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Why Major Projects Fail Before They Begin

A Six-Pillar Framework for Execution Readiness

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The delivery gap is priced in the first 90 days.

Major infrastructure projects don't fail at execution. They fail at the governance, procurement and sponsorship decisions made in the first 90 days — usually before a single contractor mobilises.

Capital has never been more available for infrastructure. Delivery capability has never been scarcer. The result is a systematic gap between what boards approve and what gets built — a gap that appears in the data as cost overruns and delay, but originates far earlier: in how decision rights are designed, how sponsors engage, how contracts allocate risk, and whether anyone owns the interfaces between the parties.

This paper makes three claims:

- The dominant failure patterns of major projects are structural, recurrent and visible before execution begins — they can be diagnosed at approval stage.
- ODEF™ — the Optiturn Delivery Excellence Framework — organises those patterns into six pillars, each with measurable elements and explicit risk signals, producing a single Readiness Score a board can act on.
- Applied in practice, readiness discipline changes commercial outcomes — illustrated by an energy-infrastructure case in which fast, well-governed decisions converted a critical interference into roughly twelve months of anticipated revenue for the client.

The paper presents the evidence, the framework and the diagnostic. It is written for the people who carry the consequences of approval decisions: boards, investment committees, sponsors and executives responsible for capital programmes.

The governance gap: approved before ready.

The performance record of major projects is one of the most stable findings in management research — and one of the most ignored at approval stage.

Nine out of ten megaprojects run over budget.

Bent Flyvbjerg, Saïd Business School, University of Oxford — the “Iron Law of Megaprojects”: over budget, over time, under benefits, over and over again.

98% of megaprojects incur cost overruns above 30%; 77% run at least 40% late.

McKinsey & Company, “Megaprojects: the good, the bad, and the better”.

Two facts follow from thirty years of this data. First, the failure rate has not improved with better engineering, better software or better reporting. Second, the projects that succeed are not the ones with fewer problems — they are the ones whose governance structure was designed to absorb problems at the speed the schedule demands.

That points to a conclusion most approval processes still resist: the decisive risks are taken before execution — in the governance, sponsorship and procurement architecture set up in the first 90 days. Execution merely reveals them.

Approval is not readiness

Boards approve business cases: demand forecasts, capital plans, contractor selections. Almost no approval process asks the questions that predict delivery: Who decides, at what threshold, in how many hours? What happens when the sponsor's attention moves on? What does the contract do when scope meets reality? Who owns the interfaces no single contractor controls?

The gap between those two examinations — the business case and the readiness case — is where the Iron Law lives.

Six failure patterns. Every time.

Across energy, transmission, industrial and building programmes — 19+ years, 14 countries — the same six patterns account for most of the damage. Each maps to one pillar of the framework presented in Part 2.

#	RECURRING FAILURE PATTERN	ODEF™ PILLAR
1	Governance delegated upward instead of designed. Decisions that need 48 hours wait weeks for committees never given authority thresholds.	P1 · Governance by Design
2	Nominal sponsorship instead of functional sponsorship. A name on the charter; no political capital, no bandwidth, no top-cover when needed.	P2 · Executive Sponsorship
3	Ambiguous contracts that manufacture claims. Scope signed before it is defined; risk allocated to whoever negotiated worst.	P3 · Contract & Procurement Integrity
4	Teams unmatched to the project's complexity. The organisation is assembled after the contract, at the market's leftover capacity.	P4 · Organisational Readiness
5	Unmapped interfaces that become crises. Every party owns its scope; nobody owns the gaps between scopes — where schedules die.	P5 · Integrated Interface Management
6	Reactive financial control instead of predictive. The first serious budget review happens after the first overrun.	P6 · Financial Execution Control

None of these is an execution failure. All six are design decisions — made, or defaulted on, before mobilisation. Which means all six can be scored before mobilisation. That is what ODEF™ does.

ODEF™ — six pillars, eighteen elements.

The Optiturn Delivery Excellence Framework is a structured diagnostic and governance framework that assesses delivery readiness across six critical pillars: three measurable elements each, one Readiness Score a board can hold a programme to.

P1 · WEIGHT 20%

Governance by Design

Elements: Decision Rights Matrix · Escalation Protocol · Authority Thresholds

Key distinction: governance by design — decision rights and speeds engineered before mobilisation — versus governance by reaction, assembled meeting by meeting once problems arrive.

Risk signal: decisions routinely waiting weeks for committee approval that the schedule prices in hours.

P2 · STANDARD WEIGHT

Executive Sponsorship

Elements: Sponsor Engagement Level · Top-Cover Availability · Strategic Alignment

Key distinction: nominal sponsorship (a signature on the charter) versus functional sponsorship — political capital and decision bandwidth actually available when it is unpopular to give.

Risk signal: a sponsor who does not know the Project Manager's name.

P3 · WEIGHT 20%

Contract & Procurement Integrity

Elements: Scope Definition Clarity · Risk Allocation Balance · Variation Management Protocol

Key concept — the Procurement Cliff: the day the contract is signed, flexibility drops off a cliff. Every ambiguity signed that day is bought back later at claim prices.

Risk signal: scope still undefined at contract signature.

P4 · STANDARD WEIGHT

Organisational Readiness

Elements: Team Competency Match · Resource Availability · Knowledge Transfer Protocol

Key concept — Execution Altitude: every project has an altitude of technical, contractual and multicultural complexity. Teams built below it do not grow into it under schedule pressure; they stall at it.

