
Term Opportunities and Developed Economies

August 22nd, 2006

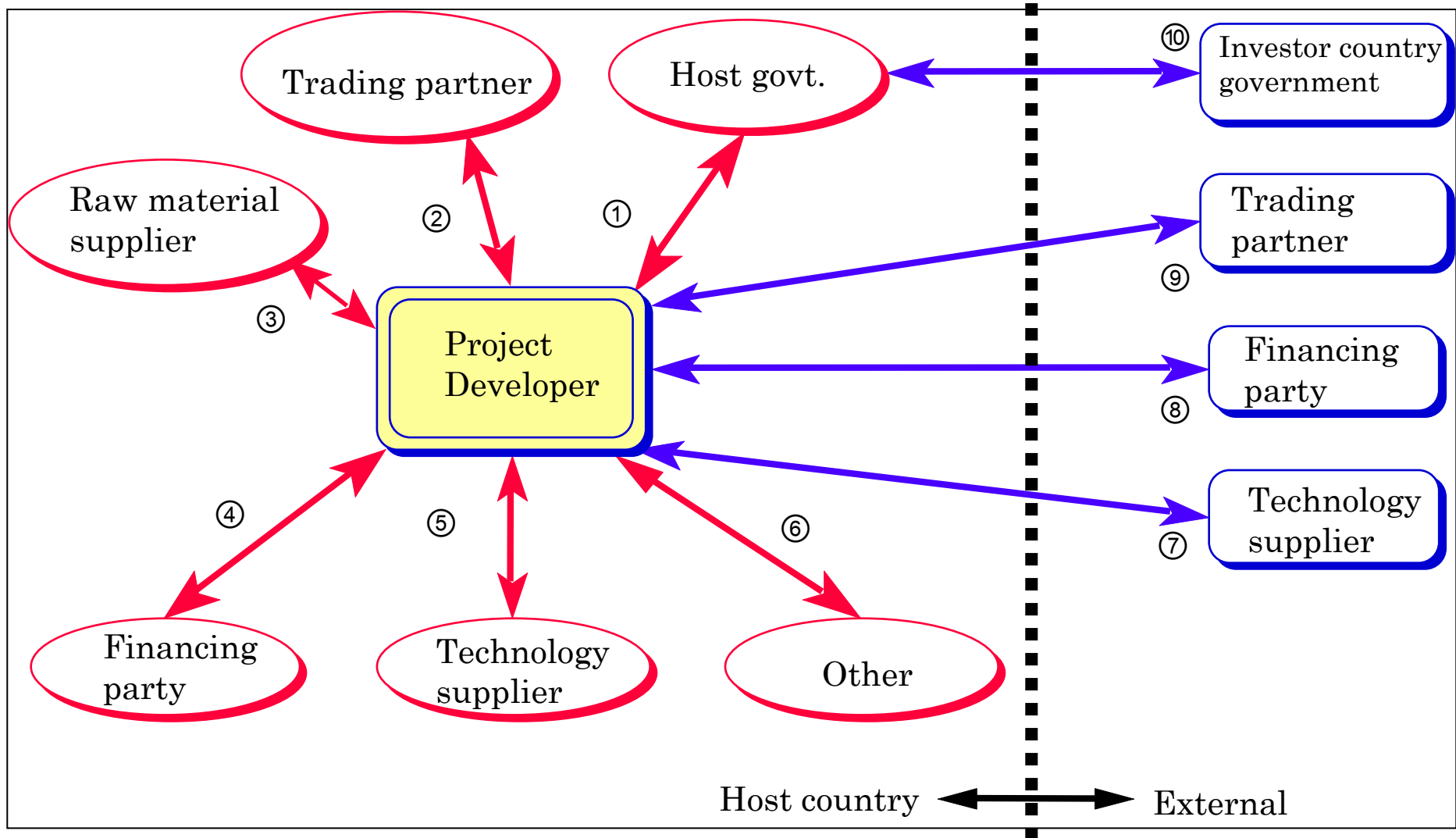


Mitsubishi UFJ Securities

1. Barriers

- CDM is one of the best mechanism that provides incentive to GHG mitigation projects existing today.
- However, there are many barriers associated with the CDM, especially related to the CCS.
- Generally, such barriers can be categorized into 10 types among 11 stakeholders.

