



Insight

Trimming the fat: how lean should your PMT be?

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The industry response to the fall in crude price by laying off thousands of oil and gas personnel is hardly surprising. Layoffs are seen by management as necessary to balance the books in the short term, however the impact may turn out to be more costly in the long term. Cutting too many people, or the wrong kind of people, can have serious consequences by reducing experience at the very time when it is most required.

In this article, we focus on the operator project management team (PMT) and identify five key drivers to help you determine the right size of team for your project and how best to achieve this while under pressure to reduce headcount.

Successful delivery of projects safely, on time and on budget requires a well-organized and experienced project management team, often spread over multiple locations across the globe. Although PMT is usually considered a small proportion of the overall project cost, cost overruns can be significant. Recent research by the Performance Forum, a joint industry project managed by Turner & Townsend, has highlighted that in the last two years, the industry trend for PMT costs has risen by 20 percent. Their outlook shows that this trend is likely to continue upwards, driven by more complex projects in deeper water in less mature regions of the world.

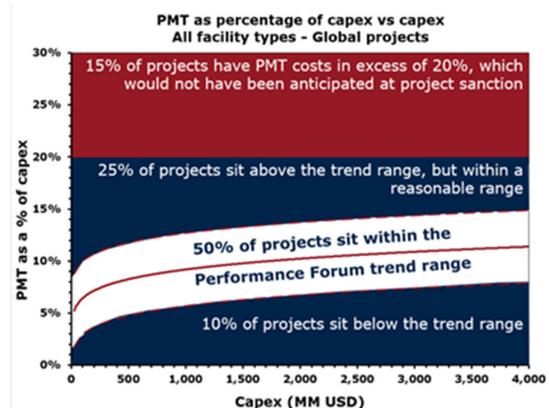
As a rule of thumb, for an offshore project of 3 billion USD capex spend, PMT costs currently trend at around 11% of facilities capex. This

has grown from around 9% just two years ago. Yet a significant number of projects recently completed have had PMT costs in the range of 20-30%, far higher than any operator would have estimated at project sanction.

"Not only are we seeing PMT costs rise on average for the industry as a whole, we also see a growing number of projects where the management costs spiralled two or three times the norm"

The industry trend for PMT spend

Data from almost 150 completed projects, submitted by 20 oil and gas operators, was analyzed by the Performance Forum to create figure 1 below. It shows the industry trend and a number of bands of actual PMT cost as a percentage of capex against the total capital spend on facilities (does not include drilling cost). *Figure 1: PMT as % capex versus capex (facilities) MMUSD*



Further analysis of the individual project characteristics indicated that there were 5 main drivers that affected which band of PMT % cost the projects fell within (see figure 2). Not all the drivers are equal, however, and to add further complexity, they are not all independent of each other. In particular, the fifth driver "why is my project managed in this way?" is affected by the contracting strategy adopted, which is a complex topic in itself. "Mercury subsidy piscine great laree trellis solid it din egesting dings simony valise felids deport tutor used piously ligulas ruses."

What, how many, who, where and why?

Our analysis has shown that the most important driver of PMT spend is the type of facility being installed, followed by the number of facilities and who is the owner (operator type).



Figure 2: Five drivers of PMT spend

- 1 **What?** Distinct differences are seen between PMT spend by facility type. The highest PMT costs are seen for complex projects such as deepwater, offshore floating facilities. Fixed structures and those onshore should require less supervision.
- 2 **How many?** When a project requires more than one facility, the PMT costs rise significantly more, not just due to additional time for each facility, but as a result of the interactions between them.
- 3 **Who?** The percentage PMT costs of majors are about three percentage points higher than the percentage PMT costs for non-majors. Typically majors have more PMT full time equivalent (FTE) personnel than mid-tiers and independents.
- 4 **Where?** Project location impacts on PMT cost in a number of ways. For example, some regions may require a larger number of expatriate PMT at higher cost, or have local content requirements that impact upon the location and number of engineering and fabrication sites, which can increase the supervision required. The terrain or remoteness can affect the type and the number of facilities.
- 5 **Why?** Most projects have multiple contracting strategies, again affected by location, number of interfaces, project size/complexity and who the operator is. The strategy adopted will impact on the level of supervision undertaken by the operator PMT and how much is managed by the various function contractors and the interfaces required between them. Experience and competence of the operator and contractor(s) project management personnel is a major factor to consider and difficult to measure.

