

PMO Performance & EVM Architecture (BQE Core + Smartsheet + Power BI)

Generic system documentation | February 08, 2026

This document describes a reusable, client-safe reference architecture for a governed PMO performance system that ingests financial actuals from BQE Core, collects plan and progress inputs in Smartsheet via controlled update workflows, and delivers EVM-style performance intelligence through Smartsheet and Power BI (Power Query + DAX).

Primary purpose	Portfolio tracking + EVM-style performance analytics (PV/EV/AC, CPI/SPI, EAC/ETC).
Financial source of truth	BQE Core (actuals/spend).
Plan + progress source of truth	Smartsheet (PM-governed dates + phase/deployment updates).
Key governance control	Scheduled Smartsheet Update Requests with restricted fields and standardized definitions.
Visibility outputs	Operational Smartsheet dashboards + executive Power BI portfolio dashboards.

1. Architecture overview

- BQE Core provides financial actuals/spend (Actual Cost) and project identifiers through an integration handshake.
- Smartsheet serves as the operational PMO system of record (one row per project), hosting plan and progress fields.
- Project start/end dates and progress signals (phase completion, deployment updates) are collected via scheduled Update Requests under governance rules.
- EVM-style metrics are calculated in Smartsheet for operational KPIs and in Power BI (Power Query + DAX) for scalable portfolio analytics.
- Dashboards are delivered in two tiers: Smartsheet for operational action management and Power BI for executive performance intelligence.

2. Logical layers

Financial Source	Provide actuals/spend and financial truth (AC).	BQE Core: actual cost/spend; financial attributes.
Integration / Sync	Load and refresh actuals into Smartsheet keyed by Project ID.	API/ODBC/export+load; scheduled sync; idempotent updates.
System of Record	Central PMO tracker with governed plan/progress fields.	Smartsheet master tracker; reference/lookup sheets.

Governed Inputs	Collect PM-owned dates and progress with accountability.	Update Requests; restricted fields; cadence rules; auditability.
EVM Calculation	Compute PV/EV/AC and derived KPIs.	Smartsheet formulas; Power Query (M); DAX measures.
Visibility Layer	Operational + executive views and exception management.	Smartsheet reports/dashboards; Power BI dashboards.
Operating Model	Ensure adoption and sustained data quality.	Weekly cadence; exception queues; SOPs; definitions catalog.

3. Data model (Smartsheet PMO tracker)

Smartsheet is modeled as a one-row-per-project tracker. Financial fields are refreshed from BQE Core, while PM-owned plan and progress fields are maintained through governed update workflows.

- Primary key: Project ID (joins BQE Core actuals to Smartsheet plan/progress).
- Financial fields (from BQE Core): actual cost/spend and related financial metrics (AC inputs).
- PM-governed plan fields: Project Start Date and Project End Date captured via Update Requests.
- Execution fields: phase completion updates and deployment progress fields captured via scheduled Update Requests.
- Traceability: last updated date, owner fields, and notes/evidence links (optional) support audit and accountability.

4. Governance and update workflows

- Controlled input mechanism: PMs and owners provide updates through Smartsheet Update Requests rather than broad sheet edit access.
- Cadence rules: requests scheduled at defined timelines (weekly/bi-weekly or stage-based) to maintain data freshness.
- Field-level governance: plan fields (start/end dates) are restricted and treated as baseline-defining inputs.
- Quality controls: required fields, standardized definitions (percent complete/phase completion), and exception reporting for missing updates.

5. EVM calculation approach

EVM-style performance metrics are computed using both operational formulas in Smartsheet and model-driven measures in Power BI to support scalable portfolio reporting.

- Inputs: Planned Value (PV) derived from plan timelines; Earned Value (EV) derived from progress/phase completion; Actual Cost (AC) sourced from BQE Core.
- Core KPIs: CPI and SPI plus cost/schedule variance (CV/SV).
- Forecasting: EAC and ETC measures calculated in Power BI for portfolio consistency and trend analysis.

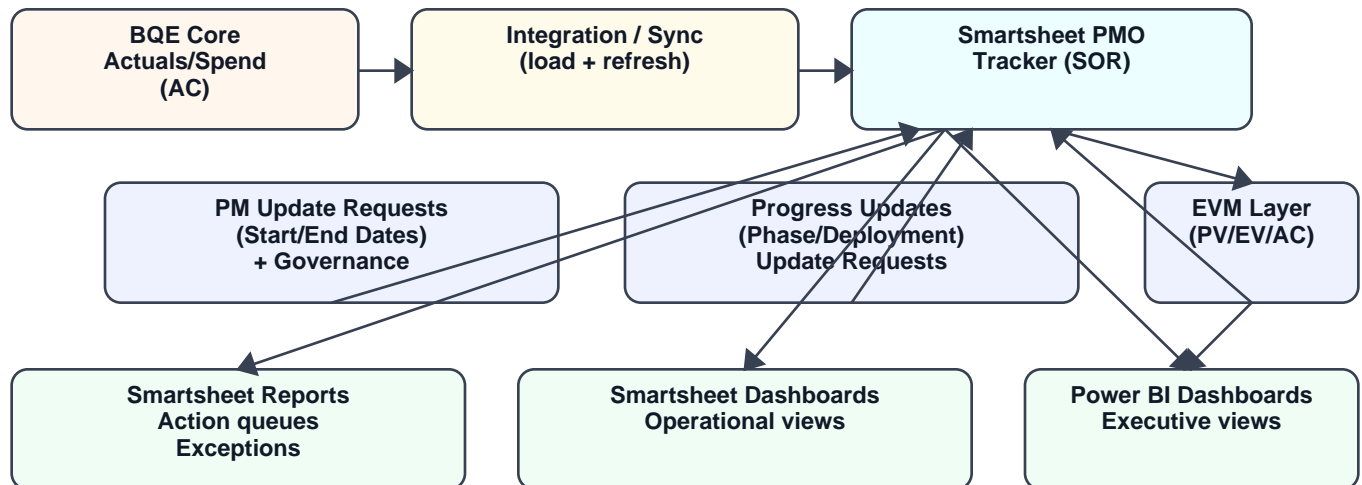
- Implementation: Smartsheet formulas for on-sheet indicators; Power Query (M) for shaping; DAX for measures and executive visualizations.

6. Dashboards and reporting

- Smartsheet operational dashboards: action queues (missing updates), phase/deployment rollups, and exception views for delivery teams.
- Power BI executive dashboards: CPI/SPI trend lines, EAC/ETC forecasting, variance analysis, and portfolio comparisons.
- Reporting strategy: build standardized reports for exceptions and drilldowns, then surface them via dashboards for different audiences.

7. Workflow diagram

High-level flow (box-and-arrow):



Appendix A: Implementation checklist

- Define PMO tracker schema (Project ID key, owners, plan fields, progress fields, financial fields).
- Stand up integration/sync from BQE Core to Smartsheet for actuals/spend refresh.
- Configure governance: restricted plan fields, update request cadence, required-field rules.
- Implement progress update workflows for phase completion and deployment tracking.
- Build EVM metrics: PV/EV/AC inputs, CPI/SPI, variance, and forecasting measures (EAC/ETC).
- Publish Smartsheet operational reports + dashboards and Power BI executive dashboards.
- Document definitions and SOPs; establish operating cadence for data quality and exception management.