參與泰國政府採購案之實戰策略 – Part II

簡報者: 中鼎工程

Sep 2023 蔡君平

Discover Reliable

大綱

1. 泰國能源政策趨勢分析
2. Major EPC players介紹
3. 泰國統包工程投標流程
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1.泰國能源政策趨勢分析

泰國能源政策彙整

Thailand National Energy Plan (NEP 2022)

Go green with energy security and competitiveness for sustainable energy future

“以能源安全與競爭力為出發點，實現可持續發展的綠色能源轉型”

總體目標

- 泰國能源部正朝著清潔能源的方向發展，在2050年實現碳中和；
- 提高國家的競爭力以及泰國投資者在全球低碳經濟發展中的地位；
- 支援創新型經濟，以實現長期的溫室氣體目標。

政策方向			
2040年，實現50%的可再生能源發電	推動“30@30政策”，推廣電動車輛行業發展	通過技術研發和創新，將能源效率提升30%以上	通過數位化、去中心化、脫碳、去監管和電氣化(4D+1E策略)，實現能源轉型

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泰國能源政策彙整

Thailand ‘s Energy Policy : 4D + 1E

數位化 Digitalization

- 加強輸電系統，實現 “智能電網”
- 發展儲能系統 (ESS) ，提高供電穩定性
- 成為東盟的能源商業中心

去中心化 Decentralization

- 完善電網/非電網系統的電力輸送，促進點對點電力交易
- 發展社區電站
- 促進南部和東部地區的電力平衡

脫碳 Decarbonization

- 促進太陽能和生物能源的生產和利用
- 將農產品作為替代燃料使用，並提高其價值

去監管 De-regulation

- 鼓勵能源創新及能源創業
- 使用能源節約促進基金ENCON，促進社區商業發展
- 增加公眾購買電力的機會（產銷合一）

電氣化 Electrification

- 拓展電動車網路
- 推廣使用電動車

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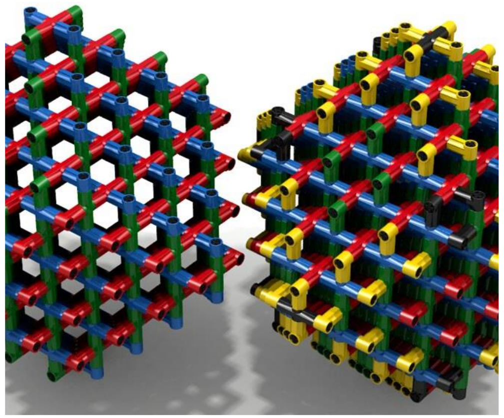
泰國石化產業展望

高端石化產品



石化業者將改為生產高端石化產品 (如ABS)，以因應對於生產電動汽車零組件、電池與醫療設備的強勁產業需求。

循環經濟

根據泰國政府石化產業發展計畫(2022-2026)的第4階段，石化業者將通過增加可生物降解(biodegradable)及可回收(recycled)塑料的產量來開拓新的市場機會。

天然氣投資

泰國石油集團(PTT) 調整營運策略，增設液化天然氣（LNG）接收站，為脫碳鋪路。

2. Major EPC Player in Thailand

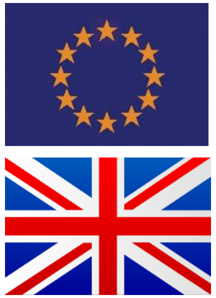
Potential Partner/ Competitor

- MHI
- KHI
- IHI
- JGC
- Chiyoda
- Toyo
- IIW
- TKK

- Samsung
- Hyundai
- SK
- Daelim
- GS
- POSCO

- Fluor
- KBR
- MDR
- Worley (merged Jacobs in 2019)
- WOOD
- Bechtel
- SNC-Lavalin

- SEG
- HQCEC
- CNCEC
- Wison



- TechnipFMC
- TR
- Saipem
- Petrofac
- TKIS
- Intecsa
- TCM
- DI (Dragados Industrial)

