

From Measuring Success to Using AI to Deliver the Right Success

Extending the DREAM Framework Through
AI-Driven Decision Intelligence

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Extending the DREAM Framework Through AI-Driven Decision Intelligence

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Forewords

The discipline of project management has evolved significantly in its understanding of success. What was once defined narrowly through the lens of delivery performance has progressively expanded to encompass outcomes, value, strategy, and societal impact. The DREAM framework represents a major advancement in this evolution. By articulating capital project success as a multidimensional construct, it provides a rigorous and empirically grounded model that reflects the true complexity of modern project environments. It enables both researchers and practitioners to move beyond reductionist measures and toward a more holistic understanding of success.

Yet defining success, however rigorously, does not in itself ensure that success is achieved. Across industries, organisations continue to deliver projects to meet established success criteria while failing to generate meaningful value. This persistent disconnect suggests that the challenge is not solely one of definition or measurement, but of how success is selected, governed, and adapted over time.

This paper is a joint contribution that builds on the DREAM foundation. It introduces a complementary perspective focused on decision-making and organisational performance, and explores the role of Artificial Intelligence in enabling a more dynamic and responsive model of project governance. Together, these perspectives aim to advance the conversation from defining success to ensuring that the right success is consistently pursued and realised.

Executive Summary

Capital projects remain one of the most significant mechanisms through which organisations pursue strategic change and create long-term value. Despite decades of advancement in project management practices, the challenge of consistently delivering successful outcomes persists. The DREAM framework provides a robust and necessary foundation for addressing this challenge. By defining success across five interdependent dimensions: Delivering Outputs, Realising Strategy, Enabling Outcomes, Achieving Value and Benefits, and Maximising Stakeholder Satisfaction. It establishes a comprehensive model for evaluating project performance. However, even with this expanded definition, organisations continue to encounter a recurring pattern: projects are delivered successfully according to defined criteria, yet fail to deliver meaningful value in practice. This paper addresses that gap. It argues that while DREAM provides clarity on what success is, an additional capability is required to ensure that success is realised. This capability lies in the ability to continuously assess whether the right initiatives are being pursued and whether they remain aligned with evolving strategic and environmental conditions.



Introduction: The Persistent Challenge of Project Success

Defining project success has always been a complex undertaking. As projects have increased in scale, complexity, and societal impact, so too has the need for more sophisticated frameworks capable of capturing the full spectrum of what success entails. Capital projects present a unique challenge. They involve substantial financial investment, operate within dynamic and often uncertain environments, and carry long-term implications for organisations and the communities they serve. In such contexts, simplistic definitions of success are not only inadequate, but potentially misleading. The DREAM framework addresses this challenge directly by establishing a multidimensional model that reflects the true nature of project success. It recognises that success cannot be reduced to delivery performance alone, but must encompass outcomes, value, strategic alignment, and stakeholder impact. Despite this advancement, a critical issue remains unresolved. Across sectors, organisations continue to deliver projects that satisfy defined success criteria while failing to produce the intended benefits or long-term value. This suggests that the problem is not limited to how success is defined but extends to how it is selected and governed throughout the project lifecycle. This paper explores that gap. It proposes that achieving consistent success requires not only a robust definition, but also a capability to continuously evaluate and adapt decisions considering changing conditions. In doing so, it introduces a complementary perspective that connects success measurement with decision-making and governance.

The Execution Gap Reconsidered

The concept of the Execution Gap has long been used to describe the disconnect between strategic intent and realised outcomes. Traditionally, this gap has been attributed to failures in communication, governance, or delivery capability. While these factors remain relevant, they do not fully explain the persistence of the problem. Even in organisations with mature governance structures and strong delivery performance, projects frequently fail to deliver the value they were intended to create. This suggests that the gap is not solely a failure of execution, but also a failure of ongoing alignment between the project and its intended purpose. Projects are typically initiated based on a set of assumptions: about market conditions, organisational priorities, technological feasibility, and expected benefits. Over time, these assumptions may change or become invalid. However, projects often continue along their original trajectory, driven by momentum, sunk cost considerations, or governance inertia. The result is a condition in which projects succeed operationally while failing strategically. They meet their defined objectives, yet those objectives no longer reflect the realities in which the organisation operates. This reframes the Execution Gap as a decision gap over time, rather than a one-time failure at the point of initiation. It highlights the need for mechanisms that enable continuous reassessment of alignment, value, and relevance throughout the lifecycle of a project.

