



#### **Seminar on Integrated Teamworking**

#### Update from UK on the "Business Case"

and innovative developments in procurement, contract and insurance of potential relevance to "RIVANS"

#### Martin Davis

by

Consultant to the Office of Government Commerce, UK Treasury

A Champion for Integration for the Strategic Forum for UK Construction

6 February 2009

# Integration of a fragmented industry

The most successful enterprises do not fragment their operations – they work back from the customer's needs and focus on the product and the value it delivers to the customer.

The process and production team are then integrated to deliver value to the customer efficiently and eliminate waste in all its forms"

**Rethinking Construction (1998)** 

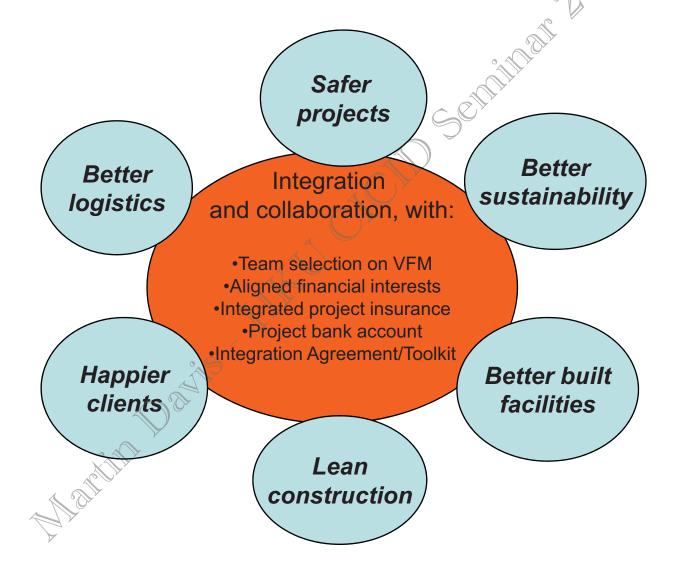
Report from the Integration Task Group to the SFfC

"...savings of up to £2.6 billion may be possible if good practice, including partnering and early development of an integrated project team, was applied across all the public sector".

The NAO Report 'Improving public service through construction' 2005



#### The power of integration and collaboration



Report from the Integration Task Group to the SFfC\*

"The fragmentation of the construction industry has contributed to its poor performance....

"Integrated working.....creates an environment that encourages investment in capacity and innovation...

...progress in adopting integrated working has been slow. We welcome the new targets for the period 2008 to 2012."

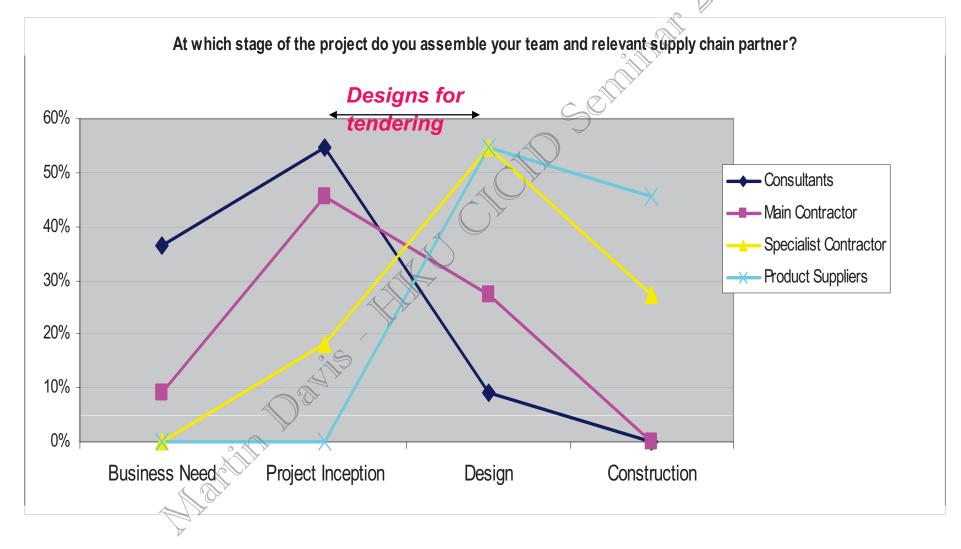
House of Commons Business & Enterprise 9<sup>th</sup> Report Construction Matters, July 2008

STRATEGIC

FORU

See "Profiting from Integration" at "www.strategicforum.org.uk"

### The Challenge: Early Involvement for All



Source: CCG Survey

#### **Summary of data**

• Consultants and Main Contractors are most commonly brought into the project team at Project Inception whereas Specialist Contractors and Product Suppliers are most commonly brought into the project team at the Design stage.

• Early involvement is seen as the key factor to success regarding working with Consultants and Main Contractors whereas Selection on Best Value is seen as the key success criteria for working with Specialist Contractors and Product Suppliers.

• Benchmarking and Project Reviews are carried out for the majority of projects (70% and 80% respectively).

Survey Report for Construction Clients' Group by Constructing Excellence

#### The Business Case for Integrated Collaborative working

Premise:

The better you are integrated and the more collaboratively you work, the better the outcomes will be for the project and all those associated with it.

