How Billions Can be Saved on Projects and Programs Through New Thinking and Approaches

Ali Jaafari, Professor of Project Management
Asia Pacific International College
My thesis

- PM Theory is removed from the realities of project management
- Our understanding of PM should change
- We need to redefine the role of Project Manager as architect and integrator
- Crafting a whole of project holistically
- Integrating efforts in time and space (functionally, product and process wise etc)
- We are dealing with complex phenomena!
Scope of this Lecture

- Why Projects Fail
- Expanding our Understanding
- A New Approach
- Conclusions
I analysed a US$1b Metro Project recently that was supposedly being managed to PMBOK2008 Standard

- Around one year spent on developing a host of processes/procedures per PMBOK
- Many great print-outs adorned PM Office
- PM and his team just about ignored all that
- Used own intuition to run the project
- Many areas were approached in a disjointed manner (fire fighting)
- Project progress was plagued, incl. projected delays, design problems, projected cost overruns, breakdown in communication, micro-management by executives.......
Decision Making and Integration on the Case Project
Decision Making and Integration on the Case Project

The need for separating functions

Governance Layer

Management Layer

Contractor/Vendor Layer
Decision Making and Integration on the Case Project

The need for bottom up integration
Decision Making and Integration on the Case Project

Project Manager’s Role (combined integration)

Influence from other components

- Component Concept & Life Cycle Attributes
- Component Design & Specs (Scope & Activities)
- Component Manufacture

Deliverables

Integration into Project

- Business Case
- Adjustment
- Leadership & Governance
- Resources
- Stakeholders’ Management
- System Integration
Extrapolation of results

Case studies & own personal observations clearly indicate that:

- Current PM BoK is too simplistic & ineffective
- Its correct application & limitation not understood
- Can be a hindrance rather than help unless Project Team is professionally competent
- Management of projects is carried out somewhat in isolation to business needs & objectives/requirements
- Project manager’s focus is on production management (traditional areas)
- Many managerial functions are neglected or managed in a disjointed manner
- These give rise to misalignment and failures
McKenna, Wilczynski & VanderSchee (2006) Survey results posted online by Booz Allen & Hamilton

- Widespread dissatisfaction with project performance amongst top 20 companies – including super majors, independents, and EPC firms as well as some heavy industrial companies from the US, Europe and Asia
- The companies surveyed had a combined capital spending of more than US$100 billion
- More than 40% of the projects had experienced significant schedule and cost overruns due to inadequacies in performance and risk management, initial project planning and problems with human resources
Why Projects Fail?

- Wrong projects are selected
- Projects are not properly defined
- Projects are poorly executed (strategic management missing)
- The rule of 1:10:100 is violated frequently!
Why Projects Fail?

Likely causes of project failure

- Poor project selection (40-50%)
- Poor project definition (40-50%)
- Poor or insufficient planning (20-30%)
- Poor project execution (10-15%)
Phase 1: Opportunity Identified

Phase 2: Generate & Select Alternatives

Phase 3: Develop Preferred Alternative

Phase 4: Execute

Phase 5: Operate

Good Project Definition

Poor Project Definition

Good Project Execution

Poor Project Execution

Source: CPDEP
Project Life Cycle

1. Project Conception
2. Project Development
3. Project Initiation
4. Project Planning & Documentation
5. Project Execution
6. Commissioning & Handover
7. Operation
8. Project Recycled

Milestones
- Preliminary Project Statement
- Project Business Case Formulated
- Project Initiation Completed
- Project Documents Completed
- Product/System Completed
- Project Completed
- Project Recycled

Deliverables
- Project Brief
- Business Case
- Initiation Plan
- Project Plan & Bid Documents
- Product/System Complete
- Product/System Accepted
- Project Recycling Plan

Approvals
- Sponsor/Client
- Sponsor/Client
- PM/Sponsor
- PM/Project Directorate
- Client Project Manager
- Product/Operations Manager
- Operator

