

PROCUREMENT APPROACHES: *Revolving, while Evolving?*

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PROCUREMENT APPROACHES: *Revolving, while Evolving?*

1. How **Evolving?** – mostly **Incremental** (slowly!);
with a **few** occasional **Innovations**
2. **Why *Revolving*?** – No ‘revolutions’. Not much drastic changes, despite desired industry reforms.
..... But some strategies & practices almost ‘*go full circle*’
e.g. D&B, PPP; GMP - *historically*

Also revolve *geographically*

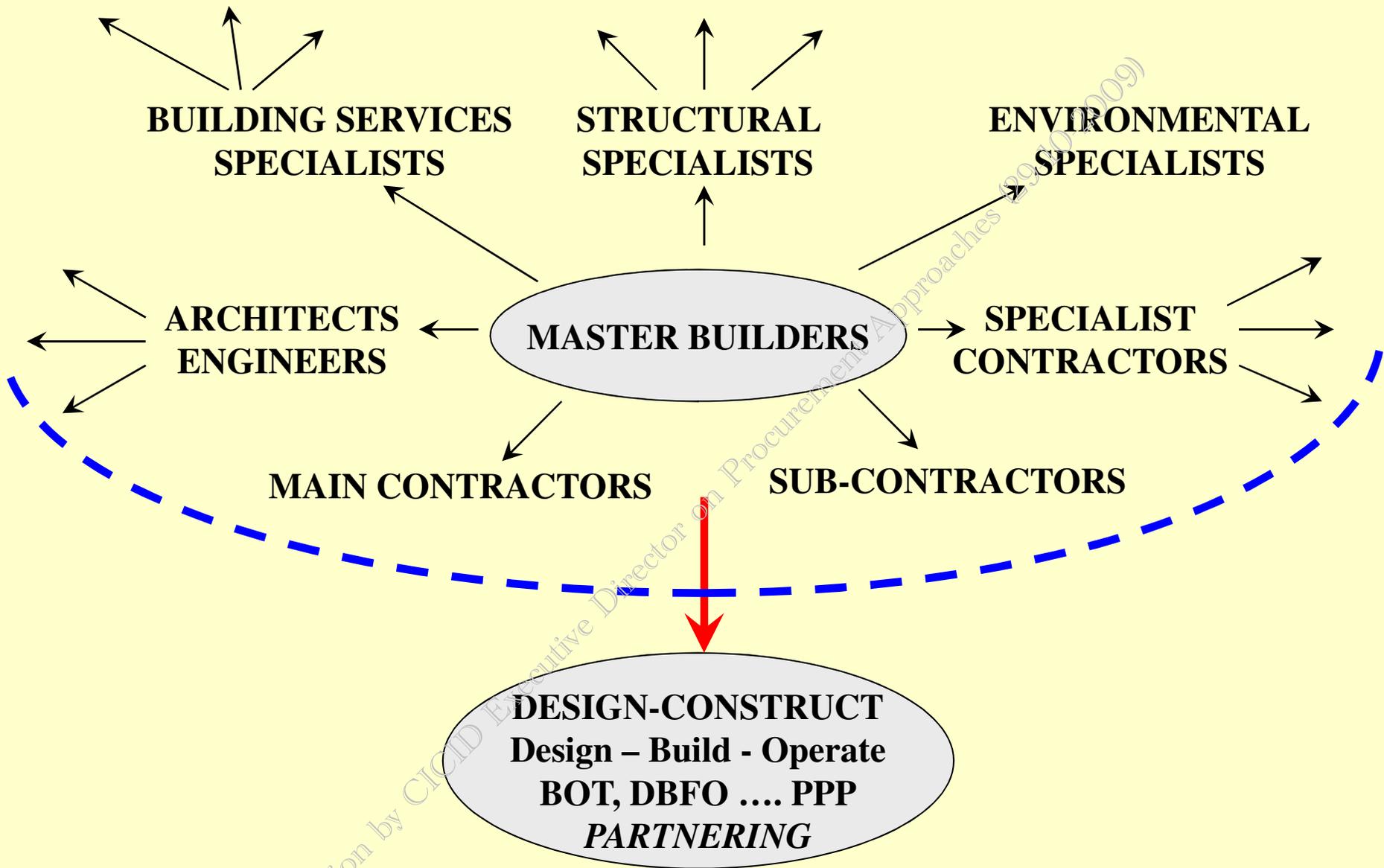
e.g. simple or no contract docs. – previously in **East**.

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



From Fragmentation to Re-integrated Teams

OUTLINE

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.

