
Opportunity Analysis Under Strategic Program Management ^{1, 2}

Bob Prieto

Chairman & CEO
Strategic Program Management LLC

Strategic Program Management is about meeting the challenges of scale and complexity but also about capturing the opportunities of leverage. Every major program as well as the projects that comprise it is the subject of a detailed and rigorous risk analysis. This is not only appropriate but also necessary. But in order to capture the full value inherent in large programs, the program management consultant or PMC must be seeking out opportunities in a proactive and ongoing manner.

The PMC's opportunity analysis is best constructed within a framework that ensures a comprehensive view of all aspects of the program. Unlike various risk frameworks and categorizations that exist, there is no comparable opportunity framework for program management in the engineering and construction industry. This paper outlines one possible framework that draws on the "*Ten Types of Innovation*" by Doblin Research and presents an initial checklist to facilitate opportunity assessment in large engineering and construction programs.

Program Management Opportunity Framework

The Program Management Opportunity Framework utilizes a construct similar to that used by Doblin in "*Ten Types of Innovation*" but with a distinctive focus on those parameters related to opportunities in large engineering and construction programs. In the Program Management Opportunity Framework four broad categories of opportunities are considered:

1. Finance
2. Processes
3. Projects
4. Stakeholders

¹ Second Editions are previously published papers that have continued relevance in today's project management world, or which were originally published in conference proceedings or in a language other than English. Original publication acknowledged; authors retain copyright. This paper was originally published in *PM World Today* in September 2010. It is republished here with the author's permission.

² How to cite this paper: Prieto, R. (2010). *Opportunity Analysis Under Strategic Program Management*, Second Edition, *PM World Journal*, Vol. IX, Issue XII, December. Originally published in *PM World Today*, September 2010.

Program Management Opportunity Framework

Finance		Processes		Projects			Stakeholders		
Business Model	Networking	Enabling Process	Core Process	Program Performance	Program System	Program Teamwork	Outreach	Communication	Stakeholder Experience
How to fund the program and individual projects; maximize return on investment	Optimizing the value chain	Streamlining owner driven processes	Applying proprietary PMC processes and intellectual property	Implementing PMC Value Improving Practices	Adopting life cycle services framework	Adopting strong alignment and partnering approaches	How stakeholders are engaged	How program benefits are communicated to stakeholders	How positive stakeholder experience is achieved

Typical Opportunity Focus



Value Creating Opportunity Focus



Within these broad categories a total of ten sub-areas are described. These sub-areas and principle area of interest include:

- | | |
|-----------------------------------|--|
| 1. Business Model | How to fund the program and individual projects; maximize return on investment |
| 2. Networking | Optimizing the value chain |
| 3. Enabling Process | Streamlining owner driven processes |
| 4. Core Process | Applying proprietary PMC processes and intellectual property |
| 5. Program Performance | Implementing PMC Value Improving Practices |
| 6. Program System | Adopting life cycle services framework |
| 7. Program Teamwork | Adopting strong alignment and partnering approaches |
| 8. Outreach | How stakeholders are engaged |
| 9. Communication | How program benefits are communicated to stakeholders |
| 10. Stakeholder Experience | How positive stakeholder experience is achieved |

An Opportunity Checklist

The opportunity checklist for any specific large-scale engineering and construction program will be governed by:

- nature of program and its individual projects
- client related constraints
- site constraints
- market constraints
- supply chain and logistical constraints
- governmental, regulatory and stakeholder constraints
- additional program specific constraints

The checklist which follows is suggestive of the breadth of opportunities which may exist in large capital programs. While important opportunities do exist in the “nuts and bolts” of large engineering and construction programs, more valuable opportunities may exist in modifications to the business models used or how stakeholder expectations are met.

Opportunity Checklist		
1. Business Model	How to fund the program and individual projects; maximize return on investment	Are there elements of the program or individual projects for which attractive vendor financing is available?
		Are there elements of the program or individual projects which should be acquired on other than a purchase basis (examples: DBOM; PPP; delivered service)?
		What is the optimal phasing of the program when considering phase-based revenues and costs?
		Are their program or individual project structuring opportunities that improve the project's tax efficiency?
		Are there risk categories which can be pooled and self-insured?
		Are there changes in the owner's business model or the PMC delivery model which are desirable based on program considerations?
		Do commodity or risk arbitrage opportunities exist?
		Do opportunities exist for favorable regulatory change?

2. Networking	Optimizing the value chain	Which elements of supply lend themselves to consolidated purchasing?
		Which elements of supply should be considered as part of a broader multi-project procurement strategy?
		Is the scope of the program or individual projects to be developed by the owner optimal or are there elements to be added or subtracted that can produce better value?
		Are their potential alliance agreements that should be considered that create value for both parties?
		Has potential value in waste or by-product streams been fully captured?
		What co-development opportunities exist with projects being undertaken by others?
		Does reorganization of the supply chain provide added value or risk transfer?
3. Enabling Process	Streamlining owner driven processes	Are there owner tollgate processes which can be accelerated through interim reviews?
		Are there opportunities to embed owner staff with change authority into site management teams for routine type changes?
		Are there opportunities to modify contingency pool policies to provide both the owner's and PMC's project team with increased flexibility?
		Are there elements of procurement and contracting which can be better undertaken directly by the PMC versus the owner's typical procurement approach?
		Are their opportunities to accelerate cash flow to contractors and suppliers through a modified invoice payment process (only exceptions not paid)?
		Can staff approval processes be streamlined for in-budget staff positions within approved ranges?
4. Core Process	Applying proprietary PMC processes and intellectual property	Are required IP agreements in place in a form that maximizes the opportunity to use proprietary PMC processes and intellectual property?
		Use PMC's integrated framework without any defaults to client preference systems?
		Is there the potential to use PMC strategic supplier relationship agreements?
		Is an external version of PMC's risk framework utilized?
5. Program Performance	Implementing PMC Value Improving Practices	Have we identified the most appropriate value improving practices and their timing to be used on the program?

