

It is Time to Shift to Integrated Business and Project Management ¹

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Keywords: Strategic project and program management, integrated business and project management, project leadership and governance, infrastructure, energy, construction, industrial, IS, defence and aerospace project management.

Introduction

My professional and academic career spans more than 50 years, most of which has been dedicated to understanding the art and science of project management. Early in my career I was involved in the construction of a major building and engineering project in the heart of City of London in Britain. This project was poorly planned, designed and governed by the client/sponsor, and mired in conflict. It was eventually completed after a lengthy delay. The finished cost exceeded the original budget by a factor of 2. This is hardly a unique experience in my professional life and others'. Projects of significant size have continued to underperform worldwide. Financial losses often impose additional burden on host communities or sponsor organisations. Consequential costs are seldom reported, though these can be substantial. Why is this the case, given more than 65 years of development in the art and science of project management?

This question has been front and centre of my thinking over many years, including the focus of my academic research. The COVID-19 pandemic's lockdown (2020-2022) provided me with an opportunity to refocus solely on this question. It enabled me to re-examine the state of play, undertake deep reflection, and combine many elements of knowledge to create a practical solution with potential to address the challenges of projects and programs on the ground, while also remaining conceptually sound. The result is a comprehensive model, captured in [The Handbook of Integrated Business and Project Management](#), published in 2 volumes in 2022. I believe that prudent application of the integrated business and project management (IBPM) methodology can address the underlying causes of failure in projects and programs in a meaningful way, and reduce the losses sustained by project sponsors and host communities. In this article I will try to explain the rationale behind the IBPM approach, and why project sponsors, client organisations and project management practitioners should consider the IBPM approach.

¹ How to cite this paper: Jaafari, A. (2023). It is Time to Shift to Integrated Business and Project Management; *PM World Journal*, Vol. XII, Issue IV, April.

What is IBPM?

The IBPM model promotes a holistic approach to creation, definition/optimisation, planning, procurement and delivery of projects and programs of significant size. The model comprises the following components:

1. A set of objectives that represent the project's end value and its fitness for purpose, used to guide the decision-making and optimisation efforts, and acting as criteria for performance assessment over the project life;
2. An integrated project lifecycle architecture, embodying both the front-end business and strategic phases, and the downstream delivery phases; and
3. A set of functions (enablers) applied to plan and deliver projects from creation to definition, design, procurement, execution, commissioning and start-up, in a holistic manner.

While elements of the above approach are covered in the literature, or applied in isolated cases, there does not exist a coherent comprehensive model, underpinned by a consistent body of knowledge, to assist both scholars and industry practitioners to anchor their approaches without limiting their freedom. The aim is not to present a rigid or prescriptive methodology. Rather, to present an open framework as a broad architecture to link all upstream and downstream elements of the project, and to sharpen focus on higher level project objectives that represent the inherent project value, and benefits flowing to the broader stakeholders, both tangible and intangible. This higher level focus is not incompatible with continuing to use the traditional parameters of scope, time, cost and quality to aid management of the execution phase, or oversee a contractor's obligations as part of the overall project delivery strategies. Table 1 compares the IBPM and traditional approaches.

Table 1: Comparison of IBPM and Traditional Approaches to Project Management

Point Comparison	IBPM Approach	Traditional Approach
Perspective	IBPM takes the sponsor/client's perspective, and proactive strategic management of projects.	The focus is on project execution and control, following contractual arrangements.
Objectives	Project objectives and related KPIs are defined under financial, performance and environment.	Traditionally, scope, time, cost, quality are used as objectives, aligned to project execution.
Life cycle	Project life cycle in IBPM has 6 phases, including 3 front-end phases.	Applies a 4-phase project life cycle, which typically excludes the front-end phases.

