

# CREATING OPERATIONAL EXCELLENCE THROUGH IMPROVING THE FIELD AND JOB SITES

Gregg Schoppman

*Here's how operationally superior E&C organizations manage work in the field and the steps that companies can take to join the ranks of the industry's best-in-class firms.*

For many engineering and construction (E&C) firms, the first area they turn to for improvement is the field, since it often seems to be the easiest place to work on efficiencies. Yet, operationally superior organizations know that you must implement the right practices, processes and people across the organization – including field teams.

Many companies don't truly understand what it means to be an operationally superior field organization. For example, many measure success on the result. They'll judge a superintendent or field leader on whether a project is finished ahead of schedule, safely and/or ahead of budget. What they don't always realize is that just because no one was injured on the job site doesn't mean that the interim processes went smoothly. By evaluating only the result, E&C firms miss out on an opportunity to achieve overall operational excellence.

[In our first article about the best practices](#) that define operationally superior organizations, we discussed preconstruction and the importance of reviewing processes even when companies are profitable. In



this second part in our series, we talk about best practices on job sites or in the field to improve productivity, safety and customer satisfaction.

## Evolution of Collaboration

Busy, fast-paced construction sites may include hundreds of workers and a team of field leaders who manage logistics, safety, costs and other functions. Planning, including budgets, resources and scheduling, is critical.

The best field leaders are those who serve not only as the nexus within all these arenas but also, more importantly, as the driver of true collaboration across a project. Whether a firm is a trade contractor that self-performs work, a general contractor that brokers all of the trades, or even a combination of the two, a successful field leader is proactively pushing collaboration and thinking ahead.

**Every project has a strong, realistic budget that begins with the project manager and field leader reworking the estimate for the project and assigning budget codes with the way it will be built in the field.**

This is important because you can't have consistency and operational excellence without buy-in from the field. If a supervisor gets a budget and instantly knows that the task can't be completed for that amount of money, he must be able to discuss it in advance (versus addressing it after the fact). To be clear, the contract amount is established. The purpose of this phase is to create a budget that the field leader believes in.

If the project goes over budget, it was likely always going to. However, if the field leaders are encouraged to recognize and identify issues early, they can help produce better overall job outcomes. So rather than having the budget quickly approved in the preconstruction phase, companies that take the time to carefully review them can get an idea of overruns or underruns and come up with a plan for addressing them early.

A stop-gap measure, early detection of budget problems correlates directly with improved collaboration and strategic planning on projects of all sizes. This, in turn, continues that evolution of collaboration from preconstruction right out to the field manager level. Everyone wins when this happens.

## It Pays to Plan

Another important part of collaboration is planning. Operationally superior **field leaders plan a minimum of a week ahead, using some sort of planning tool.** These tools manage resources like labor, materials and equipment, plus the activities of any trade partners.

Industry tools such as short-interval planning, lean last planners and pull planning are examples of best in class. The operative word in all of this is planning.



There are also countless scheduling tools; but this is not about creating a critical path schedule, but thinking ahead and developing a proactive strategy.

When field leaders have a tool they can use consistently, they can lay the foundation for steady and predictable work. The tool should also be made accessible to leaders of subcontracting firms (e.g., excavators and plumbers) who can use it to communicate with the general contractor and, if applicable, with each other. This tool should be used regularly across the organization and by all stakeholders.

When projects are planned, everyone is working from the same playbook, field leaders know they have two-way communications with the head office, and construction projects run more smoothly. For operationally superior organizations, **reactive, emergency calls to a central warehouse, shop, yard, etc., are truly nonexistent except for unforeseen conditions.**

This is an important point for field leaders and supervisors who treat their companies' warehouses and yards like convenience stores, when they should only be tapped during emergencies. Rather than stopping by a warehouse to pick up materials, supervisors should plan and only use the shop when unforeseen issue arises (e.g., someone hits a water line while digging and needs a sump pump quickly).

After weekly schedules are made, operationally superior companies also **plan daily with a focus on production targets and real-time job hazard analyses**. Much like the earlier budgeting advice, these activities should be conducted collaboratively across the office, field leaders and crew.

## Financial Acumen

**Field managers at operationally superior E&C companies are intimately familiar with the budget for all costs, including, but not limited to, vendors, trade contractors, self-performance areas and general conditions.** They always know what's going on and can intervene at any point where they see a potential problem.

They have a deep understanding of the general conditions, burn rate, utilization and other metrics that go into the financial side of project management. Historically, there has been a mindset that the financial perspective of the project was the sole province of the project manager. However, best-of-class organizations realize that you cannot expect strong financial performance when your primary project driver is removed, disconnected or disinterested in the financials.

**Field supervisors understand the difference between cost and margin. If the total price of the project is reduced to meet a customer's budget, costs are not arbitrarily slashed. Methods and means are examined for cost efficiencies, but margin is also adjusted to portray reality.**

If the margin is set at 10%, for example, field leaders are ultimately going to influence whatever gain the contractor makes on the project. Margins can be improved by getting the best productivity and yields out of their existing materials, improving general project conditions, or utilizing equipment better.

