

# 1. Defining the Need

Last week I heard the Construction Playbook referred to as “the Government’s manual for contracting”. As “mentor” for one of the Government's new models of construction procurement I thought I would explore how well the Playbook will help practitioners convert its words into successful action. For my first blog I will start at the beginning: defining the need.

The Construction Playbook says:

- Clear and measurable outcomes should be set at the outset of a project or programme,
- Outcomes and metrics should draw on the social value model,
- Benchmarking is the analysis of information and good practice from past projects and programmes to create data reference points. It can generate the inputs required for Should Cost Models [SCM]...
- All projects and programmes should produce a SCM; the SCM should be linked to the whole life carbon assessment.

Although one wouldn’t quarrel with any of these precepts, they are collectively a recipe for confusion. The basic parameters for a client must surely be: what is my need and how much am I prepared to invest to secure it? In between these there are questions such as:

- How guaranteed must the quality and compliance of the solution be?
- Am I looking for speed or predictability of completion?
- Am I prepared to spend some of my investment on social value?
- Is whole life value important because I will be holding the investment for some years?
- Am I prepared to spend some of my investment to achieve low/zero carbon?

Back now to the Playbook which says under “Effective Contracting”: “The commercial approach should be linked to the delivery model, the desired outcomes and the type of relationship you want to have with the supply chain” and “One of the most effective ways to deliver outcomes is to create contracting environments that promote collaboration and reduce waste; contracts should create positive relationships and processes designed to integrate and align multiple parties’ commercial objectives and incentives”.

The Playbook goes on to venture that alliancing arrangements should be considered; and under “collaborative models of construction procurement” it references the new models of construction procurement I have already mentioned. If I were you, I’d go a bit further than just “considering”. In my view, only alliancing based on unfettered collaboration and “no blame” will give the best prospect for ensuring that

- whatever primary and secondary objectives are chosen, they will be delivered in the priorities agreed, and
- waste in terms of unnecessary processes and silo-protectionism is outlawed.

I will return to how and why this is the case in future blogs”

## 2. Procuring the Team

This May saw the publication by the Cabinet Office of a series of Key policies and guidance for making sourcing decisions for the delivery of public services, including specific guidance on sourcing consultancy services. 432 pages in total, supplementing the 78 pages of the Playbook itself.

Also in May the non-aligned think tank RADIX published, in partnership with Gleeds, a report “Tickbox Infrastructure”, with these particular headlines:

“Tickbox culture has resulted in an over - zealous focus on rules and regulations rather than issues and people”,

“An experienced eye sees almost immediately in a few minutes what has to be done”,

“Many of those in the construction industry need to learn how to construct a human relationship before they turn to anything else”, and

“We need both human skills, as well as the ability to use digital tools, to support the creation of efficiencies and innovative approaches”.

In parallel with the Playbook the Government issued the Green Paper “Transforming public procurement”, coincidentally also 78 pages, and is now reviewing responses. Government is to be commended, not criticised, for this effort to transform construction Post Brexit. But, as the RADIX report indicates, the foundations of our procurement systems are fundamentally flawed, and a major “U” turn in our approach to delivery is required if we are to meet the Playbook’s aspirations.

Great teams of great people deliver great outcomes. Dysfunctional teams of inappropriate people, irrespective how capable or experienced they are, can be relied upon to deliver poor outcomes late and at extra cost. Procurement should therefore be about selecting the best teams of the best mix of people suitable to meet the project need.

But what about cost? Why do we ask the industry to dictate it? As RADIX succinctly puts it, Contractors put forward a ‘politically acceptable’ figure knowing it to be unrealistic”. The Playbook is rightly hot on benchmarking, and the Cabinet Office has issued a guidance note on “Should Cost” modelling, with this advice to procurers: “Should Cost Models can be used throughout the procurement lifecycle and can help to support wider requirements, such as demonstrating value for money or helping to protect government from ‘low- cost bid bias’”.

When therefore clients specify the Need and any success criteria (as discussed in my first blog) they should also be able to specify a realistic and affordable Investment Target. This has been an option under the UK’s Public Contracts Regulations 2015 article 67(4): “The cost element may also take the form of a fixed price or cost on the basis of which economic operators will compete on quality criteria only”.

Now the client can concentrate on getting together the right organisations with the right people who will undertake to deliver “best for project” solutions to meet the Need within the Investment Target. The simplest and best mechanism for this is formation of alliances.