Cause and effect



## Maturity Matrix: Measuring the Cause

		Integrated Co	laborative Working M	laturity Measures			A 360º Tool
Attribute	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	
	Client Side determines brief and cost plan.	Client Side determines brief and cost plan. Design Side involved after brief developed.	Client Side involves Design Side during brief and cost plan develooment.	Client Side involves Design Side during brief and affordability development & lead implementation Side during design. Remaining Implementation Side consulted	Client Side involves Design Side & lead Implementation Side from inception. Remaining Implementation Side involved during design	All sides involved from inception. Parties involved in design of all	Applied to the core team
<b>Early Involvement:</b> Consulted = Not paid Involve(d) = Paid	Design Side involved after brief developed. Implemetation Side involved after design 'complete' to detail and deliver.	Implementation Side consulted about products. Implementation Side involved after design 'complete' to detail and deliver.	Implementation Side consulted about products & buildability. Implementation Side involved after design 'complete' to detail and deliver. Client Side & Design Side set	about products & buildability & involved after design 'complete'. Design Side supports Implementation Side in detailing and delivery	development. Design Side supports Implementation Side In detailing and delivery. FM consulted on operability.	elements for which they have delivery or operational responsibility. Team utilises the most appropriate skills on offer.	Core team includes key suppliers
Selection By Value	Client Side sets strategy. All parties appointed sequentially using lowest price competitive tendering.	Client Side sets strategy. Design Side appointed on value/price. Implementation Side appointed on lowest price tenders.	strategy. Design Side appointed on value/price. Lead Implementation Side appointed on two stage value/price, remaining Implementation Side on lowest price.	Client Side, Design Side & lead Implementation Side set strategy. DS appointed on value. Lead Implementation Side appointed on two stage value/price, remaining Implementation Side on lowest price.	Client Side, Design Side & lead Implementation Side set strategy. Design Side appointed on value. Lead Implementation Side appointed on value, remaining Implementation Side and FM on value/price.	Whole team agrees and implements strategy. All parties appointed on value, based on ability to understand & deliver the lifecycle needs. Collaborative team selection tools are used.	and manufacturers etc.
Common Processes & Tools	Client Side tries to impose procedures & methods but everyone uses their own, usually paper based.	Client Side & Design Side use complementary systems. Lead Implementation Side applies collaboration tools but delivery side uses own systems in parallel, mostly paper based.	Client Side & Design Side harmonise systems. Lead Implementation Side agrees collaboration tools with key Implementation Side. Remaining Implementation Side operates own systems in parallel. Some use of ICT	Cifent Side & Design Side harmonise systems & collaboration tools with lead/Key Implementation Side. Remaining Implementation Side operates own systems in parallel. ICT frequently used.	Client Side, Design Side and lead implementation Side agree collaboration tools with key Implementation Side. Collaboration tools harmonised with remainder of Implementation Side & FM. ICT mostly used.	All parties agree collaboration tools and apply ICT enabled open transparent methods and protocols selected to support the ongoing operation of the asset(s).	Views should be collected by independent
Performance Measurement	Time & price performance is measured against the accepted tender and tender summation.	Client Side applies time, price & quality KPI's to Design Side. Implementation Side measures time & price performance against tender & tender summation,	Client Side & Design Side collectively agree a range of KPI's Lead Implementation Side has time, price & quality KPI's allocated, Remaining Implementation Side measures performance against tender.	Client Side, Design Side and lead Implementation Side utilise industry KPI's and agree risk allocation. KPI's allocated to remainder of Implementation Side and FM.	Whole team (including FM) utilises industry KPI's. Team agrees risk allocation. Team regularly measures performance including post completion.	Whole team utilises industry wide KPI's, shares risk allocation, agrees continuous improvement mechanisms from inception & continually measures performance including ongoing lifecycle.	intermediary Levels are the average of all
Long Term Relationships: "Framework" includes all forms of long term	by project basis from open invitation. Relationships depend	Some parties are appointed from a preferred (limited tender) pool, with the remainder from open	frameworks but still tendered, remainder from pool or open	Frameworks for key parties, some negotiated some limited tender, remainder from partners' established supply chains by	supply chains for remainder, most	All parties selected from established frameworks based on best skills match & using pre-	responses
agreements Modern Commercial	Terms & Conditions which rigidly	The second se	Most are on rigid independent	partners to openly collaborate. Remainder on partners' bespoke	Client specific modern 'partnering arrangements encourage all key partners to openly collaborate. Remainder on consistent back to	used, which align mutual benefit for all with delivery of collectively agreed success criteria including	Maturity is the aggregate of
Arrangements Client Side	focus on non-performance. Owners, occupiers, funders, end u	independent arrangements. sers, other customer stakeholders a	arrangements.	forms.	back agreements.	wholelife performance.	the attribute

scores

Design Side Consultants and others whose primary activity is the development of designs (including quantity surveyors)

Implementation Side Contractors, subcontractors, specialists, manufacturers, suppliers and others whose primary activity is the detailing, manufacture, assembly and construction of built environment facilities

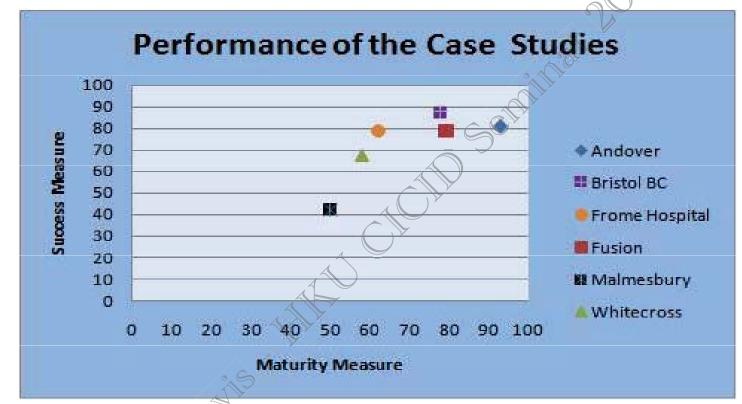
Facilities Management (FM) Maintenance, servicing, support and others whose primary activity is the management and upkeep of built environment facilities

### Success Matrix: Measuring the Effect

Integrated Collaborative Working Success Measures			
Attribute	Weighting	<b>Project Performance</b>	Score
Success Criteria 1 (e.g. Functionality)			
Success Criteria 2 (e.g. Flexibility)			
Success Criteria 3 (e.g. Whole life cost)			
Sustainability Criteria (e.g. Waste / energy )			
Predictability Time			A C
Predictability Cost		4	
Productivity		- The	
Profitability		D,g	
Defects			
Safety	Mar		
Totals	100%		

- A 360° Tool
- Team collectively agree priorities (weighting) at the beginning
- Maximum attribute weighting is 30% & minimum 5%
- Minimum weighting for Safety and Sustainability are 10%
- Success & sustainability criteria are project specific
- All other criteria are industry standard
- Results should ideally be collected by an independent intermediary
- Performance is the average of responses converted via the CE KPI Calculator to an industry comparator
- Overall score is the sum of weighted performance to provide an overall percentage

#### The Results: 6 Case Studies



The Projects:

- Andover North Site: Following success of the MOD Building Down Barriers pilot programme, Andover was the first Defence Estates stand alone Prime Contact to be let.
  Beckenham Restructuring: One of Glaxo Wellcome's highly acclaimed FUSION projects. Winner of the Contract Journal award for Single Project Partnering in 1999.
  Bristol Blood Clinic: A P21 project providing the largest blood processing centre in the world.
- Frome Victoria Hospital: Somerset Primary Care Trust and Laing O'Rourke worked together from inception to deliver the first community hospital to combine private & NHS care.
- Malmesbury Care Home: An 80 bed care home and day care centre in Wiltshire.
- Whitecross High School: A single secondary school PFI Project in Hereford with substantial environmental credentials, led by Stepnell as PFI investor and main contractor.

# Historic procurement **17 months to "start on site"**

ACTIVITY	MONTH 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Appoint Architect	Competition Appointment
Appoint Consultants	Tender
Concept Design	
Tender Documentation	
Evaluation/Negotiation	
Redesign/Design Dev.	
Planning	
Appoint Contractor	
Mobilise/Procurement	
Construct	

## Aspirational procurement 10 months to "start on site" Over 6 months early

ACTIVITY	MONTH 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Appoint Architect	
Appoint Consultants	
Appoint Contractors	
Concept Design	
Design Development	• • • • • • • • • • • • • • • • • • • •
Procurement	
Agree Cost Plan	
Planning	
Mobilise	
Construct	

# What innovations are in place or underway in UK to implement Integration and facilitate Collaboration?

- <u>Early involvement</u> )
- Selection by Value
   )
- "Selecting the Team" under "Modern Procurement" methods
- <u>Common Processes</u> "Integration Toolkit"
- Long Term Relationships Framework Agreements
- <u>Performance Measurement</u> *Measurable "Success Criteria"*
- <u>Modern Commercial Arrangements</u> Integration Agreement
   Project Bank Account
   Gain-share/pain-share
   Integrated Project Insurance,

Selection by "lowest cost tendering" – What does the UK National Audit Office say?

