

Choice of Contract Type

Written by Nick Sanders

Wednesday, 11 June 2014 00:00

Back in the day we were somewhere in the Northeast, consulting on a new thing called "Program Management Effectiveness" or PME. PME was the result of applying a CMMI approach to Defense Program Management. It evaluated the maturity of numerous attributes and (hopefully) identified "pain points" experienced by the Program (or Project) Management team, so that the organization could eliminate them. It was a fairly successful service offering but, like so many things in the consulting biz, the ultimate success or failure was largely in the hands of the client. We could identify immature processes, capability gaps and pain points, but if the client took our output and then stuck it on the bookshelf to gather dust, then it was all just an expensive waste of time.

Our team deployed at a designer and manufacturer of aircraft. We were invited to evaluate a couple of in-process major design initiatives that, if successful, were going to be franchise programs for that contractor. The problem was that they were not going very well, and senior management wanted a fresh, independent, perspective on what the contributing problems might be.

We interviewed several IPT leads and various levels of program management. We interviewed Contracts folks and Subcontract Management folks and Procurement folks. We interviewed HR and IT and a host of other functions. We delivered on our end. We never really learned what the client did with our recommendations, but I still read about those programs today; and they seem to be relatively successful as new aircraft programs go.

Out of the many issues we identified, one is relevant to today's article. It concerns contract type.

One of the more important metrics used by senior program management was "time to contract," which essentially measured the time it took to get a supplier and executed contract, once the requirements had been identified. Obviously, the quicker the better, right?

Maybe not.

When we interviewed the Subcontract Management and Procurement folks, they were quite pleased at their "time to contract" metrics. So many of the suppliers had been put under

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contract early in the program, and the personnel involved were proud of their efforts. They were also proud that they had placed 100% firm, fixed-price (FFP) contracts with their suppliers. FFP subcontracts were seen as lower-risk, since they put the risk of cost overrun on the subcontractor instead of the prime contractor. The folks saw it as a huge feather in their caps that they had negotiated and placed FFP subcontracts so early in the program life cycle.

They had never considered the ramifications of putting FFP subcontracts in place before the overall design had been finalized. They had never considered the implications of putting their suppliers on contract without having a final detailed design in place.

One thing we all know for sure is that no design is fixed until it's completely fixed. Until the design is fixed, expect changes. Perhaps lots of them. And even after the design is fixed, complete, done - expect more changes. Because just like no plan of war survives contact with the enemy, no aircraft design survives contact with a design review team, or a systems engineering team, or a manufacturability team, or an "as-built" review team. Changes are a given in any defense contract, let alone one for an aircraft that had never been built before.

Thus, the SCM and Procurement folks had never considered that their early FFP subcontracts were going to be subject to a multitude of changes. Changes initiated by the IPTs, changes initiated by the subcontractor, changes initiated by the customer that impacted the subcontractor, etc. There were going to be lots and lots of changes as the design went through reviews, and each of those changes had the potential to generate Requests for Equitable Adjustment (REAs) that could impact that tidy FFP subcontract price the folks had so quickly negotiated.

Processing REAs takes time and money. Time and money which nobody had budgeted for. We pointed that out to the contractor's senior management team; but I don't believe they ever really understood the fundamental point. The fundamental point was that the requirements needed to be close to final before a FFP subcontract was negotiated. The fundamental point was that establishing a metric that incented people to move quickly might, in this set of circumstances, be counter-productive to smart program management. If they were going to award FFP subcontracts then those should come later in the program life cycle, not earlier. Awarding them too early was going to lead to downstream cost and schedule impacts.

The Under Secretary of Defense (Acquisition, Technology and Logistics), Honorable Frank Kendall, [recently discussed](#) when it would be appropriate to issue FFP contracts and when

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it would not be as appropriate to do so. As many readers know, the Obama Administration has been hell-bent-for-leather on issuing as many FFP contracts as possible, while avoiding as many cost-type contracts as possible-judging cost-type contracts to be higher risk than FFP contract types.

As we just illustrated, that is not always the case. And apparently Mr. Kendall agrees with us on that, especially when a development contract is being contemplated.

He wrote (link above)-

FFP development tends to create situations where neither the government nor the contractor has the flexibility needed to make adjustments as they learn more about what is feasible and affordable as well as what needs to be done to achieve a design that meets requirements during a product's design and testing phases. ... Most sophisticated weapons systems development programs deal with maturing designs and challenging integration problems. As a result, the government often will and should provide technical guidance and make tradeoff decisions during development. ... While it certainly is possible to negotiate changes in a fixed-price contract environment, the nature of development is such that informed decisions need to be made quickly and in close cooperation with our industry partners. The focus in a fixed-price environment is squarely on the financial aspects of the contract structure and not on flexibly balancing financial and technical outcomes.

Risk is inherent in development, particularly for systems that push the state of the art. Even with strong risk reduction measures in Technology Demonstration phases and with competitive risk reduction prototypes, there still is often a good deal of risk in EMD [Engineering, Manufacturing, and Development]. Here are the considerations I look for before I will approve a fixed-price or FPI [Fixed-Price Incentive] EMD program:

- Firm Requirements
- Low Technical Risk
- Qualified Suppliers
- Financial Capability to Absorb Overruns
- Motivation to Continue [in the event of overrun]

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There was more but that a good summary. Mr. Kendall emphasized that FFP or FPI contract types are preferred, but that the contract type must be right for the circumstances. We agree.