



Managing Giga Project Risks – A Client's Perspective

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What we'll cover today

1. Why we need robust risk management
2. The challenges introduced by giga projects.
3. Effective organizational concepts for giga project management.
4. Managing the tactical implementation challenges.
5. Importance of the PMC role in Risk Management.
6. Q&A

Perspective:

“A”?





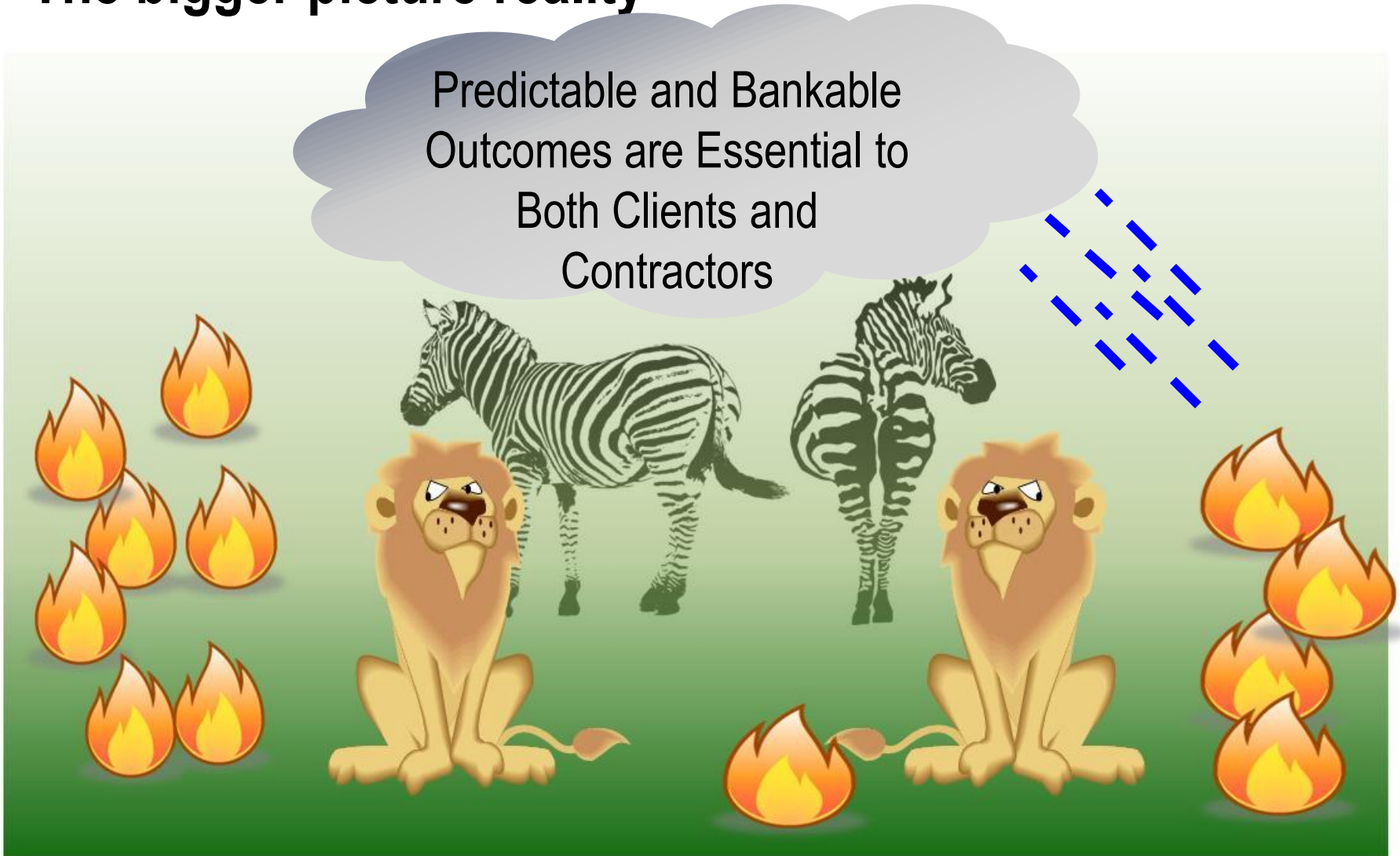
or...

