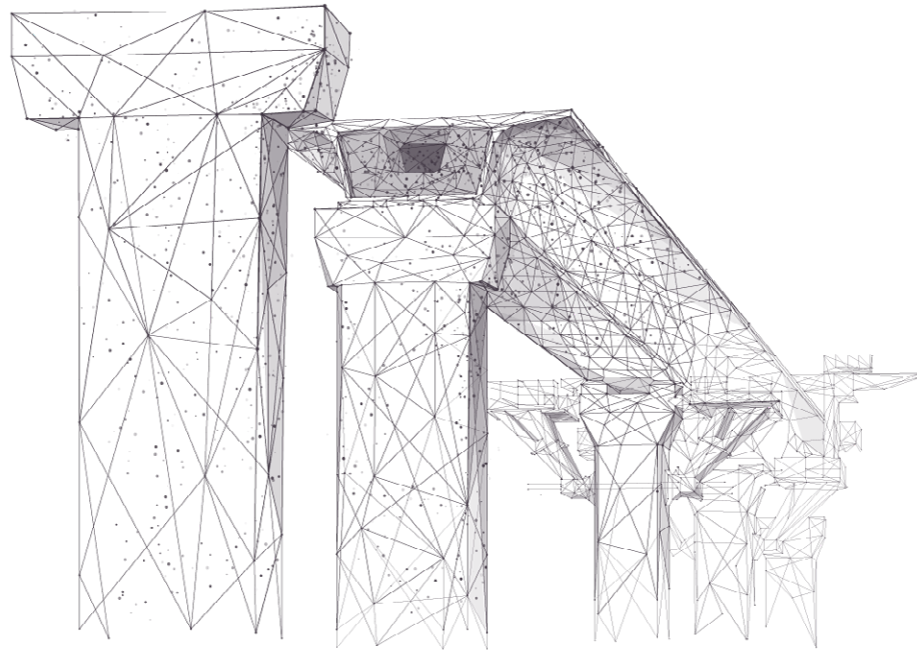


UNDERSTANDING ALTERNATIVE PROJECT DELIVERY FOR IMPROVED DESIGN MANAGEMENT



PROVEN PROJECT CERTAINTY.



THE HISTORICAL SEARCH FOR CERTAINTY

For centuries, construction designers and builders operated as one entity. During the mid 1700s, however, the two were forced to separate to keep up with demand and new design requirements. But separation came at a stiff price. The consequence was, and still is, a tremendous amount of time and energy that would have to be spent managing each vendor.

This isn't to say there's not a time and a place for the traditional general contracting project delivery method, this linear process, where one phase is completed before another phase is begun with no overlap, is the traditional method of project delivery.

While the design-bid-build model is best for projects that are not technically complex, in other words where the design is 100% constructable and there is minimal risk of uncovering unknowns, it is not always ideal. As we look to recent industry trends, the re-emergence of the alternative delivery method starts to make a lot of sense.

But first, let's look at two of the biggest challenges facing design and construction teams today.

KEY CHALLENGES FOR DESIGN & ENGINEERING TEAMS

Poor Visibility Into Design Progress

- Increasing scrutiny and pressure on design scope and progress tracking within alternative project delivery methods such as design-build, public-private partnerships and others.
- Designers and engineers more than ever need to track work on a milestone basis, adjust plans and resources accordingly, and accurately share delivery dates with other project stakeholders.

KEY CHALLENGES FOR CONSTRUCTION TEAMS

Misalignment Between Design and Construction Teams

- Design-build and alternative delivery projects incur unexpected budget and schedule impacts when designers and builders are not aligned on completion dates for design scopes.
- Design quantity growth creates certainty risk when construction budgets, work plans and schedules are not aligned to the latest design quantities.

Engineering Management is a top software category essential to contractor success in the next 1-3 years.



HOW CAN BETTER DESIGN MANAGEMENT SUPPORT ALTERNATIVE PROJECT DELIVERY?

The volume of work within the construction industry will be at generational highs over the next 10 years with leaders focused on how to deliver projects faster and smarter with greater transparency. Two qualities are prominent in alternative delivery and are where the models foster a collaborative environment in which project partners create solutions together.

These are solutions that address risk and that also promote innovation to deliver complex projects on schedule and on budget — with certainty taxpayers can see. Commitments are being made and it's time to focus on how agencies and contractors work together to build the infrastructure America needs.

