Economic risk shifting in the construction industry

Perhaps no industry has experienced more turbulence and unpredictability over the past decade than engineering and construction (E&C). Now, no other industry is as primed for change and disruption in the decade ahead. This includes a shift of economic risk from E&C firms, which took on more risk in the 2010s—with serious financial consequences. In this brief paper, we look at how E&C firms seeking growth and financial stability are rapidly shedding project risk and transferring it back to construction owners.

Where we are now: A race to the bottom

After the financial crisis of 2008, the E&C industry settled into a decade of slow growth and mixed financial performance. Despite significant investment in project management tools and technology to improve business processes and performance, the industry continued to experience projects going over budget and over schedule— occasionally spectacularly so. Construction owners consistently failed to achieve the cost certainty they desired, clouding investment decisions and causing considerable frustration. Meanwhile, as a result of competition, contractors adjusted to increasingly thin margins—resulting in a race to the bottom.

Through industry mergers and acquisitions, many private E&C companies combined with larger publicly traded corporations. Shareholder expectations forced the largest E&C companies to pursue long-term, high-value contracts at a time when there was a surge in the number of public and private megaprojects. To win them, contractors gambled on fixed-price work, resulting in project failures that drove many E&C companies into financial distress.

As we emerge from the dynamics of the recent past, four major challenges continue to threaten the heath and stability of the E&C industry:

Ongoing challenges

Labor demand

The demand for skilled E&C labor has never been higher, but the industry faces difficulties in attracting workers.[1] The U.S. Bureau of Labor Statistics reports a steady decline in union memberships,[2] and with the rollout of the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA), the demand for construction workers is only expected to increase.[3]

Supply chain disruption

The global construction industry continues to face supply chain issues. And despite increased investment in U.S. infrastructure and supply chain networks, transportation of goods and materials continues be a major challenge.

Commodity price volatility

Geopolitical conflicts and financial market instability continue to drive volatility in commodity prices.[4] We expect that uncertainty in financial systems and political unrest among commodity producing nations will continue to impact prices for key construction materials.

Capital funding

Tighter investment controls and financial liquidity is constricting the flow of funds needed for new construction projects. As owners and contractors seek to minimize risk and maximize cash flow, investment in new projects will continue to be heavily scrutinized.

[1] Source: 2023 AGC/FMI Study Reveals Top Risks Today and Tomorrow, The Associated General Contractors of America, March 16, 2023
[2] Source: Union affiliation of employed wage and salary workers by occupation and industry, www.bls.gov
[3] Source: Julie Strupp, New year, new challenges for IIJA, ConstructionDive, January 10, 2023
[4] Source: AGC/FMI, op cit.

Next: primed for change

The E&C industry is poised for a breakthrough as owners and contractors recalibrate how they partner together and deliver work. Owners will require open communication around project costs and risks, while contractors will seek relationships with owners that understand industry pressures and will help mitigate outsized risks. Project delivery teams that jointly confront risks and plan for new challenges will survive and thrive into the next decade.

At the same time, E&C companies will be looking to provide shareholders and customers with financial stability, consistent performance, and higher margins. There will be a shift away from fixed-price EPC and design-build contracts and a move toward cost-based and time-and-materials contracts with limited downside risk. Delivering a high-quality customer experience and developing strong relationships with owners as partners, will become central to contractor success. E&C companies that can provide owners with greater cost certainty and effective cost and schedule management will differentiate themselves in the marketplace.

As both owners and E&C companies search for ways to improve project performance, they will apply the following business principles and strategies:

Risk shifting is risk sharing

Razor-thin margins make it impossible for most contractors to gamble on risky project outcomes. Contractors are likely to seek locked-in pricing with subcontractors and suppliers before signing contracts with owners, or they will negotiate construction contracts with price-adjusting clauses and contingencies. Successful outcomes will be achieved through collaborative sharing of project risks.

Trust through communication

The owner-contractor relationship, which historically has been fraught with conflict, must change. Open and transparent communication between owners and contractors must occur early and often throughout a project's life cycle.

Start slow to finish strong

Owners must invest time up-front to thoroughly plan work aligned with industry pressures, contractor risks, and resource limitations.

Reassess strategy:

Not all project delivery strategies are created equal. Owners must tailor project delivery strategies to specific project objectives and select a strategy that balances business risk with cost and schedule expectations. An owner's in-house project management skills and capabilities will often determine how much project risk the owner is willing to accept.

Use data as a resource

Construction projects generate a wealth of data that can help reduce risks and increase the odds of success. Owners should consider the use of predictive data and tools for cost and schedule risk analysis before committing project funds.