I will pick up on ways of doing this in my next blog.

### 3.The Building Safety Bill

Great teams of great people deliver great outcomes: in my last blog I ventured that the best mechanism to achieve this was alliances and promised to discuss ways of forming them. Last month, when I was thinking about this, the Building Safety Bill was introduced into the House of Commons – triggered of course by the Grenfell Tower Fire tragedy and Dame Judith Hackitt’s report.

What will the Bill mean for Building Owners? Government states:

Building owners will be required to manage safety risks, with clear lines of responsibility for safety during design, construction, completion and occupation of high-rise buildings. We will also require a golden thread of information, with safety considered at every stage of a building’s lifetime – including during the earliest stage of the planning process. Building owners will need to demonstrate that they have effective, proportionate measures in place to manage safety risks. Those who don’t meet their obligations may face criminal charges.

Echoes almost 20 years later from the Strategic Forum for Construction’s “Accelerating Change” recommendation (paragraph 5.16):

At each gateway there should be a checklist for assessing the relevant health and safety risks associated with critical stages in the planning and design process. At each stage the integrated team should be required to certify that they have - as a team - considered the health and safety risks in order to ensure that the facilities currently developed will be safe to build and safe to maintain and operate.

Browsing through the Draft Regulations I came across article 8(2):

Any person carrying out any building work as a contractor or any design work as a designer must have

- (a) where the person is an individual, the skills, knowledge, experience and behaviours necessary,
- (b) where the person is not an individual, the organisational capability,

to fulfil the duties of a contractor or designer, as the case may be, under these Regulations in relation to the work.

The definition of “behaviours” includes cooperation with other persons in relation to the work and refusing to carry out work which is beyond their skills, knowledge or experience, and asking for the assistance of other persons where necessary.

Whilst this is all to the good, the fundamental flaw in the organisation of construction persists. The Draft Regulations are circumscribed throughout by the split between design and construction: they spend many clauses in trying to place accountability with the Principal Designer and the Principal Contractor (as the case may be); whereas from the days of Sir Michael Latham’s “Constructing the Team” and Sir John Egan’s “Rethinking Construction” the Industry has been trying to move to integrated teams and collaboration.

Alliances enable the client and partners to take collective responsibility throughout the design, construction and operation process: health and safety is the business of every individual and organisation involved. Following successful precedents from the Continent the risks can be independently monitored so as to give assurance that all but the unforeseeable will be foreseen. This in turn opens the door to a form of owner-controlled project insurance which funds prevention rather than cure.

I hope you will agree the Draft Safety Bill was a worthwhile distraction in this blog. I will return to the process of formation of alliances next time – and indeed the issues of risk assurance and insurance thereafter.

## 4. Forming Alliances

The Building Safety Bill was a timely diversion of my last blog which I had intended to devote to forming alliances. The Draft Regulations show that, when the chips are well and truly down, Government subjugates the traditionally sacrosanct imperatives of procurement to what matters most:

- for individuals: the skills, knowledge, experience and behaviours necessary,
- for organisations: that they have the organisational capability in terms of appropriate management policies, procedures, systems and resources.

Significantly there was a break-through in the much-maligned EU Public Procurement Directive 2014, followed in the UK Public Contracts Regulations 2015, where “lowest price” was demoted and this award criterion was introduced (Article 67(2)(b):

organisation, qualification and experience of staff assigned to performing the contract, where the quality of the staff assigned can have a significant impact on the level of performance of the contract.

With our Post- Brexit freedom the jury is currently out on the Government’s initiative at “transforming public procurement”. In my first two blogs defining the brief and procurement/ benchmarking were discussed; now let us focus on a common-sense approach to forming the actual alliance of organisations and the individuals they field. As we have turned our backs on a divided (design v construction) industry, and are forming an alliance with an integrated project team supporting the client, the selection and award process must be simultaneous for designers, constructors, specialist contractors and any key suppliers.

After the initial screening of interested bidders by a pre-qualification (or supplier assessment) questionnaire, we can concentrate on selecting the best organisations and key individuals to form the alliance. By some combination of interviews, written submissions and behavioural workshops the skills, knowledge, experience and behaviours are assessed and scored, with particular regard to suitability (i) to perform the specific project and (ii) to collaborate with their peers as alliance partners. Quality/cost ratios facilitate analysis of the appropriateness of their costs. Being the key resource for the alliance, they will need to demonstrate how they would expend the remainder of the project costs: procurement of materials, selection of suppliers, establishment of site facilities and engagement of any other specialist support. Their ability to work collaboratively – and to select

others who will also collaborate to meet the brief – will be crucial if the alliance and its integrated project team is to excel.

