THE FIELD-TO-BOARDROOM BRIDGE

How Real-World Infrastructure Experience Can Transform Boardroom Judgement

By Yogendra Prasad Singh
Independent Director | Infrastructure & Governance Professional

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please contact:

BLUEROSE PUBLISHERS
www.BlueRoseONE.com
info@bluerosepublishers.com
+91 8882 898 898
+4407342408967

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Author's Note
Your field-to-boardroom journey

I didn't arrive at the boardroom through a straight line.

My professional journey has been shaped by something less tidy—and, in my view, much more valuable: “years of seeing how decisions actually play out on the ground.”

I've worked closely on infrastructure, projects, engineering, finance and the people responsible for turning plans into reality.

That experience changed the way I look at governance.

A board paper may say that a project is on schedule.

But the person at the site may know that critical approval is still pending.

A financial report may show that costs are within budget.

But the project team may already know that a technical assumption isn't working.

A management presentation may describe an investment as successful because ₹5,000 crore has been committed.

But the more important question may be: “What has that ₹5,000 crore created around it?

These differences between the “reported position and the real position” have shaped my thinking.

I Learned That Problems Rarely Begin in the Boardroom.

By the time a problem reaches the board, it often has a history.

A delay may have started with an unresolved interface.

A cost overrun may have started with a technical decision.

A contractual dispute may have started with an unclear scope.

A cash-flow problem may have started with an investment decision made years earlier.

A failed project may have started with a decision nobody was willing to challenge.

The balance sheet records the consequences.

It doesn't always explain the beginning.

That is why I became increasingly interested in what happens "before the number appears".

From Field Reality to Boardroom Judgement

This book grew out of that observation.

I've tried to connect two worlds that are often discussed separately.

"The field'—where engineers, project managers, contractors and operating teams deal with reality every day.

And "the boardroom"—where directors are expected to exercise judgement over strategy, risk, capital and governance.

There is often a gap between the two.

My purpose in writing this book is to build a bridge across that gap.

I call it the: "Field-to-Boardroom Bridge"

The idea is simple.

"Field reality → Early signal → Interpretation → Board question → Decision → Outcome"

If that chain works, governance becomes proactive.

If it breaks, the board often sees the problem only after it becomes expensive.

Why I Wrote This Book

I didn't want to write another book explaining corporate governance in textbook language.

There are already plenty of books that explain regulations, committees, fiduciary duties and compliance.

Those things matter.

But governance isn't only about knowing what the rules say.

It is also about knowing “what questions to ask when the information isn't complete”.

It's about recognizing when a technically correct answer may still hide a commercial problem.

It's about knowing when a delay is no longer just a delay.

It's about understanding why people aren't escalating an issue.

And sometimes, it's about asking a question that nobody in the room wants to answer.

The Questions Behind the Book

Several questions kept returning during my professional journey.

- What are we not seeing in the numbers yet?
- What will it cost us if we don't decide?
- When did the field first know about the problem?
- Which external interface can derail the project?
- Are we measuring investment size—or investment quality?

- What businesses should exist around our anchor investment?
- Are people afraid to tell us bad news?
- Does responsibility match authority?
- Are we building an asset—or a long-term platform?
- What happens if we're wrong?"

These aren't academic questions.

They're questions that can change the quality of a board discussion.

The Frameworks in This Book

Over time, I found that some recurring situations could be expressed through simple practical frameworks. They became the foundation of this book.

"Pre-Balance-Sheet Governance"

Look for the operational and technical signals before they become financial problems.

"The 5D Decision Test"

Look beyond the cost of taking a decision and examine the cost of delaying it.

"Multi-Agency / Interface Risk"

Identify the risks created not within one organization, but between organizations.

"Trust, People & Execution"

Recognize that information flow, authority, confidence and human behavior directly affect execution.

"The urban mobility knot"

Identify Why Good Infrastructure Projects Get Stuck Between Organizations

“New Infrastructure Opportunity Test”

Identify structural problems that can become investable infrastructure opportunities.

These frameworks aren't intended to replace professional expertise. They're intended to help directors “ask better questions of that expertise”.

Why the Independent Director Matters

An Independent Director sits in a unique position.

You aren't running the project.

You aren't managing the finance function.

You aren't negotiating every contract.

But you have something equally important: “distance from day-to-day execution combined with responsibility for judgement.”

That position gives you the opportunity to connect the dots.

You can ask the CFO about the financial impact.

The project heads about the operational reality.

The legal team about contractual exposure.

The risk team about emerging vulnerabilities.

And then ask the board:

"What do all of this mean together?"

That is where independence becomes valuable.

I Have Also Learned to Respect Uncertainty

Real projects don't behave like spreadsheets.

A business plan may assume 90% occupancy.

Reality may deliver 65%.

A project may be designed for 36 months.

Regulatory approval may take longer.

A contractor may perform differently from expectations.

A technical assumption may prove wrong.

An external agency may miss its commitment.

Good governance isn't about pretending these things won't happen.

It's about asking:

"If they do happen, are we prepared?"

That is why this book repeatedly focuses on scenarios, early warnings, optionality and the cost of delay.

The Human Side of Governance

One of the strongest lessons from the field is that “people determine how quickly an organization learns about a problem”.

If people are afraid to speak, bad news travels slowly.

If people have authority but no accountability, decisions become careless.

If people have accountability but no authority, decisions become slow.

If good news is rewarded and bad news is punished, the organization eventually learns to hide bad news.

A board may have excellent policies.

But culture is revealed by what happens when something goes wrong.

That is why trust isn't a soft subject. “Trust is an execution variable.”

What I Hope You Take from This Book

I don't expect every reader to agree with every framework.

That's not the purpose.

I hope the book changes the way you look at a board paper.

When you see a project marked "on track," I hope you ask:

"What is happening at the field level?"

When you see an investment proposal, ask:

"What happens if demand is lower than expected?"

When you see a delay, ask:

"What is the cost of waiting?"

When you see a large industrial investment, ask:

"What ecosystem will this create?"

When management says there are no major issues, ask:

"What problem are we not hearing about yet?"

And when the numbers look good, don't stop there.

Ask: "What has to remain true for these numbers to stay good?"

That's where judgement begins.

A Personal Invitation to the Reader

Whether you're an Independent Director, Promoter, CEO, CFO, Project leader, Investor, Consultant or Governance professional, I invite you to read this book from your own perspective.

You may recognize projects you've worked on.

You may remember decisions that took too long.

You may recognize the frustration of dealing with multiple agencies.

You may remember a technical issue that later became a commercial dispute.

Or perhaps you'll recognize something even more uncomfortable: “a risk that everyone could see, but nobody wanted to discuss”.

Those are the experiences from which meaningful governance lessons emerge.

The Journey Continues.

The field-to-boardroom journey isn't a destination.

Infrastructure will change.

Technology will change.

Business models will change.

India's demographic and economic landscape will change.

New risks will emerge.

New opportunities will appear.

But one thing won't change: “Good decisions require good judgement”.

And good judgement requires the ability to see beyond the immediate number, understand the reality behind it and ask the question that matters.

One Final Thought

If there is one message, I want this book to leave with you, it is this: “Don't wait for the problem to become visible in the financial statements before you start asking questions”.

Go upstream. Understand the field.

Listen to the people closest to the problem.

Challenge the assumptions.

Understand the interfaces.

Measure the cost of indecision.

Look for the ecosystem.

Test the downside.

And then bring that understanding into the boardroom. Because the most valuable contribution a director can make isn't always having the answer.

Sometimes it's “asking the question early enough for the organization to still have choices.”

That is the bridge I have tried to build in this book.

- From field reality to boardroom judgement.
- From experience to insight.
- From insight to better decisions.

And ultimately— “from better decisions to better outcomes”.

Yogendra Prasad Singh
IRMS (Civil) | Independent Director | Infrastructure & Governance Professional |

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Preface

Most boardroom risks don't begin in the boardroom. They begin much earlier.

They begin with a technical assumption that nobody challenges them. A design decision that looks minor. A tender condition that creates room for future claims. A delayed approval. A contractor interface that isn't properly managed. A project milestone that quietly slips by three months while the dashboard still looks reassuring.

By the time the problem reaches the Board, it may no longer be an engineering problem. It has become a "financial, strategic, governance or reputational problem".

I have spent more than three decades working close to where these problems emerge—on railway and transport infrastructure projects, bridges, construction sites, technical approvals, tenders, project execution and coordination between multiple agencies.

That experience has shaped the central idea of this book: Boards don't need to become engineers. But they do need to understand which engineering questions can become business risks.

This book is about that gap. I call it the "Field-to-Boardroom Bridge".

Why I Wrote This Book

Infrastructure projects are usually presented to boards through numbers. CAPEX, Progress percentage, Cost variance, Project completion date, Revenue projections, IRR, Claims, and Debt.

These numbers matter. But numbers often tell us, “What has happened’. They don't always tell us “Why it is happening” or what is likely to happen next.

A project showing 80% completion may still have its most difficult 20% ahead.

A ₹1,000-crore project may have only a small technical issue today, but that issue may sit directly on the critical path.

A delayed decision may appear to save money this quarter while increasing the eventual project cost substantially.

A contractor dispute may begin with a drawing, specification or site condition and end up as a financial liability.

The Board needs to see that chain early. That requires a different kind of questioning.

Not: “Is the project on schedule?”

But: “What could prevent this project from being commissioned on schedule?”

Not: “Why has CAPEX increased?”

But: “What changed in the field that caused the original assumption to fail?”

Not: “Why hasn't management decided?”

But: “What is the cost of waiting?”

These are simple questions. They aren't always easy questions.

What the Field Taught Me

Working in infrastructure teaches you a lesson that isn't always visible in board papers: “Reality doesn't always follow the project report”. A drawing may be technically correct but difficult to execute at site. A contractor may have adequate capacity on

paper but struggle with the actual Workfront. An approval may be procedurally pending while the project is effectively losing money every day.

Two agencies may be performing their responsibilities properly, yet the project may remain stuck between them. And sometimes the most expensive decision is the one nobody wants to make.

I have seen situations where timely engineering judgement made a substantial difference to project delivery.

One example that stayed with me was the Karan Singh Bridge project, where a project originally planned for 36 months was completed in 24 months. The lesson wasn't simply that a project can be accelerated.

The deeper lesson was this: “Decision-making speed has economic value”.

When people become excessively afraid of deciding because they fear financial consequences, projects can become paralyzed. That paralysis also has a cost. Sometimes the question is not whether a decision carries risk. Every meaningful decision does.

The better question is: “Is the risk of deciding greater than the risk of not deciding?”

That is a boardroom question. But it comes from field experience.

From Technical Risk to Board Risk

One of the purposes of this book is to build a bridge between two languages.

The field speaks about- design; specifications; site conditions; construction methodology; work fronts; contractors; interfaces; approvals; safety; testing; and commissioning.

The boardroom speaks about- capital allocation; cash flow; return on capital; risk; compliance; governance; shareholder value; and reputation.

These aren't two separate worlds. They are connected.

A design change can become a cost overrun. A delayed approval can become a financing cost. A weak contractor can become a liquidity problem. A safety compromise can become a governance crisis. An unresolved interface can become a contractual dispute. A project delay can change the economics of an entire investment.

The Board doesn't need to solve the engineering problem. It needs to recognize "when the engineering problem has crossed the threshold into a Board problem". That is the bridge this book tries to build.

The Frameworks in This Book

I have deliberately avoided turning this book into a technical manual or a textbook on corporate governance. Instead, I have tried to convert field experience into practical decision tools.

The "FIELD-to-BOARD Risk Translation Framework" helps identify when a technical issue has become a financial, strategic or governance concern.

The "5D Decision Test"—Define, Data, Damage, Delegate and Decide—helps examine whether a decision is being delayed unnecessarily and what that delay may cost.

The "CAPEX Reality Check" asks whether an investment remains strategically, technically and economically sound—not merely whether the sanctioned project is progressing.

The "Red-Flag Ladder" helps distinguish issues that management can handle from those that require senior management, committee or Board attention.

These frameworks aren't intended to replace management expertise. They're intended to improve the questions asked by those responsible for oversight.

A Word About Independent Directors

An Independent Director doesn't have to be the most technically qualified person in the room. But an Independent Director should be able to recognize when something doesn't make sense.

That may mean asking why physical progress and cash expenditure aren't moving together. It may mean challenging an optimistic completion date. It may mean asking what happens if a key assumption proves wrong. It may mean questioning whether the project is still economically viable after a significant delay.

Or it may simply mean asking management: “What are we not seeing?” That question can sometimes be more valuable than another presentation.

Good governance isn't about asking more questions. It's about asking the “right questions at the right time”.

This Book Is About Judgement

There is plenty of information available about infrastructure. There are project management manuals, engineering standards, financial models, governance codes and regulatory requirements.

What is harder to capture is “judgement”. When should the Board intervene? When should it allow management to decide? When does a cost increase acceptable? When does technical variation become a strategic concern? When should a project be accelerated? When should it be reconsidered? When is a delay tolerable? When does waiting become more dangerous than deciding?

There is rarely a formula for these questions. They require experience. They require context. They require a willingness to look beyond the number presented in the Board paper.

That is why this book focuses less on theory and more on “how to think about real decisions”.

The Bigger Idea

India is investing heavily in infrastructure. The scale of opportunity is enormous. But larger investments also create larger consequences when decisions go wrong. The quality of infrastructure investment will not be determined only by how much money we spend.

It will be determined by: “what we build, why we build it, how we execute it, how quickly we respond when assumptions change, and whether the resulting asset actually creates sustainable value.”

That is where field experience can make a difference in the boardroom. The Board doesn't need another dashboard. It needs better judgement behind the dashboard. It doesn't need to run the project. It needs to see the risk before the risk runs the project. And it doesn't need to know every engineering detail.

It needs to know “which detail matters”.

Finally

I have written this book from a simple belief: “The best boardroom judgement is often informed by what happens far away from the boardroom.”

On a construction site. Inside a tender committee. During a technical inspection. In a difficult coordination meeting. At the point where two agencies disagree. When a contractor raises a claim. When an engineer must decide with incomplete information. Or when a project is running behind schedule

somebody must decide whether to wait, intervene or change course.

Those experiences create a kind of knowledge that cannot be learned entirely from reports.

This book is an attempt to bring that knowledge into the boardroom. To build a bridge between "field reality and boardroom responsibility".

And perhaps, more importantly, to encourage a different question when the next major project comes before the Board: "What is happening on the ground—and what does it mean for us?"

That is where good oversight begins.

The core idea

"The board shouldn't wait for the balance sheet to tell it that something has gone wrong."

"A PRACTITIONER'S GUIDE TO BOARD-LEVEL JUDGEMENT"

FIELD REALITY → EARLY SIGNAL → BOARDROOM JUDGEMENT → BETTER DECISION

Engineering experience translated into boardroom value.

By **Yogendra Prasad Singh**
IRMS (Civil) | Independent Director |
Infrastructure & Governance Professional |

Introduction

The Translation Gap

Why What Happens in the Field Must Be Understood in the Boardroom

A board meeting can look reassuring.

The presentation is well prepared. The numbers are neatly arranged. The project is shown as "on track." Risks are listed in a familiar red-amber-green format. Management answers the questions confidently.

The board approves the proposal.

Six months later, the project is delayed.

Costs have increased.

A contractor has raised a claim.

Approval is still pending.

Cash is tied up.

The expected revenue has moved to the right.

The board is now discussing a problem that, in many cases, “started long before it appeared in the financial statements”.

This is the translation gap.

It is the gap between “what is happening in the field and what the board can see, understand and act upon”.

And in infrastructure-intensive businesses, that gap can be expensive.

The Problem Is Rarely Just the Number

Consider a project that is ₹2,000 crore in size. Management reports that the project is 70% complete.

The board sees:

- 70% physical progress;

- Expenditure broadly within budget;

- No major litigation;

- Approvals substantially in place;

- Projected returns still attractive.

At first glance, everything appears reasonable.

But suppose the site team knows that a critical design assumption is proving difficult.

Suppose a utility relocation is still unresolved.

Suppose another government agency has not completed part of its work.

Suppose the contractor has begun slowing deployment because payments are under discussion.

None of these may immediately appear as a major financial problem.

Yet together, they could change the project's outcome.

The board doesn't need to know how to solve the engineering problem.

But it “does need to know that the engineering problem exists, what it could mean commercially and when management expects it to be resolved”.

That is the director's job as translator.

What Does a Director Actually Translate?

The word "translator" is deliberate.

A director often receives information from different parts of the organization.

The engineer speaks in technical terms.

The project manager talks about milestones.

The finance team talks about cost and cash flow.

The legal team talks about contracts and claims.

The risk team talks about probability and exposure.

The business team talks about growth and returns.

Each may be correct.

But the board's responsibility is to understand “how those pieces connect”.

For example:

Technical problem → Construction delay → Contractor claim → Additional cost → Higher funding requirement →Lower project return→ Potential impairment

What began as an engineering issue can eventually become a shareholder-value issue.

The translation gap exists when that connection isn't made early enough.

Why This Matters More in Infrastructure

Infrastructure projects are particularly vulnerable because they involve long timelines, large capital commitments and multiple dependencies.

A road, bridge, railway, industrial park, power project or urban development project can involve:

- Engineering consultants;
- Contractors;
- Government departments;
- Regulators;
- Utilities;
- Landowners;
- Lenders;
- Local authorities;
- Customers;
- Multiple internal teams.

The project doesn't operate in isolation.

One delayed decision can affect several others.

That's why infrastructure governance can't be limited to financial reporting.

By the time the accounts show the consequences, the underlying problem may have become difficult and expensive to reverse.

The Board Usually Sees the End of the Chain

This is one of the most important observations behind this book.

The field sees the “signal”.

Management interprets the signal.

Finance eventually sees the “financial consequence”.

The board often sees the “reported number”.

The sequence can look like this:

Site issue → operational impact → commercial impact → financial impact → board discussion

The danger is that the board enters the conversation at the end.

My argument is simple:

The board should be brought into the chain early enough to influence the outcome—not merely review the consequence.

That doesn't mean the board should micromanage.

It means the board should understand the "leading indicators" that can eventually become financial risks.

A Realistic Indian Infrastructure Scenario

Imagine an urban infrastructure project in Mumbai involving multiple agencies.

The contractor has completed much of its planned work.

But a critical portion of the project depends on shifting an existing utility and obtaining clearance from another agency.

The contractor can't proceed in that section.

The project team initially treats it as an operational issue.

Then the delay extends from two weeks to two months.

Equipment remains underutilized.

Manpower must be retained.

The contractor starts raising additional cost claims.

The completion date begins to move.

Finance initially sees only a modest increase in project expenditure.

But the real issue is much bigger.

The project now faces:

- Additional construction cost;

- Potential claims;

- Delayed revenue;

- Additional interest during construction;

- Reputational pressure;

- Possible contractual disputes.

The board could have asked the right question much earlier: "Which external dependency can prevent us from completing the project even if our own team performs perfectly?"

That question moves the conversation from ‘project monitoring” to “governance”.

This Is Where the “Field-to-Boardroom Bridge” begins.

The “Field-to-Boardroom Bridge” is not about bringing operational detail into every board meeting.

That would overwhelm the board.

It is about identifying the operational details that have “strategic, financial or governance consequences”.

The bridge has five stages:

1. Field Reality

What is happening?

2. Early Signal

What has changed from the original assumption?

3. Translation

What could that change mean for cost, time, cash flow, risk or strategy?

4. Board Judgement

Does the board need to challenge, approve, monitor or intervene?

5. Action

What decision needs to be taken, by whom and by when?

This is the central thread running through the eight chapters of this book.

The Five Questions That Close the Gap: Across the eight chapters, five questions keep coming back.

1. What is happening on the ground? - Not just what the report says.

2. What could this become? - What is the downstream consequence?

3. What will it cost if we wait? - Not just the cost of acting.

4. What assumption could change the outcome? - Find the weak link.

5. What decision is required now? - Turn information into action.

These five questions can transform a routine board discussion.

The Director as Translator: This is ultimately what this book is about.

A good director doesn't simply receive information.

A good director “translates information into judgement”.

The engineer says: "The site condition has changed."

The director asks: “What does that do to cost and schedule?"

The project head says: "The agency hasn't completed its work."

The director asks: "What's the critical-path impact?"

The CFO says: "Cash flow is under pressure."

The director asks: "Which operational assumption created the pressure?"

Management proposes a new infrastructure investment.

The director asks: "What structural problems are we solving, who will pay for it and what happens if our demand assumption is wrong?"

That's the bridge.