		Are there technology options we should currently be considering?
		Are the classes of quality for each portion of the program or individual projects consistent with its intended use and associated risks?
		Are there opportunities for pre-fabrication, pre-assembly and modularization that improve labor productivity and reduce costs?
		Has standardization been considered from a full life cycle perspective (procurement and construction simplification; reduced sku's for spares)?
		Are there opportunities to use lower cost engineering centers for an increased portion of the program?
		Have opportunities to minimize construction waste been adequately considered (recyclable packaging materials; onsite re-use of select waste streams; reduced number of sku's in supply chain)?
		Are strategies for reducing energy use during construction in place (consolidated shipments to the site; renewable energy to meet onsite construction power needs; use of micro grids)?
		Are strategies for minimizing potable water use during construction in place?
		Have water "barter" arrangements been considered to reduce limits on well pumping rates?
		Have design margins been optimized?
		What opportunities for energy and water operation during operations exist?
		Are value creation and value awareness activities being adequately harvested for improvements?
		Can productivity be enhanced through training, tools or other workforce changes?
6. Program System	Adopting life cycle services framework	Are there opportunities to streamline start-up and commissioning (including pre-commissioning of elements of the project)?
		Have O&M needs been addressed in project design?
		Have O&M needs with respect to consumables and spares been addressed in initial project procurement?
		Is it desirable for the PMC to provide an initial or ongoing maintenance activity for all or part of the project?

		Does the approach to design, procurement and construction result in an asset management database suitable for plant operations and maintenance?
7. Program Teamwork	Adopting strong alignment and partnering approaches	Have alignment activities been carried out comprehensively across owner, PMC and all stakeholder organizations?
		Are regular partnering sessions continued throughout the program duration?
8. Outreach	How stakeholders are engaged	Have stakeholder management plans been developed and do they reflect the preferred method each stakeholder desires to engage through?
		Are we monitoring and assessing stakeholder engagement and providing feedback to stakeholders on their engagement?
9. Communication	How program benefits are communicated to stakeholders	Are we using the most cost-effective communication techniques to reach each stakeholder with appropriately targeted messages?
		How can we better measure effectiveness?
10. Stakeholder Experience	How positive stakeholder experience is achieved	Have we solicited each stakeholder's definition of success and measured and communicated the program's movement towards that goal?

Conclusion

Large scale programs are faced with significant challenges of scale and complexity. They also offer a wide range of opportunities to better leverage existing and new models, practices and processes. Capturing and capitalizing on these opportunities can benefit from a structured and ongoing examination of opportunities much in the same way as risk are systematically identified, assessed and managed. This paper outlines a framework for such an opportunity analysis as it may be applied to large engineering and construction programs and suggest some first order areas worth examining.

About the Author



Bob Prieto

Chairman & CEO
Strategic Program Management LLC
Jupiter, Florida, USA



Bob Prieto is a senior executive effective in shaping and executing business strategy and a recognized leader within the infrastructure, engineering and construction industries. Currently Bob heads his own management consulting practice, Strategic Program Management LLC. He previously served as a senior vice president of Fluor, one of the largest engineering and construction companies in the world. He focuses on the development and delivery of large, complex projects worldwide and consults with owners across all market sectors in the development of programmatic delivery strategies. He is author of nine books including “Strategic Program Management”, “The Giga Factor: Program Management in the Engineering and Construction Industry”, “Application of Life Cycle Analysis in the Capital Assets Industry”, “Capital Efficiency: Pull All the Levers” and, most recently, “Theory of Management of Large Complex Projects” published by the Construction Management Association of America (CMAA) as well as over 750 other papers and presentations.

Bob is an Independent Member of the Shareholder Committee of Mott MacDonald. He is a member of the ASCE Industry Leaders Council, National Academy of Construction, a Fellow of the Construction Management Association of America, Millennium Challenge Corporation Advisory Board and member of several university departmental and campus advisory boards. Bob served until 2006 as a U.S. presidential appointee to the Asia Pacific Economic Cooperation (APEC) Business Advisory Council (ABAC), working with U.S. and Asia-Pacific business leaders to shape the framework for trade and economic growth. He had previously served as both as Chairman of the Engineering and Construction Governors of the World Economic Forum and co-chair of the infrastructure task force formed after September 11th by the New York City Chamber of Commerce. Previously, he served as Chairman at Parsons Brinckerhoff (PB) and a non-executive director of Cardno (ASX)

Bob serves as an honorary global advisor for the *PM World Journal* and Library and can be contacted at rpstrategic@comcast.net.