EPC Company in Thailand – TTCL

- Company Introduction：

Item	Information
Company Name	TTCL Public Company Limited (TTCL)
HQ Location	Bangkok, Thailand
Strengths	oil, gas, oil & gas development, petrochemicals, chemicals, water treatment, transportation systems, power generation, nuclear power, advanced production systems, pharmaceutical, fine chemical, distribution systems, biotechnology, environment
Est. Year	April 24, 1985
Website	https://www.ttcl.com
Notes	• Toyo Engineering Corporation entered the Thailand market in 1978 through its subsidiary, Toyo-Thai Corporation Public Company Limited (TTCL). • TTCL was a JV company by Toyo Engineering Corporation (TEC) and Italian-Thai Development Public Company Limited (ITD), with the shareholder stake of 49% and 51%. In 2018, Sojitz has become a major shareholder instead of TEC. • TTCL has over 20,000 employees. They have been involved in major projects such as the Map Ta Phut Olefins, Sriracha Refinery Expansion, Clean Fuel Project, and Rayong Refinery Upgrade, contributing to Thailand's petrochemical and refining sectors.

EPC Company in Asia – JGC

- Company Introduction：

Item	Information
Company Name	JGC Corporation (JGC)
HQ Location	Yokohama, Japan
Strengths	(1)Oil & Gas (Refining, Petrochemicals, LNG, etc.), (2)Infrastructure (ex. Power)
Est. Year	October 25, 1928
Number of Employees	7,900
Website	http://www.jgc.com/
Notes	JGC Corporation has a strong presence in Thailand's EPC market since the 1970s, successfully executing projects in the oil and gas, petrochemical, and power sectors.

EPC Company in Thailand – IHI

- Company Introduction：

Item	Information
Company Name	IHI Corporation (IHI)
HQ Location	Tokyo, Japan
Strengths	(1)Resources, Energy and Environment, (2)Social Infrastructure and Offshore Facilities, (3)Industrial System and General-purpose Machinery
Est. Year	December 5, 1853
Website	https://www.ihi.co.jp/en/
Notes	• IHI Corporation has a long-standing presence in the Thailand market. • They have been involved in major projects related to power generation, industrial machinery, marine industry, and infrastructure development

EPC Company in Thailand – Samsung Engineering

■ Company Introduction：

Item	Information
Company Name	Samsung Engineering
HQ Location	Seoul, Korea
Strengths	(1)Oil & Gas Processing, (2)Refinery, (3)Petrochemicals, (4)Power, (5)Industrial, (6)Environmental
Est. Year	1970
Website	http://www.samsungengineering.com/index
Notes	• Samsung step into Thailand market since 1992, currently Samsung has 150 engineers in Thailand. • In Thailand, Samsung has developed 17 projects including PTT Plc's sixth gas-separation plant, the world's largest, and Map Ta Phut Olefins' cracker with annual production capacity of 800,000 tonnes.

EPC Company in Thailand – TFMC

- Company Introduction：

Item	Information
Company Name	TechnipFMC plc
HQ Location	Houston, United States, Paris, France, (Operational headquarters)
Strengths	subsea, offshore/onshore, and surface projects
Est. Year	2017; Technip (1958), FMC Technologies (2001)
Recent Cooperation with CTCI	Saudi Kayan Furnace 10 Project, EPC, KSA Pertamina Balikpapan Refinery RDMP Project, EPCC, Indonesia (Tender only)
Website	www.technipfmc.com
Notes	• TechnipFMC has been involved in major refinery modernization projects in Thailand. • Technip’s operations and engineering center in Bangkok (Thailand) will execute the contract with pipeline engineering support from Technip’s operations and engineering center in Kuala Lumpur (Malaysia).