“B”?




The bigger picture reality

Predictable and Bankable
Outcomes are Essential to
Both Clients and
Contractors



The Need for Robust Giga Project Risk Management

- 
- Predictable outcomes are essential to both Clients and Contractors
 - Margins and tolerance for undesirable outcomes have been reduced
 - Giga project complexity compounds the risks
 - Giga project strategies force us to acknowledge and manage risks
 - To be confident that you can manage that risk, you must have *robust* risk management capabilities.



The Execution Challenges

Technology Selection and Implementation

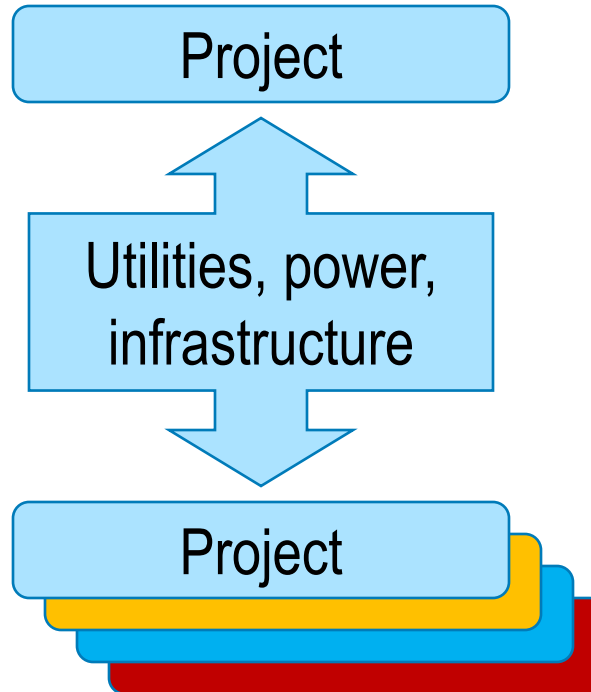
- Many licensors

Integration

- Project teams
- Site balances
- Construction planning

Standardization

- Design standards
- Work processes



Synchronization

- Schedule alignment
- Scope development
- Third party scope

Organization Capabilities

- Size of organization
- Ability

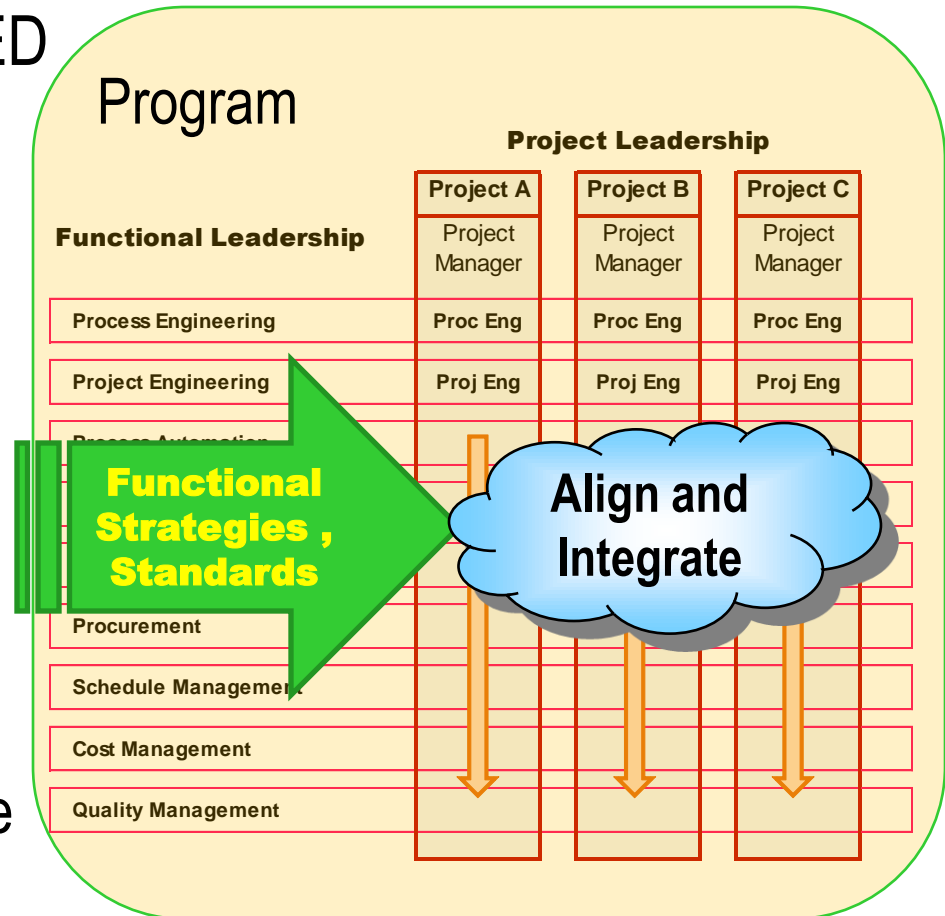
Financing

- Conditions / Guarantees
- Availability

Many new sources of risk

The Framework for Giga Project Risk Management

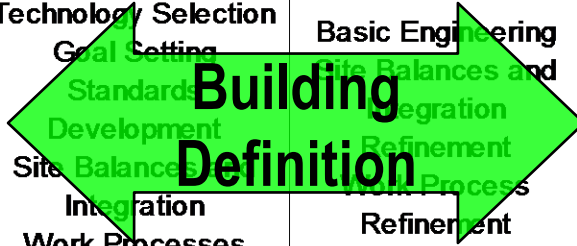
- Substantial Organization in FEED of Owner and PMC
 - Multiple parallel Projects integrated into an overarching Program schedule
 - Parallel development of functional strategies and scope definition in FEED.
 - Functional plans and strategies are aligned for the Program
 - Program responsibilities include governance, standardization and synchronization





Leveraging the Organization to Manage Risk

		PROGRAM FEED	PROJECT FEED	EPC
	Phase Characteristics	Technology Selection Goal Setting Standards Development Site Balances Integration Work Processes	Basic Engineering Site Balances and Integration Refinement Process Refinement	Execution Contracts in Place Control Estimate and Schedule
PROGRAM Risks	Significant cost or schedule impact	[Blue bar spanning PROGRAM FEED, PROJECT FEED, and EPC]		
PROJECT Risks - Technical	Specific to the individual technology	[Blue bar spanning PROJECT FEED and EPC]		
PROJECT Risks - Execution	Specific to the individual project execution	[Blue bar spanning PROGRAM FEED, PROJECT FEED, and EPC]		
FUNCTION Risks	Escalated Risks related to functional plans and strategies	[Blue bar spanning PROGRAM FEED, PROJECT FEED, and EPC]		
Operations Risks	Commissioning, Startup and Operational Risks	[Blue bar spanning PROJECT FEED and EPC]		



