

Rising Prices, Supply Chain Bottlenecks, and Material Shortages – the Importance of Procurement Strategy in Today’s Environment

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In a turbulent environment of rising prices, supply chain bottlenecks, and material shortages, implementing an efficient procurement strategy on your construction project is more important than ever. The procurement strategies that worked in the past will likely not work now, nor will they likely work again in the future. These strategies of the past include, amongst others, relying on a single supplier or small group of suppliers, sourcing materials from overseas, and just-in-time delivery. In times of uncertainty, there are actions that projects and companies can take to mitigate the risks of procurement-related delays and disruptions. Some of these actions are described below.

Strengthen the Supply Base

Recent events have taught many companies hard lessons about the viability of their supplier base. Companies are recognizing that they have been too reliant on one supplier, one region, or one location. While this may have been an effective strategy in the past, companies should be looking to strengthen and broaden their supplier base. This may include:

- Diversifying the supply chain to work with more suppliers.
- Reshoring or nearshoring the supply base to mitigate against delays resulting from supply chain bottlenecks. The risk of offshore suppliers and associated delays could far outweigh any modest price increase by using domestic suppliers.
- Engaging with large, medium, and smaller sized suppliers to understand the benefits and risks of working with each.
- Collaborating with suppliers to address

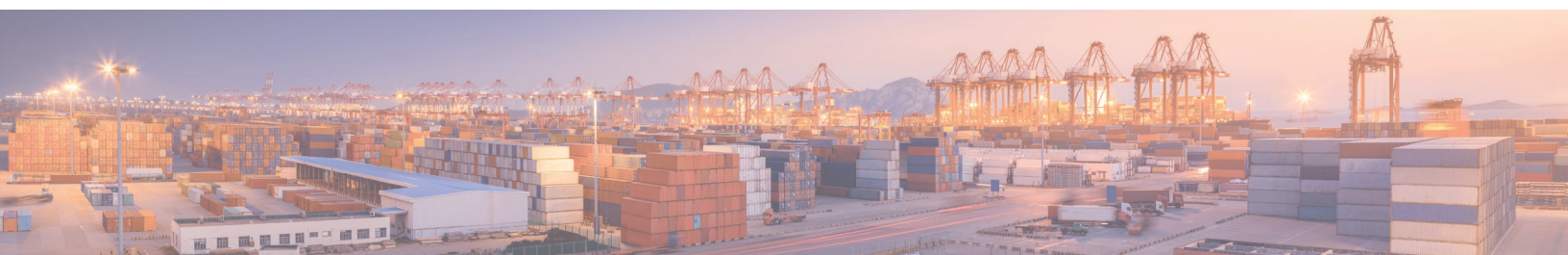
challenges and put adequate contingencies in place, which will likely be broader and deeper than in previous times.

- Identifying alternative sourcing strategies, or alternative materials, for essential products and critical services.

Stay Liquid

Ensuring there is sufficient liquidity to weather the storm is an important step in assessing your company’s preparedness. Companies and project managers should evaluate and monitor their expenditures and preserve cash flow in case of a crisis. Proactive steps that companies and/or project managers can take to ensure they have sufficient liquidity include:

- Improved payment terms: Negotiate more favorable payment terms with vendors through the procurement process or active dialogue.
- Prioritize spending: Consider whether each expenditure is necessary for the project to progress, or if it can be minimized or delayed.
- Re-procurement: Determine if better prices or terms can be obtained by using a different supplier or contract structure.
- Establish unit rates: Set material pricing by unit cost. Allow for future price increases and rely on reliable industry metrics to anticipate these changes. This will facilitate more accurate forecasting, which will in turn mitigate unexpected cost overruns.
- Early payment milestones: Having payment milestones in the contract to cover early upfront costs can help with any potential cashflow problems.



- Open lines of communication: Developing open lines of communication between the owner, contractor, and suppliers can help identify any liquidity or cash flow problems early on, allowing all parties to work together to resolve the issue before it becomes a systemic problem.
- Consider renting vs. buying: Buying a piece of equipment generally requires a larger up-front cash expenditure compared to renting. Reducing the upfront expenditure by renting can help alleviate cash flow challenges.
- Identify items that require advanced planning: Many prefabricated items require advance notice in order to secure a “slot” in the manufacturing or fabrication process. If this slot is missed, or if the order is not placed in time, there could be delays and negative impacts to the schedule. Ensure engineering schedules are aligned with the manufacturing windows so that construction drawings are issued timely.
- Stay informed of materials that are in short supply: Recent events have shown how a shortage or delay of a single component, chip, or other critical item can impact and delay the delivery of an entire system. Staying informed of these critical items is necessary. Project managers should place these orders in advance and/or find alternative materials.
- Ensure transparency by establishing agreements that are fair to all parties involved: Subcontractors and suppliers need to know that everyone is being treated fairly. If the supplier understands that the owner shares the material escalation risks, the supplier is more likely to give a fair market price instead of an inflated number.