"Experience has shown that acceptance of the lowest price bid does not provide value for money in either the final cost of construction or the through life and operational costs"

**Modernising Construction 2001** 

#### Directive 2004/18/EC of the European Parliament and Council Article 53 – Contract award criteria

<u>Either most economically advantageous tender from the point of</u> view of the contracting authority – criteria such as

- quality,
- price,
- technical merit,
- aesthetic and functional characteristics,
- running costs,
- cost-effectiveness,
- after-sales service and technical assistance,
- delivery date and delivery period or period for completion,

#### <u>or</u>

the lowest price only.

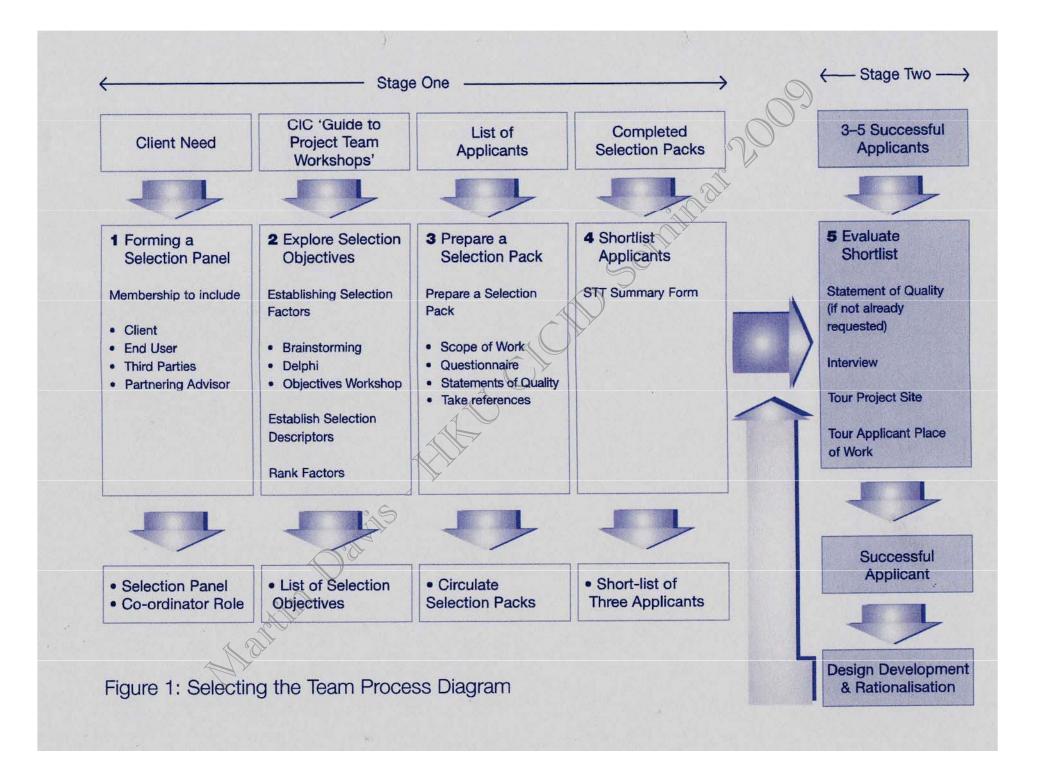
#### "Selecting the Team"

"Selecting the Team will be of great assistance, not only to clients and their advisers who are embarking on integrated team working for the first time, but will also serve as a standard methodology for those who are more experienced"

"Using a carefully selected integrated team will enhance a project in many ways. A key factor to the success of any project is getting the brief right, and a well chosen team is better able to develop a brief that meets the client's needs." Peter Rogers

"Picking the right players is the key to building any successful team. Simple as it seems, the process is not just about selecting the best available for each role. It is about getting the right blend to form the team best suited to undertake the particular job in hand."

NB "Selecting the Team" is freely accessible at <u>www.strategicforum.org.uk</u> under "Reports"



PROCESS **Needs of project** Success criteria + priority Selection Criteria + weighting **Appointment of Core** Team **Development of design** solutions + cost plans **Approval of** 

recommended design solution + cost plan **Modern Procurement** 

ACTORS

Client Team + Integration Facilitator

Advisory Team (incl. End User, Relevant Specialist + Cost Adviser)

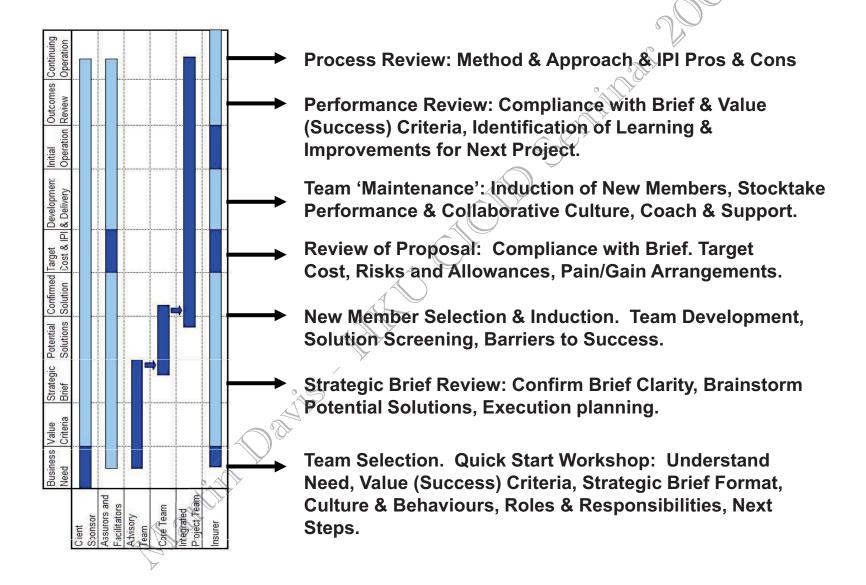
Core Team: Client Team + IF Consultants, contractors, specialists, key suppliers + FM

Client Team + IF with Advisory Team

Client

**DELIVERING VFM** Agreement in principle to integrate/collaborate 'Select the Team" best suited to give initial advice "Select the Team" best suited to deliver project **Prioritise best design** solution + cost plan Evaluate design solution cost plan against objective benchmarks Invest in the project

#### Integration Facilitation Activities



#### Common Processes – the challenge of the Integration Toolkit

- Outcomes that better meet your needs, delighting your clients, customers and end users
- Delivery that is 25% 40% faster than your competitors with 11% – 30% less capital required
- Improved profitability, reduced operating costs and more sustainable outcomes
- Significantly improved predictability of programme, price and quality
- To work in a safer environment where empowered people are open, honest and realistic and go home feeling trusted, valued and fulfilled

Visit <u>www.strategicforum.org.uk</u>, "Integration Toolkit" and click on spanner

