



مركز الحوكمة
CENTER FOR GOVERNANCE

GOVERNANCE OF MAJOR INFRASTRUCTURE PROJECTS

How boards can protect value through discipline,
challenge and accountability



A PIF COMPANY

2026

An abstract geometric pattern consisting of numerous overlapping, parallel lines that create a sense of depth and movement. The lines are arranged in a way that they appear to be receding into the distance, forming a series of nested, elongated shapes. The pattern is rendered in a light, golden-brown color against a darker, solid background of the same hue.

Center for Governance

Report

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EXECUTIVE SUMMARY

Major infrastructure projects, from transportation networks and energy systems to water facilities, digital infrastructure and new urban developments, can transform the economic prospects of companies and nations. Often described as megaprojects or, in some contexts, giga-projects, they also involve substantial risks and commitments that can last decades. Good governance shapes their prospects of success through decisions about what to build, when to commit and whether and how to change course.

Large, complex projects place heavy demands on governance. Significant financial commitments are often required before assumptions about cost, technology, demand and operating performance can be fully tested. Projects often outlast the decision-makers who approve them, and their consequences can continue for decades. Many problems that later appear as delivery failures begin as weaknesses in governance. Boards are central to addressing those weaknesses. This paper examines what can go wrong and how board members can improve a project's prospects of success.

A poor project outcome does not in itself prove governance failure. Major projects face genuine uncertainty and can be affected by unforeseeable external shocks. However, a recurring risk observed in this kind of project is the gradual loss of boardroom choice. Design specifications, contracts, spending and public commitments can make change increasingly expensive. By the time weaknesses can no longer be ignored, a board may face only poor choices, such as a costly continuation of the project or a disruptive cancellation.

The paper distinguishes the sponsor board, which maintains the investment case and oversees the owner's exposure, from the delivery board, which oversees execution and tests whether the mandate remains achievable. Some boards perform both roles. Whatever the structure, the central governance question is whether important information can reach decision-makers with the expertise and authority to act while viable alternative options remain available.

The paper draws on three case studies and the perspectives of 15 experienced Saudi and international board members with substantial involvement in major infrastructure projects (see Annexes). It identifies six disciplines which board members should apply to their oversight of major projects:

- 1 Make the governance structure clear and workable from the outset.** Clarity is needed on who maintains the investment case, who can commit capital or change the project's scope and who can pause, redesign or stop the project.
- 2 Build capable boards that can challenge.** Relevant experience matters, as does independent judgment, curiosity and the willingness to challenge constructively.
- 3 Base each major commitment on evidence.** Approval to proceed should depend on evidence that the project is ready for its next stage. Forecasts should reflect uncertainty. Material changes to project objectives should prompt a fresh board assessment. Important assumptions should be independently tested.
- 4 Stay in touch with reality.** Boards are more likely to hear the truth about problems or concerns when psychological safety enables people to raise issues at an early stage. Independent assurance providers should have direct access to the relevant board and be able to report concerns without management filtering. Boards should continue to compare performance with the original case as well as the latest forecast.
- 5 Keep options open.** Staged commitments, pre-agreed intervention triggers and careful management of supplier dependence can preserve practical alternatives for longer.
- 6 Maintain accountability across the project lifecycle.** Clear handovers should preserve the reasoning behind decisions and identify unresolved risks and obligations. Accountability for realizing the expected benefits should continue after construction ends.

The HS2, Gorgon LNG and Riyadh Metro case studies described in Annex I provide insight into differing governance issues faced by infrastructure boards – especially the dangers of losing optionality (HS2), the need for post-completion accountability (Gorgon LNG) and the benefits of maintaining a coherent network scope (Riyadh Metro). Annex III translates the paper's lessons into three practical tools which board members can use to guide their oversight activities.

Governance cannot eliminate uncertainty or guarantee success. It can ensure that a project's purpose remains clear, its investment case is tested as circumstances change, and emerging problems reach people with the authority to act while meaningful choices remain. The contribution of governance is often underestimated because, once a project is underway, attention tends to focus on delivery. Yet decisions made before and during construction, together with accountability that continues after completion, can determine whether an asset delivers lasting value.



THE NATURE OF INFRASTRUCTURE PROJECT GOVERNANCE

Why project governance matters

Major infrastructure projects can create or substantially expand the networks and facilities on which economies and communities depend. They span transportation, energy, water and sanitation, digital infrastructure, and social facilities such as hospitals and universities. Some deliver a single major asset, such as an airport or power station. Others bring together several types of infrastructure within a new city, industrial zone or regional development program.

These projects require substantial investment and typically take many years to develop and deliver. The term “megaproject” is commonly applied to complex ventures costing US\$1 billion or more.¹ At the largest scale, investment can reach tens or hundreds of billions of dollars. “Giga-project” is sometimes used to describe exceptionally large developments, often comprising numerous interconnected projects and assets, although it has no universally agreed cost threshold. Their significance for boards lies in their duration, complexity and consequences as well as their cost.

When well-chosen and successfully delivered, major infrastructure projects can reshape the economic prospects of companies and nations. They can lower business costs, connect people to jobs and markets, improve essential services, and strengthen energy and water security. They can also support new industries, attract further investment and improve environmental performance.

These investments are particularly prominent in countries pursuing rapid economic transformation. For example, in China extensive high speed transportation networks have helped connect cities and markets. India is using major infrastructure programs to improve national connectivity, reduce logistics costs and strengthen competitiveness. In Saudi Arabia, major urban and tourism developments are supporting economic diversification.

Individual projects illustrate the benefits. In the UK, London’s Elizabeth line has expanded rail capacity, improved access to jobs and supported development along its route.² The Barakah Nuclear Energy Plant, which achieved full commercial operation in 2024, supplies up to a quarter of the United Arab Emirates’ electricity.³ Sydney Metro Northwest, opened in 2019, improved connections between the city’s northwestern suburbs and its wider rail network.⁴

1 Flyvbjerg, B. (2014) ‘What you should know about megaprojects and why: An overview’, *Project Management Journal*, 45(2), pp. 6–19.

2 Transport for London and Department for Transport (2025) Elizabeth line post-opening evaluation: Transport outcomes, full report. 30 May. London: Transport for London.

3 Emirates Nuclear Energy Corporation (2024) ‘UAE celebrates historic milestone as Unit 4 of the Barakah Plant commences commercial operation: Delivering full-fleet operations’, 5 September.

4 Landcom (2019) Sydney Metro Northwest Places Program: 242–244 Beecroft Road, Epping. Submissions report. November, p. 1.

However, the delivery records of even ostensibly successful projects differ considerably. Sydney Metro Northwest opened on time and below budget. In contrast, the Elizabeth line's central section opened approximately three and a half years late, with the project's estimated cost about 28% above the original funding package. Barakah's first unit began commercial operation in 2021, against an original expectation of 2017. Substantial benefits can coexist with serious delivery difficulties.

The wider record shows how common those difficulties are. Drawing on a database of some 16,000 projects across different sectors, Bent Flyvbjerg and his colleagues found that almost 92% exceeded their budgets, schedules or both. Fewer than one in a hundred met cost, schedule and benefit targets.⁵ The International Monetary Fund estimates that more than one-third of the potential value of public investment is lost through inefficiency.⁶ Flyvbjerg describes the recurring pattern as the "iron law" of megaprojects: "over budget, over time, over and over again."⁷

Not every disappointing outcome reflects weak governance. But decisions about what to build, when to commit and how to respond as circumstances change can shape what delivery teams can achieve. Many problems that later become delivery failures begin with untested assumptions, commitments made too early or warnings that fail to prompt action. Boards have a central role in addressing these weaknesses.

Conventional corporate governance does not always provide an adequate template for major projects. An established company will usually have settled reporting lines, recurring governance mechanisms and clearly defined organizational boundaries. A major project may instead depend on a temporary network of sponsors, delivery companies, government bodies, lenders, contractors and regulators. Delivery may extend beyond the tenure of the directors and executives who approved the project. The expected benefits may not emerge until years after construction ends.

Project governance must therefore maintain clarity and accountability across organizational boundaries and over long periods. It must preserve the reasoning behind important decisions as people come and go. Large funding requirements call for careful control over the release of capital. Work divided among contractors requires clear responsibility for coordination and interfaces. Accountability for operational readiness and expected benefits must continue after the asset has been completed.