Align the Procurement Schedule with the Owner's Priorities

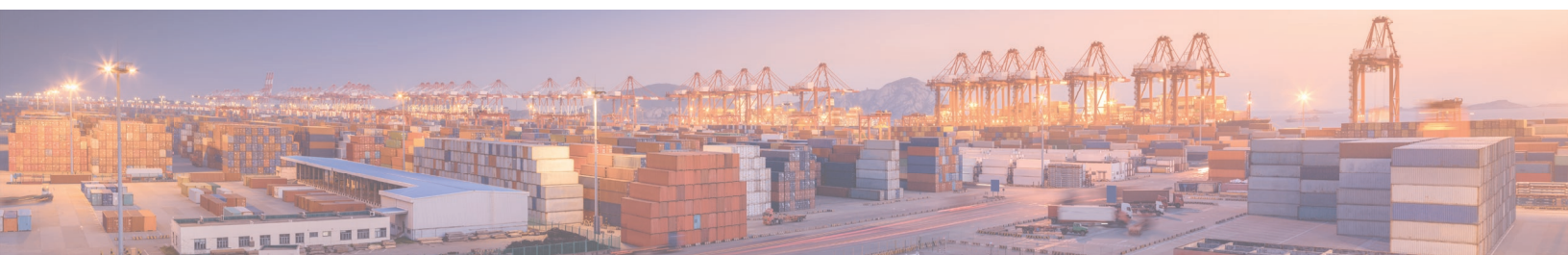
Managing lead times to avoid both delays and cost overruns is a challenge for any construction project. A key first step to mitigate against material and scheduling risks is to involve the owner early in the procurement planning, when schedules are being set. Early owner involvement will help to establish the priorities for the project, set pricing and schedule benchmarks, and ensure the project risks are distributed appropriately. Early owner engagement can include the following:

- Determine the priority: On every complex project, there is a need to balance the project budget with the project schedule. Understanding which of the two, budget or schedule, is the priority is crucial for a project's success and will allow for an appropriate procurement strategy.
- Identify long lead items: Set funding schedules and determine what equipment or material requires early release and expedited procurement. Financial commitments are needed sooner than normal to procure long lead materials. For items requiring earlier procurement to support the project schedule, ensure sufficient front-end engineering is done to properly define the long lead item.

Build Loyalty with Multiple Subcontractors and Suppliers

Establishing a broad set of trusted subcontractors and suppliers allows for earlier engagement and results that can help control costs, implement design changes when necessary, and limit exposure to changing lead times and/or limited material availability. Companies that build loyalty and trust with subcontractors and suppliers see benefits such as:

- Better pricing
- Teamwork, where both parties can work together to overcome challenging circumstances



- Preference when resources or materials are in short supply
- Early notice on changing lead times and material availability

Implement the Appropriate Technologies

- Technology enables contractors to build faster and safer with fewer surprises. Technology can also be leveraged to modify designs and incorporate the most appropriate and cost-effective materials available. Examples of this can include:
- 3D model-based estimating to establish more accurate quantities and budgets
- Integrating business systems such as accounting, procurement, project management, and supply chain operations through an Enterprise Resource Planning (ERP) system
- Laser scans that show realistic conditions of existing structures
- 3D virtual project prototypes to help work through design and coordination challenges before installation begins as well as to support site logistics and scheduling
- Prefabricated systems and components to save time and help mitigate potential labor shortages

Conclusion

Procurement-related disruptions and cost overruns are a common occurrence on many large-scale construction projects. Especially in today's uncertain economic environment, companies and projects should be examining and adjusting their procurement and contracting strategies to ensure greater resilience and mitigate the risks of procurement-related disruptions.

How Interface Can Help

Interface has extensive experience analyzing and assessing the impact of procurement-related disruptions, delays, and cost overruns on complex engineering and construction projects. Additionally, our project advisory services can help guide your team through the uncertainty of today's market and improve your procurement and supply chain resilience.



Amanda Larson, a senior managing consultant with Interface Consulting International, Inc., has over 15 years of domestic and international construction, engineering, and project management experience. She provides claims consulting and expert services for complex disputes involving design, schedule delay, construction management, quantum, and other issues. To learn more, call 713-626-2525 or email Ms. Larson at allarson@interface-consulting.com.

