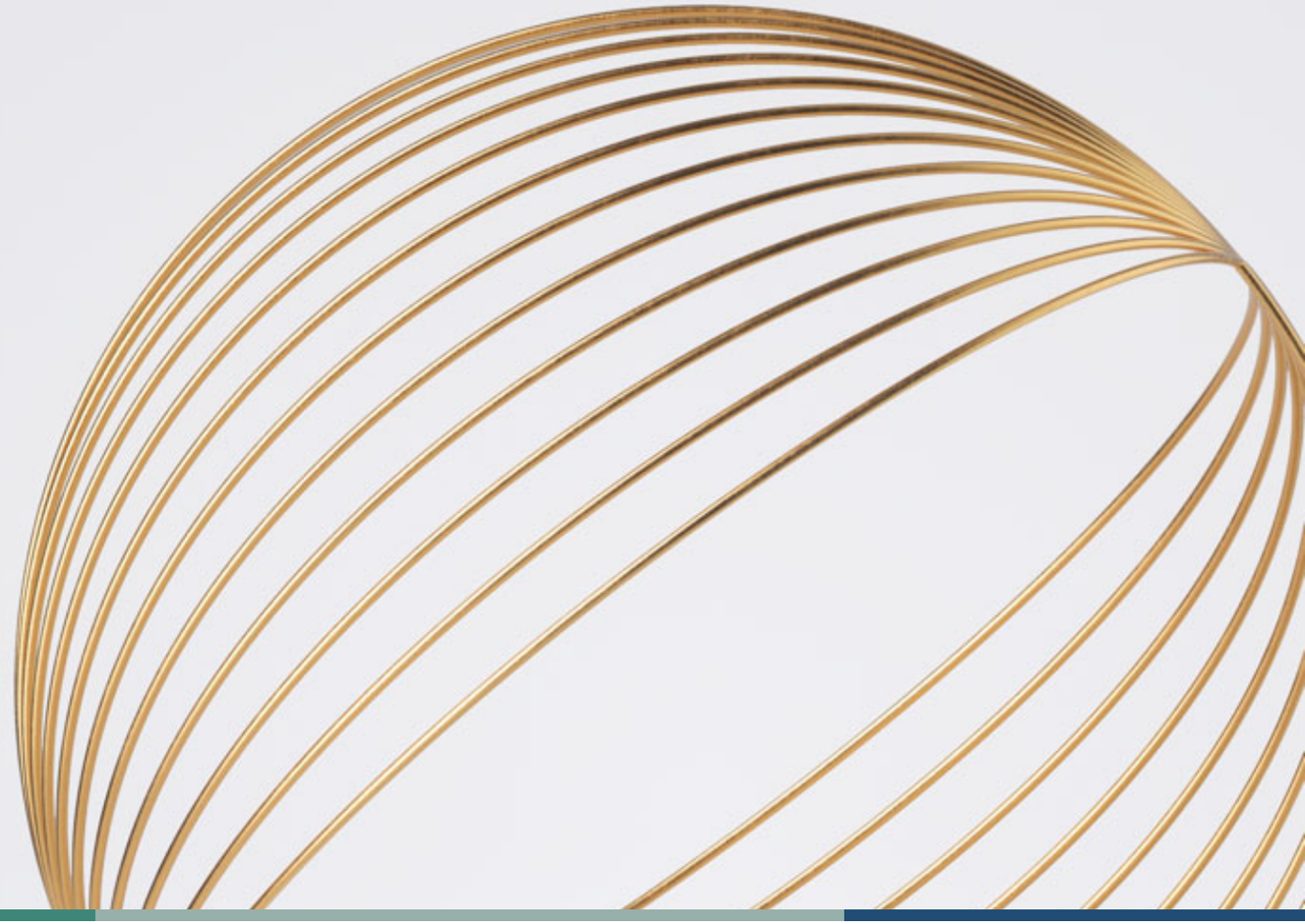
Leveraging Earned Value and Schedule Data for Forensic Insight and Future Project Success

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Introduction



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Agenda

1. Why EV and Schedule Data is Underutilized
   - Frame the value of P/p performance data beyond monthly reporting.
2. Documentation That Matters
   - Identify the records, progress data, and structured fields that preserve analytical value.
3. Forensic Data Management Framework
   - Show how to preserve, structure, integrate, and validate data across parties.
4. Demonstration Analysis
   - Organize fragmented data to quantify resource, owner, contractor, and vendor impacts.
5. Decision, Claims, and Audit Readiness
   - Translate findings into real-time management insight and future defensibility.