The challenge grows when several forms of uncertainty combine. A project may depend on unfamiliar technology, new construction methods, untested demand and an unproven operating model. Each element may appear plausible when considered separately. Taken together, however, they can make the proposal far riskier than its individual parts suggest. Boards must therefore assess not only each source of uncertainty, but also the cumulative risk created when several untested elements depend on one another.

Effective governance does more than authorize a project and monitor its execution. It establishes who may commit capital, who must challenge the assumptions and who has the authority to change course. It creates opportunities to test whether the original case still holds and whether continuing, changing, pausing or stopping remains the best course. It keeps attention focused on whether the project will deliver its intended benefits, not simply whether construction is proceeding on schedule and within budget.

This paper is written for two principal audiences. The term "sponsor board" refers to the board that oversees the investment case and the sponsor's commitments on behalf of the ultimate owner. The term "delivery board" refers to the board of a separate company entrusted with delivering the finished asset. Contractor boards also have responsibilities, but they are not the main focus of the paper. Where the responsibilities of the sponsor and delivery boards differ, our recommendations identify which board should act. Other disciplines, including reliable information, constructive challenge and clear accountability, apply to both.

5 Flyvbjerg, B. and Gardner, D. (2023) *How big things get done: The surprising factors that determine the fate of every project, from home renovations to space exploration and everything in between*. New York: Currency, chapter 1.

6 Schwartz, G., Fouad, M., Hansen, T. and Verdier, G. (2020) 'How strong infrastructure governance can end waste in public investment', IMF Blog, 3 September.

7 Flyvbjerg, B. (2014), see footnote 1 above.

The architecture of project governance

Project governance sets the project's purpose, authority and limits. It continually tests whether the investment remains justified, affordable and deliverable, and holds those responsible to account for their decisions and performance.

Governance is not management carried out at a higher level. A delivery board absorbed in day-to-day problems can miss the fact that the overall plan is unrealistic. A sponsor board focused too closely on delivery activities can overlook a weakening investment case. Detailed board involvement does not necessarily produce better oversight.

Directors need enough distance to exercise independent judgment and enough knowledge to recognize warning signs. They give management a clear mandate, test whether it remains appropriate and hold executives to account without taking over their work.

Every major project must allocate several connected responsibilities. Some may sit within one organization; others may be spread across several. The first task is to establish who holds each responsibility, what authority they have and how they work together.

The owner and sponsor

The owner holds an ownership interest in the project or asset, bears the associated financial and reputational risks, and expects to benefit from its success. The sponsoring organization may be the owner itself, or it may oversee the project on the owner's behalf.

The sponsoring organization establishes the project's purpose and investment case. It secures funding, institutional support, and holds the delivery body accountable. Throughout the project, it will regularly ask itself whether it would approve the project again today, knowing what it now knows. It must also ask what course offers the greatest value from here.

The sponsor board's answers to these two questions may differ. A project that would not be approved today may still be worth completing. A project that was reasonably approved may now be worth stopping. The board must therefore compare the remaining costs, expected benefits, and risks of continuing, redesigning, pausing, or canceling. Past spending should remain visible when assessing performance and accountability. But sunk costs that cannot be recovered should not determine the next decision.

The sponsor also ensures that responsibility for operating the completed asset is clearly assigned. These responsibilities may sit with different bodies, but each needs a clear mandate and arrangements for accountability that extend beyond construction.



The delivery body and its board

The delivery body turns the sponsor's mandate into an asset that can operate as intended. It may be a division, a separate company, a joint venture or a special-purpose vehicle. Its executives organize delivery, manage contractors and resolve day-to-day problems. Where it has its own board, that board oversees the delivery plan, management capability, major contracts, safety, compliance, integration and the delivery organization's own exposure.

Where the delivery body is a separate legal entity, its directors must discharge their duties under company law to that entity. However, constitutional frameworks, shareholder agreements and financing arrangements – which define things like approval thresholds, reserved matters, information rights and procedures for managing conflicts – will also shape decision-making.

The delivery board should challenge whether the mandate remains achievable and escalate changes that threaten the investment case to the sponsor. Decisions about the sponsor's continuing investment belong with the sponsor and any other bodies whose approval is required. However, the delivery board retains responsibility for decisions within its own authority, including whether work can proceed safely and lawfully. It may need to recommend changes, suspend activities or seek a revised mandate.

The senior responsible owner

Appointing a senior individual accountable for connecting the investment case, delivery and expected benefits is an established feature of good project governance. The UK government formalizes this through the role of the "senior responsible owner," who owns the business case and is accountable for achieving the project's objectives and benefits.⁸ This person secures timely sponsor decisions, escalates matters beyond their delegated authority and ensures that changes affecting the project's value receive proper scrutiny.

Where sponsor and delivery organizations are separate, this role should normally sit with the sponsor and be distinct from the delivery company's chief executive or project director. Where both functions sit within one organization, the board should protect a credible review of the investment case that is sufficiently independent of delivery pressures.

Close involvement in delivery can make a responsible executive increasingly committed to completion. The sponsor board should ensure that this commitment does not crowd out scrutiny of whether the project remains worth doing. Independent challenge and assurance help preserve that distinction.

The supply chain

The supply chain raises governance questions as well as procurement questions. Contracts often allocate risks before key uncertainties have been resolved. A delivery board may therefore inherit exposure from decisions made before construction began.

The board should understand which risks it has transferred to contractors and which remain with the delivery organization. It should also continually assess if risks have been allocated to suppliers without the financial or operational capacity to bear them. Another key responsibility is to determine if dependence on a particular supplier makes replacement difficult, even after serious underperformance.

Insolvency, disputes and renegotiation can bring apparently transferred risks back to the client when the project has little capacity to absorb them. Contractual risk transfer does not remove the board's responsibility to understand and oversee the remaining exposure.

⁸ Government Project Delivery (2026) Role of the senior responsible owner. Version 2.1. See "Project leadership and management practices," "Ownership of the business case" and "Ownership of the benefits."

Assurance and external approvals

Routine project reporting is not a substitute for independent assurance. A project management office may provide valuable information on cost, schedule, risk and dependencies. But it is not a sufficient source of information. Independent assurance is also needed to test the evidence, controls and forecasts presented to boards.

Assurance may be shared across the project, but it should address each board's responsibilities. The sponsor board needs assurance about the continuing investment case and its overall exposure. The delivery board needs assurance about execution, controls, safety, integration and readiness for operation. Assurance providers should have direct access to the relevant board and be able to report material concerns without management filtering.

Consents, permits and regulatory approvals also shape the project. Their timing can determine the sequence of work and when commitments become difficult to reverse. The delivery board should oversee the approvals required for its activities. The sponsor board should examine how that sequence affects the project's viability and its ability to change course.

How the responsibilities connect

Exhibit 3 shows how these roles relate. Committees can help both boards examine matters in depth, but their mandates should distinguish who reviews, who recommends and who decides. Where sponsor and delivery boards have separate committees, their responsibilities and information-sharing arrangements should be clear.