#### www.strategicforum.org.uk IPT Workbook 3

PT Workbook 3   Form core team - Microsoft Internet Explorer	provided by Freeserve	
File Edit View Favorites Tools Help		<u> </u>
🔇 Back 🔹 🕥 - 📓 🎑 🏠 🔎 Search 📌 Favorites 🔇	Media 🧭 🍰 🐷 🗉 🗾	
Address 🛃 D:\ipt_workbooks\03.html		Go Links 🎽
<b>O12345</b> IPT Workbook 3 Core team: create and scree	6 7 Setting	
Home TheToolkit Guide Integrated	Supply Chain	What's new
At a glance 3.0 Form the core team 3.1a For occasional clients of the construction industry	<ul> <li>3.9 Inform the team</li> <li>3.10 Interactive development of the Strategic Brief - collectively explore the business needs to enable clarification of the project</li> </ul>	
3.1b For regular clients of the construction industry	objectives 3.11 Feedback objectives - to confirm understanding	
3.2 Select and appoint appropriate alliances/partners	3.12 Create a robust precedence-based decision-making process for the development of strategic solutions	
3.3 Select internal partners	3.13 Identify strategic solutions	
3.4 Agree core values and principles	3.14 Managing expectations	
3.5 Define roles and responsibilities	3.15 Reconfirm selection and prioritisation of value criteria	
3.6 Agree processes to resolve issues	3.16 Identify potential solutions	
3.7 Agree remuneration strategy	3.17 Screen solutions against value	
3.8 Appoint partners	3.18 Determine which solutions to take forward	
Step Process Culture and activities	Tools and techniqu	
		My Computer
Start 0 04-06-08CWC SFC T A IPT Workbook 3   For	1	EN Computer

#### Long Term Relationships – "Framework Agreements"

"An agreement between one or more contracting authorities and one or more economic operators, the purpose of which is to establish the terms governing contracts to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged"

EU Directive 2004/18/EC Article 1(5)

"The parties to the framework agreement shall be chosen by applying the award criteria set in accordance with Article 53"

EU Directive 2004/18/EC Article 32

#### Example of a UK Framework Agreement - NHS Procure 21

"The overriding principle in guiding the parties in the operation of this agreement is their agreement to work together with the supply chain and any NHS Client (and any Professional Advisers appointed by any NHS Client) in a co-operative and collaborative manner to achieve the overriding objective acting in good faith and in the spirit of mutual trust and respect"

clause 3.1

#### **NHS Procure 21 Framework principles**

- Early involvement of key members of the project team
- Target cost approach .. with pain/gain incentivisation
- Continuous improvement targets
- Share information/best practice use of IT
- Long-term relationships
- Key performance indicators
- Standardise processes
- Use of NEC contract on schemes
- Open-book accounting
- No guarantee of work

### Frameworks – the benefits

- Sound award criteria (other than lowest price)
- They permit "long term" relationships (4 years)
- The "Principal Supply Chain Partner" has every opportunity to "co-operate and collaborate" with the rest of the supply chain
- The ECC contract chosen (Option C under P21) encourages pro-active and collaborative conduct

# Frameworks – the problems

- They only open the door to good practice; if the parties don't work at it, inefficiency can abound
- If the PSCP abuses his position and applies lowest cost tendering to the supply chain, the benefits will be lost
- Large frameworks for "bundled projects" can result in local SME's not getting their proper share of the work, resulting in low standards and excess inflation

# Examples of "the Virtual Company" – Teamworking/Integration/Collaboration

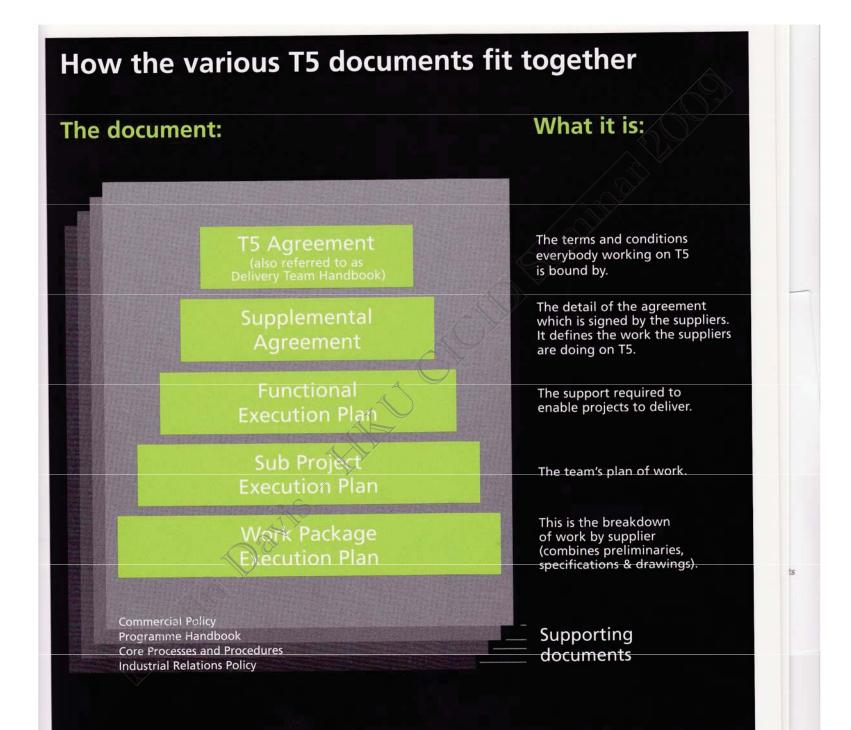
British Airports Authority

Heathrow Terminal 5

• Defence Logistics Organisation –

Andover (North Site)

See also "Partnering in Europe – Incentive based alliancing for projects" ISBN 072772965 - 9



#### BAA Terminal 5: "The T5 Agreement" – 3 "values"

#### Commitment

- Being seen to do what we say
- Challenging targets
- Value-focused
- Managing the supply chain
- Enabling processes and solutions

#### Trust

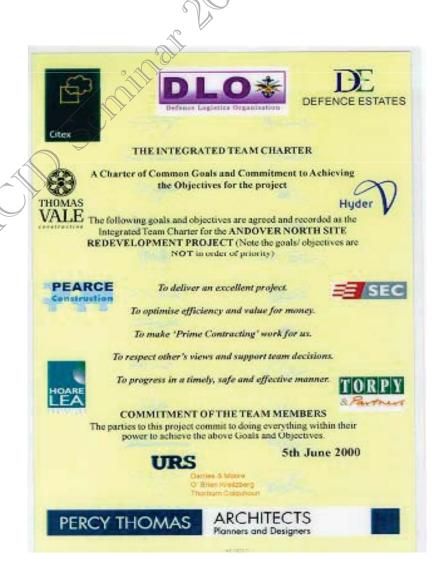
- Partnering
- Co-operation
- Meaning what we say
- Respect
- Selected on merit
- Treating our workforce as customers

#### Teamwork

- Fully inclusive teams
- Integrated
- Co-located
  - Share responsibility
- Share success
- Outcome (not problem) focused
- Helping and supporting
- Enabling individuals
- Managers as enablers
- Fully empowered
- Trained
- Celebrate achievements
- Leading by example

#### MOD Andover North Site – the "Virtual Company"-

- Aligning objectives
- The Project Charter
- Single Project Pll
- The Integrated
   Project Agreement
- Core Team share in Risks and Rewards
- Project Bank Account
- Technology tools



#### The Andover Core Team SHADE 2 FM PM/QS Architect Bucknai / SEC Bucknal Percy Thomas **Prime Solutions** M&E Services Services SEC Client Engineer HLP/ Halcrow ANSR/ DE Thomas Vale URS Construct Facility 2 Matelin Pearce Structural Hyder Engineer Construct **Facility** Infrastructure Design

