>	

<sup>9</sup> With recognition that some Tier 1 contractors offer self delivery.

<sup>10</sup> For example, through applying Supply Chain Collaboration.

All the models are designed to obtain early proposals for savings and improved value on the understanding that a collaborative approach will be adopted for project delivery.

Reinforcing the common principles underpinning the different models, they are not mutually exclusive and clients have the option to adopt the following combinations if properly structured (i.e. with regard to the earlier comment in this document that the steps and techniques set out in the guidance need to be adopted as a whole at each key stage in the process):

- A Cost-Led Procurement selection process followed by Two Stage Open Book and/or Integrated Project Insurance and/or further Supply Chain Collaboration;
- An Integrated Project Insurance model followed by further Supply Chain Collaboration;
- A Two Stage Open Book model combined with Integrated Project Insurance and/or followed by further Supply Chain Collaboration.

In considering the option to implement any of the above combinations relating to Integrated Project Insurance:

- It should be noted that the IPI model would not proceed to insurance policy inception if: any alliance members have been selected on lowest cost tendering; or the proposed form of contract does not include “*no blame/no claim*” undertakings and related mechanisms suitable for IPI;
- For these particular reasons, early contact should be made with the mentors (refer to Annex A).

# TRIAL PROJECTS AND OTHER EVIDENCE

The programme has drawn on many previous examples of public sector clients using processes that correspond to these models of procurement in varying degrees. The Trial Projects programme demonstrates, by reference to contemporary evidence, that a client-led approach to these processes supported by clear pre-construction phase<sup>11</sup> contractual commitments will:

- create successful integrated teams;
- generate significant savings and improved value for clients; and
- create benefits for Tier 1 contractors and Tier 2/3 subcontractors and suppliers.

Published case study reports<sup>12</sup> are an output of monitoring the progress and outcomes of the trial projects. They help ensure that central and local government learn from the trial projects, so that the effective processes can be adopted across public sector construction projects.

The reports highlight savings and review the full extent to which the common characteristics, specific features and other key initiatives such as Building Information Modelling, the Infrastructure Routemap and Government Soft Landings have been implemented. They also highlight important enablers for efficiency relating to the strategic procurement context, e.g., the use of frameworks to deliver strategic relationships and continuous improvement.

In reporting savings, organisations are using the standard counting method developed for assessing the overarching Strategy related savings. For example, the audited FY 2012/13 cost reductions reported for DEFRA / Environment Agency and Ministry of Justice provide further validation of the savings reported in the two case studies from these central government departments.

The monitoring of the trial projects follows an approach developed by the Trial Projects Support Group that is based on previous methods<sup>13</sup>. The outcomes have been independently analysed and audited. Where appropriate, extracts are quoted throughout the guidance documents.

The full Trial Project Case Studies are published at: [Case Study Reports](#).

Currently the guidance for Two Stage Open Book is informed by evidence from five full case studies (with three more in outline), while evidence for Cost Led Procurement is informed by a

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<sup>11</sup> Full details of the Pre-Construction Phase relevant to each model can be found in the respective Guidance.

<sup>12</sup> Case study reports are produced at four stages: Kick-off Meeting; Brief / Team Engagement; Decision to Build; Build and Occupy.

<sup>13</sup> The established methods have been developed by Constructing Excellence.

single case study. Other evidence supports the case for implementing these new models of procurement. For example, certain principles incorporated within these models are common to those adopted in delivering the Education Funding Agency's (EFA) and Highways Agency's (HA) programmes. This has contributed to significant cost reductions for EFA and HA reported in: [Government Construction: Construction Cost Reductions, Cost Benchmarks & Cost Reduction Trajectories to March 2014.](#)

Integrated Project Insurance incorporates many features (common to Cost Led Procurement and Two Stage Open Book) that leading practitioners have also successfully implemented elsewhere for some time. The outcomes from trialling these features during the pre-procurement stages on the Ministry of Defence RM Lymington project - and the measures needed in preparing for the adoption of the innovative integrated project insurance product - are the subject of an initial case study published alongside this document. In the meantime, guidance has been published to permit full consideration of the merits of this innovative approach by those interested to trial its adoption.