ALTERNATIVE DELIVERY PROVIDES FOUR KEY BENEFITS:

- Minimal risk
- Full transparency
- A collaborative approach
- Schedule certainty

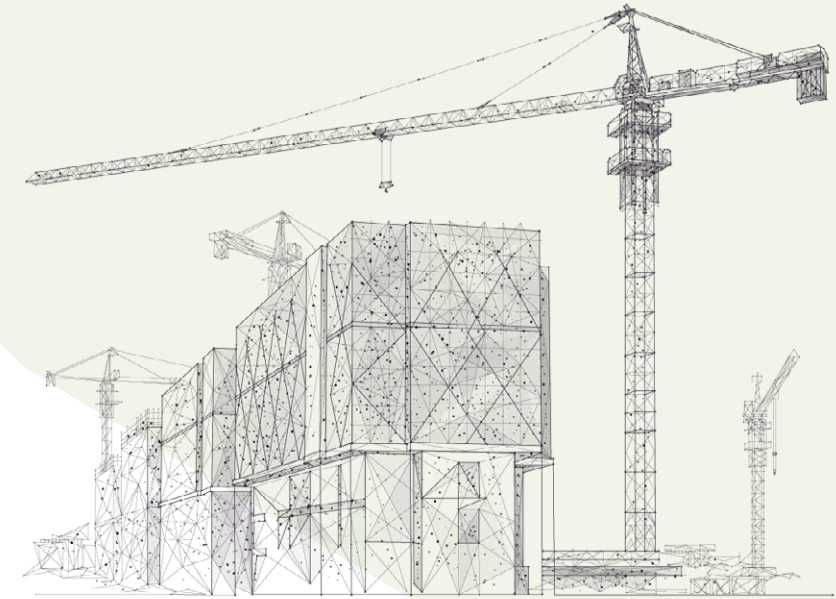
Construction-focused engineering is modeled on these exact qualities. By integrating stakeholders early in the design process, transportation departments and other agencies can better project their costs and timelines, all with more certainty resulting in fewer claims.

Alternative delivery amplifies direct communication.

HOW ALTERNATIVE DELIVERY MINIMIZES RISK

In a traditional design-bid-build, the agency has full control over design, but any issues with design and their resulting increases in construction costs are completely on the owner. Industry and public agencies have learned from the days of unaddressed risk being pushed from entity to entity resulting in costly change orders. Other consequences may include extra charges for impending supply chain limitations, labor shortages, or environmental concerns. A single surprise can cost taxpayers millions of dollars and cause weeks in schedule delays.

In alternative delivery models, risk is reduced early on through team analysis. This early engagement and collaboration helps to mitigate risk that impacts overall cost and schedule.



INCREASING VISIBILITY

For alternative delivery models to succeed, they must incorporate well-structured and easily accessible project management systems that allow partners to work from the same data points throughout the project life cycle. Transparency is an important attribute to the success of complex projects spurring impacts that can span decades. By using best practices within alternative delivery, agencies and designers can identify issues and opportunities together and use the collaborative process to lower cost. They can also have open-book conversations about commercial language and associated costs.

This radical transparency encourages all partners to work together and resolve complex problems.



A COLLABORATIVE APPROACH

This approach streamlines the planning, procurement and production process into a single relationship. This alliance promotes collaboration and produces a design that is compliant with the project’s goals. It also incorporates innovations that reduce risk — positively impacting your project cost. By uniting highly qualified professionals with different backgrounds, skillsets and perspectives, alternative delivery projects create a stronger final build. Designers work in lockstep with build teams to develop equally safe, groundbreaking and constructable final designs.

BUILDING SCHEDULE CERTAINTY

The point of cost and schedule certainty for alternative delivery occurs considerably earlier in the project’s development compared to a traditional design-bid-build. This is because the design-builder provides cost certainty prior to having a fully completed design. Working alongside the agency is instrumental to project success as it provides quick and effective communication regarding how decisions during the pre-construction process affect cost and schedule. The ability to make modifications is particularly important for future operations and maintenance.

Evaluating operations and maintenance variables before the project is fully designed allows critical input on engineering assets that will eventually get deployed. This one-team approach and early collaboration reduces the likelihood of having significant change orders during construction. By selecting a trusted partner through best value there are fewer, if any, changes negatively impacting cost growth and schedule slippage.

Alternative delivery’s dedication to achieving an ideal outcome is the linchpin for successful engagements.

THE RIGHT TECHNOLOGY FOR THE JOB: INEIGHT DESIGN MANAGEMENT

From streamlined operating structures to greater ownership of the project life cycle, alternative delivery models supported by the right technology have a track record of helping agencies secure the most qualified partners and completing projects efficiently, effectively and on time. The core strength of InEight Design in this case is its ability to manage design work and manage design quantities.

