FROM DESIGN RISK TO CONSTRUCTION CLAIM

An Evidence-Based Framework for Risk Traceability, Schedule Forecasting, and Claims Avoidance

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Purpose and learning objectives

- Explain why many construction claims should be understood as the final stage of an earlier risk-actualization process.
- Show how project controls can preserve traceability from design risk through issue, impact, response, and commercial disposition.
- Examine the unapproved TIA problem as a conflict between contractual schedule integrity and realistic forecasting.
- Present a governed dual-view scheduling model and a practical implementation workflow.

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Presentation roadmap

01 Why claims begin earlier

02 Risk-to-claim traceability

03 The unapproved TIA problem

04 Dual-view schedule governance

05 Implementation and conclusions

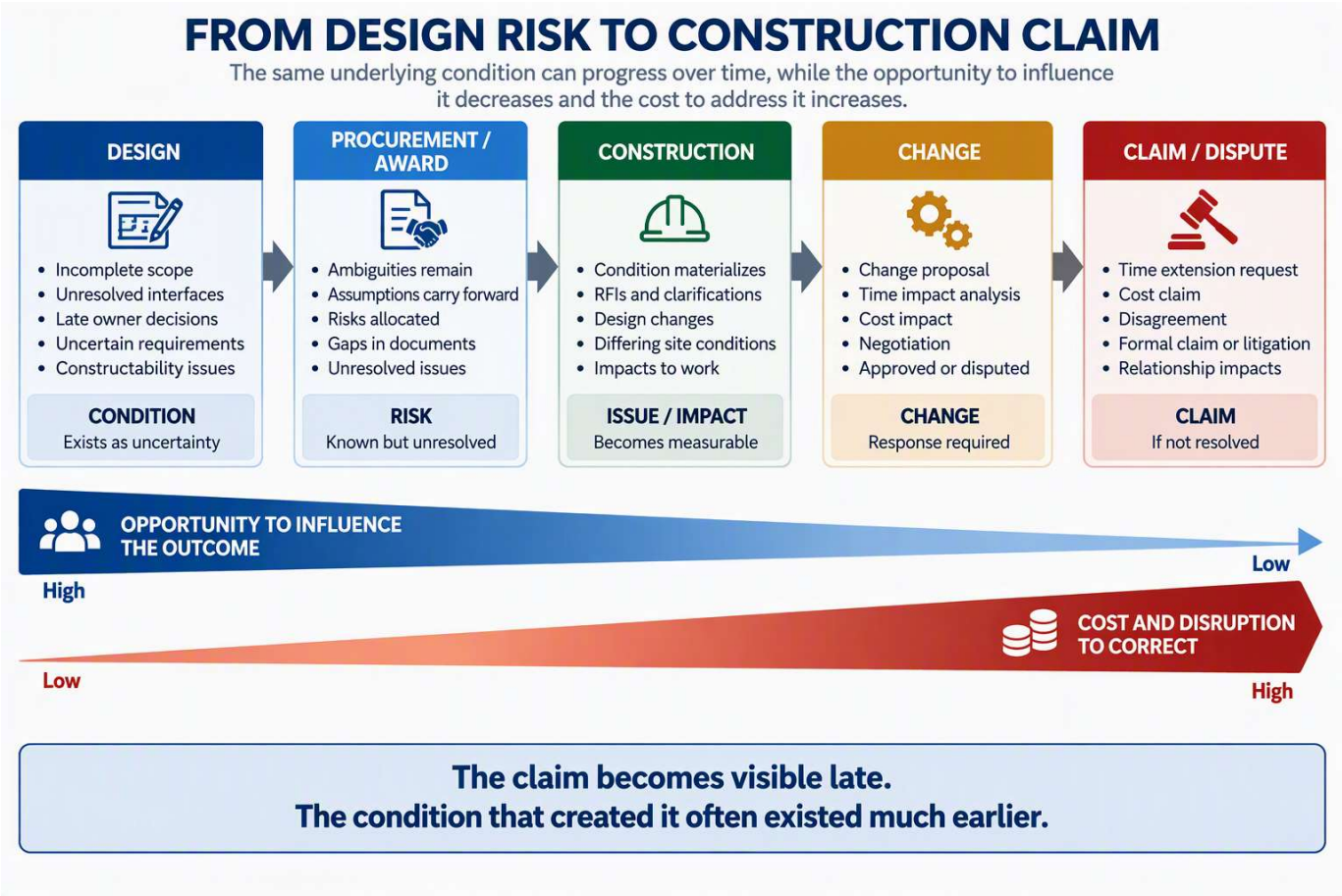
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01

Why claims begin earlier

The claim becomes visible late. The condition that created it often existed much earlier.