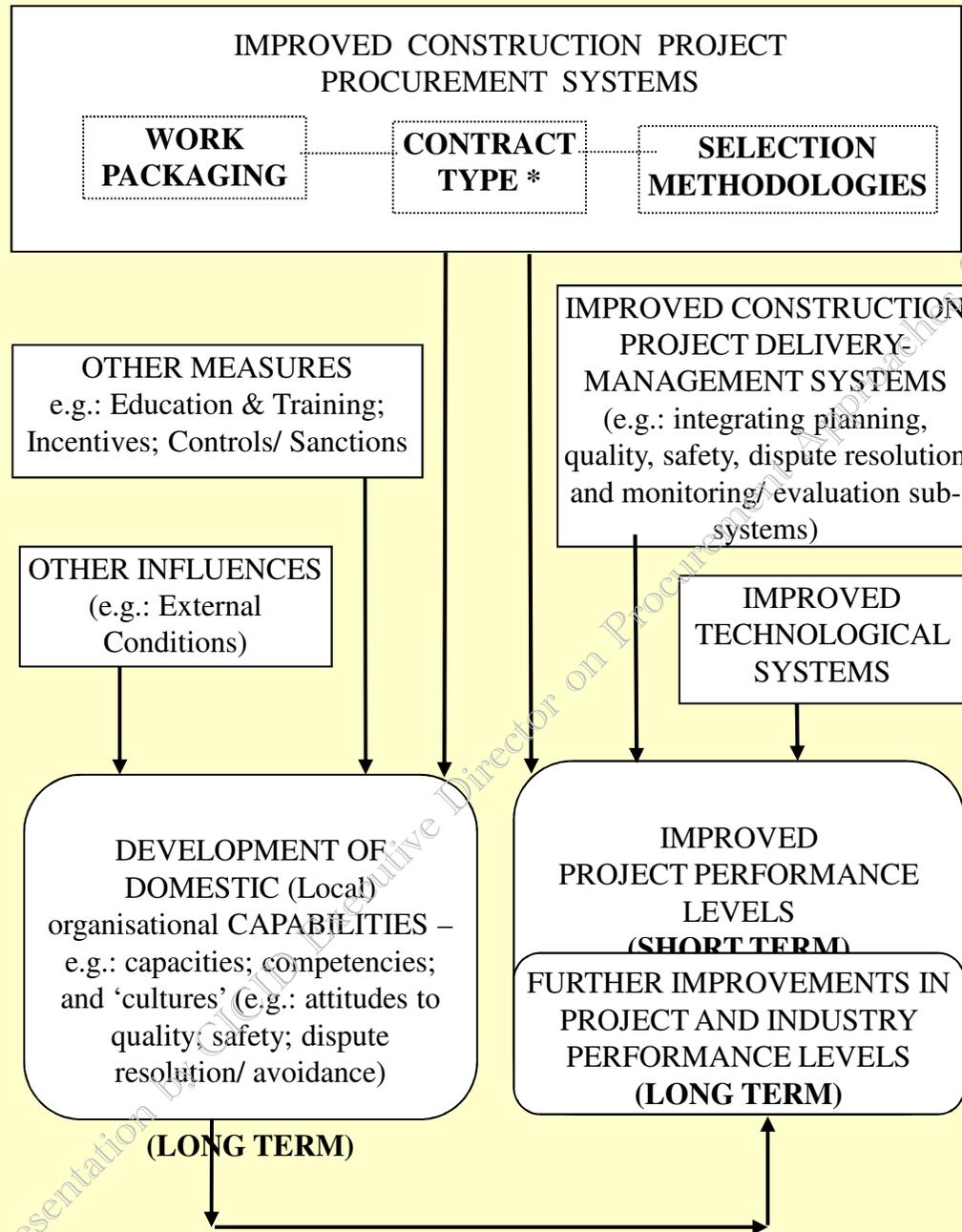
e.g. (a) Contractors priced much higher when ‘exculpatory’ (disclaimer) clauses were retained/ introduced (survey in Canada)