Risk signal: the delivery team assembled after the contract, not before it.

P5 · STANDARD WEIGHT

Integrated Interface Management

Elements: Interface Register Completeness · Third-Party Coordination Protocol · Design Freeze Discipline

Key concept — the Interface Blind Spot: contracts see scopes; programmes fail between scopes. The interfaces no single party controls are where unowned risk accumulates.

Risk signal: third-party interfaces not mapped at planning stage.

P6 · STANDARD WEIGHT

Financial Execution Control

Elements: Cost Baseline Integrity · Earned Value Discipline · Variation Authorization Protocol

Key distinction: financial execution control — a forward-looking system that authorises and steers — versus financial reporting, which measures what has already been lost.

Risk signal: the first serious budget review happens after the first overrun.

The scoring model

Each element is scored 0–10 against defined criteria: 18 elements, 30 points per pillar, 180 raw points, normalised to a 0–100 Readiness Score. P1 and P3 — where the evidence says programmes are won or lost — carry 20% weight each; the remaining pillars carry standard weight.

READINESS BAND	SCORE	MEANING FOR THE BOARD
Execution Ready	85–100	Proceed with standard monitoring.
Conditional	70–84	Specific gaps must be resolved before mobilisation.
Caution	50–69	Significant structural changes required.
Not Ready	<50	The programme should not proceed as configured.

THE SINGLE PILLAR VETO

Any pillar scoring below 15/30 automatically invalidates the overall Readiness Score — regardless of the aggregate. A programme with excellent contracts and absent sponsorship is not “averagely ready”. It is exposed.

ODEF™ in practice: twelve months of revenue, one decision.

SECTOR	ASSET	TIMELINE	CRITICAL DECISION	RESULT
Utility-scale solar — HV substation	28.5 MW plant grid connection, Sicily	Provisional energization May 2024 · permanent June 2025	€1M authorised variation (HDD/TOC)	~12 months of anticipated revenue

Situation. A 28.5 MW solar plant in Sicily, commercially dead until its HV substation connected it to the grid. The critical path ran through the HV cable route — and through an interference with existing underground infrastructure that conventional excavation could not resolve within the connection window.

The readiness difference. On most programmes, an interference of this kind produces the classic sequence: consultant study, committee review, contractual standoff, a season lost. Here, the governance had been designed for speed before it was needed:

- P1 — Governance by Design: decision rights and authority thresholds allowed a €1M variation — the HDD/TOC trenchless solution for the HV duct interference — to be evaluated and authorised in days, not quarters.
- P2 — Functional sponsorship: the sponsor carried the overrun decision to the client’s board with full top-cover, because engagement pre-dated the crisis.
- P3 — Contract integrity: the variation entered the contract as a clean, priced, documented order — not as a claim to be litigated after the fact.
- P5 — Interface management: the third-party interference was on the interface register before it was on the critical path; the trenchless option had already been scoped as contingency.

Outcome. A dual-phase delivery strategy — provisional energization in May 2024, permanent configuration in June 2025 — put the plant on the grid roughly a year earlier than the conventional sequence. Against ~12 months of generation revenue on a 28.5 MW asset, the €1M authorised overrun was not a cost. It was the highest-return decision on the programme.

The overrun was authorised in days because the authority to approve it existed before the problem did. That is what readiness means.

How ready is your project?

Every pattern in this paper is diagnosable before mobilisation. ODEF™ is delivered in three formats: the Executive Briefing Assessment (a 3-hour board diagnostic), the Self-Assessment Questionnaire (built on the 18 elements) and the Facilitated Assessment Workshop (a two-day engagement). The starting point is the questionnaire: it identifies your programme's readiness gaps in under 30 minutes.

TAKE THE DIAGNOSTIC

Is your programme delivery-ready?

The self-assessment is free, anonymous and takes less time than the meeting you are about to have about the meeting.

[OPTITURN.CLOUD/SELF-ASSESSMENT](https://optiturn.cloud/self-assessment)

Conclusion

The question is not whether your project will face complexity. It will. The question is whether your governance structure is designed to absorb that complexity — or whether it will amplify it.

ODEF™ exists to make that question answerable — with a score, before the capital is committed, while the design decisions are still cheap.

About the author

Simone Turnone is the founder of Optiturn, an Executive Infrastructure Advisory boutique. He has spent 19+ years delivering critical energy and infrastructure programmes across 14 countries in Europe, MENA and the GCC — from FEED to commissioning, HV/MV up to 400 kV, across EPC and EPCM delivery models. Registered Engineer, Architect and Surveyor. He works with boards, investment committees and executives who are judged on what gets built.

Sources and references

1. B. Flyvbjerg, "What You Should Know About Megaprojects and Why: An Overview", Project Management Journal, 45(2), 2014; and "The Iron Law of Megaprojects", Saïd Business School, University of Oxford. Figure cited: roughly nine out of ten megaprojects run over budget.
2. McKinsey & Company, "Megaprojects: the good, the bad, and the better" (Capital Projects & Infrastructure). Figures cited: 98% of megaprojects incur cost overruns above 30%; 77% run at least 40% late.
3. Framework, weights, bands and Single Pillar Veto: ODEF™ Framework, optiturn.cloud/odef-framework. Part 3 case: 28.5 MW photovoltaic HV connection programme, Sicily (2023–2025) — author's project data; commercial details rounded for confidentiality.

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