INVIZION
Unified Data. Actionable Insights.

INSIGHT · JUNE 2026

Your CIP Has an Accountability Problem.

Measurement without consequence is not accountability.

A 2024 peer-reviewed review of water utility performance-indicator research — examining 108 published studies — found that despite widespread use of performance indicators across the sector, the findings of that research are not reliably making it into improved utility outcomes. Utilities are measuring. Few are closing the loop.

108	18%	9.1 vs 6.3	5
STUDIES REVIEWED IN THE IWA PERFORMANCE-INDICATOR RESEARCH-GAP FINDING (AQUA 2024)	PROJECT PROFESSIONALS WITH HIGH BUSINESS ACUMEN (PMI PULSE 2025)	SUCCESS FACTORS TRACKED: HIGH-ACUMEN VS. PEER PROFESSIONALS (PMI 2025)	KEYS TO MANAGEMENT SUCCESS IN AWWA'S EUM FRAMEWORK — MEASUREMENT IS ONE

Sources: AQUA — Water Infrastructure, Ecosystems and Society, IWA Publishing (2024) · AWWA Effective Utility Management Framework · AWWA Utility Benchmarking Program · PMI Pulse of the Profession 2025 (2,841 project professionals surveyed) · General capital-planning change order cost research · AWWA does not sponsor, endorse, or affiliate with third-party companies, products, or services.

Guy Barlow, President
June 2026

SECTION 1 OF 3

What Utilities Actually Measure.

Ask a CIP director what they track and the list is usually long: change order rate, schedule variance, cost variance, percent design complete, contingency drawdown. Most utilities have gotten genuinely good at *measurement*. Dashboards exist. Reports go to the board on schedule.

What's harder to find is evidence that the measurement changes a decision before the damage is done — and this isn't a hunch. It shows up in the research literature directly. A 2024 review published in IWA's *AQUA* journal examined 108 studies on water utility performance indicators spanning distribution pipes, leakage management, asset management, and utility management.

AWWA'S FIVE KEYS TO MANAGEMENT SUCCESS

Measurement

Tracks performance and establishes and maintains accountability — the key this piece focuses on.

Leadership & Strategic Management

Sets direction and aligns the organization around it.

Customer Focus, Continual Improvement, Knowledge Management

The remaining three keys, supporting day-to-day execution and learning.

> *"While numerous studies have utilized performance indicators, a gap still exists between the actual management of utilities and the outcomes of those research works — the results have not necessarily been incorporated into improving water utility efficiency and effectiveness."*
>
> AQUA — WATER INFRASTRUCTURE, ECOSYSTEMS AND SOCIETY, IWA PUBLISHING, 2024

In plain terms: the water sector has no shortage of indicators. What it has a shortage of is indicators wired to a decision.

This is a structural pattern, not a competence gap. PMI's 2025 Pulse of the Profession — a global survey of 2,841 project professionals — found that only 18% demonstrate high "business acumen" proficiency, the capability most associated with catching problems before they fail. Those who do this well don't just track more things — they track an average of 9.1 success factors per project, compared to 6.3 for everyone else, and they build decision triggers around those factors rather than waiting for a quarterly review to notice a problem.

SECTION 2 OF 3

Diagnostic KPIs vs. Behavioral KPIs.

Not all KPIs function the same way, even when they sit on the same dashboard.

A **diagnostic KPI** tells you something happened. Cost variance is 14% over budget. Schedule slippage is six weeks. The number is accurate and current — and entirely descriptive. It describes a condition after the fact, with no built-in mechanism for what happens next.

A **behavioral KPI** is wired to a decision *before* the threshold is crossed. If cost variance exceeds a defined level, a re-scoping review triggers automatically. If schedule slippage passes a set point, ownership escalates to a named individual with the authority to act — not just a name on a distribution list. The sidebar sets the two types side by side across timing, ownership, and what happens when a threshold is missed.

Most CIP KPI frameworks sit almost entirely in the diagnostic column. The IWA review of asset management and utility management research found that data quality and indicator selection are consistently identified as areas needing improvement — but selecting better indicators doesn't help if no mechanism exists to act on what they show.

DIAGNOSTIC VS. BEHAVIORAL KPIS

What it does

Diagnostic: reports a condition. Behavioral: triggers a decision.

Timing

Diagnostic: after the threshold is crossed. Behavioral: before it is crossed.

Owner

Diagnostic: often unassigned or implicit. Behavioral: named, with defined authority.

Typical home

Diagnostic: the quarterly board report. Behavioral: the active PM workflow.

Result of a miss

Diagnostic: noted, explained next cycle. Behavioral: re-scoping, escalation, re-prioritization.

SECTION 3 OF 3

Why the Gap Persists, and What It Costs.

This isn't a competence problem. It's structural, and it shows up in predictable ways.

Reporting Lag Cost

KPIs typically roll up on a quarterly or monthly cadence — by the time a board sees a variance, the cheap decision window has often closed. The same overrun caught at 15% complete costs a fraction of what it costs to catch at 60%.

Ownership Vacuum Cost

A dashboard tells you *that* a metric crossed a line. It rarely tells you *who* owns the response. Without a named owner and a defined trigger, the default response to a missed threshold is discussion, not action — and discussion doesn't stop a project from continuing to drift.

Compounding Schedule Cost

High business-acumen project professionals achieve materially lower failure rates than their peers, largely by intervening earlier. A diagnostic-only framework structurally delays intervention — the data arrives on time, but the decision doesn't happen until the report is read, discussed, and acted on.

Change Order Cost

Projects that drift without a triggered intervention point routinely accumulate change orders in the 8–28% range of contract value — a cost almost always rooted in planning and oversight gaps, not contractor performance. A diagnostic KPI that flags the drift without forcing a decision doesn't prevent this cost. It documents it.

FOUR WAYS TO WIRE KPIS TO DECISIONS

01 Audit your current CIP KPIs and sort them: diagnostic (describes a condition) vs. behavioral (triggers a decision). Most utilities find the list is almost entirely the former.

02 For your three or four highest-stakes KPIs, define an explicit threshold, a named owner, and a required action — before the next reporting cycle, not after a variance is discovered.

03 Shorten the distance between when a KPI updates and when someone with authority to act sees it. Quarterly board reporting is fine for the board. It's too slow for the PM.

04 Revisit your KPI framework against AWWA's EUM Five Keys — Measurement is one of five, and it's explicitly tied to accountability, not just tracking.

None of this means utilities need more KPIs. Most need fewer, more tightly wired ones — metrics with a defined threshold, a named owner, and a pre-built response, so the system catches problems while they're still cheap to fix.

About Invizion

Guy Barlow is President of Invizion, a purpose-built capital lifecycle management platform for water utilities. Invizion integrates CIP management, prioritization, scenario planning, and performance tracking in a single unified system — enabling utilities to wire their KPIs to real decisions instead of quarterly observations.

Guy Barlow
President, Invizion
getinvizion.com

See how Invizion performs with real world data, challenging constraints, and tough trade-offs. We'll walk you through a live environment.

Schedule a Walkthrough →

Sources: AQUA — Water Infrastructure, Ecosystems and Society, IWA Publishing (2024) · AWWA Effective Utility Management Framework · AWWA Utility Benchmarking Program · PMI Pulse of the Profession 2025 (2,841 project professionals surveyed) · General capital-planning change order cost research · AWWA does not sponsor, endorse, or affiliate with third-party companies, products, or services.