Each alliance partner must enjoy committed support from its organisation in terms of high-quality management and associated back-up resources: again, quality/cost ratios facilitate analysis. Neither overheads nor profit should be the subject of competitive bidding (the fertile area for sub-economic tendering and claims strategies): they should be factual and “ring-fenced”, with the opportunity for significant extra profit to be earned by the collective success of the alliance at meeting the brief.

Having assembled great teams of great people, we can expect them to deliver great outcomes.

## 5. Opening Up The IPI Model

A survey of over 1,000 construction consultants, contractors and specialists published by the Construction Leadership Council in March of this year found:

- Premiums have increased nearly 4-fold at the last renewal, having doubled the year before; the average rate is 4% of turnover but one in five who gave figures are paying more than 5% of their turnover for their PI insurance
- Almost half of respondents had been declined insurance by three insurers or more

Bullerwells have said “In Crisis”, is not an over-exaggeration when describing the current state of the Professional Indemnity Insurance Market for the construction sector. The combination of increases in professional indemnity (PI) claims from the UK construction sector coupled with major catastrophes such as the Grenfell tragedy and Carillion’s financial collapse, have created a “perfect storm” accelerating the “hardening” of the PI market.

In June the Housing Minister has however stated: “We do not have plans to regulate the behaviour of insurers undertaking PII as this is activity already regulated by the Financial Conduct Authority and the Prudential Regulation Authority”.

The insurance industry mirrors the construction industry it serves; traditionally they have both been liability/blame-based. Professional indemnity insurance is the antithesis of collaborative partnership. In her report “Building a Safer Future” Dame Judith Hackitt stated (paragraph 9.9):

The aim of the procurement process should be to obtain best value, rather than lowest cost. Clients should be aiming to construct buildings that have a long life cycle. The best value is dependent on establishing a collaborative partnership between the client, the contractor and their supply chain – those responsible for the technical detail and those responsible for commercial negotiations need to work together effectively.

A main board director of a top insurer has said that the greatest risk for construction projects going awry is breakdown of collaboration. With an inviolate completion date, the 2012 Olympic projects were overseen by an independent dispute avoidance panel – resulting in minimal disputes and completion on time.

With successful precedents in Australasia, facilitation of collaborative relationships has been an essential ingredient of alliancing. Even when commercial pressures (such as the millstone of a

successful lowest price tender) are absent, contractual stances die hard, and an independent reminder can prevent polarisation.

The other risks can be broadly categorised as technical and financial. There has been a successful precedent for “technical assurance” in Belgium (started by SECO in 1934) as a result of which decennial latent defects insurance cover is available; and cost monitors provide “financial assurance” for bank lending.

Prevention is always to be preferred to cure. As already discussed in Blogs2 and 3, the client’s alliance partners must be chosen for their competence at meeting the brief; a collaborative team culture ensures a robust collective responsibility. Independent facilitation and technical/financial assurance provide a third-party safeguard – for example that innovations proposed are safe and reliable. Three pay-offs can be expected:

- The alliance will be motivated to manage out risks and avoid the cost of remedying defects
- There can be sign-off by the independent facilitator and risk assurers before the client gives final go-ahead
- Insurance premiums and cover availability will improve as insurers’ confidence in alliancing grows.

Alliancing with credible risk management embedded will yield exceptional and predictable outcomes – and therefore the support from insurers that it deserves.

## 6. Building successful alliancing relationships

Under “Effective Contracting” the Construction Playbook makes mention, albeit brief, to alliancing and reiterates its theme of “alignment”:

Alliancing models also provide more effective integration, which leads to effective and aligned arrangements, and enables engagement with the wider supply chain and platform delivery.

Since alliances are built of partners around the client, they can – and should be – self-sufficient. Any alliancing agreement should empower the members, not constrain them. Their mission, set by the procurement, is to fulfil the need as defined in the brief, meet the success criteria specified, and to achieve this within the investment target.