EPC Company in Thailand – SAIPEM

- Company Introduction：

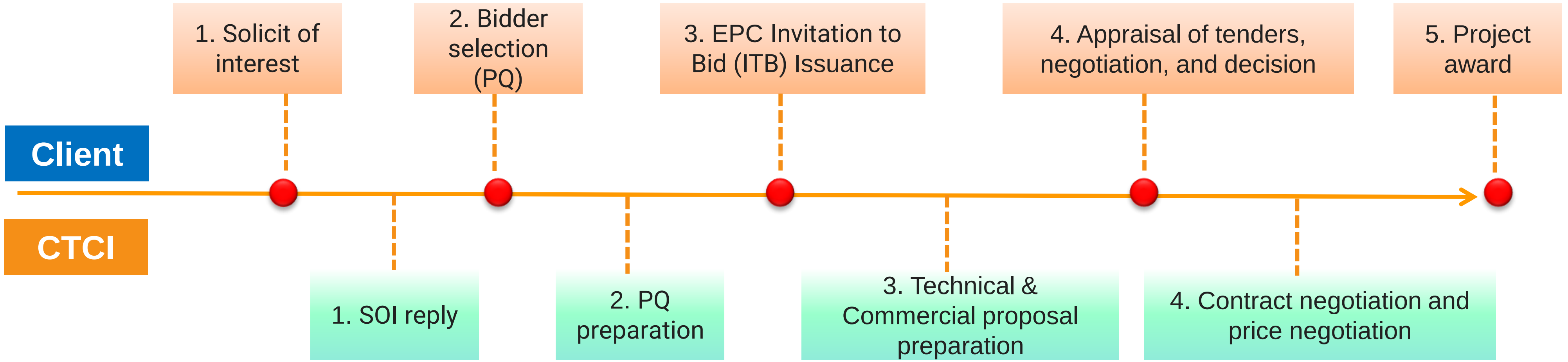
Item	Information
Company Name	Saipem S.p.A.
HQ Location	San Donato Milanese, Italy
Strengths	Offshore, Onshore, Drilling
Est. Year	1957
Recent Cooperation with CTCI	PTTLNG Noon Fab LNG Receiving Terminal Project, EPCC, Thailand IRPC MARS Project, EPC (Bidding only) QP NFE EPC-1 (Bidding stage)
Website	www.saipem.com
Notes	

3. 泰國統包工程投標流程

EPC Bidding Timeline

Procedure:

The bidding timeline can vary depending on the specific project and its complexity. However, here is a general outline of the typical EPC bidding timeline::



Note:

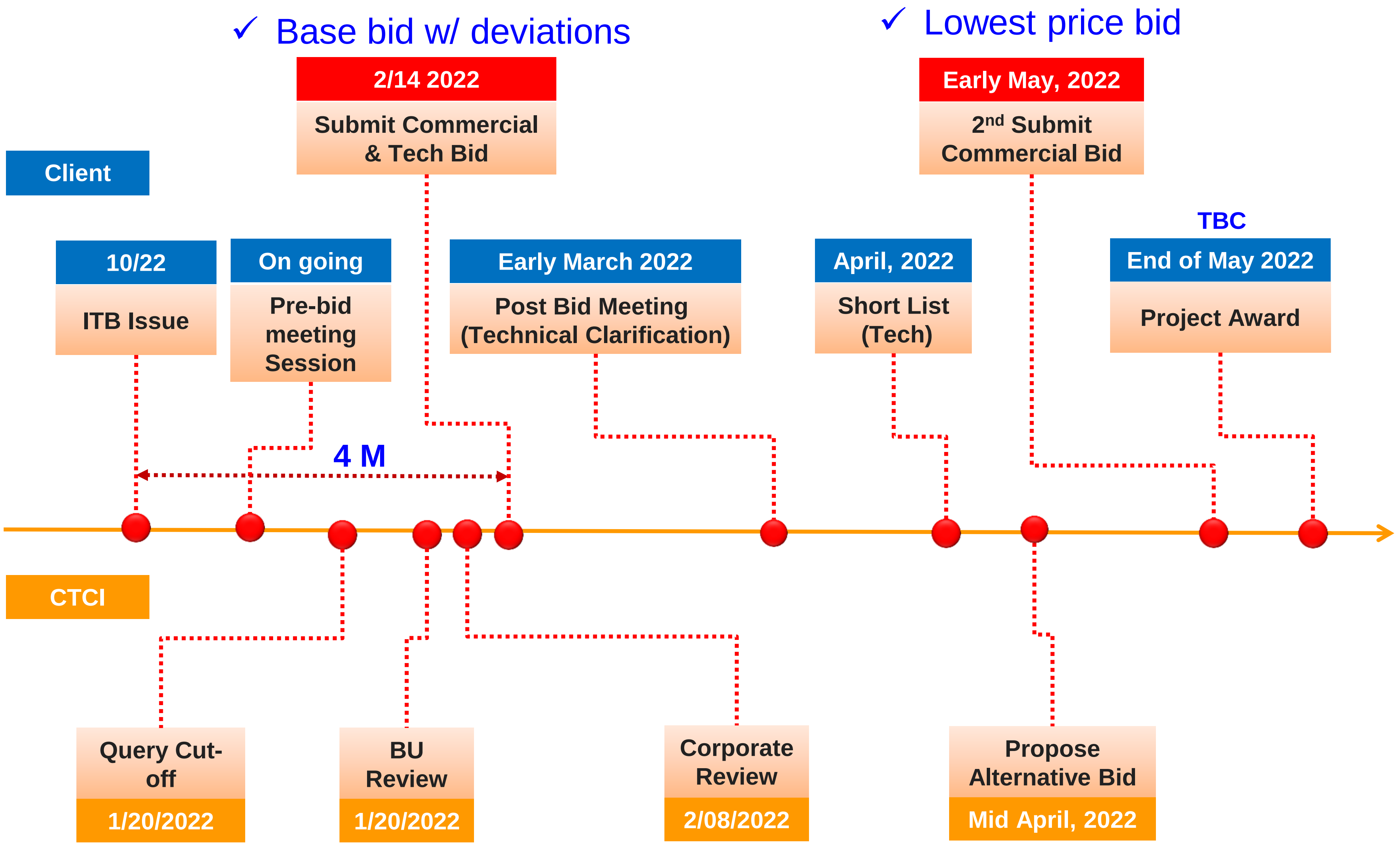
1. SOI and PQ: Interested contractors submit PQ documents to demonstrate their capabilities, experience, and financial stability. The client evaluates these submissions and shortlists qualified bidders.
2. Invitation to Bid (ITB): The shortlisted bidders receive the detailed ITB document, which outlines project requirements, specifications, scope, schedule, and commercial terms.
3. Proposal Preparation: Bidders review the ITB, conduct site visits if necessary, and prepare their technical and commercial proposals. This involves developing engineering plans, procurement strategies, construction methodologies, cost estimates, and project schedules.
4. Evaluation and Clarifications: The client evaluates the received proposals based on technical compliance, cost competitiveness, experience, and other evaluation criteria. They may seek clarifications or request additional information from the bidders during this stage.
5. Negotiation and Contract Award: The client may enter into negotiations with the selected bidder(s) to finalize contract terms, including pricing, scope of work, and project timeline. Once negotiations are concluded, the contract is awarded to the successful bidder.