From design risk to construction claim



Claims often originate before construction, when greater opportunities for intervention remain.

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Why early intervention changes the outcome

During design

- Investigate assumptions and existing conditions
- Modify design, packaging, sequence, or procurement
- Clarify responsibility and allocate retained risk
- Preserve alternatives before commitments are fixed

After award

- RFI, redesign, resequencing, or reprocurement
- Lost float, added resources, and acceleration pressure
- Change requests and time-extension analysis
- More expensive reconstruction of evidence and responsibility

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THE RISK-TO-CLAIM CONTINUUM

Not every risk becomes a claim.

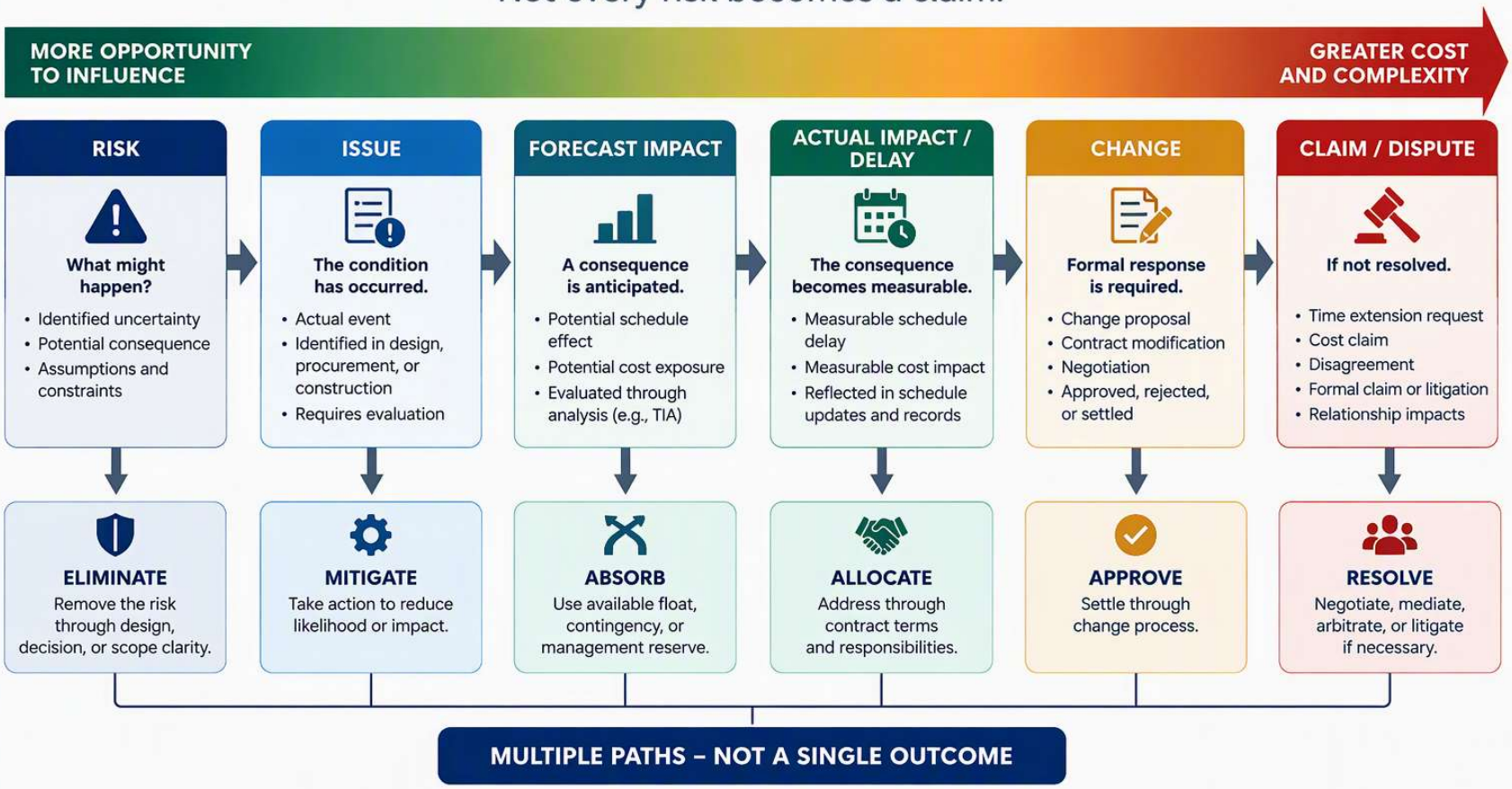


Figure 2 – Unresolved risks can progress from issues to impacts, changes, and claims.

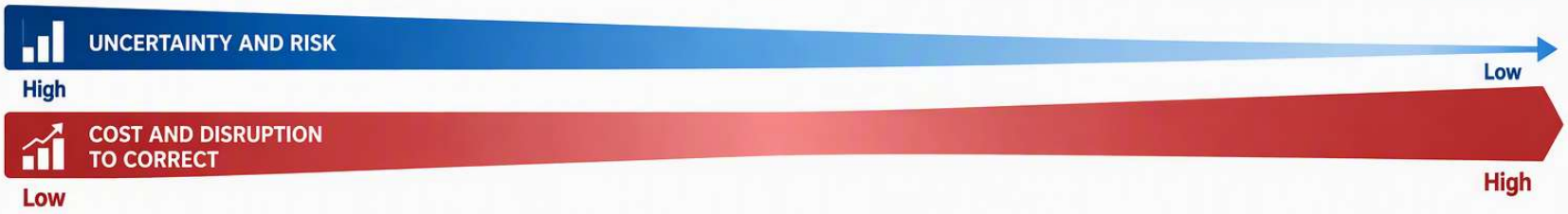
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Move claims avoidance upstream into design.

INTEGRATED PHASE-GATE PROJECT CONTROLS

Bring claims avoidance forward by maturing project controls with project definition.

PROJECT CONTROL DISCIPLINE	CONCEPT Define the Opportunity	EARLY DESIGN Develop the Basis	DESIGN DEVELOPMENT Refine and Validate	FINAL DESIGN Complete and Issue	PROCUREMENT / AWARD Contract and Mobilize	CONSTRUCTION Execute and Close