Why Is This Book Practical

The chapters that follow aren't intended to provide theoretical answers.

They're designed to provide **questions, lenses and practical frameworks** that a director can use when the information is incomplete and the consequences matter.

The goal isn't to eliminate uncertainty.

That's impossible.

The goal is to make uncertainty “visible early enough to manage it”.

And the goal isn't to prevent every project from going wrong.

Real projects will go wrong.

The goal is to ensure that the board isn't the last place to discover it.

The Central Proposition of This Book

If I had to reduce the entire book to one proposition, it would be this: “The board should not wait for operational reality to become financial reality before exercising judgement.”

A technical problem can become a financial problem.

A people problem can become an execution problem.

An interface problem can become a schedule problem.

A delayed decision can become a capital problem.

A demographic shift can become an infrastructure opportunity.

The director's role is to connect these dots.

Before You Turn the Page

As you read the following chapters, I encourage you to keep one question in mind:

"What is happening today that could become tomorrow's board problem—or tomorrow's strategic opportunity?"

That question is the starting point of the “Field-to-Boardroom Bridge”.

The chapters that follow will take that idea further—from early risk detection, to decision-making, to multi-agency coordination, ecosystem creation, trust and execution, and finally to identifying new infrastructure opportunities.

The common thread is simple:

See earlier.

Question better.

Translate clearly.

Decide before the cost of indecision becomes larger than the cost of action.

Because the best governance doesn't begin when the numbers turn red.

It begins when someone in the organization notices the first signal—and someone in the boardroom knows how to ask what it means.

Chapter 1

The Boardroom Cannot See What the Dashboard Doesn't Show

A project can be green on the dashboard and already be in trouble. I've seen this happen more than once.

The board receives a familiar set of numbers: percentage completion, budget utilization, milestone achievement, procurement status, safety performance and expected completion date. Everything looks broadly under control.

But the real warning sign may be somewhere else. It may be technical approval that's still pending. A design assumption that doesn't match the actual site condition. A utility shifting issue nobody quite owns. Or an interface between two agencies where each side assumes the other will take care of it.

By the time that problem appears in the accounts, the board is usually looking at the consequence—not the cause.

That's what I call the “Field-to-Boardroom Gap”.

When Green Isn't Really Green

Take a major infrastructure project. The monthly report says:

- Overall progress: 68%
- Budget utilization: 64%
- Schedule variance: 3%
- Safety: Green

- Procurement: Green
- Expected completion: Within approved timeline

Nothing immediately looks alarming.

Now suppose one critical structural package is waiting for technical approval. The project team expects approval shortly, so the item is marked "under process."

No cost overrun has been booked.

No milestone has technically been missed.

The dashboard stays green.

But I'd want to ask one question:" What happens if that approval takes another 60 days?"

That question can change the entire discussion.

Perhaps equipment has already been ordered. Labor has been mobilized. Dependent activities can't start. Contractors are sitting with resources that can't be fully deployed.

Suddenly, technical approval becomes a schedule problem.

The schedule problem becomes a cost problem.

The cost problem becomes a claims problem.

And eventually, it becomes a board problem.

The financial problem didn't start when the cost went up. It started when a critical assumption became uncertain.

That's the distinction boards that need to understand.

The Problem with Looking Only at the Numbers.

Financial statements tell us what has happened.

Board dashboards often do the same thing, just in a more convenient format.

They tell us what has been spent, what has been completed, what has been ordered and what has been delayed.

All that matters.

But a board also needs to ask: “What are we seeing today that could affect the numbers six months from now?”

That's where field experience makes a difference.

Someone who's spent years around projects learns to notice things that don't immediately show up in a financial report.

A small design change can have a large commercial impact.

A seemingly routine approval can sit directly on the critical path.

A contractor asking for repeated clarification may be telling you the design isn't mature enough.

Two agencies can each be doing their job properly while the project still moves backwards because their activities don't line up.

And when a project team keeps saying, "No major issue," I want to know whether that's genuinely the case—or whether people have simply stopped escalating bad news.

These aren't accounting issues.

Yet they can become accounting issues very quickly.

That's why I call this “Pre-Balance-Sheet Governance”.

Pre-Balance-Sheet Governance

The idea is straightforward: “Don't wait for risk to show up in the numbers before you start managing it”.

Consider a common chain:

Pending technical approval→ Activity can't start → Schedule moves → Resources remain deployed → Cost increases → Contractor claim emerges → Cash requirement increases → Project return deteriorates.

By the time the last three events occur, everyone is discussing the financial problem.

But the board had an opportunity much earlier.

The opportunity was at the first arrow.

That's where board judgement can make a real difference.

An Independent Director doesn't need to approve the engineering drawing. That's management's job.

But the director can ask:

- "Why is this approval still pending?"
- "Is it on the critical path?"
- "Which activity depends on it?"
- "What's the consequence of a 30-day delay?"
- "Who owns the decision?"
- "At what point does this become a commercial issue?"

Those are proper board questions.

They don't require the director to become an engineer.

They require the director to understand the business consequence of an engineering issue.

A Realistic Indian Infrastructure Example

Consider a large urban infrastructure project in the Mumbai Metropolitan Region.

The project involves a project authority, contractors, consultants, utility agencies and other public bodies. The civil work itself may be progressing well.

The difficulty is at the interface.

One part of the project depends on another agency completing related work. Another requires statutory or technical approval. A third depends on utility shifting.

Each issue, taken on its own, looks manageable.

So, the project team continues to report satisfactory overall progress.

Then one interface slips for a few weeks.

The immediate response is usually familiar: "We can recover the delay."

Maybe they can.

But recovery has a cost.

The contractor may need additional shifts. Equipment may have to be redeployed. Procurement sequences may change. Night work may become necessary. Other activities may have to be compressed.

A 30-day delay can therefore create a much larger financial consequence.

This is where I'd change the boardroom question.

Don't ask only: "Are we delayed?"

Ask:

- "What's the architecture of the delay?"
- Who controls dependency?
- Which activity is affected?

- Can another activity continue?
- What's the cost of recovery?
- What contractual rights could arise?
- What happens if the same dependency slips again?

And perhaps the most important question: “Are we treating an interface problem as an operational inconvenience when it's actually a strategic risk?”

That's a very different level of oversight.

The Field-to-Boardroom Bridge

This is where my “Field-to-Boardroom Bridge” comes in.

The purpose isn't to turn directors into engineers.

It's to help directors translate what's happening at the site into consequences the board can act on.

The bridge has five steps:

- Field reality (What is happening?)
- Operational consequence (What does it affect?)
- Financial consequence (What could it cost?)
- Governance consequence (What does the board need to watch?)
- Board decision (What needs to be decided, challenged or escalated?)

Take the delayed technical approval:

- Field reality - The approval hasn't been received
- Operational consequence - Critic activity can't begin
- Financial consequence - Resources may remain underutilized and additional costs may arise

- Governance consequence - The board needs clarity on ownership, escalation and contingency.
- Board decision - Management may need to approve an alternative execution strategy, escalation route or recovery plan.

Notice what we're not doing.

We're not asking the board to decide how the structure should be engineered.

We're asking the board to understand “what that engineering uncertainty means for the business”.

That's the bridge.

The Question Behind the Question

Experienced directors develop a useful habit.

They don't stop at the first answer.

Management says: "The approval is expected shortly."

I'd ask: "By what date do we actually need it?"

Management says: “The contractor can recover the delay."

I'd ask: "At what additional cost?"

Management says: "There's no immediate financial impact."

I'd ask: "What could become financially material if this continues for another quarter?"

Management says: "The matter is being coordinated between the agencies."

I'd ask: "Who owns the resolution?"

These aren't questions born out of mistrust.

They're questions of governance.

A good board doesn't necessarily challenge management more.

It challenges more intelligently.

Be Careful With "Under Process"

There's one phrase I've learnt to treat carefully in project reviews: "Under process."

An approval can be under process for three days.

It can also be under process for three months.

The phrase itself tells the board very little.

A better question is: "Under process against what critical date?"

That immediately changes the discussion.

The same applies to other familiar phrases.

"Expected shortly."

By when?

"Minor variation."

What's the cumulative financial impact?

"Can be managed."

With what contingency?

"No major concern."

What would make it a major concern?

"Recovery plan is in place."

What's the cost of recovery?

This is where judgement matters more than terminology.

The Cost of Waiting

There's another point boards sometimes underestimate.

Time isn't neutral in a project.

Every additional week can change the economics.

The cost can come through inflation, financing, labor, equipment utilization, contractual claims, delayed revenue, escalation costs or lost opportunities.

This is where my “5D Decision Test” becomes useful.

Before allowing an important issue to remain unresolved, ask:

1. Data

What do we know?

2. Delay

What happens if we wait?

3. Downside

What could go wrong?

4. Dependencies

Who or what must align?

5. Decision

What needs to be decided now?

That last question is particularly important.

Board meetings can spend a lot of time reviewing information without ever identifying the decision that information is supposed to support.

A good discussion should eventually reach: "So, what do we need to decide?"

The Board Shouldn't Run the Project

There's an important boundary here.

A board shouldn't become a project management office.

It shouldn't tell engineers how to design a structure. It shouldn't direct contractors on daily sequencing. And it shouldn't substitute its judgement for management's operational expertise.

The board's job is different.

It should test whether management has:

* Identified the real risk,

* Understood its consequences,

* Assigned clear ownership,

* Considered alternatives,

* Established escalation points,

* Protected shareholder value,

* And acted early enough.

That's governance without micromanagement.

The board isn't crossing the bridge to become management.

It's building the bridge so that “important information reaches the board before it becomes a crisis”.

From Dashboard Review to Judgement Review

This requires a small but important change in how directors ask questions.

Instead of: "What's the status?"

Ask: "What has changed?"

Instead of: "Are we within budget?"

Ask: "Which assumptions are supporting the current budget?"

Instead of: "Are we on schedule?"

Ask: "What is currently protecting the schedule?"

Instead of: "Are there any major risks?"

Ask: "Which risk could become major the fastest?"

Instead of: "Why hasn't this been resolved?"

Ask: "What's preventing resolution, and what happens if we wait?"

These questions produce better information.

Better information leads to better judgement.

And better judgement is what a board is expected to bring.

The First Principle of the Field-to-Boardroom Bridge

My first principle is simple: “Don't wait for the financial statements to tell you what the field has already told you”.

The board doesn't need every operational detail.

It needs to understand the “consequences hidden inside operational detail”.

A technical approval isn't just an approval.

It can be a schedule risk.

A design change isn't just a design change.

It can be a cost risk.

An inter-agency disagreement isn't just coordination.

It can become a claims risk.

A contractor's concern isn't just a contractor issue.

It can be an early warning signal.

And a management team's reluctance to escalate bad news isn't merely a cultural issue.

It can become a governance risk.

This is how field experience becomes boardroom value.

The objective isn't to make the board more operational.

It's to make the board more perceptive.

Practical Boardroom Checklist

The Field Reality Test

Before reviewing any major infrastructure or capex project, ask:

* What has changed at the field level since the last board review?

* Which technical assumption has changed or remains uncertain?

* Which approval is currently critical to the schedule?

* Which activity is on the critical path?

* Which dependency is outside management's direct control?

* What happens if the current issue is delayed by 30, 60 or 90 days?

* What could be the financial consequence if the operational risk materializes?

* Could the issue lead to a contractor claim, cost escalation or financing impact?

* Is management reporting the “cause” of the risk or only it’s ‘effect’?

* Are any "green" indicators dependent on assumptions that should be challenged?

* Who owns resolution?

* What is the trigger of escalation?

* What decision, if any, is required from the board now?

* What could become financially material even though it isn't financially material today?

* What will it cost us if we don't decide?

The question I'd leave with the board

- "What do we know today that could become tomorrow's financial problem?"

That question is where the “Field-to-Boardroom Bridge” begins.

Chapter 2

Pre-Balance-Sheet Governance

By the time a risk appears in the balance sheet, it has usually been visible somewhere else for months.

The cost overrun didn't suddenly appear.

The delayed project didn't suddenly become delayed.

The cash-flow problem didn't begin when the bank balance became uncomfortable.

There was usually an earlier signal pending approval, a design issue, a contractor concern, a delayed interface, a weak assumption or a decision that kept getting pushed to the next meeting.

The board's real opportunity is to act “before the number appears”.

That's what I mean by “Pre-Balance-Sheet Governance”.

It isn't about adding another layer of reporting. It's about recognizing the operational event that could eventually create financial problems.

The Number Is Usually the Last Warning

Consider how a project problem typically develops.

A technical issue is identified.

The project team believes it can be resolved.

A few weeks have passed.

The resolution takes longer than expected.

The contractor starts asking for additional time.

Resources remain deployed.

The schedule moves.

Management initially absorbs the impact within the project contingency.

Then the contingency starts getting used up.

Eventually, the board hears: "There is some pressure on project costs."

At that point, the board is being asked to deal with the “financial result of an earlier operational problem”.

I'd rather ask: "When did we first know this could become a problem?"

That question usually takes the discussion to a much more useful place.

Risk Has a journey

Most risks don't jump directly from "nothing" to "financial loss."

They move through stages:

Signal → Operational Risk → Schedule/Execution Impact → Commercial Exposure → Financial Impact → Balance-Sheet Impact

The earlier you identify the signal, the more choices you have.

At the early stage, a problem may be solved with approval, a design clarification, a change in sequencing or a direct conversation between the right people.

Once a contractor claim has been filed or a project milestone has been missed, the choices become fewer—and usually more expensive.

That's why I don't look only at the “size of a risk”.

I also look at “how quickly it can become irreversible”.

A Realistic Indian Infrastructure Example

Take a large infrastructure project involving civil works, specialized equipment and several government interfaces.

The project is broadly on schedule.

But a critical utility relocation hasn't been completed.

The project authority, utility agency and contractor are discussing it. The monthly report says: “Utility shifting is under coordination. No material impact at present."

Technically, that may be correct.

But I'd immediately ask: "How long can we wait before this becomes material?"

Suppose the answer is eight weeks.

Now the situation looks different.

If the utility isn't shifted, the contractor can't complete the affected section. Equipment and manpower may not be used as planned. Other activities may have to be sequenced.

The contractor may then seek an extension of time.

Additional mobilization costs may follow.

A recovery plan may require additional shifts or resources.

The original delay may be eight weeks. The financial consequence could be much larger.

At the first board meeting, none of that may appear in the accounts.

But the risk already exists.

So, the better question isn't: “Is there a financial impact?"

It's: "What is the latest date by which this issue must be resolved to protect the approved completion date?"

The second question gives management something to act on.

The Early Signal Matters More Than the Final Number

Boards understandably focus on materiality.

But there's another question that's often more useful: "Could this become financially material?"

Those are very different questions.

A ₹2 crore issue may be insignificant on a ₹5,000 crore project.

But if that ₹2 crore issue sits on the critical path and trigger a ₹100 crore claim, its current value tells you very little.

You need to understand the “direction of travel”.

That's the point of Pre-Balance-Sheet Governance.

Use the Field-to-Boardroom Bridge

This is where my “Field-to-Boardroom Bridge” becomes practical.

Suppose management tells the board: "The technical sanction is still awaited."

The discussion shouldn't end there.

Take it through five questions.

1. Field Reality

What exactly is pending?

Is it a drawing approval, technical sanction, statutory clearance or design confirmation?

2. Operational Consequence

What work can't proceed until it's resolved?

3. Financial Consequence

What happens to cost, resources, financing and revenue if the work is delayed?

4. Governance Consequence

Who owns the issue?

What's the escalation mechanism?

What's the contingency?

5. Board Decision

Does management need a decision, additional authority, an alternative strategy or board-level escalation?

The technical issue hasn't changed.

The board's understanding of its consequence has.

That's the bridge.

Ask the Question Behind the Question

Experienced directors develop a useful habit.

They don't stop at the first answer.

Management says: “The approval is expected shortly."

Ask: "By what date do we actually need it?"

Management says: "The contractor can recover the delay."

Ask: "At what additional cost?"

Management says: “There’s no immediate financial impact."

Ask: "What could become financially material if this continues for another quarter?"

Management says: "The matter is being coordinated between the agencies."

Ask: “Who owns the resolution?"

These aren't questions of mistrust.

They're questions of judgement.

A good board doesn't necessarily challenge management more.

It challenges more intelligently.

Be Careful With "Under Process"

There's one phrase I treat carefully in project reviews: "Under process."

An approval can be under process for three days.

It can also be under process for three months.

The phrase tells the board almost nothing.

I'd ask: "Under process against what critical date?"

That immediately makes the discussion concrete.

The same applies to several other familiar phrases.

"Expected shortly."

By when?

"Minor variation."

What's the cumulative financial impact?

"Can be managed."

With what contingency?

"No major concern."

What would make it a major concern?

"Recovery plan is in place."

What's the cost of recovery?

These questions don't make the board operational.

They make the board more precise.

The Cost of Waiting

There's another point that deserves more attention.

Time isn't neutral in a project.

Every additional week can change the economics.

The cost may come through inflation, financing, labor, equipment utilization, contractor claims, delayed revenue or lost opportunities.

This is where my “5D Decision Test” becomes useful.

When an important issue is unresolved, ask:

1. Data

What do we know—and what are we assuming?

2. Delay

What happens if we wait?

3. Downside

What's the realistic downside?

4. Dependencies

Who must act for the solution to work?

5. Decision

What needs to be decided now?

The second D is often overlooked.

Boards spend a lot of time asking what a decision will cost.

They should also ask: "What will it cost us if we don't decide?"

A ₹10 Crore Decision May Prevent a ₹100 Crore Problem

Imagine management proposes spending an additional ₹10 crore to redesign or accelerate a critical part of a project.

The first reaction may be: "Why should we approve another ₹10 crore?"

Fair question.

But it's only half the question.

Ask: "What happens if we don't spend it?"

Suppose the answer is:

- six-month delay;

- ₹25 crore additional financing cost;

- ₹30 crore potential contractor claim;

- ₹20 crore lost revenue;

- And a significant impact on customer commitments.

Now the ₹10 crore decision looks very different.

That doesn't mean the board should automatically approve it.

It means the board should compare “the cost of action with the cost of inaction”.

That's judgement.

Where Governance Usually Breaks Down

I've seen three recurring problems.

1. A risk is reported without a trigger

Management says: "There is a risk of delay."

I'd ask: "What event will tell us that the risk is becoming real?"

Without a trigger, a risk register is just a list.

2. Nobody clearly owns the issue

Several agencies are involved.

Everyone is coordinating.

Nobody is accountable.

That's dangerous.

The board should be able to identify:

- Who owns it?
- Who can resolve it?
- Who escalates it?

If those answers aren't clear, the risk is already larger than the report suggests.

3. Recovery is assumed rather than tested

Management says: "We'll make up for the delay."

I'd ask: "How?"

Then: “what cost?"

Then: "What assumptions do that recovery plan depend on?"

A recovery plan isn't a solution simply because it's written in the monthly report.

It must be credible on the ground.

Challenge the Assumption, Not Just the Number

Suppose management tells you: "The project will be completed by March."

The obvious question is: "How much work is complete?"

I'd ask something else first: "What has to go right between now and March?"

Now you start hearing the real dependencies:

Approval must arrive.

The contractor must mobilize.

The utility must move.

The design can't change materially.

The equipment must arrive.

Testing must happen on time.

Another agency must complete its work.

The March date isn't a fact.

“It's a conclusion built on assumptions”.

The board's job is to decide whether those assumptions remain credible.

Not Every Risk Belongs in the Boardroom

Pre-Balance-Sheet Governance doesn't mean bringing every site issue to the board.

That would turn the board into a project management office.

The test is whether the issue can become an “enterprise problem”.

I'd want board attention when an issue:

* Can affect the critical path;

* Can materially change project economics;

* Depends on an external party;

* Involves an important regulatory or technical approval;

* Can create a significant contractual claim;

* Leaves management with little room to recover;

* Or can have consequences beyond the individual project.

A good board doesn't know every operational problem.

“It knows which operational problems can become strategic problems”.

Turning the Risk Register into a Risk Radar

A conventional risk register usually shows:

Risk | Probability | Impact | Mitigation | Owner

Useful—but incomplete.

I'd add three questions:

- How quickly can this risk become material?
- What event will tell us it's moving in that direction?
- What decision becomes unavailable if we wait too long?

Those questions turn a static risk register into a “risk radar”.

You're no longer just recording risk.

You're watching its movement.

What This Means for an Independent Director

An Independent Director doesn't need to know every engineering detail.

But the director should recognize when an engineering detail has commercial or strategic consequences.

That requires curiosity.