Managerial functions	IBPM applies 17 core functions (69 variables) and 54 processes to plan and deliver projects/programs.	Uses 10 functions related to project execution planning and control.
Integration	IBPM applies a systematic approach to phase and functional integration, with focus on the business case and project objectives.	Generally focuses on integrating project activities, using a PM plan based on scope, time, cost and quality management.
Governance and leadership	IBPM places the client at the apex of project governance and leadership, presiding over project capabilities, processes and outcomes.	Client’s role is a contractual role focused on delivering a project once the contract is signed. Client has limited decision making powers.
Project enablers and capabilities	IBPM provides a systematic basis for planning, establishment and empowerment of project enablers and capabilities, incl. client/PM team capabilities.	Limited focus on client/sponsor managerial and leadership capabilities, relying on contracted entities’ capabilities.
Risk management	Risks to project business case and project objectives are tracked in each phase in a dynamic manner.	Typically focused on project execution risks.
Sustainability	Strategies, decisions and plans are optimised considering targets set for sustainability KPIs.	Sustainability is considered through the design process, plus contractual stipulations.
Performance Assessment	3 types of interrelated assessments: project outcomes, state of project and business management, and execution control.	Performance assessment is generally confined to progress monitoring and expediting.

Why IBPM?

The 1980s saw the introduction of quality assurance standards across all industry sectors, including contracting. At the time the dominant view was that the adoption of QA standards by contractors would lead to substantial improvements in project delivery practices and outcomes. Such expectations were misguided. This is because major project decisions are generally made well before contractors are engaged. Besides, contractors can only perform well if the project environment is conducive to performance, if the decisions made and plans developed beforehand are realistic and optimum, and if the project is well managed.

In parallel to the adoption of quality assurance standards, there was also a trend to outsourcing. Governments and major corporations embarked on downsizing of their project management capabilities, aiming to outsource the bulk of the required services from the marketplace. The upshot of the above changes was for client bodies to lose their capabilities; in many cases they were forced to take a back seat in terms of leadership and governance of their projects and

programs. After more than 30 years of experimentation with outsourcing, the collective understanding is that sponsor and client organisations simply cannot transfer all of their responsibilities to contractors. Clients, assisted by their project managers, sit at the apex of the project governance and leadership pyramid; they need to be in full control of their projects and programs. In short, they need to set their projects up for success. That requires prudent application of the 8 principles espoused by the IPA²:

Principle 1: Focus on outcomes

Principle 2: Plan realistically

Principle 3: Prioritise people and behaviour

Principle 4: Tell it like it is

Principle 5: Control scope

Principle 6: Manage complexity and risk

Principle 7: Be an intelligent client

Principle 8: Learn from experience

The IBPM approach aims to set projects up for success, which includes recalibrating the players' roles and responsibilities with particular emphasis on the critical role and capabilities of client and sponsor organisations. To be able to lead their projects and discharge their roles effectively and efficiently, clients need to adopt and apply a strategic framework, processes and tools, and a coherent body of knowledge in line with the above-mentioned principles. The IBPM model presents the respective framework, processes and tools that will enable clients and project managers to set projects up for success, and proactively manage the entire process from creation to completion.

Project Objectives

Project objectives should reflect the success criteria, and be suitable for performance assessment over the project life. The success criteria represent the end state of the project. The success criteria should not only reflect the quality of the deliverables, but also the long term performance of the asset and its broader impacts (benefits and costs). Thus, I consider a project to be successful if:

- the solution delivered by the project is fit for purpose (business case test);
- the project meets the threshold values set for project objectives;
- the project has the capacity to deliver the planned benefits to the broader stakeholders and end users; and

² IPA. (2020). *Principles for Project Success*. Infrastructure and Projects Authority. Retrieved August 2021, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/901126/IPA_Principles_for_Project_Success.pdf

- the constraints faced in achieving the above outcomes have been overcome in an optimum manner.

Considering the above success criteria, the IBPM defines project objectives in 3 classes:

- **Financial objectives** that relate to the underlying value of the project to the sponsor organisation or investors, using the familiar quantitative measures, such as the project’s net present value (NPV) or equity internal rate of return (EIRR).
- **Performance objectives** that relate to its capacity to meet the KPIs set for performance requirements in the operation and repurposing phases, including operability, functionality, sustainability, competitiveness and capacity to meet licensing and regulatory requirements.
- **Environmental objectives** relate to the project’s capacity to meet the KPIs set for environmental performance over its life cycle, covering carbon footprint, ecological impacts, economic and community impacts, social costs/benefits, and so on.

