

BrandSafway: At Work For You™

Helping customers reach the next level of productivity

For any specialty-labor contractor, a culture of safety, experienced craft labor and expert supervision are the basic building blocks of being a credible service provider. However, moving the true levers of productivity demands much more. To truly partner with customers and help them move up a “productivity maturity curve” (supported by improved performance metrics), advanced capabilities and a structured approach are required. These include lean construction techniques led by strong project managers, integrated advanced workface planning tools and processes, experienced application engineers, highly skilled multicraft services (under one overhead structure) and craft-specific innovations.

In June 2017, Brand Energy & Infrastructure Services combined with Safway Group. Larger, yet *more* local than ever, BrandSafway employs approximately 35,000 people and has 240 locations in North America and another 110 globally. The company supports more than 8,000 jobsites and provides more than 75 million hours of soft-craft services annually.

“Our breadth and depth of capabilities, coupled with a structured approach to value creation, enable us to move customers along a ‘productivity maturity curve,’” said Dave Witsken, president of Energy and Industrial for BrandSafway. “We’ve seen this approach generate total cost savings in excess of 30 percent, plus outage cycle time reduction. Tracking productivity and using data in structured stewardship reviews are key to driving improvement. Looking at standardized productivity along with key performance indicators (KPIs) and comparing them over time — to other sites and to the universe of BrandSafway contracts — is enlightening and provides great context for improvement.”

Improving execution with project management

Project management is critical to improved performance and increased productivity. “BrandSafway takes a disciplined

approach to project management and invests heavily in training as well as the development of new methodologies and tools,” said Brad Cortazzo, vice president, Operating Functions. “As a result, our people on the ground make smart decisions that improve productivity and mitigate risk.”

BrandSafway trains project managers in all aspects of their job, including managing schedules, costs, quality, personnel and contracts, and using the tools that support them. Skilled crafts are also encouraged to establish and climb a career ladder, and the company gives them the resources they need to be successful. Providing multicraft services — labor crews trained in more than one specialty (scaffolding, insulation, fireproofing and coatings) — gives everyone more opportunities to grow as well.

Measuring performance

Historically, soft-craft providers took an *ad hoc* approach to project results: erect scaffold; blast, paint and insulate as the contractor directs; and then dismantle. Productivity varied from site to site. BrandSafway is committed to establishing new norms and achieving consistency in its approach.

“We have the experience — and the data behind that experience — to drive consistency and productivity, and one way we’re doing this is by establishing standard metrics for KPIs,” said Brad Newton, vice president, Project Controls and Process Standards, BrandSafway.

The industry measures scaffold KPIs in leg-feet per hour for erection and dismantle, plus modifications as a percent of total hours. BrandNet™, BrandSafway’s proprietary access optimization system, is well suited to track these metrics, and BrandSafway is working to standardize performance measures across all of its branch locations.

Moving forward, the company will be able to assure customers that the scaffold productivity KPIs at their Gulf Coast facilities are the same as at their California or Canadian operations. Metrics and data management systems for coatings and insulation are more complex, but those are now being established as well.

“The next step involves aligning our KPIs with customer KPIs,” said Newton. “For example, during a turnaround, when shutdown costs are measured in millions of dollars per day, customers prioritize faster erection and dismantle. During construction, or when access work doesn’t disrupt production, they value lower labor costs.

“We can leverage our logistics and crew management expertise to improve productivity in the areas

that are most meaningful to customers.”

To facilitate understanding, BrandSafway is moving toward a stewardship approach, where its team and the customer’s team review KPIs and cost data on a monthly basis and jointly develop actions for continuous improvement. For large customers with ongoing contracts, the results can be powerful. At one refinery, scaffold productivity nearly doubled, saving 60,000 labor hours over two years and yielding a seven-figure savings. At another site, using KPIs enabled BrandSafway to increase its efficiency by more than 30 percent over a 12-month period.

Advanced planning for better outcomes

BrandSafway’s approach to planning delivers efficiencies in three key areas: strategy and constructability, workface planning (WFP) and execution. It also emphasizes early engagement, starting during the project definition/scope assessment phase.

“Aligning access needs at the workface is a core element of workface planning, which is why we’re one of the industry’s leading WFP advocates,” said Rick Dunlap, vice president of Technical Services for BrandSafway.

WFP organizes a project to deliver the right services to the right people at the right time. A subcomponent, advanced work packaging (AWP), includes highly detailed plans used on-site by the field crew to perform work in alignment with the WFP. Together, WFP and AWP deliver savings through better productivity, smaller crews, fewer project interruptions and reduced opportunity for incidents.

To support WFP and AWP, BrandSafway project managers use various processes and tools, such as BrandNet, which enables managers to virtually design, estimate and execute scaffold. They can import a 3-D model, design a basic or custom scaffold, place it at GPS coordinates, create a bill of materials, manage labor, and generate reports for internal and external use.

“BrandNet is a powerful visual tool we can use with customers to validate plans and then execute them smoothly,” said Cortazzo. “If a customer wants to know where we have assets deployed, who is using them and what they cost, we can generate the data they need and review results objectively.”