(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

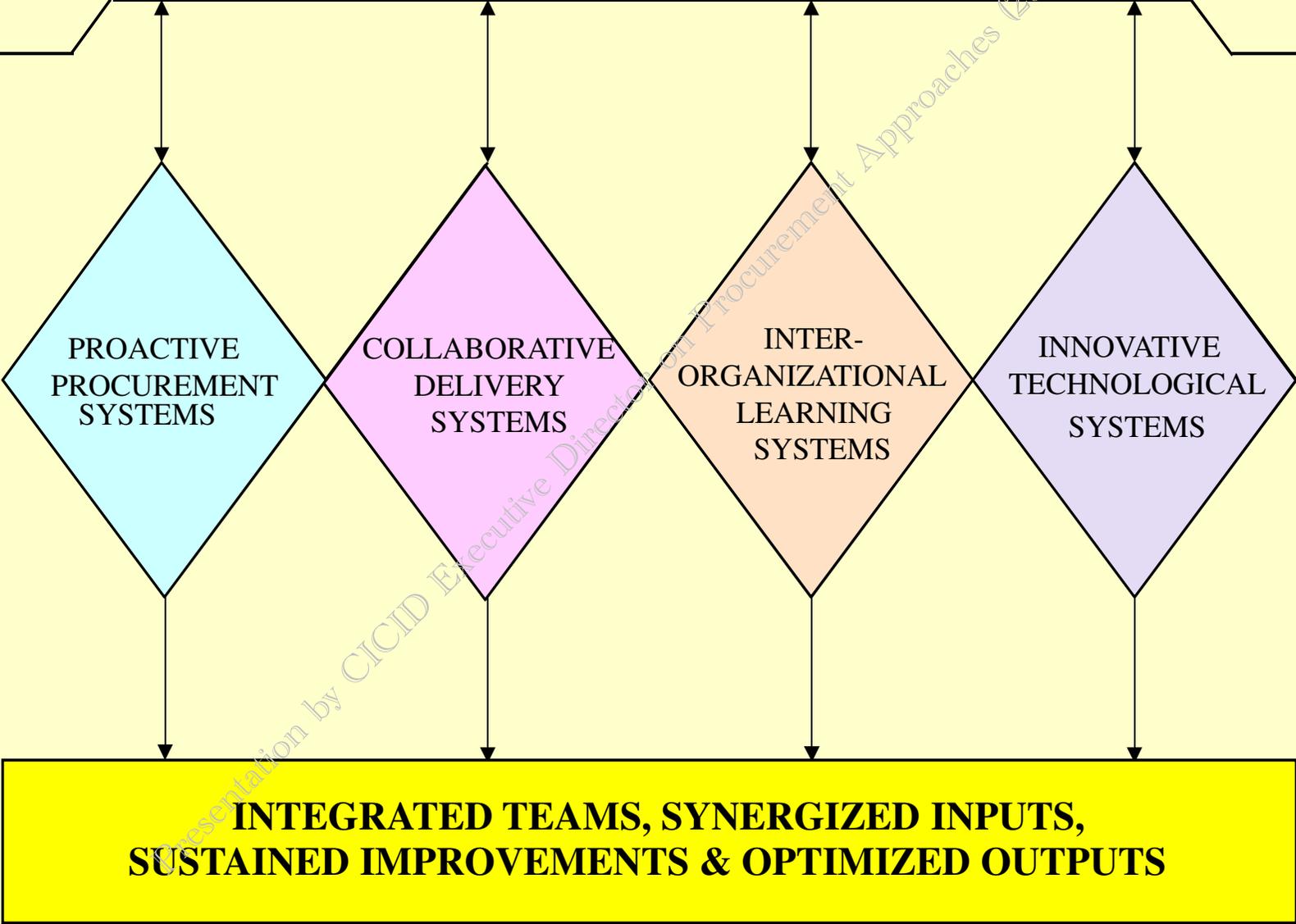
e.g. (a) Sub-contractors priced lower when they believed there would be genuine ‘partnering’ (example in UK)



‘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**



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 – **19th C. BC**
 - possibly DR then! So 'full circle'?
- *Functional Groupings in Construction Contracts – 20th 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 skill 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
- Working Group to review GCCs – led to 1985 Contract Conditions – not a 'joint production', but by HK Govt.; Next editions -1993; 1999
- 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. & Exhbtn. 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

Mediation in HK – origins in Construction Industry after costly Arbitrations - Working party: Govt. & BCA – Draft Rules (1982)

Early 1980's - Trial Mediation scheme; then Mediation Rules
– revised 1989, 1991, 1999 ... Also ACP Rules (1991).

HKIAC set up in 1985 – own Mediation rules in 1991

(Physical) **'Impossibility' Disputes** – 1990's

Beware Disputes on Dispute Resolution clauses!

e.g. Hyundai v Vigour Ltd (2004) Kenon v Nippon K..K..K.. (2004)

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?

– *Jesse Grove Report 1998*

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

Risk	1990's Allocation/ Provision	Grove Recommendation	Steering Grp. Response 2000
Changes in law	Contractor	Client	Accept
Ground conditions	Contractor	Client	Reject
Legal and Physical impossibility	Client	Allow Engineer to relax contractual requirement or issue variation	Reject
Third party interference	Contractor - cost Client - time	Client should accept both	Reject
Breach of contract by employer	No specific provision	Should be introduced	Reject
Need to terminate	No provision to terminate without default	Should be introduced	Accept
Client's need to accelerate	No provision	Should be introduced with compensation to contractor	Reject
Global claim	No contractual prohibition	Should be contractually prohibited	Reject
Care of the works	Contractor's risk except damage, loss or injury from 'excepted risks'	Require All Risks insurance coverage	Accept - on a needs basis

GCC / RISK PROVISIONS - 1998 STATUS, GROVE RECOMMENDATIONS & RESPONSES (Contd.)