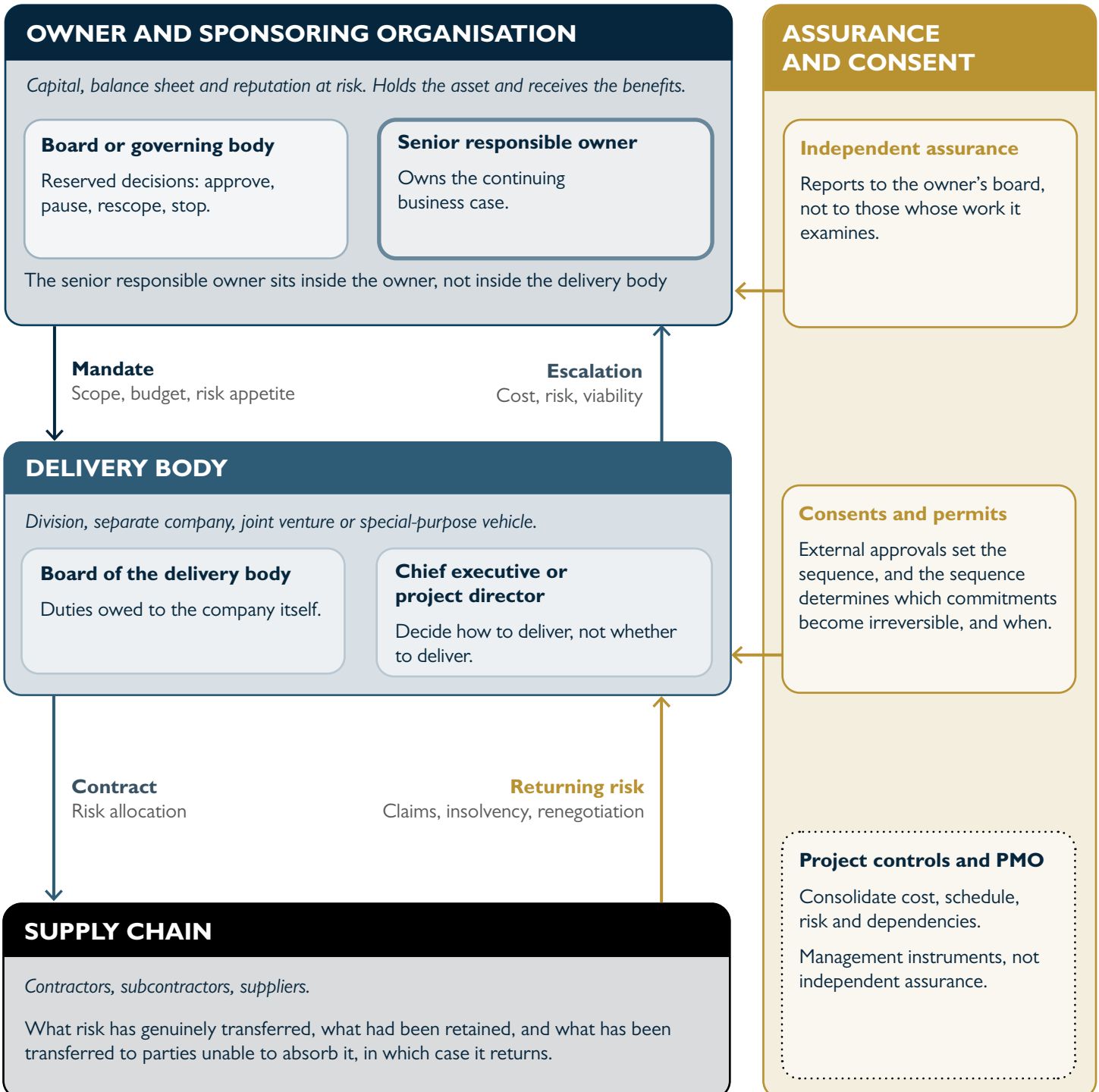
Integration deserves particular attention. Civil works, equipment, technology, utilities and operating arrangements must function together. Every contractor may complete its own work successfully while the asset still fails to operate as a system. A named integration lead needs the authority and capability to manage these interfaces, with clear escalation routes for matters beyond its control. Both boards should receive a clear view of risks that cross contractual and organizational boundaries.

The project's place in the sponsor's wider portfolio matters too. Delivery may remain on track while changes to other projects or investment priorities undermine its value. The sponsor board should assess these dependencies and establish who can change the project's scope, timing or funding, or pause or stop it. Where decisions require agreement from several bodies, the route to that agreement should be clear before it becomes urgent.

The practical test of the governance architecture is straightforward: does an important issue reach a decision-maker with the authority to act, supported by sufficient evidence and with enough time to make a meaningful choice?



The architecture of project governance



HOW PROJECT GOVERNANCE CAN FAIL



Major projects rarely fail in a single dramatic moment. Weaknesses compound. The investment case deteriorates, costs rise and responsibilities blur. Bad news reaches the board too late. These problems may develop within the sponsoring organization, within the delivery body, or at the boundary between them.

A poor outcome does not in itself indicate governance failure. A supplier may underperform despite reasonable due diligence. A well-supported technical assumption may prove inaccurate. An external event that could not reasonably have been anticipated may disrupt delivery. Governance fails when weaknesses in oversight, authority, information, or accountability cause avoidable harm or worsen a difficult situation.

The six patterns described below draw on research and experience across major projects.⁹ They show how weaknesses in evidence, authority, accountability, and the ability to change course can gradually deprive boards of meaningful choices.

⁹ This section draws on Flyvbjerg, B. (2014) 'What you should know about megaprojects and why: An overview', *Project Management Journal*, 45(2), pp. 6–19; and OECD (2017) *Getting Infrastructure Right: A Framework for Better Governance*. Paris: OECD Publishing.

Ambition outruns the evidence

Before approval, the sponsor board has its greatest freedom to shape, phase or reject an investment. It is also the point at which the proposal is most likely to appear attractive. Optimism bias can lead project developers to underestimate cost and duration, overstate benefits and place too much confidence in favorable assumptions.

The risk is greater when appraisal relies entirely on the project team's own detailed forecast. An estimate may appear precise while resting on weak assumptions, particularly if it is not tested against the actual performance of comparable projects. The volume of analysis can give the board confidence without providing a reliable view of the likely outcome.

Optimism is not the only source of distortion. Estimates may also be selectively framed to secure funding, approval or political support. Flyvbjerg describes this as strategic misrepresentation.¹⁰ Unlike optimism bias, it is not simply an error of judgment. It reflects incentives to present the project more favorably than the evidence supports. A well-known study by Martin Wachs has shown how planners can be pulled between two roles: objective analyst and advocate for a preferred proposal. Institutional and political pressures may reward forecasts that advance the project more than forecasts that accurately represent uncertainty.¹¹

The result can be what Flyvbjerg calls “survival of the unfittest.” Projects with the most attractive forecasts win approval partly because their estimates are the least realistic. A proposal based on cautious assumptions may appear less compelling than one that understates costs and overstates benefits. The selection process can therefore reward inaccuracy. The investment case becomes a device for securing commitment rather than a tool for deciding whether to commit.

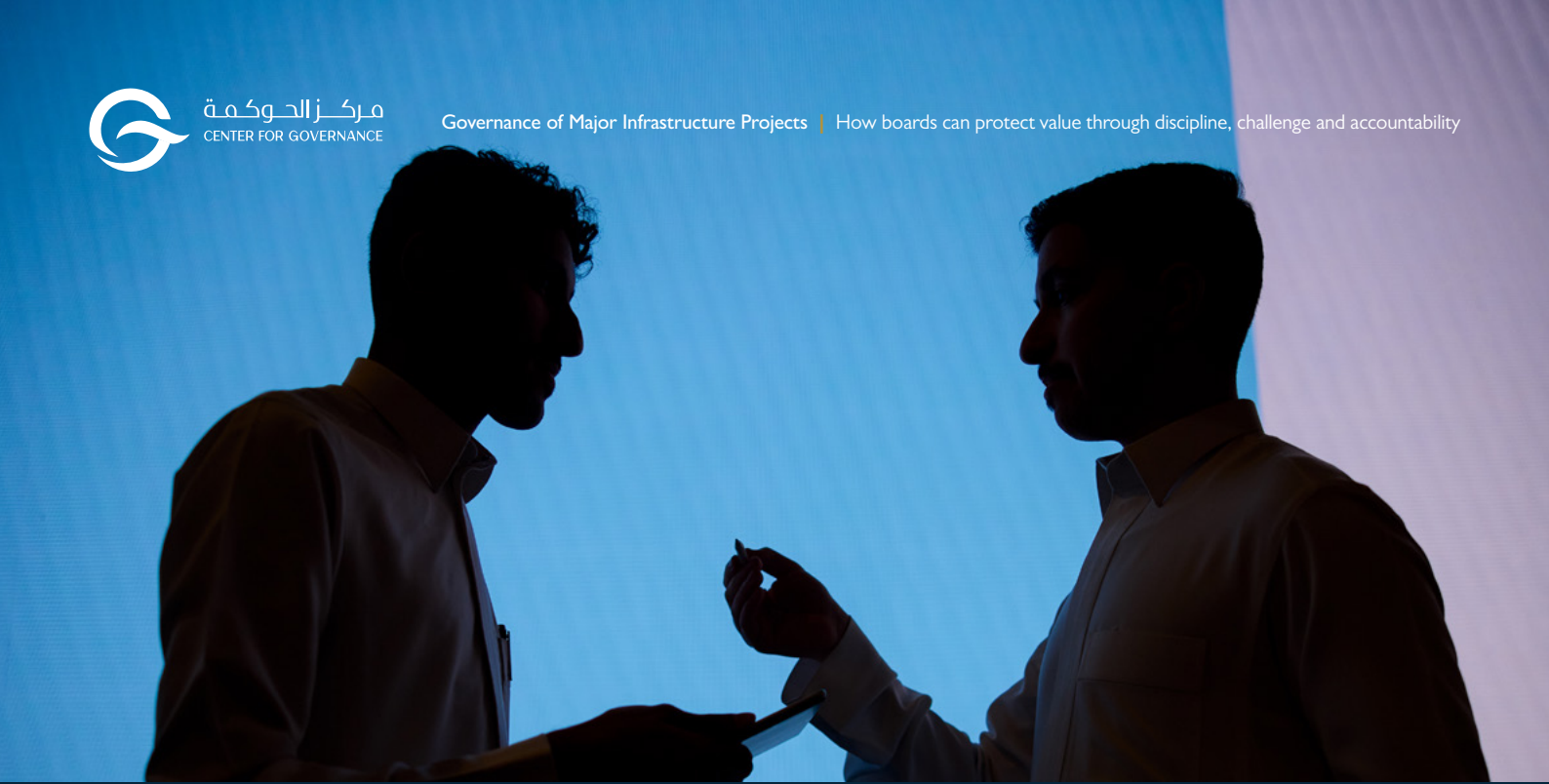
Later assessments then inherit a distorted benchmark. Cost growth may be treated as a delivery failure even when it reflects an estimate that was implausible from the outset. Apparent scope changes may include work that was always necessary but omitted from the original estimate. The board may believe that it is comparing actual performance with an approved plan when the original plan never provided a credible basis for comparison.