Upstream
- Project definition report

Downstream

Initial uncertainty

Project life cycle phases
Most PM literature and standards focus on execution. Up to 85% of project value is determined in the selection/creation and development/definition phases. Strategic management of projects is vital. Leadership is essential. External risks need critical attention: financing, negotiation, competitor move and so on! Business acumen determines value delivery.
Project management focus in large projects

- Focus on whole of life management in an integrated fashion
- Project must deliver a business case as per the business plan
- Project management spans all upstream and downstream phases
Project Objectives

- **Financial objectives**
  - IRR, NPV/C, Payback, B/C, LCC etc. derived from the parent program/portfolio

- **Performance objectives**
  - Operability, Functionality, Facility utilisation etc. derived from operational requirements and the parent program/portfolio

- **Environmental objectives**
  - Environmental sustainability, customers’ satisfaction, community impacts, OH&S etc. due diligence and meeting of social/environmental expectations.

• Time, cost, scope, quality are not project objectives
• There can be no project management objectives
Project Strategic Planning
Strategic phases

Project Life Cycle

- Project Creation
- Project Development
- Project Initiation
- Project Planning & Documentation
- Project Execution
- Commissioning & Handover
- Project Close Out

Project Monitoring & Control

- Sub-project/ System
- Part/ Component
- Work Package
- Activity
- Task
- Work unit/ Performance
- System/ Function
- Contract/ Process

Deliverables

Targets & Priorities

Strategies

Project Definition Report

- Project Plan & Documentation
- Project Execution
- Project Outcomes

Project Integration Management

- Project objectives (financial, environment & performance)
- Life cycle targets for major deliverables
- Policies & organisational factors

- Formulation of business case
- Strategies for achieving project objectives
- Major risks, challenges and constraints

- Strategies for delivering business case
- Project implementation risks and strategies
- Optimum project implementation

- Project plan & documentation
- Major issues and dependencies
- Important risks, challenges and constraints

- Acceptance of systems/outcomes
- Project performance analysis
- Lessons learnt

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Project vs. Program vs. Portfolio

1. Policy Change (Goals)
   - Policy Document
2. Project Creation Needs/Requirements
   - Project Brief
3. Project Development (Definition)
   - Business Case
4. Project Initiation
   - Initiation plan
5. Project Planning & Documentation
6. Project Execution
7. Commissioning & Hand over
   - Product/system completed
8. Project Operations
   - Product/system accepted

Major Product Lines
Portfolio (Product Line)
Program (Part of Portfolio)
### Business & Strategic Management

- Customers & Markets
- Stakeholders
- Technology
- Facility Design and Operational Requirements
- Supply Chain System
- Learning & Innovation
- Finance
- Project Delivery Strategy
- Risks and Due Diligence

### Implementation Management

- Governance & Leadership
- Engineering, Detailed Design & Specifications
- Procurement*, Transportation & Warehousing
- Planning and Control*
- Team Performance
- Information & Communications Management*
- Quality Management*
- Offsite Management
- Risk Management

* Functions covered by PMI in their PMBOK®
### Core Function (Enabling Processes) ▼

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#### Functional (Managerial) Integration

- Quality Management: 4
  - Quality Goals
  - QM Strategy
  - QM Master Plan
  - Construction & Manufacturing QM Plans
  - Implement QM Scope
  - Verification, Acceptance & Manuals
  - Lessons Learnt

#### Product and Process Integration

- Project Delivery: 3
- Risks & Due diligence: 6
- Governance & Leadership: 5
- Engineering & Specifications: 3
- Procurement, Transportation & Warehousing: 3
- Planning & Control: 6
- Team Performance: 3
- Information and Communication Management: 3
- Quality Management: 4
- Off site Management: 2
- Risk Management: 2
Conclusions

Management of Projects and Programs:

• We need a shift in project management thinking and practice
• PM literature & standards must reflect project realities
• The PM framework needs to:
  - Extend project life cycle phases
  - Focus on strategic & front-end phases
• Enablers are 18 core functions (67 variables)
• Objectives & threshold values defined in terms of:
  o Financial
  o Performance
  o Environment
• KSFs/managerial principles applied to guide actions
• Situational factors determine nature of action