INEIGHT DESIGN ENABLES DESIGN AND ENGINEERING ORGANIZATIONS TO:

- Plan, allocate resources, and track progress of design deliverables and scope on a project
- Define claiming schemes (rules of credit) with standardized steps, weighted step percentage, resource type and milestones
- Manage design scope and deliverables progress with scope planning, progress tracking, resource allocation, and change management
- Progress design scope and cost items with integrated scope and budget (with Control integration)
- Gain views of project status, task curves, delivery status and resource allocation/utilization (with Explore integration)

RESULTING IN:

- Knowing where you stand and when the design deliverable will be complete
- 10% reduction in engineering costs
- Managing design scopes and resources, and tracking design progress to ensure predictable completion of design work
- Bringing proven project controls methodology to design and engineering projects
- Standardizing and systematically tracking design project budgets, forecasts, earned values, and earned revenues
- Controlling and sharing design documentation, and automating review workflows for design packages

For design and engineering firms, EPCs, and CMs who need to ensure predictable completion of design projects, InEight Design Management allows organizations to implement proven processes to stay in control of design scopes, design resources and budgets, design documentation (including review workflows), and track progress of design work using rules of credit.

Unlike the siloed, non-integrated project management systems that exist on the market, Design Management allows organizations to systematically track their project's progress and resource plan while also standardizing how they budget, forecast and maintain document control on a project.

INEIGHT DESIGN MANAGEMENT ENABLES CONSTRUCTION TEAMS TO:

- Consume changes from the design phase of a project via quantity management.
- Relate design changes — and resulting quantities — to the budget, forecast, resourcing needs, schedule, procurement, etc.
- Manage design quantity by tracking the construction quantity impacts as the design phase evolves on a project (30-60-90-IFC)
- Group quantities by design elements
- Keep budget quantities in sync with design quantities (with Control integration)
- Keep work plan quantities in sync with design quantities (with Plan integration)
- Gain views of quantity growth by discipline (with Explore integration)

RESULTING IN:

- Elimination of surprises due to design quantity growth and design completion dates
- 10%-20% reduction in risk associated with design quantity growth
- Real-time visibility into evolving design quantities and delivery dates
- The managing of design quantity changes — and their impact — to drive accountability as designs move through 30/60/90-IFC
- Improved management of all EPC activities such as budgets, forecasts and work plans with an early warning system for design quantity growth
- Controlled and shared project documentation, and automated review workflows for design packages, RFIs, submittals, and more

For CMs, EPCs, and Design-Build contractors who need to gain better control of their alternative delivery projects, InEight Design Management eliminates surprises by ensuring full alignment between design work and construction work throughout the project lifecycle.

Unlike with the non-integrated, side spreadsheets being leveraged on these projects today, Design Management gives organizations full visibility to design completion status — and design quantities — so that construction budgets, forecasts and work plans are based on the latest design assumptions. In addition, Design Management also simplifies collaboration with other project stakeholders with full document control and automated workflows for design packages, RFIs and more.

A BETTER FINAL PRODUCT

The dedication, partnership and communication at the core of successful alternative delivery technology are visible in the final delivery. Because agencies award contracts based on merit, the best designer and constructor is brought to the team to shape the final vision. That expertise brings with it faster decision-making, more precise execution and a higher-quality final product — delivered at higher value to the agency.



A LASTING EFFECT

With alternative delivery powered by the right technology, both agency and design-builder can step into the relationship with a commitment to doing what's best for the project. Instead of selecting partners based on the lowest cost, agencies award alternative delivery contracts by the highest qualifications. Instead of quick-turn executions, design-builders become integrated portions of the planning team and carry greater risk.

When partners are selected by qualifications, transportation departments and other agencies find themselves with a partner eager to collaborate, one that's aligned with their goals and outcomes and has proven to be trustworthy, fair and transparent.

In exchange for entrusting one team with the creation of their vision, stakeholders receive a more efficient and effective final project.

From improved cost and delivery to greater pride and ownership of the final outcome, alternative delivery offers agencies an exciting solution for realizing their vision of a 21st-century transportation system for their community. Through a combination of trust, engagement and efficiency, alternative delivery offers more predictable projects that meet stakeholder expectations — now and in the future.

About InEight

InEight provides field-tested project management software for the owners, contractors, engineers, and architects building the world around us. Over 575,000 users and more than 850 customers worldwide rely on InEight for real-time insights that help manage risk and keep projects on schedule and under budget across the entire life cycle. InEight's solutions are built on an open, functionally rich, and modular technology platform that drives seamless integration with other systems. For more information, visit [InEight.com](https://ineight.com).

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