During the early phase of a project, BrandSafway can deploy a full suite of advanced tools, including laser scanning, drones, LiDAR, photogrammetry, GPS and thermography. Even in the absence of original blueprints, these technologies can create a 3-D model of complex facilities that provides x-,

y- and z-axis points for every object, which are accurate to *within millimeters*.

“When designing access solutions and work plans, we can insert them into a 3-D model and take customers, contractors and craft labor on a virtual walk-through of the jobsite,” said Cortazzo. “Accurate front-end planning eliminates unnecessary modifications and promotes predictability.”

“After implementing WFP, we saved one refinery operator \$500,000 by reducing the typical scaffold modification rate from more than 15 percent to 7 percent,” added Dunlap. “We also reduced turnaround time, which was even more valuable.”

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— Brad Cortazzo, BrandSafway

To explain how BrandSafway achieved these savings, Dunlap cited a situation where various crafts within the refinery had requested 10 small scaffolds. After assessing craft needs, BrandSafway consolidated nine of the small scaffolds into two larger scaffolds and reduced labor costs by 40 percent. Pre-kitting materials and eliminating the teardown and rebuild of scaffolds for crane access are two other common areas of improvement.

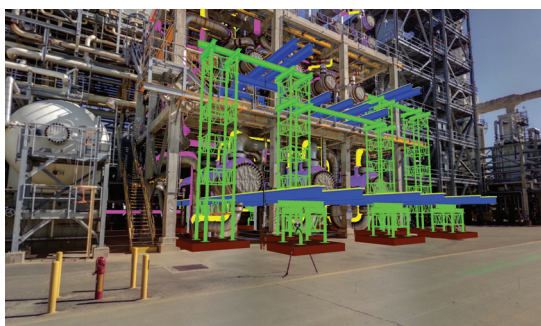
Multicraft labor drives efficiencies

In addition to unmatched access expertise and the resources cited above, BrandSafway’s solutions include depth in other critical service areas: insulation (panel systems, blankets, silica aerogels and thermography), specialty services (refractory, fireproofing, CUI management, cathodic protection, blasting and industrial coatings), rope access, forming and shoring (wall, slab, climbing and monolithic), and edge protection.

“We have cross-trained our crews for increased efficiency,” said Witsken. “Multicraft labor, especially when led by one site overhead team, can significantly reduce response time in critical path situations, decreasing costs and outage cycle time.”

Witsken cited one refinery example where opening a reactor vessel revealed much more broken refractory than anticipated. The best-case scenario in the “old world” was to lose a day while bringing in crews and materials.

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BrandSafway’s proprietary access optimization tool, BrandNet™, allows managers to virtually plan, engineer, estimate and execute scaffold.

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Now, with cross-trained labor maintaining a continuous presence on-site, triage work began within minutes, which included a rope access team assessing the extent of repairs. Using a multiservice approach clawed back an extra day of operation for the refinery.

Larger toolbox, better solutions

Along with crews trained to deliver multicraft services, having a larger toolbox supported by an experienced application engineering team further enhances productivity. “BrandSafway offers more products and services — from scaffolds, suspended and motorized platforms, hoists, and lifts to weather protection and rope access — than any other soft-craft provider,” said Witsken. “And many of these solutions are patented and unique to BrandSafway.”

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— *Dave Witsken, BrandSafway*

Rope access, for example, was originally developed to solve maintenance problems offshore. But it has evolved to become an integral tool for many kinds of at-height work — fireproofing, refractory, insulation, coatings, mechanical hoisting and rigging, and lifeboat winch change-out.

“Rope access reduces schedules and costs on complex maintenance projects and helps with inspection and rigging,” said Witsken. “We also use rope access teams to install beam clamps for our suspended access solutions.”

BrandSafway is a member of the international Industrial Rope Access Trade Association (IRATA), a UK-based orga-

BrandSafway CPI

In a maintenance environment, budgets are generally provided for each task. Actual cost is compared to budgeted cost and presented to the customer as part of KPI reporting. Project work is most often measured using Earned Value Management under PMI project cost management principles. Cost Performance Index (CPI) is measured to reflect the amount of work being completed on a project for every unit of cost spent. CPI is computed by Earned Value/Actual Cost. A CPI value above one means the project is performing better than the budgeted cost. For each of BrandSafway’s major sites in North America, the company has achieved a 1 — or better — in CPI measurement.

nization whose two-rope failsafe method has helped BrandSafway achieve more than 100,000 hours on the rope with zero recordable incidents. BrandSafway offers IRATA training at facilities in Eunice, Louisiana, and Edmonton and Fort McMurray, Alberta.

Another technology new to BrandSafway’s portfolio, freestanding hoists, solves the challenge of lifting scaffold components in tight spaces with numerous obstacles. This solution recently saved an Illinois refinery 10-15 labor hours per day, resulting in a total annual savings of \$260,000.

A freestanding hoist consists of a telescoping boom lift with a material basket on the end. Unlike a self-powered boom lift, a half-ton truck tows the freestanding hoist into place, where two people can fine-tune its position by hand.