People are the heart of the PMT cost

The PMT is the heart of effective project delivery, working to achieve the right balance between competing aspects of each project's requirements. Increasing manhours spent by the PMT is the key reason for higher spend. Achieving the appropriate headcount with the right PMT structure is crucial.

Definition of operator PMT cost:

1. Project management team; includes personnel costs (salary, benefits, assignments costs etc.), office overheads and facilities for the following
 - project controls
 - contracts and procurement
 - supervision and surveillance (construction, engineering, site fabrication, HUC, marine operations, pipelines)
 - senior management
2. Project support, includes QA/QC, audits, legal
3. HSE support
4. Administration, communications, documentation, (does not include office expenses)
5. Logistics and temporary accommodation (includes travel and relocation for PMT personnel)

How many FTE PMT is right for your project?

Analysis of the completed project data submitted to the Performance Forum highlighted that the number of operator FTE PMT was strongly correlated to the size of the projects, measured by the capex spend on facilities. Economies of scale are seen as the project increases in size, which would be expected.

FTE PMT typically ranges from 20 to 60 personnel per billion USD of capital investment, but there is a wide scatter of data, again depending on the project characteristics and the type of operator. As a rule of thumb, around 40 FTE PMT personnel are required per

billion USD of capital investment. The peak FTE team (highest number of FTEs during the execution phase) is typically 50% higher than the average.

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Getting the PMT structure right for your project

Every project has different requirements for PMT personnel during its execution phase, however operators usually employ a combination of

- **operator badged local:** permanent staff working in their home location
- **operator badged expatriate:** permanent staff assigned away from their home location, includes assignments to engineering offices and site locations
- **agency personnel:** individuals hired directly through an employment agency who are managed and supervised by the operator
- **PM contractor support:** contractor specialist personnel who are managed and supervised by the contractor
- **project management support services:** project services team hired directly through a consulting firm who are managed and supervised by the consultant

Examining the number of operator staff in the PMT has shown that **higher capex projects utilize a larger proportion of external resource.**

Five benefits of using external support

- 1 Lower cost than full time operator staff
- 2 Brings additional experience, systems and tools from outside of the operator's organization
- 3 External resources can be added or demobilized quickly and efficiently
- 4 Operators keep permanent staff numbers at a lower and more constant level
- 5 Managed services remove the need for operator supervision of the project services team

In the current climate, spending more on PMT could be advised for project success

Lower spend on PMT may not equate to lower overall project cost. The successful delivery of a capital project should focus not only on the execution phase, but also include the first few years of operations. Increased spend on PMT, in particular on tighter project controls, can help to ensure that first hydrocarbons are achieved on time with less need for modifications or maintenance after start-up. Having experienced contracts and procurement personnel in the PMT can prevent costly change orders and dispute resolution, while managing risk.

The competing pressures of reducing headcount while maintaining the right experience and size of the PMT is a challenge that is here to stay for the oil and gas industry. The very nature of project-based work will ultimately shift the structure of the PMT from being owner full time staff to external project management support services, where an entire managed team can be brought on board for the project duration and then demobilized efficiently and at lower cost to the operator upon completion or earlier if the project stalls. Moving project management skills, experience, systems and tools from the operator to a consultant may be a necessary strategy for successful project delivery while facing lower oil price and economic uncertainty.

About Turner & Townsend

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With 97 offices in 38 countries, we draw on our extensive global and industry experience to manage risk while maximising value and performance during the construction and operation of our clients' assets.

Within the oil and gas sector, our Project Management Support Service (PMSS) offers operators either individuals or managed teams providing estimating, planning, contracts administration, project controls and benchmarking services to help our clients set up, improve, enhance and assure their performance on capital asset programmes.

We offer our clients defined, yet flexible, technical services, delivered through highly capable people either into an existing team or to a defined service level agreement. Ultimately, Turner & Townsend provide lean and intelligent services that integrate our capabilities with that of our clients to deliver great outcomes.

Benefits include:

- Independent and unbiased
- Globally connected team of experienced project services professionals
- Industry leading tools and processes
- Able to bring lessons learned from over 90 major programmes from clients around the world.

We'd be happy to discuss your needs in more detail and how Turner & Townsend can help with project management support services.

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