Risk	1990's Allocation/ Provision	Grove Recommendation	Steering Grp. Response 2000
Notice and time bar provisions for claim	Notice - 28 days, particulars - 180 days after completion	Failure of notice should give rise to damages not forfeiture	Reject
Profit on claims for 'loss and expense'	No profit	Profit should be allowed	Reject
EOT for the events not included in contract	Allowed for special circumstances	Should be avoided	Reject
Liquidated damages	Only for delay damages	Apply to performance deficiencies as well	Provide through special conditions
Dispute resolution	Engineer's decision, voluntary mediation and arbitration	Wider use of DRA and voluntary use of 'no-decision' mediation	Not yet decided
Contractor's post-contract alternative design	No provision to incorporate as a variation	Should be considered. Variations preferably issued on a daywork basis	Accept
Sub-contractor payments	Sub-contractors	Sub-contractors with call for investigating payment insurance / payment bond as an option	Accept

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; and (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:

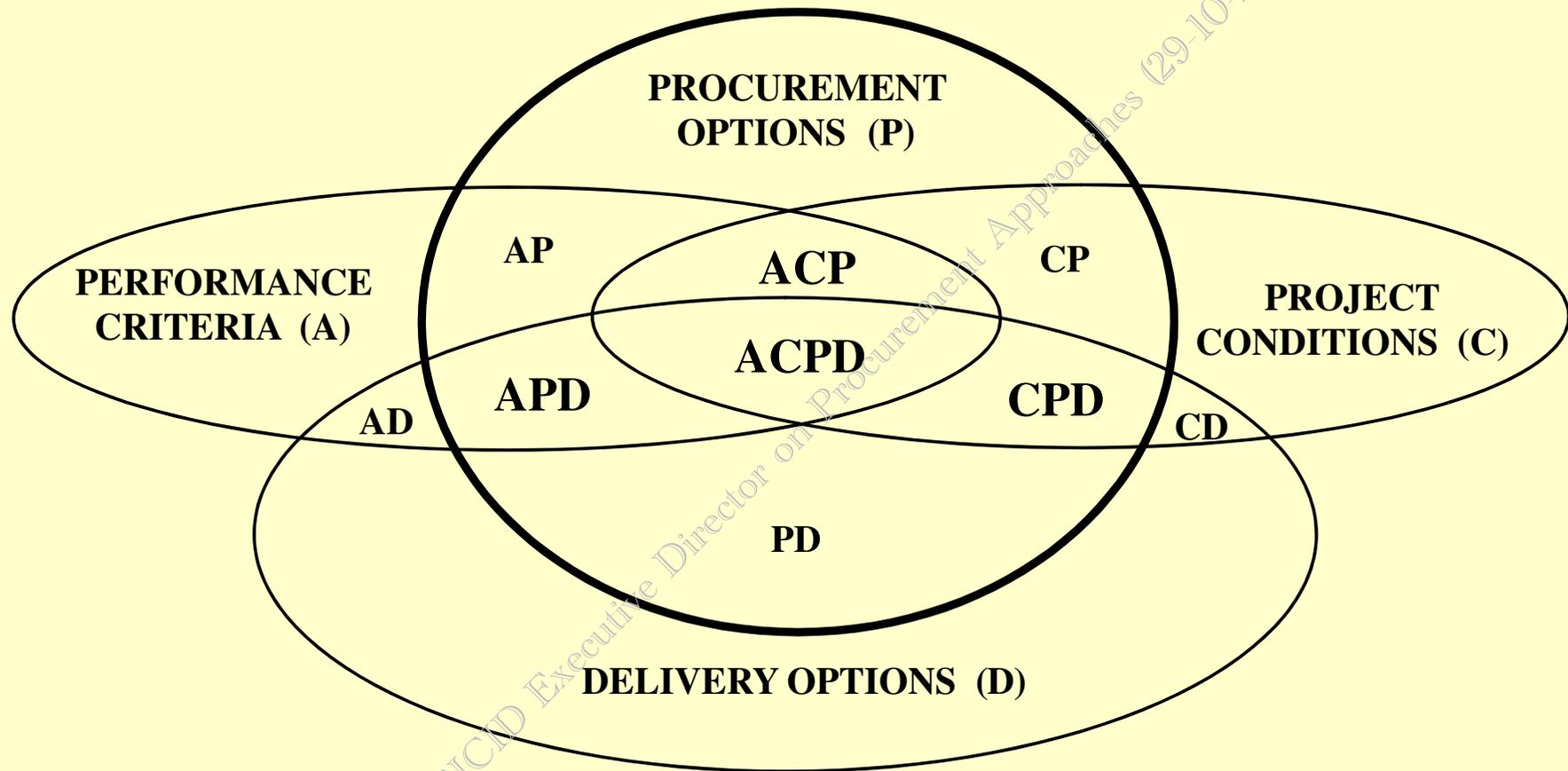
- (1) Designer Led
- (2) Design & Construct
- (3) Design Construct & Operate
- (4) Finance Design Construct & Operate.