The problem can continue after approval. Incentives tied mainly to construction speed or visible milestones may give too little weight to total cost, operational readiness and the benefits the project was intended to produce. A delivery board can report that a milestone has been achieved while the value of the sponsor's investment quietly deteriorates. Each party may meet its own target while the project as a whole moves further from success.

Unrealism can also arise at portfolio level. A sponsor board may assess each project separately without examining their combined demands. Several projects may be individually feasible but, together, exceed the capacity of the available workforce, specialist contractors, management teams and supporting infrastructure. Funding capacity is not the same as delivery capacity. Capital alone may not be able to create scarce skills and capabilities on the required timetable.

¹⁰ Flyvbjerg, B. (2009), “Survival of the Unfittest: Why the Worst Infrastructure Gets Built, and What We Can Do About It,” *Oxford Review of Economic Policy*, 25(3), pp. 344–367.

¹¹ Wachs, M. (1989), “When Planners Lie with Numbers,” *Journal of the American Planning Association*, 55(4), pp. 476–479.



Unclear decision-making authority

It is usually clear who is responsible for delivering a major project. It is often less clear who must question whether it should continue, and who has the authority to change course or stop it. Governance weakens when those held accountable lack the power to act, or those with that power do not receive the information they need to make sound decisions.

The delivery body is closest to the emerging problems. Yet an organization created and resourced to build something has a strong institutional interest in completing it. Its reports may identify rising costs, delays and technical difficulties without confronting the larger question of whether its mandate remains achievable. Recommendations may focus on how to continue rather than whether continuation remains justified.

The sponsor is not necessarily a neutral judge either. It may have developed the original proposal, secured its funding and defended it publicly. Changing course can then appear to undermine earlier decisions or commitments. The delivery body and sponsor may therefore favor continuation for different reasons, leaving no one to test the investment from the owner's perspective.

As construction proceeds, the continuing business case can become a neglected responsibility. The delivery team concentrates on execution, while sponsor executives assume that established reporting processes will reveal any serious deterioration. The investment case may still be updated, but updating cost and schedule estimates is not the same as reassessing purpose, demand, benefits and alternatives. A formally current document can rest on assumptions that no one has recently challenged.

Even when the weakness becomes visible, authority may be dispersed among boards, committees, management teams, lenders and public bodies. An issue can be examined repeatedly without reaching anyone who decides what happens next. Each participant may explain why the next move belongs elsewhere. Requests for further analysis postpone the decision while contracts are signed, suppliers are mobilized, and capital continues to be spent. The formal authority to change or stop the project may remain, but the practical freedom to use it steadily diminishes.

Informal influence creates a different form of misalignment. An owner or sponsor may instruct delivery executives directly, leaving the delivery board accountable for commitments it has not examined. The same weakness operates in the other direction when routine management decisions are unnecessarily escalated to the sponsor. This creates delay and dilutes executive accountability. Too much intervention can damage governance as surely as too little.

The architecture has failed when an important issue cannot reach someone with the authority to act, supported by adequate evidence and with enough time to preserve a meaningful choice. The project then continues not because anyone has decided it should, but because no one is empowered to decide otherwise.

The board loses touch with reality

Directors oversee projects they do not manage day to day. Their understanding therefore depends heavily on the information that reaches them. The delivery board relies on reports from the managers whose performance it assesses. The sponsor board may receive the same information only after it has passed through delivery management, the delivery board, sponsor executives and committees.

Each step can remove context or soften bad news. A concern raised on site becomes a management update, then a committee summary and finally a status indicator in a board pack. Every statement along the way can be technically accurate while the overall impression is misleading. The problem is often not false information. It is accurate information presented without the context, connections or historical comparison needed to understand its significance.

More reporting does not solve the problem. Large board packs can conceal shrinking financial contingency, contractor financial distress, unresolved relationship problems, repeated scope changes and declining stakeholder support. The volume of information may create an appearance of control while making the most consequential developments harder to see.

Information can also mislead when problems are reported separately. A delayed grid connection, difficulty with a critical supplier and slower-than-expected customer commitments may each appear manageable on its own. Taken together, they may undermine the project's timetable, operating model and investment case. Reporting through separate workstreams or committees can prevent the board from seeing their cumulative effect.

The project's purpose shifts without scrutiny

Even a project supported by a credible original case can lose its direction. Commercial return, economic development, public benefit and strategic capability may all be legitimate objectives. Their relative importance may also change as circumstances evolve. But governance fails when that change occurs without explicit acknowledgment or reassessment.

Weak demand may be defended by pointing to jobs created. Rising costs may be justified by invoking the project's strategic importance. These benefits may be real, but they can also obscure disappointing results in other aspects of the project. When objectives have not been ranked and translated into clear measures, success becomes a moving target. An outcome that disappoints against the original case can be defended using a benefit that was previously secondary.

Routine reporting may not reveal this shift. A project can remain on time and within budget even as the reasons for pursuing it weaken. Construction reporting shows whether work is progressing, but not whether the completed asset will still deliver the benefits that justified it. If a changing rationale does not prompt a fresh assessment, delivery may stay on plan while the investment case quietly deteriorates.

Over time, the announced solution can become the objective. Once a particular design or scope has been publicized, political, reputational and contractual commitments begin to form around it. Attention shifts from finding the best way to achieve the project's purpose to completing the solution already chosen. New evidence may support a smaller project, a different design or a different construction sequence, but these alternatives become harder to consider as the original proposal gains momentum.

Concerns raised by communities, customers, regulators or partners may provide early evidence of weak demand or uncertainty about who will benefit. When these concerns are treated only as communications problems, inconvenient evidence about the project itself can be dismissed as resistance to change. The project then retains momentum by changing the case for it rather than demonstrating that the original case still holds.

Commitments narrow the available choices

Early enthusiasm can make a project feel inevitable. Alternatives receive too little attention, designs become difficult to change, and public promises are made too soon. As money and reputation become tied to completion, cancellation feels like failure and redesign like delay. Researchers describe this escalating commitment as “lock-in.” It can begin before formal approval and continue throughout delivery.¹²

Sunk costs and reputational commitments can make change feel unacceptable, while contracts and technical dependencies can make it genuinely expensive. The sponsor board may retain the formal power to reconsider while losing much of its practical freedom to do so.

The decisions that remove choice often appear individually reasonable. Land is acquired, key people are appointed, suppliers are selected, and public announcements are made. Each commitment may be authorized separately without anyone examining the combined exposure. Together, they raise the financial, operational and reputational cost of saying no. A project can therefore become difficult to reverse before that consequence has appeared on a board agenda.

