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How to Be more Cost-Effective in Project Execution

In days of low commodity prices, it is essential for Contractors to propose cost-saving approaches so as to help make developments economically feasible – and become more competitive on their market. The approaches will be very different depending on the type of projects, in particular their size and complexity. This White Paper explains the steps that can be taken, for different project types.

Note: In the following paper, we will not address the issue of lowering the cost of the internal resources used for project execution, which is also an important lever on the middle term - with limits related to the historical investments of the organization. We will concentrate on what can be done at the organization and process level to save cost for the overall project execution.

Smaller projects: leveraging on efficiency at portfolio level

For smaller projects of low complexity, efficiency and optimal usage of available internal resources (personnel, assets) are the essential performance drivers. External costs are more limited than in large projects because of the lower ratio of procurement of goods and services, so that there is lower leverage to be expected on the procurement side.

For small projects, internal resources are not normally managed at the project level but rather at the project portfolio level for a particular entity (often a region). Hence a number of processes that are currently implemented repetitively in each project can be usefully transferred to the portfolio level; that would save cost, limit the supporting resources required and at the same time make those processes more effective.

The processes that should be concentrated at the portfolio level (still with relevant project inputs) include:

- Internal resources scheduling and allocation leading to utilization optimization (this includes both manpower – office and site based and construction equipment); and limit the number of personnel that are allocated full-time to the project to the minimum,
- Project risk management – including the possibility to better manage and mitigate risks and to manage contingency at the portfolio level and share it between projects resulting in a lower required contingency level for each individual project,
- Project cost management,
- Management of common vendors (procurement and fabrication) including setting up frame agreements, dealing with repetitive work across projects, implementing standardization and managing directly the performance of the work,
- HSE and Quality management (including both assurance and control).

The processes that need to remain at project level but should be better coordinated at portfolio level include:

- Project-specific scheduling,

- Construction activities to develop the maximum synergies between projects.

Large projects: leveraging on critical chain focus and procurement

For larger and more complex projects the performance drivers are different. The main issue is to control convergence, i.e. the risk that a small part of the project delays the rest (or, for an Owner, that a single Contractor delays all the other Contractors). This can lead to significant cost overruns due to the project grinding to a halt while having most resources still mobilized and difficult contractual situations. This issue often requires investment upfront to ensure that critical activities will be completed on time. Absolute cost-driven, efficiency-maximizing management is not fully adequate in this case.

In large projects, internal resources will often be assigned to the project full-time. In reality, the resources that are not on the critical chain are often operating well below their possible efficiency, because they have time available due to delays somewhere else in the project – and that work tends to fill the time available! There is thus often considerable room for productivity improvement as long as one makes sure that people effectively work as a priority on the project's critical chain activities should they cross their path. A finer resource management could thus possibly produce significant productivity savings overall in the organization, by having spare capacity either work on other tasks in the current project or on other tasks for the organization.

Finally, the weight of procurement in the overall project is much more important for large projects and a major driver of cost effectiveness and schedule will be on the supply-chain side. The different drivers include:

- On the short term the market can be expected to cool down and this needs to be taken into account in the costing of projects without relying necessarily on the recent benchmarks. Lump sum approaches might not be the best as it equates to taking a guess on the market situation in 6 months to a year time; alternate approaches such as provisional sums for key supply items and external resources, or indexation on appropriate market indices might be preferable to enhance competitiveness in the current fluid environment,
- The Owner's specifications are sometimes onerous without clear benefits in terms of safety or reliability; this can increase dramatically cost of items

Optimizing the execution of Smaller and Larger projects requires distinct approaches

compared to off-the-shelf supplies, Contractors need to propose alternates and Owners establish an effective process for the examination of deviations to their general specifications,

- Procurement processes often get lengthened and complicated because of the involvement of the Owner; it is essential to clarify what that involvement will be and for the Owner to understand the consequences in terms of cost and delays to the project.

Dealing with small and large projects in the same organization

As discussed in a number of our papers (see for example [Why Striving for a One-Size-Fits-All Project Management Model in Your Organization is Fundamentally Wrong \[2012-02\]](#)), small & simple and large & complex projects are not the same business. They should ideally be run in distinct Business Units, or even legal entities.

They should also be run using different processes. We have seen organizations running small projects using the relatively more cumbersome processes suited for large, complex projects and losing competitiveness on that part of the market; at the same time we have seen organizations moving into large projects with simple processes and fail utterly to execute the projects, sometimes with dire consequences.

Leverage portfolio mutualisation for smaller projects.

Leverage procurement and concentrate on critical chain convergence for larger projects

It might look sub-optimal from far – in particular in a cost-optimization period - to state that a single organization should have distinct processes depending on the complexity of projects, but in the end that additional complication is the key to success over the entire range of project types. It is easier to comprehend from the point of view that these are entirely different businesses. Of course, some resources might have to be shared between both types of projects, but this should be kept minimal (typically, by dedicating certain offices to certain types of projects only and maximizing the number of construction assets that are assigned to each type of projects).

Conclusion – Summary

Every downturn is the occasion to review the work processes and seek more effectiveness. Small & simple projects need to be dealt with differently from large & complex projects and the drivers for improving effectiveness will be notably different. It will go through the establishment of differentiated process – an additional complication that is warranted to make the organization more adapted to its markets.



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