	Gate 1 Proceed to Design	Gate 2 Proceed to Define	Gate 3 Proceed to Procure	Gate 4 Proceed to Award	Gate 5 Proceed to Construct	
Scope / WBS	Conceptual	Preliminary	Developing	Defined	Contracted	Managed
Cost	Order-of-magnitude	Preliminary estimate	Refined estimate	Baseline estimate	Contract value	Cost control
Schedule (CPM)	Conceptual	Preliminary logic	Developing logic	Baseline schedule	Contract schedule	Update and forecast
Risk	Initial risk workshop	Qualitative assessment	Quantitative analysis	Mitigation plans	Allocated / included	Monitor and manage
Constructability	Initial review	Ongoing input	Detailed review	Resolved / incorporated	Contract requirements	Field execution support
Procurement	Strategy development	Market analysis	Package planning	Bid documents	Bid and award	Subcontract management
Contract Strategy	Delivery method	Risk allocation	Contract terms	Final contract documents	Execute contracts	Administer and enforce
Change Controls	Define approach	Develop process	Refine procedures	Implement controls	Active change process	Manage changes
Records / Claims Readiness	Define requirements	Establish systems	Train and implement	Fully in place	Contractual obligation	Maintain and support



Advance when project definition and project controls are mature enough to support the next commitment.