## Quality Assurance Versus Quality Control

At leading E&C companies, **field leaders also understand the difference between quality assurance and quality control and make that one of their key priorities.** Quality assurance is the standard for how work is put in place. It is the playbook that the organization follows every time to create a quality product. Quality control is the testing component that assures the guidelines and end results meet those standards and jobs are being continually monitored. However, if a field leader focuses solely on quality control, he or she is largely playing defense and reacting to conditions as they arise.





Superior field leaders focus on driving quality every day. They have adopted the phrase “punch as you go,” which becomes the mantra for not leaving miniscule items to build until the end of the project. Quality assurance requires a strong company philosophy, combined with a strong individual mindset.

## Overcoming Obstacles

Planning and scheduling are both important for leading organizations. **All projects should have a baseline schedule, and that schedule should be updated by the project teams on a regular frequency.** Using basic software tools like Microsoft Project, for example, companies can get their labor-intensive contractors and subcontractors on a common platform and adhering to the schedule.

**Any project’s issues and challenges (i.e., weather, delays, shipments, etc.) should also be presented on the schedule to reflect the reality of the job site conditions.** For example, if it’s raining or if the job

site is temporarily flooded, then the schedule should reflect the reality of the project in real time so that everyone can adjust accordingly.

This also helps when presenting proof to project owners, who may not always understand why a delay happened. Too often, projects that are met with massive issues, such as claims, design issues, delays, etc., do not reflect those on the schedule, only to be met with legal hurdles. Field leaders understand how to portray realism to protect the firm.

## Worry More About Dirty Than Dirt

Construction is obviously a dirty activity; yet, operationally superior organizations understand the difference between cluttered, trashed and dangerous versus typical day-to-day operations. In operationally superior companies, **job sites are clean, maintained and well organized – each trade is held accountable for its own waste cleanup, and adherence is monitored daily.**

The job site that’s strewn with debris and litter is not only unsightly but also dangerous and a huge liability and safety concern. Not to mention, you eventually must clean everything anyway, so why not clean daily to avoid a massive effort at the end of the project? Once again, punching as you go means more than just repairing drywall and damaged concrete. Cleanliness is the hallmark of safety, productivity and field leaders who know how to get work done.

## Managing Changes

Change is inevitable. No job adheres directly to plans, thus change orders, which can be a challenge to manage and communicate across an organization.

**Change orders have a defined structure and adhere to a checklist that guarantees items, such as where a change is located. There is also back-up support for the change, and breakdowns of costs are all included to avoid needless delays in processing.**

It's also important for change orders to be processed quickly and approved to avoid project delays. In the best companies, change orders do not linger – escalation of older **change orders ensures action is taken sooner rather than later. These changes orders should have a series of gates, or specific deadlines and procedures, that ensure timely approval and payment.**

Best-in-class field leaders manage change proactively and ensure that all aspects of those changes – schedules, deliveries, coordination, etc. – are integrated and communicated to all stakeholders. The project or operations manager should review, approve or reject these change orders and ensure that the project owner also agrees.

## Productivity Counts

A final area that most of the leading E&C companies stand out on is with their focus on productivity. They're hyperaware of the connection between efficiency and labor productivity, and they take steps to maximize both in the safest and most logical manner possible.

They also know that there's a difference between productivity (the productive effort's efficiency, as measured in terms of the rate of output per unit of input) and production (the total output), and they understand which one most favorably impacts their profitability. In most situations, it's productivity—and not the production itself—that delivers the best project outcomes. So, while customers care the most about output and don't really care how much labor it takes to get the job done, top-performing, labor-intensive companies are hyperfocused on productivity; that's where the money is made.

By following the best practices outlined in this article, E&C companies can carve out a successful path to becoming operationally superior organizations.

# Author



**Gregg Schoppman** specializes in productivity and project management for general and trade contractors across the country. He also facilitates strategic planning and evaluation services focused on organizational transformation. Gregg was named one of the Top 25 Consultants in the World in 2014 according to Consulting Magazine and is also the recipient of the Association of Management Consulting Firms' "High Five Award" for consulting excellence in 2013.

He leads FMI's Operations consulting practice as the discipline leader. Gregg has been a featured instructor in FMI's Project Manager Academy and regularly trains at all levels of construction from foreman to CEO.

Gregg often addresses industry organizations and has also been a featured keynote speaker for Viewpoint, Sage and Autodesk. With Viewpoint, he is a founding member of the Alliance for Construction Productivity. Gregg has successfully completed engagements all over North America and throughout the world, including Mexico, Canada and Russia.

Before coming to FMI, Gregg was a senior project manager for a general contracting firm in central Florida, completing complex and sophisticated construction projects in several niches and geographic markets. Gregg can be reached at [gregg.schoppman@fmicorp.com](mailto:gregg.schoppman@fmicorp.com).



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