Prequalification Flow Chart

Procedure:

1. Receive SOI from Owner
2. Evaluate whether to submit the PQ.
3. Reply SOI
4. Create PQ Project Code
5. Assign PM responsible for PQ preparation
6. M&S to arrange KOM for Split of Work.
7. Collect all internal quires. M&S is the contact window to communicate with Owner.
8. Arrange internal Review
9. M&S is to compile the PQ documents and submit to Owner.
10. Confirm Owner receives the PQ submission.

Bid Timeline (Sample, International Tender)



4. 業主審標要項與備標重點

The Key Points for EPC bid Evaluation

1. Key criteria considered include technical compliance, experience, project schedule, cost competitiveness, and proposed solution quality.
2. The commercial compliance (Ex: T&C) will also be considered.
3. The client or project owner reviews and compares bids to select the most suitable contractor.
   - The L1 of Technical qualified bidders (Lowest bid)
   - Comprehensive evaluation
4. Clarifications or additional information may be requested from bidders during the evaluation process.

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Proposal Check List (Sample)

Technical Proposal

- ✓提出業主製程優化方案(如最新科技應用)
- ✓提供高效能或先進技術設備或材料
- ✓強調「具製程安全分析及執行經驗」
- ✓強調「熟悉現場操作習慣及保修流程」
- ✓強調「完善之QA/QC/HSE/CSR規劃」
- ✓提出比ITB更好之條件(如備品項目及數量)
- ✓提供備品長期固定單價
- ✓建立完整檢試驗計畫
- ✓強調主動為業主整合不同包商介面
- ✓提供重要工法說明
- ✓提出「保證如期或提前完工」之具體作法
- ✓以4D模擬說明重大施工項目
- ✓提出具體之分項品質計畫及工安計畫

2.2 Instructions to Bidders_Rev A

Technical Proposal Requirement (Sample)

5.0 Proposal Technical Section

Bidder's proposal shall include technical responses to this RFP, as follows:

5.1 Bidder shall identify any technical issues or engineering issues which Bidder considers required further development to install the work.