02

Risk-to-claim traceability

Maintain the evidentiary connection from initial risk through continuous improvement.

RISK-TO-CLAIM TRACEABILITY FRAMEWORK

Maintain the evidentiary connection from initial risk through continuous improvement.

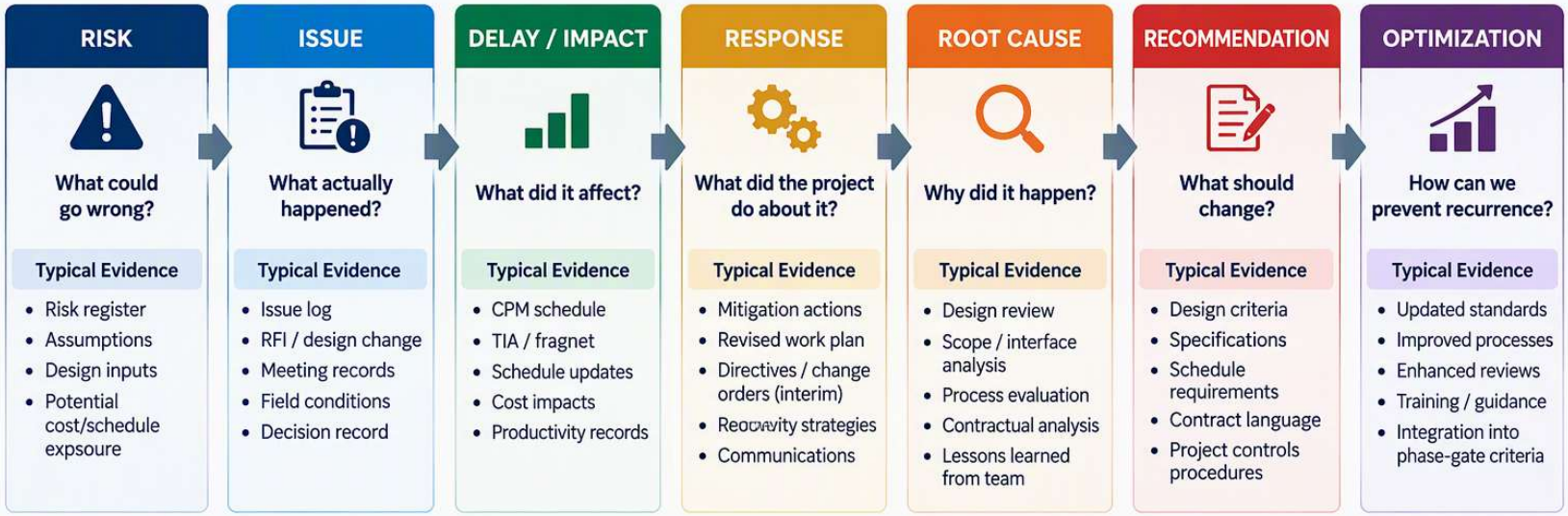


Figure 4 – Traceability connects risk identification through root cause and continuous improvement.

The critical handoffs are where traceability is commonly lost

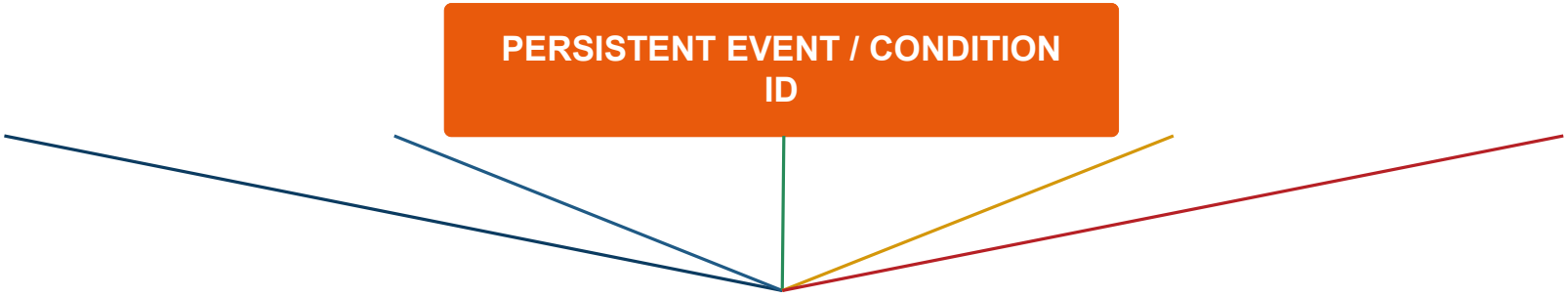
- **Risk → issue**: preserve the originating identifier, trigger date, affected scope, and first response.
- **Issue → impact**: measure the effect in the context of the CPM plan and the conditions existing when the event occurred.
- **Impact → response**: document mitigation, direction, assumptions, and the forecast effect expected from the response.
- **Response → root cause**: test schedule evidence against contemporaneous records before assigning an underlying cause.
- **Root cause → optimization**: return the lesson to design criteria, specifications, controls, and future phase gates.

