

BIC

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BRANDSAFWAY: ACCESS, INDUSTRIAL SERVICES FOR THE NEW DECADE

With a focus on data-driven jobsites, product and service innovation, and a highly trained workforce, BrandSafway can help you work smarter, improve productivity and enhance safety in the coming decade.

USA DEBUSK: FCCU AND COKER SPECIALISTS

With a proven record of safety and performance, USA DeBusk provides best-in-class industrial services to streamline critical paths of these key unit turnarounds.

FEATURES

Chris Jahn helping to advance ACC and the 'business of chemistry'

Eastman's Sergio Portillo Matute strives for excellence at Texas City site

Beginning the digital jobsite transformation

Chevron: No buyer's remorse in purchasing century-old refinery

Marathon, Enbridge: Common vision essential to reliability

Shell's Kanade: How to meet continuous improvement challenges

GICC creates global cleaning standards to improve safety

Industry productivity expected to continue increasing in 2020

Overcoming generational challenges key to supply chain success

PLUS...



Bayou City Industrial Contractors LTD.

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Beginning the digital jobsite transformation

While decision makers at refineries and power plants might not have reached a tipping point when it comes to building a digital transformation strategy, they're at least beginning to explore options. Helping to promote the change are contractors who can demonstrate cost savings and value creation by using data, software and digital tools to drive meaningful results. The winners in this game will be good at collecting the right data with relative ease, turning that data into relevant information, taking action after reviewing the data, and ensuring that those actions deliver meaningful results.

The important thing to realize is the time is now. Decision makers who take advantage of digital worksite tools and resources today will see a multitude of benefits in the future.

Collecting data

Creating a data-driven jobsite can start with using web-enabled devices to enter time. Unlike entering time worked on paper, digital entry tools can more easily allow us to link hours to specific projects, jobs and activities (e.g., material logistics, jobsite travel, erecting, dismantling, modification, etc.).

RFID (radio-frequency identification) or "smart tags" are digital tools that benefit a data-driven jobsite. Smart tags enable us to capture and know — with certainty — data associated with each scaffold (or insulation blanket, pipe, etc.), such as location, status, most recent inspection, appearance, erect and dismantle dates, and costs for labor and rent. Smart time and tag management tools are in their early stages, but they will be the norm by the end of the decade.

Other future points of data collection on the horizon will involve safety and compliance. However, collecting data just because there's a new tool or app isn't a good enough driver to forge ahead.

Getting started

You will want to begin by identifying the endgame and working backward. Meet with contractors to select key performance indicators (KPIs) that, when improved, will impact areas that really matter. We want to track the right data to establish relevant metrics, but not so much that we drown in a sea of meaningless numbers. In addition, we don't want to overwhelm the people who use the tools and will need to consider the impact on the IT department as well.

Another key source of data that drives KPIs comes from time-on-tools studies. A person not associated with a work crew tracks their activity over a given day, especially noting unproductive activities that are difficult to capture. Examples include time spent waiting to pull a permit, filling

out paperwork, waiting for materials and jobsite travel.

Contractors who are moving to paperless transactions and using web-based applications can inherently offer more value because they consume less budget for overhead costs. This includes administrative personnel keying in data (a process fraught with inaccuracies) and costs associated with the physical storage, retrieval, manipulation and sharing of data. This is low-hanging fruit that other industries picked a long time ago, and it's time we did, too.

Turning data into information

But the real power of data collection comes from analysis. For example, what does "cheaper" really mean? Raw time and material costs only represent an input and aren't very meaningful metrics in and of themselves. KPIs should reflect outcomes, such as schedule attainment, productivity per worker-hour, total headcount, utilization rate, days on rent, planned vs. unplanned work, etc.

The next step requires presenting the KPIs in a stewardship or executive sponsorship meeting held quarterly or semi-annually. To be effective, it must include those with the authority to make change from all parties. From the contractor side, this typically includes the project manager, regional manager, vice president and maybe the president. On the customer side, it will be the lead contract holder, the contractor's sponsor ("buddy manager"), plant managers, and perhaps the maintenance, safety and project managers.

Presentation is also key. Spreadsheets are great, but when possible, graphically display KPI metrics. Visual aids enable people to identify trends and communicate information faster and more holistically.

If the right data has been collected and then presented in a clear format, the issues to address and opportunities to improve value and cost savings should be obvious. The group meeting then needs to agree on decisive actions and track the results of those actions in successive stewardship meetings with constancy of purpose. For example, how will you convert unproductive time to productive time to impact productivity KPIs? Did the actions produce the desired results? Are the results meaningful? That is, did they move the organization in a strategic direction?