Project Life Cycle

As seen from Figure 1, the IBPM project life cycle has 6 phases, as follows: Front-end phases (creation, definition & implementation masterplanning); and Implementation phases (design & procurement, execution, commissioning & close-out). The adopted project life cycle model considers project phases as an integral part of the asset life cycle, as seen from Figure 1. Note that the front-end phases will fundamentally influence the asset’s capacity to meet the KPIs and expectations set for the project operation (utilisation), repurposing (including asset life extension) and resource recovery (including recycling of the hardware).

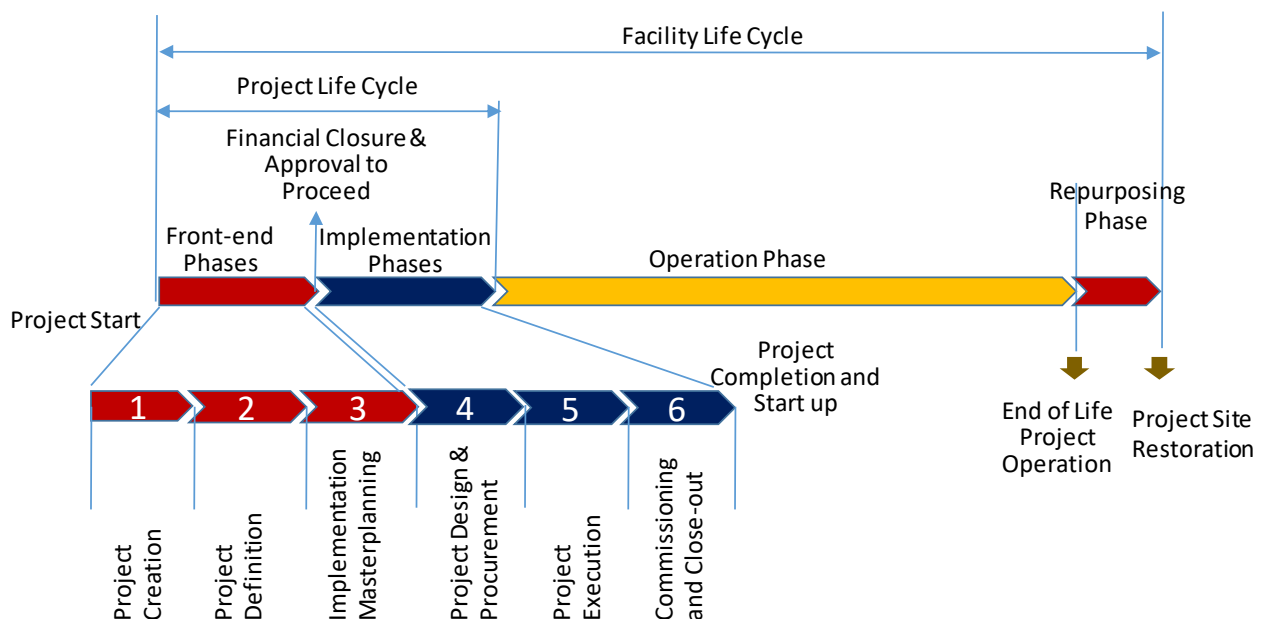


Fig. 1: Project Life Cycle vs. Asset Life Cycle

Business and Project Management Functions

In order to set the project up for success, typically, 17 business and project management functions (characterised by 69 variables) will need to be planned and managed over each project phase. Some of the functions can turn out to be critical in a given project, depending on the nature and size of the project under consideration, and the situational factors. If such functions are not managed optimally the project may experience turbulence and conflict, ultimately leading to failure. In traditional approaches, some of these functions are not explicitly recognised or managed. Under the IBPM method, the emphasis is on identifying and managing the critical functions systematically over the project phases. This requires investing in functional capabilities or core competencies (see Table 2).