It means asking one more question when everyone else is ready to close the agenda item.

It means understanding why a delay is occurring rather than accepting "delay" as the explanation.

It means distinguishing between:

- a temporary variance and a structural problem;
- a manageable issue and a critical dependency;
- management optimism and evidence-backed confidence.

Most importantly, it means asking questions while management still has choices.

That's the real value of Pre-Balance-Sheet Governance.

A Simple Test I Would Use at Every Major Project Review

Before closing the project discussion, ask management to identify:

Three things that could go wrong before the next board meeting.

Then ask: What's the earliest warning signal for each?

Then: What can we do now to reduce the probability or impact?

Finally: At what point should this be addressed to the board?

It takes a few minutes.

But it changes the discussion from reporting what happened to preparing for what could happen next.

The principle

I'd reduce Pre-Balance-Sheet Governance to one principle: The earlier the board recognizes the operational cause of a financial risk, the more choices the company has.

Once the cost is booked, choices narrow.

Once a claim is filed, the company is negotiating from a different position.

Once a critical milestone is missed, recovery becomes expensive.

Once cash is under pressure, management starts managing liquidity instead of strategy.

Good governance intervenes earlier.

Not by interfering with management.

By asking the right question while management still has room to act.

Practical Boardroom Checklist

The Pre-Balance-Sheet Risk Test

Before closing a major project or capex review:

- What operational risk exists today that isn't yet visible in financial statements?

- Which assumption is most critical to the business case?

- What happens if that assumption proves wrong?

- Which issue could become financially material fastest?

- What's the earliest warning signal?

- What event should trigger escalation?

- Is the issue on the critical path?

- Which external agency, contractor or stakeholder controls the dependency?

- Who owns resolution?

- What happens if the issue is delayed by 30, 60 or 90 days?

- What's the cost of recovery?

- What's the cost of doing nothing?

- Is the recovery plan supported by evidence?

- What decision becomes harder or more expensive if we wait?

- What does the board need to decide, challenge or escalate now?

The question I'd leave with the board

"Which problem are we currently treating as operational that could become financial if we don't act now?"

That's the essence of “Pre-Balance-Sheet Governance”.

The board's greatest contribution isn't always solving the problem.

Sometimes, it's recognizing the problem “before everyone has to solve it at a much higher cost”.

Chapter 3

The Field-to-Boardroom Bridge

A board doesn't need to know how to design a bridge.

But it does need to know when something happening on that bridge project could affect the company's money, schedule, reputation or ability to deliver.

That's the distinction.

After spending years around infrastructure and large project environments, I've seen how technical information often gets diluted by the time it reaches the boardroom.

The engineer says: "The foundation condition is different from what we assumed."

The project manager says: "There's a three-week impact."

Finance eventually says: "Project cost has increased."

The board must connect those three statements.

That's what I mean by the “Field-to-Boardroom Bridge”.

The Problem Isn't Lack of Information

Large projects produce mountains of information.

There are drawings, site reports, inspection reports, progress reports, contractor correspondence, variation statements, approval trackers and risk registers.

The problem is usually not getting information.

It's knowing “which information matters to the board, and what it means”.

A technical issue may look small on its own.

Its consequence may not be small.

For example:

Design clarification can become→ work stoppage which becomes →schedule delay which becomes →contractor claim which becomes →Cost escalation which eventually becomes → lower project return.

The board shouldn't wait for the last step.

It should understand the chain while there's still time to do something about it.

The Five Questions That Build the Bridge

The “Field-to-Boardroom Bridge” is built around five questions.

1. Field Reality

What is happening?

2. Operational Consequence

What does it affect?

3. Financial Consequence

What could it cost?

4. Governance Consequence

What does the board need to watch, challenge or escalate?

5. Board Decision

What needs to be decided now?

The framework is deliberately simple.

The value comes from asking the questions in the right order.

1. Start With What Is Actually Happening

Don't start with the number.

Start with the field reality.

Suppose the project report says: "Foundation work is progressing as per the revised plan."

That's a conclusion.

I want to know what happened before that sentence was written.

Was the soil condition different from the original assumption?

Was the foundation depth changed?

Was additional testing required?

Was the contractor waiting for clarification?

Did work stop for two weeks?

Those details matter.

The percentage shown on the dashboard is usually the “end of the story”.

The field condition is where the story begins.

2. Find the Operational Consequence

Once you know what's happening, ask: "So, what does this affect?"

A technical issue may affect only one activity.

But that activity may sit directly on the critical path.

Now the issue has a different significance.

For example:

Design revision affects one structure.

That structure affects equipment installation.

Equipment installation affects testing.

Testing affects commissioning.

Commissioning affects revenue.

The original design revision is no longer just a technical matter.

“It's a business matter”.

That's the translation a board needs.

3. Put a Financial Lens on It

The next question isn't always: "How much will this cost?"

Sometimes the better question is: "What could this cost if it continues?"

At an early stage, nobody may know the exact number.

That's acceptable.

What the board needs is a realistic understanding of the exposure.

Ask about:

- Additional manpower;

- Idle equipment;

- Financing costs;

- Procurement changes;

- Contractor claims;

- Liquidated damages;

- Lost revenue;

- Acceleration costs;

- Working-capital requirements.

Don't demand false precision.

Ask for a sensible range and, more importantly, ask “what could move that range”.

4. Find the Governance Consequence

This is where technical discussions often stop too early.

Management may say: "The issue is with the contractor."

That's not an explanation.

I'd ask: "What's management doing about it?"

Then: "Who owns the resolution?"

Then: "What's the escalation point?"

And: "When does the board need to hear about it again?"

The board doesn't need to solve the contractor's technical problem.

It needs to make sure the problem has an owner, the response is credible and the escalation point is clear.

5. Decide What the Board Actually Needs to Do

Not every issue needs a board decision.

Sometimes the right action is simply: Monitor.

Sometimes: Challenge management's assumption.

Sometimes: Require a contingency plan.

Sometimes: Escalate.

And sometimes: Decide now, because waiting will reduce the available choices.

This is where my “5D Decision Test” fits naturally.

Ask:

Data: What do we know?

Delay: What happens if we wait?

Downside: What could go wrong?

Dependencies: Who must act?

Decision: What needs to happen now?

The issue gets brought into the boardroom through the Field-to-Boardroom Bridge.

The 5D test helps determine what the board should do with it.

A Realistic Indian Infrastructure Example

Consider a major railway or urban infrastructure project in India involving a large bridge structure.

The engineering team encounters unexpected site conditions

The immediate technical response is straightforward: reassess the design and determine whether additional strengthening or a revised construction method is required.

At first glance, it's an engineering issue.

But walk it through the bridge.

Field Reality

The actual condition of the site differs from the original assumption.

Operational Consequence

The construction methodology must change.

Some work is paused while the revised solution is assessed.

Schedule Consequence

The affected activity affects the critical path.

A delay begins to build.

Financial Consequence

Additional engineering, manpower and potentially acceleration costs arise.

The contractor may also raise a claim.

Governance Consequence

Management must demonstrate that the revised solution has been properly reviewed, responsibility is clear and the completion plan remains credible.

Board Decision

The board may need to challenge the recovery assumptions, approve additional authority or require escalation.

Notice what's happened.

The board hasn't decided on an engineering solution.

It has decided whether the ‘business consequences of the engineering issue are being properly managed”.

That's the Field-to-Boardroom Bridge in practice.

Don't Let "Technical" Become a Blind Spot

I've seen boards become unnecessarily cautious when a matter is described as "highly technical."

That's understandable.

But it can create a blind spot.

You don't need to understand every calculation.

You do need to understand the “decision significance” of the calculation.

You may not know how a structural member was designed.

But you can ask:

- "What assumption is the design based on?"
- "Has that assumption been independently validated?"
- "What happens if it's wrong?"
- "How much of the project depends on it?"
- "What's the fallback?"

Those are perfectly legitimate board questions.

And they're often more useful than sitting through another 50-page technical presentation.

Use the "And Therefore" Test

Here's a simple technique I've found useful.

Whenever management presents a technical issue, mentally add: "And therefore..."

For example:

"The drawing approval is delayed."

And, therefore?

"The activity can't start."

And, therefore?

"The contractor remains mobilized."

And, therefore?

"Cost may increase."

And, therefore?

"Project returns may decline."

And, therefore?

"The board needs to understand the exposure and decide whether management's response is adequate."

That phrase "and therefore" forces the conversation beyond description.

It takes you from "what happened" to "why it matters".

Information Isn't the Same as Insight

A board paper may contain ten pages on a project issue.

It may include:

- Technical drawings;
- Correspondence;
- Progress photographs;
- Contractor letters;
- Cost estimates;
- Approval status;
- Meeting minutes.

That's information.

Insight is different.

Insight sounds like: "If this approval isn't received by 15 September, commissioning is likely to move, and the current recovery plan would require additional expenditure."

Now the board knows: "what matters, why it matters, when it matters and what happens next".

That's the standard I'd expect from senior management reporting.

Don't Ask for Certainty Where None Exists

Infrastructure projects are full of uncertainty.

Boards sometimes make the mistake of asking: "Will the project finish on time?"

Management may give the best answer it can.

But the more useful questions are: "What could prevent completion on time?"

Then: "Which of those risks is increasing?"

Then: "What are we doing about it?"

And: "When will we know whether the mitigation is working?"

You're not demanding certainty.

You're demanding “visibility, ownership and preparedness”.

The Bridge Works in Both Directions

The framework isn't only about bringing field issues into the boardroom.

It also works the other way.

Suppose the board says: "We want the project completed six months earlier."

That's not yet an executable decision.

Management must translate that into:

- Additional resources;

- Revised procurement;

- Additional shifts;

- Revised sequencing;

- Contractor negotiations;

- Cost implications;

- Safety implications;

- Approval requirements.

So, the bridge works in both directions:

Field → Board *and* Board → Field

If either direction breaks, execution suffers.

Don't Confuse Percentage Completion with Risk Reduction

This is one of the simplest traps in project reporting.

A project is reported as 90% complete.

That sounds reassuring.

But what if the remaining 10% includes:

- Testing;

- Commissioning;

- Statutory certification;

- System integration;

- Difficult interfaces;

- Customer acceptance?

That final 10% may determine whether the asset can generate revenue at all.

So, I'd distinguish between:

“Percentage completed”, and

“Percentage of risk retired”.

They're not the same thing.

A project can be 90% physically complete and still carry significant execution risk.

That's why I don't treat a high completion percentage as a substitute for judgement.

Ask What's Left—Not Just What's Done

When a project reaches 70%, 80% or 90% completion, ask: "What's left?"

Then ask: "Is what's left easier or harder than what we've already completed?"

That second question is often revealing.

The first 70% may have involved relatively straightforward construction.

The final 30% may involve testing, approvals, integration and commissioning.

The project can therefore become “more difficult as the completion percentage rises”.

The dashboard won't necessarily tell you that.

Experience often will.

The 5D Test Before Closing the Discussion

When an issue reaches the board, I would run it through the “5D Decision Test”.

Data:

What do we know?

What remains uncertain?

Delay:

What happens if we wait another month?

Downside:

What's the credible downside?

Not the disaster scenario.

Not the optimistic scenario.

The downside management genuinely needs to plan for.

Dependencies:

Who or what must happen to the solution to work?

Decision:

What must management or the board decide now?

If the discussion ends without reaching the fifth D, there's a good chance the board has reviewed the issue without governing it.

A Good Board Paper Doesn't Need More Pages

I've seen project papers become longer and longer without becoming clearer.

For a major project issue, I'd want to know:

- What happened?
- Why did it happen?
- What does it affect?
- What could it cost?
- What are our options?
- What does management recommend?
- What happens if we do nothing?
- What decision is required?

That's usually enough to start a useful board discussion.

The objective isn't to remove technical details.

It's to put the technical detail “behind the decision”, rather than putting the decision somewhere behind the technical detail.

What Field Experience Teaches You

Field experience gives you something a dashboard can't easily provide pattern recognition.

You learn that a small unresolved issue can become a major delay.

You learn that "coordination" can sometimes mean nobody has clear ownership.

You learn that repeated contractor queries may indicate a design problem.

You learn that a project schedule can look perfectly achievable on paper and be extremely difficult to execute on site.

But experience also teaches restraint.

Not every issue is a crisis.

Not every delay deserves escalation.

Not every contractor’s complaint is valid.

That's equally important.

Good judgement isn't about seeing danger everywhere.

It's about knowing “which signals deserve attention and which don't”.

The Bridge Is About Judgement, Not Engineering

This is perhaps the most important point.

The “Field-to-Boardroom Bridge” isn't an engineering framework.

It's a “judgement framework”.

It helps a director move from: "I don't understand the technical details."

to: "I understand enough to ask what this means for business."

You don't need to know everything.

You need to know “what matters”.

And you need the confidence to keep asking when the answer isn't clear.

A Five-Sentence Boardroom Exercise

At the next major project review, take one technical issue and ask management to explain it in five sentences.

Sentence 1: What has happened?

Sentence 2: What does it affect?

Sentence 3: What could it cost?

Sentence 4: What happens if nothing is done?

Sentence 5: What decision is required?

If management can answer those five questions clearly, the issue is probably understood.

If the discussion keeps circling around technical details without answering them, the board may not yet understand the business consequence.

That's when you need to keep asking.

The principle

I'd summaries the “Field-to-Boardroom Bridge” in one sentence:

“A board doesn't need to know every technical detail; it needs to understand which technical details can change the business outcome”.

That's the difference between operational information and board-level insight.

The field sees the problem.

Management sees the execution challenge.

Finance eventually sees the number.

“The board has to connect all three”.

That's the bridge.

Practical Boardroom Checklist

“The Field-to-Boardroom Translation Test”

When a technical or operational issue comes before the board:

- What exactly is happening at the field level?

- Which assumption has changed?

- What activity or milestone does it affect?

- Is the affected activity on the critical path?

- What happens if the issue continues for 30, 60 or 90 days?

- What could be the financial consequence?

- Could it create a contractor claim or commercial dispute?

- Which external agency, contractor or stakeholder controls the dependency?

- Who owns resolution?

- What is management's proposed solution?

- Has the solution been independently validated where necessary?

- What assumptions do the recovery plan depend on?

- What happens if the recovery plan fails?

- What decision becomes harder or more expensive if the board waits?

- What does this technical issue mean for shareholder value?

The question I'd leave with the board

"If I strip away the technical language, what business problem are we actually being asked to govern?"

If the board can answer that question clearly, the “Field-to-Boardroom Bridge” is doing its job.

Chapter 4

The 5D Decision Test

What Will It Cost Us If We Don't Decide?

Most boards are comfortable asking: "What will this decision cost?"

That's a fair question.

But after years of working around projects and business decisions, I've found another question is often more important: "What will it cost us if we don't decide?"

The difference can be enormous.

A ₹10 crore decision that looks expensive today can become a ₹40 crore problem six months later—not because the decision changed, but because the company lost time and options.

That's why I developed the “5D Decision Test”:

Data → Delay → Downside → Dependencies → Decision

It's a practical test I use to separate a genuinely difficult decision from a decision that's simply being allowed to drift.

A Board Can Have Plenty of Information and Still Not Have a Decision

I've seen board papers running into dozens of pages.

There are financial projections, technical notes, legal opinions, risk registers, management recommendations and annexures.

And yet, after the discussion, a director can still ask: "So, what exactly are we deciding today?"

That's a problem.

The board doesn't necessarily need more information.

It needs to know “what the information means, what could happen next, and when action is required”.

The 5D Test is designed for exactly that.

D1 — Data

What do we know?

D2 — Delay

What happens if we wait?

D3 — Downside

What could realistically go wrong?

D4 — Dependencies

Who or what must move?

D5 — Decision

What needs to be decided now?

The sequence matters.

Don't jump to the decision before you've understood the first four.

D1 — DATA

What Do We Actually Know?

The first discipline is simple: “Separate facts from assumptions”.

That sounds obvious. In a boardroom, it isn't always.

Suppose management says: "The project is expected to be commissioned by March."

That's a forecast, not a fact.

I'd ask: "What facts support that forecast?"

Perhaps 82% of physical work is complete.

That's a fact.

But perhaps the remaining 18% includes testing, statutory approvals and commissioning.

Those are facts too.

The conclusion that the project will therefore finish by March is an assumption.

That distinction matters.

Fact, Estimate or Assumption?

When a significant decision comes to the board, I like to mentally put the information into three buckets.

Fact - Something that has happened or can be independently established.

Estimate - A calculation based on available information.

Assumption - Something that must happen for the forecast to work.

The danger comes when an assumption starts being presented as though it's a fact.

For example:

"The contractor will complete the balance work within four months."

I'd ask: "Based on what?"

Has productivity been demonstrated?

Are materials available?

Are approvals in place?

Is manpower adequate?

Are there unresolved interfaces?

You aren't challenging management for the sake of challenging management.

You're testing whether the decision rests on something solid.

D2 — DELAY

What Happens If We Wait?

This is the D I believe boards often underuse.

Delay.

A board may ask: "What's the cost of the proposal?"

I'd add: "What's the cost of waiting?"

Waiting is also a decision.

Sometimes it's exactly the right decision.

Sometimes it quietly destroys value.

Imagine management proposes replacing a critical piece of equipment for ₹8 crore.

The board decides to obtain another technical opinion before approving it.

That's reasonable.

But suppose the additional review takes three months, while production remains constrained and the business loses ₹2 crore of contribution every month.

The board has effectively made a ₹6 crore decision by choosing not to act.

Nobody may describe it that way.

But economically, that's what happened.

Delay Doesn't Usually Cost Only One Thing

In a major project, one month of delay can trigger several costs at once:

- Additional site overhead;

- Financing cost;

- Contractor extension claims;

- Idle equipment;

- Additional manpower;

- Procurement escalation;

- Delayed revenue;

- Pressure on subsequent activities.

These costs can build on one another.

That's why I often ask: "What happens after 30 days?"

Then: "What happens after 60 days?"

And: "At what point does our recovery option change?"

That last question is particularly important.

A decision may be easy today and expensive three months from now.

D3 — DOWNSIDE

What Could Realistically Go Wrong?

The third D is “Downside”.

This isn't about frightening the board with a disaster scenario.

It's about understanding the outcome that becomes reasonably possible if the current plan doesn't work.

I don't find statements such as: "There is no major risk."

Particularly useful.

There is almost always some risk.

I'd rather ask: "What's the credible downside if our current plan fails?"**

For a major project, that might include:

- six-month delay;

- Additional capex;

- Contractor claims;

- Financing costs;

- Delayed revenue;

- Lower utilization;

- Customer penalties;

- Regulatory consequences.

Then ask: "What assumptions are behind that downside?"

That's usually where the real discussion begins.

Don't Confuse Worst Case with Credible Downside

There's a big difference between the “worst imaginable outcome” and the “credible downside”.

If everything goes wrong, almost any project can produce a frightening number.

That's not particularly useful.

The board needs to know what could realistically happen if the current assumptions fail.

For example: "If the approval isn't received by October, the project could lose its planned commissioning window, adding approximately ₹15–20 crore in project and financing costs."

That's useful.

It gives the board something to think about.

It also gives management something to manage.

D4 — DEPENDENCIES

Who Has to Move?

This becomes particularly important in Indian infrastructure.

Large projects rarely sit entirely within one company's control.

You may be dependent on:

- Government departments;
- Municipal authorities;
- Railways;
- Utilities;
- Land authorities;
- Contractors;
- Consultants;
- Lenders;
- Customers;
- Statutory authorities.

The company may be ready.

The project may still be blocked.

That's a different kind of risk.

Ask: "Who Has to Move?"

Suppose management tells the board: "The project is awaiting approval.

Don't leave it there.

Ask: "Who has to issue the approval?"

Then: "What exactly are they waiting for?"

Then: "Who is responsible for following it up?"

Then: "What's the escalation route?"

And finally: "What do we do if the approval doesn't arrive?"

You're not getting involved in daily project administration.

You're identifying the dependency that could determine the business outcome.

An India-Based Example

Consider a large urban infrastructure project in Mumbai involving several agencies.

The main contractor has completed most of its work.

However, a critical interface with another public authority remains unresolved.

The monthly report says: "The matter is under discussion with the agency concerned."

That's easy to accept.

But suppose the unresolved interface is a prerequisite for testing.

Now the issue has changed.

It isn't just an inter-agency coordination matter.

It's a “commissioning dependency”.

Run it through the 5D Test.

Data: Most physical work is complete, but the interface remains unresolved.

Delay: If clearance takes another three months, testing and commissioning move.