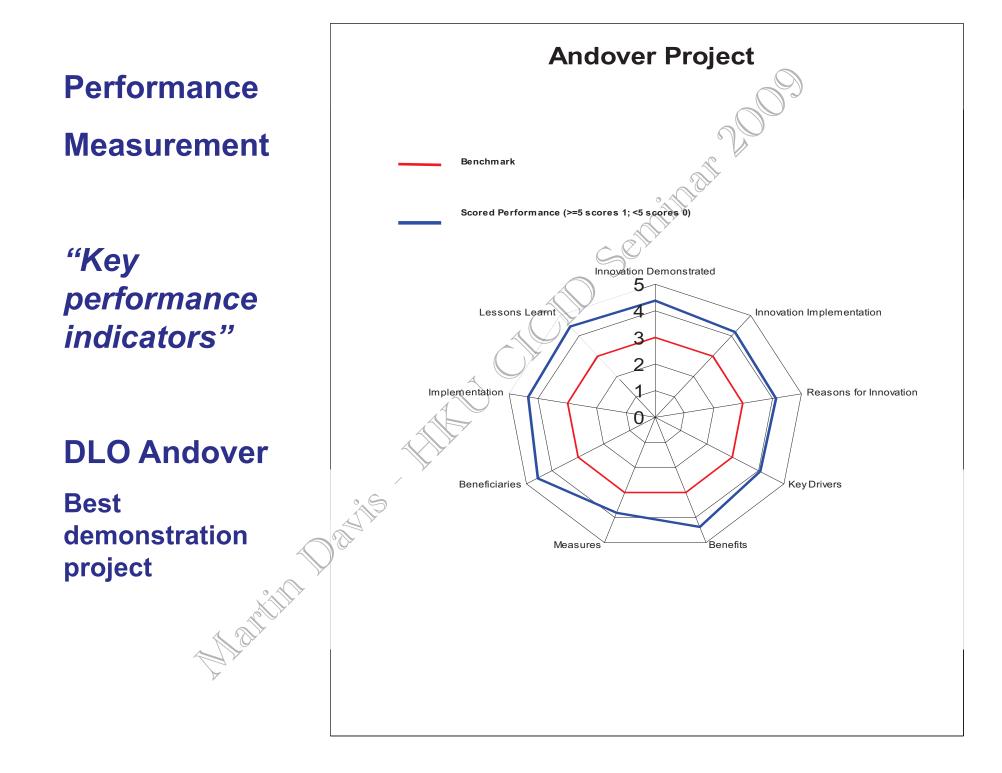
### Identifying Needs, Evolving Solutions

- Integrated team workshops throughout design & construction
- Potential solutions assessed utilising Balanced Score Card Reviews

- Balanced Score Card Reviews:
  - Capital Cost
    - Whole life Cost
  - Risk
  - Programme
  - Aesthetic
  - Health & Safety
  - Environment

### **Performance Measurement**

- Success Criteria must be "bought into" by the whole Integrated Team
- Measurement : 360° to cater for different personal perspectives and positions
- Comparison of two projects where varying involvement of the supply chain caused commensurate variation in performance



### Success Matrix: Measuring the Effect

Integrated Collaborative Working Success Measures			
Attribute	Weighting	<b>Project Performance</b>	Score
Success Criteria 1 (e.g. Functionality)			
Success Criteria 2 (e.g. Flexibility)			
Success Criteria 3 (e.g. Whole life cost)			
Sustainability Criteria (e.g. Waste / energy )			
Predictability Time			A C
Predictability Cost		4	
Productivity		- The	
Profitability		D,g	
Defects			
Safety	Mar		
Totals	100%		

- A 360° Tool
- Team collectively agree priorities (weighting) at the beginning
- Maximum attribute weighting is 30% & minimum 5%
- Minimum weighting for Safety and Sustainability are 10%
- Success & sustainability criteria are project specific
- All other criteria are industry standard
- Results should ideally be collected by an independent intermediary
- Performance is the average of responses converted via the CE KPI Calculator to an industry comparator
- Overall score is the sum of weighted performance to provide an overall percentage

# Whitecross High School, Hereford



Report from the Integration Task Group to the SFfC

- -900 Place Secondary School
- -PFI Procurement Route
- -Contractor acting as investor and D&C Contractor
- -Time to manage delivery and supply chain risks
- -Emphasis on whole life costs
- Extensive use of LEAN practices







-80 bed Care Home

-Developer led Procurement Route

-Poor control of initial delivery risk

-Very little time to manage supply chain risks

**Extensive variations** 



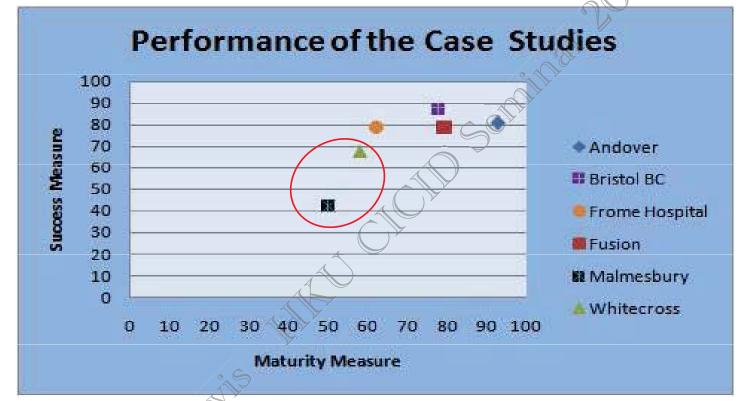
# Lessons learnt

The results appear to correlate with expectations, though it is important to understand anomalies
Success measures were consistent between the client and principal supply chain partners. Supply chain measures were not so well aligned
Parties generally needed assistance in completing the matrices and using the CE calculator. Further induction/advice

required by Constructing Excellence



# The Results: 6 Case Studies



The Projects: Andover North Site: Following success of the MOD Building Down Barriers pilot programme, Andover was the first Defence Estates stand alone Prime Contact to be let. Beckenham Restructuring: One of Glaxo Wellcome's highly acclaimed FUSION projects. Winner of the Contract Journal award for Single Project Partnering in 1999.

Bristol Blood Clinic: A P21 project providing the largest blood processing centre in the world.

- Frome Victoria Hospital: Somerset Primary Care Trust and Laing O'Rourke worked together from inception to deliver the first community hospital to combine private & NHS care.
- Malmesbury Care Home: An 80 bed care home and day care centre in Wiltshire.
- Whitecross High School: A single secondary school PFI Project in Hereford with substantial environmental credentials, led by Stepnell as PFI investor and main contractor.