What does the alliance board need to decide as soon as the alliance contract is in place? I would put these as common objectives for initial workshops:

- Appoint their alliance manager and alliance cost manager,
- Agree the “alliance principles” or a “charter” of good conduct,
- Select their “lean” integrated project team from the individuals they had each put forward as suitable candidates in their bids,
- Ensure they have a common understanding of what is meant by cost together with the need for transparency and absolute honesty,

- Confirm the roles of the alliance board, the alliance manager/cost manager and the integrated project team,
- Confirm the basis of overhead and profit recoveries and how they will be ring-fenced so as to ensure fair reflection of each partner's contribution whilst avoiding the pitfalls of cost-plus, and
- Reach an understanding about the basis under which incentives will be structured, adopting (in the Playbook's terms) a one-team 'win-together, fail-together' approach.

As soon as this alignment is achieved and sound relationships are established between the client and the partners, the alliance's integrated project team can set about optioneering for "best for project" solutions to meet the brief. Reverting to the Playbook, under "Successful Relationships" it states:

For more complex projects and programmes, experience has demonstrated that a partnership model with the principles of collaboration, openness, transparency and flexibility based on contractual delivery can be beneficial in driving successful outcomes and innovation.

Strategic supplier relationship management can unlock additional value and innovation.

Whilst alliance partners should be capable of carrying out key elements of their scope of work themselves (as in the case of SMEs), they are only as good as their suppliers. Alliances that have a contracting strategy of early selection of suppliers to be quasi-partners in the alliancing culture and of extending fair treatment to them can expect reciprocal support in forms such as stated in the Playbook:

SMEs are experts in their fields and can provide insight into MMC, innovative technologies and ways to minimise the GHG footprint of the proposed solutions across their whole lifecycle.

Traditional procurement practice is to delay the appointment of suppliers until the extent of work is defined and the best price can be secured. This locks out their above-mentioned intellectual and practical contributions and engenders adverse commercial positioning. Suppliers are human too! But it is essential that alliance workshops to instil progressive collaborative processes and behaviours are extended to all the suppliers as they come on board: they will need more convincing than any other sector of the industry that the alliancing principles are sincerely meant – and to be guided on how to respond.

## 7. Machines and Humans in a Digital Age

In Blog2 reference was made to this comment in the RADIX/Gleeds report: "We need both human skills, as well as the ability to use digital tools, to support the creation of efficiencies and innovative approaches". In its chapter on MMC the Playbook discussed this synergy by advocating:

- Supporting the development and use of consistent structure, rules and language in standards and specifications to facilitate shared understanding and the use of digital and automated solutions.
- Digitising standards and specifications so that requirements are both human and machine readable. This will help to facilitate cross-referencing with other standards and process workflows
- Sharing design content across portfolios and sectors using digital object libraries and common approaches to reducing differences.

More emphasis was however placed on the collaboration between human and machine that can unlock the transformation of the construction industry in an article published by Infrastructure Intelligence in June headed “Machines and humans united” by Richard Shennan, global digital delivery director at Mott MacDonald. He writes:

Humans’ strengths include creativity, judgement, empathy, leadership, intuition, domain experience and a quest for innovation. Machines are good at executing rules-based and repetitive digital or physical tasks and can increase capacity to achieve a desired objective. However, they must be built to do that by humans that understand the direction in which we need to travel to progress.

Unlike in the case of well-funded industries such as space exploration and medical sciences, the construction industry has yet to realise this vision of human/machine synergy for seamless design/construction. This is because it has come from separate origins and has yet to be transformed into one world:

Design: the “management” function was originally the province of the RIBA and architects; with the growing importance of engineering systems, digital twin and energy efficiency engineers have stepped up; but neither’s expertise has extended to facilitating efficient and safe assembly and construction. The IT systems they have developed have been in silos and only now are attempts being made to coordinate them into one simple holistic digital capability.

Construction: the construction managers on the original Broadgate Development influenced the subdivision of work packages to facilitate interface management. Rarely does one see evidence of construction managers using their advantage of early involvement to collaborate in the design development, e.g. by providing for product interfaces, setting to work, commissioning and soft landings from the earliest stage. Their IT systems mirror these deficiencies.

There is another serious block to our industry realising this vision: the project staff who have both exceptional track records and the best vision of how existing project procedures should be improved are usually committed on problematic and challenging projects, and so others are allocated to briefing the IT specialists. I personally fought against this dilemma some years ago, with huge frustration.