5.2 Bidder's shall submit its proposed organization chart indicating key individuals to be assigned to the Project. The organization chart should distinguish between office personnel and site personnel.

5.3 Bidder shall submit a resume or bio for each key personnel which would demonstrate that these key individuals have prior working experience in this type of project and Work.

5.4 Bidder shall submit a manpower plan which identifies the construction supervision personnel by title (construction manager, field engineer, safety, quality, etc.) which are planned to be on site, full time, each month.

5.5 Bidder shall submit a manpower histogram by craft discipline (civil, structural, mechanical, piping, etc.,) which indicates the number of craft planned in each discipline and the total (peak) manpower planned each month.

5.6 Bidder shall identify its planned work week. Bidder may offer alternate scheduled work week to complete the work areas on earlier dates, including any cost impact of same.

2.2 Instructions to Bidders_Rev A

Technical Proposal Requirement (Sample)

5.0 Proposal Technical Section

5.7 Bidder shall submit preliminary construction equipment plan, by type of equipment, by quantity of each type of equipment each month and whether planned construction equipment is rented or owned.

5.8 Bidder shall submit a preliminary execution plan with its proposal. The execution plan must include a narrative sequence of Work consistent with submitted Level 1 Schedule, which demonstrates Bidders understanding of how best to approach/execute this work.

5.9 Bidder shall develop and submit a Level 1 Schedule, based on the critical dates presented in Exhibit A-9.

Bidder's schedule shall identify any portion of the Work that bidder plans to subcontract and will include identifiable critical dates. Bidder to identify any office which may provide home office support services for the project and what services will be performed.

5.10 Bidder shall provide a description of its proposed temporary facilities planned support the execution of the work, including trailers, laydown area size. The submittal shall include the temporary facilities which will be provided by bidder for use by the Company through the achievement of Final Completion

2.2 Instructions to Bidders_Rev A

Technical Proposal Requirement (Sample)

5.0 Proposal Technical Section

5.15 Bidder will confirm ability to meet or exceed insurance requirements set forth in Exhibit D.

5.16 Bidder to identify any proposed changes to the Agreement and Terms and Conditions.

5.17 Bidder to provide preliminary details on the location, construction and operation of a construction camp as may be required by Bidder to provide housing, food and accommodation to Bidders construction craft and supervision for the duration of the project.

5.18 To the extent that Bidder plans to modularize the construction of certain portions of the Work, Bidder shall submit an overview of the type of modules (process, pipe rack, etc.) and the number of modules that may be constructed offsite.

5.19 Bidder to provide an overview of the material management plan/procedures which will be used manage the receiving, inventory, issue and installation of both Company Supplied Equipment and Contractor supplied materials.

EPC Bidding Criteria (Lowest bid)

- <u>Technical evaluation criteria</u>

Stage 1	**Technical and commercial proposal submit in the same time on 26th Nov**			
Stage 2	**Technical clarification, apple to apple, and bidders can submit the price of update portion only.**			
Stage 3	No.	technical proposal Major Criteria Items	Weight (%)	**Remark**
	1	Performance Guarantees (Mechanical)	TBC	**80 Pass (Total 100)**
	2	Key points of Project execution		
	3	Qualification of nominated personnel		
	4	Bidder's workload		
	5	Cost reduction alternatives offered by Bidder as options		
	6	Safety performance and procedures		
	7	Material management procedures		
	8	Quality assurance procedures		
	9	Construction and Commissioning procedures		
	10	Training program		
	11	Schedule		
	12	Compliance with AVL and Subcontractor List		

EPC Bidding Criteria (Comprehensive evaluation)

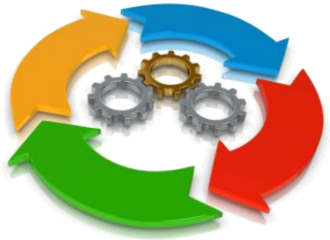
- Commercial evaluation criteria

	No.	Major Criteria Items	Weight (%)	Remark
Stage 4	1	Technical Proposal Scoring	65%	**the highest score as a successful bidder for each package (owner select maximum 2 contractors for whole project)**
	2	Commercial Proposal Scoring	35%	
	In case owner award to one contractor. The weighting of scoring is VCM > PVC > OSBL.			