# Modern Commercial Arrangements

- ECC Contract Option endorsed by UK Government, with Options C or E used on public sector "modern" contracts
- "Model Form of Agreement for an Integrated Project Team" (multi-party) at <u>www.strategicforum.org.uk</u> "Integration Toolkit" IPT workbook 3.2
- Project Bank Account:
  - "Fair Payment Charter
  - Comparative payment cycles (Traditional / FPC/ PBA)
  - Savings compared to traditional base case

#### Model 'Fair Payment' Charter'

Fair and transparent payment practices are an essential underpinning to achieving successful integrated working on construction projects. In working with each other in good faith and in a spirit of mutual trust and respect, we agree that by 1st January 2008<sup>2</sup> we will meet the 'Fair Payment' commitments set out below:

- Companies have the right to receive correct full payment as and when due. Deliberate late payment or unjustifiable withholding of payment is ethically not acceptable.
- 'Fair Payment' will apply equally between the client and lead contractor and throughout the supply chain<sup>3</sup>.
- The process will be transparent in order that members of the supply chain have certainty of how much and when they will be paid.
- Companies will consider, where appropriate, operating relevant contracts on an open book basis.
- The correct payment will represent the work properly carried out, or products supplied, in accordance with the contract. Any client arrangements for retention will be replicated on the same contract terms throughout the supply chain. Any withholding of payment due to defects or non-delivery will be proportionate and demonstrably justified in line with arrangements made at the time of contract.
- To ensure effective and equitable cash flow for all those involved, all contracts will provide for regular payments and have payment periods not exceeding 30 days.
- In order to avoid payment delays, the client and all supply chain members will agree payment procedures at the outset of their contracts. Payment will be through electronic BACS transfer and will apply throughout the supply chain.
- Monitoring and auditing and problem resolution procedures will be agreed between the parties.

We the undersigned agree that this Charter is not intended to be a legally binding document and not used in construing any contractual commitment.

The Charter sets out the values and arrangements relating to payment practices consistent with integrated working. The Model Charter is flexible to allow for adaptation and can either be a standalone document or part of a wider partnership charter. In either case it is not intended to be legally binding.

<sup>2</sup> An introduction period is to allow time for clients and contractors to modify their business systems and procedures. <sup>3</sup> The client would sign the Charter at the outset. Contractors and suppliers subsequently engaged would be expected to sign the Charter before appointment.

	Savings compared to	ompared to base case:	
	Option A: Improved 'Fair Payment' Process	Option B: Using Project Bank Accounts <sup>11</sup>	
Sub-contract (total of all sub-contracts)		20	
Reduction for cash collection	-0.1%	-0.1%	
Reduction for cash flow risk certainty	-0.8%	-2.1%	
Reduction for trade indemnity insurance	0%	-0.2%	
Lead contract	50		
Reduction for cash collection	-0.1%	-0.2%	
Reduction for cash flow risk certainty	-0.5%	-0.8%	
Increased profit to offset loss of cash flow benefit	+0.5%	+1%	
Total impact on project	-1%	-2.5%	

Typical traditional payment cycle (base case)

#### Lead contractor

S/C prepare applications Lead contractor assembles application QS certification (allowed up to 7 days) Arch certification (allowed up to 7 days) Client payment period

#### 1 & 2nd tier supply chain

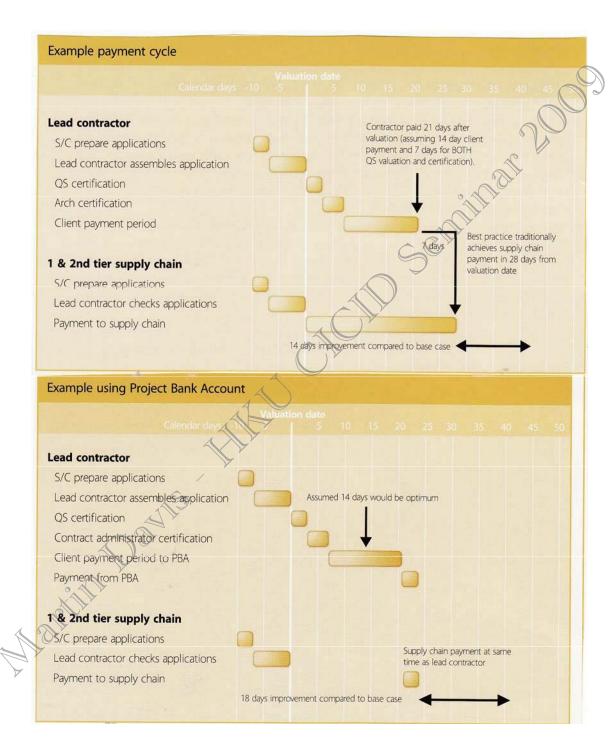
S/C prepare applications Lead contractor checks applications

Payment to supply chain

Contractor paid 35 days after valuation (assuming 21 day client payment and 7 days each for QS valuation and certification).

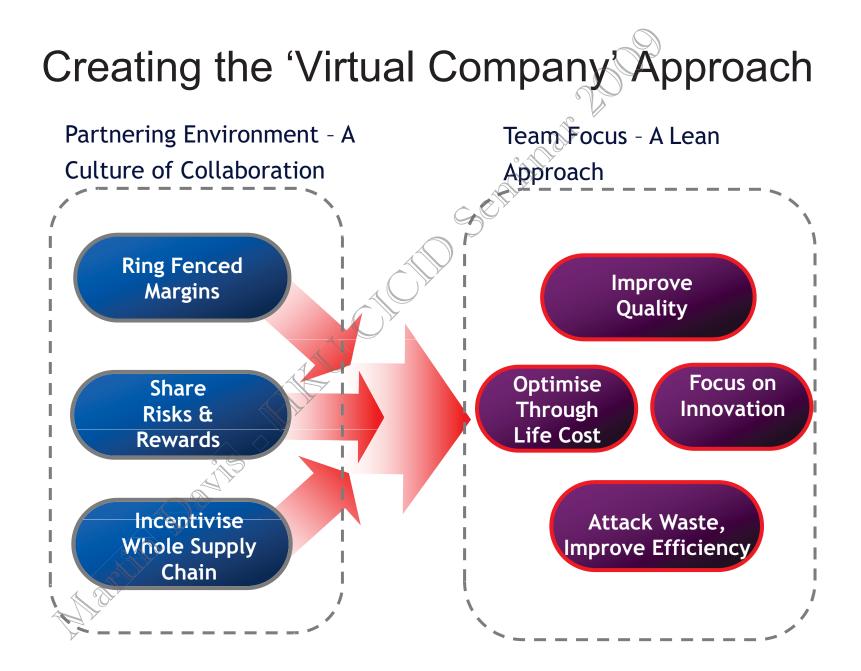
Typically 14, 21 or 28 days as amended in contract (21 assumed)

If contractor payments linked to being paid by client then supply chain would not be paid until 42 days after the valuation date (28 days after certification) at best.



# Gain-share / Pain-share

- To align interests of client and integrated team by gearing to performance against success criteria
- Client and all key members of team critical to delivery of success criteria must share
- Allocations must be the same for pain-share as gainshare
- Allocations must be agreed by balancing party's critical importance against financial capacity



## Developing the 'Virtual Company' Approach Pain/Gain Sharing Model

The WHOLE Core Team have agreed shares of the benefits/pain of Cost under-runs and over-runs across the whole project, not for individual parts. No one party

has a majority.

**Bucknall Prime** MOD 70% Solutions 30 % **Cluster Leaders Design Team Bucknall Austin** 13% 57% 30% Cluster Cluster Cluster Leader Leader Leader Pearce Thomas SEC 25% 22% Vale 10% Architect Structural M & E M & E Infrastructure **PTP** Engineer Engineer Engineer Engineer 7% HLP 2% Hyder 1% **URS 2% TME 1%** 

#### But what happened when we hit a real problem?

• Traditionally:

'problems' are seen as 'opportunities' for claims where nobody wins (except the lawyers)<sup>9</sup>!