The DREAM Framework as the Foundation

A defining strength of the framework lies in its recognition that success is not a single outcome, but a latent construct that must be assessed across multiple dimensions and over time. By providing structured measurement scales and clearly defined indicators, DREAM enables both rigorous analysis and practical application. Crucially, the framework establishes that success is achieved only when positive results are demonstrated across all five dimensions. This

principle challenges the tendency to equate success with delivery performance alone and reinforces the need for a more balanced and holistic approach. In doing so, DREAM answers a fundamental question that has long been contested within the discipline: **What does success look like in capital projects?**

However, while this question is essential, it is not sufficient on its own to ensure successful outcomes in practice.

The **DREAM** framework provides a comprehensive and empirically grounded model for defining capital project success. Its five dimensions include:

- **D**elivering outputs
- **R**ealising strategy
- **E**nabling outcomes
- **A**chieving value and benefits
- **M**aximising stakeholder satisfaction

They all collectively capture the full spectrum of what success entails.

The Limitation of Measurement in Isolation

Measurement plays a critical role in understanding performance, but it does not inherently influence outcomes. Even the most sophisticated measurement frameworks, when applied in isolation, remain descriptive rather than prescriptive. Within the context of capital projects, measurement often occurs after key decisions have already been made and trajectories established. While it may identify emerging risks or performance issues, it does not necessarily challenge the underlying assumptions or strategic rationale of the project itself. This creates a fundamental limitation. Projects may perform well against defined metrics while still failing to deliver meaningful value. In such cases, the issue is not a failure of execution, but a misalignment between the project and its intended purpose. The implication is clear: **improving measurement alone will not resolve the broader challenge of project success.** What is required is a capability that connects measurement with decision-making, enabling organisations to act on insights in a timely and effective manner.