Early involvement and collaboration are the centre-piece of all three models, and the business case has evolved over more than a decade. Two important sources of additional case studies are as follows:

- Over 600 projects in all, managed through demonstration programmes over the last 15 years (managed by Constructing Excellence, see <http://constructingexcellence.org.uk/resources/demonstrationprojects>).
- The Strategic Forum for Construction's "Business Case for integrated collaborative working" (2010) analysed 14 projects where there was rigorous data on the six key attributes of integration and collaboration (see [www.strategicforum.org.uk/ayty8.shtml](http://www.strategicforum.org.uk/ayty8.shtml)) concluding that "*the more integrated and collaborative your team is, the more successful your projects will be and the more benefits they will deliver for you all*".

As the Trial Projects programme continues, additional case studies will reveal new challenges, solutions and techniques. These will be captured in future updates to these guidance documents. As the models are adopted across central and local government, feedback will be obtained from clients and their integrated teams. This continuing feedback process will inform future updates to these guidance documents.



## ANNEX A – AUTHORS AND CONTRIBUTORS

The following individuals have mentored the trial projects and have led the creation of these guidance documents.

### Mentors

Model	Mentor	Affiliation
Cost Led Procurement	Vaughan Burnand	VEB Lean Ltd.
Integrated Project Insurance	Martin Davis	Integrated Project Initiatives Ltd.
Two Stage Open Book	David Mosey	King's College London

### Contributors

The new models of procurement were originally defined by the members of the Procurement and Lean Client Task Group. The members of this group are identified in Appendix A of the task group's report, which can be found at:

<https://www.gov.uk/government/publications/government-construction-task-groups>

Members of the Trial Projects Delivery and Support Groups, together with other mentors and academics have contributed the creation of these guidance documents, and the accompanying trial project case study reports. These individuals are:

Trial Projects Delivery Group	
Phil Wilbraham (Chair)	Heathrow Ltd
Andrew Butt/ Nisha de Silva/ Elizabeth Jacobs	Cabinet Office
Alan Couzens/ Steve Hudson	Infrastructure UK
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Bill Hughes/ Nigel Miller/ Emily Simmons	Ministry of Defence
Chris Ollier	Home Office
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John Connaughton	University of Reading
Martin Ball/ Rob Garvey	University of Westminster
Peter McDermott	University of Salford

## ANNEX B – RELEVANT PUBLICATIONS

- Construction 2025 (Industrial Strategy: Government and Industry in Partnership), July 2013 <https://www.gov.uk/government/publications/construction-2025-strategy>
- Government Construction Strategy May 2011  
<https://www.gov.uk/government/publications/government-construction-strategy>
- Government Construction Strategy: Cost Benchmarking Principles and Expectations and Cost  
<https://www.gov.uk/government/publications/construction-cost-benchmark-data>
- Cost Reduction Validation Method  
<https://www.gov.uk/government/publications/construction-costs-departmental-reductions-2010-2011>
- Government Trial Projects (Cabinet Office website)  
<https://www.gov.uk/government/collections/government-construction#government-construction-strategy>
- Highways Maintenance Efficiency programme Supply Chain Management Toolkit [January 2014]  
<http://www.highwaysefficiency.org.uk/efficiency-resources/lean-toolkit.html>
- Infrastructure Carbon Review (HM Treasury) 2013  
<https://www.gov.uk/government/publications/infrastructure-carbon-review>
- Infrastructure Routemap (IUK), January 2014 (to be added once re-published)  
<https://www.gov.uk/government/news/government-launches-new-guide-to-infrastructure-delivery>
- JCT Constructing Excellence (Sweet & Maxwell)  
[http://www.ictcontracts.com/JCT/contracts/view\\_family.jsp?familyId=180](http://www.ictcontracts.com/JCT/contracts/view_family.jsp?familyId=180)
- NEC3 Option C (Thomas Telford)  
<http://www.rics.org/uk/shop/contracts/NECcontracts/nec3/>

- PPC2000 (amended 2013) (Association of Consultant Architects and Association of Consultancy and Engineering)  
[http://www.ppc2000.co.uk/ppc2000\\_benefits.html](http://www.ppc2000.co.uk/ppc2000_benefits.html)
- Procurement/Lean Client Task Group Report, July 2012  
<https://www.gov.uk/government/publications/government-construction-task-groups>
- Axelos Common Glossary <http://www.axelos.com/?DI=635846>