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Closing the traceability gap



Without a persistent identifier, each record may contain part of the story while the evidence chain remains incomplete.



ONE CONDITION | MULTIPLE RECORDS | ONE TRACEABLE EVIDENCE CHAIN

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03

The unapproved TIA problem

One schedule is often expected to satisfy two legitimate but different purposes.

The scheduling conflict

Contractual schedule perspective

- Recognize actual progress and approved changes
- Preserve the accepted plan and contractual completion basis
- Avoid implying that unresolved entitlement has been granted

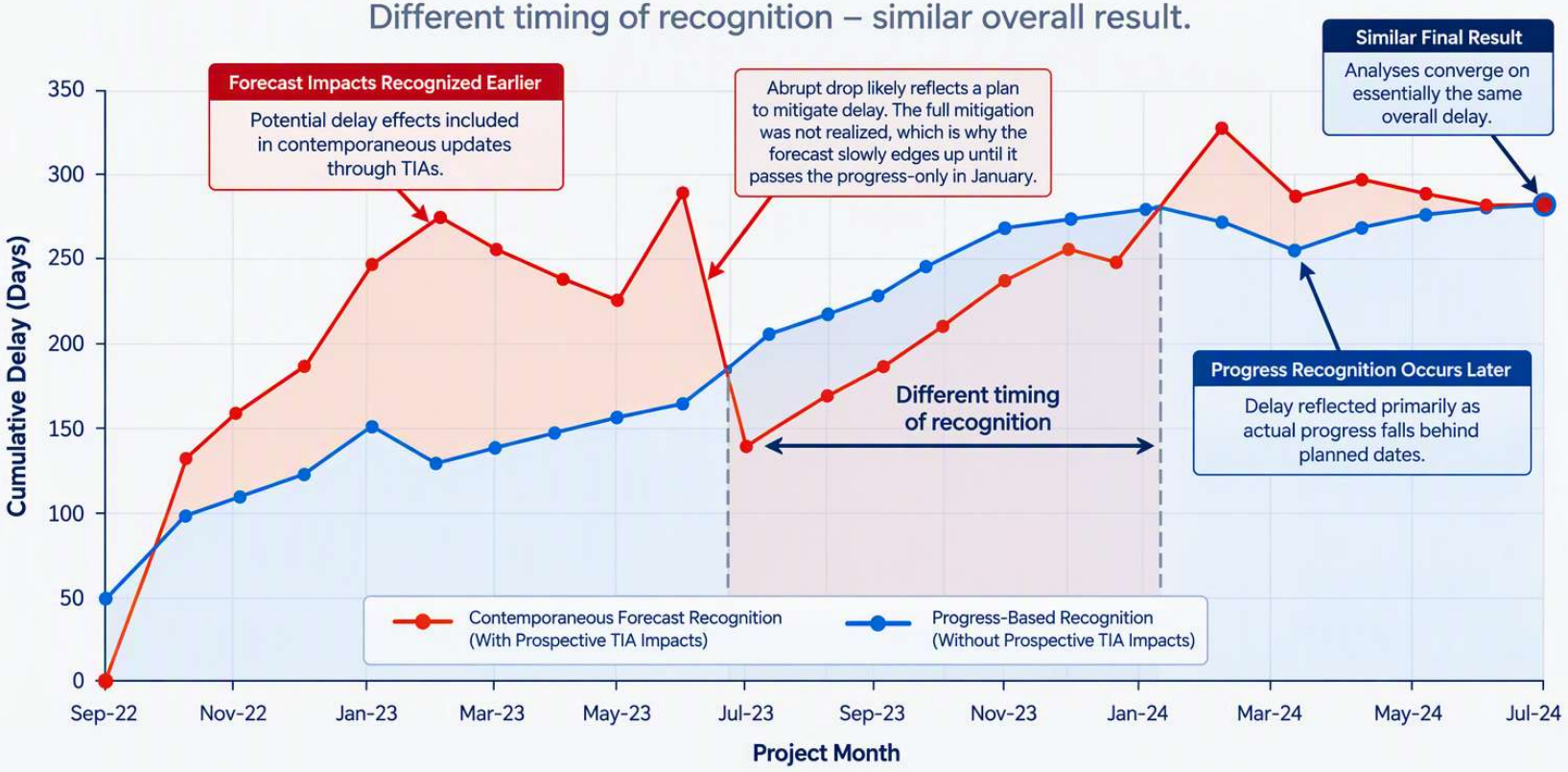
Management forecast perspective

- Represent credible known impacts before approval is complete
- Support mitigation, procurement, resource, and interface decisions
- Avoid an optimistic forecast that ignores emerging conditions

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FORECAST VS. ACTUAL DELAY RECOGNITION

Different timing of recognition – similar overall result.



The timing of delay recognition can differ significantly while the overall cumulative delay is similar.

What the forensic comparison establishes, and what it does not

- The contemporaneous updates forecast substantial delay earlier; the half-step analysis recognized much of the same delay later through progress.
- The curves ultimately converged on approximately the same cumulative delay, providing an independent reasonableness test.
- The comparison does not establish that every prospective TIA prediction was precisely correct.
- Each event, fragnet, logic path, duration, status, and predicted critical-path effect still requires validation and preferably contemporaneous corroboration.
- Forecast information should be preserved and tested, not automatically accepted or retrospectively removed.