Downside: Project overheads continue, financing costs rise, contractor claims may increase and revenue may be delayed.

Dependencies: The company can't resolve the matter by itself. Another authority must act.

Decision: Management may need board support for escalation, an alternative execution strategy or additional resources.

The original report said: "Matter under discussion."

The board now understands: "This unresolved external dependency could affect commissioning and therefore the project's financial outcome."

That's a much better board discussion.

D5 — DECISION

What Actually Needs to Be Decided?

This is where many board discussions become unclear.

Management presents the problem.

Directors ask questions.

Everyone agrees it's important.

The meeting moves on.

But nobody is quite sure what decision was made.

That's not good enough.

The fifth D asks: "What exactly needs to be decided?"

It might be:

- Approve additional expenditure;

- Accept a revised project plan;

- Change the execution strategy;

- Authorize management to negotiate;

- Escalate the issue;

- Approve a contingency;

- Defer the decision subject to a defined trigger;

- Or decide that no action is required.

The decision needs to be explicit.

Sometimes the Right Decision Is to Wait

There are situations where the correct answer is: "Don't decide yet."

That's perfectly legitimate.

But don't leave it vague.

If the board decides to wait, establish:

- What are we waiting for?
- By when?
- What information will change the decision?
- Who will bring it back?
- What happens if that information doesn't arrive?

Now waiting becomes a controlled decision. Otherwise, it's simply indecision.

Deliberation Can Become Indecision

Boards should take time to deal with important matters.

But there's a point where caution becomes expensive.

Imagine a project that needs a major design change.

Management asks for approval.

The board requests another study.

The study comes back.

Another consultant has been appointed.

Another meeting is being held.

Three months have passed.

Meanwhile, the project continues accumulating costs.

Everyone can say: "We were being careful."

But caution has a cost too.

That's why ‘Delay” comes before ‘Decision’ in the 5D Test.

The board needs to understand the price of waiting before deciding whether waiting is sensible.

The ₹15-Crore Decision

Suppose management recommends spending ₹15 crore to accelerate a project and protect the commissioning date.

The immediate question might be: "Why should we spend another ₹15 crore?"

Fair question.

But don't stop there.

Run the five Ds.

Data: What evidence shows that acceleration can protect the commissioning date?

Delay: What happens if the ₹15 crore isn't approved this month?

Downside: What's the credible financial exposure if acceleration doesn't work?

Dependencies: Which contractors, suppliers and agencies must cooperate?

Decision: What exactly does management want the board to approve?

Now the board isn't simply approving ₹15 crore.

It's deciding whether “₹15 crore is the right price to protect a much larger economic outcome”.

That's a far better conversation.

The Decision Window

Every important decision has what I call a “Decision Window”.

It's the period during which the company can still influence the outcome at a reasonable cost.

Before the window starts closing: “Options are open”.

As it closes: “Choices become more expensive”.

After it closes: “The company is mostly reacting to events”.

That's why I ask: "Are we still inside the decision window?"

It's often a more useful question than: "Is the current risk material?"

Why This Matters in Capex

Capex decisions are particularly vulnerable to this problem.

A project may start with a strong business case.

Then circumstances change.

Commodity prices move.

Interest rates change.

Technology improves.

Customer demand shifts.

Approvals are delayed.

A contractor struggles.

Yet the company continues because: "We've already spent so much."

That's a dangerous reason to continue.

Past expenditure is sunk.

The board should ask: "If we were making this investment today, knowing what we know now, would we still approve it?"

That question can be uncomfortable.

It can also save substantial money.

Don't Protect Yesterday's Decision

Boards can become attached to earlier decisions.

Management has spent years on the project.

Significant capital has already been invested.

Promoters may have strong strategic reasons for continuing.

Nobody wants to admit that the assumptions have changed.

That's when a board can start protecting yesterday's decision instead of making today's decision.

The better question is: "Given what we know today, what's the best decision now?"

That's the mindset I prefer.

The Independent Director's Role

An Independent Director doesn't have to own the project.

You don't have to solve the engineering issue.

You don't have to negotiate the contractor's claim.

Your value is often in asking the question that prevents a difficult decision from drifting.

Sometimes that question is simply: "What are we waiting for?"

Then: "How long can we wait?"

And finally: "What decision becomes more expensive if we delay?"

Those questions can change the entire discussion.

Five Statements That Should Trigger a Follow-Up

When I hear these phrases in a board meeting, I don't necessarily see a problem.

But I do see a reason to ask another question.

"We'll review it next month."

Ask: "What will change between now and next month?"

"We're waiting for more information."

Ask: "What information, and when will we have it?"

"The situation is still evolving."

Ask: "What decision threshold are we watching?"

"Management will monitor the situation."

Ask: "What's the specific trigger for action?"

"No immediate decision is required."

Ask: "What happens if we don't decide for another 30 or 60 days?"

None of these statements is necessarily wrong.

But each deserves precision.

The Board Doesn't Need to Decide Everything

Good governance isn't about making more decisions.

It's about making ‘important decisions at the right time”.

Some matters belong to management.

Some need escalation.

Some genuinely need more information.

Some require immediate board action.

The 5D Test helps distinguish between them.

That's why I don't see it as a theoretical decision-making model.

It's a “decision-discipline tool”.

It protects the board from two opposite mistakes: “deciding too quickly without understanding the facts”, and “waiting so long that the decision becomes unnecessarily expensive”.

One Rule I Keep Coming Back To

When a difficult issue reaches the board, don't ask only: "What's the right decision?"

Ask three more questions:

- "What happens if we're wrong?"
- "What happens if we wait?"
- "What choice do we lose if we delay?"**

Those questions often reveal more than another hour of presentation.

The principle

I'd reduce the "5D Decision Test" to one principle: "A good board decision isn't simply the decision with the lowest immediate cost. It's the decision that protects the company's future choices".

Data: tells you where you stand.

Delay: tell you what time it costs.

Downside: tells you what you're exposed to.

Dependencies: tell you what must move.

Decision: tell you what needs to happen now.

That's the discipline.

And sometimes the most important decision a board can make is the one it makes "before the problem becomes expensive".

Practical Boardroom Checklist

The 5D Decision Test

D1 — DATA

- What are the facts?
- Which numbers are estimates?
- Which assumptions are being used?
- What information is still missing?
- Has management clearly separated fact from expectation?

D2 — DELAY

- What happens if we wait 30 days?

- What happens if we wait 60 or 90 days?
- What additional cost could arise?
- Does waiting reduce our options?
- When does the decision window start closing?

D3 — DOWNSIDE

- What's the credible downside?
- What's the potential financial exposure?
- Could there be claims, penalties or lost revenue?
- Which assumption could make the downside worse?
- Has management tested a realistic downside scenario?

D4 — DEPENDENCIES

- Who must act?
- Which external agency, contractor or stakeholder is involved?
- Who owns the resolution?
- What's the escalation mechanism?
- What’s our fallback if the dependency fails?

D5 — DECISION

- What exactly is the board being asked to decide?
- What happens if we don't decide today?
- Can the decision be delegated?
- If we're deferring, what specific trigger brings it back?
- What decision becomes harder or more expensive if we wait?

The Question I'd Leave with the Board

"We're spending a lot of time discussing what this decision will cost. What will it cost us if we don't make it?"

In the real world, “indecision isn't free”.

Sometimes, it's the most expensive decision a board can make.

Chapter 5

Multi-Agency & Interface Risk

When Everyone Owns a Part—and Nobody Owns the Outcome

Some of the most expensive problems I've seen with infrastructure don't sit inside one organization.

They sit “between organizations”.

One agency says the work is ready. Another says it needs approval. The contractor says it can't proceed. The consultant says the design is complete.

Everyone has an explanation.

The project still hasn’t moved.

That's interface risk.

And in large Indian infrastructure projects, it can be more dangerous than a straightforward technical problem because the solution often sits outside the company's direct control.

The Problem Between the Boxes

A project may involve a developer, EPC contractor, consultant, railway authority, municipal corporation, utility provider, state government department and lender.

Each has its own responsibility.

The problem starts with where those responsibilities meet.

A drawing must move from one party to another.

A site must be handed over.

A utility must be shifted.

A railway block must be obtained.

Approval must be issued.

A design must be accepted.

If one of those handovers fails, the next activity may stop.

The project doesn't care which organization caused the delay.

“The project simply stops”.

That's the point boards need to understand.

Don't Treat Interface Issues as Routine Coordination

I've often seen project reports use phrases such as:

- "Under coordination."
- "Approval awaited."
- "Matter under discussion."
- "Expected shortly."

These phrases tell me that someone is working on the issue.

They don't tell me whether the project is protected.

So, I'd ask four simple questions:

- What exactly is pending?
- Who must act?
- By when?
- What happens if they don't?

That immediately changes the quality of the conversation.

The Board Should Follow the Critical Path

The board doesn't need to monitor every interface.

That's management's job.

The board needs to identify the interfaces that can affect the “critical path”.

Consider a railway infrastructure project.

A contractor is ready to execute a major section of work.

But execution requires railway approval.

The project team reports: "Railway approval is under process."

That sounds routine.

But suppose approval is required within 30 days to maintain the commissioning date.

After 30 days, the contractor must change the construction sequence.

That may mean additional mobilization, additional shifts and higher cost.

Now the issue isn't: "Railway approval is pending."

It's: "A railway interface has a 30-day decision window after which project recovery costs increase."

That's the information a board needs.

A Realistic India-Based Example

Take a large urban infrastructure project in the Mumbai region involving several public agencies.

The civil contractor has completed most of the structure.

The next major activity requires coordination with an existing railway corridor. At the same time, a utility relocation is required before another section can proceed.

The monthly project report says: "Railway and utility interfaces are being coordinated."

I'd stop there.

Not because the statement is wrong, but because it doesn't tell me enough.

I'd ask: "Which interface is currently affecting the critical path?"

Suppose management says railway approval is expected within four weeks.

Then I would ask: "What is the latest date on which we need that approval to protect the commissioning date?"

Suppose the answer is 25 September.

Then: "What happens if we don't receive it by 25 September?"

Management may explain that the contractor will need to resequencing the work, requiring additional mobilization and potentially adding ₹4 crore to project cost.

Now the board has a completely different picture.

The issue isn't simply an external approval.

It's a “time-bound commercial risk”.

The Critical Interface Date

For every important interface, I want one date clearly identified.

I call it the “Critical Interface Date”.

It's the date after which the project starts paying materially for the unresolved interface.

For example:

- Approval required: 15 September
- Normal tolerance:10 days

- Critical Interface Date: 25 September
- After 25 September: resequencing and additional mobilization required

This is much more useful than a status saying, "approval awaited."

It gives management a deadline.

It gives the board a trigger.

And it tells everyone when the issue needs escalation.

Use the Field-to-Boardroom Bridge

This is where the “Field-to-Boardroom Bridge” becomes particularly useful.

Take a technical or operational problem and translate it into its business consequence.

Field Reality

A railway approval hasn't been received.

↓

Operational Consequence

A critical construction activity can't proceed as planned.

↓

Schedule Consequence

The commissioning sequence is at risk.

↓

Financial Consequence

Additional mobilization, financing cost and potential contractor claims.

↓

Governance Consequence.

Management needs a defined escalation strategy.

That's the bridge.

The board doesn't need to decide how an engineer should solve the problem.

It needs to understand “when the engineering problem becomes a business problem”.

Responsibility Isn't the Same as Ownership

This distinction is extremely important.

An external authority may be responsible for giving an approval.

But management still must have the consequences for the company.

Suppose an authority delays a clearance.

Management says: "It's not our fault."

That may be completely true.

But I'd ask: "Who owns the consequence?"

Because shareholders don't receive compensation simply because the delay wasn't the company's fault.

The project still incurs cost.

Revenue may still be delayed.

Cash may still be blocked.

The contractor may still submit a claim.

“Responsibility can be divided. The consequence can't”.

Don't Let "Not Our Fault" Become the Strategy

There will be genuine situations where an external agency causes a delay.

The company may even have a contractual right to recover the resulting cost.

That's useful.

But a claim isn't the same as cash.

Suppose the company has a legitimate ₹50 crore claim.

It may still take years to settle.

During that time, the project remains delayed.

Financing continues.

Management attention is consumed.

Cash remains tied up.

So, when I hear: "We'll recover it through a claim."

I'd ask: "When do we expect the cash?"

Then: "What does the delay cost us until settlement?"

And: "What are we doing to prevent the underlying problem?"

A contractual right is protection.

It isn't a substitute for managing the project.

Apply the 5D Decision Test

The “5D Decision Test” is particularly powerful for interface risks.

1. Data

What exactly is pending?

Don't accept: "Approval pending."

Ask:

- Which approval?

- From whom?

- For which activity?

- When was it submitted?

- What response has been received?

- What's still outstanding?

2. Delay

What happens if the matter remains unresolved for another:

- 30 days?

- 60 days?

- 90 days?

→Does the contractor remain mobilized?

→Does the critical path move?

→Does commissioning move?

→Does the revenue date move?

3. Downside

What's credible financial exposure?

Look at:

- Additional project cost;

- Contractor claims;

- Financing costs;

- Idle resources;

- Escalation;

- Delayed revenue;

- Penalties;

- Additional mobilization.

Don't just ask for the worst-case number.

Ask: "What's the most realistic downside if the current plan doesn't work?"

4. Dependencies

- Who must act?

- Who controls that action?

- Who can influence them?

- What are they waiting for?

- Is there an alternative route?

- This is the heart of interface risk.

5. Decision

- What can management do now?

- Can the work be sequenced?

- Can an alternative methodology be adopted?

- Does the issue require escalation?

- Does management need additional authority or funds?

- Or should the board establish a specific escalation trigger?

The objective isn't to solve every operational problem at board level.

It's to stop an important problem from drifting.

Build an Interface Map

For a large project, I'd rather see one good interface map than another 50-page project report. The map should show:

Sr. No	Interface	External Party	Pending Action	Critical Date	Potential Impact	Internal Owner	Escalation
1	Railway approval	Railway authority	Work permission	25 Sept	Commissioning risk	Project director	CEO
2	Utility Shifting	Utility agency	Relocation	20 Sept	Construction delay	Package Head	Project Director
3	Land handover	State authority	Site access	30 Sept	Workfront constraint	Project Head	CEO
4	Design approval	Authority / Consultant	Revised Drawing	10 Sept	Foundation delay	Engineering Head	CEO

The purpose isn't documentation.

It's visibility.

A board member should be able to look at the page and immediately see:

- What's blocked?
- Who controls it?
- When does it become serious?
- Who is accountable internally?
- What happens next?

One Owner for Every Critical Interface

For every critical interface, I recommend one internal owner.

Not: "The project team."

Not: "The coordination committee."

One person.

That person may not control the external agency.

That's fine.

The person owns the “outcome, follow-up and escalation”.

If the interface remains unresolved, that person brings it forward.

This creates accountability without pretending the company controls an external authority.

Interface Meetings Should Produce Action

I've attended enough project meetings to know that a meeting can produce excellent minutes and very little progress.

For a critical interface, I want four things recorded:

- Who will do what?
- By when?
- What happens if they don't?
- Who escalates?

That's usually more useful than another long set of minutes.

→Watch for Repeated Delays

One isolated delay may be unavoidable.

Repeated delays around the same interface are different.

Suppose the project report says:

- Month 1: Approval awaited.
- Month 2: Approval under discussion.
- Month 3: Approval expected shortly.
- Month 4: Approval likely next month.

I'd ask: "What has changed since this issue was first reported?"

If the answer is "nothing," the board should take a closer look.

The problem may no longer be the external agency.

It may be the company's escalation process.

→ The Pattern Is Often More Important Than the Event

A single two-week delay may not be material.

But five separate two-week delays around different interfaces can destroy the schedule.

That's why I look for patterns:

- Repeated approval delays;
- Repeated design changes;
- Repeated access problems;
- Repeated utility conflicts;
- Repeated contractor claims;
- Repeated resequencing.

Each may appear small in isolation.

Together, they can change the economics of the project.

Ask What Evidence Will Be Needed Later

There's another question boards should ask: "If this becomes a claim two years from now, will we have the evidence to prove what happened?"

That means maintaining a proper record of:

- Correspondence;
- Approvals;
- Instructions;
- Meeting records;
- Site records;

- Photographs;
- Program changes;
- Notices;
- Contractual communications.

This isn't bureaucracy.

It's commercial protection.

A poorly documented interface can become a weak claim, even when the company was right.

The Board Doesn't Need to Control Every Interface

This is an important boundary.

A board shouldn't become a project management office.

Management must be managed.

The board must govern.

The board's role is to make sure management can answer:

- Which interfaces matter most?
- What's the critical date?
- What's financial exposure?
- Who owns the outcome?
- What's the fallback?
- When does the matter come back to the board?

If management can answer those questions clearly, the board has visibility without getting into operational detail.

A Useful Test: "What Happens Next Monday?

I sometimes find that a very simple question exposes weak planning: "What exactly happens next Monday if this approval still hasn't come?"

If nobody can answer, there's probably no real contingency plan.

A good project team should be able to say: "If approval doesn't come by Monday, we move Package B forward, deploy the second crew to Section C and escalate the railway interface to the designated authority."

That's action.

Compare that with: "We'll continue to follow up."

That's activity.

“Boards should look for action, not just activity”.

Interface Risk Can Become Governance Risk

At first, the issue may look technical.

Then it becomes commercial.

Then financial.

Eventually, it can become a governance issue.

Why?

Because the board may have been receiving repeated assurances without a realistic assessment of the consequences.

That's when directors need to ask whether the report itself is giving a true picture of the project.

A dashboard that repeatedly says "on track" while critical interfaces remain unresolved isn't giving the board useful information.

The problem isn't the color on the dashboard.

It's the judgement behind it.

The Real Boardroom Question

The most useful question isn't: "Who caused the delay?"

It's: "What can we do now to protect the project's outcome?"

Fault can be determined later through contracts and claims.

The board's immediate responsibility is to protect value.

That may mean escalation.

It may mean resequencing.

It may mean spending additional money.

It may mean changing the execution strategy.

Or it may mean accepting a delay because the economics of recovery doesn’t make sense.

But the choice should be deliberate.

The principle

I'd summaries multi-agency and interface risk in one sentence: “When responsibility is divided between organizations, ownership of the consequence must remain clear”.

The board doesn't need to control every external agency.

It needs to know: “what is dependent, who must act, when they must act, what happens if they don't, and when management must escalate”.

That's the difference between “monitoring an interface” and “governing an interface”.

And in major infrastructure projects, the most dangerous risk isn't always inside the project.

Sometimes it's the gap “between two perfectly competent organizations”.

Practical Boardroom Checklist

Multi-Agency & Interface Risk Test

1. Identify the Interface

- Which activities depend on another organization?
- Which interface can affect the critical path?
- What exactly is pending?
- Is the dependency internal or external?

2. Identify the Critical Date

- What date is required to protect the project schedule?
- What is the “Critical Interface Date”?
- What happens after that date?
- Does recovery option become more expensive?

3. Establish Ownership

- Who must act externally?
- Who owns the consequence internally?
- Is there one named internal owner?
- Who has authority to escalate?

4. Test the Financial Exposure

- What additional cost could arise?
- Could there be contractor claims?

- Could financing costs increase?

- Could revenue or commissioning be delayed?

- Is management relying on future claim recovery?

5. Test the Dependency

- What exactly is the external party required to do?

- What are they waiting for?

- Is there a documented action plan?

- Is there a fallback option?

- Is the issue genuinely being resolved—or merely discussed?

6. Test the Decision

- What can management do immediately?

- Does the matter require escalation?

- Is additional authority or expenditure required?

- What is the trigger of escalation?

- When will the matter be resolved with the board?

The question I'd leave with the board

"If everyone is doing their own job, but the project still isn't moving, who owns fixing the interface?"

That's the question that takes a board from “watching the problem” to “governing the outcome”.

Chapter 6

Trust, People & Execution

The Human Factor Behind Every Successful Project

A project can have a good contract, a strong consultant, adequate funding and an experienced technical team—and still fail to deliver.

I've seen projects where the engineering was sound, the drawings were available and the schedule looked achievable.

Yet the project kept slipping.

The problem wasn't always technical.

Often, it was the way people were working together.

People weren't sharing bad news early. Decisions were being pushed upward. Managers were protecting themselves. Site teams were waiting for instructions instead of taking ownership.

That’s when I started looking at “trust as an execution issue”.

Not a leadership slogan.

An execution issue.

When People Stop Speaking Up

Consider a site engineer who notices that a particular construction sequence isn't working.

He knows the problem may affect the schedule.

But raising it creates another problem.