2. Conceptual Schema



Note 1: External trading partner includes CER buyer

Note 2: "Other" can include geographical, social and cultural considerations not listed in 1 – 5

(from Mitsubishi Research Institute)



3. Barrier Analysis

Barrier category	Specific Barrier	
Within Project Developer	Awareness level of pro-environmental projects	○
	Low Motivation	○
	Small scale and potential	○
	Profitability	○
	Lack of financing	○
	Lack of know-how, technologies, skills and creditworthiness	○
① Host Government - Project Developer	Creditworthiness of project developer	○
	Compliance risk	○
	Government regulations	●
	Bounty system	●
	Law, accounting and taxation system	●
② Trading Partners within the Host Country - Project Developer	Government approval risk	●
	Creditworthiness of project developer	○
	Instability of demand	●
	Unstable product price	●
	Uncertainty of industry, market, operation level	●
③ Raw Material Supplier - Project Developer	Distribution risk	●
	Creditworthiness of project developer	○
	Creditworthiness of raw material supplier	●
	Instability of supply and price	●
	Quality	●
	On time delivery	●
	Cost overrun on construction	●
	Uncertainty of industry, market and operation level	●
Uncertainty of raw material and energy supply	●	
④ Host County Financing Party - Project Developer	Creditworthiness of project developer	○
	Profitability	○
	Fund-raising capability	○
	Deterioration in financial standing	○
	Awareness level of pro-environmental projects	●
	Liquidity	●

- Barriers associated with Project Developer
- Barriers associated with Project Developer's counter party

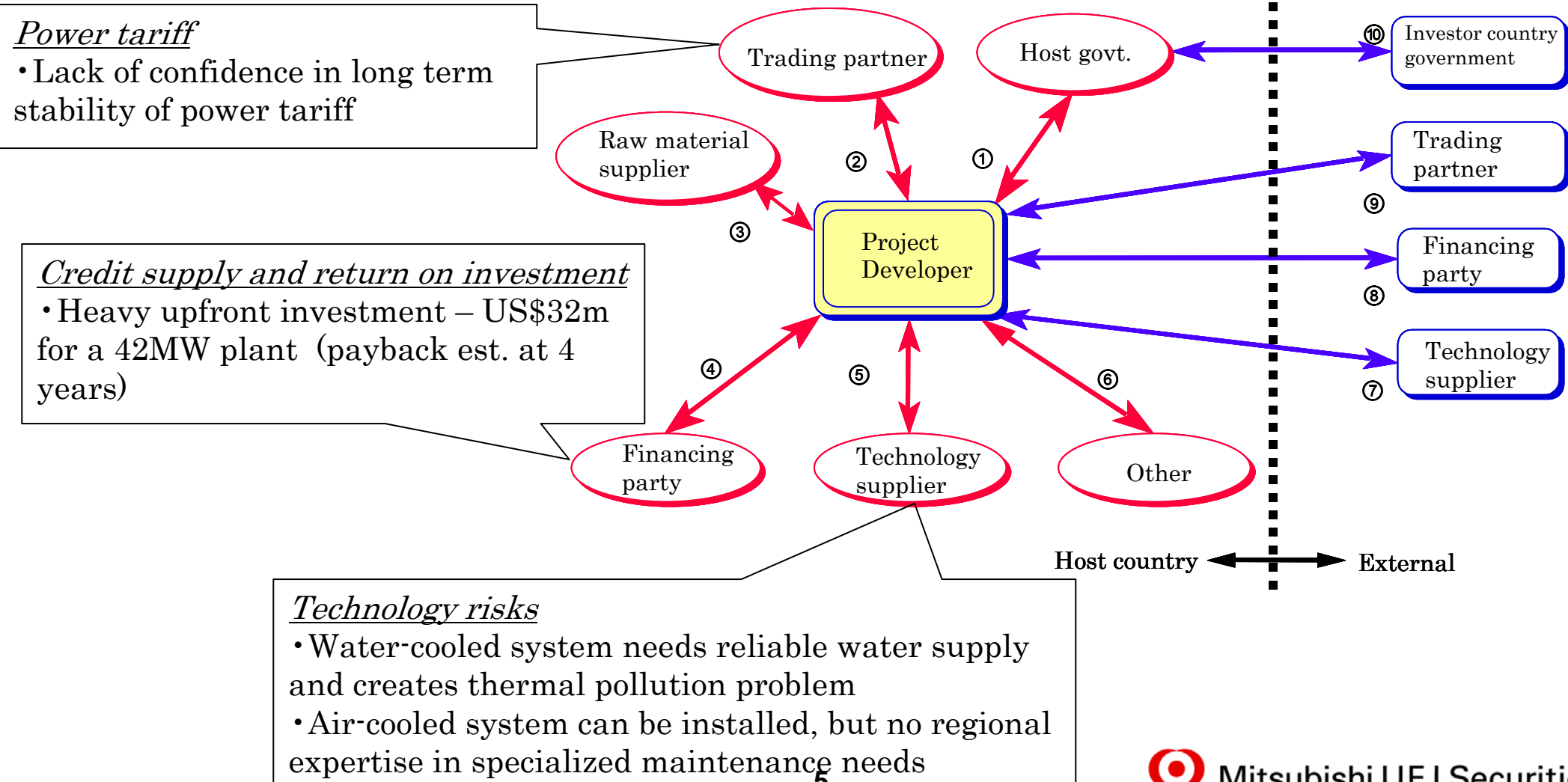
3. Barrier Analysis (Continued)