This weakens the purpose of formal approval points. When earlier commitments make alternatives appear prohibitively costly, approval becomes a formality rather than a genuine choice.

Some narrowing of options is inevitable as a project advances. Governance fails when it occurs prematurely, without its cumulative effect being recognized or before the evidence justifies the commitment.

The project’s technical and contractual structure can also create lock-in. The contracting entity may retain a legal right to replace a supplier while losing the practical ability to exercise it. Proprietary technology, supplier-controlled design information, a limited market or dependence on specialist personnel can make transition impractical. This dependency may develop before performance deteriorates and become visible only when the supplier needs to be replaced.

Underperformance is then met with revised terms, additional time or further payment because replacement appears more disruptive than continuation. The supplier gains leverage as the project’s alternatives disappear. Formal contractual remedies remain available, but using them may threaten delivery more than tolerating continued underperformance.

Supplier dependence does not automatically indicate governance failure. Specialist expertise or an integrated solution may justify it. Governance fails when the dependency develops without being understood or explicitly accepted, leaving contractual rights that can no longer be exercised in practice.¹³



Accountability ends before the investment can be judged

Major projects often outlast the people who approve them. When directors and executives move on, the reasoning behind their decisions can disappear. Successors inherit an approved plan without a record of the doubts surrounding it, the alternatives rejected, or the conditions attached to consent. Formal minutes may show what was authorized but reveal little about why.

This loss of memory makes later accountability difficult. Successors may be unable to tell whether an adverse development was unforeseen, consciously accepted or expected to trigger reconsideration. They can compare results with the approved plan, but they cannot reconstruct the judgment on which that plan rested. A project may therefore continue after its original conditions have ceased to hold because no one remembers how important those conditions were.

Accountability can weaken again when construction ends. The delivery team disperses, consultants depart, and the delivery board may have little continuing role. Yet contractual obligations, operating risks and unrealized benefits remain. Construction completion is treated as the end of the project even though the investment itself cannot yet be judged.

Handing over to the future operator can widen the gap. Information about unresolved defects, temporary workarounds, supplier dependencies and long-term obligations may be incomplete or dispersed across departing teams. If the operator lacks the information, resources or authority to address them, unresolved risks can disappear into the handover. Responsibility becomes hardest to locate just as the consequences begin to emerge.

Benefits are particularly vulnerable. The delivery phase may legitimately end before expected benefits are realized. When accountability ends with it, completing the asset becomes a substitute for investment success. The project can be declared complete before anyone knows whether the asset is being used as expected, operating effectively or producing the commercial, strategic or public benefits that justified its funding.

Where no one owns the expected benefits and no date has been set to assess them, the business case can disappear from scrutiny at handover. Costs and construction outputs remain visible because they have been measured throughout delivery. Benefits are easier to defer, redefine or leave unexamined. The asset opens without a clear basis for establishing whether the original investment case was ultimately fulfilled.

The six governance failures described in this section can reinforce one another. An unrealistic investment case secures approval. Responsibility and authority then drift apart. Filtered reporting delays recognition that circumstances have changed, while the project's purpose becomes a moving target. As commitments accumulate, the available choices narrow. Leadership changes and handover finally weaken accountability before the investment can be judged. Each failure increases the cost of addressing the others.

The result is a governance system that continues to operate after it has lost the ability to direct the investment. Meetings continue, reports circulate, and approvals are obtained, but choices narrow until boards can do little more than endorse what has already become unavoidable. The forms of governance remain after its substance has gone.



WHAT BOARDS SHOULD DO

Confidential interviews conducted by the Center for Governance with 15 Saudi and international board members and governance practitioners with significant experience overseeing major infrastructure projects (see Annex II) suggest a recurring gap: formal oversight can be extensive while at the same time the project remains vulnerable to the major governance risks described in the previous section. The following six recommendations for board members are intended to enhance the chances of success.

Make the governance structure clear and workable

The best time to make the governance architecture explicit is as early as possible, and certainly well before anything of significance is approved. A sound structure clarifies who maintains the investment case, who can release funding or change the scope. It defines where consent is required from the sponsor, owner, shareholders, lenders or government. It also provides a credible route to pause, redesign or stop the project before choices start to diminish.

The distinction between sponsorship and delivery remains important even when both roles sit within the same organization. The sponsor board considers whether the investment remains worthwhile and whether the sponsor's exposure remains acceptable. The delivery board oversees execution and holds management accountable. Routine matters remain with management. Sponsor or owner directions pass through formal channels, avoiding a situation in which the delivery board becomes accountable for commitments it did not examine.

An organization chart alone does not show whether these arrangements will work under pressure. A realistic scenario, such as a substantial cost increase, regulatory delay, contractor failure or proposed change in scope, can reveal more. It should help show whether the situation reaches the right people, whether authority is clear and whether a decision can be made in time. A structure that relies on personal relationships or exceptional intervention may look workable but may be difficult to sustain or apply consistently.



Build a capable board that can challenge

Major projects need directors with relevant experience and the confidence to question what they are told. The sponsor board needs expertise in capital allocation, finance and commercial decision-making. The delivery board needs enough knowledge of construction, contracts, technology, safety and operations to recognize an unrealistic plan. The balance of skills may need to change as the project moves from approval to construction and then to operation. Advisers, committees and training can fill gaps, but directors cannot outsource their judgment.

Expertise alone is not enough. Directors must be willing to exercise independent judgment, particularly when a project carries political, shareholder or institutional prestige. The chair should encourage constructive dissent, ensure that difficult views can be expressed without personal cost and record material disagreements that remain unresolved.

The board should challenge management without trying to manage the project itself. Useful questions include: What could cause this plan to fail? What evidence contradicts management's view? Which alternatives were rejected? Who independently tested the main assumptions?

Require evidence at each major commitment

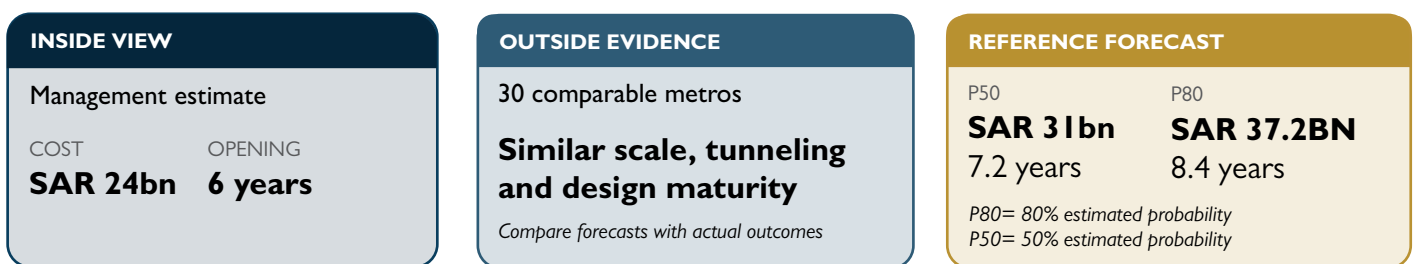
A milestone has meaning when it represents genuine readiness, rather than simply the arrival of a date. Before each major commitment, an updated investment case allows the sponsor board to consider whether the project remains worthwhile and affordable. The delivery board brings a different perspective: whether the next stage can realistically be delivered. The extent of the update can reflect how much has changed since the previous decision.

Updating the investment case does not mean quietly rewriting the basis for success. A project's purpose, priorities or measures of success may legitimately change as circumstances evolve. Where such a change alters the basis on which the project was approved, it warrants fresh consideration by the appropriate decision-maker. Otherwise, weak performance against the original objectives may be concealed by replacing them with different ones.

Reference class forecasting provides a useful outside view. It compares the project's forecasts with the actual results of similar completed projects. This places proposed costs, timetables and contingency allowances in a more realistic context. It also counterbalances the inside view of those closest to the proposal and helps reveal forecasts shaped by optimism bias or pressure to secure approval.¹⁴

Reference class forecasting: from inside view to outside view

Illustrative 40-kilometer metro extension



Cost forecast



Opening forecast



¹⁴ Flyvbjerg, B. (2006), "From Nobel Prize to Project Management: Getting Risks Right", Project Management Journal, 37(3), pp. 5–15; Flyvbjerg, B. (2008). "Curbing optimism bias and strategic misrepresentation in planning: Reference class forecasting in practice." European Planning Studies, 16(1), 3–21.