Someone may ask: "Why didn't you identify this earlier?"

Or worse: "Who approved of this method?"

So, the engineer waits.

The team tries another adjustment.

A few days become a few weeks.

Eventually, the issue reaches senior management.

By then, a technical problem has become a schedule problem.

Then there is a cost problem.

And eventually, potentially a board problem.

The board sees the cost.

It rarely sees the hesitation that caused it.

The Question I Would Ask

When a major problem appears late, I don't want to hear only: "What went wrong?"

I'd first ask: "When did the team first know about it?"

Then: "When did it escalate?"

The gap between those two dates can tell you a great deal.

If the site knew about a problem on 1 June and the project head knew on 30 June, that's not simply an engineering issue.

It's a management issue.

If the project head knew on 5 June and the board heard about it in August, that's a governance issue.

The timeline matters.

Trust Isn't About Being Soft

There's a common misunderstanding about trust.

Some people think a high-trust organization means being lenient.

It doesn't.

Trust doesn't mean tolerating poor performance.

It doesn't mean ignoring mistakes.

It doesn't mean removing accountability.

It means people can say: "We have a problem."

Without immediately fearing: "Who will be blamed?"

The first response should be: "Tell me what happened. What are our options? What do you need to fix it?"

Accountability can follow.

But first, you need the truth.

A Realistic India-Based Example

Think about a major bridge or rail infrastructure project involving difficult terrain, specialized construction and multiple agencies.

The project team discovers that one part of the planned construction sequence is taking considerably longer than expected.

The schedule is already tight.

The project head could respond with: "The commitment is 36 months. Find a way to finish."

That's understandable.

But it can produce the wrong behavior.

The engineering team may become reluctant to say that the original approach needs to change.

Instead, they keep trying to make the existing method work.

Weeks pass.

Then the issue becomes too large to ignore.

A different approach would be to tell the team: "I don't need a perfect report. I need the real problem. If the method isn't working, tell me now. We'll decide what to change."

That doesn't remove accountability.

It creates room for professional judgement.

And that can save time.

Trust Speeds Up Information

This is where trust has a very practical value.

When people don't trust management:

- Bad news travels slowly.

When people trust management:

- Bad news travels quickly.

That's a major difference between a complex project.

If an engineer identifies a problem today, management should know today.

Not after the monthly review.

Not after the contractor submits a claim.

Not after the schedule has already slipped.

The earlier management knows, the more choices it has.

That's why trust has an economic value.

The Field-to-Boardroom Bridge

This is exactly where my "Field-to-Boardroom Bridge" becomes useful.

A seemingly small people issue at site can travel through the organization.

At the field

The problem hasn't escalated.

↓

At project management level

Corrective action starts late.

↓

At commercial level

Additional costs appear.

↓

At contract level

Claims begin.

↓

At financial level

Project margins deteriorate.

↓

At board level

The investment case changes.

The board sees the final consequence.

The original problem may have started with one person being reluctant to speak up.

That's why boards need to understand what is happening “before the number appears in the accounts”.

The Cost of Fear

Fear doesn't appear in a project budget.

But its consequences do.

Suppose an engineer identifies a potential design or construction problem.

If the environment is supportive, the issue gets raised immediately.

Management investigates.

A decision is made.

The project moves forward

If the environment is punitive, the engineer may wait.

Then the project manager waits.

Then senior management waits.

Eventually, the board is asked to approve an expensive recovery plan.

The cost wasn't created when the recovery plan was approved.

It started when somebody decided it was safer “not to speak”.

Trust and the 5D Decision Test

This connects directly with the “5D Decision Test”.

When people hesitate to decide, ask: "What will it cost us if we don't decide?"

Suppose a technical modification costs ₹2 crore. Management hesitates because nobody wants to approve additional expenditure.

Three months later:

- The contractor submits a claim;

- Mobilization costs increase;

- Equipment remains idle;

- Financing costs continue;

- Commissioning is delayed.

The ₹2-crore decision looked expensive.

But the cost of not deciding may be considerably higher.

That's why good governance isn't simply about controlling expenditure.

It's about understanding the “cost of delay”.

People Closest to the Problem Often Know the Most

In infrastructure, the best information isn't always sitting in the corporate office.

It may be with:

- The site engineer;

- Construction manager;

- Quality engineer;

- Equipment operator;

- Maintenance supervisor;

- Project controls team.

They see the problem every day.

But information without authority doesn't produce execution.

If every small technical decision must travel through five levels of management, the project will slow down.

The answer isn't always another meeting.

Sometimes it's simple: Give the right person the authority to decide.

Authority Must Match Responsibility

This is one of the simplest tests I use.

Ask:

- Who sees the problem?
- Who understands the problem?
- Who has authority to act?
- Who carries accountability?

If the answers are for different people sitting at four different levels, expect delay.

A project manager who is responsible for delivery but can't approve of a reasonable operational decision isn't really being given responsibility.

He's being given “accountability without authority”.

That rarely ends well.

Don't Reward Only the Result

Consider two project managers.

The first meets the original schedule but hides emerging risks until the last stage.

The second raises problems early, changes the execution plan and finishes slightly later—but avoids a major cost overrun and a much bigger delay.

Who demonstrated better judgement?

The dashboard may favor the first person.

I wouldn't.

A board should look at “how the result was achieved”, not just the final number.

Good governance rewards responsible judgement, not just attractive reporting.

Recognition Matters

Recognition doesn't need to be elaborate.

Sometimes it's simply saying: "You did the right thing by raising this early."

That message matters.

People watch what senior management rewards.

If the only behavior that gets praised is: "Everything is on schedule,"

People may learn to hide anything that threatens the schedule.

If management recognizes: "You identified the problem early and helped us deal with it,"

The organization learns a different lesson.

That lesson is much healthier.

Create a "Red Flag" Conversation

One practical tool I like is a regular “Red Flag Review”.

Ask every project leader: "What's the one thing you're worried about that isn't yet visible in the formal report?"

Then listen.

Don't immediately challenge the person.

Don't turn the meeting into a blame exercise.

The objective is to get information that may not appear in the standard dashboard.

The formal report tells you what has been reported.

The red-flag question tells you what people are “actually worried about”.

Those aren't always the same.

The Board Should Watch Behavior, Not Just Reports

You can learn a lot from how management reacts to bad news.

Does the room immediately ask: "Who made the mistake?"

Or: "What happened?"

Does management listen?

Or interrupt?

Does the person reporting the problem become defensive?

Or does the team focus on fixing it?

These behaviors tell you more about the organization than a beautifully written culture policy.

The "No Surprises" Principle

I believe boards should insist on a “no-surprises culture”.

That doesn't mean management will never make mistakes.

It means the board shouldn't discover material problems through:

- The media;

- A regulator;

- A lender;

- A contractor;

- An auditor;

- Or a sudden financial provision.

If management knows about a significant issue, the board should hear about it early enough to exercise judgement.

A board can't govern what it doesn't know.

But No Surprises Doesn't Mean No Bad News

This distinction is important.

If management tells the board: "There are no issues."

Every quarter, that shouldn't automatically reassure you.

Complex projects have problems.

Good management isn't management without problems.

Good management is management that “finds problems early and deals with them honestly”.

I'd rather hear: "We have three significant risks. Here's what we're doing."

Then: "Everything is under control."

Followed six months later by a major cost overrun.

Trust Needs Boundaries

Trust without control can become dangerous.

People need clear limits.

There should be defined approval thresholds for:

- Cost variations;

- Design changes;

- Contract amendments;

- Safety matters;

- Technical deviations;

- Schedule changes.

The objective isn't to let people act without control.

It's to give them enough authority to act “within clearly understood boundaries”.

That's how you combine speed with governance.

Don't Confuse Speed with Recklessness

Fast decisions aren't automatically good decisions.

A safety-critical technical change may need independent review.

A minor operational decision may not need three levels of approval.

The board should ask: "Is the level of approval proportionate to the risk?"

That's a better question than simply telling management: "Take decisions faster."

Good governance doesn't eliminate controls.

It puts the “right controls at the right level”.

Trust Works in Both Ways

The field team needs to trust management.

But management also needs to trust the field.

An engineer should be able to think: "If I report this honestly, I'll get support."

Management should be able to think: "If I give this person authority, they'll use it responsibly."

That relationship isn't created by a policy document.

It's built through repeated behavior.

One unfair reaction to bad news can destroy months of trust.

Measure the Culture Through Execution

Culture can sound difficult to measure.

You can still look for evidence.

Ask: How early are risks being escalated?

Are serious problems reaching management before they become expensive?

“How long do decisions take?”

Is a two-day decision taking three weeks?

“Are the same problems recurring?

If yes, are we solving symptoms rather than causes?

“Are experienced people leaving?”

High turnover in critical project roles deserves attention.

“Are near misses being reported?”

A sudden drop in reported incidents isn't necessarily good news.

It may mean people have stopped reporting them.

These aren't perfect measures.

But together they reveal the health of execution.

The Board Doesn't Need to Run the Project

An Independent Director shouldn't tell a project manager how to execute a construction activity.

That's management's job.

The board's role is different.

It should test whether management has created the conditions in which good decisions can be made.

Ask:

- Are the right people getting the right information?
- Are they authorized to act?
- Are they being held accountable?
- Can they raise problems without fear?
- Does management know when the plan is no longer working?

Those are governance questions.

When Things Go Wrong, Watch the First 30 Minutes

One of the best indicators of organizational culture is what happens immediately after a serious problem is discovered.

Does everyone start looking for someone to blame?

Or does someone say: "Stop. Let's understand the facts."

Does management hide the issue?

Or escalate it?

Does the team freeze?

Or start working through options?

Those first reactions often tell you more about leadership than any formal presentation.

The Real Test of Trust

You don't test trust when everything is going well.

You test it when:

- The project is behind schedule;

- The budget is under pressure;

- A technical assumption has failed;

- A contractor is making a claim;

- A regulator has raised concern;

- or a senior executive has made a mistake.

That's when people decide whether telling the truth is safe.

And that's when boards should pay attention.

The principle

I'd put it simply: “People execute better when they know they can tell the truth, take responsible decisions and ask for help without being punished for raising a problem early”.

Trust isn't a soft concept.

It affects the speed at which information moves.

It affects the speed at which decisions are made.

It affects the quality of judgement.

And eventually, it affects the cost and completion date of the project.

So, when a project is underperforming, don't look only at the schedule and the budget.

Look at the people.

Ask whether they have the “information, authority and confidence to act”.

Because sometimes the biggest execution problem isn't that people don't know what to do.

“It's that they don't feel safe enough to say what they know”.

Practical Boardroom Checklist

Trust, People & Execution Test

1. Information

- Are material problems being escalated early?

- When did the field team first know about the current major issue?

- When did senior management know?

- When did the board know?

- Is there an unexplained gap between these dates?

2. Decision-Making

- How long does it take to make important operational decisions?

- Are routine decisions unnecessarily escalated?

- Does the person responsible for delivery have sufficient authority?

- Are approval limits clear?

- Is fear of making the wrong decision slowing execution?

3. Trust

- Can employees challenge an existing plan?

- Can they report bad news without fear?

- Does management listen before assigning blame?

- Are people recognized for identifying problems early?

- Do contractors and consultants feel comfortable raising concerns?

4. Accountability

- Are responsibilities clearly defined?

- Does authority match responsibility?

- Are repeated failures addressed?

- Are safety and compliance failures treated seriously?

- Does trust coexist with accountability?

5. 5D Decision Test

- Data: What do we know?

- Delay: What will it cost if we wait?

- Downside: What could go wrong if we act?

- Dependencies: Whose expertise or approval is required?

- Decision: Who should decide, and by when?

6. The One Question I Would Ask

"What problem does the project team know about today that isn't yet visible in our board report?"

If the answer is genuinely "nothing", that's fine.

But if the room becomes uncomfortable, defensive or silent, pay attention.

The silence may be telling you more than the dashboard.

A strong culture of execution isn't one where nobody makes mistakes. It's one where people have the courage to surface mistakes early enough for the organization to do something about them.

Chapter 7

The Urban Mobility Knot

Why Good Infrastructure Projects Get Stuck Between Organizations

A railway project doesn't usually fail because engineers don't know how to build a bridge.

A metro project doesn't get delayed because nobody knows how to construct a station.

Very often, the problem sits somewhere else.

Between organizations.

One agency controls the railway land. Another controls the road. A third is responsible for utilities. Someone else must give an approval. The contractor is waiting for a decision from one department, while that department is waiting for action from another.

Everyone may be doing their job.

Yet the project isn't moving.

That's the "Urban Mobility Knot".

It happens when a project involves several agencies, contracts and decision-making systems, but nobody is actively managing the space "between them".

That's where practical infrastructure and leadership matters.

The administrative question is: Who's responsible?

The project question is: What's stopping the work?

The leadership question is: Who needs to act, by when, and what happens if they don't?

That difference can be worth crores on a major project.

The Project Boundary Is Not the Organizational Boundary

This is one of the clearest lessons I've learned from working in railway and transport infrastructure.

A project may have a neat physical boundary.

The organizational boundary is rarely that neat.

Take a railway bridge in a crowded urban area. The railway organization may control the bridge, but completion can depend on land, road diversions, utility shifting, traffic management, municipal permissions, contractors, consultants and safety clearances.

The bridge itself may be 95% complete.

But if the approach road isn't ready, the public can't use it.

From an engineering perspective, the bridge is nearly complete.

From the citizen's perspective, "the project isn't complete at all".

That's why I'm cautious about headline numbers such as "95% complete".

A project can be: 95% physically complete and 100% operationally incomplete.

That distinction matters.

A Realistic Indian Example: The Urban Railway Interface

Consider a typical situation in Mumbai's suburban railway environment.

The railway authority decides to improve the congested corridor by constructing a new road overbridge and the associated approaches. The railway portion progresses well. The design is approved, the contractor is mobilized and fabrication has started.

The monthly report looks healthy.

Then the project reaches the approach road.

Land must be made available. A utility must be shifted. Traffic arrangements need approval. Different agencies must coordinate their activities.

The railway authority writes to the municipal authority.

The municipal authority says a utility must be shifted first.

The utility agency says it needs a shutdown and a joint inspection.

The traffic authority wants a revised diversion plan.

The contractor says it can't proceed until the site is handed over.

Every statement may be correct.

But the project is waiting.

That's the knot.

The Problem With "Coordination"

The usual response is to call another coordination meeting.

Everyone attends.

Everyone explains what they're waiting for.

Someone records the minutes.

Another letter is issued.

Two weeks later, the same issue appears in the next meeting.

I've found that the better approach is to stop discussing the organizations and identify the "interface that's actually blocking the next critical activity".

That's where I use the "KNOT Framework".

K — Know the interfaces

Map the actual dependencies.

Don't just list the agencies involved. Identify the points where one organization's action is necessary before another can proceed.

For example:

Land → Utility shifting → Traffic diversion → Site handover → Construction → Testing → Commissioning

That's the real project chain.

N — Name one accountable owner

Every important interface needs a named person who drives the issue to closure.

Not: "The Municipal Corporation will resolve it."

Instead: "Mr. X will coordinate with the municipal and utility teams and secure the required decision by 15 September."

The organization may own the function.

"Someone must own the follow-through".

O — Order the dependencies

What must happen first?

What can happen simultaneously?

What's genuinely on the critical path?

This matters because project teams often spend time chasing items that look urgent but have little effect on the completion date.

T — Track the critical interfaces

Don't monitor only expenditure and physical progress.

Track the interfaces that can stop the next milestone.

T — Trigger escalation early

Escalation shouldn't mean that someone has failed.

It means the normal mechanism isn't working quickly enough.

A good escalation system stops a two-week problem from becoming a six-month problem.

The Three Clocks

I look at major infrastructure projects through three clocks.

1. The Engineering Clock

Can the asset be designed and built?

2. The Administrative Clock

Can land, approvals, utilities and inter-agency decisions happen in time?

3. The Financial Clock

Can the economics of the project absorb the consequences of delay?

The problem starts when these clocks move at different speeds.

Suppose the engineering team can complete a bridge in six months.

But land clearance takes another four months. Utility shifting takes three more. Traffic approval takes another two.

The engineering team hasn't failed.

The project has simply failed to synchronize its three clocks.

But the financial clock doesn't stop while the administrative clock is running.

Interest continues.

Escalation continues.

Contractor overheads continue.

Equipment remains committed.

Revenue remains postponed.

So, I would put it very simply: Delay is not an administrative event. Delay is a financial event.

The Cost of Waiting

Management is generally comfortable presenting the cost of deciding.

They might say: "Option A will cost ₹10 crore more."

The Board then discusses whether the additional ₹10 crore is justified.

But I'd ask another question: "What will it cost us if we don't decide?"

Suppose delaying the decision by six months results in additional financing costs, contractor claims, escalation, idle resources and delayed revenue.

The apparent saving from postponing the decision may disappear very quickly.

That's why I use the "5D Decision Test".

DEFINE

What exactly needs to be decided?

DATA

What do we know?

What are we assuming?

What remains uncertain?

DAMAGE

What happens if we wait another month, three months or six months?

DELEGATE

Who has the authority and the information to make the decision?

DECIDE

What action is required now?

Who owns it?

By when?

And what triggers escalation?

A meeting that ends with: "The matter will be examined"

Hasn't necessarily produced a decision.

A useful meeting ends with: Decision + Owner + Deadline + Escalation Trigger.

When Everyone Is Responsible, Nobody Is Accountable

This is one of the most dangerous situations in a multi-agency project.

You can have ten organizations represented in a meeting, all with competent officers.

Minutes are prepared. Letters are issued. Everyone goes back to work.

Six weeks later, the same issue is discussed again.

Why?

Because responsibility was distributed, but accountability wasn't.

That's why I use the "4A Interface Test".

ALIGN

Are all agencies working toward the same outcome?

ASSIGN

Who is the single accountable person for resolving the interface?

ANTICIPATE

What could prevent the agreed action?

ACT

What needs to happen now?

The word "single" is important.

Five agencies may be involved.

There should still be one person responsible for driving the coordination.

That doesn't transfer the legal or contractual responsibility of the other agencies.

It simply ensures that the interface doesn't become everybody's problem and nobody's priority.

The Board Shouldn't Manage the Project

There's another trap.

Once a Board realizes that interfaces are creating risk, it can start getting involved in operational details.

That isn't the Board's job.

An Independent Director shouldn't tell the project engineer how to sequence construction activities.

But the Board should ask questions that reveal whether management actually has control.

For example:

- Which external interface currently represents the biggest risk to commissioning?
- Who owns it?
- How long has it been unresolved?
- What's the financial impact of another three months of delay?
- What escalation has already taken place?
- What decision is still pending?
- When does this come back to the Board?

These aren't operational questions.

They're "governance questions informed by engineering reality".

That's where field experience becomes useful in the boardroom.

Look Beyond the Progress Number

One of the habits I developed in infrastructure work was to look beyond the headline number.

Suppose the Board receives: Project Progress: 82%

That sounds reassuring.

My next question would be: 82% of what?"

Is it physical quantity?

Expenditure?

Weighted progress?

Critical-path progress?

More importantly: Can the completed work be commissioned?

The remaining 18% may include the most difficult parts of the project—land, utility relocation, testing, integration, safety certification, traffic diversion or commissioning.

If so, the project may be much riskier than the 82% figure suggests.

The last 10–20% of a complex infrastructure project can carry a disproportionate amount of risk.

So, the Board shouldn't ask only: How much have we completed?

It should ask: "What remains, and which remaining activity can prevent the entire asset from becoming operational?"

That's the question that matters.

From Coordination Meetings to Decision Meetings

I've seen coordination meetings become routine very easily.

Everyone attends.

Everyone reports.

Everyone records minutes.

Everyone leaves.

The project remains stuck.

A better meeting should answer six questions:

1. What's blocked?

2. Why is it blocked?

3. Which interface is causing the blockage?

4. Who can unblock it?

5. By what date?

6. What happens if it isn't resolved?

The sixth question changes the conversation.

Once people understand the consequence of delay, the discussion becomes less about correspondence and more about resolution.

The Board's Red-Flag Ladder

Not every interface problem needs Board intervention.

I'd use a simple four-level approach.

GREEN — Controlled

The interface is progressing and has no critical-path impact.

"Management handles it".

AMBER — Emerging

There's a credible risk of delay or cost impact.

"Project leadership monitors it closely".

RED — Material

The issue affects the critical path, cost, safety or commissioning.

"Senior management or the appropriate Board committee needs to intervene".

BLACK — Strategic

The underlying project assumption has materially changed.

