

Business Transformation in Engineering and Construction

Contractors in the engineering and construction industry can sum up their business in three words: pursue, build, and repeat.

To keep the doors open, firms must pursue new business. But as any established firm will attest, it isn't wise to pursue business without a strategy. For best results, contractors must define and incorporate three key factors into a new business strategy:

- » The right kind of work
- » The right kind of customer
- » The right profit margin



The Need for Business Transformation

Organizations must zero in on getting the right kind of customer—with projects that are a good match for their expertise. At the right profit margin, so that the business you win is worth the expense and effort that was spent winning it. Most important, when the project is done, you then have to repeat that whole process all over again.

But instead of having each new project start from scratch, you must use the intellectual capital gained from lessons learned on every past project to institutionalize the good business practices that set your firm apart from the competition. Leveraging client and historical data to prepare successful bids, controlling the approval process when deciding which projects to onboard, and better predicting which projects you will win. In effect, transforming your business.

Executive Summary

Technology can help. But automating your organization with standardized business processes and systems is just the beginning. At Oracle, we believe that true business transform requires more—an integration of people, process, and technology. This solution brief will explore how business transformation revolves around solving your business challenges in six key areas:

- » Lead-to-contract processes
- » BIM-enabled estimation
- » Project and construction execution

- » NEC3 Engineering and Construction Contracts
- » Software as a Service (SaaS)
- » Lean construction

Business Transformation

Across a myriad of industries, Oracle's Primavera offers best-in-class solutions aimed at transforming our client's businesses by connecting executive, financial, and operational strategy through enterprise project portfolio management (EPPM). An integrated project management solution provides a powerful framework to institutionalize best business practices for contractors by delivering the transparency and visibility critical for organizations to meet their business challenges. Specifically, we will explore the six key areas mentioned previously.

Lead-to-Contract Processes

As mentioned before, the ongoing challenge for contractors is going after new business: winning the right work, with the right customers, at the right profit margins. Yet, in the typical engineering and construction organization, rarely do the teams that prepare the estimates for project bids and the teams that deliver those projects work together and share information. This lack of historical data includes information about which clients are a good fit—and which are not.

A lead-to-contract solution transforms that process, by making the bill of materials and other estimate data automatically available to the people who need it, via role-based dashboards. With the ability to visualize project estimates as well as ongoing project performance metrics, firms can leverage all of the lessons learned on every project. Moving forward, organizations can improve their approach to new business development by using this data to understand both the opportunities and the risks involved with new projects.

BIM-Enabled Estimation

Traditionally, when the estimators work on a project, they are far removed from the designers. They receive blueprints or digital files and must quickly come up with cost estimates based on those plans. This lack of complete information makes it difficult for them to fully visualize the scope of a project, which can cause increased risks to cost, schedule, and margin.

With the increasing use of building information modeling (BIM) in construction, contractors can leverage data-rich 2D and 3D models to build more complete and accurate cost estimates and better manage both risk and liability. BIM models enable estimators to better visualize construction and preconstruction realities so that any potential issues can be reflected in the completed estimate.

Incorporating 4D (schedule) and 5D (cost) into a BIM-enabled estimating solution

CONNECT WITH US

-  blogs.oracle.com/eppm
-  facebook.com/OraclePrimavera
-  twitter.com/OracleEPPM
-  oracle.com/primavera

FOR MORE INFORMATION

Contact: +1.800.423.0245
 EMEA: +44 (0) 870.8.768711
 APAC: +65.6645.1365

empowers construction firms with a total integration of design, estimating, and scheduling. It provides a unified platform for the estimators to easily review a BIM model and immediately gain access to data between design, quantity, cost items, and scheduling activities. BIM technology enables a closer, more collaborative relationship between owners and contractors throughout the entire value chain, from preconstruction through post-construction.

Project and Construction Execution

Even with the best-laid plans, projects face serious challenges during execution. Your ability to understand and manage the impact of changes can make or break a project's success. Errors in change management and cost capture reduce project profitability. Inaccurate reports provide misleading information about a project's progress. A lack of transparency and visibility means you can't plan ahead to re-allocate resources.