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

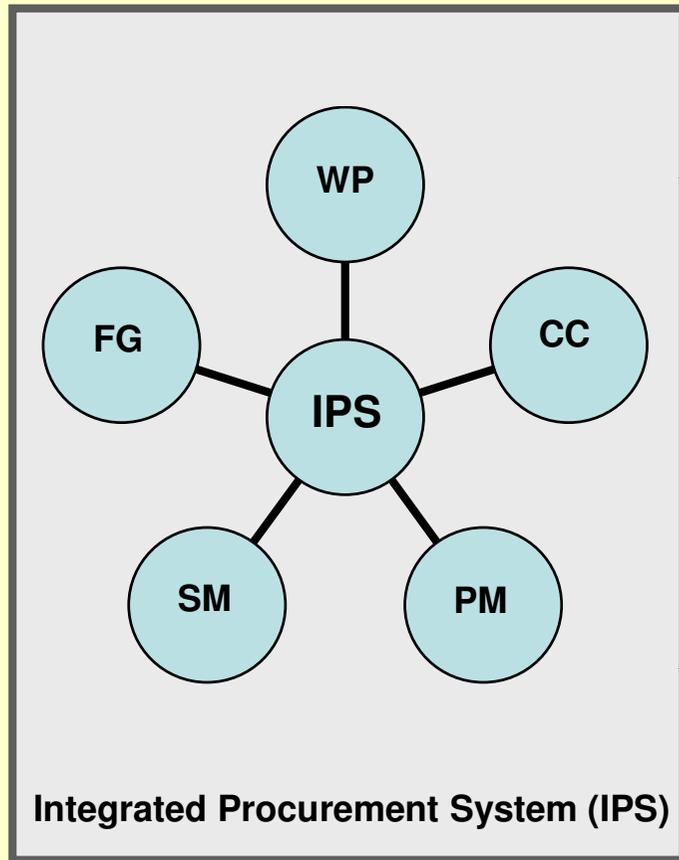
- (a) Tabulated **allocation of key responsibilities** (incl'dg. for 'Conceptual Design' and 'Design Development') between Employer, Designer & Contractor
- (b) Comparisons of **Major Features**, **Advantages**, **Disadvantages** and also their **Typical Performance levels** against criteria of **Cost, 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/ Management 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

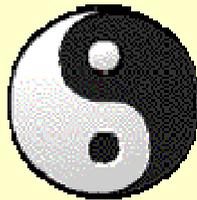


IPS sub-systems

- CC – Contract Conditions
- FG – Functional Groupings
- PM – Payment Modalities
- SM – Selection Methodologies
- WP – Work Packaging

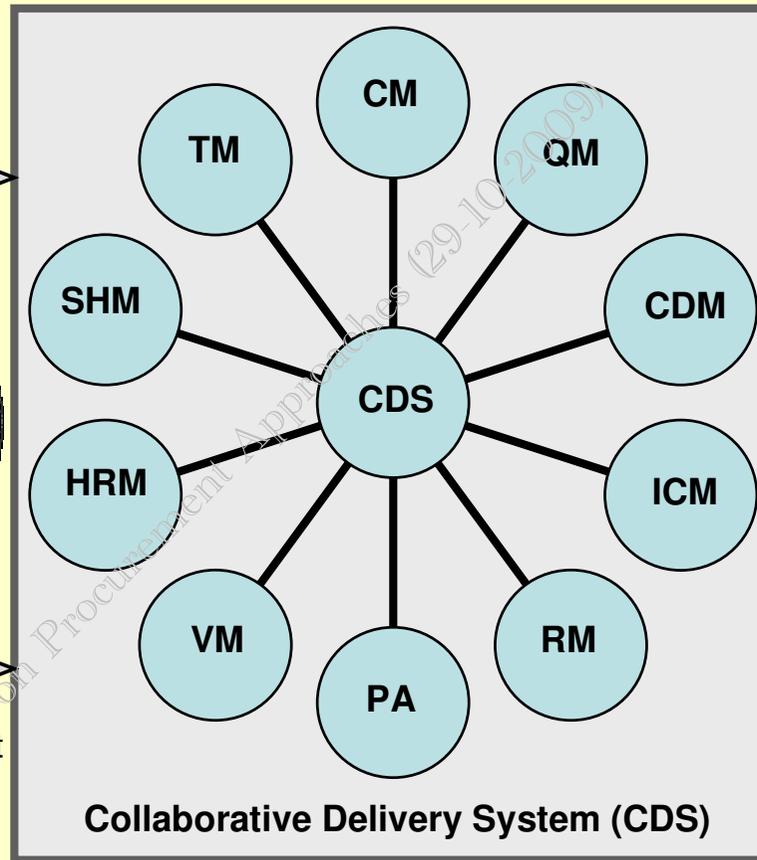
Interactive

initial
strategic
decisions



Monitoring &
feedback

for joint
improvement



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

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, Envnmnt, 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:

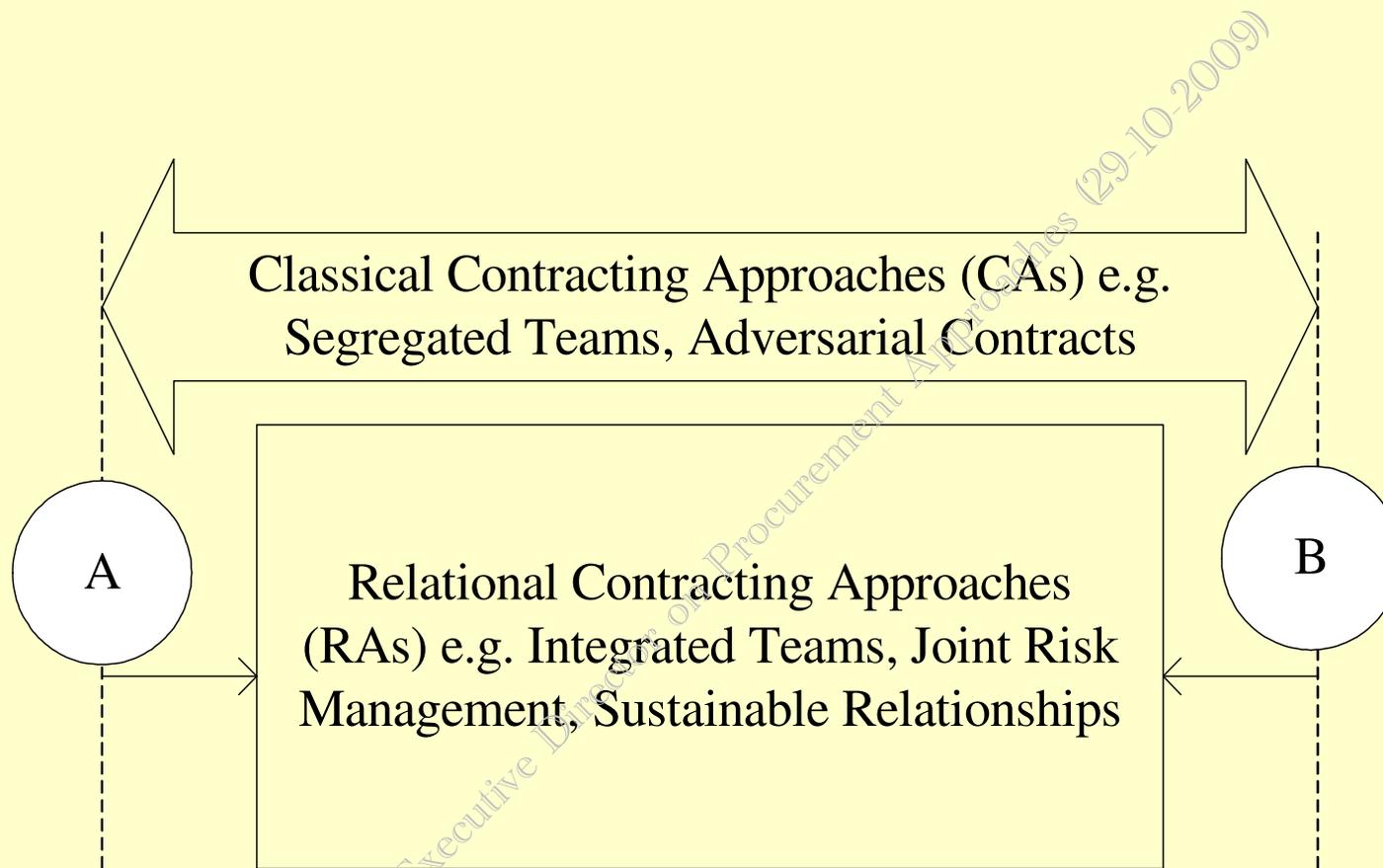
Clifford (HK) – (a) quality, cost and time performance can be increased by up to 10% - by starting with Partnering, then value and risk mgmnt.
(b) in TKE project, Return on Investment in above – estimated at 3,000%