Demand may have changed. Costs may have increased substantially. Completion may have moved far beyond the original business case.

At this point, the question changes.

It's no longer: "How do we complete the project?"

It becomes: "Should we continue the project in its present form?"

That's a Board question.

What I Would Want to See as an Independent Director

If I were reviewing a major urban infrastructure project at Board level, I wouldn't ask management for another hundred pages of project reports.

I'd ask for a "one-page Interface Dashboard".

Sr. No	Critical Interface	Owner	Days Outstanding	Impact	Current Action	Escalation Date
1	Land	Named Person	42	High	Approval pending	20 Aug
2	Utility	Named Person	28	High	Joint inspection	25 Aug

3	Traffic	Named Person	15	Medium	Revised plan	30 Aug
4	Design approval	Named Person	7	Low	Under review	----

That page can tell the Board more about the project's real risk than dozens of pages of narrative.

The Board doesn't need to know every technical detail.

It needs to know:

- Where is the knot?
- Who owns it?
- What is it costing us?
- What decision is required?

The Deeper Lesson

The Urban Mobility Knot isn't really about bureaucracy.

It's about "interfaces".

India has developed the capability to execute large and technically sophisticated infrastructure projects. The harder challenge is making different systems work together.

Railways must connect with roads.

Stations must connect buses, metros, parking and pedestrian networks.

Infrastructure agencies must connect with municipalities.

Government programs must connect with private investment.

Project teams must connect technical decisions with financial consequences.

The future of urban mobility won't depend only on how quickly we build individual assets.

It'll depend on how well we "connect institutions around one outcome".

That requires a different kind of leadership.

Not command-and-control.

Not another coordination committee.

Not another exchange of letters.

It requires "interface leadership"—the ability to see where responsibility changes hands and make sure the project doesn't get stuck at that handover.

That is the essence of "The Urban Mobility Knot".

"The project doesn't care which department owns the problem. The project only cares whether the problem gets solved".

And ultimately, neither does the citizen.

Practical Checklist: Untying the Urban Mobility Knot

Before approving, monitoring or escalating a major multi-agency infrastructure project, ask:

- Have all participating organizations and critical interfaces been mapped?

- Is there one clearly identified owner for every critical interface?

- Are dependencies properly sequenced?

- Which interface currently sits on the critical path?

- How long has each unresolved interface remained open?

- What's the financial cost of the delay?

- Are contractor claims or escalation costs increasing?

- Are land, utility and approval dependencies being tracked separately?

- Does reported physical progress translate into operational readiness?

- What remains before the asset can be commissioned?

- Which decisions are pending, and with whom?

- Has management calculated the cost of waiting?

- Is escalation happening early enough?

- Does every coordination meeting end with an "owner and deadline"?

- Has the project moved from coordination to decision-making where necessary?

- Does the original business case still hold?

- What is the single biggest interface risk today?

- What decision is required now—not at the next review?

The question I would leave every project team and Board with: "Where is the knot—and who is accountable for untying it?"

Chapter 8

New Infrastructure Opportunities

Seeing the Need Before Everyone Sees the Opportunity

When people talk about infrastructure, they usually think about roads, bridges, railways, airports, ports and power plants.

Those assets will continue to matter.

But some of the most interesting opportunities in India are emerging somewhere else—where “demographic change, industrial growth, technology and changing consumer behavior create new infrastructure needs”.

That's where I believe board-level judgement becomes valuable.

The question isn't simple: "What infrastructure does India need today?"

I'd ask: "What problem is becoming too large for the existing infrastructure to handle?"

That's often where the next opportunity begins.

Start With the Problem, Not the Project

I've seen investment discussions start with the asset.

"We should build a logistics park."

"We should develop senior living."

"We should build a data center."

"We should enter warehousing."

That's backwards.

Start with the problem.

- What is changing?
- Who is affected?
- How serious is the problem?
- Who is willing to pay for a solution?

Only then should you decide what asset to build.

A good infrastructure project solves a real problem.

A bad one starts with an attractive piece of land and tries to find a reason to build something on it.

The Next Opportunity May Not Look Like Traditional Infrastructure

India's infrastructure needs are changing.

An ageing population creates demand for senior living and specialized healthcare.

Manufacturing growth creates demand for industrial logistics and supplier parks.

Urban congestion creates demand for multimodal transport and distributed logistics.

Digitalization creates demand for data infrastructure.

Climate pressure creates demand for water, waste and resilience infrastructure.

The physical assets may be different in each case.

But the investment logic is similar: “Find a structural need. Understand the customer. Build only what the demand can support.

A Realistic India-Based Example: Senior Living

Consider a developer with 10 acres on the outskirts of a major Indian city.

The conventional real-estate approach is straightforward:

Build apartments.

Sell them.

Collect the money.

Move to the next project.

But suppose the developer looks at the demographic change happening around the city.

Children are increasingly living in other cities or countries.

Parents are living longer.

Families are smaller.

Healthcare needs become more complex with age.

Many seniors don't necessarily want to sell their capital and move into an institution.

They may want a secure, well-managed community where they can “rent their home and access services”.

Now the developer has another option.

Build 300 professionally managed senior-living units.

Provide:

- Accommodation;

- Housekeeping;

- Food;

- Security;

- Emergency response;

- Healthcare access;

- Recreation;

- Transportation;

- Wellness facilities.

The asset is no longer just residential real estate.

It's an “operating platform”.

The Business Model Changes

In a conventional residential project, the financial model may look like:

Land → Construction → Sales → Collections → Exit

Senior living can look very different:

CAPEX → Occupancy → Monthly Revenue → Operating Cost → EBITDA → Long-term Asset Value

That changes the questions the board must ask.

It's no longer enough to ask: "How much can we sell these units for?"

You need to ask: "Can we operate this asset profitably for 15–20 years?"

That's a completely different skill set.

The Field-to-Boardroom Bridge

This is where the “Field-to-Boardroom Bridge” becomes useful.

At the field level, the observation may be: "There are more elderly people who need managed living."

At the board level, the question becomes: "What operating model converts that demographic need into sustainable recurring cash flow?"

That's the bridge between an observation and an investment decision.

The board doesn't need to design the senior-living facility.

It needs to challenge whether the underlying assumptions are sound.

Don't Confuse Interest with Demand

This is one of the biggest traps in new infrastructure.

Suppose a survey shows that 70% of respondents like the idea of senior living.

That sounds encouraging.

But I'd immediately ask: How many will pay?

Then: At what price?

Then: For how long?

There's a big difference between:

Interest → willingness to pay → actual occupancy → profitable occupancy.

The board needs evidence of the entire chain.

The Same Logic Applies to Other Assets

Take industrial warehousing.

Everyone may agree that India's logistics infrastructure needs to improve.

That's not enough.

Ask:

- Where is demand concentrated?
- Who are the anchor customers?
- What rent will they pay?
- What utilization is realistic?
- How much competing capacity exists?
- What happens if a major customer leaves?

Or consider a data center.

The question isn't simply: "India needs more data centers."

The questions are:

- Who will use the capacity?
- What power availability is required?
- What's the expected utilization?
- How secure is the power supply?
- What happens if technology changes faster than the asset?

Infrastructure decisions need this level of practical questioning.

Look at the Second Ring

One of the most interesting opportunities often sits ‘around the major asset”.

Suppose a ₹5,000-crore manufacturing plant is coming up.

Everyone wants to participate in the plant.

But what will the plant need?

- Warehousing;

- Logistics;

- Maintenance;

- Testing;

- Packaging;

- Utilities;

- Waste management;

- Worker housing;

- Training;

- Specialized services.

Those requirements create a second ring of infrastructure.

And sometimes that second ring is a better investment opportunity than the headline project.

The Anchor-to-Ecosystem Multiplier

This is where my "Anchor-to-Ecosystem Multiplier" applies.

Don't look at the anchor in isolation. Map out what happens around it.

Anchor

Large manufacturing facility.

↓

Supporting infrastructure

Warehousing, logistics and utilities.

↓

Services

Maintenance, testing, technology and security.

↓

Human infrastructure

Training, housing and healthcare.

↓

Ancillary industry

Local suppliers and specialized manufacturers.

The board should ask: "Which of these requirements will become long-term businesses?"

That's where the multiplier starts.

Don't Build Before You Understand Demand

Infrastructure has one characteristic that makes mistakes expensive.

“It's difficult to reverse”.

If a software product doesn't work, you can shut it down.

If you've spent ₹300 crore building a specialized facility in the wrong location, you can't simply move it.

That's why I prefer a staged approach.

Test the market.

Secure anchor customers.

Validate pricing.

Understand operating costs.

Then commit the next tranche of capital.

“CAPEX should follow evidence—not optimism”.

Scenario Planning Is More Useful Than a Perfect Forecast

Suppose management presents a senior-living project with 90% occupancy

I wouldn't immediately debate whether 90% is achievable.

I'd ask for three cases.

Downside: 55% occupancy.

Base: 75%.

Upside: 90%.

Then ask:

- At what occupancy does the project break even?
- At what occupancy does debt servicing become uncomfortable?
- How much cash will be consumed before reaching steady state?
- How long can the business survive below target occupancy?

That's much more useful than arguing over one forecast.

Pre-Balance-Sheet Governance

This is also where “Pre-Balance-Sheet Governance” becomes important.

By the time the board sees:

* Poor occupancy;

* Cost overruns;

* Weak margins;

* Negative cash flow;

* Debt-service pressure;

The decision has already been made.

The real governance work happened earlier.

Before committing capital, the board should have asked:

- Is the demand proven?
- Is the customer willing to pay?
- Is the operating model realistic?
- Are the approvals achievable?
- Can the assets be repurposed?
- What happens if our assumptions are wrong?

That's governance before the problem reaches the balance sheet.

Optionality Matters

One of the most important lessons I've learned from infrastructure is simple: “Don't build an asset that has only one possible future”.

Suppose a senior-living facility can serve only one narrow customer segment.

That's a risk.

But if the asset can potentially support:

- Independent senior living;

- Assisted living;

- Rehabilitation;

- Wellness;

- short-term stays;

The downside becomes more manageable.

The same thinking applies to warehouses, logistics parks and specialized commercial assets.

Where technically and economically possible, “flexibility has value”.

The Multi-Agency Problem Doesn't Disappear

New infrastructure opportunities often involve several authorities.

Land.

Environment.

Municipal approvals.

Utilities.

Transport.

State agencies.

Central agencies.

Regulators.

The individual approvals may all look manageable.

The problem usually appears at the interface.

One approval gets delayed.

Another can't proceed.

The construction sequence changes.

Contractors wait.

Costs increase.

The project schedule moves.

That's why the “Multi-Agency/Interface Risk” framework matters.

Don't ask only: "Have all approvals been applied for?"

Ask: "Which approval is on the critical path, and what happens if it is delayed by six months?"

That's a board-level question.

The 5D Decision Test

The “5D Decision Test” is especially useful when evaluating a new infrastructure opportunity.

Data:

What evidence proves demand exists?

Not what consultants believe.

What do customers say and do?

Delay:

What happens if we wait?

Could land prices increase?

Could competitors enter?

Could the opportunity disappear?

Downside:

What happens if demand is 30% below forecast?

Can the asset survive?

Can it be repurposed?

Can CAPEX be reduced?

Dependencies:

What must happen before the project works?

Land?

Approvals?

Power?

Technology?

Operators?

Anchor customers?

Decision:

What do we need to commit today?

And what can we deliberately keep flexible?

That last question is often overlooked.

Good boards don't confuse movement with progress.

The Infrastructure Opportunity Test

I use five simple questions.

1. Is the problem real?

Not theoretical.

Not just a government announcement.

Real people or businesses must experience it.

2. Will somebody pay to solve it?

A social need isn't automatically a commercial opportunity.

3. Can we execute?

Land, approvals, technology, people and capital must be available.

4. Can the project survive the downside?

Demand won't always match the business plan.

5. Does it create a wider ecosystem?

If it does, the strategic value may be greater than the project-level return.

Watch Structural Change, Not Fashion

This is where judgement matters.

"Senior living is the next big thing."

That's the headline.

But smaller families, longer life expectancy and children living away from parents are structural changes.

That's more interesting.

"Warehousing is booming."

That's a trend.

But organized retail, e-commerce, manufacturing growth and changing supply chains create structural demand for better logistics.

That's more meaningful.

The board shouldn't chase fashionable sectors.

It should understand “why the demand exists”.

The Second Question: What Happens If We're Wrong?

This is the question I find most useful.

Management will naturally explain why the project should work.

The board should ask: "Suppose you're wrong. Then what?"

Suppose occupancy reaches only 55%.

Suppose the anchor customer leaves.

Suppose approvals take 18 months longer.

Suppose construction costs increase by 20%.

Suppose the technology changes.

Suppose the competing project opens first.

A good infrastructure proposal should have an answer for these questions.

Not a perfect answer.

A credible one.

Phase the Capital Where Possible

If uncertainty is high, don't necessarily commit all the capital on day one.

Break the project into decision points.

For example:

Stage 1: Market validation

Stage 2: Land and approvals

Stage 3: Anchor customer commitments

Stage 4: Initial construction

Stage 5: Expansion based on actual demand

This gives the board the ability to learn before committing the next tranche of capital.

That's particularly valuable in emerging infrastructure sectors.

The Board Should Look Around Corners

Management is usually focused on immediate projects.

The board can step back.

Ask: "What is changing in India that will create a new infrastructure requirement five years from now?"

It could be:

- Demographics;

- Industrial policy;

- Urbanization;

- Technology;

- Climate;

- Healthcare;

- Logistics;

- Energy;

- Consumer behavior.

The board doesn't need to predict the future perfectly.

It needs to recognize “directional change early enough to make a sensible investment decision”.

From Asset to Platform

This is the shift I want boards to make.

Don't ask only: "What asset can we build?"

Ask: "What platform can this asset become?"

A senior-living campus can become a healthcare and wellness platform.

A logistics park can become a supply-chain platform.

An industrial park can become an MSME ecosystem.

A transport hub can become a multimodal commercial platform.

Once you think this way, the opportunity becomes much larger than the original construction project.

The principle

I'd put it simply: “The best infrastructure opportunities usually emerge where a structural problem is growing faster than the existing infrastructure can solve it”.

The board's job isn't to chase every new theme.

It's to recognize genuine demand, challenge management's assumptions, understand the downside and decide whether the organization has the capability to execute.

That's where the “Field-to-Boardroom Bridge” matters.

Because the question isn't: "Can we build it?"

It's: "Should we build it, for whom, under what assumptions—and what happens if we're wrong?"

That's the difference between building an asset and building an infrastructure business.

Practical Boardroom Checklist

New Infrastructure Opportunity Test

Demand:

- What specific problem are we solving?

- Is the problem structural or temporary?

- Who is the customer?

- Who pays?

- Is willingness to pay supported by evidence?

Economics:

- What is the total CAPEX?

- What are the operating costs?

- What utilization or occupancy is required to break even?

- What happens if demand is 20–30% below forecast?

- How much funding is required before positive cash flow?

Execution:

- Is the land available?

- Are critical approvals achievable?

- What is on the critical path?

- Which technical assumptions could materially change the economics?

- Does management have the required operating capability?

Ecosystem:

- What supporting infrastructure is required?

- Which partners and suppliers are critical?

- Can the project create an ecosystem around itself?

- Can the "Anchor-to-Ecosystem Multiplier" strengthen the opportunity?

Optionality:

- Can the assets serve more than one customer segment?

- Can it be repurposed?

- Can CAPEX be phased?

- Can expansion be linked to actual demand?

- What is the alternative-use or exit strategy?

Interface Risk:

- Which government agencies are involved?

- Which approval is on the critical path?

- Are inter-agency dependencies mapped?

- What happens if a critical approval is delayed?

- Is one person clearly responsible for managing each interface?

5D Decision Test:

- Data: What evidence proves the opportunity exists?

- Delay: What happens if we wait?

- Downside: What happens if demand disappoints?

- Dependencies: What must happen for the project to work?

- Decision: What should we commit now—and what should remain flexible?

The Boardroom Question

"Are we investing because this is a fashionable infrastructure theme—or because we've identified a structural problem that customers will continue paying us to solve?"

The biggest infrastructure opportunity isn't always the biggest project.

Sometimes it's the asset that solves a problem “before everyone else realizes how important that problem is”.

That's where infrastructure investment meets judgement.

And that's where the “Field-to-Boardroom Bridge” becomes valuable.

Chapter 9

From ESG Compliance to Capital Allocation

Sustainability becomes real in a company when it starts influencing **where capital goes**.

Not when another ESG report is published.

Not when the board approves another sustainability target.

Not when management presents a colorful dashboard showing emissions, water consumption and social initiatives.

The real test comes when the company has ₹1,000 crore to invest.

Does sustainability influence that decision?

If it doesn't, sustainability is still sitting outside the core business.

This is where Sustainable Finance enters the **Field-to-Boardroom Bridge™**.

The board doesn't need to make every investment "green". It needs to make sure that capital is allocated after considering the **full economic life of the decision**—including environmental, social, regulatory, climate and resource risks that can affect future cash flows.

The Investment Proposal Is Never the Full Story

Imagine management brings a ₹1,000-crore infrastructure project to the board.

The presentation is familiar:

- Project cost
- Expected revenue
- EBITDA
- IRR
- Payback period
- Funding requirement
- Construction schedule
- Key risks

The numbers look attractive.

The board asks the usual questions.

Then someone asks: "**What could make these numbers wrong five years from now?**"

That's the question that changes the discussion.

Perhaps energy prices rise.

Perhaps water availability becomes constrained.

Perhaps environmental regulations become tighter.

Perhaps the technology becomes obsolete.

Perhaps customers increasingly prefer lower-carbon products.

Perhaps the asset needs expensive retrofitting.

None of these may appear as a major problem in today's financial model.

But each can change tomorrow's economics.

That's why Sustainable Finance is ultimately a **board judgement issue**.

Sustainability Can't Sit in a Separate Column

I've seen sustainability treated as though it belongs to another department.

Finance prepares the investment case.

Operations assess execution.

Risk looks at exposure.

The sustainability team prepares ESG information.

The board receives all four.

That's not enough.

The board has to connect them.

A water problem can become an operating problem.

An operating problem can become a revenue problem.

A revenue problem can become a cash-flow problem.

A cash-flow problem can become a valuation problem.

The translation should look like this:

Sustainability signal

↓

Operational consequence

↓

Financial consequence

↓

Capital allocation decision

That's the same principle that runs through this book: **See the signal before it becomes a number.**

A Realistic Indian Example

Consider an Indian manufacturing company planning a new plant requiring an investment of around ₹800 crore.

The original project report assumes adequate water availability.

The financial model works.

The project clears the company's investment hurdle.

During the board discussion, however, one director asks: "**What happens to this project if water availability is restricted for several months a year?**"

Initially, management treats this as an operational question.

But when the team examines it properly, the consequences become clearer.

The plant may require:

- additional water storage;
- recycling systems;
- treatment facilities;
- process-efficiency improvements;
- alternative water arrangements.

The upfront project cost increases.

Someone could easily say:

"Why should we spend more? The original project is already financially viable."

But the director asks a more important question: "**What will it cost us if we don't invest now?**"

Now the analysis includes potential production disruption, future retrofit costs, regulatory restrictions and lost revenue.

The board may ultimately approve the additional investment.

Not because it wants a "green project".

Because it wants a **more resilient and economically viable asset**.

That's Sustainable Finance in practical boardroom language.

The 5D Decision Test Changes the Conversation

This is where the **5D Decision Test** becomes particularly useful.

When sustainability requires additional capital, don't simply ask: "How much more will it cost?"

Ask five questions.

1. Data

What evidence supports the risk or opportunity?

Is the climate, water, energy or regulatory assumption based on credible information?

2. Delay

What happens if the investment is postponed?

Will the cost increase?

Will the company lose an opportunity?

Will retrofitting become more expensive?

3. Downside

What happens if our assumption is wrong?

What is the credible financial consequence?

4. Dependencies

What has to work for the investment case to hold?

- Technology?
- Regulation?
- Water?
- Energy?
- Suppliers?
- Infrastructure?
- Customer behavior?

5. Decision

What exactly does the board need to decide?

- Approve?
- Reject?
- Pilot?
- Stage the investment?
- Approve subject to defined conditions?

This prevents sustainability discussions from becoming vague.

The Cost of Cheap Capital Can Be Expensive

One of the most common mistakes in capital allocation is focusing too heavily on initial cost.

Suppose a company has two technology choices.

Option A

Lower initial capex.

Higher energy consumption.

Higher maintenance.

Greater regulatory exposure.