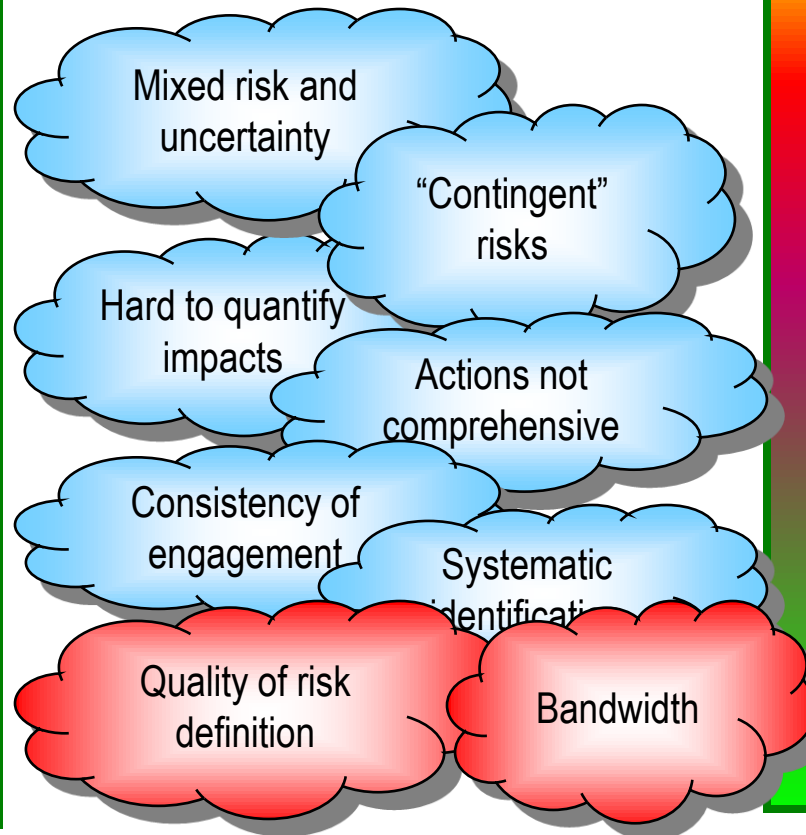
Maximize leverage and manage these during FEED





Giga Projects Share the Same Basic Challenges

“Standard” Enablers



Objectives





So How Should We Approach This?

....how to facilitate management oversight of project risks at the Program
....how to manage strategic risks impacting the entire Program
....how to align teams in different offices, with different PMCs.
....how to manage risks holistically vs. each team being left to manage by itself.
....who to call when it is outside of your scope to manage.

How to **Drive Accountability and Build Confidence**

- Overall – Establish the **culture** and establish it early
- Reinforce **accountability**
- Be prepared to **support it.**
- Be **consistent**
- Be **persistent**