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

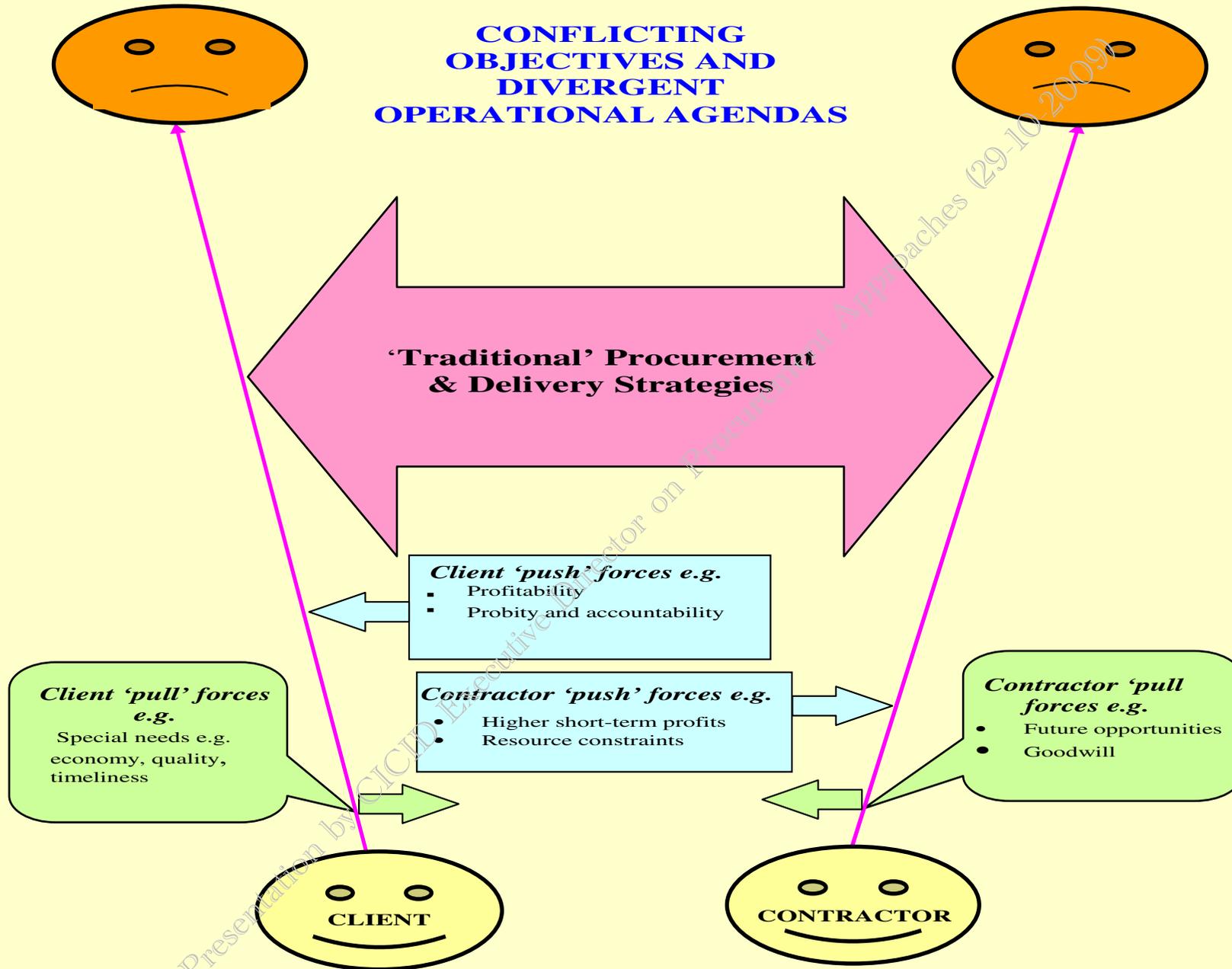
- 'Streamlined' Payments? Whether 'Security of Payments' provisions (as in UK, Australia, S'pore) and/or 'Fair Payment Charter' (UK), and/or .. (next session!)

BARRIERS to Innovations/ progress? Lack of Champions? Inertia? Fears of Collusion in close Co-operation/ partnerships?