Option B

Higher initial capex.

Lower operating costs.

Better resource efficiency.

Greater resilience.

Lower retrofit requirements.

Option A may win if the board looks only at initial investment.

But infrastructure assets don't exist for one year.

They may operate for 20 or 30 years.

So, the better question is: "**Are we buying a cheaper asset—or a cheaper life cycle?**"

That's a very different decision.

From Capex to Life-Cycle Economics

For infrastructure-intensive businesses, the real cost of an asset is closer to:

- Initial Capex
- Operating Cost
- Energy Cost
- Water Cost
- Maintenance
- Compliance
- Climate Adaptation
- Technology Replacement
- Potential Stranded-Asset Cost
- True Life-Cycle Cost

The board doesn't need false precision.

It does need visibility of the trade-offs.

A ₹100-crore saving today may look attractive.

But if that decision creates ₹300 crore of additional cost over the asset's life, the saving wasn't really a saving.

It was simply a **cost shifted into the future**.

Sustainable Finance and the Cost of Capital

There's another reason boards should pay attention.

Sustainability can influence how investors and lenders assess a company.

Credible sustainability governance, measurable transition plans, stronger resilience and transparent reporting can support access to certain forms of sustainable capital.

But the reverse is also true.

Weak sustainability governance can become a financing concern.

It can contribute to:

- regulatory exposure;
- reputational damage;
- transition costs;
- customer loss;
- asset-value risk;
- difficulty accessing appropriate capital.

So, the question isn't simply: "**Can we raise green finance?**"

The better question is: "**How does the sustainability quality of our business affect our access to and cost of capital?**"

That belongs in the boardroom.

Green Finance Isn't the Same as Sustainable Finance

This distinction matters.

A company may issue a green bond.

It may finance a renewable-energy project.

It may obtain sustainability-linked financing.

These can all be useful.

But the financing instrument isn't the starting point.

Capital allocation is.

If the underlying investment doesn't make economic sense, putting a sustainability label on the financing doesn't make it a good investment.

The board should therefore resist another form of box-checking: "**Is this project eligible for sustainable finance?**"

The better question is: "**Is this a financially sound investment whose sustainability characteristics strengthen its long-term value?**"

That's a much stronger test.

Double Materiality: Look Both Ways

The concept of **double materiality** is useful here—but it shouldn't remain confined to reporting.

Ask two questions.

First: "How can sustainability issues affect our company?"

For example:

Climate exposure → higher operating costs → lower margins.

Second: "How does our company affect people and the environment?"

For example:

Industrial activity → water consumption → community pressure → regulatory response.

The two can eventually meet.

An environmental impact can become a business risk.

A social issue can become a licence-to-operate issue.

A governance weakness can become a financing issue.

The board's job is to understand those connections before they become expensive.

Sustainable Finance and the Anchor-to-Ecosystem Multiplier

This is where the **Anchor-to-Ecosystem Multiplier™** becomes particularly powerful.

Take a large industrial investment.

The conventional approach is simple:

Build the plant.
Operate the plant.
Generate returns.

The ecosystem approach asks: "**What else can this investment unlock?**"

Perhaps:

- renewable-energy suppliers;
- local MSMEs;
- logistics providers;
- recycling businesses;
- skill-development centers;

- maintenance companies;
- efficient warehousing;
- local technology providers.

Now the capital is doing more than creating one asset.

It's strengthening the ecosystem around that asset.

That's where Sustainable Finance can move beyond company-level efficiency towards **ecosystem-level value creation**.

The Board Should Ask About the Multiplier

Suppose a company invests ₹1,000 crore in a new industrial facility.

A useful board question is: "**What additional economic activity should this investment create around us?**"

The answer shouldn't be a slogan.

Management should identify measurable outcomes:

- local procurement;
- number of MSME suppliers;
- skilled employment;
- supplier investment;
- logistics capacity;
- energy infrastructure;
- water infrastructure;
- technology partnerships.

The objective isn't to manufacture a multiplier number.

It's to make sure that a major investment doesn't become an **isolated island**.

This connects directly with the thinking developed earlier in this book.

A large investment should ideally create a larger ecosystem around itself.

Sustainable Finance Is Also About What Not to Fund

There is a tendency to discuss Sustainable Finance only in terms of opportunities.

Boards should look at the other side.

Ask: "**What capital should we not allocate?**"

That can be just as important.

An asset may look profitable today but carry:

- high regulatory exposure;
- excessive resource dependence;
- weak climate resilience;
- uncertain future demand;
- significant transition risk.

The board should be prepared to say: "The headline returns are attractive, but the risk-adjusted returns aren't."

That's disciplined capital allocation.

Pre-Balance-Sheet Governance Applies Here Too.

Sustainable Finance is another form of **Pre-Balance-Sheet Governance**.

Climate exposure may not yet have created a loss.

Water stress may not yet have stopped production.

Carbon regulation may not yet have increased costs.

Technology transition may not yet have made an asset obsolete.

But the risk already exists.

The board's job is to ask about it **before it becomes financially visible**.

That's the common thread running through this book.

Sustainability Should Influence Incentives

There's another practical question.

If management is rewarded only for:

- revenue;
- EBITDA;
- EPS;
- project completion;

why should the organization give sufficient attention to long-term sustainability?

The board should consider whether appropriate sustainability and resilience measures belong in management performance evaluation.

Not as decorative ESG targets.

As business measures.

For example:

- Energy intensity
- Water efficiency
- Safety
- Resource productivity
- Supplier resilience

- Climate-risk mitigation
- Project life-cycle cost

The principle is straightforward: What gets measured and rewarded gets attention.

Don't Turn the Board into an ESG Approval Committee

This is important.

An Independent Director shouldn't automatically support additional spending simply because an investment is environmentally beneficial.

The board must still challenge:

- economics;
- execution;
- technology;
- assumptions;
- alternatives;
- financing;
- timing.

Sustainability doesn't replace financial discipline.

It expands the definition of financial discipline.

The real question becomes: "What is the true risk-adjusted, life-cycle value of this investment?"

A Better Capital Allocation Conversation

Imagine management proposes two projects.

Project A: IRR (Internal Rate of Return)- 17%

Lower initial capex.

High resource intensity.

Higher transition exposure.

Project B: IRR (Internal Rate of Return) - 15%

Higher initial capex.

Lower operating costs.

Better resilience.

Lower resource dependence.

A purely financial comparison may favour Project A.

A deeper board discussion may conclude otherwise.

Why?

Because the relevant question isn't: "Which project has the highest headline IRR (Internal Rate of Return)?"

It's: "**Which project creates the better long-term risk-adjusted value for shareholders?**"

That's board judgement.

The Sustainable Capital Allocation Framework

For major investments, I suggest that boards look at six questions.

1. Economic Value

What return does the investment generate?

2. Resilience

How does it perform if key assumptions change?

3. Resource Security

What does the asset depend upon—energy, water, materials and land?

4. Transition Risk

What happens if regulation, technology or customer preferences change?

5. Ecosystem Value

What wider economic activity does the investment create?

6. Governance

Who owns the outcomes and how will the board monitor them?

This keeps the conversation firmly connected to business reality.

One Question I Would Always Ask

If I were sitting in a board meeting reviewing a major infrastructure investment, I'd ask:

"If this asset operates for the next 20 years, what are we assuming about the world that may no longer be true?"

That question forces management to look beyond today's spreadsheet.

Energy prices may change.

Climate conditions may change.

Technology may change.

Customer expectations may change.

Regulation may change.

Financing conditions may change.

A good investment doesn't have to predict the future perfectly.

It needs to be **robust enough to survive reasonable changes in the future**.

Sustainable Finance Is About Optionality

This is an aspect that often gets missed.

Good capital allocation preserves choices.

Bad capital allocation removes them.

If a company builds an inefficient asset today, it may spend years paying for that decision.

If it builds a flexible and resilient asset, it has more options later.

That means sustainability can have another financial value:

It can preserve strategic optionality.

A board should therefore ask: "**Does this investment lock us into today's assumptions, or does it give us room to adapt?**"

That's a very practical way of looking at sustainability.

From ESG Reporting to Board Accountability

The next step is accountability.

A board should be able to answer: "**What sustainability outcomes are linked to our capital allocation?**"

Not simply:

"How much did we spend?"

Suppose the company invests ₹500 crore.

Management should be able to explain what outcomes are expected.

For example:

- reduction in energy intensity;
- reduction in water consumption;
- emissions avoided;

- waste recovered;
- supplier development;
- resilience improvement;
- operating-cost reduction.

If management can't explain how the investment creates measurable value or protects against a material risk, the board should challenge the investment case.

The Stewardship Test

This brings us back to one of the deeper ideas in this book: **From Box-Checkers to True Stewards**

A box-checking board asks: "**Have we complied?**"

A stewardship-oriented board asks: "**Are we allocating capital in a way that protects and builds enterprise value over the long term?**"

The first is compliance.

The second is responsibility.

Sustainable Finance is therefore not simply about sustainability.

It is about **stewardship of capital across time**.

The Boardroom Test

Before approving significant capital, the board should be able to answer:

- Why are we investing?
- What could make the investment fail?
- Which sustainability risks could affect the economics?
- What happens if we do nothing?
- What additional investment creates resilience?

- What is the life-cycle cost?
- What ecosystem does the investment create?
- How will we know whether the expected benefits are actually being delivered?

If these questions can't be answered, the board probably isn't ready to approve the capital.

Practical Boardroom Tool

The Sustainable Capital Allocation Checklist.

Before approving a major investment:

Strategic Fit - Does the investment support the company's long-term strategy?

Financial Discipline - Have we assessed risk-adjusted returns rather than headline returns?

Life-Cycle Economics - Have we considered operating, maintenance, energy and compliance costs?

Climate & Resource Risk - Could climate, water, energy or resource availability affect the asset?

Transition Risk - Could regulation, technology or customer behavior change the economics?

5D Decision Test

- What do we know?
- What will delay cost us?
- What happens if we're wrong?
- What external dependencies exist?
- What decision is required now?

Ecosystem - What local suppliers, MSMEs, jobs or supporting infrastructure can this investment create?

Financing - Could credible sustainability performance improve access to capital or financing terms?

Governance

- Who owns the sustainability outcomes?
- What will be reported to the board?
- What measurable indicators will demonstrate success?

The Bottom Line

Sustainable Finance shouldn't be treated as **finance with an ESG label**.

It's better understood as **better capital allocation under changing conditions**.

The board's responsibility is to look beyond today's return and ask what happens to that return when the assumptions change.

A resilient asset can protect cash flows.

A resource-efficient asset can reduce operating costs.

A well-governed transition can protect access to capital.

A strong ecosystem can multiply the value of an anchor investment.

And an early decision can prevent a much larger future cost.

The central question isn't: "**How sustainable is this investment?**"

It's: "**How will sustainability—or the absence of it—change the long-term economics of this investment?**"

That's the question that moves Sustainable Finance from the sustainability report **into the boardroom**.

And that is where the **Field-to-Boardroom Bridge** becomes a bridge between **capital today and enterprise value tomorrow**.

Chapter 10

From Capital Allocation to Long-Term Enterprise Value

The difficult question isn't whether a company should spend money on sustainability.

The difficult question is: **Where should the next rupee of capital go if the company wants to remain valuable for the next 10, 20 or 30 years?**

That's a very different question.

It moves the conversation away from ESG reporting and towards what boards are actually responsible for: **how capital is allocated and how future enterprise value is protected**.

When a company commits ₹1,000 crore to a factory, logistics park, railway asset, data centre or infrastructure project, it's not making a one-year decision.

That asset may operate for decades.

Today's design choice can become tomorrow's operating cost. Today's technology choice can become tomorrow's replacement cost. Today's environmental assumption can become tomorrow's regulatory problem.

This is why Sustainable Finance should be viewed as a **capital-allocation discipline**, not simply as a financing product.

Every Rupee Creates a Direction

When a company invests ₹1,000 crore, the money creates much more than an asset.

It creates an operating model.

The asset will consume energy and resources. It will depend on suppliers, employees, infrastructure and customers. It will operate under changing regulations and market conditions.

It will also create future cash flows.

So, the board isn't simply approving ₹1,000 crore.

It's deciding **what kind of business that ₹1,000 crore will create**.

That's why capital allocation is one of the clearest expressions of board judgement.

The Cheapest Asset Isn't Always the Cheapest Asset

Consider two investment proposals.

Option A

- Lower initial capex.
- Older technology.
- Higher energy consumption.
- Higher maintenance.
- Greater exposure to future regulation.

Option B

- Higher initial capex.
- More efficient technology.
- Lower operating costs.
- Better resilience.

- Greater flexibility for future upgrades.
- Option A may look better in the first board presentation.

But infrastructure experience teaches a simple lesson: The cheapest solution at the beginning isn't necessarily the cheapest solution over the life of the asset.

The board should therefore ask: "What will each option actually cost us over its useful life?"

That's where Sustainable Finance becomes practical.

A Realistic Indian Scenario

Consider an Indian infrastructure company developing a large urban facility with a 25-year operating life.

Management presents two alternatives.

The first requires lower upfront investment.

The second costs more because it includes better drainage, water recycling, energy-efficient systems and greater climate resilience.

The initial financial model favors the cheaper alternative.

Then a director asks: "**What happens if energy costs rise significantly over the next decade?**"

Another asks: "**What happens if extreme rainfall becomes more frequent?**"

Then comes the uncomfortable question: "**What will it cost us to retrofit the cheaper option five or ten years from now?**"

The numbers change.

The higher upfront investment may now produce the better long-term economics.

The board hasn't chosen the more expensive project.

It has chosen the better risk-adjusted investment.

That's an important distinction.

Sustainable Finance Is About Future Cash Flows

At board level, sustainability matters because it can affect future financial performance.

The translation isn't complicated.

Energy efficiency → lower operating cost

Water efficiency → lower resource dependence

Climate resilience → lower disruption risk

Better supplier practices → stronger supply reliability

Cleaner technology → lower transition risk

Better governance → greater confidence among investors and lenders

The sustainability issue is only the starting point.

The board needs to follow the chain until it reaches **cost, cash flow, risk or enterprise value**.

That's the essence of the **Field-to-Boardroom Bridge™**.

FIELD REALITY → BOARDROOM DECISION

A practical boardroom translation looks like this:

Field Reality - What is happening on the ground?

↓

Early Signal - What could become a problem or opportunity?

↓

Financial Consequence - What could it do to cost, revenue, capital or risk?

↓

Board Judgement - What matters most?

↓

Capital Decision - Where should the money go?

This is particularly important for Independent Directors who may not have the technical background of management.

You don't need to know every engineering detail.

But you do need to understand **which technical assumptions can change the economics of the investment**.

The 5D Decision Test™ for Capital Allocation

The **5D Decision Test™** is especially useful when management asks for additional capital to improve resilience or sustainability.

Don't stop at: "**How much more will it cost?**"

Ask five questions.

1. Data:

- What do we actually know?
- Which assumptions are supported by evidence?

2. Delay:

- What happens if we wait?
- Will the cost rise?
- Will the opportunity disappear?
- Will retrofitting become more expensive?

3. Downside:

- What happens if we're wrong?
- How much capital could be at risk?

- Could the asset become commercially unattractive?

4. Dependencies:

- What has to work for this investment case to succeed?
- Energy?
- Water?
- Technology?
- Approvals?
- Suppliers?
- Customer demand?
- Financing?

5. Decision

- What exactly does the board need to decide?
- Approve?
- Reject?
- Pilot?
- Phase?
- Approve subject to conditions?

The most powerful question often remains: "**What will it cost us if we don't decide?**"

Don't Confuse Low Capex with Low Cost

This mistake is common.

A company may celebrate saving ₹50 crore during construction.

Five years later, the same asset may have:

- higher energy bills;
- higher maintenance;

- more frequent breakdowns;
- expensive modifications;
- additional compliance requirements.

The original ₹50-crore saving may have disappeared many times over.

That's why the board should distinguish between:

Capex efficiency & ***Life-cycle value***.

They're not the same thing.

Think Beyond the Initial IRR

IRR is important. But IRR is only as good as the assumptions underneath it.

A project may show a 17% IRR based on assumptions about:

- energy prices;
- demand;
- capacity utilization;
- maintenance;
- financing costs;
- regulatory conditions;
- asset life.

Change those assumptions and the IRR can change quickly.

So, I would rather ask management: "**Show me what happens when the important assumptions move.**"

That's a more useful board discussion than debating whether the IRR is 16.8% or 17.2%.

Scenario Thinking Beats False Precision

Infrastructure projects rarely behave exactly as planned.

- Weather changes.
- Approvals get delayed.
- Ground conditions differ.
- Input prices move.
- Technology changes.
- Demand surprises management.
- Boards shouldn't expect certainty.

They should expect **preparedness**.

For a major investment, management should be able to show at least three reasonable scenarios:

Base Case - What management currently expects?

Stress Case - What happens if key assumptions deteriorate?

Resilience Case - What happens if the company invests upfront to reduce those risks?

This allows the board to see the price of resilience rather than simply hearing about it.

The Value of Flexibility

There is another form of value that doesn't always appear clearly in an investment paper: **Optionality**

- Suppose an asset can be upgraded without major reconstruction.
- Suppose its energy system can accommodate future technology.
- Suppose water-recycling capacity can be expanded.

- Suppose the design allows alternative suppliers.
- Suppose the facility can adapt to changing customer requirements.

These features may cost more today. But they give the company choices tomorrow.

The board should therefore ask: "**Does this investment lock us into today's assumptions—or does it give us room to adapt?**"

Sometimes flexibility is worth paying for.

What Capital Should We Not Allocate?

This is one of the most important questions in Sustainable Finance. Boards spend a lot of time deciding where to invest.

They should also ask: "**Where should we not invest?**"

An asset may have an attractive current return but depend heavily on:

- scarce water;
- outdated technology;
- high energy consumption;
- uncertain regulation;
- declining demand;
- fragile supply chains.

The headline IRR may still look attractive.

But the board should ask: "**Is the return actually compensating us for the risk?**"

If it isn't, walking away may be the best capital-allocation decision.

A disciplined board isn't measured by how much capital it deploys.

It's measured by how intelligently it deploys capital.

The Anchor-to-Ecosystem Multiplier

Sustainable Finance becomes even more powerful when combined with the **Anchor-to-Ecosystem Multiplier**.

Take a ₹1,000-crore industrial investment.

The conventional question is: "**What return will this project generate for the company?**"

Necessary, but incomplete.

Ask another question: "**What economic ecosystem will this investment create around itself?**"

The project may create opportunities for:

- local MSMEs;
- component manufacturers;
- logistics providers;
- renewable-energy suppliers;
- maintenance companies;
- technology firms;
- training institutions;
- recycling businesses.

Now the investment isn't simply creating one asset. It's creating a network of economic activity around that asset.

That can strengthen the company's own supply chain while creating wider economic value.

Avoid the Isolated-Island Investment

Large investment numbers can be misleading.

"₹5,000 crore investment is coming."

The headline sounds impressive.

But the board should ask: "**What happens around the ₹5,000 crore?**"

- How much local procurement?
- How many MSMEs?
- How many ancillary suppliers?
- How much skill development?
- What supporting logistics?
- What technology ecosystem?
- What renewable-energy capacity?

A large project that operates like an isolated island may generate revenue for the company without creating the ecosystem required for long-term resilience.

That's the problem the **Anchor-to-Ecosystem Multiplier** is designed to expose.

Supply-Chain Resilience Is Part of Sustainable Finance

A company may have an efficient factory. But if one critical supplier fails, production can stop. That's a board-level risk.

The question therefore becomes: "**Where does our resilience end—at our factory gate or across our supply chain?**"

For critical suppliers, the board should understand:

- geographic concentration;
- financial strength;
- resource dependence;
- climate exposure;
- alternative suppliers;

- technology dependence;
- recovery capability.

Sometimes the most important sustainability investment isn't inside the company's own facility.

It's in the **ecosystem that keeps that facility running**.

Sustainable Finance and Management Incentives

Capital allocation and management incentives should point in the same direction.

If executives are rewarded mainly for short-term EBITDA, they may naturally prefer:

lower capex today over **lower operating cost tomorrow**.

They may prefer:

quick project completion over **better life-cycle economics**.

They may prefer:

short-term margin over **long-term resilience**.

The board should examine whether incentives are encouraging the behavior it actually wants.

This doesn't mean creating 25 ESG targets. It means selecting a few measures that genuinely matter.

For an infrastructure-heavy business, these might include:

- life-cycle cost;
- energy intensity;
- water efficiency;
- safety;
- asset availability;
- project resilience;

- supplier resilience;
- avoidable rework.

