Together makes progress

ConstructionSight™: Transforming construction risk management with predictive intelligence

Executive summary

Construction programs, especially large, geographically dispersed capital portfolios, are increasingly challenged by cost overruns, schedule delays, fragmented data, and limited early-warning capability. Industry research has found that 70%[1] of construction projects experience significant cost and schedule overruns, and that these risks can be mitigated through more integrated digital solutions.[2]

ConstructionSight™ is Deloitte's AI-powered risk-sensing analytics platform designed to unify construction data, surface forward-looking risk signals, and enable faster, more confident decisions across projects, programs, and portfolios. It transforms risk management by shifting owners and delivery leaders from reactive reporting to continuous, predictive oversight, supported by automated data integrity checks, customizable dashboards, proactive notifications, and generative AI (GenAI)–enabled insights.

Industry context: Why construction risk management must evolve

In today's capital project landscape, portfolio owners, executives, and managers face immense complexity and a recurring set of constraints:

- **Risk signals arrive late** because project performance data is scattered across legacy tools, spreadsheets, field reports, and vendor systems.
- **Manual reporting** consumes delivery capacity and still struggles to produce trustworthy, decision-grade insight.
- **Oversight at scale is hard** when a portfolio includes hundreds of projects and leadership needs a consistent view of risk across cost, schedule, safety, and quality.

ConstructionSight™ was purpose-built to address these pain points by providing a 360-degree, predictive view of asset/program performance and risk, enabling earlier interventions and more transparent governance.

1. CII Research Team, "AWP Data Requirements Implementation Guideline," April 2023.

2. International Data Corporation and Procore, "Owners at the Leading Edge", 2021

What Is ConstructionSight™?

ConstructionSight™ is a construction program intelligence platform that centralizes project data and applies AI/ML-driven analytics and GenAI insights to identify, predict, and help mitigate risks across the project lifecycle. It is positioned as a risk-sensing tool providing an "overarching, continuous and predictive view" of construction programs.

How ConstructionSight™ works

ConstructionSight™ helps organizations: Unify disparate construction data into a single hub; normalize risk signals into consistent metrics leadership can trust and act on; predict cost and schedule performance, and emerging risks using AI/ML; and operationalize risk response with alerts, dashboards, and GenAI-driven recommendations.

ConstructionSight™ is organized into three components that take the platform from raw data to actionable decision support:

1. **Data integration**—Centralized aggregation from disparate sources (legacy systems, spreadsheets, field reports), with active monitoring for missing/incomplete data to preserve analytic reliability.
2. **Analytics engine**—AI-powered risk monitoring and portfolio performance visualizations to provide enterprise-wide oversight using timely KPIs.
3. **Front-end interface**—Flexible dashboards and reports for project/program/portfolio views, plus in-app and email notifications and a built-in chatbot for question-driven analysis.

This structure is designed for rapid deployment and integration, leveraging pre-built modules and data pipelines that enable quicker onboarding across common commercial tools and custom-built systems.

Key capabilities that transform construction risk management

Unified KPI framework + "confidence score"

ConstructionSight™ is streamlined to keep the data integration requirements minimal, using 43 commonly available data elements spanning cost, schedule, safety, quality, and general project information, then normalizes results into a Confidence Score to identify risk at the portfolio, project, and delivery-dimension level.

Examples of leading indicators include cost (e.g., contingency usage rate, estimate-at-complete rate of change), schedule (e.g., schedule performance index, substantial completion forecast), safety (e.g., DART rate), and quality (e.g., deficiency resolution time).

Why this matters: Risk management improves when leaders move from inconsistent, lagging indicators to standardized, leading KPIs that are comparable across projects and programs.

Predictive analytics for cost and schedule outcomes

ConstructionSight™ applies machine learning models that are trained on an organization's own past performance to forecast the outcomes construction leaders care about most:

- **Schedule Delay** forecasting of project duration and milestone dates
- **Cost Overrun** prediction of final project costs and cost drivers
- **Productivity Rate** benchmarking against a standardized delivery curve to understand required production rate to stay on schedule

Why this matters: Instead of asking, "What happened?" the platform helps teams ask, "What's likely to happen—and what do we do now?"

Weather intelligence and risk sensing

ConstructionSight™ incorporates weather analytics to identify adverse conditions that may impact upcoming construction activities and send notifications about extreme conditions that pose safety or delivery risk. It also includes a Weather Impact GenAI model to predict impacts of forecasted conditions on upcoming activities.

Why this matters: Weather is a recurring driver of delay and safety exposure; proactive sensing creates earlier decision windows for resequencing work and risk mitigation.

GenAI-driven "intelligent insights" for mitigation

Beyond detection and prediction, ConstructionSight™ uses GenAI to interpret project risk profiles and generate recommendations for mitigation. The user interface also includes a chatbot so customers can ask questions and explore insights directly on the platform, focusing on topics like underlying data values, interpretation of results, and suggested approaches for what to do next.

