

FAQs About EPC Projects What Lead Site Engineers and Procurement Managers Need to Know

Written by: David Broughton, Vice President, Life Sciences, Gannett Fleming, and
Craig Crowther, PE, President, Gannett Fleming Project Development Corp.

Imagine you're at the helm of a significant CapEx project at a state-of-the-art facility. Every decision you make impacts layers of complexity, including timelines, budgets, and the ultimate success of your project and operations. The maze of technical specifications, regulatory requirements, and stakeholder expectations make it a thrilling yet daunting journey.

This is where the power of engineering, procurement, and construction (EPC) comes in, offering a streamlined path through project management, design, and construction delivery.

There are many challenges of site leaders, particularly within demanding Current Good Manufacturing Practice-regulated environments in manufacturing, industrial, and commercial facilities. That's why we've compiled a comprehensive list of frequently asked questions (FAQ) about the EPC approach. This guide explains the process and highlights the transformative benefits of EPC.

Read on to learn how EPC can simplify your role, enhance project outcomes, reduce risks, and lead to faster, more cost-effective project delivery.

Q: What exactly is EPC delivery?

A: The EPC delivery method combines the design, procurement, and construction of a project in a single contract, facilitating a seamless transition from the planning phase to project execution. This approach boosts cost savings and accelerates



schedules in a contract for which the EPC contractor is responsible. By overseeing the project from inception to turnover, the EPC firm ensures compliance with all aspects of the project, minimizing discrepancies and aligning with the project's budget, schedule, and scope of work.

Q: What are the primary benefits of using EPC delivery?

A: Employing an EPC contract typically provides benefits such as single-source responsibility, fixed-price contracts, limited risks, and performance guarantees. It also enables an approach where a single point of responsibility handles all the required equipment, materials, and subcontractor services. This delivery model is ideal for completing capital projects in any cost format: lump-sum, guaranteed maximum price, or time and materials.

Q: What is the role of an EPC contractor?

The role of an EPC contractor encompasses comprehensive responsibilities across the lifecycle of a design and construction project. From initial planning to final project delivery, highlights of the EPC method include:

- » **Single-Source Responsibility:** Managing design, procurement, and construction phases, simplifying the owner's responsibility, communication, and decision-making.
- » **Engineering Design:** Creating detailed designs and specifications that meet facility project requirements.
- » **Procurement and Expediting:** Obtaining project materials and services on time.
- » **Construction Oversight:** Complying with the established time, budget, safety, and quality standards.
- » **Risk and Quality Management:** Assuming project risks and ensuring adherence to quality and regulatory standards, thus reducing the owner's risk exposure.
- » **Completion and Turnover:** Ensuring client satisfaction, document turnover, performance evaluation, and team briefing.

Q: How does EPC delivery manage project risks?

A: This delivery method can significantly benefit project owners, providing benefits such as price certainty, decreased schedule delays, and consistent quality across all project phases. However, receiving the benefits of an EPC approach depends on the contractor's ability to manage risk related to schedule, cost, quality, safety, and environmental concerns.


Success hinges on defining the project scope early, strategizing execution, implementing robust project controls, mitigating risks, ensuring safety, fostering ongoing education, and managing changes efficiently. EPC focuses on best practices that buffer the project owner against unforeseen challenges, safeguarding project objectives and financial viability.

Q: How does the EPC model benefit from technological advancements?

A: Technological advancements are crucial in enhancing the efficiency and effectiveness of this design, procurement, and construction process. EPC contractors are driven to improve productivity, reduce costs, meet stringent project timelines, and continually assess and adopt innovative technologies and methodologies. Innovations in software for project management allow for real-time tracking and more accurate forecasting. At the same time, advancements such as building information modeling, artificial intelligence, and machine learning drive complex tasks at accelerated speeds for improved project outcomes.

Q: How can I shift to EPC delivery for my project?

A: Shifting to EPC involves creating a strategic delivery execution plan that aligns with your project requirements. The first step is thoroughly assessing your project's needs, constraints, and goals. Once you've confirmed alignment, select a reliable and experienced EPC contractor. This partner should have a robust portfolio of completed projects like yours and demonstrate a deep understanding of your industry and its challenges. Seek out a firm that prioritizes collaboration and transparency, both crucial elements for ensuring the success of any EPC project.

Engaging with your chosen EPC contractor early in the programming phase is highly recommended. This collaboration allows for a comprehensive understanding of your project's requirements and enables the EPC team to provide solutions tailored to your objectives. It also eases the transition to the EPC model, aligns all stakeholders, and sets up the initiative for success from the outset. 



About the Authors

David Broughton is the vice president, Life Sciences, at Gannett Fleming. David can be reached at dbroughton@gfnet.com.

Craig Crowther, PE, is the president at Gannett Fleming Project Development Corp. Craig can be reached at ccrowther@gfnet.com.

About the Article

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