Abstract

Leveraging Earned Value and Schedule Data for Forensic Insight and Future Project Success

Whether supporting planning, execution, or closeout, earned value and schedule progress data generated on programs/projects (“P/p”) is often underutilized—particularly from a historical and forensic perspective. While this data is routinely collected to support performance reporting, its structured nature also provides a powerful foundation for understanding delay, disruption, and responsibility, and can directly support requests for additional time or funding from Congress and other stakeholders.

This presentation introduces a practical **framework for maximizing the long-term value of P/p performance data** by applying forensic analysis principles to both active and completed projects. Drawing on the authors’ forensic and dispute resolution experience, the presentation identifies the specific types of project documentation and progress data that are most critical, explains why they are valuable, and outlines best practices for **managing and integrating data** across multiple contractors and stakeholders to ensure it remains usable, reliable, and decision-ready.

The presentation will include a demonstration, by the authors, in which fragmented and largely unstructured data is systematically organized and analyzed to quantify the impacts of resource allocation, owner-driven changes, contractor performance, and vendor-related issues. This example highlights how disciplined data management and forensic techniques can **transform existing project information into actionable insight**.

Attendees will gain a practical understanding of how to improve data governance, enhance the defensibility of project outcomes, and position their schedules



Learning Objectives

Turning Schedule Metrics Into Management Insight



Recognize the strategic value of earned value and schedule performance data as a long-term program and project asset



Understand how structured project data can support risk-informed decision-making throughout the project lifecycle



Identify data management practices that improve the defensibility and reliability of project outcomes



Evaluate how forensic analysis methods can be used to reconstruct performance issues and quantify project impacts



Apply lessons learned from an example to improve data governance and project controls practices

Big Picture

The data already exists. The opportunity is to preserve, structure, and use it for better decisions.

Whether supporting planning, execution, or closeout, earned value and schedule progress data generated within projects is often underutilized, particularly from a historical and forensic perspective.



Performance Reporting

Routine collection of EV and schedule progress information.

Historical Record

Structured data can become a reliable record of what happened and when.

Forensic Support

The same data can support delay, disruption, responsibility, and funding/time questions.

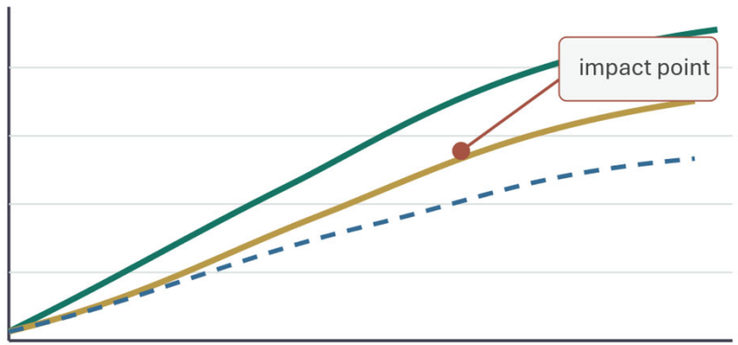
Future Decisions

A disciplined data approach improves real-time management and later defensibility.

Takeaway: performance data should be treated as a long-term project asset, not just a monthly reporting requirement.

Why This Concept Matters

Structured project data links performance reporting to defensible and reliable project outcomes.



The Typical Data Gap

- EV and schedule data are collected for reporting, but not always managed for later analysis
- Key supporting records may be disconnected across parties, systems, and formats
- Data that is not well-structured contemporaneously can lose evidentiary and management value

Delay

What changed the path to completion?

Disruption

What reduced productivity or planned flow?

Responsibility

Which party, event, or constraint drove the impact?

Funding/Time

What support exists for additional funds or time?

Demonstration: Turning Fragmented Data Into Quantified Insight

Disconnected project data can be organized and analyzed to evaluate multiple impact drivers.