A Hierarchical View of Organisational Performance

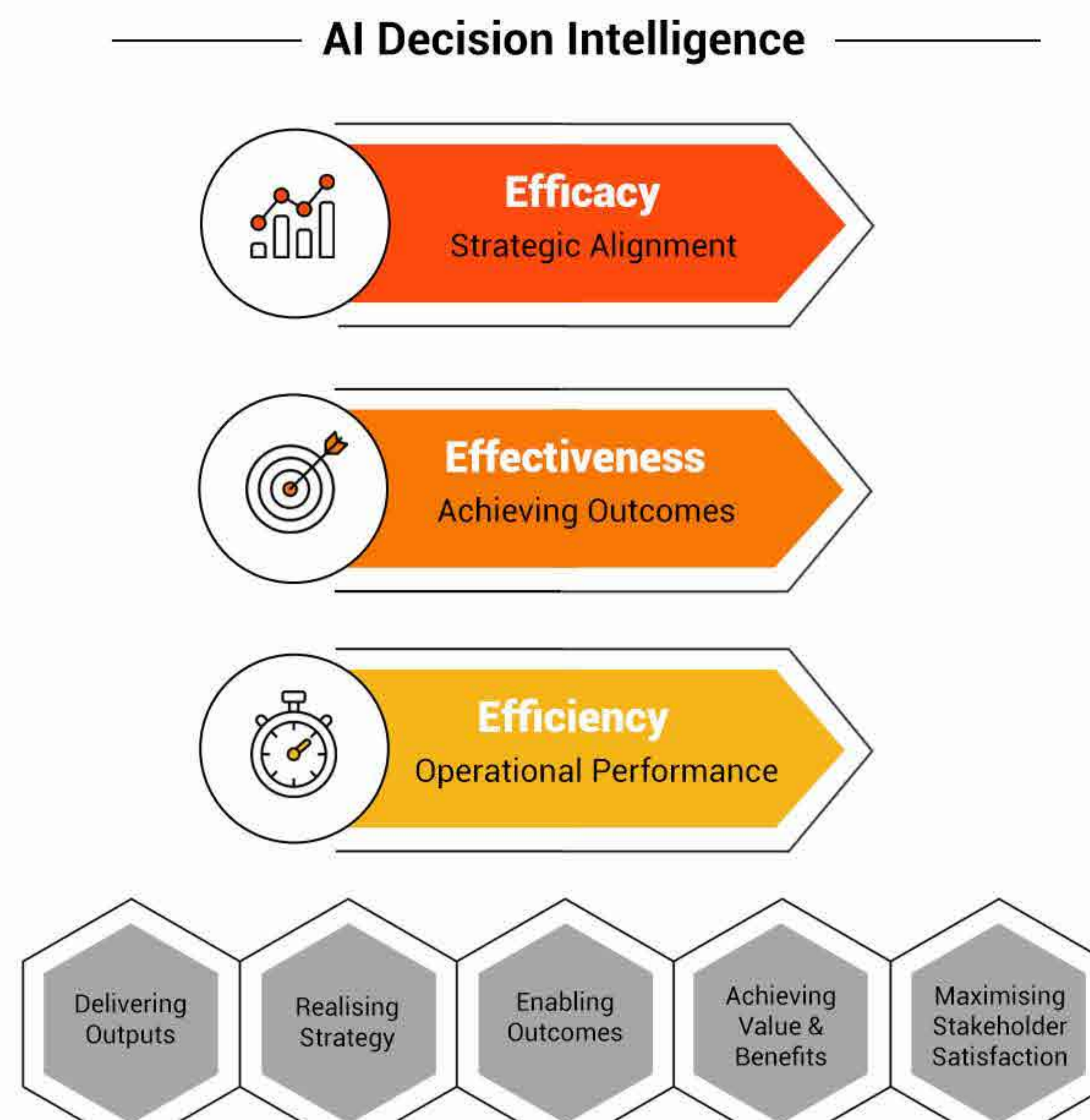


Figure 1 – Conceptual Model

To bridge this gap, it is useful to consider organisational performance across three interconnected layers: Efficiency, Effectiveness, and Efficacy. **Efficiency** relates to the execution of work. It concerns how well resources are utilised and how effectively time, cost, and scope are managed. **Effectiveness** extends this perspective to outcomes, focusing on whether the intended results are achieved. **Efficacy**, however, operates at a higher level. It addresses the question of whether the right goals and initiatives are being pursued in the first place. These three layers form a hierarchy. Efficiency and effectiveness are necessary conditions for success, but they are not sufficient. Without efficacy, organisations risk delivering outcomes that are well executed but fundamentally misaligned with strategic objectives or value creation. Within the DREAM framework, this hierarchy becomes visible. Delivering Outputs aligns with efficiency, Enabling Outcomes aligns with effectiveness, and the remaining dimensions, Achieving Value and Benefits, Realising Strategy, and Maximising Stakeholder Satisfaction, are inherently dependent on efficacy. This reveals a critical insight. The most significant risks to project success do not arise during execution, but at the level of decision-making that determines which projects are undertaken and how they are sustained over time.

A Hierarchical View of Organisational Performance

Artificial Intelligence has already begun to transform project environments, primarily through improvements in efficiency and effectiveness. Automation has streamlined processes, while predictive analytics has enhanced the ability to anticipate risks and improve outcomes. However, the most significant opportunity lies beyond these applications. AI has the potential to operate at the level of efficacy, enabling organisations to continuously assess whether their initiatives remain aligned with strategic objectives and value creation. This capability can be described as Decision Intelligence. It involves the use of data, models, and algorithms to inform and improve decision-making in real time. Rather than focusing solely on what is happening or what is likely to happen, decision intelligence addresses a more fundamental question: what should be done. In the context of capital projects, this includes:

- Testing the assumptions underpinning business cases
- Identifying early indicators of misalignment
- Evaluating alternative courses of action
- Supporting decisions to adapt, pause, or terminate projects

This represents a shift in the role of AI. It moves from being a tool for optimisation to becoming a mechanism for strategic insight and governance.

Integrating DREAM with Decision Intelligence

The integration of the DREAM framework with Decision Intelligence creates a complete and more dynamic model of project success. DREAM provides the structure for defining and measuring success across multiple dimensions. Decision intelligence provides the capability to continuously align projects with those dimensions as conditions evolve. This integration enables a transition from static evaluation to dynamic governance. Projects are no longer assessed solely against predefined criteria, but are continuously challenged against changing strategic, financial, and environmental conditions. As a result, organisations can move beyond retrospective analysis and toward proactive intervention. They can identify misalignment early, take corrective action, and, where necessary, make difficult decisions about the continuation of projects.