- - Emergency meeting of the Joint Steering Committee called
  - All discussions centred on 'what is right for the project'.
  - Team solution took 20 minutes!!!
  - Everyone won, (except the lawyers) !
  - QED

# The Client's View of Team Achievements

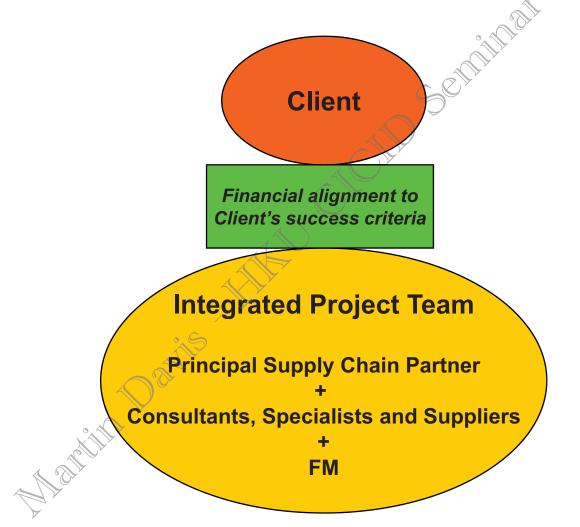
- Collocation Virtual/Real
- Collaborative Working
- Open & constructive approach by both Client and Partners
- On Time
- On Budget
- No Claims!
- Meeting the Strategic Brief

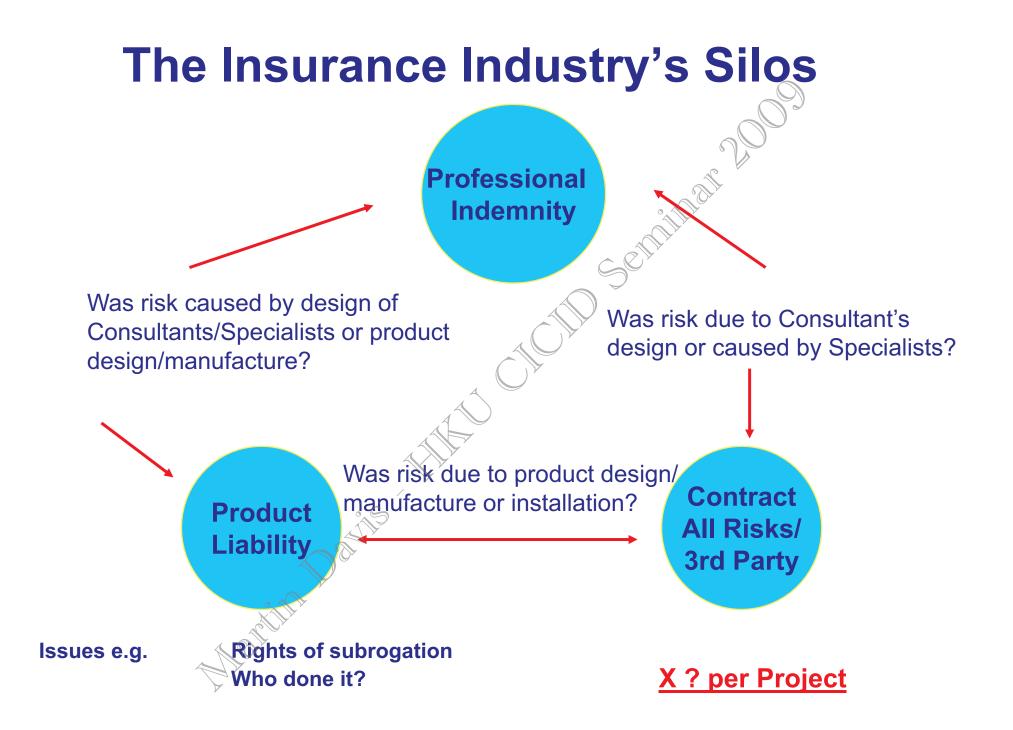
Result Client Satisfaction .....

# Integrated (Project + Insurance)

- The team must be integrated, and show its commitment to collaboration by a "no blame/no claim" agreement (except for fraud)
- Team gain-share (profit) is geared to how successfully the project objectives are delivered; shares are pre-determined
- Team pain-share equals the excess under the financial loss insurance; therefore each party's loss is limited to its similarly pre-determined share
- Insurers waive rights of subrogation against all insured under the policy

# A "Virtual Company" – full integration of the project team





# **Project** professional indemnity insurance

- Covering Clients, Consultants, Contractors and their supply chains
- Loss, not culprit, has to be demonstrated
- Rights of subrogation waived
- Can sit alongside project All Risks insurance
- Positive effects on behaviours and performance
- DLO Andover and Heathrow Terminal 5 had Project CAR and PI Insurance, and both benefitted
- But T5 partners, despite minimal financial impact, were reluctant to disclose failures, and so delayed claims

#### **Project Insurance** What does the UK National Audit Office say?

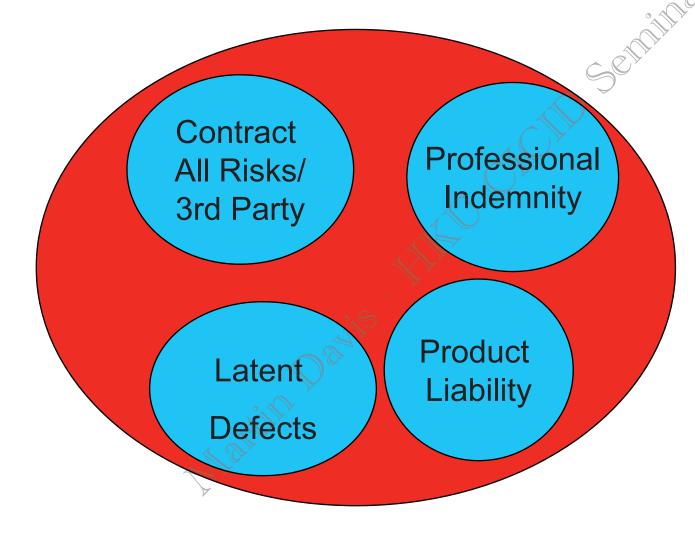
"Departments should ....seek opportunities to pursue the case for project-wide insurance

- not only to reduce costs through bulk buying,
- but also to align behaviours with the principles of integrated team working.