Table 2: Core Business and Project Management Competencies Espoused in the IBPM Model

Core Competency/ Capability	Related Functions	Focus
Project strategic alignment and management	Customers and markets	Competencies required for project strategic alignment and management, incl. planning and meeting the requirements related to customers and markets, stakeholders, supply chain and offsite management. Optimum formation and application of these competencies will result in the completed project meeting validated business and strategic requirements, and fulfilling the business and strategic objectives.
	Stakeholders	
	Supply chain system	
	Offsite management	
Project engineering and design management	Technology	Competencies applied to manage feasibility studies, modelling, technical design and documentation of the project, and provide the design and technical services required over the project life, also to ensure that the project deliverables meet the quality and performance requirements, in line with the project business case/needs and the objectives.
	Facility design and operational requirements	
	Engineering, detailed design and specifications	
Project governance, leadership and HRM	Governance and leadership	Relational competencies concern with creation of trust, commitment, teamwork and communication among the coalition of organisations and individuals engaged on a project/ program. The focus is on boosting commitment to project goals, engendering a positive attitude and maintaining high morale. Also, it includes promotion of learning and innovation to enhance the project delivery process and outcomes.
	Learning and innovation	
	Team performance	
Project finance and financial management	Finance	Competencies required to estimate project cost, analyse project funding requirements and secure finance to deliver the project successfully as planned, and also to meet the cash flow and financial obligations of the project, based on the selected project delivery method and planned procurement and execution sequence.
Project procurement, transportation &	Project delivery	Concerns with competencies needed to craft an optimum procurement strategy, seek, select, engage and empower project participants, including project manager, contractor,
	Procurement, transportation and warehousing	

warehousing management		designers and vendors. Also competencies to manage additional activities related to offshore procurement, transportation and warehousing.
Project quality management	Quality management	Competencies in setting goals, documenting requirements and standards, establishing a tailored framework and policies, and developing and applying a project QM masterplan and a system to guide the activities performed by the project participants, and assure the quality of project processes and deliverables.
Project control	Planning and control	Competency to monitor, control and expedite the execution of the project in accordance with the project implementation masterplan, reflecting the selected project delivery method and the terms of the delivery contracts signed with the designer, prime contractors, vendors and other related parties.
Project information, communication and document management	Information & communications management	Competency to design and apply a tailored project information, communication and document management system, and offer the services needed to enable the project participants to communicate, collaborate and integrate their efforts in each project phase, in order to deliver the phase deliverables (the business case), and achieve the project objectives.
Project risk management	Risk management	Competency to identify, analyse and treat risks, threats, ambiguities, complexities and discontinuities, as well as opportunities and constraints, devising and applying treatment strategies, and ensuring that these are reflected in the project decisions and plans. The aim is to minimise the probability of the subject project failing to deliver its business case and/or meet the project objectives.

My research and observations confirm that success in planning, optimisation and delivery of large projects and programs depends on the optimality of capabilities. Projects take place in a dynamic and changing environment. Capabilities are applied to progress a project from creation to completion dynamically in an integrated manner. These capabilities are distinct from those furnished by contractors for executing the scope assigned to them; these are client side capabilities.

A client body may not possess all the capabilities required for managing the critical functions on a large project. In such cases, the client body can secure additional capabilities through outsourcing. However, the client’s own responsibilities should not be delegated to third parties. As stated, clients have to lead proactive strategic management of projects throughout the project life. This includes hands-on oversight and guidance of the project and its many elements in a dynamic manner.

Proactive Dynamic Management

Proactive and dynamic management of projects and programs is pivotal to their success (Figure 2). Projects are complex dynamic systems that change with time. Success in their delivery requires re-evaluation of the respective strategies, decisions and plans each time a significant change is experienced, followed by redirection of the resources. The client/PM team are at the helm of proactive and dynamic management of the project from concept to completion. This is similar to flying an airliner, from the point of take-off, through to the safe landing at the destination airport. The pilot needs to continually monitor the plane conditions, read all instruments, assess the risks and weather conditions, make the necessary adjustments to its course, and continue flying till the plane reaches its destination safely and in time. The pilot cannot ignore any of the functions that influence the flight course or airliner's performance.

