PROCUREMENT APPROACHES: 
Rovelling, while Evolving?

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PROCUREMENT APPROACHES: 
Revolving, while Evolving?

1. How Evolving? – mostly Incremental (slowly!); with a few occasional Innovations

   ..... But some strategies & practices almost ‘go full circle’
   e.g. D&B, PPP; GMP - historically

Also revolve geographically

  e.g. simple or no contract docs. – previously in East.
  Also in West e.g. ‘on a handshake’; ‘my word is my bond’

But Contracts increased in complexity in West. Then West exported ‘better’ tighter contracts Eastwards! Now
   ‘partnering’ philosophy is re-exported West → East

Many present procurement ‘systems’ are hybrid permutations of past approaches
Master Builders

Specialists

Structural
Specialists

Environmental
Specialists

Building Services
Specialists

Architects
Engineers

Main Contractors

Sub-Contractors

Design-Construct

Design – Build - Operate

BOT, DBFO .... PPP

Partnering

From Fragmentation to Re-integrated Teams

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What is Procurement? Why should it be Proactive

A Brief History of Procurement – Intl. & HK

Snapshots & Milestones from Hong Kong –
- Early days, ACP, Grove Report, CIRC, TC 32/2004, ADR,
- Special Approaches – HA, KCRC, MTRC, ‘Works’ Depts.

Recent Developments - Intl. & HK -
- Contractual Partnering & Alliancing, PPP, Framework Agreements,
- Relational Contracting, Target Cost, GMP, facilitating Payments, ….

Back to the Future — Possibilities: Trends/ Predictions/ Wish-lists -
- e.g. “Co-opetition” - Co-operating and Competing Together
Procurement … Delivery? - What’s the Difference?

Procurement or Delivery?
Overlapping & confusing usage -
e.g. in USA, UK, Australia
Why not Procurement and Delivery?

Construction Project Procurement: 'the framework within which construction is brought about, acquired or obtained‘ - design framework & sub-systems; initiate upstream activities

Delivery – ‘Operational’ & downstream activities
- during construction phase (or full life cycle, if DBO or PPP)
Why should **Procurement** be Proactive?

- **Appropriate Procurement Approaches** are important for: **Project Success** – in shorter term; and **Development of Industry** capacities/ organisations / competitiveness - in longer term.

  *e.g. (a) Contractors priced much higher when ‘exculpatory’ (disclaimer) clauses were retained/ introduced (survey in Canada)*

  *(b) Lowest price selection can cost much more – “It’s unwise to pay too much, but it’s worse to pay too little …” – Ruskin, 1860.*

  * (c) **Inappropriate** risk allocation or ‘functional assignments’ (‘functions’ of: design, construct, manage) can be disastrous*

But **Appropriate Procurement Approaches** are just a starting point – necessary but not sufficient for project success

  *e.g. (a) Sub-contractors priced lower when they believed there would be genuine ‘partnering’ (example in UK)*
‘Contract type’ includes
(a) Functional Grouping
(b) Payment modalities
(c) Contract Conditions

Integrating improved Procurement and Delivery-Management Systems to enhance Project Performance levels and Industry Development
INDUSTRY-WIDE CONSTRUCTION PROJECT MANAGEMENT SUPPORT SYSTEM FRAMEWORK

PROACTIVE PROCUREMENT SYSTEMS

COLLABORATIVE DELIVERY SYSTEMS

INTER-ORGANIZATIONAL LEARNING SYSTEMS

INNOVATIVE TECHNOLOGICAL SYSTEMS

INTEGRATED TEAMS, SYNERGIZED INPUTS, SUSTAINED IMPROVEMENTS & OPTIMIZED OUTPUTS
HISTORICAL SNAPSHOTs - Worldwide

- **Conditions of Contract** –
  **Hammurabi’s Code** *(1780 BC)* - interesting examples:
  229: If a builder build a house for some one, … and the house which he built fall in and kill its owner, then that builder shall be put to death.
  230: If it kill the son of the owner the son of that builder shall be put to death. (Eye for an Eye? … Sins of the Fathers …?)
  232: If it ruin goods, he shall make compensation for all that has been ruined …. (Economic Loss?)

- **Codified Legal Systems** - go back further e.g. in Egypt to 3000 BC

- **ADR** (as we call some approaches now!)
  - Reportedly practised by Assyrians – *19*th C. BC
  - possibly DR then! So …. ‘full circle’?