Why this matters: This reduces the "analysis bottleneck" and helps translate complex portfolio analytics into decision-ready actions.

Automated data governance and integrity monitoring

ConstructionSight™ performs continuous checks to identify missing or incomplete data, improving reliability of analytics and reporting. Release 2.1 also introduced Excel-formatted data integrity reports that highlight data gaps across projects to support proactive remediation.

Why this matters: In construction oversight, risk models are only as credible as the underlying data; automated integrity controls help build trust and adoption.

Alerts, executive reporting, and portfolio transparency

ConstructionSight™ delivers real-time intelligence through in-app and email notifications on emerging risks, thresholds, and milestones. Release 2.1 added a configurable Executive Dashboard for portfolio-level metrics and actionable intelligence, with portfolio and project view upgrades including improved filtering and at-risk project focus.

ConstructionSight™ also includes a built-in "CS Connect" chatbot to assist users in real-time. CS Connect is a key agentic feature which enables faster and more accurate data source connectivity. The CS Connect Agent integrates with a conversational chatbot interface, enabling users to extract data from web applications using natural language queries. The chatbot acts as an intelligent orchestrator that understands user intent, gathers necessary information, and executes data extraction workflows autonomously.

Why this matters: Construction risk is a governance problem as much as an analytics problem—leaders need consistent, timely visibility to prioritize intervention and resources.

How ConstructionSight's™ core value changes the risk management operating model

ConstructionSight™ delivers extensive value by enabling a shift across five practical dimensions of construction risk management:

1. **From siloed data → integrated, portfolio intelligence**
   Unifies legacy and field data into a single repository with consistent metrics.
2. **From lagging indicators → leading KPIs and predictive forecasts**
   Uses normalized KPIs and ML models to anticipate cost/schedule outcomes.
3. **From periodic reporting → continuous monitoring and alerts**
   Delivers real-time notifications on risk thresholds and milestones.
4. **From ad hoc judgment → decision support with GenAI recommendations**
   Turns risk signals into mitigation suggestions via Intelligent Insights.
5. **From governance friction → transparent, standardized oversight**
   Improves data integrity, portfolio comparability, and executive visibility through dashboards and integrity reporting.

ConstructionSight™ is broadly applicable and highly scalable. It is built for use across a variety of construction project types, whether public, private, or complex multi-site initiatives. The solution supports future growth through configurable features, custom data fields, and integration with other Deloitte assets and third-party products alike.

Why this matters: This helps reduce the "analysis bottleneck" and helps translate complex portfolio analytics into decision-ready actions.

Value for Government & Public Services (GPS) Construction Portfolios

For GPS portfolio owners and program leaders, such as transportation and infrastructure organizations, ConstructionSight™ is positioned to improve oversight across cost, schedule, safety, and quality while reducing manual reporting burden including:

- **Automated data quality and governance** to keep analytics trustworthy
- **Risk monitoring** highlights critical risks (reducing noise) via weighted KPIs and confidence scoring
- **Portfolio filtering and benchmarking** to strengthen resource allocation and governance

ConstructionSight's™ expanded capabilities and deployment flexibility enable positioning as a multi-platform solution that can be sold or deployed as a design accelerator on Palantir while preserving the core capability set:

- **Secure SFTP data ingestion** to support highly secure integration for large/sensitive datasets
- Expanded custom **data fields** at project and portfolio levels
- Enhanced **notification emails**, risk trigger logic, and configurable risk flags
- **Strengthened platform foundation**, including vulnerability remediation and privacy compliance updates

Additionally, ConstructionSight™ supports flexible deployment by integrating with existing IT infrastructure—whether for a Palantir-native version or secure hosting in Deloitte-managed environments.

Implementation approach designed for speed-to-value

ConstructionSight™ is designed for rapid onboarding via pre-built modules and robust data pipelines, with flexible configuration to accommodate both commercial platforms and custom systems. Secure ingestion options (including SFTP) support sensitive environments with minimized disruption.

A pragmatic implementation typically emphasizes:

- **Connector + data mapping** across core cost/schedule/safety/quality sources
- **Data integrity checks and remediation workflow** to improve reliability early
- **Role-based dashboards** (executive, program, project) and alert tuning

Conclusion: The future of construction program oversight

ConstructionSight™ sets a modern standard for construction risk management by combining unified data, predictive analytics, and GenAI-enabled decision support into an operating model that improves transparency, predictability, and intervention speed. For executive level and program leaders aiming to strengthen governance and delivery performance at scale, ConstructionSight™ provides a practical pathway from fragmented reporting to continuous, intelligence-driven oversight.

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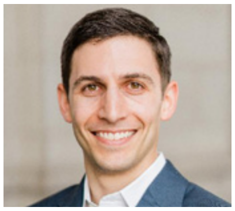

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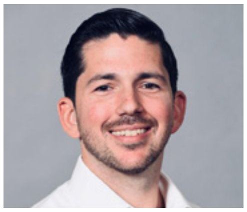

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