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Case Study | From Adversaries to Integrated Team

A. Project Characteristics

- This case study is not for a single project; it is for an "Alliance Contract."
  - The "Alliance Contract" was for a portfolio of projects.
  - Alliance Contract is a long term "framework contract."
  - In this case, the Alliance was to manage all projects within a geographic area.
  - The geographic area consisted of five process facilities (petrochemical plants).
- The actual situation is that we had a project portfolio management office (PMO), although we did not use this terminology (not called PMO).
- Projects were mostly "revamp" (plants' modifications, also known as brownfields).
  - This means "small" projects, like equipment additions, piping modifications, etc.
  - Basically, we were working inside operating (live) process units.
- Some projects were "shut down" or "turnaround" maintenance projects.
  - These would be projects where a processing unit would be shut down for a short time.
  - Therefore, the work will be around the clock, and the overall duration might be 2 to 3 weeks.
- There were about 40 or 50 small and medium-sized projects.
  - With ~ $100 million budget across all sites.
  - Small projects were from US$200,000 up to $2 million.
  - Medium projects were mostly up to $15 million.
  - We also typically had one or two large projects (in one case, $50 million).

B. The Project Owner

- The owner was a petrochemical company with multiple facilities, offices, and plants- globally.
- The contractor was a leading global player, which was experienced in working on major/large projects.

C. The Contract

- The contract was specific to a given geographical area (as mentioned above).
- The area included five process plants of different sizes.
- A four-year contract, with possible renewal for 4 years increment.

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- **This specific contractor replaced another contractor, who was there for 4 years.** This is relevant to the case study, as you will see later, due to the possibility of not renewing the contract – the contractor had something to lose.
- The contract was reimbursable (cost plus), incentive contract.
- The budget is set by the owner, with input from the contractor.
- The main challenge: if projects do not complete below budget, the owner will have over expenditure or over-run situation, and the contractor will not earn any profit.
- The opportunity: with project performance, completion on or under budget, the contractor will earn a profit (higher or lower than the plan).

D. Project Management

- The Project Owner (project management team – 'PMO') was responsible for the projects' overall management (portfolio).
- The contractor also had their own management team.
- The above led to redundancies due to organizational culture, conflict of interest, trust, or lack of, etc.
- Project Owner's 'PMO' consisted of project engineers (PE) (each managing 5-10 projects), construction supervisors, safety, and quality supervisors, but initially did not include project control; project control was the PE responsibility. The project engineers (PE) were the de-facto project managers.
- Project estimating and funding was done by an owner's home office unit (outside the PMO) with PMO input (owner and contractor).
- Contractor personnel included the project management staff ('PMO') in addition to engineering, procurement, and construction resources (EPC).

E. The Challenges

- The contractor was used to managing and delivering large projects. As a result, they were struggling with managing multiple small projects. Also, their project control system was not customized or adapted for the multiple small projects environment.
- The cost-plus incentive contract added to the pressure since the contractor did not have control over setting the budget, which will judge their performance and incentive.
- Owner project engineers did not have enough project control (cost and schedule, change management) expertise or were too busy to focus on project control; their primary focus was on implementation.
- For the owner in a cost-plus environment, project control is crucial since the risks are on the owner, but this was a significant challenge since no one (on the owner side) was dedicated to this function.

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- A major shut down project was one of the first projects under the alliance contract and was not going well; it ended up with an over-run (more than 110% of budget) and unsure how late behind schedule.
- The conflict was high and escalating, which required a drastic change.

F. Owner Initial Solution (Project Support Office)

- The owner decided to establish a project control/support office ('PSO') within the 'PMO' to take the lead for all activities that the project engineers cannot focus on, such as cost control, schedule control, coordination with estimating, and forecasting.
- The 'PSO' was established with 3 people: with another resource added later.
  - One of those resources was a construction supervisor with limited computer skills and no project control experience.
  - Another team member was an estimator.
  - The lead was the only one with substantial experience as an estimator, cost control, project control, and project engineering.
- The contractor had about 20 people in the project control role and close to 300 staff on the whole Alliance (excluding construction labor).
- The 'PSO' came into existence in the middle of the ongoing conflict.
- PSO identified numerous contractor management problems and control – primarily due to 'large project' versus 'multiple small projects' culture.
- PSO also identified some issues on the owner's side, which added to the conflict.
- Project control became the center of the conflict and confrontations, especially during the monthly meetings and reports (shoot the messenger syndrome). **Something must be done!**

G. Integration

- Adding the PSO by itself – gave the owner more resources and insights, but the conflict was at the peak.
- The new program director for the contractor – resulted in escalating conflict initially.
- We had to break through the conflict, which we did by getting him involved in the issues; basically, we used his pride to present the facts and to show the gaps.
- As we built relations with the new program director, it led to increased trust. For example, we implemented educational sessions (for all staff) and established estimate feedback and budget reviews to enhance the absent transparency. The lack of transparency fueled many of the mistrust fires.
- The above actions led to integrating project control teams; under the leadership of the owner PSO manager. This was done with a great deal of resistance from both sides, the contract control team and

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the owner's management. However, the owner, PSO Manager, and the contractor program director pushed it through.

- Project control identified areas of conflict and assigned integrated sub-teams to work on them. We followed this process:
    - Charter: Identify the deficiencies, develop solutions, train teammates, train staff.
    - Four to six week's timeframes, with reports at an offsite team-building session.
    - Despite the challenges and prior conflicts, the integrated teams worked through the issues, identified the gaps, developed the recommendations for the solutions, and had a successful offsite session where all integrated team members presented their work.
- After the offsite session, teams immediately started to implement solutions.

H. Results

- This effort was a significant contributor to enhancing project control performance and overall projects' performance.
- The enhanced relations and trust helped in renewing the Alliance Contract for another 4 years.

End of Case Study

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