

## The Foundations of Operational Excellence

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For many engineering and construction (E&C) firms, the first area they turn to for improvement is the jobsite, because it often seems to be the easiest place to boost efficiency. Yet, operationally superior organizations know they must implement the right practices, processes, and people across the entire organization, including field teams.

Many companies do not truly understand what it means to be an operationally superior field organization. For example, many measure success on the outcome. They'll judge a superintendent or project leader on whether a project is finished ahead of schedule, safely, and/or ahead of budget. What they do not realize is that an absence of injuries on the jobsite does not mean the interim processes went smoothly. By evaluating only the outcome, firms miss out on an opportunity to achieve overall operational excellence. Below, in the second part of this [four-part series](#), we cover best practices on jobsites to improve productivity, safety, and customer satisfaction.

### Evolution of Collaboration

Busy, fast-paced construction sites may include hundreds of workers and a team of 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 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 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 reworking the estimate for the project and assigning budget codes with the way it will be built on the jobsite.

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, they must be able to discuss it in advance. To be clear, the contract amount is established. The purpose of this phase is to create a budget 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 stopgap 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 – it's about 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 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 an 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 vs. 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 the organization follows every time to create a quality product.

Quality control is the testing component, which assures that 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 leaders focus on driving quality every day. They have adopted the phrase “punch as you go,” which becomes the mantra for not leaving minuscule items to build until the end of the project. Quality assurance requires a strong company philosophy and married to 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 regularly updated by the project teams. By using basic software tools companies can get their labor-intensive contractors and subcontractors on a common platform and adhering to the schedule.

Any project’s issues and challenges (e.g., weather, delays, shipments, etc.) should also be presented on the schedule to reflect the reality of the jobsite conditions. For example, if it’s raining or if the jobsite is temporarily flooded, then the schedule should reflect the reality of the project in real time so 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 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, but operationally superior organizations understand the difference between cluttered, trashed, and dangerous versus typical day-to-day operations. In operationally superior companies, jobsites are clean, maintained, and well organized – each trade is held accountable for its own waste cleanup, and adherence is monitored daily.

The jobsite strewn with debris and litter is not only unsightly but also dangerous, a huge liability, and a safety concern. 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 requiring 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 backup 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 quickly processed 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 confirm 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 in which most of the leading E&C companies stand out is 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 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.





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### About the Author

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