Resource Allocation

Labor, staffing, funding, work sequence, and execution capacity

Owner-Driven Changes

Scope changes, directives, decisions, access, and approvals

Contractor Performance

Productivity, resequencing, rework, coordination, and execution issues

Vendor Impacts

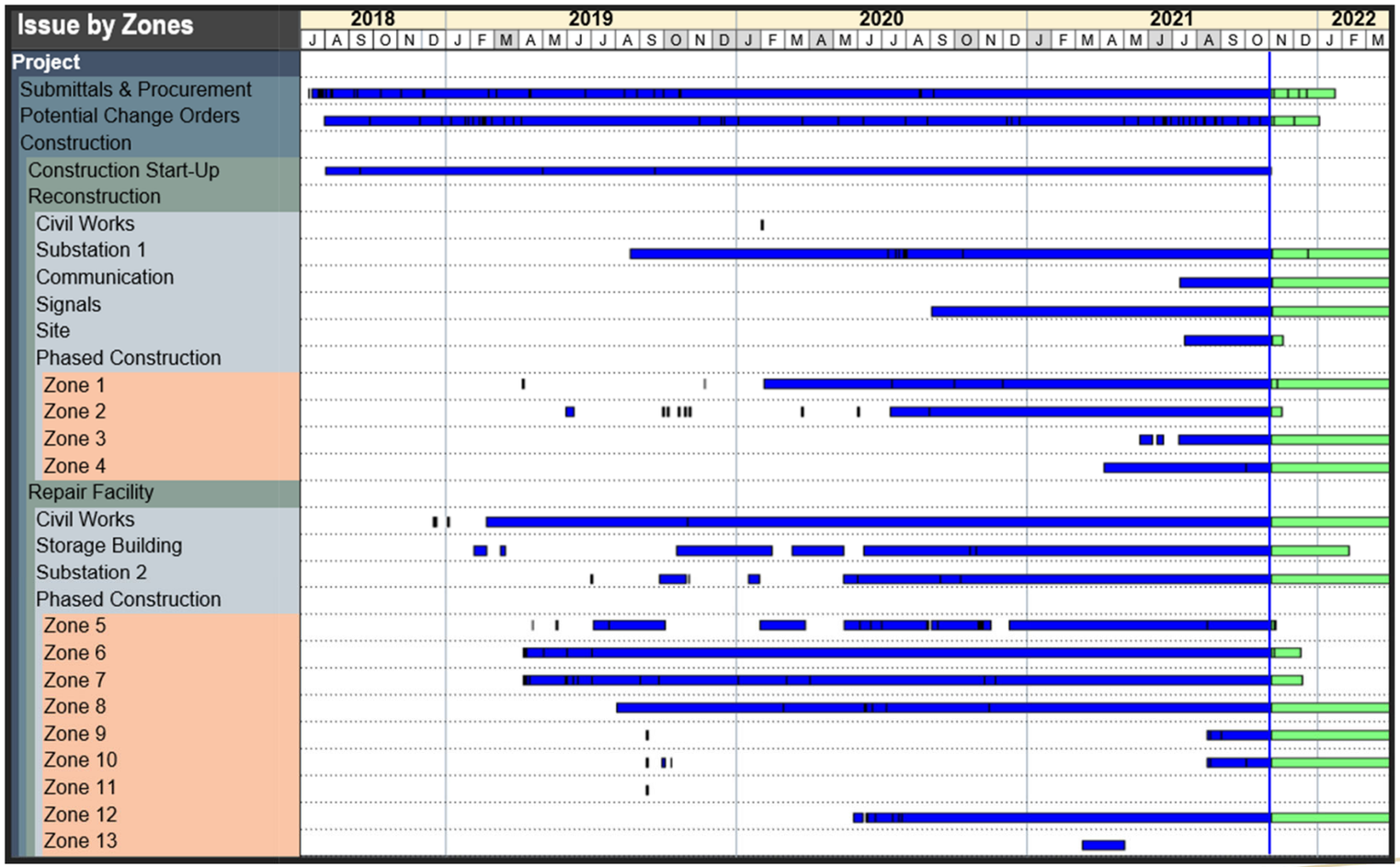
Long-lead items, delivery constraints, supplier performance, and material flow



Takeaway: a defensible impact narrative that links earned value, schedule progress, project records, and party-specific events.

Example: Data “Triangulation”

Question: What Really Happened?