Freestanding hoists can reach heights of up to 118 feet and support weights of up to 550 pounds. With lifting speeds of up to 150 feet per minute, freestanding hoists can move material at much faster rates than manual lifting with a block and tackle, while eliminating the potential for muscle strain and injury. They also reduce crew size from 10 people to two. Compared to cranes, which may have a rental rate of \$2,500 per day, freestanding hoists reduce cost, fit better into confined spaces and can be repositioned faster.

Innovation enhances productivity

To accelerate innovation and continue improving its processes, products, services and solutions, BrandSafway launched its Innovation Council in June 2018, led by Vishnu Irigreddy, vice president of Global Access Engineering for BrandSafway.

“The Innovation Council allows us to draw upon and focus resources from around the globe, creating cross-functional teams with different experiences,” said Irigreddy. “It also eliminates duplication, frees up more resources and reduces development time.”

Innovation efforts have focused on products, better asset management, project management, improved processes and tools like BrandNet to optimize planning.

Another level of innovation the council has emphasized is adapting existing solutions to meet specific project needs. For example, one recent boiler repair required work both in the V bottom and on the water wall, starting at a height of 75 feet. So work could proceed simultaneously in both areas, BrandSafway used the QuikDeck® Suspended Access System. Suspended from structural elements in the penthouse, BrandSafway then erected six to eight levels of Systems™ Scaffold on top of the QuikDeck for work in the bull nose.

“Combining access solutions helped bring the boiler back on line 12 days ahead of schedule and reduced erection and dismantle time by 708 labor hours,” said Irigreddy.

To further enhance boiler or heat recovery steam generator (HRSG) repair productivity when smaller crews need to work on the water

BrandSafway’s EHS Team At Work for You™

The Brand and Safway combination brought together two of the industry’s safety leaders in 2017. In fact, together, 19 BrandSafway refinery and plant crews earned the Contractor Safety Achievement Award from AFPM in 2017. Other recent safety achievements include:

- A Baytown, Texas, plastics facility crew has worked more than 3.4 million hours without a single recordable injury.
- The crew at a refinery in Baton Rouge, Louisiana, was recently recognized for continuing their outstanding safety performance, going seven years with zero recordable injuries.
- The scaffolding, abatement and insulation crews at a Washington state facility have gone over 540,000 hours and five years without a recordable injury.
- The team at a Fort McMurray, Alberta, refinery has provided scaffolding services for maintenance, including numerous shutdowns and turnarounds, without a single injury over the past five years.

wall, BrandSafway can affix a monorail (aluminum I-beam) to the bottom of QuikDeck and suspend a Spider® swing stage for complete lateral and vertical flexibility. Overall, combining access solutions can generally reduce access costs by a minimum of 33 percent and up to 50 percent or more, depending on the scope and duration of the outage.

“Providing general contractors with combined and more efficient solutions, supported by the largest and most advanced team of application engineers, helps contractors win business, especially with structures and in situations that present unique challenges,” said Irigreddy.

Even traditional Systems Scaffold continues to evolve, with the introduction of complementary products such as Flex-Deck™, designed to solve all platform penetration challenges. Using galvanized steel planks, Flex-Deck’s plank-to-plank transoms work with cup-lock systems to enable the configuration of a platform around pipes, beams or other vertical obstructions using standard components. Another new, innovative tool, the BrandTech™ Precision Welding system, can further increase productivity and reduce turnaround time. This computer-driven stud welding technology for refractory anchors enables a two-person crew to complete 2,600 welds in a 12-hour shift with a 0.5-percent error rate. That’s more welds and better accuracy than a 16-person crew using conventional techniques.

“The skilled craft labor shortage is widely known,” said Witsken. “Innovations such as BrandTech enable us to dramatically improve the productivity and quality of existing labor through faster and easier operation. Using better tools and cross-training also boosts craft labor retention.”

BrandSafway’s innovation story also includes the use and presentation of data for better decision making. BrandSafway is rolling out a cloud-based approach to tag management. Its Pro-Tag™ system can capture transactional data every time an access solution is built, dismantled, modified or inspected. Field

personnel use web-enabled devices to scan their badges and scaffold so the system can generate a tag history, material report and associated costs.

Additional technologies new to the BrandSafway portfolio include lightweight silica aerogel insulation and robotic blasting.

Larger yet more local

Local branches, labor and resources are other important factors in BrandSafway’s ability to serve and maintain customer relationships. “When we can draw on the industry’s largest and best-trained craft labor, project managers and engineering experts, along with industry-leading safety systems and innovative solutions to support them, we are in a better position to serve our customers,” said Witsken. “Our crews simply perform better.”

Witsken acknowledged there’s still work to be done to streamline the operation of the combined Brand and Safway enterprises, but emphasized most of the heavy lifting has been accomplished. “That doesn’t mean we’re satisfied with where we are today, but it does mean we’ve optimized many aspects of our operation so that we can perform better for our customers,” he said. “We hope it is evident to any company that works with us that we’re continuously developing the tools, technology and people to move the true levers of productivity for our customers.”

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



Rope access reduces schedules and costs on at-height work — from fireproofing and refractory to insulation and coatings.