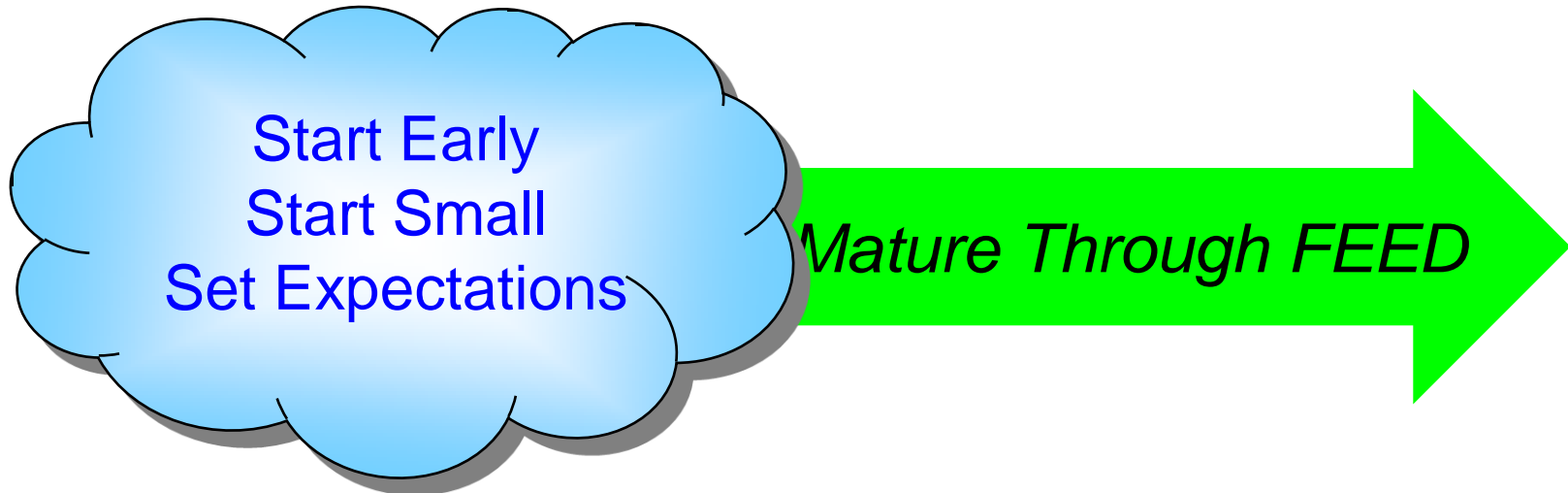
When to Engage



Establish the work process

➔ Demonstrate the work process

➔ Engage Function and Project teams



Start with Program Leadership

- Demonstrate the accountability
 - Set the expectation for a risk management culture
 - Drive a top down approach
 - Model engagement and follow-up
 - Ensure Program Leadership team own and manage the Program Heat Map
- Drive risk identification before the decision
- Drive intolerance for indiscipline
 - The Risk Register is **the** Risk List. Identify risk in different venues, but document in one place
 - Manage *Issues* in regular meetings



....and guide the armada !



Tackle the Bandwidth Issue

- Appoint full time Risk Manager(s) to develop and manage the RM Program
 - Lead Program and support Project Risk Management activities
 - Drive consistency, quality and engagement
 - Practice zero tolerance for un-managed “red zone” risks
- Emphasize continuity
 - Execution risk management is continuous
- Leverage risk identification and response plans
 - Manage the escalation and communication process
- Assess potential *systemic risks and issues*

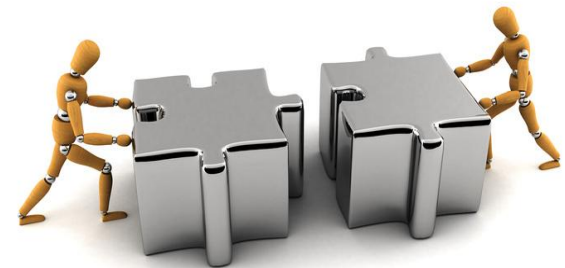


Facilitate the process



Add Context and Relevance through Alignment

- The risk management workshop can be harmful
 - Beware open brainstorming
 - VIP reviews, Stage Gates, Schedule and Cost reviews – focus on what's visible
 - Challenge assumptions
- Use Lessons Learned to help identify execution risks
 - Leverage leading team experiences
- Integrate risk management with reporting
 - Schedule sensitivity analysis
 - Establishing and managing contingency
 - Risk Validation!



Integrate into the Culture

Added Requirements for Giga Project Risk Registers

- Accessibility: Many teams and diverse locations.
- Visibility: Risks must be visible across teams and to the Program
- Security: Ability to control how much can be shared
- Differentiates risk types: Risk, Issue, Concern, Program Risk
- Categorization: Supports ability to look for systemic risks
- Standardized risk ratings: Consistency and objectivity for rating
- Auditability: Time stamped review fields



Facilitation and Communication



....But Be Prepared

- Giga projects can take you into uncharted territory
 - Size and complexity escalate probabilities and decrease manageability
 - The potential for “Black Swans” increases for the *Program*.
 - Due diligence may not always be enough
- The “Firehouse” concept prepares us for *higher* probability risks that could significantly impact the Program
 - Leverages across many similar risk scenarios
 - Early indicators, intervention triggers and response strategies.





How PMCs can help

- Drive the engagement strategy *early*
 - Bring the focus to *Execution* risks
 - Leverage your work processes – and align to Program goals.
- Manage reporting of all risk
 - One risk list for each project. One risk list for the Program.
 - Integrate into Project Controls reporting and expectations. Integrate risk management into all discussion around progress.
- Highlight accountability
 - Focus on “real” risks and align capital and schedule impacts to specific costs and activities.
 - Force the dialog and the documentation
- Apply simple but effective tools
 - Accessibility, Brevity, Clarity



The Key Takeaways

1. Predictable, bankable outcomes are equally important to clients and contractors
2. Giga projects amplify the need to manage both Project and Program Risks
 - Size, complexity, integration and synchronization
 - The stakes are higher!
3. Robust risk management is not an option. Engagement and focus create credibility and confidence.
4. Start early and start at the top. Drive the culture.
5. Apply the concepts to any size project...it applies to *value creation* as well as value protection.



Questions?