Barrier category	Specific Barrier	
⑤ Technology Supplier in Host County - Project Developer	Creditworthiness of project developer	○
	Skilled labor	○
	Accessibility	●
	High cost	●
	Creditworthiness of technology supplier	●
	Unpredictable events related to the technology	●
⑥ Other - Project Developer	Uncertainty of industry, market, operation level	○
	Compliance risk	○
	Social acceptability, cultural and custom issue	●
	Location	●
	Loss of employment	●
	Unpredictable events related to technology	●
⑦ External Technology Supplier - Project Developer	Creditworthiness of project developer	○
	Skilled labor	○
	Accessibility	●
	High cost	●
	Creditworthiness of technology supplier	●
	Exchange Rate risk of host country	●
	Unpredictable accidents related to technology	●
⑧ External Financing Party - Project Developer	Creditworthiness of project developer	○
	Profitability	○
	Deterioration financial standing	○
	Exchange Rate risk of host country	●
	Liquidity	●
⑨ External Trading Partner - Project Developer	Creditworthiness of project developer	○
	Uncertainty of project implementation	○
	Compliance risk	○
⑩ External Government - Host Government	Political risk and unpredicted events	●

- Barriers associated with Project Developer
- Barriers associated with Project Developer's counter party

4. Case Study – Gas power-gen. in India

Upgrade to single to combined cycle at 42MW gas power plant in NE India



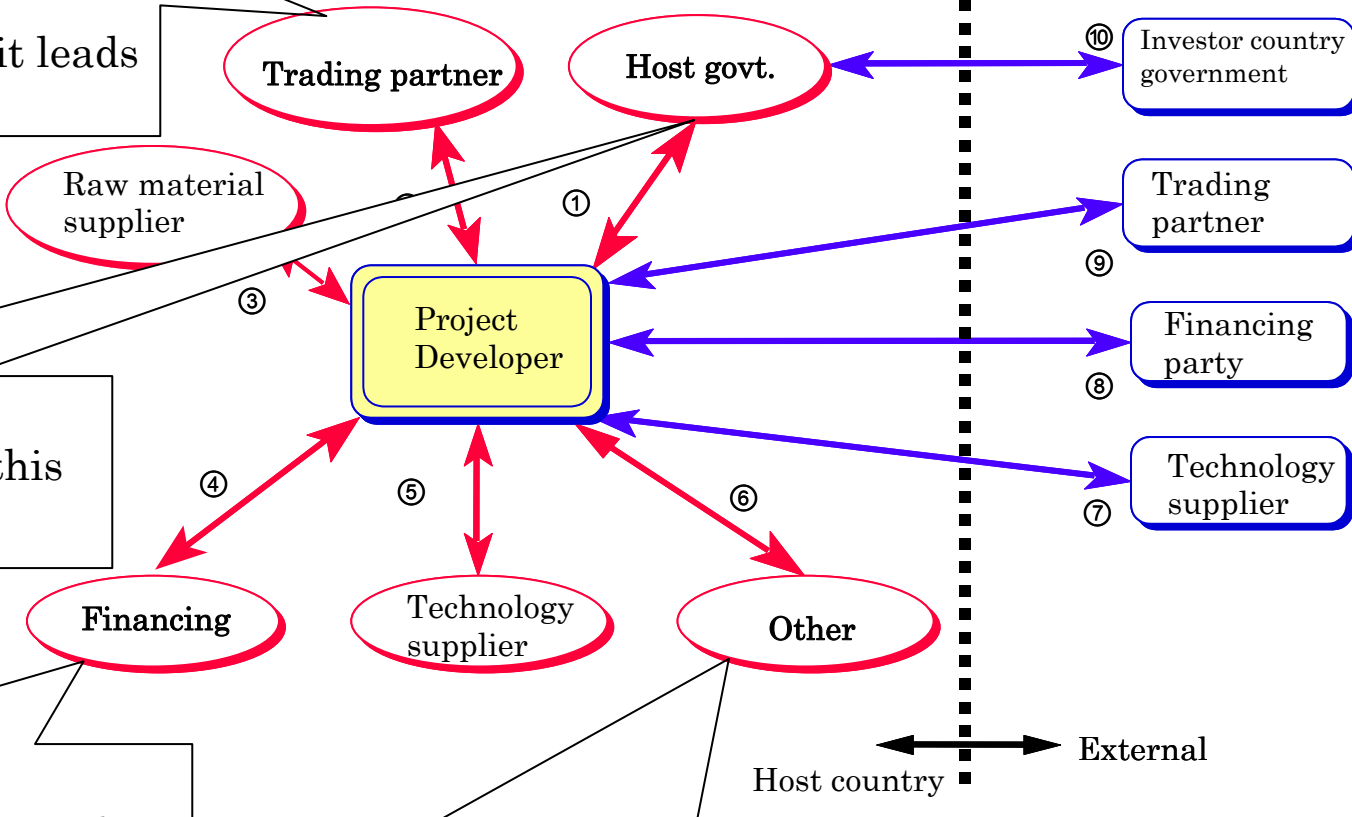
4. Case Study –Cement works energy efficiency in China

• Customers unwilling to pay higher price, even for higher quality cement
 • Business interruption during retrofit leads to loss of business