An integrated project and construction execution solution enables you to share product, asset, and engineering documents across the enterprise to effectively manage time, costs, resources, contracts, and changes. Project teams can increase collaboration and coordinate the change management process with all stakeholders. With visual access to drawings, documentation, and information, accountability and decision-making improves. Integrating project financials with project delivery and controls enables detailed budgeting and forecasting, reducing project risk.

NEC3 Engineering and Construction Contracts

NEC, or the New Engineering and Construction Contract, is a family of engineering and construction contracts that promotes best practices and collaborative relationships between contractors and clients. Now in its third incarnation, NEC3 is widely used throughout the United Kingdom and internationally in countries including New Zealand, Australia, Hong Kong and South Africa. To compete globally, US firms must also conform to these standards.

NEC is a fundamentally different approach to many other procurement contracts on the market. Where traditional contracts can promote an adversarial relationship between contractors and owners, NEC fosters a partnering collaborative approach that has a consistent track record of delivering projects on time and on budget. As companies incorporate NEC practices into their operations, they have an opportunity to transform their processes to improve collaboration, reduce risk, and improve quality.

Handling reporting manually across different standards can be difficult, time-consuming, and can create separate silos of information. Without a single version of truth, you can't be sure if compliance standards are being met. An integrated project management solution helps organizations streamline the contract management process, while facilitate communication between stakeholders. With a complete integration of process and project data throughout the entire project lifecycle, organizations can get NEC3-ready and reap the benefits this improved contract management approach.

CONNECT WITH US

-  blogs.oracle.com/eppm
-  facebook.com/OraclePrimavera
-  twitter.com/OracleEPPM
-  oracle.com/primavera

FOR MORE INFORMATION

Contact: +1.800.423.0245
 EMEA: +44 (0) 870.8.768711
 APAC: +65.6645.1365

Software as a Service (SaaS)

Lean practices, collaborative workflows, and BIM all require more computing power. Existing on-premise legacy systems are most likely not up to the task. A cloud-based Software-as-a-Service solution enables your organization to access the software functionality quickly, and with lower risk and cost.

Modern cloud applications help you reimagine your business. These applications have been architected on a modern and open service-oriented platform and infrastructure to simplify integration needs and lower your total cost of ownership. SaaS solutions give you the performance the market demands with minimal upfront investment. New services can be rolled out quickly as projects or collaborative partners are brought in—even to remote construction sites—with less burden on internal IT staff.

Oracle's cloud solutions are integrated with the latest social, mobile, and analytic capabilities, enabling you to transform staff and customer experiences and insight. Organizations can quickly execute complete and integrated business processes, coupled with unified execution, visibility, and control. There are no information silos, and no need to coordinate software upgrades between vendors, integrate data, or manage disparate security policies.

Lean Construction

More and more organizations are incorporating lean management principles and methodologies into their business practices. The lean process requires a dramatic change in the way that engineering and construction projects are managed. This productivity-focused approach calls for predictability of workflow, and efficient use of resources, and increased collaboration between project team members, especially the field.

In order to adopt lean principles, organizations must first trade their old business processes for consistent, repeatable project processes and systems that break down silos of information and data and offer better collaboration tools for improved team productivity

Moreover, this business transformation must go beyond the organization's project management systems and integrate project and program resources with other departments, all the way from the field to the board room, to provide a single version of truth throughout the organization.

Conclusion

Whether it's implementing BIM and lean practices or becoming NEC3 compliant, transforming your business is about being able to address the areas you want to improve. To effectively compete in a highly competitive industry, contractors need to look hard at how they are going about the business of pursue, build, and repeat. Primavera provides EPPM solutions to support business transformation to standardize, simplify, automate, and globalize.

CONNECT WITH US

-  blogs.oracle.com/eppm
-  facebook.com/OraclePrimavera
-  twitter.com/OracleEPPM
-  oracle.com/primavera

FOR MORE INFORMATION

Contact: +1.800.423.0245
 EMEA: +44 (0) 870.8.768711
 APAC: +65.6645.1365