- **Functional Groupings in Construction Contracts** – *20*th Century –
  (1) Separated (Design, Construction) - from previous Century;
  (2) Integrated (Re-integrated - from previous master-builder practices)
  (3) Management (led) – Construction (Project) Management, Management Contracting
**HISTORICAL SNAPSHOTs – Hong Kong**

*Reference: Walker & Rowlinson (HKCA book)*

**Pre WW II** — examples, similarities and differences:

*St. John’s Cathedral* – foundation stone: 1847

Financed by Govt. funds and Private subscriptions; Disagreements within Client and with Contractors. Contractors ‘bonded’ – relatively high % and with *individual* (not Bank) sureties; series of *Sub-contracts* – directly supervised by Surveyor General

*Government House* – took 2 years for approvals *(no change??)*!

But started work in 1848 (before approvals! - *Can we do this now??*)

Supervision – Surveyor General and 3 Sappers!

Convict labour to construct Upper Albert Road! – Another approach to procurement!

Bond enforcement threatened *(no change)*

Claim - Pirates disrupted material supplies & caused price escalations.

**Post WW II**

*Housing Crisis!* Silver lining – construction and entrepreneurial skilll inflow from M. China.

1951 – 5 year programme for major new Public Works

Late 1950’s: Building boom. Bank of China – with *construction management*

Also, *Public Housing* and *New Towns* – from 1950’s
HISTORICAL SNAPSHOTs – Hong Kong
References: P. Berry, M. Byrne

**Development of Contract Conditions**

- Mid 60’s Riots – extra contractual payments
- Inadequate EOT provisions – must define all circumstances
- Mid 70’s – economic downturn – loss & expense claims; then Arch. Office formula to reimburse some delay costs
- BCA (precursor to HKCA) complained of interference by Govt. engineers with ‘Engineer’. Commissioned Arthur Marriot in 1980 to petition Governor demanding remedies
- 1990’s Airport Core Programme conditions – to meet needs for: (a) cost certainty and timeliness – lump sum contracts; milestone payments; (b) co-ordinating multiple contracts – joint responsibilities & Owner Controlled Insurance Programme; compulsory mediation + possible adjudication
HISTORICAL SNAPSHOTS – Hong Kong
References: P. Berry, M. Byrne, B. Fleming, P. Lam, M. Kumaraswamy

**Trends in Procurement Approaches**

- Design & Build – Refugee Camps – success; big push led by ASD in early 1990’s
- BOT – sporadic: 5 tunnels from 1960’s to 1990’s
- PPP? – Convntn. & Exhbbtn. Centre – 1980’s
- Private-Private Partnership – e.g. StdChBnk HQ
- Public-Private co-operation increased, but barriers to/ lack of champions for anticipated PPPs … so few
- Management Contracts – 1980’s HSBC HQ, 1990’s, Hung Hom Rail terminus extension
HISTORICAL SNAPSHOTs – Hong Kong

References: M. Byrne, B. Fleming, P. Lam, C. Wall, M. Kumaraswamy

Disputes and Alternative Dispute Resolution

Some early Landmark cases:
(1) Mitsui v AG (1987) – fixing new rates;
(2) Philips HK v AG (1993) - when is Liquidated Damages a penalty?
(3) AG v Technic Construction – appealing an Arbitration award


(Physical) ‘Impossibility’ Disputes – 1990’s

Beware Disputes on Dispute Resolution clauses!

DRA – ‘made in HK’: in many ASD & other Govt. contracts, mandatory in HA.

DRA also helps in Dispute Minimisation – as does Partnering – another story!
Are Procurement choices/ Contract Conditions mostly about desired Risk Allocation?

Grove - 4 standards for appropriate Risk Allocation:

(1) DEFAULT Standard -
   Party responsible for extra cost or delay should bear the consequences

(2) FORESEEABILITY Standard –
   Contractor should only price for reasonably foreseeable risk

(3) MANAGEMENT Standard -
   Allocate risk to party who is best able to evaluate and control it

(4) INCENTIVE Standard - Place risk on party most in need of the incentive to prevent or control that risk

Avoid ‘Risk dumping’!
Aren’t some risks better managed jointly?
   - Joint Risk Management? – another story!
## GCC / RISK PROVISIONS - 1998 STATUS, GROVE RECOMMENDATIONS & RESPONSES