The answer is a combination of a significant injection of R&D funding and serious collaboration with the universities. We need an injection of extremely bright new entrants who (i) will not be contaminated by the divide between design and construction and (ii) will have second-nature facility with digital systems. Participation in “live” alliancing should be part of their induction, so that they can see first-hand how powerful human collaboration can be and how currently lacking is digital support to manage the time, cost and risk of design/construction.

## 8. Signing off the Solution

Earlier this year the Infrastructure and Projects Authority published its “Gate Review Process”. Gate 3 Review: Investment Decision Version: V1.0” comprised 51 pages plus 19 documents as “Supporting Guidance”. Under “assessment of the proposed solution” there are 98 “core and specific questions and evidence” to be answered in categories ranging from general, strategic, economic, commercial, finance to management.



Given that Gateway project gate review 1 has investigated the Strategic Outline Case (SOC) and a proposed way forward to confirm that the project scope is clear and achievable, and the project is likely to deliver what is required, and that this has been confirmed at gate 2, one can only wonder why the cost and delay from such an extensive gate 3 procedure is necessary.

Over 30 years ago the Prisons Service woke up to the fact that its briefs had grown like Topsy over many years, with many updates, into a mammoth document which no consultants could possibly grasp. The result was many misunderstandings and therefore post-contract revisions with associated delays and extra costs. The solution was to scrap it all and start afresh with a performance brief, outline drawings showing the operational requirements of each typical building and minimal prescriptive details.

In its chapter on “early engagement and clear specifications” the Playbook implies, rightly, that solutions should not be prescribed:

Clear outcome-based specifications will facilitate innovative, cost-effective solutions ensuring there is a major focus on social value and sustainability.

“Fitness for purpose” has for long been a controversial concept in our industry: firstly because the purpose (to fulfil the need) is not clearly defined, and secondly because design consultants, or contractors, or specialists cannot on their own undertake to meet such a requirement. If on the other hand (a) the purpose is clearly defined in the brief and (b) all parties with the intellectual know-how and capability to meet the requirement are joined together in an alliance, then such an undertaking can indeed be given.

Such a collective alliance undertaking is cogent, worth much more than the sum of its parts. Each alliance partner is watching out, not just for its own compliance, but also for the overall. Because however clients are turning against “more of the same”, and rather looking for innovation, MMC, product and human safety, low carbon, sustainability and social value, alliances will be expected to break new ground - even experiment - with new technologies, digital innovations, new products and new materials.

This involves risk. As mentioned in my earlier Blogs, following successful precedents from the Continent these risks can be independently monitored so as to give assurance that all but the unforeseeable will be foreseen. Having monitored the development of the brief into the “best for project” solution and the culture of the integrated project team, the independent facilitator and the technical & financial risk assurers are in a position to provide “sign-off” before the client gives final go-ahead.

If this sign-off can also be underpinned by a form of owner-controlled project insurance that protects the client, any funder and his partners from these risks, how much more confidence will this give them to embark on the construction process!

## 9. Turning Plans into Reality

The Construction Playbook concentrates, as we have seen in previous Blogs, on the vital front-end areas of procurement and planning. It is however thin on implementation policies, although under “Driving Better, Faster Greener Delivery” it says:

For more complex projects and programmes, experience has demonstrated that a partnership model with the principles of collaboration, openness, transparency and flexibility based on contractual delivery can be beneficial in driving successful outcomes and innovation.

Pre Latham and Egan, designers were advised not to get involved in how their designs should be built – that should be the contractor's sole responsibility. On the international level, when my company was tendering for the M&E for the Mass Transit Railway in Hong Kong, I recall hearing that the Japanese competition devoted far more time (at every level in their organisations) than UK companies in planning how the work would be performed; if actual circumstances showed the plans to be misplaced, they would be reluctant to change; UK companies, having spent much less time on plans, were far more ready to abandon them.

By assembling integrated teams of designers, constructors, specialists and suppliers for the formative stage of projects proposals can be developed and checked by the full breadth of skills and experience of the team: designs will be buildable, interfaces will be manageable, and products will be compatible and fit into the spaces allocated. Under the inspiration and management of a "project integrator" each member of the team will join in taking collective responsibility for the chosen solutions and project execution plans. Abdication of responsibility should be anathema.

Such intellectual and practical integration ensures, not only that the solutions and plans are robust, but also that they will be turned into reality unless there is consensus that some departure is essential. Such cohesion and common commitment is a rarity in a divided industry.