5. 競標策略分享

Project Risk Management

專案生命週期



SOI 階段

PQ階段

取得ITB

投標

得標

專案執行

結案

高風險報價案評估

風險事件管控追蹤、執行案風險稽核

收集專案資訊，選定目標專案並評估業主信用等級。

評估潛在風險。

取得管理層批准後啟動報價。

- 針對高風險報價案持續追蹤評估。
- 召開會議，確認競標、執行策略。
- 落實審查商務條款，確保條款不超過風險底線。

- 對風險事件成立因應小組，依照風險等級報告處置情形 (定期/不定期)。

TOPIC for Strategy Meeting

- Project Outline
  (Owner/ Contract Type/ Budget/ Schedule/ SOW/ Bidder List…etc.)
- Contract Scheme (JV/ Consortium/ Main-Sub)
- Bidder Analysis (Major competitor/ CTCI Pro & Con…etc.)
- Evaluation Procedure
  (Price open bid/ Negotiation/ Two stages-Technical Bid & Price Bid/
  Award by Technical Scoring Method)
- Potential Risk (Consequential Loss/ LD/ Total Liability…etc.)
- "Winning Strategy"

  (Partner/ Local resource/ relationship with Owner/ E, P, C strengths)

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Partner Selection

- ✓ Project Complexity
- ✓ Expertise (Experience) and Resources
- ✓ Risk Mitigation (Financial, technical, operational, or contractual risks)
- ✓ Local Market Knowledge
- ✓ Financial Considerations and ECA
- ✓ Reputation and Track Record
- ✓ Contractual Arrangements
- ✓ Project Schedule

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Partner Analysis (Sample)

Criteria	S Company	H Company	C Company
Engineering Capacity	Strong	Strong	Strong
Cooperation Scheme	JV	JV	Consortium
Relationship with Client	Client A: Fair Client B: Good	Client A: Good Client B: Good	Client A: Fair Client B: Good
Local Resource	Fair	Strong	Fair
Willingness to cooperate with CTCI	Strong	Fair	Fair
Competitiveness	Strong	Fair	Fair
Experience in Thailand	1. AAA Project 2. BBB Project 3. CCC Project	1. DDD Project	1. EEE Project 2. FFF Project 3. GGG Project 4. HHH Project

Cooperation Scheme - Joint Venture vs. Consortium

台灣/聯合承攬	JV		Consortium
契約風險	共同執行工作，共同承擔風險		各自執行工作 對業主負連帶保證
利潤/損失分配	全案依JV議定比例共享損益		享有各自合約金額執行 所產生之損益
登記與否	UJV： 不登記僅記帳	IJV： 登記JV公司	NA
稅務	UJV： 利潤按JV比例計算分配予成員，由成員繳稅	IJV： 由公司繳稅，稅後利潤按出資比例分配股東	各自繳稅
考量要點	1. 雙方是否欲共同合作、承擔風險及利潤共享。 2. 技術合作、經驗交流、成本考量及提升競爭力。 3. 業主及ITB規範可接受之承攬模式。 4. 當地法規對JV形態之限制 (例如：中國僅接受IJV)。		