Much the same way, the business and project management functions must be monitored and re-evaluated to reflect the state of the project, including risks and discontinuities or disruptions, followed by replanning and redirecting the resources to ensure the project stays on course and would be completed successfully. The IBPM methodology creates a playbook for the client/PM team for orchestrating, expediting and guiding the project during the design, procurement and execution phases in a dynamic manner. In short, we are dealing with a complex picture, in project planning and delivery. There are multiple actors, complex interactions, and cause and effect loops within the project boundaries, as well as changes due to external factors. All of these necessitate a proactive dynamic approach to project/program management. The key to success is to ensure that the enablers or capabilities are optimum and steered to facilitate proactive and dynamic management of the project under consideration.

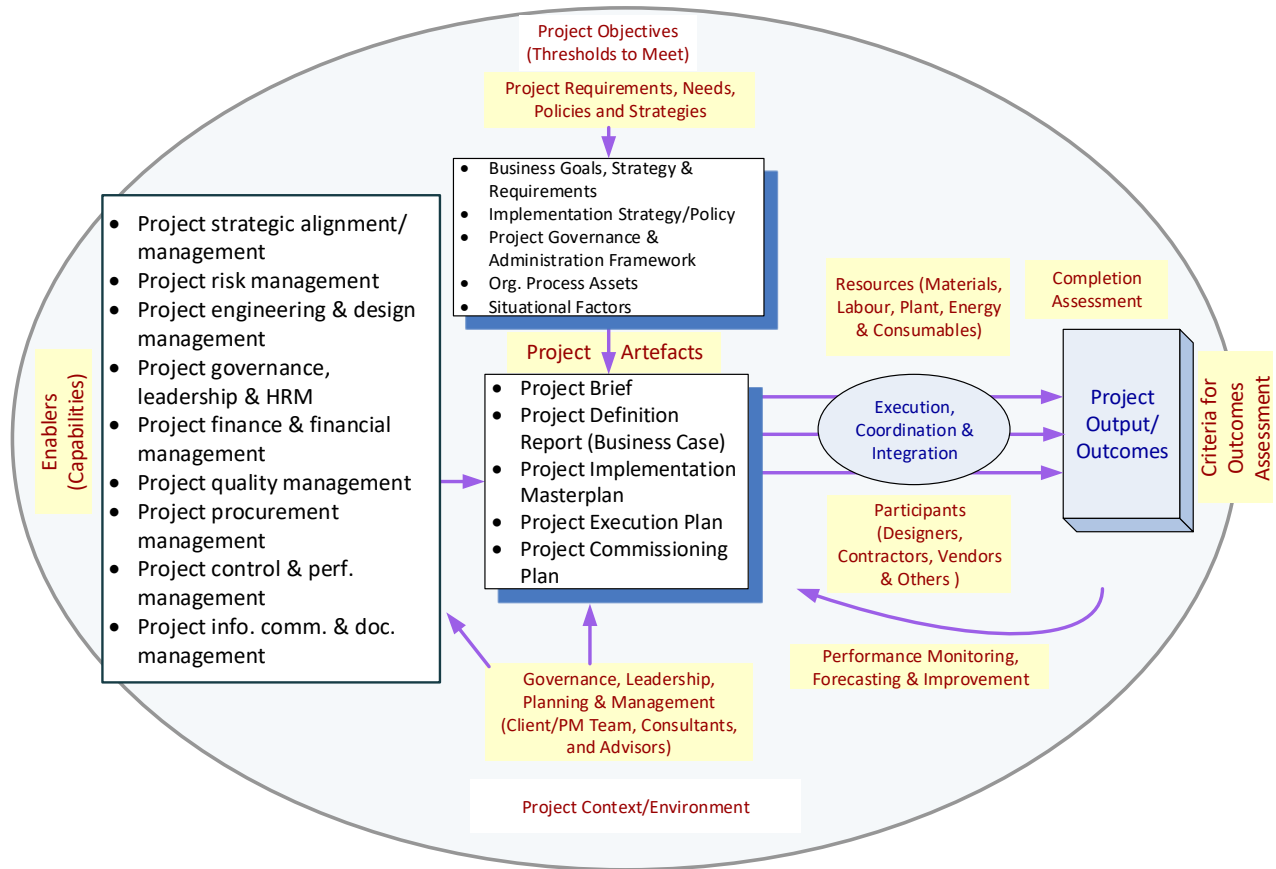


Fig. 2: Simplified Presentation of Complexity in Project Planning and Delivery Processes

