

Method selection is governed by two things: what the contract requires, and what the contemporaneous record can actually sustain. An analysis whose method the records cannot support will be discounted however sound the underlying entitlement.

Six questions, answered on their own terms

Choosing a forensic delay analysis method is a judgement about evidence, not preference. It turns on whether a credible baseline exists, what the contract requires, what state the contemporaneous updates are in, and whether concurrent causes have to be separated. More than one method is often defensible on the same facts, and a report that runs a primary method and a cross-check is usually stronger than one that runs either alone.

- 1

What are you trying to prove?
Delay methods answer a different question from disruption or acceleration. This decides whether the selector applies at all.
 - Delay to completion, and entitlement to time
 - Lost productivity or disruption
 - Acceleration or mitigation cost
 - Not sure yet
- 2

Is there a credible baseline programme?
Every technique here depends on one. Answer this honestly before anything else.
 - Yes: accepted or approved, properly logic-linked, and reviewed
 - A baseline exists, but it is poorly logic-linked or was never properly reviewed
 - No usable baseline
 - Not sure
- 3

When is the assessment being made?
Prospective methods model an event as it arises. Retrospective methods measure what the record shows.
 - As events arise, while the project is live
 - After the fact, once the effect is known
 - Not sure
- 4

What does the contract require?
Asked whichever way you answered the last question, because a prescribed method still binds you after the event.
 - It requires the event assessed when it arises, on a forecast basis (for example NEC4 compensation events)
 - It is silent or general on method (common under FIDIC-based forms)
 - Not sure

- 5

What state are the contemporaneous records in?
Answer against the weakest part of the delay period, not the best of it. If more than one statement describes your project, pick that one; the selector will offer the other as a cross-check rather than discarding it.
 - Programme updated regularly, with logic maintained through the period in question
 - Updates exist but logic was not maintained; period-by-period progress and site records are good
 - Little meaningful updating, but a complete as-built exists whose logic was recorded at the time rather than applied afterwards
 - A reliable, dated as-built exists, but its logic was never recorded
 - Records are thin overall
 - Not sure
- 6

Do employer-risk and contractor-risk events affect the same period of critical delay?
Concurrency drives method choice, because only some methods separate causes period by period.
 - Yes, or it is likely to be argued
 - No, there is a single dominant cause
 - Not sure

The seven techniques

Method	What it does	What your records must sustain	Where it is weak	What would make it fail
Time Impact Analysis PROSPECTIVE	A fragnet modelling the delay event is inserted into the programme in force at the time, and the predicted effect on completion is read off.	A well-maintained programme in force at the time of the event, and an event that can be discretely identified and dated.	Data-hungry and sensitive to update quality. It produces a forecast, and a tribunal reviewing a completed project may prefer what actually happened.	Where the programme in force was not maintained, or was never agreed between the parties, the result inherits that weakness. Where many events overlap, inserting them sequentially makes the order of insertion affect the answer, while summing separately-modelled events can double-count.
Impacted As-Planned PROSPECTIVE	Delay events are added into the baseline programme to model their theoretical effect.	A sound, logic-linked baseline.	It relies entirely on a sound baseline and ignores what actually happened on site. A tribunal reviewing a completed project can see the as-built, so a model that ignores it reads as academic.	Where the baseline was optimistic, poorly logic-linked or never reviewed, the modelled result carries that defect straight into the answer.
Time Slice Windows RETROSPECTIVE	The programme is divided into periods; critical-path movement is measured in each window against the updated schedules, and the delay in each window is then attributed to causes from the contemporaneous record.	Contemporaneous programme updates with logic maintained through the delay period.	It can only separate employer and contractor causation if the contemporaneous updates actually captured both, with logic, fragnets and notices that match the events.	Where updates were rebuilt, re-baselined or progressed without logic, the window results measure the rebuild rather than the delay.
As-Planned versus As-Built Windows RETROSPECTIVE	A windows analysis driven by factual records rather than programme logic, comparing intended against actual progress period by period.	Reliable period-by-period progress and as-built data.	Causation is inferred from the factual record rather than modelled through logic, so it is more contestable where causes overlap.	Where the as-built record is itself incomplete or assembled after the fact, the comparison inherits that uncertainty.
Retrospective Longest Path Analysis RETROSPECTIVE	The as-built longest path is traced back from actual completion to identify what in fact drove the finish date.	A reliable, detailed as-built with dated actuals.	It identifies the driving path rather than the cause. It applies no contemporaneous test of criticality, and it is weak on separating employer and contractor responsibility.	Where criticality moved between paths during the works, a single retrospective longest path can hide that movement.
Collapsed As-Built (but-for) RETROSPECTIVE	Delay events are stripped out of the as-built programme to show what would have happened without them.	A complete as-built programme whose logic was recorded contemporaneously.	It requires a fully logic-linked as-built, which is rare and often reconstructed after the fact. It reasons from effect back to cause, applies no contemporaneous criticality test, and the result is sensitive to the order in which events are removed.	Where the as-built logic was inserted by the analyst rather than recorded at the time, the method is vulnerable on exactly that point.
As-Planned versus As-Built RETROSPECTIVE	A visual, factual comparison of the intended programme against what actually happened.	A baseline and an as-built record, both good enough to compare.	It shows correlation, not causation, and is weak where multiple causes overlap.	Where causes overlap or the critical path moved, it cannot separate responsibility and will be discounted if presented as though it could.

When the answer is not a method

Establish the planned intent before selecting a method
Every technique here depends on a baseline.

Repair the contemporaneous record first
The project is still live, which means the record can still be put right.

This is a disruption question, not a delay-to-completion question
Lost productivity is proved by comparing achieved output against a reasonable measure of what should have been.

This is an acceleration question, not a delay-to-completion question
Acceleration and mitigation cost turn on what was instructed or reasonably required, and on what the measures.

Your records may not sustain a concurrency analysis
Where causes overlap, responsibility has to be separated period by period.