Project delivery and contracting strategies

In the future, project delivery and contracting strategies cannot be simply market-based, but must be based on the skills, qualifications, and proven track records of project participants. While new approaches to project delivery may lead to higher planning and preconstruction costs, a value-based selection of architect and engineering firms, contractors, and suppliers can increase the chances of project success.

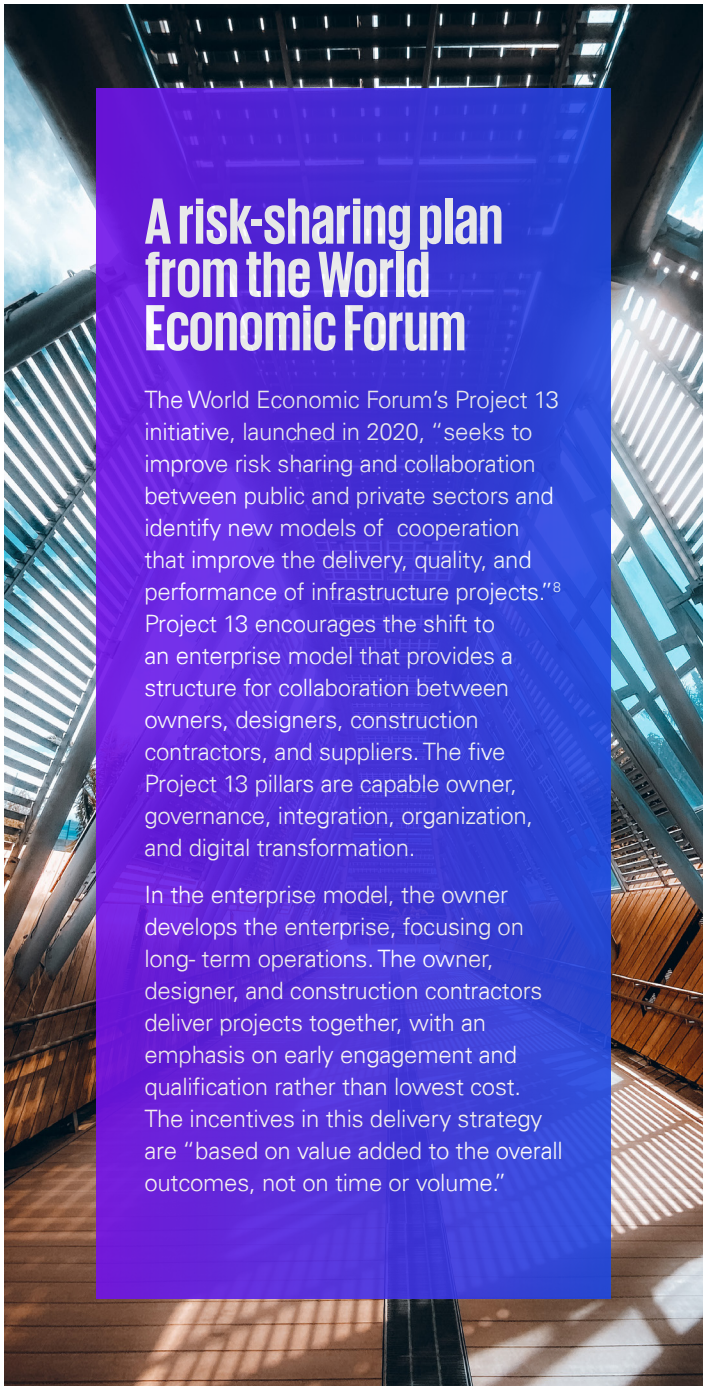
There are also trade-offs between speed to market and efficient use of resources. For example, projects with insufficient design may lead to higher bid costs and increase the likelihood of change orders,[5] but shorten the time to start construction. Waiting for a fully mature design will increase cost certainty; however, the timeline to develop complete design drawings may not be possible for all projects. The current preference for contractors is to contract for construction on a cost reimbursable basis, which leaves little incentive for contractors to manage costs efficiently.[6]

Customized delivery strategies and careful selection of contracting methods allow for more collaboration between owners, designers, and contractors and can optimize project outcomes. Strategies such as Progressive Design Build and Integrated Project Delivery (IPD) are used more frequently due to their ability to engage contractors early while still controlling construction costs.