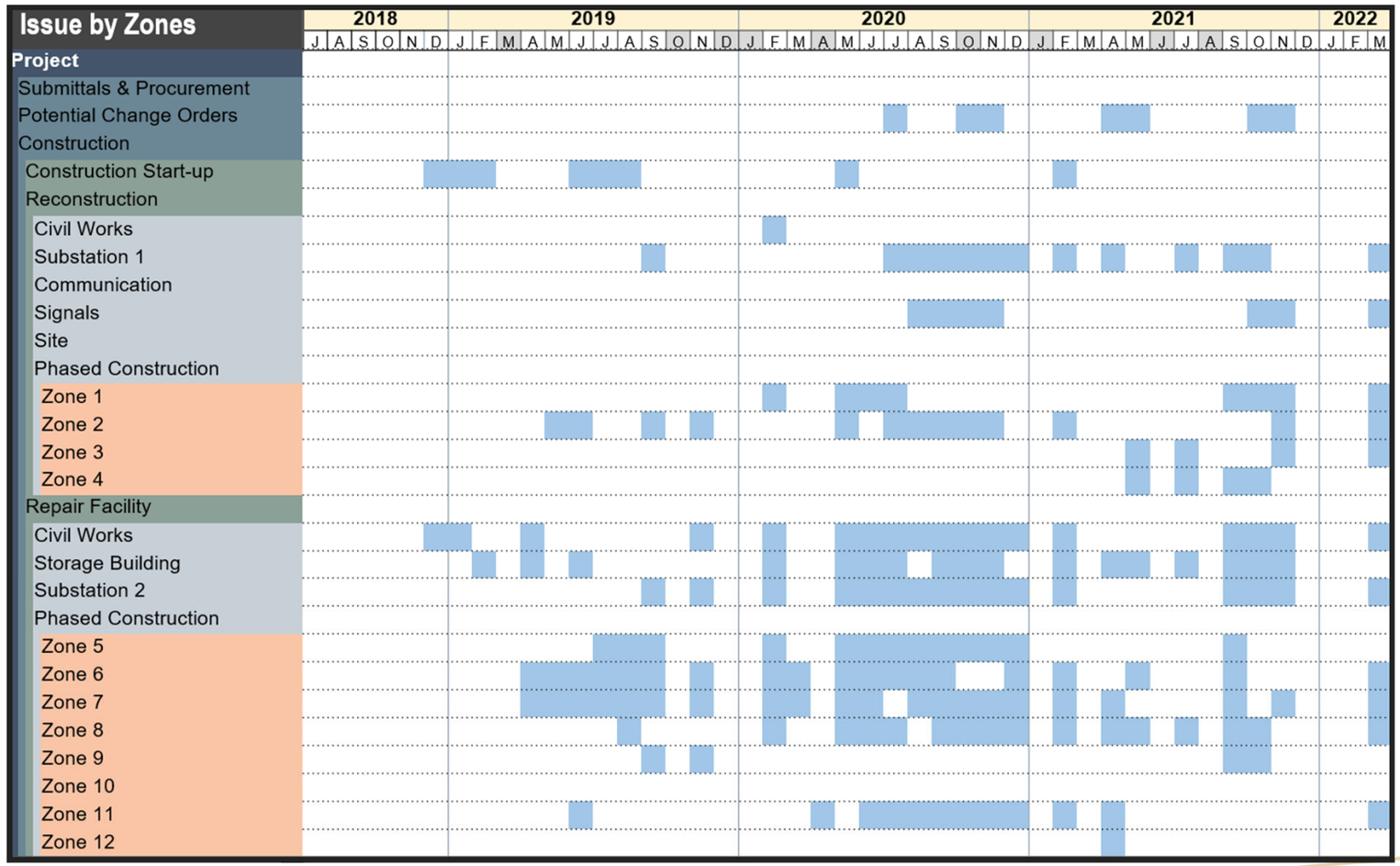
Schedule provides duration

Activities appear continuously active even though crews mobilized intermittently

Did the work actually progress throughout the entire duration shown?