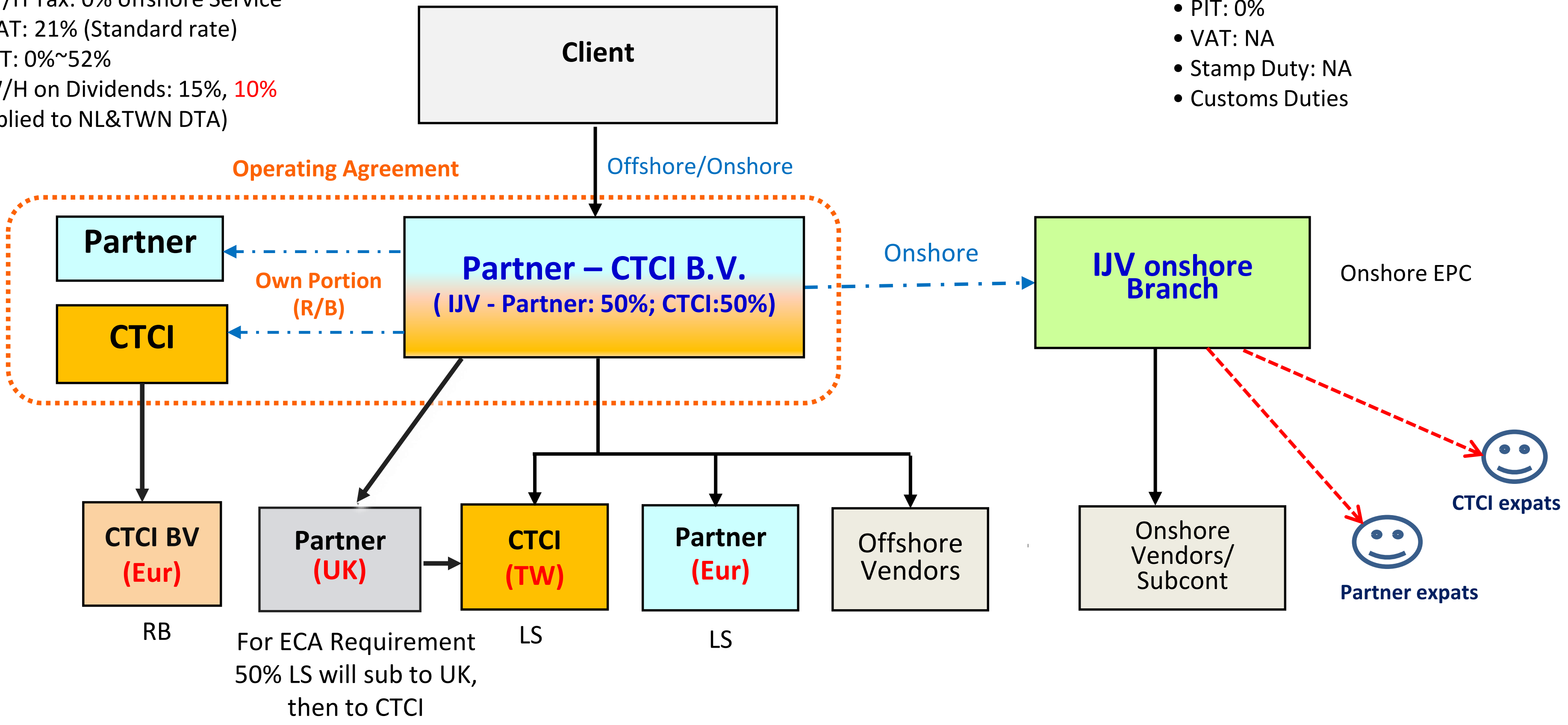
Joint Venture Scheme (Sample)

Contract :
Work Flow :
Payment Flow :

Contract Scheme
(Single Contract)

IJV company Taxation：
- CIT: 20% /25% (for profit>EUR 200,000), 0% for foreign branch
- W/H Tax: 0% offshore Service
- VAT: 21% (Standard rate)
- PIT: 0%~52%
- W/H on Dividends: 15%, 10% (applied to NL&TWN DTA)

Project Country Taxation：
- CIT: 15%
- W/H Tax: 10% for offshore Service
- PIT: 0%
- VAT: NA
- Stamp Duty: NA
- Customs Duties



