

Case Study | Working across Continents/Organizations

A. Project Characteristics

- Megaproject: the approved budget was about (~) \$700 million US (early 1990's).
- This megaproject had two main sub-projects:
 - One sub-project was modifications to an existing refinery (~\$100 million), and
 - The second sub-project (~\$600 million) was new facilities (grassroots/greenfield).
- The project was on an island, in a country where there were limited labor and technicians.

B. The Project Owner

- The Project Owner was a joint venture consisting of three companies:
 - 50% (N. America),
 - 40% (N. America),
 - 10% (Asia).
- The 10% company was a joint venture between the 40% company and a government of an Asian country.

C. The Service Providers

- Project Owner awarded a global contractor (main contractor) an Engineering, Procurement, and Construction (EPC) contract.
- The contract was reimbursable (cost plus), incentive contract.
- The main contractor was ultimately responsible for engineering, procurement, and construction management (UK); construction was awarded to a general contractor.
- The construction's general contractor ended up being a joint venture between three companies (Europeans – mostly Germans).
- Construction labor came from Asian countries, senior construction staff was mostly European and Asian.

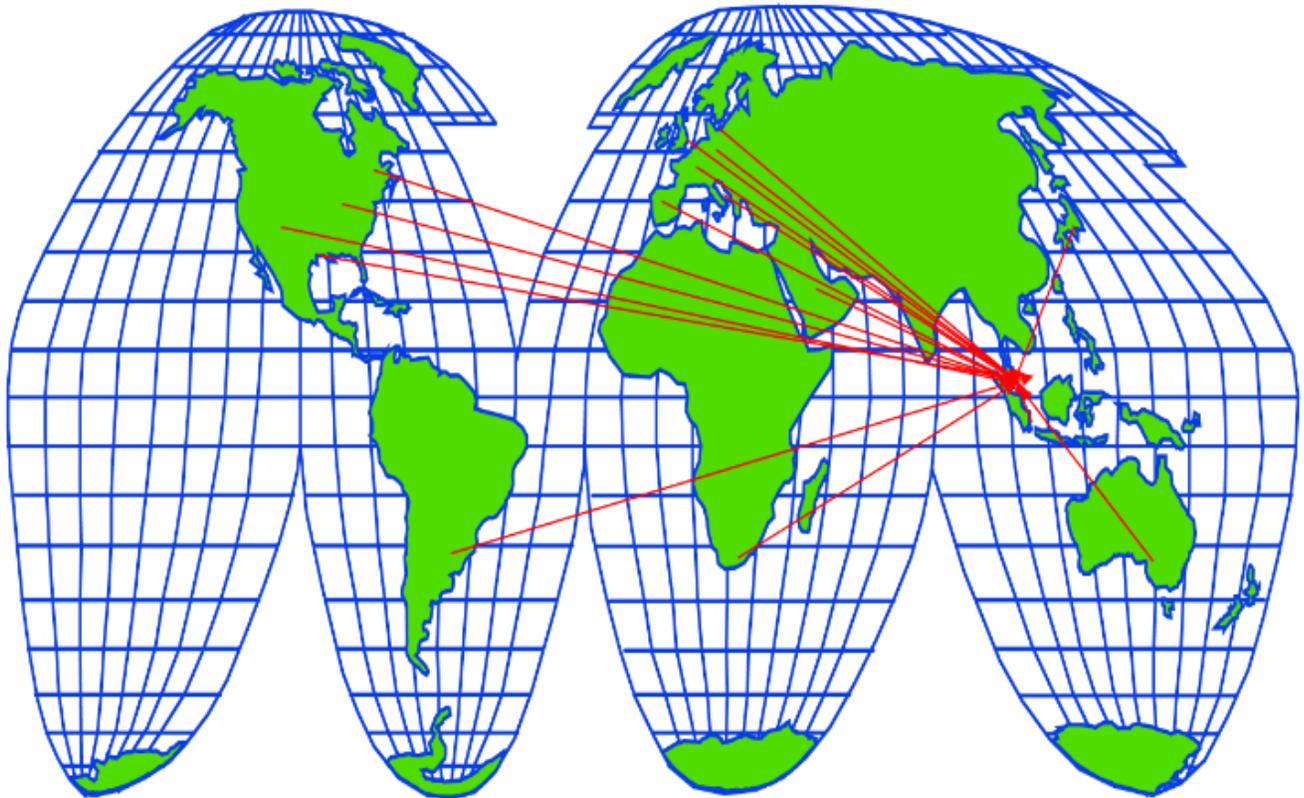
D. Project Management

- Through their project management departments, the Project Owner was responsible for the overall management of the project (program).
- Most project management team members and operation representatives came from the leading partner but with a few other partners' resources.

- The owner project management team members came mostly from North America, but we also had European and Asian members.
- The owner project management team was geographically split between Europe (UK) and S.E. Asia (more than one location).
- The project owner delegated some of the project management activities to the main contractor because of the cost-plus-incentive contract.

E. Project Management

- The Project Owner's executive management central offices were in North America (the minority partner was in Asia).
- The project management team was split and working from more than one location.
- The engineering activities were mostly performed in the UK.
- All materials and equipment had to be shipped to one of four construction locations in SE Asia.
- Construction was on four sites; most of the work on two of the four locations.



- The Service Providers' construction management members were mostly European and Asian but included other nationalities.
- Construction supervision staff were also international.
- Labors were mostly Asian.

F. Challenges and Success Factors (Focus on Human Aspects)

The main challenges

- **Organizational stakeholders:** There were many organizational stakeholders. These included: three project owners, one main contractor, and three construction companies (joint venture).