Example: Data “Triangulation”

Additional Data Changes the Story



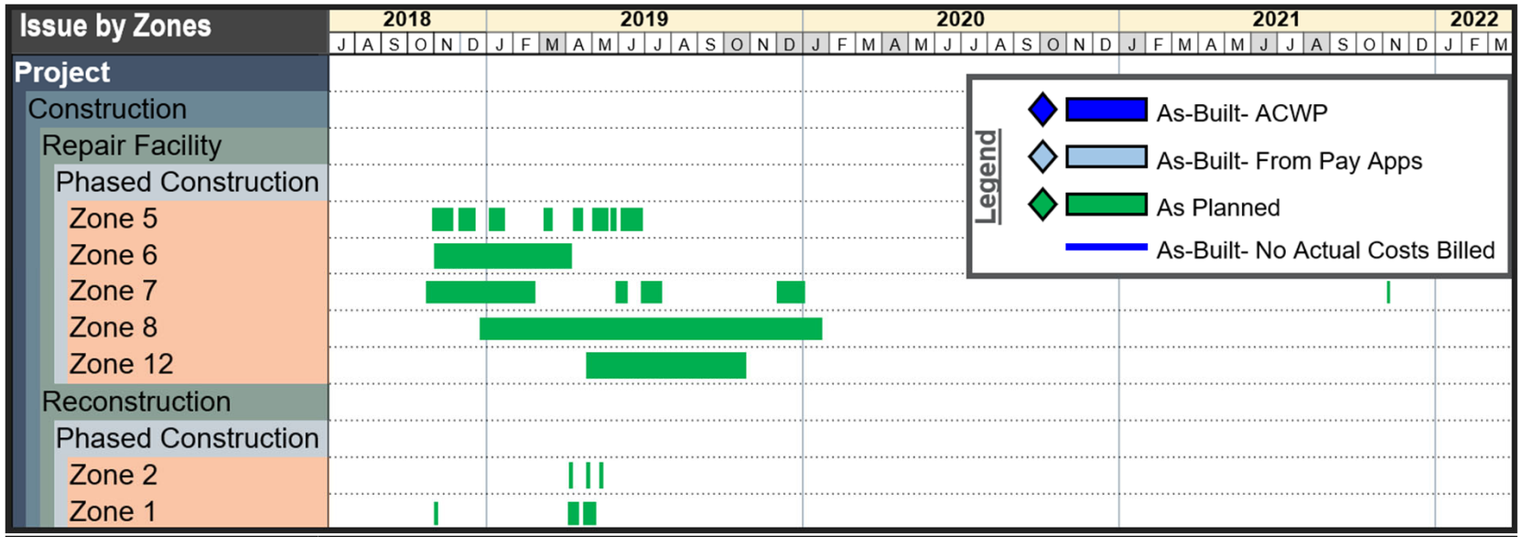
Pay Applications provide contemporaneous record of when contractor billed for work

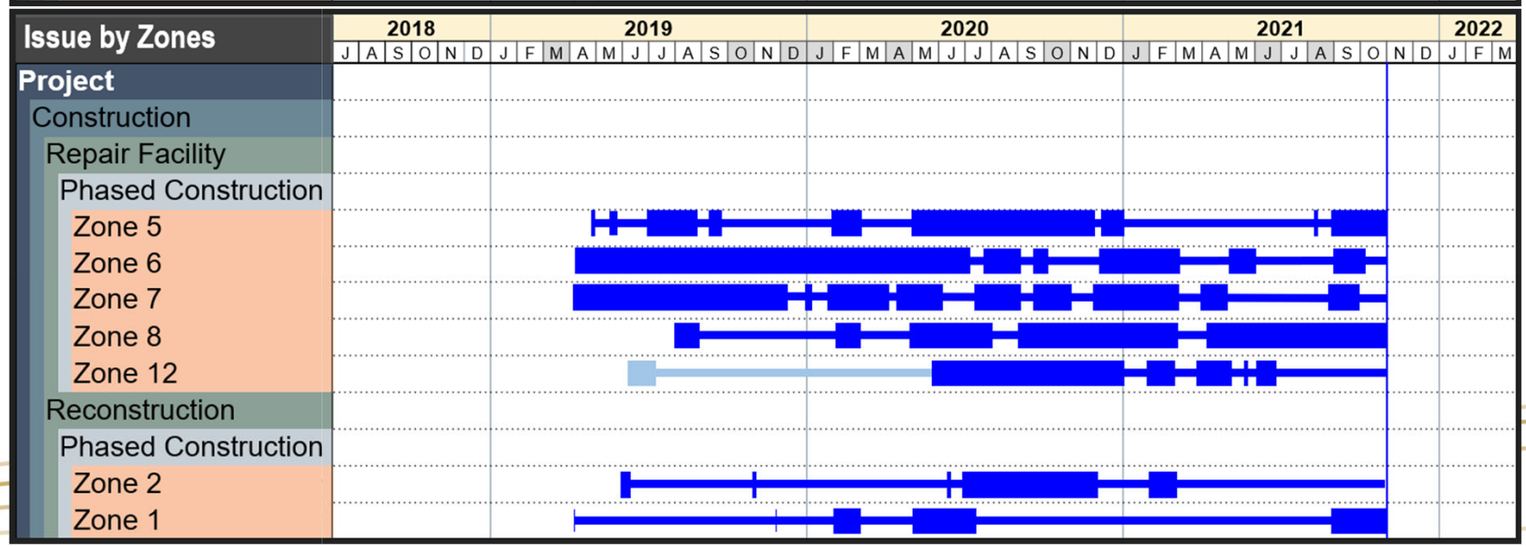
Mapping billed quantities to schedule WBS reveals periods with active production or periods with no or little progress