Equilibrium of Push-pull forces between any two team members

CONFLICTING OBJECTIVES AND DIVERGENT OPERATIONAL AGENDAS



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

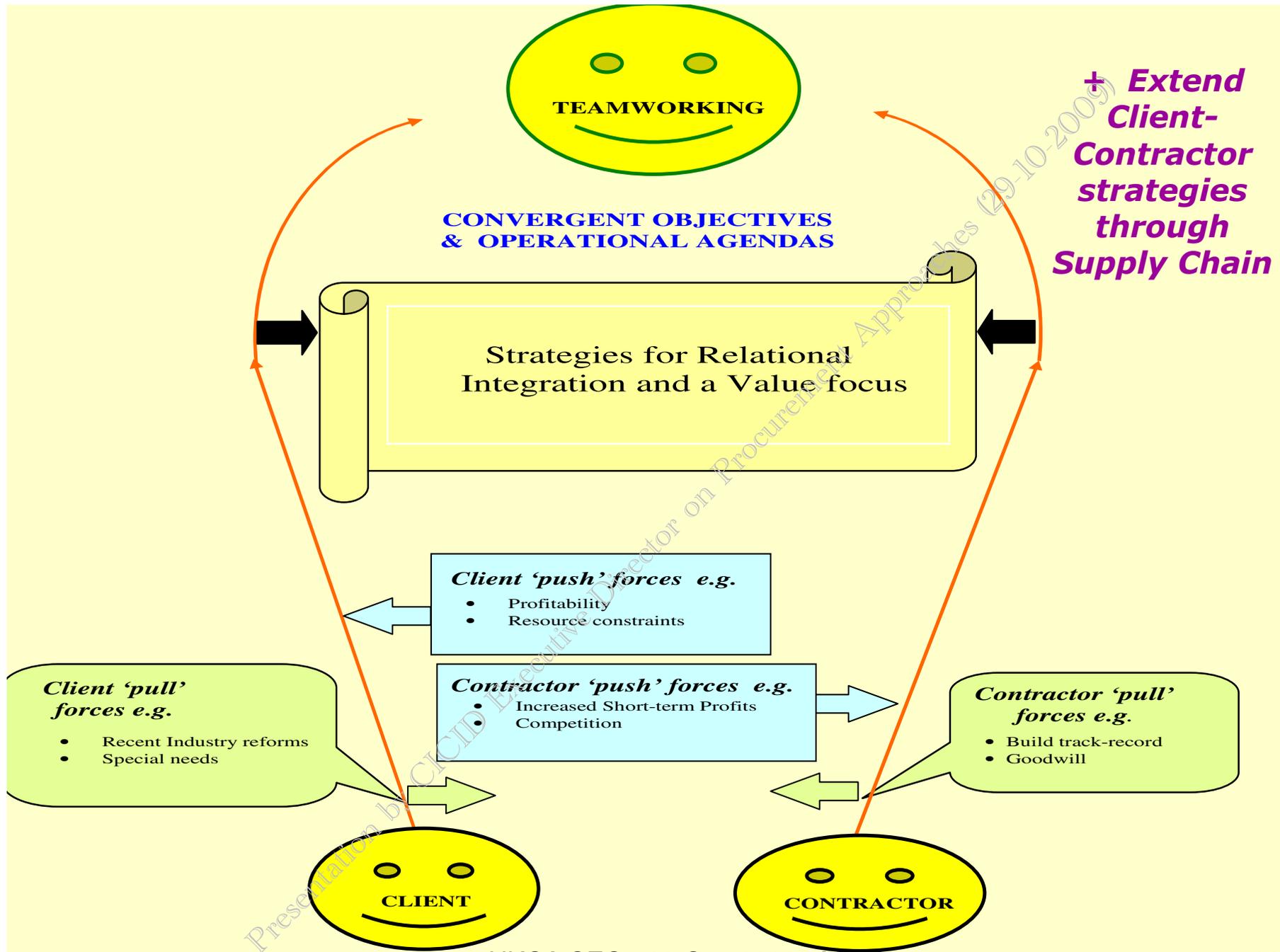
- Parties do not always follow legal mechanisms in written contracts - 'Good Relationships' also develop obligations
 - Compare with a traditional Japanese approach: "written document is only a tangible acknowledgement of a relationship ... rather than a precise instrument that defines the relationship"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

General: Macaulay (1963), Macneil (1974 1985)
Williamson (1985), Coase (1988), Eisenberg (2000)
HKU (2002



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**

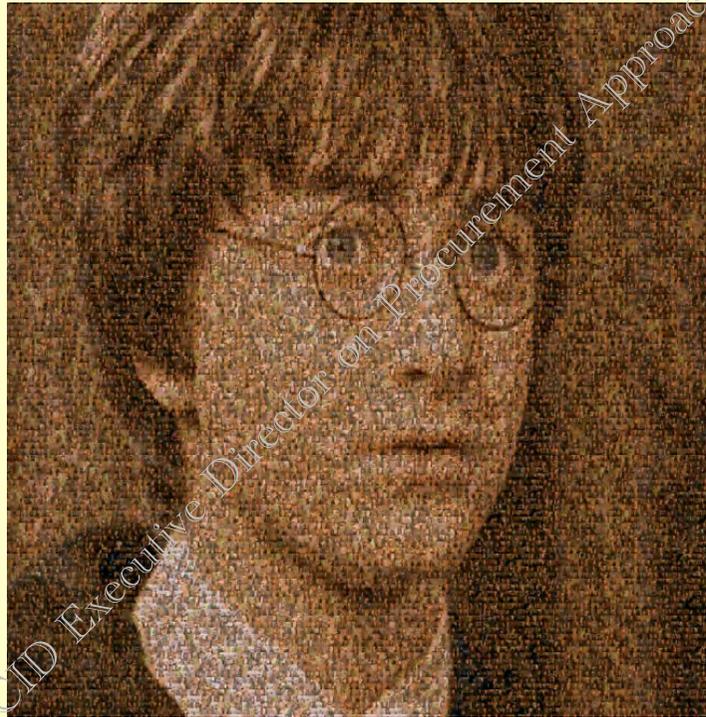
So **Procurement** (software) can **extract the most** from **new technologies**

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**