Integration Management

As shown in Figure 3, Integration management is achieved across the managerial functions and along the phases. Figure 3 contains thumbnail entries for *Quality Management* function to illustrate the scope for this function in each project phase in broad terms. The aim is to illustrate how each function will be covered along the project life cycle phases. As noted, in the project creation phase, requirements, standards and targets for project quality management are determined, and documented. In the project definition phase, an optimum strategy for project quality management is developed, considering the project characteristics, complexities, the solution dimensions, and other related factors.

Functions and Variables		Project Life Cycle Phases					
Business and PM Functions	No of Variables	Creation	Definition	Masterplanning	Design & Procurement	Execution & Perf Management	Commissioning, Hand-over & Close-out
Customers & Markets	5						
Stakeholders	4						
Technology	4						
Facility Design & Operational Requirements	4						
Supply Chain System	2						
Learning & Innovation	4						
Finance	4						
Project Delivery	3						
Project Risk Management	10						
Governance & Leadership	5						
Engineering, Detailed Design & Specifications	3						
Procurement, Transportation & Warehousing	3						
Project Control	6						
Engagement and Performance	3						
Information & Comm. Management	3						
Quality Management	4	QA Requirements & Perf. Targets	QM/QA Strategy/ Approach	QM Masterplan	Designer/ Contractor QA Plans	QA/QC per QMM & approved QA Plans	Perf Verification, Handover & Closeout
Offsite Management	2						

Fig. 3: Functional and Phase Integration Management in the IBPM

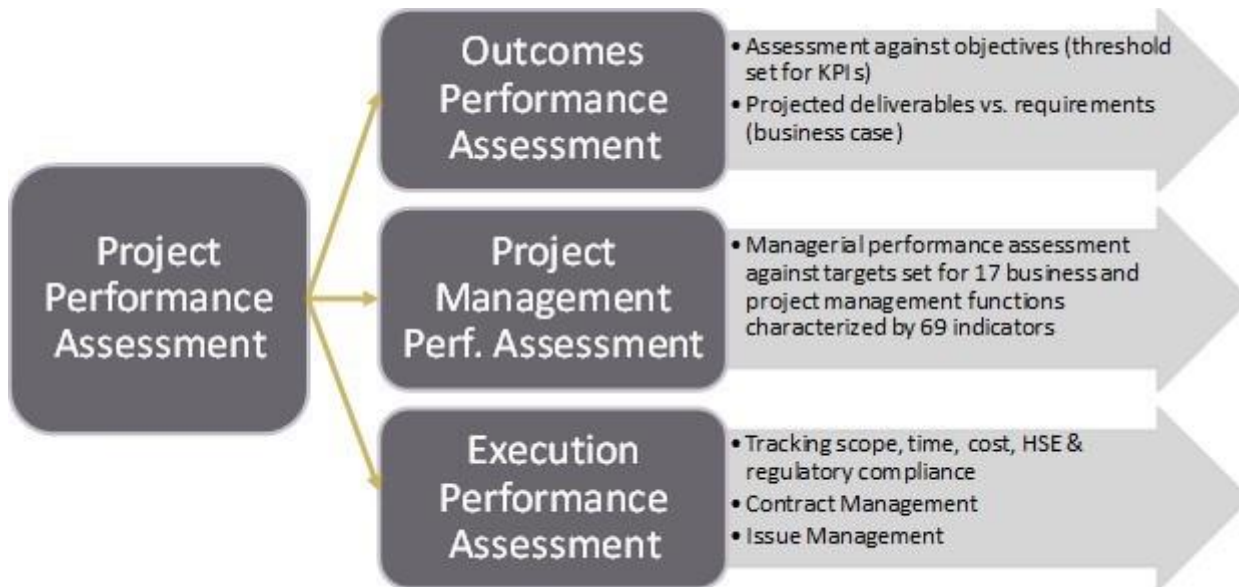
This strategy is then turned into a quality management masterplan (QMM) during the implementation masterplanning phase. The contracts signed in the procurement phase for project design and execution, obligate the appointed designers and contractors to prepare their own QA plans, based on the QMM. These QA plans, and the QMM will be the basis for monitoring quality during the execution phase. The QMM will contain high level criteria for inspection, testing, commissioning, performance verification and acceptance of the completed project, as well as feedback and QM performance assessment.