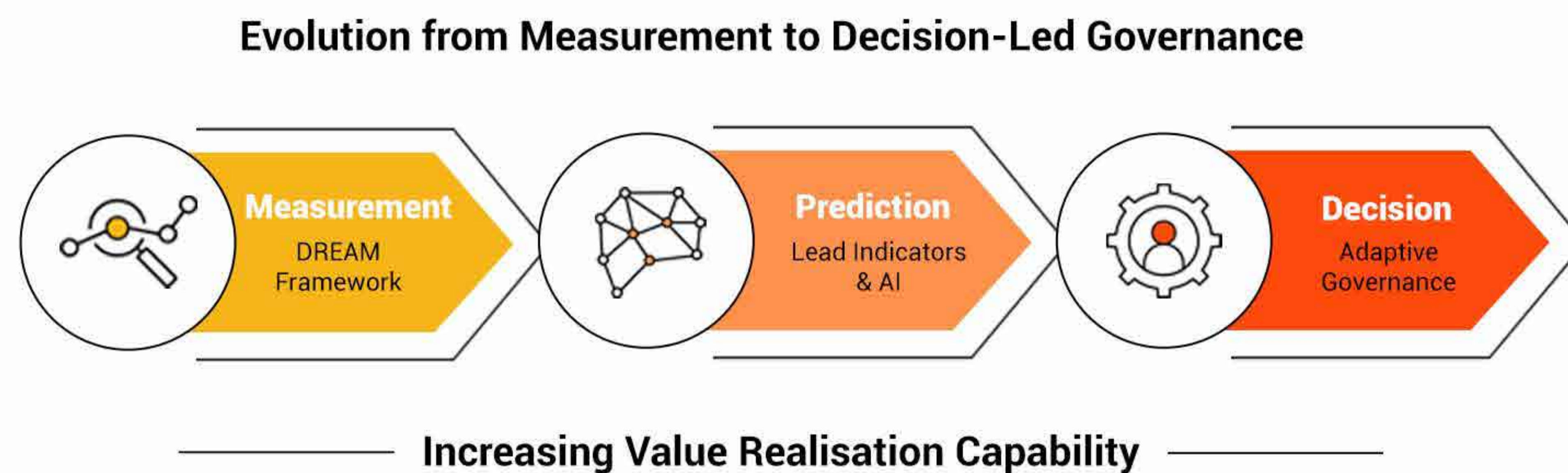


Figure 2 – Governance Evolution

Toward Predictive and Adaptive Governance

The combination of multidimensional success measurement and Decision Intelligence supports the development of a new governance model. This model is characterised by its ability to anticipate, adapt, and respond to change in a structured and evidence-based manner. In this context, governance is no longer limited to oversight and control. It becomes an active mechanism for shaping outcomes. Decisions are informed by real-time insights, and interventions are made while success is still achievable. This represents a fundamental shift in how projects are managed. Rather than progressing linearly from initiation to completion, projects become adaptive systems that evolve in response to emerging information.

Implications for Practice

The implications of this model are significant for all stakeholders involved in capital projects. For executives, it requires a shift from one-time approval decisions to continuous validation of strategic alignment and value. For project and programme leaders, it expands the focus of governance beyond delivery performance to include ongoing assessment of relevance and impact. For professional bodies, it suggests the need to evolve standards and frameworks to reflect the importance of decision-making as a core component of project success.

Completing the Model of Project Success

The DREAM framework provides a critical and necessary foundation for defining capital project success. By establishing a multidimensional construct supported by empirical measurement, it advances both theory and practice. This paper builds on that foundation by addressing a complementary challenge: ensuring that success is realised in practice. By integrating DREAM with a structured understanding of organisational performance and the emerging capabilities of AI-driven decision intelligence, it becomes possible to move beyond measurement toward active and continuous alignment. The result is a more complete model of project success, the one that not only defines what success looks like but enables organisations to consistently pursue and deliver the right outcomes.

About Authors



Lloyd Skinner - *CEO of greyfly.ai*

Lloyd has 25+ years' experience in programme management and has led award winning, full life cycle, multi-year, multi £millions transformation projects. For 7 years he and his team have been investigating the use of AI in project management and developing a suite of Intelligent Project Predictions (IPP) tools. IPP won both the Technology and Innovation categories for APM 2024 project of the year.



Wilson Guilherme - *General Manager at Petrobras*

With over 30 years of experience leading strategic investments and capital projects, Wilson has held senior leadership roles at Petrobras and Transpetro across upstream, midstream, and downstream sectors. He combines extensive project delivery expertise with a strong academic background, including a DBA and executive education from Stanford and Harvard. As an IPMA Level A Project Director, PMP, and founding member of IPMA Brazil, Wilson remains committed to advancing project management excellence globally.



About greyfly.ai

greyfly.ai is an award-winning leader in AI for Project Management, recognised for its practical impact on modern project delivery and featured as a Saïd Business School, University of Oxford executive course case study. We work with organisations across sectors including infrastructure, telecoms, logistics and the public sector to strengthen delivery performance by unlocking intelligence from their existing project data. Our Delivery Intelligence Platform helps delivery leaders act earlier, manage risk more effectively, and improve project outcomes through predictive insight, structured knowledge extraction, and intelligent change capability.