Progressive design build is becoming a more popular delivery strategy that allows for contactor selection based on qualifications. It is an application of the traditional design-build strategy, but it allows for a phased approach where the design is nearly finalized in the first phase and construction terms and pricing are agreed in the second phase.[7]

The IPD approach includes owners, contractors, and designers from the very beginning of the project lifecycle. The early involvement of all parties enables for more transparency into the project costs and allows for construction contractors and designers to mitigate clashes before beginning construction.[8]

As project delivery methods evolve, it is essential to return to the basic principles for developing project scope, schedule, and risk profiles. A project team that can provide certainty around these attributes will provide greater cost certainty. An experienced and qualified project team and selection.



A risk-sharing plan from the World Economic Forum

The World Economic Forum's Project 13 initiative, launched in 2020, "seeks to improve risk sharing and collaboration between public and private sectors and identify new models of cooperation that improve the delivery, quality, and performance of infrastructure projects."[8] Project 13 encourages the shift to an enterprise model that provides a structure for collaboration between owners, designers, construction contractors, and suppliers. The five Project 13 pillars are capable owner, governance, integration, organization, and digital transformation.

In the enterprise model, the owner develops the enterprise, focusing on long- term operations. The owner, designer, and construction contractors deliver projects together, with an emphasis on early engagement and qualification rather than lowest cost. The incentives in this delivery strategy are "based on value added to the overall outcomes, not on time or volume."

[5] Source: Chris Carson, Control of Project Risk for Owners. Arcadis Design & Consultancy

[6] Source: Design Build Institute of America Progressive Design-Build

[7] Source: Integrated Project Delivery: Managing risk and making it work for all parties, KPMG LLP, 2013

[8] Source: Collaborative Infrastructure Delivery Initiative | World Economic Forum, weforum.org

Advice for owners: Get your house in order

As owners experience a market with risk-averse contractors, they need to prepare themselves and their organizations in a way to gain cost and schedule certainty. Project owners can prepare themselves for this new market by:

Establishing strong project governance

Project governance and controls will lead to well-defined schedules and accurate budget estimates. It is critical to maintain records and increase the sharing of lessons learned across the owner's business units, so the mistakes of previous projects are not repeated.

Practicing risk management:

Implementing strong risk management practices and mitigating risks as they arise can help decrease time lost and unplanned costs. Project risk registers must be developed, maintained, and communicated with the project team so that risk mitigation measures can be incorporated early into project planning.

Using digital information systems to monitor performance in real-time

Digital technology allows for real-time information sharing. Technology can help detect inconsistencies between design and construction, or between cost and schedule, resulting in fewer changes and more project certainty. Owners can use the information from technology solutions and platforms to make informed decisions.[9]

Developing and training project teams

Project teams need periodic training to maintain skills in project management, governance, risk management, and digital information systems. Up-to-date knowledge will allow teams to better execute projects according to plan, collaborate effectively with contractors and suppliers, and manage changes as they arise.

Engaging early with contractors

Once the above are in practice and most of the variables of the project are confirmed, engaging early with contractors allows for project teams to build rapport and have established ways of working.[10]

Rewarding performance and adjusting to changing circumstances

With more open-ended T&M and cost-based contracting structures, owners will bear a larger share of risk for project cost and schedule overruns and will need to manage construction agreements accordingly. Recommended changes include:

Pre-Qualification Benchmarking

Require contractors to provide references on past project cost, schedule, safety, and quality performance under similar contract models.

Evaluating Contract Project Control Maturity

Prior to contract award, perform a quick assessment of the maturity of the contractor's project controls.

Descoping Non-Performance

Have a back-up plans ready for areas of non-performance and be prepared to descope contract elements. This is one area that is much easier to do under cost-based and T&M contracts, which owners can take advantage of.

Paying for Performance

Include performance review criteria for monthly payments to ensure deliverables, performance targets, and metrics outlined in the contract are being met prior to payment.

[9] Source: Melissa Zanocco, The Project 13 guidelines for digital transformation, Digital Construction Hub, June 23, 2022

[10] Source: The Construction Playbook, gov.uk, December 8, 2020

How KPMG can help

The KPMG global Engineering and Construction practice employs 2,000 professionals in multidisciplinary teams in more than 40 countries. E&C Practice services include construction program evaluations, project risk and controls assessments, contract compliance analyses, and cost investigations, as well as project support. We combine global insight with hands-on local experience to help clients address challenges at any stage of the construction lifecycle.

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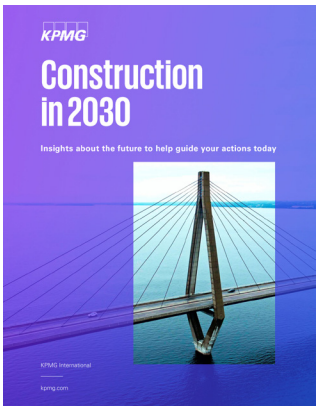

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