

MCX

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Key Points

- xProgram management requires a broader focus than just project management
- xGiga programs introduce challenges and opportunities beyond ~~traced~~ even in megaprojects
- xA changed perspective is one key dimension required for successful program management of giga programs

Introduction

Program management is about managing the challenges of scale and complexity. It is also about capturing the opportunities of leverage in the engineering and construction sector. Program management begins in front end engineering and design (FEED) and continues through the engineering and construction phase.

- 40. Are external stakeholder and resource constraints well understood and their impact on strategy selection well understood? Do mechanisms exist to monitor these constraints for any changed impacts and strategic flexibility that may result?

Program Execution

- 41. Has standardized programwide program and safety orientation been put firmly in place to help μ]o šZ %o CE}P OE u[• • (š Ç ew to š the site? u}v P o }OE v
- 42. Do owner and PMC team members understand the broader leadership role and not just the role of management that is required of them in implementing a large scale program? Have the precepts of leadership been communicated and adequately reinforced?
- 43. Have functional organization requirements been clearly defined and agreed to with the owner? Is there a shared understanding of how this organization will change the life of the program?
- 44. Does the selected functional organization provide adequate }À OE P }(o o šZ %o }š v š] c •%o •_ šZ š AE]•š š Á v šZ %o CE}i š• }u %o CE]•]v P šZ %o CE }P OE
- 45. Has any potential PM role been thoroughly reviewed, agreed, and clearly defined?
- 46. Are the roles and responsibilities of the various functional elements clearly spelled out with respect to their interaction with various program contractors? Have program contractors been clearly informed of the nature and extent of their interaction with the various PMC functional organizations and are these expectations captured in program or contractual governing documents?
- 47. Are functional organizations attuned to processes that may result in layering of contingencies for example, resulting in over designed systems, structures and components or estimates with contingencies at component, system and area levels
- 48. Are value improvement processes being implemented early in the program and then revisited when the program moves into subsequent phases when there major changes in the program
- 49. For changes recommended for incorporation after the change review and approval process are complete, is the program

75. Have scenarios been used to test the resilience of program strategy? Have they explicitly considered emerging trends that the industry or region is facing?
76. Has due consideration been given to the early detection of risk or risk precursors?
77. Are constraint-coupled risks identified and the associated coupling constraint tracked?
78. Are trust-influencing factors monitored for level and trend? Do program strategies, processes, and people reinforce trust-building behaviors?
79. Have internal and external systemic risk categories been reviewed by the program team? Are periodic reviews of these systemic risks undertaken?
80. Have candidate strategies to reduce program risk in the engineering and construction program been developed and the most appropriate strategies selected?
81. Has a structured approach to opportunity identification been undertaken and potential opportunities identified? Have requisite efforts been put in place to capitalize on the identified opportunities?

Sustainability

82. Has a programmatic approach to safety and sustainability been adopted by the program team?
83. Has a holistic life-cycle approach (CAPEX and OPEX phases) sustainability been adopted or are efforts more narrowly focused on the CAPEX phase?
84. Are metrics established with respect to sustainability that will drive and reinforce the practices and results being sought?
85. Is the program enhancing its social license to operate? Is there a documented plan?
86. Have all waste streams and the activities of all projects to minimize waste and impacts on a programmatic basis been carefully reviewed? Are waste treatment strategies endorsed by governing authorities?
87. What special attention has been given to minimizing energy and water usage both during construction and in subsequent operations?
88. Are labor force capacity building programs providing the skills needed for O&A/PEX?
89. Is strong owner commitment to safety present and felt at all program levels?
90. Have stakeholder management programs been designed to comprehensively identify all stakeholders, understand their needs and potential influence on the program, and how the stakeholders relate to each other?
91. Do stakeholder plans exist with well-defined beginnings, middle, and ends?
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Innovation

93. Have opportunities for and barriers to innovation in the program been identified?
94. Is the long life of the program to foster systemic innovation and learning based on the semi-permanent relationships the program creates being taken advantage of?

Reference

Prieto, Bob, The GIGA Factor: Program Management in the Engineering & Construction Industry, Construction Management Association of America, ISBN 978-1-938014-99-4; 2011.

Suggested Reading

1. NAC Executive Insight Opportunity Analysis
2. NAC Executive Insight
3. NAC Executive Insight
- 4.