Under Insurance Backed Alliancing with IPI, alliance partners are selected for their experience and track-record of performing the work concerned and for their collaborative culture. They are motivated collectively by gain/pain share to deliver projects "fit for the purpose" defined in the brief within the investment target; they do not acquiesce in, excuse or claim for delays and extra costs. But dynamic of collaboration often needs underpinning, and with Insurance Backed Alliancing this is achieved in three ways:

(1) A "project integrator" (as recommended in Project 13) is an alliance partner with focus on ensuring that the agreed priorities are balanced in ongoing reality, and to arrange adjustment if things start getting off-track or the client's requirements change. This is a precious skill, rarely found, not least because of the inspirational qualities required.

(2) An independent facilitator and technical/financial risk assurers provide 3rd party oversight of the collaborative culture and of technical and financial adequacy and innovation respectively throughout the process from design to completion. These roles are however "light-touch" because of the composition, competence and culture of the alliance partners.

(3) An alliance manager and an alliance cost manager are responsible for the overall management of the alliance, covering in particular the forecasting, gathering and collation of the partners' costs, their timely certification and payment through a project bank account, and the administration of gain/pain share depending upon the delivery of the agreed objectives.

This doesn't involve the creation of new roles in the industry; but for sure it demands that each discipline "steps-up" to better performance and genuine collaboration. How many participants have accessed the Integration Toolkit which was launched for the Strategic Forum for Construction in 2003 to promote integrated collaborative working across the Industry? It is now available in updated form at <https://icwtoolkit.com/>

When will we see a strong demand for training in alliancing and the like? The reality is that alliancing is an exciting and challenging journey: no sooner than we have opened one door of improvement, another two present themselves.

## 10. Insurance Backed Alliancing Unveiled

To the growing number of you on LinkedIn who have shown interest in my Blogs so far, I hope this last one in the series will show your perseverance was worthwhile.

To recap on the journey so far:

(1) Defining the Need: The basic parameters for a client must surely be: what is my need and how much am I prepared to invest to secure it? Between these are success criteria: what priority should be given to quality, programme, sustainability, predictability?

(2) Procuring the Team: Great teams of great people deliver great outcomes. Procurement should therefore be about selecting the best teams of the best mix of people suitable to meet the project need. When clients specify the Need and any success criteria, they should also be able to specify a realistic and affordable Investment Target

(3) The Building Safety Bill: Alliances enable the client and partners to take collective responsibility throughout the design, construction and operation process: health and safety is the business of every individual and organisation involved. Risks can be independently monitored so as to give assurance that all but the unforeseeable will be foreseen.

(4) Forming Alliances: As we have turned our backs on a divided (design v construction) industry and are forming an alliance with an integrated project team supporting the client, the selection and award process must be simultaneous for designers, constructors, specialist contractors and any key suppliers. Their ability to work collaboratively – and to select others who will also collaborate to meet the brief – will be crucial if the alliance and its integrated project team is to excel.

(5) Managing Risk: The insurance industry mirrors the construction industry it serves; traditionally they have both been liability/blame-based. Professional indemnity insurance is the antithesis of collaborative partnership. Prevention is always to be preferred to cure. Alliancing with credible risk management embedded will yield exceptional and predictable outcomes – and therefore the support from insurers that it deserves.

(6) Building Successful Alliancing Relationships: Any alliancing agreement should empower the members, not constrain them. Their mission, set by the procurement, is to fulfil the need as defined in the brief, meet the success criteria specified, and to achieve this within the investment target. Whilst alliance partners should be capable of carrying out key elements of their scope of work themselves (as in the case of SMEs), they are only as good as their suppliers. Alliances that have a contracting strategy of early selection of suppliers to be quasi-partners in the alliancing culture and of extending fair treatment to them can expect reciprocal support.

(7) Machines and Humans in a Digital Age: We need an injection of extremely bright new entrants to our industry who (i) will not be contaminated by the divide between design and construction and (ii) will have second-nature facility with digital systems. Participation in “live” alliancing should be part

of their induction, so that they can see first-hand how powerful human collaboration can be and how currently lacking is digital support to manage the time, cost and risk of design/construction.

(8) Signing off on the Solution: “Fitness for purpose” has for long been a controversial concept in our industry; but if (a) the purpose is clearly defined in the brief and (b) all parties with the intellectual know-how and capability to meet the requirement are joined together in an alliance, then such an undertaking can indeed be given. Such a collective alliance undertaking is cogent, worth much more than the sum of its parts.