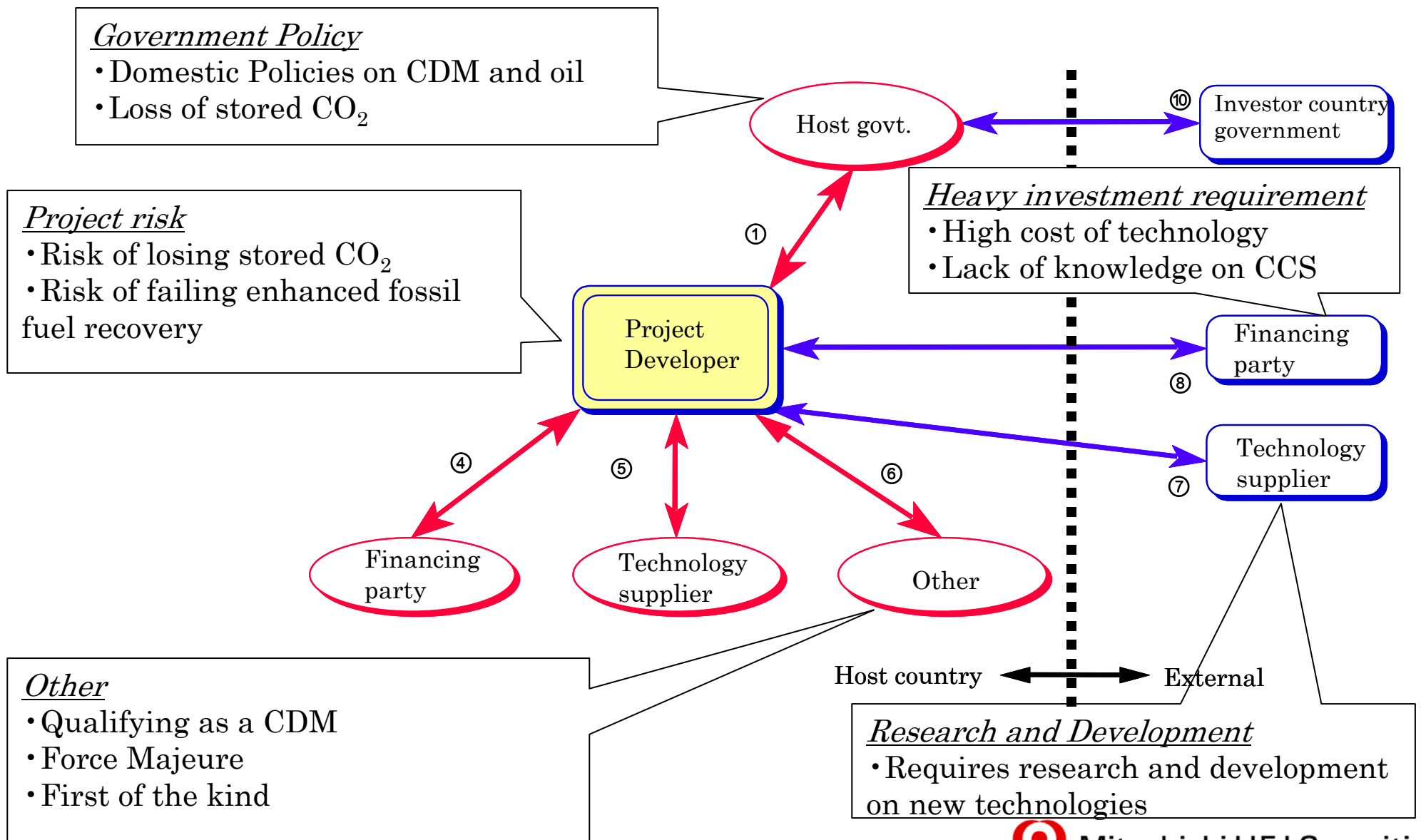
Government Policy
 • Govt. is actively encouraging use of this technology

Heavy investment requirement
 • Cement must be sold at a higher price to be viable
 • Loss of competitiveness leads to non-implementation

Loss of employment
 • Technology can only be applied to large plants
 • Social pressure to maintain smaller plants which provide significant employment in some localities