Forecasts are most credible when they reflect remaining uncertainty. Immature designs, untested technology, and limited supplier capacity naturally call for wider cost and schedule ranges, supported by greater contingency. Pilots and early engagement with operators, regulators, users and affected communities can test assumptions while the project is still open to change. A fixed-price contract may create an appearance of certainty, but it cannot correct an incomplete design or risk transfer to a contractor unable to bear it.¹⁵

The relevant evidence should extend beyond the project itself. Several projects may appear affordable when considered separately, yet compete for the same engineers, contractors, equipment or utilities. Additional funding cannot create capacity that does not exist. In such circumstances, adjusting the timing or scope of individual projects may protect the portfolio's overall value.¹⁶

¹⁵ Cabinet Office (2022), The Construction Playbook, chapters 5–8, on delivery models, contracting and risk allocation.

¹⁶ Infrastructure Australia (2025), Infrastructure Market Capacity Report, 13 November; HM Treasury (2026), The Green Book, London, gov.uk; OECD (2020), Recommendation of the Council on the Governance of Infrastructure, OECD/LEGAL/0460.

Stay connected to reality

A dashboard offers only a partial view of a project. Its value depends on the curiosity brought to it. More revealing questions might include:

- What is becoming harder to deliver?
- What has changed since approval?
- Do several separate red flags point to a larger problem?

Reporting against both the original approved case and the latest forecast helps preserve perspective. A revised baseline may be sensible as an ongoing planning tool, but it becomes misleading when earlier deterioration disappears from view.

Boards also influence the quality of the information they receive. When the manager who surfaces a problem is blamed or suffers personal consequences, the next red flag is likely to be escalated only reluctantly. The board's response to difficult evidence, dissent and unresolved issues signals to the organization what it is safe to report. In addition, an agenda crowded with management presentations may provide reassurance at the expense of insight.

Independent assurance adds most value when it examines assumptions that could change a board decision, rather than simply confirming that processes have been followed. Its credibility is stronger when the board or relevant committee determines the scope, receives the findings directly and can meet the reviewer without management present. Site visits and conversations with project teams can also reveal gaps between formal reporting and conditions on the ground. Such contact is a source of insight, not an alternative line of management.

Findings acquire greater weight when action point ownership, deadlines and the evidence required for closure are clear. Without these, even a serious concern can remain in circulation unresolved. The sponsor and delivery boards may need different views of the same issue. One focuses on investment and the other on delivery, but neither benefits from a fragmented picture.



Early-warning view of project health

These questions are relevant to both sponsor and delivery boards, although each will consider them within its own authority.

Area	Central question	Signals that merit investigation
 Strategic case	Does the project still address the original need and justify continued investment?	Falling demand; changes in technology or regulation; weakening benefits; purpose or success measures changing without fresh approval.
 Affordability and value	Are the expected value, total exposure and financing still acceptable?	Contingency being used faster than progress is made; rising cost to complete; weakening returns; reduced headroom under funding or lender conditions.
 Deliverability	Is the current plan credible, and what does any slippage mean for the investment case?	Missed milestones; design rework; unresolved interfaces; skill or equipment shortages; an unconvincing recovery plan.
 Stakeholders and approvals	Does the project retain the approvals, access and support needed to proceed?	Regulatory concerns; calls for delay or redesign; community opposition; weakening confidence among partners or funders.
 Supply chain	Can critical suppliers perform, and could the project respond effectively if they failed?	Repeated claims or concessions; supplier distress; costly or difficult replacement; dependence on proprietary systems, data or knowledge.
 Governance and information	Are concerns reaching the right decision-makers early enough for them to act?	Late reporting; slow decisions; unsupported optimism; unexplained baseline changes; unresolved findings; dissent disappearing from the record.

Keep options open

In a major project, every major commitment narrows later choices. This is unavoidable. The important distinction is whether flexibility is surrendered knowingly or lost by accident. Pilots, adaptable designs, modular contracts, adequate contingency and carefully timed public commitments can delay the point at which useful choices disappear. The purpose is not to preserve every option indefinitely, but to retain room to change course while that room still has value.

Staged capital releases can help where each stage still provides a meaningful choice about what happens next. New evidence and a fresh look at the original assumptions can then inform each further commitment. But phasing is not always the best answer. Some projects derive much of their value from an integrated network, as the Riyadh Metro case illustrates (see Annex). Committing essential elements early may protect the value of the system as a whole. In such cases, clarity about which options are being closed, and why, becomes especially important.

Intervention triggers can rapidly turn an emerging warning signal into a timely decision. They work best when agreed before major commitments and updated as the project evolves. A useful trigger identifies the breach, the people to be informed, the decision-maker, the time available and the work that may continue in the meantime.

However, a potential review has little value unless credible alternatives remain. Depending on the circumstances, these may include continuing, pausing, redesigning, reducing the scope, changing the order of work, replacing a supplier or stopping the project. The sponsor board should consider the investment choice within its authority. The delivery board brings a different perspective: whether the available options can be implemented realistically.

Dependence on a critical supplier is another way in which practical choices can disappear. A contractual right to terminate offers little protection if the organization cannot obtain the designs, data, licenses, knowledge or alternative capacity needed to replace the supplier. Replacement time and cost, access to essential information, step-in arrangements and the expertise retained in-house reveal how much freedom the contract provides in practice. They allow the delivery board to judge whether failure can be managed and the sponsor board to understand the remaining financial and strategic exposure.

Sustain accountability over time

Accountability is easiest to retain while the original leaders remain in place and the project organization is intact. It often becomes less clear as people leave, or the project enters a new phase. A concise decision record helps preserve the reasoning that might otherwise be lost. More than a record of approval, it captures why the decision was made, which alternatives were rejected, what assumptions and risks were accepted, and what developments might warrant reconsideration. A formal handover transfers this context, not simply a collection of documents.

Formal acceptance of the asset by the operator or receiving body is the final stage in the handover process. However, even after this point, the sponsor board retains an interest in whether residual risks, long-term obligations and lifetime costs have clear owners and adequate provision. These costs extend beyond construction to operation, maintenance and eventual closure.

Benefits are particularly vulnerable during this transition because many emerge only after the delivery organization has begun to disperse. Assigning responsibility for each material benefit before handover keeps the original investment case alive. Reviews at agreed intervals can then compare actual outcomes with the original expectations, explain significant differences and carry lessons into future projects.¹⁷

The test is simple: after leaders have left and construction has ended, can the organization still explain who made the important decisions, why they were made and who is now responsible?

¹⁷ HM Treasury (2026), *The Green Book: Appraisal and Evaluation in Central Government*, London; OECD (2020), *Recommendation of the Council on the Governance of Infrastructure*, OECD/LEGAL/0460, principle ii.

CONCLUSION

Major infrastructure projects will always involve uncertainty. A delay, cost increase or technical setback does not by itself prove that governance has failed. The deeper failure occurs when boards accept weak evidence, authority across the project is unclear, problems are filtered before they reach decision-makers, and action comes only after meaningful choices have disappeared. The board's contribution lies in keeping the investment case under honest review and ensuring that emerging realities reach those able to act.

The cases in this paper point to a common danger: the gradual loss of choice. Specifications, contracts, spending and public commitments can make a project difficult to change long before a formal approval point is reached. Governance therefore matters most before commitments harden. It also depends on retaining credible alternatives and reconsidering the project in light of current evidence, rather than allowing past spending or earlier promises to determine what happens next.

For boards overseeing projects of exceptional scale and national importance, sound governance is part of the ambition itself. It keeps the project grounded in evidence and preserves the ability to respond as circumstances change. Construction marks the completion of an asset, but not the final judgment on the investment. That judgment comes later, when the asset is operating (or not operating), and its commercial, strategic or public benefits can be compared with what was originally promised. Accountability must endure long enough for that judgment to be made.