(9) Turning plans into reality: By assembling integrated teams of designers, constructors, specialists and suppliers for the formative stage of projects proposals can be developed and checked by the full breadth of skills and experience of the team: designs will be buildable, interfaces will be manageable, and products will be compatible and fit into the spaces allocated. Such intellectual and practical integration ensures, not only that the solutions and plans are robust, but also that they will be turned into reality unless there is consensus that some departure is essential. Such cohesion and common commitment are a rarity in a divided industry.

The Construction Playbook has been the “inspiration” for these Blogs but, like the Playbook, such thought-pieces will not enable or unlock action. Although I have made a passing reference to it already, let me now introduce properly our radical but tried & tested solution: Insurance Backed Alliancing with IPI.

- Instead of appointing design consultants to do design, getting contractors to tender against that design, and then instructing the contractors to build to that design (and live with the consequences of any failures or misunderstandings), the client appoints an “alliance” of suitable consultants, contractors and specialists as his partners to jointly develop the best solution to meet the brief within a stipulated “investment target”. The selection of the organisations and the specific project staff is based on their capability and track record to deliver the type of project cost-effectively to time and quality. The selection and award procedure comply with EU Directives.
- Throughout the selection, design and delivery process an independent facilitator and technical/financial risk assurers monitor the alliance’s conduct, performance and control, and if issues are not satisfactorily resolved with the team, report them to the alliance board for resolution.
- Under the alliance contract the client and his partners agree a “no blame/no claim” protocol (binding except in the case of “wilful default”); they appoint an alliance manager; and they choose from their resources the “best for project” lean integrated project team to deliver the project.
- When the alliance has done sufficient design to be able to confirm a target cost within the investment target, the independent facilitator and risk assurers prepare a report to confirm whether the alliance is working collaboratively and whether the solution and target cost make adequate allowance for risk. If favourable, this is the basis on which the client can (but does not have to) instruct the alliance to construct and complete the project. If it is unfavourable, the client has clear grounds to ask why the risks are considered to be excessive – before proceeding.
- This report also goes to the insurers. If it is favourable, they activate the “Integrated Project Insurance” policy which insures the client, his alliance partners and all the supply chain collectively against the normal construction risks, public liability, cost overrun and latent defects for 12 years.

- The cost overrun part of the policy is unique. Because the insurers have been briefed about the collaborative behaviour of the team and the sufficiency of the target cost, they are prepared to cover cost overrun virtually regardless of its causes, without the need to prove liability (as is the case with professional indemnity policies). This insurance confidence is further enhanced as the alliance is incentivised to deliver by sharing in gain or pain depending on performance, the 'pain share' being the excess on the policy. As with all insurances there is a cap on insurers' indemnity, beyond which the costs are to the client's account.
- Completion is achieved when, on the advice of the independent technical assurers, the alliance board confirms that the project has been delivered "fit for the purpose" defined in the brief. The latent defects insurance follows seamlessly, giving cover for 12 years, again on a "no fault" basis.
- The cost of the IPI product, including the embedded independent facilitation and risk assurance and the 12 years latent defects cover, is broadly cost neutral as compared to the many insurances traditionally purchased right down the supply chain – which it renders redundant.

The Government's Construction Strategy 2011 endorsed the Integrated Project Insurance model of procurement & delivery for scrutiny and trial. Government's Guidance on the model, published in July 2014 stipulated: The trial outcomes must be the result of the application of the whole model process rather than of selected elements of the model. As such the model cannot be trialed without the involvement of Integrated Project Initiatives Ltd, the owners and custodians of the model and IPI product.

There have been three pilots under the Trial Projects Delivery Programme so far:

- Dudley College Advance II: further education facility £11.6m
- Derby Museum of Making refurbishment and extension: £17m
- Dudley College Institute of Transformational Technologies: £23m

Each has delivered predictability, progressive improvements in outcomes (including sustainability) and each has won industry awards. One of my roles as "IPI Mentor" is to author case studies for Constructing Excellence, and the last of these will shortly appear at [www.constructingexcellence.org.uk](http://www.constructingexcellence.org.uk)

We have analysed the processes of Insurance Backed Alliancing against the policies in the Construction Playbook and tracked how they deliver the outcomes of "driving better faster greener delivery". That's for another time – but the first three pilot projects speak for themselves!