

Stewardship relationships yield exponential improvements

The days of “three bids and a buy” are numbered. A transactional relationship often devolves into haggling over pennies per hour. Instead of focusing on total value, the soft-craft provider simply carries out customer orders to erect a scaffold, blast, paint or insulate as directed.

Conversely, a stewardship-based approach brings soft-craft providers together with refinery operations and maintenance managers, EPC contractors, mechanical contractors and other parties with a vested interest. They review productivity data, identify opportunities for continuous improvement and have joint accountability over results. Everyone has skin in the game. By shifting to a stewardship-based approach, efficiency improvements of 30-100 percent or greater have been consistently documented.

Early engagement enables providers to introduce nontraditional options when customers still have time to consider them.

Some of the elements used by soft-craft providers as part of a stewardship approach include unit pricing, joint review of key performance indicators (KPIs), talking in relevant terms, early engagement and workface planning.

Contracts and KPIs

Historically, most soft-craft provider contracts have been of the time and materials type. Today, however, more customers are asking for unit pricing, such as cost per leg-foot of scaffold, square foot of coating or equivalent linear feet of pipe insulated. Unit pricing encourages everyone involved on a project to plan better, communicate and collaborate, optimize execution, and measure, track and improve the KPIs that underlie productivity improvements.

KPIs are essential for improvement, but they are often only relevant to internal industry audiences. When a soft-craft provider says, “We increased productivity from 2.1 units per person per hour to 3.8 units per person per hour after 24 months,” the refinery operators may respond, “And ... ?” Trying to further explain that it means “we achieved a productivity factor of 1.81” causes further consternation.

To discuss KPIs in a relevant manner, providers must shift to supporting meaningful customer metrics by saying, “This means our actions contributed to four days more of total uptime, yielded another

million barrels and improved your price spreads. Going further, because we understand the levers of productivity, we can replicate the success from your Gulf Coast refinery at your West Coast refinery. Here are four actions that can yield a nearly immediate impact on the West Coast.”

By appreciating each other’s needs, language and perspectives, providers and customers can establish a more mature relationship. With a stewardship approach, providers meet with customers at least monthly to go over work scope, develop action plans, review KPIs, establish an operating rhythm and hold each other accountable for the actions to which they’ve committed.

Clear scope

Improving KPIs usually starts by finding ways to eliminate waste. To accomplish this, soft-craft providers need a clearly defined scope of work. Understanding the scope for the entire project is ideal, but a four-week look ahead is required to optimize cost management (hence the need for monthly meetings). This enables the provider to validate the scope and align the size and skills of the labor pool with work requirements.

As an example of a four-week plan, imagine a site requires 20 people for the proposed work scope in weeks one and four, but only 10 people in weeks two and three. (And, of course, there could be thousands of tasks within a facility.) Without knowing the future, the soft-craft services provider would tend to maintain head count instead of redeploying resources.

Alternatively, the provider can go to the customer and say, “The welders have scheduled this scaffold to be completed in week three, but we can perform this task in week two when we have crews in this unit; is there any reason we can’t erect it earlier? Or could we at least pre-kit and pre-stage materials nearby? That will save us a day on erection and give the welders a head start.”

Using fireproofing as an example, crews wrapping insulation on a pipe have a lower labor rate than those who perform thermal spraying or finishing work. Structuring the labor pool accordingly saves money. Even if a four-week lookout is only 60-percent accurate, that’s a good starting point for project managers to provide customers with better visibility into how they can facilitate more timely and efficient results.

Workface planning

A typical task has four stages: definition/scope, planning/preparation, execution and closeout. Subcontractors are often not engaged until the execution phase, when they are directed to provide services. That

mentality is a bit like generals making a battle plan and marching the troops forward before notifying the engineering corps that they need to cross a river. What type of bridge? What size and capacity? Permanent or temporary? What about using boats and airlifting a small advance force?

Engaging subcontractors early — during the definition/scope phase — is one of the pillars of workface planning (WFP). A sub-element, the advanced work package (AWP), contains highly detailed, small plans used on-site by the field crew to perform work in alignment with the WFP.

WFP and AWP reduce unproductive, nonvalue-added time; however, these processes require collaboration among construction, engineering and the crafts during a more thorough planning phase. Through better collaboration, planning and communication, the project team can design for better constructability and synchronize the supply chain accordingly. With WFP and AWP, we can tightly define the scope of work to remove guesswork at the workface and ensure that the correct resources are in place.

Through WFP, some of the “first wave” productivity improvements often include:

- Reduced modifications/rework.
- Reduced rebuilds: Scaffold erected, torn down (such as for allowing a crane pick) and rebuilt.
- Optimized crew mix between apprentices and journeymen.
- Improved material movement through dedicated material handlers.
- Bundled, smaller jobs.
- Pre-kitted projects to reduce waste and associated trips back to the laydown yard.
- Increased number of satellite yards to pre-stage materials.

There are several other opportunities for industrial customers to support improved time on tools. These include better planning, consideration of on-site logistics, optimized

permit processes and industry innovations.

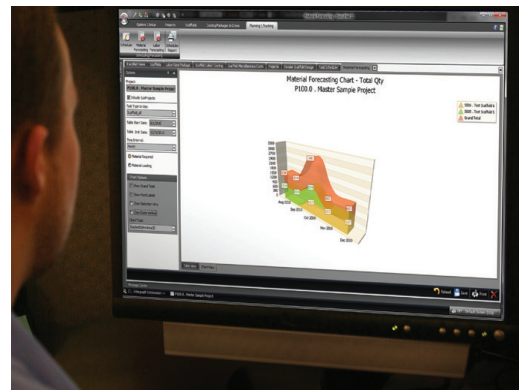
During the engineering phase, specialty services such as 3-D laser scanning, drone photography and videography, thermography and LiDAR can be used to improve accuracy and planning. These files can be combined with engineering files in Navisworks (or used separately) to enable virtual planning. Now, instead of just talking about what access looks like, the stewardship team can evaluate a virtual image.

There are also software planning programs that have been developed that can generate labor and cost estimates, as well as a bill of materials, and the files can be output as PDFs or DWGs. Validation becomes easier, and parties can hold each other more accountable.

Early engagement also enables soft-craft providers to introduce nontraditional options when customers still have the time to consider them. This includes suspended access solutions, swing stages, rope access, aerogel insulation, steel toe boards, redesigned ladder cages, thermal spray aluminum coatings for tank tops and many more trade-specific innovations. In short, productivity leaps don’t just come from more efficient tool time; they also come from using more efficient tools.

Given the volume of soft-craft services required during a major turnaround (approximately 2,500 scaffolds and 300-600 craftspeople would be typical), there are numerous opportunities for efficiency improvements. However, that potential will remain largely untapped until service providers, refineries and EPC contractors transition from a transactional relationship and instead engage in a proactive stewardship relationship, working together in a manner designed to deliver joint improvements.

For more information, visit www.brandsafway.com or call (800) 558-4772.



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+ Collaborate
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PRODUCTIVITY IMPROVEMENTS

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