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<tbody>
<tr>
<td>Changes in law</td>
<td>Contractor</td>
<td>Client</td>
<td>Accept</td>
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<tr>
<td>Ground conditions</td>
<td>Contractor</td>
<td>Client</td>
<td>Reject</td>
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<tr>
<td>Legal and Physical impossibility</td>
<td>Client</td>
<td>Allow Engineer to relax contractual requirement or issue variation</td>
<td>Reject</td>
</tr>
<tr>
<td>Third party interference</td>
<td>Contractor - cost Client - time</td>
<td>Client should accept both</td>
<td>Reject</td>
</tr>
<tr>
<td>Breach of contract by employer</td>
<td>No specific provision</td>
<td>Should be introduced</td>
<td>Reject</td>
</tr>
<tr>
<td>Need to terminate</td>
<td>No provision to terminate without default</td>
<td>Should be introduced</td>
<td>Accept</td>
</tr>
<tr>
<td>Client’s need to accelerate</td>
<td>No provision</td>
<td>Should be introduced with compensation to contractor</td>
<td>Reject</td>
</tr>
<tr>
<td>Global claim</td>
<td>No contractual prohibition</td>
<td>Should be contractually prohibited</td>
<td>Reject</td>
</tr>
<tr>
<td>Care of the works</td>
<td>Contractor’s risk except damage, loss or injury from ‘excepted risks'</td>
<td>Require All Risks insurance coverage</td>
<td>Accept - on a needs basis</td>
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### GCC / RISK PROVISIONS - 1998 STATUS, GROVE RECOMMENDATIONS & RESPONSES (Contd.)

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<tbody>
<tr>
<td>Notice and time bar provisions for claim</td>
<td>Notice - 28 days, particulars - 180 days after completion</td>
<td>Failure of notice should give rise to damages not forfeiture</td>
<td>Reject</td>
</tr>
<tr>
<td>Profit on claims for 'loss and expense'</td>
<td>No profit</td>
<td>Profit should be allowed</td>
<td>Reject</td>
</tr>
<tr>
<td>EOT for the events not included in contract</td>
<td>Allowed for special circumstances</td>
<td>Should be avoided</td>
<td>Reject</td>
</tr>
<tr>
<td>Liquidated damages</td>
<td>Only for delay damages</td>
<td>Apply to performance deficiencies as well</td>
<td>Provide through special conditions</td>
</tr>
<tr>
<td>Dispute resolution</td>
<td>Engineer’s decision, voluntary mediation and arbitration</td>
<td>Wider use of DRA and voluntary use of 'no-decision' mediation</td>
<td>Not yet decided</td>
</tr>
<tr>
<td>Contractor’s post-contract alternative design</td>
<td>No provision to incorporate as a variation</td>
<td>Should be considered. Variations preferably issued on a daywork basis</td>
<td>Accept</td>
</tr>
<tr>
<td>Sub-contractor payments</td>
<td>Sub-contractors</td>
<td>Sub-contractors with call for investigating payment insurance / payment bond as an option</td>
<td>Accept</td>
</tr>
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Note: Above (two slides) cover the 16 major recommendations (of a total of 24)

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Other Views on Risk Allocation

e.g. (a) American Society of Civil Engineers –1979:
• Risks belong with those parties who are best able to evaluate, control, bear the cost, and benefit from the assumption of (those) risks
• Many risk and liabilities are best shared
• Every risk has an associated and unavoidable cost which must be assumed somewhere in the process

(b) Construction Industry Institute – USA
• Ideal Contract – one that will be most cost effective – assigns each risk to the party that is best equipped to manage and minimise that risk, recognising the unique circumstances of the project
CIRC (Constr. Industry Review Comm.) Report
Recommended (in 2001) *inter alia*:

1. to revisit some Grove recommendations
2. Radical improvements in the way risks are shared and projects are procured and delivered etc.
3. Changes to achieve *value in procurement* e.g. in selecting consultants & contractor; *and* through equitable contracting arrangements; effective risk management and dispute resolution; partnering, *incentives* etc.
**ETWB (Works) Technical Circular 32/2004**

- TC 32/2004 – was developed, based on:
  - (a) 2001 CIRC recommendations above;
  - (b) resulting ETWB commissioned study on ‘Alternative Procurement Strategies for Public Works …’

- Provides useful guidelines on “selection of procurement approaches and project delivery techniques”. Assists in:
  - (a) more objective consideration of non-traditional options
  - (b) systematic consideration of alternative approaches, before final choice
  - (c) justifying such choices – internally and externally
ETWB (Works) Technical Circular 32/2004

TC 32/2004 identifies 4 Procurement Categories:

1. Designer Led
2. Design & Construct
3. Design Construct & Operate

It provides many structured guidelines & charts to compare above 4 categories, e.g.