4. Case Study –CCS



5. Main Barriers and Solutions

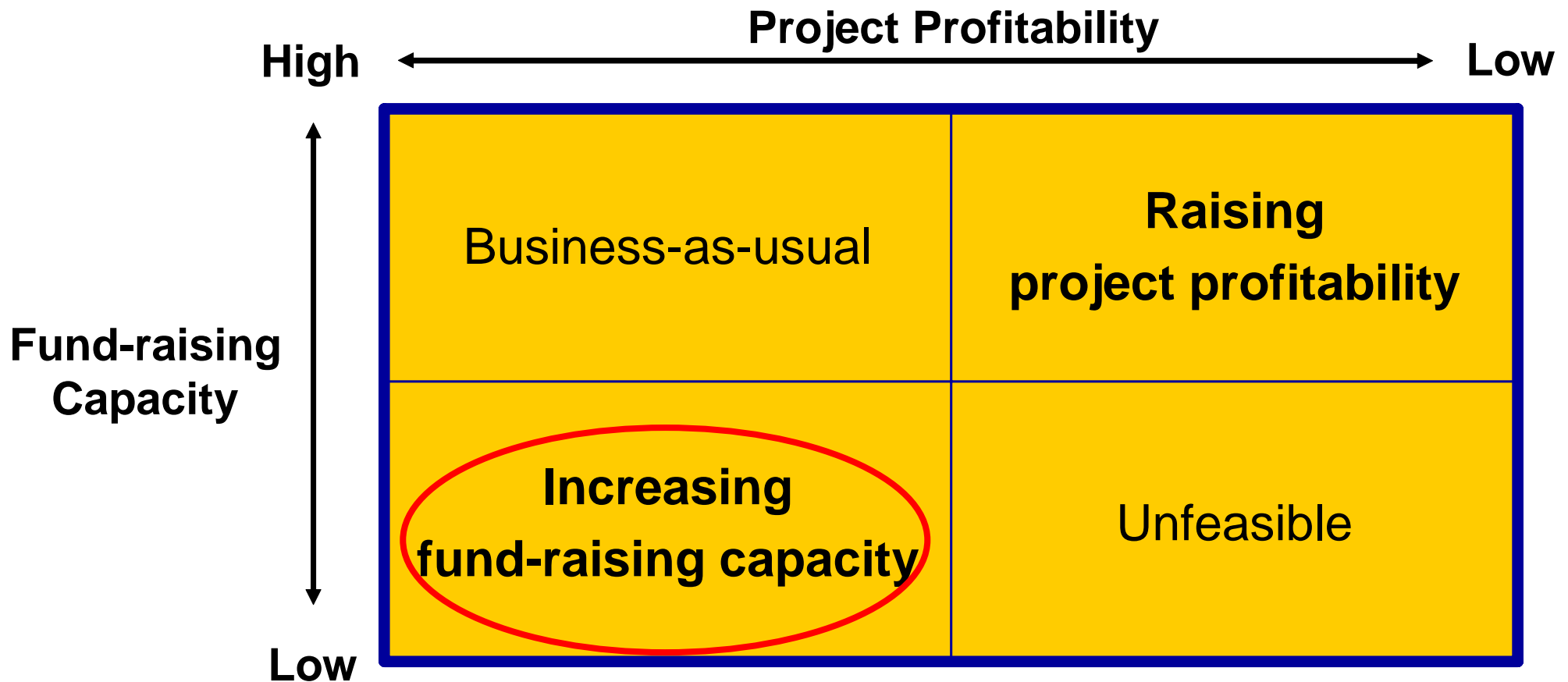
a) Counted among key barriers are financial issues.

b) Key issues are how to increase

- Profitability and
- Fund-Raising Capacity

5. Main Barriers and Solutions (Continued)

c) These subjects correspond to the two amber boxes.



6. Increasing Fund-Raising Capacity

a) A large number of worthy pro-environmental projects, even when their profitability is high enough, are precluded from implementation for lack of funding/financing.

b) Possible solutions are

1. Public-Private Partnerships
2. Capital Market Avenues

6. Increasing Fund-Raising Capacity (Continued)

- Public-Private Partnership

With partial funding by the public sector and indirect supports by Governments / International Financial Institutions, risks can be mitigated.

- Capital Market Avenues

Create investment vehicles to channel developed country green money to developing countries' pro-environmental projects.

7. Other Approaches

- Establishment of an International Testing and Research Institute
- Technology Due Diligence by International Organization
- Asia Pacific Partnership

8. Clean Energy Finance Committee

- a) Established in Feb. 2001 to assist renewable energy and energy efficiency projects with our firm's financial expertise.
- b) The Committee is a fully-fledged business unit with thirty-three staffs (twenty-eight full-time professionals), speaking fourteen languages in total.
- c) Networking with local consultants in Hong Kong, India, Indonesia, Philippines, Brazil and Argentina.
- d) A global leader in CDM consultancy: one of the only four private firms in the world with three or more approved methodologies.

9. Mitsubishi UFJ Securities' Approach to CDM

- a) MUS's services are to assist project developers in obtaining CERs through
 - PDD Production
 - Acquisition of required approvals

- b) MUS also helps with the sale of the CERs if the client so wishes. Not tied to any particular buyer, MUS always looks after the best interest of project developers (CER sellers).

10. Contact

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