Pay applications indicate that work occurred but do not establish sequence or duration

Example: Data “Triangulation”

Triangulation Produces Actionable Insight





The schedule doesn’t tell the whole story

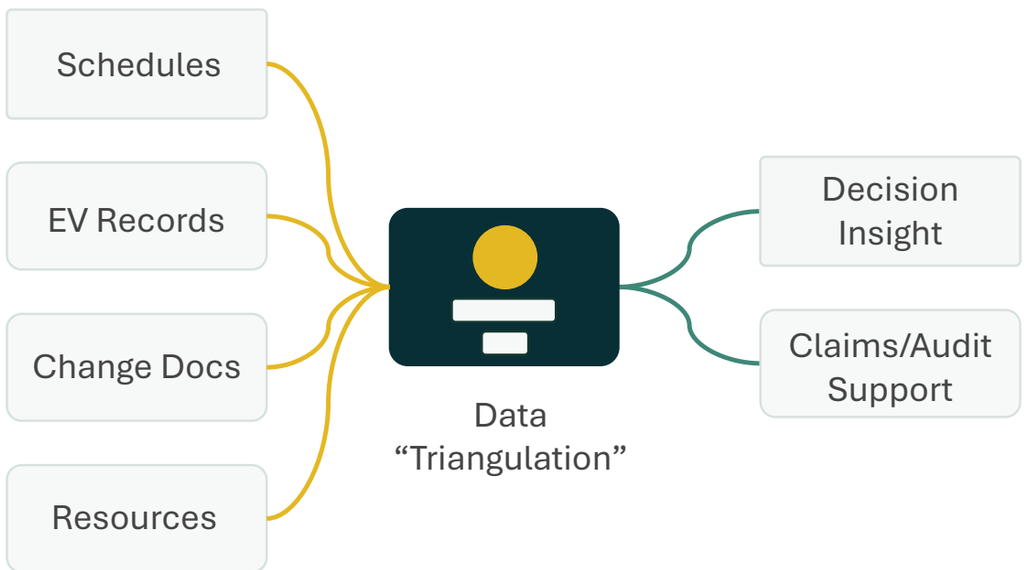
Schedule provides activity duration and sequence

Pay applications provide evidence of actual production

Several activities show as continuously active, experience significant periods of no production

Practical Framework

Maximize the long-term value of P/p performance data by applying forensic analysis principles.



1	Identify	Define the documentation and progress data that matter most.
2	Preserve	Manage records so they remain usable and traceable.
3	Integrate	Connect data across multiple contractors and stakeholders.
4	Analyze	Use forensic methods to quantify impact, responsibility, and timing.
5	Communicate	Convert findings into reliable, decision-ready insights.

Takeaway: records should be governed, integrated, traceable, reliable, and defensible before dispute, audit, or funding questions arise.

Value in Active Management, Claims, and Audits

The same disciplined data foundation supports both real-time decisions and future scrutiny.

Improve Data Governance

Clarify what data matters, how it is preserved, and how it is connected.

Support Real-Time Decisions

Use performance data to identify issues before the project reaches closeout.

Enhance Defensibility

Create a clearer record of project outcomes and the basis for conclusions.

Prepare for Claims and Audits

Position schedules and records to support future claims or government audits.

Takeaway: the project controls record should be decision-useful today and defensible tomorrow.

Thank you

Questions and Discussion

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