ANNEX I: CASE STUDIES

Case study I: HS2 and the narrowing of choice

High Speed Two (HS2) was conceived in 2009 to increase capacity on Britain's congested main railway lines. It was intended to connect London with Birmingham, Manchester and Leeds. This would free existing lines for local and freight services and support regional growth. The Department for Transport, a government ministry, sponsored the program. HS2 Ltd, an arm's-length public body with its own board, was responsible for delivery.¹⁸

A first narrowing of choice came through changes to the original design specification. A railway initially justified by capacity objectives became, in the 2013 business case, an ambition to build the world's best and fastest high-speed railway. The new design called for a straight route, 17 trains an hour and speeds above 320 kilometers per hour. This largely ruled out using the proven but slower HSI design, which had been used for the railway linking London to the Channel Tunnel. A later public review concluded that this ambition made subsequent cost control much harder.¹⁹

The second narrowing came through the legal approval process. In 2013, the government introduced legislation to approve the route and grant construction powers. Design was then understood to be only about 4% mature. The legislation nevertheless fixed much of the route and scope before costs could be estimated reliably. That left little room to redesign for affordability.²⁰

The third narrowing came through supplier contracts. Main civil works contracts were awarded in 2017 while designs remained insufficiently developed. Much responsibility for design and assurance passed to contractors, weakening HS2 Ltd's ability to act as the project's "guiding mind." Commercial arrangements also left the client exposed to rising costs, with contractors incentivized to prioritize meeting the schedule over cost control.²¹

By 2019, the project could no longer be delivered within its budget or timetable. The government commissioned the Oakervee Review to consider whether and how to proceed. By that stage, the government had spent about £9 billion. Cancellation would require a further £2.5 billion to £3.6 billion. Around 2,000 companies and more than 9,000 workers were involved in the supply chain. The review recommended proceeding with the project, and the government issued a Notice to Proceed in April 2020.²²

Later reviews found that advice to government at that time largely framed the choice as proceeding or stopping. Delay, redesign and different contractual arrangements were not developed sufficiently. Earlier commitments had already made those options difficult and expensive.²³

The HS2 Ltd board also struggled to see the narrowing choices. According to subsequent investigations, lengthy, detailed board papers failed to highlight the main issues. The Department for Transport relied on much the same information as the delivery board. Furthermore, its formal intervention powers as a sponsor proved to be illusory in practice. They were ultimately seen by the government as being too drastic to activate – and as a consequence unusable.²⁴

18. Department for Transport (2012), High Speed Rail 2.

19. Department for Transport (2025), Stewart Review, pp. 7–8 and 61–64.

20. Department for Transport (2025), Stewart Review, pp. 63–64.

21. Institution of Civil Engineers (2024), The Cancellation of HS2's Northern Leg: Learning Lessons, September, pp. 8–14.

22. Department for Transport (2020), Oakervee Review of HS2, February.

23. Cabinet Office (2026), Review of Implications for the Civil Service and Wider Public Sector of Findings of the James Stewart Review (the Lovegrove Review), May, paras. 55–62.

24. Stewart Review, pp. 41–43.

In 2021, the government canceled much of the eastern branch to Leeds. In October 2023, it canceled the remaining sections north of Birmingham – despite the fact that much of the project's value depended on the wider network. By then, £24.6 billion had been spent, and stopping it was expected to cost a further £11 billion. Those cancellation costs helped drive continuation of a much-reduced project, even though the government acknowledged that its total costs would substantially exceed its benefits.²⁵

By March 2026, program expenditure had reached £46.8 billion, including spending on canceled sections. The estimated cost of stopping Phase One and dealing with unfinished works was between £33 billion and £58 billion. The pattern was clear: each review came after further commitments had made changing direction more expensive.²⁶

Four lessons follow for sponsor and delivery boards:

Before the sponsor approves an ambitious specification, it should require comparison with proven alternatives. The delivery board should test their feasibility, cost and risk.

Before seeking a hard-to-revisit authorization, the sponsor should require enough design evidence to understand the commitment. The delivery board should clarify the remaining uncertainty.

Before awarding contracts, the approving board should examine who bears cost overruns, what the incentives reward and whether suppliers can be replaced at meaningful points. The sponsor should understand the effect on its own exposure.

At each major decision, the sponsor should demand choices beyond proceeding or stopping. The delivery board should provide credible delivery alternatives. Each option should show which choices it preserves, which it closes and what a later change of direction could cost.

The lesson is not that HS2 necessarily should have been canceled. It is that formal approval points offer little protection once earlier commitments have made alternatives unaffordable.

25 National Audit Office (2024), HS2: Update Following Cancellation of Phase 2, HC 128, July.

26 National Audit Office (2026), High Speed Two Reset, June.

Case study 2: Gorgon LNG and governance beyond completion

Gorgon is one of the world's largest liquefied natural gas (LNG) projects. Located off the northwest coast of Western Australia, Chevron and its joint-venture partners approved it in 2009 at an estimated cost of US\$37 billion. First gas was planned for 2014. By 2013, the estimate had risen to US\$54 billion. The first LNG cargo departed in March 2016.

The development included a carbon capture and storage system intended to be the world's largest. Western Australia's approval conditions required injecting at least 80% of the reservoir carbon dioxide removed during gas processing underground. Full-scale performance could be demonstrated only after most capital was committed and the LNG facilities were operating. Injection began in August 2019, more than three years after LNG production started.²⁷

Chevron has since reported injecting more than 12 million metric tons of carbon dioxide.²⁸ This is well below the required level. Over the five years analyzed by the Institute for Energy Economics and Financial Analysis (IEEFA), it injected about 44 of every 100 metric tons removed during processing, against the requirement of at least 80. In FY2023-24, the rate fell to about 30 of every 100 metric tons.²⁹

For the first assessment period shortfall, Chevron and its partners agreed with the Western Australian government to purchase and surrender offsets equivalent to 5.23 million metric tons of carbon dioxide.³⁰ The offset arrangement addressed the regulatory shortfall, but it drew stakeholder criticism and created substantial additional costs, along with ongoing regulatory and reputational exposure.

Public information does not establish how the relevant boards and joint-venture governing bodies anticipated or oversaw this risk. The case nevertheless shows the difficulty of commitments that cannot be fully tested until most capital is spent and that remain outstanding after operations begin.

Each investing participant should identify such obligations before approval, require a fallback plan and understand its share of any additional cost. Delivery and operating oversight should track performance against the required outcome, with clear reporting and triggers for renewed review. Each participant also needs assurance and escalation rights suited to its exposure. Physical completion does not end oversight while material approval obligations remain unresolved.

27 Trupp, M., Ryan, S., Barranco, I., Leon, D. and Scoby-Smith, L. (2021) 'Developing the world's largest CO₂ injection system: A history of the Gorgon Carbon Dioxide Injection System', Proceedings of the 15th Greenhouse Gas Control Technologies Conference (GHGT-15), 15–18 March.

28 Chevron Australia. 'Gorgon carbon capture and storage'.

29 Denis-Ryan, A. and Morrison, K. (2024) 'Gorgon CCS underperformance hits new low in 2023-24', Institute for Energy Economics and Financial Analysis, 28 November.

30 Government of Western Australia (2022) Ministerial Statement 1198: Gorgon Gas Development and Jansz Feed Gas Pipeline, condition 26.



Case study 3: Riyadh Metro and the preservation of network value

Riyadh Metro is one of the largest metro networks delivered through a single construction program. Its six automated lines extend 176 kilometers and serve 85 stations across the Saudi capital. The Royal Commission for Riyadh City oversaw the program. In 2013, three international consortia were appointed to deliver all six lines in parallel.³¹

The case shows why sponsors need to identify the scope that creates the expected benefits. Riyadh committed to an integrated network from the outset, rather than an initial line with the rest dependent on later approvals. That was ambitious and risky. It required coordinating contractors, technologies and construction sites across a fast-growing city. It also committed the program to delivering a connected system.

A transport network's value depends on more than individual lines. Connections and interchanges increase the destinations passengers can reach and make each line more useful. Deferring or removing a line can therefore reduce the value of the rest. Contracting all six together reduced the risk of later funding or approval decisions breaking up the network.

Commercial operation was originally expected in 2018. The network opened progressively between December 2024 and January 2025.³² Despite the extended timetable and difficult construction conditions, the core six-line network entered service. Early passenger numbers showed strong demand: 100 million journeys in less than nine months and more than 173 million by January 2026.³³

The lesson from Riyadh Metro is not necessarily that every major project should be approved in full at the start. Where parts can create value on their own, phased approval preserves flexibility. But where benefits depend on a complete system, the sponsor should identify and protect its essential scope through funding, contracts and oversight. Delivery boards and managers should clarify the interfaces and consequences of proposed reductions. Riyadh Metro illustrates how preserving network integrity can protect long-term value even when delivery takes longer than expected.