Key Points for Price Review Meeting

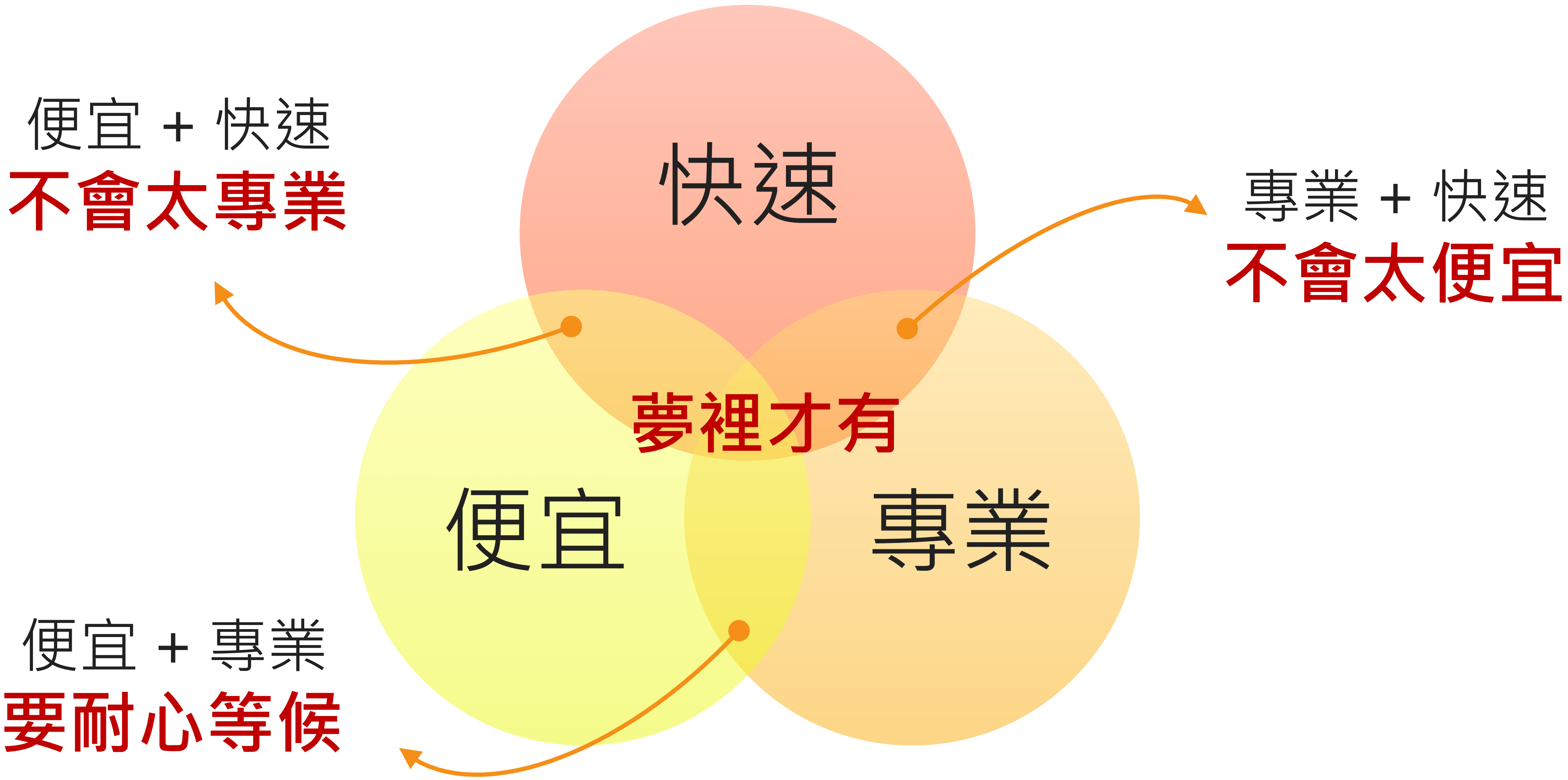
公司層級:
合約條文、保護措施、退場機制、權責範圍、罰則規定、公司授權、收支平衡、風險管控、策略運用、合理稅制、利潤配置...等 (偏商業面)

事業部層級:
專案成本/時程、相關規範/數量/選商/執行計劃...等 (偏技術面)

Experience Sharing

1. 策略是什麼? Proposal 的賣點是什麼?
2. 業主審標? 決標? NDA? Partners? 退場機制?
3. 找出那些(人/時/地/物/$) 掌握/控制在別人手上，想辦法解套
4. Rely upon information => baseline => 隱性保護條文…
5. Deviation => Opening vendors list…
6. Lower cost => 轉包，境/廠外預製
7. Qualification => 業主供料/LLI/novated item 交期…
8. 簽約方式/內容，T&Cs, => 節稅
9. Neutral cash flow,
10. 保護措施 => 備案(胎)是什麼?在那裡?
11. 全身而退? => liability/保證/保固怎麼罰? 罰責? 付款條件?

又快又好又便宜...存在嗎?



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Price is what you pay. Value is what you get

NT 80

<u>成分:</u>
- 柳橙

NT 20

<u>成分:</u>
- 水
- 高果糖糖漿
- 蔗糖
- 柳橙果肉
- 柳橙濃縮果汁
- 香料
- 檸檬酸
- 檸檬酸鈉
- 維生素C
- 胡蘿蔔素

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《看得見的信賴》專書

“Discover Reliable” (Book)