Departments should, however, assess the costs and benefits of such approaches and whether they have sufficient capability to manage the associated risks"

*Improving public services through better construction 2005* 

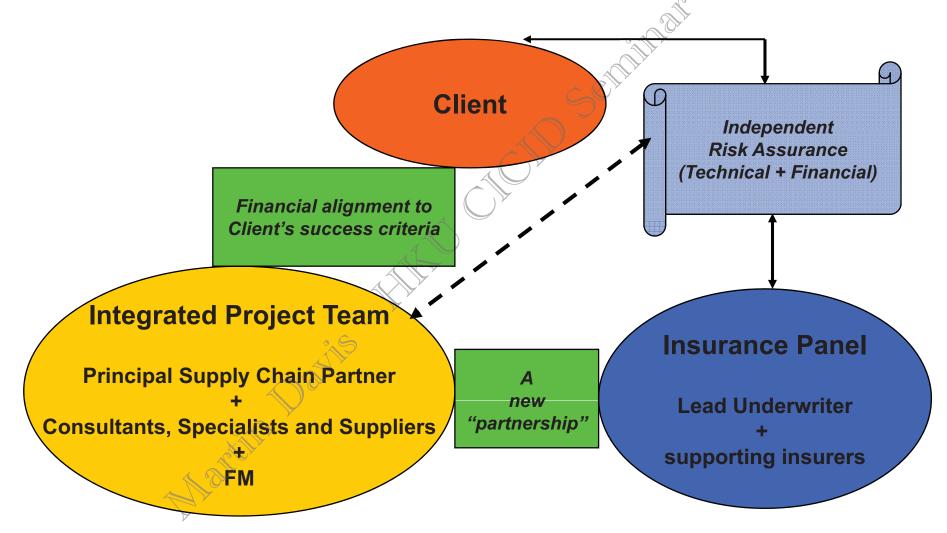
A move from families of individual Risk Insurances to one "Integrated Project Insurance", also covering Financial Loss over the agreed Cost Plan



To cover all members of the Integrated Project Team including Client, and funders

No blame: Rights of subrogation waived Demonstrate loss, not culprit

# A "Virtual Company" + an Insurance Panel a partnership in Risk Management



#### The rationale for Independent Risk Assurance

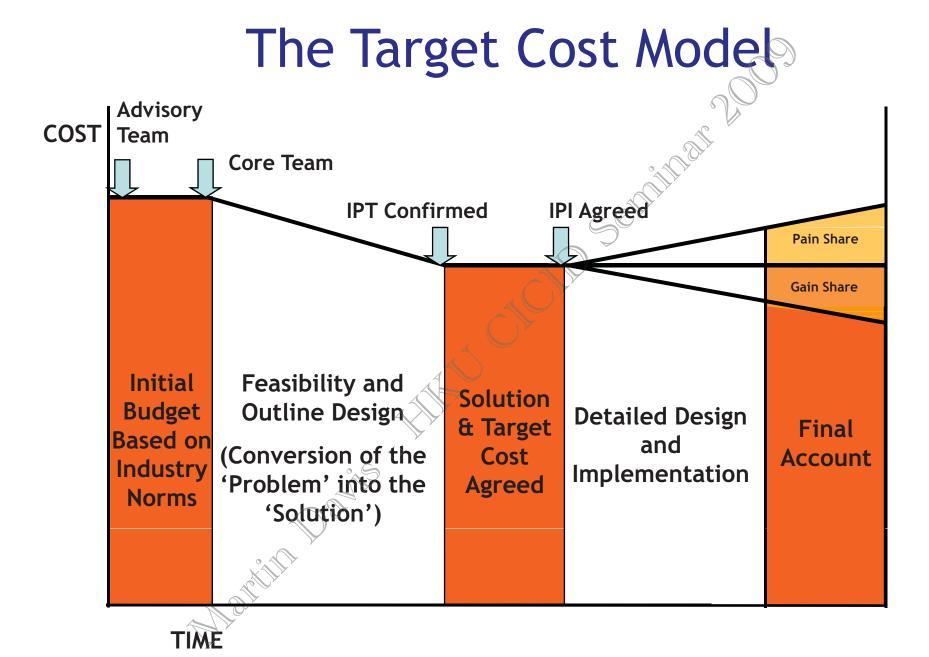
#### **Technical**

- Belgian "technical control" as operated collaboratively by SECO underpins the performance of Integrated Teams
- Safety is addressed integrally with the critical design and planning stages
- Latent defects premiums typically reduce by 30%

#### • This is similar to the "due diligence" carried out by Cost Advisers for banks intending to lend

Financial

- Insurers must know that the cost plan has adequate allowance for the risks involved
- Under an "integration agreement" all parties undertake transparency



### **Testing Integrated Project Insurance in practice**

- Radical innovations have to be proven in practice!
- HM Government has agreed to 10 pilot projects over several years at £10m - £20m each
- A Panel of insurers, led by Norwich Union and Royal & Sun Alliance, has agreed in principle to IPI; brokers are Griffiths & Armour and Tysers
- Development and piloting of IPI is controlled by a "Product Team" steering group
- Progress with the pilot programme is slow despite support from Government (Treasury, PSCCF and Select Committee)
- Will the Recession help or hinder?

# Feedback on first pilot project

- A mental health facility for older persons
- Principal Supply Chain Partner: Laing O'Rourke

   "Building Constructive relationships" strategy has established supply chain of consultants and specialists for Health Projects
- Prioritisation of Success Criteria recognised all must benefit
- Value creation workshop savings in work content (eg balconies!) and process improvements (eg avoidance of re-bidding) facilitated
- Specialists in supply chain needed confidence-building
- Habit must be challenged at each stage, so as to cut out wasted time and money; role of seconded research graduate agreed

#### **Prioritised Success Criteria – who benefits?**

- 1. Improved H&S during delivery and operation
- 2. We make a profit that is everyone gets the appropriate level of income and expenditure
- 3. Safe environment
- 4. NEAT sustainability and energy costs
- 5. Design to ensure staff monitoring of clients
- 6. Value for money
- 7. Cost certainty GMP & CE not exceeded
- 8. Minimal / zero defects at handover
- 9. Collective team success e.g. infection control and other issues are addressed
- **10. Designed and built for safe operation and maintenance**
- 11. Flexible / future proof
- 12. Patient experience improved
- 13. Staff experience / recruitment / retention improved

#### **Prioritised Success Criteria – who benefits?**

- 1. Improved H&S during delivery and operation
- 2. We make a profit that is everyone gets the appropriate level of income and expenditure [Team benefit]
- 3. Safe environment
- 4. NEAT sustainability and energy costs

[Client benefit]

[Safety]

- 5. Design to ensure staff monitoring of clients
- 6. Value for money
- 7. Cost certainty GMP & CE not exceeded
- 8. Minimal / zero defects at handover
- 9. Collective team success e.g. infection control and other issues are addressed
- 10. Designed and built for safe operation and maintenance
- 11. Flexible / future proof
- 12. Patient experience improved
- 13. Staff experience / recruitment / retention improved

### Benefits of IPI – behavioural and legal (1)

- Liberates the whole team from the need for protective behaviours
- The "Joint and Several Liability" problem is avoided.
- Collateral Warranties a huge aggravation for little advantage become redundant
- IPI cover survives the insolvency of any member of the team, and any resultant financial loss will be covered [NB this should facilitate partnering with local SMEs]
- Legal, forensic and management costs in re-living projects embroiled in "whodunnit?" litigation should be avoided
- Limits each partner's potential loss to their share of the pain-share
- Expected to cost no more than the 2½% cost of traditional insurances throughout the supply chain (no longer required)

### **Benefits from IPI - efficiency and performance (2)**

The IPT can dispense with

- Processes orientated around each team member's silo
- Protective contractual documents
- Separate systems (in favour of common platforms)
- Specifications and drawings prepared by consultants to obtain tenders which have the effect of creating divides down the supply chain
- Protective and non-productive letter-writing
- Notification, preparation and pursuit of claims, or defences against claims

This is Latham's 30%, still to be applied to 80% = 24% !