- **Dispersed work:** The work was spread across four construction sites, multiple vendors, and subcontractors.
- **Teams integration:** There were a few challenges among the partners' organizations (Project Owners). These were in addition to the typical difficulties between Project Owners and Service Providers.

Dealing with the teams

The situation encouraged us to split our project management teams across all sites. However, we had to develop close working relations, although virtual relations. For the partners, we worked as integrated teams – in transparency, which enhanced the trust.

Regarding the owner/contractor challenges, the Project Owner and the Primary Contractor's project management teams worked in a semi-integrated approach (could not fully integrate). Again the key was transparency and fairness in the process, looking for win-win, and open and timely communication.

Global Locations

The global locations and spreading the team were challenges that we had to overcome through frequent online and face to face communications. Keep in mind that this was before social media and smartphones. We had regular team meetings, email communications, monthly management reports, and quarterly face-to-face meetings that included owner and contractor personnel.

The Island location, limited space, and limited resources

The solution for this challenge was modular construction and four construction sites (we will document this in another case study). Splitting the construction work among multiple sites helped us avoid the island space limitations and labor issues. Further, by going to fabrication yards, we were able to enhance safety and workforce productivity.

Incentive-Cost Contract

Early in the project, the incentive-cost plus contract was a challenge (almost a threat) and created conflict; since the owner set the budget. We had to resolve the conflict as soon as possible, which we accomplished through open communication and educational sessions on the owner budgeting and estimating processes. Further, as we learned to work together, we learned to trust each other. Consequently, because of the incentives, the contract type became an advantage (opportunity).

Language Barriers

The language was a vital issue, especially in construction (Safety). We mitigated the risks by ensuring all construction sign and safety messages were available in four languages. Further, each construction crew had a foreman who speaks one of the four languages. We also used numerous pictures and illustrations.

US Safety Rules

The laborers were not used to strict North American construction safety rules. We worked by encouraging every project management team member to be safety-aware and proactive. We included a daily site walk-through. We also used innovative training techniques with the laborers, including using Fashion Models, to teach them how to use and wear proper protective clothing.

End of Case Study