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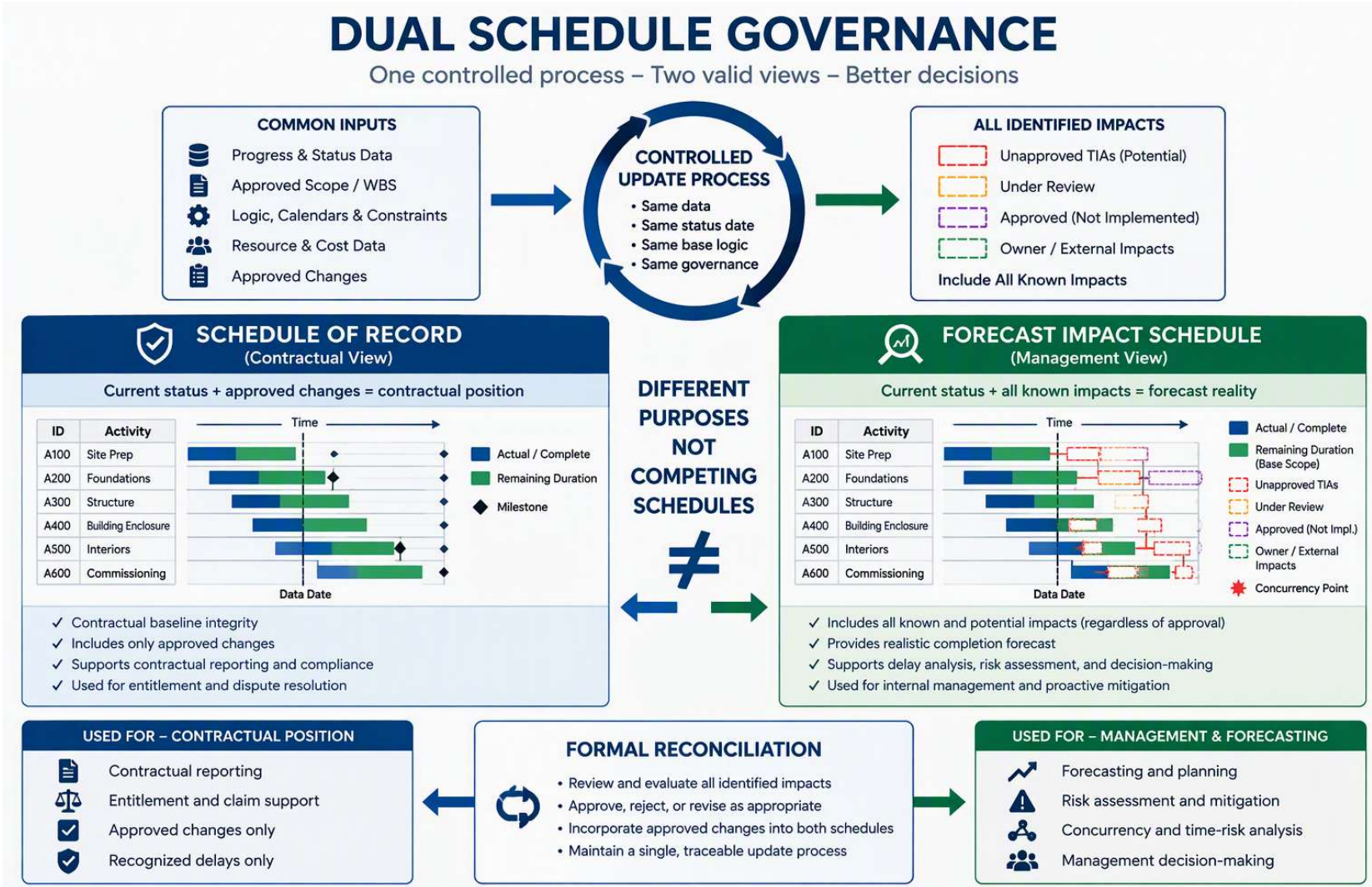
04

Evidence-based dual-view governance

Preserve contractual integrity without requiring management to ignore credible emerging impacts.

DUAL SCHEDULE GOVERNANCE

One controlled process – Two valid views – Better decisions



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Dual views must remain one controlled scheduling process

- Both views begin with the same status, actual dates, and accepted base logic.
- Differences are limited to identifiable unresolved events and documented forecast assumptions.
- Each update reconciles approved, rejected, superseded, mitigated, or absorbed impacts.
- The Forecast Impact Schedule is not a second baseline and is not represented as an approved contractual schedule.
- Configuration control and reconciliation prevent divergence and preserve credibility.

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05

Implementation

Connect identifiers, evidence, responsibilities, and schedule governance across the project lifecycle.

RISK-TO-CLAIM MANAGEMENT WORKFLOW

From early identification to continuous improvement.



A disciplined, end-to-end process turns today's risks into better projects tomorrow.

Responsibility should follow the decision, not the software

DESIGN MANAGEMENT	Technical resolution
RISK MANAGEMENT	Risk characterization and response tracking
PROJECT CONTROLS	Integrated cost and schedule measurement and forecasting
PROJECT MANAGEMENT	Execution decisions
CONTRACT / COMMERCIAL	Contractual disposition

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Conclusions

- Every claim has an earlier risk origin, even when contractual entitlement is determined later.
- Many downstream impacts have design-phase contributors that can be identified while more response options remain available.
- Phase-gate integration improves visibility by testing whether controls and project definition are mature enough for the next commitment.
- Dual-view scheduling can preserve both contractual discipline and realistic management forecasting when reconciliation is formal and continuous.
- Evidence traceability improves contemporaneous decision-making and reduces the reconstruction required if a dispute develops.

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THE PRACTICAL BEST PRACTICE

Integrate early.
Preserve the evidence.
Forecast realistically.
Reconcile continuously.

Claims avoidance is the cumulative result of disciplined decisions and evidence maintained from design through completion.

QUESTIONS

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