(a) Tabulated *allocation of key responsibilities* (incldg. for ‘Conceptual Design’ and ‘Design Development’) between Employer, Designer & Contractor

(b) Comparisons of Major Features, Advantages, Disadvantages and also their Typical Performance levels against criteria of Cost, Time, Quality, Risk, Management Efficiency, Contractual Security.
Many more permutations – hybrids of possible Procurement Approaches - Examples:

1. Anthony Walker (from 1980’s): 42 different ‘Organisational Structures’ – 2 x 3 x 7 matrix – based on:
   2 Client approaches, 3 Design Team/ Mangement approaches and 7 contractor appointment approaches.

2. Will Hughes (2009 @ HKU): 15,625 permutations! Surprised? - based on many options in each of 6 groups/ parameters. So ‘theoretical’, but still ……wide range

3. Mohan Kumaraswamy (from mid 1990’s) – menu of options under 5 Proc. Sub-systems (mix & match options for each of 5 main ‘course dishes’ + other ‘side-dishes’ – Many permutations, but must suit project priorities & conditions, & be internally compatible.
Schematic Representation of interacting sets of Variables
**IPS sub-systems**
- CC – Contract Conditions
- FG – Functional Groupings
- PM – Payment Modalities
- SM – Selection Methodologies
- WP – Work Packaging

**CDS sub-systems**
- TM – Time Management
- CM – Cost Management
- QM – Quality Management
- VM – Value Management
- RM – Risk Management
- PA – Performance Appraisal
- HRM – Human Resources Management
- SHM – Safety & Health Management
- CDM – Claims & Disputes Management
- ICM – Information & Communications Management

Interactive initial strategic decisions
Monitoring & feedback for joint improvement

Presentation by CICID Executive Director on Procurement Approaches (29-10-2009)
**Innovative Procurement Approaches in HK?**

**Examples from some ‘Progressive’ Clients:**

- **ASD – D&B, DRA**
- **Hospital Authority** — ‘pioneered’ formal partnering in HK
- **MTRC** — Hands-on; Target Cost, Gain/Pain Share; Risk Register incldg. Open-book accounting, **Joint Risks** .... (more from another speaker!)
- **KCRC** — ‘Avoidance better than Cure’, and ‘Your problem is my problem’; Supplemental Agreement & proactive Claims Mangmnt.
- **EPD** — Design Build Operate
- **DSD – NEC** .... (more from another speaker!)
- **HK Land, Swire** — Partnering, GMP
- **Housing Authority**: well-structured **PTAS, PASS, mGMP**, compulsory Partnering & DRA, **Care for Quality, Safety, Envmnt, Community & Supply Chain** (incldg. labour protection), ‘Integrated Proc. Approach’, marks for **Innovations** proposed
- **Airport Authority** — PPP (Asia World Expo) …
- ........
Considering / Adapting any relevant Overseas Procurement Innovations

• Contractual Partnering? ... Guidelines by CIC Task Force; Examples – using NEC; ‘Be Collaborative’ Contract (UK); ConsensusDOCS (USA)
• Alliancing? .... Framework Agreements ....?
• PPP – different types, degrees of partnership

Examples of benefits:

Clifford (HK) – (a) quality, cost and time performance can be increased by up to 10% - by starting with Partnering, then value and risk mgmnt.
(b) in TKE project, Return on Investment in above – estimated at 3,000%

Duffield (Australia) - two benchmarking studies in Australia indicate much better cost and time performance:
(1) of PPP vs. Traditional; and (2) of Alliancing vs. Traditional projects – over 10% improvements against original estimates of time & cost

• ‘Streamlined’ Payments? Whether ‘Security of Payments’ provisions (as in UK, Australia, S’pore) and/or ‘Fair Payment Charter’ (UK), and/or .. (next session!)