The principle is straightforward: What gets measured and rewarded gets attention.

Sustainable Finance Is Also Governance

A company can have an excellent sustainability policy and still make poor capital decisions.

Why?

- Because the real issue is accountability.
- Who challenges the assumptions?
- Who validates the data?
- Who owns the climate-risk assessment?
- Who checks whether the projected savings actually materialize?
- Who reports deviations to the board?
- Who decides whether additional capital is required?

These are governance questions.

A polished ESG policy doesn't compensate for weak decision-making.

From Box-Checkers to True Stewards

This is where one of the central ideas of this book comes into play.

A **Box-Checker** asks: "**Have we completed the required ESG disclosure?**"

A **True Steward** asks: "**Are we allocating today's capital in a way that protects tomorrow's enterprise value?**"

A Box-Checker asks: "Did we meet the target?"

A True Steward asks: "**Did the target actually reduce risk or create value?**"

A Box-Checker asks: "Did we approve the project?"

A True Steward asks: "**Will this project still make sense when today's assumptions change?**"

That's the difference between compliance and stewardship.

Sustainable Capital Allocation Scorecard™

For significant investments, I would use a simple eight-point boardroom lens.

1. Economic Value - What return does the investment generate?

2. Life-Cycle Cost - What will it cost to build, operate, maintain and eventually upgrade?

3. Resilience - How does the investment perform if assumptions change?

4. Resource Security - How dependent is it on energy, water and other critical resources?

5. Transition Risk -Could regulation, technology or customer behavior weaken the business case?

6. Ecosystem Value - What wider economic activity can the investment create?

7. Financing - Could the sustainability profile affect access to capital or financing conditions?

8. Governance - Who owns the outcomes, and how will the board monitor delivery?

This isn't another complicated scoring system. It's a way to stop important questions from disappearing inside a 100-page investment paper.

The Director as Capital Steward

This brings us back to the role of the Independent Director.

The director's value isn't simply in voting "yes" or "no."

It's often in **improving the quality of the decision before the vote**.

That means asking questions management may not have considered.

It means connecting technical risk with financial consequences.

It means challenging optimistic assumptions without becoming an obstacle to management.

It means recognizing that delay has a cost.

It means asking whether the investment strengthens the company beyond the immediate project.

And it means thinking about shareholders who may own the company long after today's management team has moved on.

That's stewardship.

One Question I Would Put on Every Major Investment Paper

If I had to put one question at the top of a major capital-allocation proposal, it would be: "What are we assuming about the next 20 years—and how resilient is this investment if those assumptions change?"

That question forces management beyond today's spreadsheet.

It also forces the board beyond today's return.

The Boardroom Test

Before approving major capital, I would want the board to be comfortable answering eight questions:

1. Why are we investing?

2. What could make the investment fail?

3. Which sustainability issues could change the economics?

4. What happens if we delay?

5. What happens if our key assumptions are wrong?

6. What ecosystem does the investment create?

7. How flexible is the asset if conditions change?

8. How will we know, three years from now, whether we made the right decision?

If these questions have good answers, the board is probably looking at the investment properly.

If they don't, the problem may not be the investment.

The problem may be that the decision hasn't been understood deeply enough.

Practical Boardroom Checklist

Sustainable Capital Stewardship Checklist

Capital Allocation:

- Is the investment aligned with the company's long-term strategy?
- Have we assessed risk-adjusted returns?
- Have reasonable alternatives been compared?

Life-Cycle Economics:

- Have operating and maintenance costs been considered?
- Have energy and water costs been considered?
- Have compliance and adaptation costs been considered?
- Have potential retrofit and replacement costs been considered?

Risk:

- Which assumptions could materially change the investment case?
- Have stress scenarios been tested?
- What is the cost of delay?

5D Decision Test:

- Data — What do we actually know?
- Delay — What will waiting cost?
- Downside — What happens if we're wrong?
- Dependencies — What external factors must work?
- Decision — What must we decide now?

Ecosystem:

- Does the investment strengthen the company's supply ecosystem?
- Can it create opportunities for local MSMEs and suppliers?
- Does it improve supply-chain resilience?

Flexibility:

- Can the asset adapt to changing technology?
- Can it respond to changing customer or regulatory requirements?

Governance:

- Is accountability clearly assigned?
- Are expected sustainability benefits measurable?
- Will the board receive regular progress against those outcomes?

The Bottom Line

Sustainable Finance isn't finance with an ESG label attached to it.

It's **better capital allocation under changing conditions**.

The board should look beyond the initial price.

Beyond the headline IRR.

Beyond the ESG score.

Beyond the financing label.

The real question is: "**What will this capital create—and what risks will it lock us into?**"

A resilient asset can protect future cash flows.

A resource-efficient asset can reduce operating costs.

A flexible asset can preserve strategic choices.

A strong ecosystem can multiply the value of an anchor investment.

And an early decision can prevent a much larger future cost.

That's the real connection between Sustainable Finance and boardroom judgement.

The director doesn't need to predict the future.

But the director should make sure the company isn't making a **20-year decision using only today's assumptions**.

That is the final extension of the **Field-to-Boardroom Bridge**:

FIELD REALITY → EARLY SIGNAL → FINANCIAL CONSEQUENCE → CAPITAL ALLOCATION → RESILIENT ASSET → LONG-TERM ENTERPRISE VALUE

The board's responsibility isn't to know exactly what the future will look like.

It's to make sure the enterprise is **strong enough to remain valuable when the future doesn't look the way today's spreadsheet predicted**.

Board questions

Boardroom Questions Every Director Should Ask

From Chapter 1 to Chapter 10 — The Field-to-Boardroom Bridge few important questions and answers:

These questions bring the eight chapters together. They're designed to be used in an actual board meeting—not as theoretical governance questions, but as "questions that expose risk, improve judgement and force better decisions before problems reach the balance sheet".

1. What are we not seeing in the numbers yet?

Answer:

A board shouldn't wait for a financial variance before identifying risk.

A technical approval pending, a design assumption that hasn't been validated, a difficult site condition, a delayed land handover or an unresolved interface with another agency may not appear in the accounts today.

But each can eventually become a cost overrun, delay, claim or impairment.

Board judgement:

Ask management to identify the "three material risks that haven't yet appeared financially".

Framework: Pre-Balance-Sheet Governance

2. What will it cost us if we don't decide now?

Answer:

Boards naturally ask what a decision will cost.

The better question is what ‘indecision” will cost.

A ₹2-crore technical modification may appear expensive. But if delaying it causes six months of project delay, contractor claims, idle resources and additional financing costs, the cost of waiting may be several times higher.

Board judgement:

Every significant delayed decision should have a “cost-of-delay estimate”.

Framework: 5D Decision Test

3. When did the field first know about this problem—and when did the board know?

Answer:

The gap between those two dates is often more revealing than the problem itself.

If a site team identified an issue in June but management reported it to the board only in September, the board should understand why.

Was the issue underestimated?

Was escalation delayed?

Was someone afraid to report bad news?

Board judgement:

The board should examine the “speed of information flow”, not just the final outcome.

Framework: Field-to-Boardroom Bridge

4. Which interface could stop this project even if our own team performs perfectly?

Answer:

Large infrastructure projects rarely depend on one organization.

A project may involve RVNL, DFCCIL, MRVC, MMRDA, CIDCO, municipal authorities, utilities, contractors and regulators.

Your team can perform perfectly and still be delayed because another party hasn't completed its obligation.

Board judgement:

Ask management to identify the "three most critical external dependencies", their owners, deadlines and consequences of delay.

Framework: Multi-Agency/Interface Risk

5. Are we measuring the size of investment—or the quality of investment?

Answer:

₹5,000 crore of investment sounds impressive.

But what happens after the investment?

Does it create local suppliers?

Does it generate MSME opportunities?

Does it create skilled employment?

Does it attract complementary businesses?

Does the local economy benefit beyond the original project?

A large investment that operates as an isolated island may create less long-term value than a smaller investment that builds an ecosystem.

Board judgement:

Ask management for an “Investment Quality Scorecard”, not just an investment amount.

Framework: Anchor-to-Ecosystem Multiplier

6. If the anchor project succeeds, what businesses should exist around it?

Answer:

A major industrial project shouldn't be viewed as a standalone asset.

It creates secondary requirements—logistics, warehousing, maintenance, testing, utilities, training, housing and specialist suppliers.

Those requirements can become additional business and investment opportunities.

Board judgement:

Ask: "What is our second-ring opportunity?"

Then identify which ancillary businesses the company can create, partner with or invest in.

Framework: Anchor-to-Ecosystem Multiplier

7. Are our people hiding problems because they fear the consequences of reporting them?

Answer:

A board should be careful when management repeatedly reports that everything is "under control."

Complex projects have problems.

The real question is whether problems are being “reported early enough to fix”.

A culture where people fear blame can turn a manageable technical issue into a major commercial problem.

Board judgement:

Ask: "What significant problem has been escalated this quarter before it became financially material?"

If the answer is "none," investigate further.

Framework: Trust, People & Execution

8. Does the person responsible for delivery have the authority to deliver?

Answer:

Accountability without authority is a common execution problem.

If a project manager is responsible for a schedule but can't approve reasonable operational decisions, every issue gets pushed upward.

Decisions slow down.

People become cautious.

The project loses momentum.

Board judgement:

For major projects, compare:

Responsibility → Authority → Approval limits → Accountability

They should broadly match.

Framework: Trust, People & Execution + 5D Decision Test

9. Are we building an asset—or creating a long-term platform?

Answer:

The next generation of infrastructure may not be about selling an asset.

Consider senior living.

The opportunity may be to create a recurring revenue platform combining accommodation, healthcare, hospitality and community services.

Similarly, an industrial park can become an MSME ecosystem, while a logistics park can become a supply-chain platform.

Board judgement:

Ask: "What can this asset become five or ten years after construction?"

That question can change the investment case.

Framework: New Infrastructure Opportunities + Field-to-Boardroom Bridge.

10. What happens if we're wrong?

Answer:

This may be the most important question a board can ask.

Management's job is naturally to explain why a project should work.

The board's job is to test what happens if the assumptions aren’t held.

What if:

- Occupancy is 55% instead of 90%?

- Costs increase by 20%?

- Approval is delayed by 12 months?

- The anchor customer leaves?

- The technical assumption fails?

- The market changes?

A strong investment isn't one where nothing goes wrong.

It's one where the company “can survive when something does go wrong”.

Board judgement:

Every major investment proposal should include a credible “downside case and recovery plan”.

Framework: 5D Decision Test + Pre-Balance-Sheet Governance

The 10 Questions — One-Page Boardroom Version

No.	Boardroom Question	What It Tests
1	What are we not seeing in the numbers yet?	Pre-balance-sheet risk
2	What will it cost us if we don't decide now?	Cost of indecision
3	When did the field know—and when did the board know?	Information flow
4	Which interface could stop the project?	Multi-agency risk
5	Are we measuring investment size or investment quality?	Ecosystem value
6	What businesses should exist around our anchor project?	Multiplier effect

7	Are people hiding problems because they're afraid to report them?	Trust and culture
8	Does responsibility match authority?	Execution discipline
9	Are we building an asset or a platform?	Future infrastructure
10	What happens if we're wrong?	Downside resilience

The Central Message of the Book

All ten questions lead back to one principle: A board shouldn't wait for the balance sheet to tell it that something has gone wrong.

The strongest board judgement happens earlier—when a technical assumption is still being questioned, when an approval is still pending, when a project manager is hesitating, when an ecosystem is still being formed, or when a new infrastructure need is only beginning to emerge.

That's the “Field-to-Boardroom Bridge”:

Field reality → Early signal → Management judgement → Board question → Better decision → Better outcome.

And perhaps the most powerful question a director can ask is simply:

"What are we seeing today that will become a board problem tomorrow if we don't act?"

Conclusion: The Director of Translator

Turning Field Reality into Boardroom Judgement

A board doesn't need another person who can read a balance sheet.

It needs people who can understand “what is happening behind the balance sheet.

That's the central idea behind this book.

My experience has taught me that many of the problems that eventually appear in financial statements don't begin in finance.

They begin at the project site.

They begin with an unresolved technical issue.

A delayed approval.

A contractor dispute.

A design assumption.

A coordination failure between agencies.

A decision nobody wants to make.

A team that stops speaking openly.

By the time the problem appears as a cost overrun, margin erosion, working-capital pressure or impairment, the real decision point may have passed months earlier.

That is why I see the Independent Director's role differently.

The director is a translator.

Translating the Field into the Boardroom

A project engineer may say:

"The design isn't working as expected."

The finance team may hear: "There could be a cost impact."

The legal team may hear: "There could be a contractual claim."

The project team may hear: "The schedule is at risk."

The board needs to understand all four—and connect them.

That's the translator's role.

A director doesn't need to become a project engineer, quantity surveyor, lawyer or CFO.

But the director must be able to ask: "What does this technical issue mean for cost, time, cash flow, risk and ultimately shareholder value?"

That is board-level judgement.

From Site to Strategy

The Field-to-Boardroom Bridge is built on a simple chain:

Field reality → Early signal→ Management interpretation → Financial / commercial consequence→ Board decision

The failure usually happens when one of these links is missing.

A technical team identifies the problem but doesn't escalate it.

Management receives the information but doesn't interpret its strategic significance.

Finance sees the cost but doesn't understand its operational cause.

The board receives a financial variance but doesn't ask what happened before the number appeared.

The translator connects these pieces.

The Director Must Ask Before the Number Appears

This is the essence of “Pre-Balance-Sheet Governance”.

The board shouldn't wait for:

- Cost overruns;

- Provisions;

- Claims;

- Project delays;

- Declining margins;

- Debt-service pressure;

- Asset impairment.

It should ask what is likely to create those outcomes.

For example:

- Has the required technical approval been received?
- Is the design assumption validated?
- Is the land available?
- Is the contractor performing as expected?
- Is the project dependent on another agency?
- Is the team escalating problems early?

These questions may sound operational.

They're not.

They are “early-warning governance questions”.

The Director Must Translate Delay into Money

A delay is rarely just a delay.

A six-month project delay can mean:

- Additional interest;

- Idle equipment;

- Extended staff costs;

- Contractor claims;

- Escalation in material prices;

- Delayed revenue;

- Loss of market opportunity.

That's why the “5D Decision Test” asks a question that can change the quality of a board discussion: "What will it cost us if we don't decide?"

The board should understand both sides of the decision.

Cost of acting.

And: Cost of waiting.

Sometimes the second number is far more important.

The Director Must Translate Interfaces into Risk

A project may involve several government bodies, contractors, consultants and utility providers.

Each may be performing its own responsibility.

The project can still fail.

Why?

Because the problem often lies between organizations.

That's why “Multi-Agency/Interface Risk” deserves board attention.

The director should ask:

- Which dependency is critical?
- Who owns it?
- What happens if it slips?
- Who takes the commercial consequence?
- When will the board know?

The issue isn't whether everyone has completed their individual task.

It's whether “the entire system can move forward”.

The Director Must Translate Investment into Ecosystem.

A ₹5,000-crore industrial project can look impressive in an investment presentation.

But the more important question may be: "What happens around that ₹5,000 crore?"

- Does it create suppliers?
- MSME opportunities?
- Local logistics?
- Training?
- Warehousing?
- Maintenance services?
- Worker housing?
- New businesses?

This is the thinking behind the “Anchor-to-Ecosystem Multiplier”.

An anchor project should ideally create more than its own output.

It should create an ecosystem around itself.

That is how a board can move from asking: "How much are we investing?"

to: "What economic value are we creating?"

The Director Must Translate People Behavior into Execution Risk

Numbers can tell you that a project is slipping.

They don't always tell you why.

Sometimes the answer is uncomfortable.

People aren't escalating problems.

Managers are afraid to make decisions.

Teams are waiting for approval.

Good news travels quickly, bad news travels slowly.

That's why “Trust, People & Execution” is not a soft subject.

Trust affects the speed at which information moves.

It affects decision-making.

It affects execution.

And eventually, it affects cost.

A board should therefore ask: "What problem does the project team know about today that isn't visible in our formal report?"

That one question could be more than another presentation.

The Director Must Translate Emerging Trends into Opportunities

Governance isn't only about preventing failure.

It is also about recognizing opportunities.

India's infrastructure requirements are changing.

Ageing

Urbanization.

Industrialization.

Digitalization.

Climate pressure.

Changing supply chains.

These changes create new infrastructure needs.

Senior living is one example.

The opportunity isn't simply to build housing for older people.

It may be to create a long-term platform combining:

housing + healthcare + hospitality + community + recurring revenue.

That requires the board to think beyond the physical asset.

It asks the question: "What problem will customers continue paying us to solve?"

That's the essence of the “New Infrastructure Opportunities” chapter.

The Director Must Translate Risk into Decisions

A board can spend hours discussing risk.

But risk discussion without a decision doesn't create value.

The director's job isn't to make management uncomfortable.

It's to make the decision clearer.

Ask:

- What do we know?
- What don't we know?
- What happens if we're wrong?
- What happens if we wait?
- What are our alternatives?
- Who should decide?
- By when?

This is where the frameworks in this book become practical.

They aren't meant to sit on a page.

They're meant to be used when the room is uncertain.

The Boardroom Should Not Become a Second Project Office

There's an important boundary.

An Independent Director shouldn't start running the project.

The board shouldn't decide on construction methodology.

It shouldn't micromanage engineering.

It shouldn't replace management.

But it should challenge whether management is seeing the right risks, making timely decisions and escalating material issues.

The distinction is simple:

Management asks: "How do we execute?"

The board asks: "Are we executing the right plan, with the right controls, at the right risk?"

That's governance.

The Five Habits of a Translating Director

If I had to reduce this book to five habits, they would be these.

1. Go below the number

Don't stop at the variance.

Ask what operational event it created.

2. Look forward

Don't ask only what happened.

Ask what is likely to happen next.

3. Challenge the cost of delay

A decision not taken is also a decision.

4. Listen to the field

The earliest warning may come from someone far below the boardroom.

5. Connect the dots

Technical risk.

Commercial risk.

Financial risk.

People risk.

Regulatory risk.

Strategic risk.

They rarely exist independently.

A Final Boardroom Example

Imagine management presents a project to the board.

The project is ₹2,000 crore.

The IRR is attractive.

Approvals are largely in place.

The contractor is appointed.

The board presentation looks comfortable.

But during discussion, a director asks: "What is the single biggest assumption that, if wrong, could change the economics of this project?"

Management identifies a critical technical assumption.

The director asks: "Has it been independently validated?"

The answer is: "Not completely."

Another question: "What happens if validation takes six months?"

Now the discussion has changed.

Then: "What will the six-month delay cost?"

The financial team calculates the impact.

Then: "Can we stage the investment until the assumption is validated?"

Suddenly, the board has moved from “approving a project” to “improving the decision”.

That's the difference a good director can make.

Not by knowing every technical detail.

But by asking the question that connects the detail to the decision.

Conclusion

The Director of Translator

The most valuable director isn't necessarily the person who knows the most about one subject.

It's often the person who can connect different forms of knowledge.

- Engineering → Finance
- Operations → Risk
- Risk → Strategy
- People → Execution
- Infrastructure → Capital
- Field reality → Board judgement

That is the translator.

And translation matters because every function sees only part of the picture.

The board's responsibility is to see the whole picture.

The Field-to-Boardroom Test

Before leaving any major board discussion, a director should be able to answer five questions:

1. What is really happening?

Not what the presentation says.

What is happening on the ground?

2. What could change the outcome?

Which assumption or dependency matters most?

3. What haven't we seen in the numbers yet?

What risk is still upstream?

4. What decision is required?

And what happens if we don't make it?

5. What should we monitor next?

What early indicator will tell us whether our judgement was right?

If these five questions are answered clearly, the board has probably added value.

The Final Thought

Good governance isn't about asking more questions.

It's about asking, “better questions at the right time”.

A board that asks questions only after a problem appears is performing oversight.

A board that recognizes the problem while it is still manageable is exercising judgement.

And a board that sees an emerging opportunity before it becomes obvious to everyone else is creating strategic value.

That's the territory where I believe the Independent Director can make a real difference.

Not by sitting above the business.

Not by running the business.

But by “understanding the business deeply enough to translate what is happening in the field into decisions that matter in the boardroom”.

That is the “Field-to-Boardroom Bridge”.

And ultimately, that's what this book is about: See the signal early. Translate it correctly. Ask the difficult question. Make the decision before the problem becomes a number.

Because by the time the problem appears clearly on the balance sheet, “the board may already be too late.”