31 KHL Group (2013) 'Saudi Arabia awards US\$22.5 billion metro contracts', 29 July. Alstom (2013) 'Alstom awarded a turnkey metro project by the city of Riyadh in the Kingdom of Saudi Arabia', 29 July.

32 Royal Commission for Riyadh City (2025) 'RCRC announces the launch of Riyadh Metro's Orange Line this Sunday', 4 January.

33 Saudi Press Agency (2025) 'Riyadh Metro reaches 100 million rider milestone in under nine months', 26 August. Saudi Press Agency (2026) 'Royal Commission for Riyadh City awards Red Line Metro expansion project', 12 January.

ANNEX II: INTERVIEWS WITH SAUDI AND INTERNATIONAL BOARD MEMBERS

This section summarizes confidential, semi-structured interviews with 15 Saudi and international board members and governance practitioners. The interviews were conducted between March and June 2026. Quotations and observations are anonymized and lightly edited for clarity.

Phasing and realism. Interviewees warned that pressure to move quickly can lead to committing too early or building more than is needed. If funding or economic conditions change, the investment may then become difficult to justify. A phased approach can preserve the long-term ambition while limiting exposure until key assumptions have been tested.

One interviewee summarized the concern: “An imposed urgency can lead to rushed, suboptimal designs and infrastructure that becomes difficult to justify if funding or economic conditions later change.” The observation does not imply that every project should proceed slowly. It argues for separating speed of decision from irreversibility of commitment. A board can move quickly to fund investigation, enabling works or a first phase without authorizing the entire exposure.

Information quality. Board reports may contain a great deal of operational detail but provide little real insight. Site visits, discussions with project leaders and occasional contact with their teams can help boards check whether the reports reflect what is happening in practice.

As one interviewee put it, “Boards must proactively seek the right level of information. Management may overwhelm them with detail or provide too little.” The board’s task is to identify the information that could potentially change its perspective. Volume is not a substitute for insight. Access outside normal reporting processes should be structured to test management’s account without undermining executive authority.

Capability and capacity. Boards overseeing major projects need directors who understand how projects are developed and delivered, including joint ventures, contracts, safety, operations and technical risk. General governance experience alone may not be enough. Specialist committees, external experts where permitted and focused director training can improve the quality of challenge. Directors must also have enough time to do the job properly. Reputation and meeting attendance are no substitute for active oversight.

“Boards need people who have lived through the full project cycle,” one participant observed. “Otherwise, they may not know where the real risks sit.” Directors need experience not to manage the project, but to recognize when a reassuring technical answer fails to address the questions that really matter. Time matters too. Even an experienced director cannot oversee a complex investment properly without enough time to prepare.

Ritualistic oversight. Formal processes do not always lead to effective oversight. A board may meet regularly, receive assurance and approve reports, yet still fail to challenge unrealistic commitments or hold decision-makers accountable. The real test is whether governance influences decisions while meaningful choices remain open.

One practitioner described this as a situation in which “the board is present, but the oversight is not always working.” The distinction is important. Attendance, lengthy papers and frequent meetings may create evidence of process while leaving the central assumptions untested. Effective oversight is visible in the quality of questions, the treatment of dissent and the decisions that follow.

The personal cost of challenge. Several interviewees supported formal pause, rescope and kill-switch mechanisms because they reduce the risk to the individual of raising doubt about the project. As one observed, “if everyone around the table knows a commitment cannot be delivered but no one will say so, the governance system is not working. Scaling back should be treated as a normal governance response when assumptions change, not automatically as a loss of face.”

ANNEX III: PRACTICAL TOOLS FOR SPONSOR AND DELIVERY BOARDS

Tool A: Board checklist

Before approval

- 1 What strategic, commercial or public value must the project deliver?
 - 2 Which assumptions must hold, and what independent evidence supports them?
 - 3 Have credible alternatives been considered, including phased development and not proceeding?
 - 4 Are responsibilities, decision rights, approval requirements and escalation routes clear?
 - 5 Do the board and management have the necessary skills and capacity? Is a named executive responsible for maintaining the business case?
-

During delivery

- 6 Would we approve the project again today, knowing what we now know?
 - 7 How does performance compare with the original approved case and the current plan? How much contingency and schedule flexibility remain?
 - 8 Which assumptions have changed, which escalation triggers have been breached and what options remain?
 - 9 What serious concerns or assurance findings remain unresolved? Who is responsible for addressing them?
 - 10 Is the board receiving reliable information from independent sources as well as management?
-

At and after completion

- 11 Is the asset ready to operate, or is construction merely complete?
- 12 Who accepts responsibility for the remaining risks, obligations and expected benefits?
- 13 Are actual costs, performance and benefits being compared with the original business case?
- 14 What should change in future approvals, assurance, contracts and incentives?

Tool B: Decision rights and escalation

This map shows a typical division of responsibilities. Each project should identify the actual decision-maker, the applicable thresholds and any further consent required.

For each decision, the project should also specify:

- what triggers escalation;
- who must be notified;
- who can decide;
- how quickly the decision must be made; and
- what work may continue while the decision is pending.

Decision	Management	Delivery-company board	Sponsor and other approvals
Strategic case and funding	Prepares the business case and recommendation.	Considers the effect on the delivery company and approves matters within its powers.	Sponsor board approves the strategic case, capital exposure and risk limits. Owner, shareholder, lender or government consent may also be required.
Business plan and major contracts	Develops the plan and implements approved decisions.	Approves the plan and contracts within its authority.	Sponsor approval is required for reserved matters or additional capital. Other consents may also apply.
Major scope change or contingency release	Assesses the effect on cost, schedule, benefits and risk.	Approves within agreed limits or refers the matter to the appropriate decision-maker.	Sponsor decides any additional funding or change to reserved scope. External consent may be required.
Supplier failure or major claim	Assesses the exposure and develops response options.	Approves the contractual and commercial response within its authority.	Sponsor decides any effect on its funding or other reserved matters.
Pause, rescope or stop	Develops practical options and their consequences.	Acts within its powers or makes a recommendation.	Sponsor decides its investment position. Owner, lender or government approval may be required.
Operational readiness and handover	Demonstrates readiness and manages commissioning and handover.	Authorizes handover or operation within its authority.	Sponsor considers any effect on its obligations and expected benefits. The operator and regulators provide the required acceptance or approvals.

Element	Example
Trigger	More than 50% of contingency has been used before 60% of construction is complete. Or an independently checked forecast shows that the remaining balance may be insufficient.
Notification	The project CEO or finance lead informs the delivery board chair and secretary. The sponsor executive is informed at the same time if sponsor funding or a reserved matter may be affected.
Decision	The delivery-company board acts within its authority. The sponsor or owner decides any additional funding or change to reserved scope. The decision should be made within ten business days or before any further major commitment.
Interim action	No new commitment that would materially reduce the available options should be made without authorization.
Follow-up	Record the decision, reasons, actions, owners and deadlines. Track the response until it is complete.

Tool C: Evidence for a major decision

Before making a major decision, the board should receive:

- 1 The decision required.** State precisely what the board is being asked to decide, who has authority and what would happen if the decision were approved, deferred or rejected.
- 2 The current business case.** Compare the original approved case, the current approved baseline and the latest forecast.
- 3 What has changed.** Explain which assumptions have changed and which must still hold.
- 4 The latest forecast.** Show expected cost, completion date, remaining contingency, schedule flexibility and benefits.
- 5 The main risks and dependencies.** Cover financing, suppliers, interfaces, stakeholders, regulation and other projects on which delivery depends.
- 6 The available options.** Explain the alternatives, including pausing, changing the scope or stopping where relevant. Identify which options the proposed decision would close.
- 7 Independent assurance.** Present the reviewer's conclusions, any limits on the review and all material findings that remain unresolved.
- 8 Conditions and accountability.** Identify any conditions of approval, escalation triggers, responsible executives and the date of the next review.

The board or authorized committee should agree the scope of independent assurance, be satisfied with the reviewer's expertise and independence, and receive the findings directly. It should be able to meet the reviewer without management present. Material findings should remain open until the board recognizes that they have been addressed.

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