BARRIERS to Innovations/ progress? Lack of Champions? Inertia? Fears of Collusion in close Co-operation/ partnerships?
Relational Contracting Approaches (RAs) e.g. Integrated Teams, Joint Risk Management, Sustainable Relationships

Classical Contracting Approaches (CAs) e.g. Segregated Teams, Adversarial Contracts

Equilibrium of Push-pull forces between any two team members
CONFLICTING OBJECTIVES AND DIVERGENT OPERATIONAL AGENDAS

‘Traditional’ Procurement & Delivery Strategies

Client ‘push’ forces e.g.
- Profitability
- Probity and accountability

Client ‘pull’ forces e.g.
- Special needs e.g. economy, quality, timeliness

Contractor ‘push’ forces e.g.
- Higher short-term profits
- Resource constraints

Contractor ‘pull’ forces e.g.
- Future opportunities
- Goodwill

Example of Force-field ‘against’ Relational Integration in a Client-Contractor relationship
RELATIONAL CONTRACTING

- Relational Contracting (RC) considers contracts as more than what is in ‘Black & White’. i.e. Also as:
  - A framework for reasonable ‘exchange’ in the future
  - drawing on relationships among the parties, since: all risks and future events cannot be foreseen or quantified - uncertainties & complexities will remain
So in RC, ‘Contracts’ are flexible enough to address uncertainties

- Parties do not always follow legal mechanisms in written contracts - Good Relationships’ also develop obligations
  - Compare with a traditional Japanese approach: “written document is only a tangible acknowledgement of a relationship … rather than a precise instrument that defines the relationship”

- RC allows
  - mutual future planning
  - sharing of both benefits and burdens e.g. GAIN SHARE/PAIN SHARE in TARGET COST Contracts
RC and Teamworking

• Problems are expected as normal
• Problems are dealt with by
  – cooperation, restorational techniques, & adjustment processes - solve problems faster and also maintain ‘relationship’
• RC thus enables
  – win-win-win environment
  – monetary and non-monetary satisfaction
  – move from adversarial culture to co-operation

• RC principles underpin co-operative working arrangements
  – in Partnering, Alliancing
  – extend thru. the whole Supply Chain

RC IN THEORY:
  HKU (2002 .....)
CONVERGENT OBJECTIVES & OPERATIONAL AGENDAS

Strategies for Relational Integration and a Value focus

Client ‘push’ forces e.g.
- Profitability
- Resource constraints

Client ‘pull’ forces e.g.
- Recent Industry reforms
- Special needs

Contractor ‘push’ forces e.g.
- Increased Short-term Profits
- Competition

Contractor ‘pull’ forces e.g.
- Build track-record
- Goodwill

+ Extend Client-Contractor strategies through Supply Chain

Potential Force-field towards Relational Integration in a Client-Contractor relationship

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But Despite Industry Recommendations Worldwide, we are still finding it DIFFICULT to ‘Re-INTEGRATE’ having been segregated Functionally & Relationally – under Traditional Systems for so long!

• e.g. UK industry did not meet their target: for 50% of projects by integrated teams and supply chains by 2007

• Structural / Functional Integration of Teams e.g. via D&B, DBO etc. is Necessary, but Not sufficient!

• we still need RELATIONAL INTEGRATION

• Some Clients pursue longer term relationships with principal Supply Chain members e.g. British Airports Authority – Framework Agreements; and Hong Kong Housing Authority – Premier League
How to ensure Good Relationships are not Abused?
Supply Chain members must maintain High Productivity – to remain Competitive

**CO-OPERATION + COMPETITION**

= **CO-OPETITION**
  - co-operation to compete better (together)
  - to create a bigger pie, while competing in dividing it

Sonia Gandhi (of India) said (in China) – in 2008
“guiding principles of relations (with China) are “**pragmatism and mutual interest**”.

*Does this apply to us? Is it achievable? When?*
Future Trends/Predictions/Wish-lists

Survival of the Fittest? No ‘one size fits all’. No Panacea!
Develop a suite of strategies that are ‘Fit for Different Purposes’
Fine-tune approaches to suit specific project priorities and conditions
- to extract higher performance levels

Also, Procurement Strategies will change with Technology (Hardware) innovations, new capacities and ‘ways of working’
Software (Procurement strategies) must also change with Hardware
(e.g. BIM - Building Information Modeling, other ICT advances, more Off-site Manufacture; Green Technologies).

But we should not lag behind!
We must anticipate and be proactive
So Procurement (software) can extract the most from new technologies

Common Goal: Procuring, Delivering & Sustaining better Infrastructure

Procurement Approaches – ‘revolving while evolving’? Spiralling – hopefully upwards!
Looking into the Future?

Do we need *Wizards* ref. *Harry Potter*, or other *Magic* .... *to predict Procurement needs & trends*?
Future Procurement must draw on Many Elements: past lessons & current options to address current & future needs