Some functions have close affinity to one another, and it is prudent to plan and manage these functions in an integrated manner. For example, ‘Governance and Leadership’, ‘Learning and Innovation’ and ‘Engagement and Performance’ are grouped together under *Project Governance, Leadership and Human Resource Management*. Altogether, the above 17 functions are grouped into 9 functional areas for planning purposes.

Project Performance Assessment

Typically, project performance assessment is conducted at regular intervals, and at any time that a major change is introduced. Under the IBPM methodology, performance assessment of a project of significant size focuses on 3 interrelated areas: (a) project worth/outcomes performance assessment; (b) project management performance assessment; and (c) project

execution performance assessment. The frameworks, processes and tools for performing these assessments are presented in the IBPM Handbook (volumes 1 and 2).



Summary

In this short article I attempted to make a case for a shift to integrated business and project management for projects and programs of significant size. Here are a few bullet points to summarise the key messages of this article:

- There is an urgent need to re-examine the foundation concepts of project and program management, as projects continue to underperform, and experience conflicts, cost and time overrun, despite the considerable work done in this field to improve the theory and practice of project management.
- The continued poor performance of project management in real life has been of great concern to me. This is the reason for my attempts to develop a solution that can address the shortcomings in a fundamental way. The result is the integrated business and project management model for project and program management.
- The IBPM model promotes a holistic approach to project and program creation, development and implementation management.
- The IBPM model has 3 components: (i) higher level project objectives; (ii) an extended project life cycle to include the front-end phases; and (iii) up to 17 business and project management functions characterised by 69 variables (KPIs).
- As is widely known the front-end phases are critical to project success; this explains why the IBPM model has 6 phases, 3 of which are the front-end phases.

- The IBPM model is a complete restructure of the traditional approaches to planning and implementation of projects and programs of significant size.
- Its main objective is to set projects and programs up for success. It places greater emphasis on the role of project client and sponsor bodies, including their role in proactive dynamic management of the whole project system.
- Under the IBPM approach project planning and delivery follows a dynamic process, permitting project assessment and realignment at phase transition points and/or critical intervals.
- Project performance assessment under the IBPM methodology comprises 3 interrelated assessments, i.e. outcomes, managerial and execution performance assessment.

References

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About the Author



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Dr Ali Jaafari is an author, academic, practitioner and consultant, recognised internationally, particularly in management of large complex projects and programs. He served as an academic and researcher at the University of Sydney in Australia for 24 years, and was appointed to a Professorial Chair in 2000, in recognition of his contributions to the research and education of students and practitioners, as well as his widespread global contribution to knowledge in this field. He has delivered courses and training workshops to thousands of professionals and executives globally, including major public and private sector organisations, and government agencies.

Dr Jaafari has published widely in major international journals and conferences, books and monographs. He has been at the forefront of research and development of project, program and organisation management. Currently, he acts as a consultant in the field of project and program management, though he has held leadership positions in higher education for over 15 years, including President, Asia Pacific International College (2005-2015), Vice-President, Group Academic and Compliance, Education Centre of Australia (2015-2020), and Principal and Director of ECA College of Health Sciences (2018-2020). Dr Jaafari has an extensive professional track record in business and project management, and is known as an authority internationally. He has a Master of Civil Engineering from the University of Tehran, a Master of Highway Engineering and a PhD in Quantitative Business Methods from Surrey University in the UK.

Dr. Jaafari is the author of the recently-published two volume textbook: [The Handbook of Integrated Business and Project Management, Volume 1: Fundamental Concepts, Structure and Methodologies](#) and [Volume 2: Business and Project Management Framework and Processes](#)

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