The executives I have recently met feel empowered by the potential for digital tools, software and data-driven jobsites. When a contractor walks in with hard data that shows cost and time savings and presents multiple opportunities for increased efficiency, clients become very interested.

They see the results of early initiatives by contractors as a jumping off point for further improvements.

Smart planning, improved execution

Digital technology, used in conjunction with 3-D services and workface planning (WFP), creates smart jobsites. For example, an access contractor can use software to import a 3-D model, overlay the recommended access solution and generate a virtual walk-through. If a digital model of the structure doesn't exist, contractors can use 3-D services (laser scanning, drone technology, etc.) to generate one.

With a digital model, all contractors on the project can validate that the proposed solution meets their needs and doesn't pose any clashes that would require modifications. The potential cost and time savings here are monumental.

By coordinating activity between trades, one refinery gained efficiencies exceeding \$600,000 on a single job. On an FCCU repair, another refinery realized the stand for a large component had the wrong dimensions; 3-D modeling identified the error and

prevented a delay of six to eight shifts.

On the access planner's side, software and time-tracking tools suggested optimizing the access solution to design one large scaffold instead of building several smaller scaffolds in an area, allowing a five-person crew to work more efficiently.

Smart planning is so powerful that one forward-thinking refinery now requires all contractors to sign off on scaffold design. In general, an average project can have scaffold modification rates of 30-40 percent. Smart planning can cut that in half and has even lowered it to single digits in some cases.

A smart job means planning the work and working the plan without waste. This approach inherently improves safety as well. Workers take fewer steps, handle less material and require limited material deliveries. When a crew approaches a known task, they already have their head 100-percent in the game, and that's a win for everyone involved.

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



By using 3-D services, such as laser scanning and drone technology, contractors can import a digital model, overlay an access solution and generate a virtual walk-through.

Others talk. We get results.



A digital world starts with a data-driven worksite.

Construction is going digital, and BrandSafway is leading the charge. Introducing BrandSafway's smart digital worksites, where we can use personnel and material tracking systems, 3D renderings and benchmark data from other sites to design, estimate and plan access solutions that get the right services to the right people at the right time. Combined with our expertise and proprietary tools, we can create unique solutions that use less equipment, less labor and increase safety. Get more value on your next project with cutting-edge technology designed to drive results.

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At Work For You™

Your Access and Industrial Services Partner for the NEW DECADE

It's a new decade, and BrandSafway is harnessing new innovations and cutting-edge technology to create smarter ways of working, with highly skilled local labor and expert management teams. BrandSafway's strategic digital approach is driving operational excellence, enhancing the customer experience and delivering data-driven insights that provide real value to customers.

"We can shave days and weeks off project schedules, especially when we can begin working with customers early in the planning process," explained Brad Newton, regional vice president, Energy and Industrial, BrandSafway.

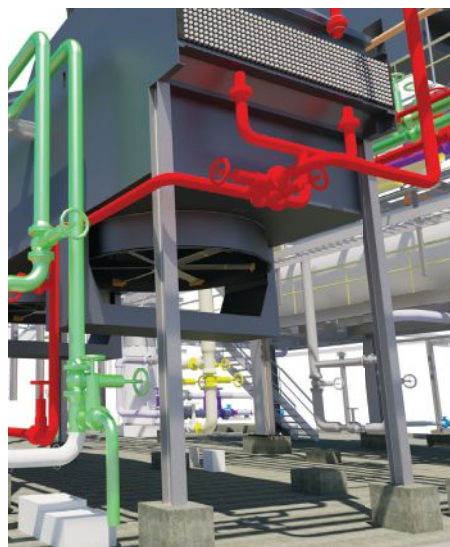
Working smarter

Data-driven worksites help differentiate BrandSafway as a value provider. BrandSafway customers are seeing efficiencies of 5 percent to 20 percent on projects that use tools like BrandNet® for design, estimating, planning and management; building information modeling (BIM); 3-D services such as laser scanning, photogrammetry, LiDAR, thermography and drone technology; and advanced workforce planning (AWP).

"Digital initiatives provide real visibility into key and critical functions, offering customers huge opportunities to save time and money," said Rick Dunlap, vice president of Technical Services at BrandSafway. "At one refinery, by using a laser scan model of the reactor design and an access solution from BrandNet, we identified a dimensional clash and prevented a delay of six to eight shifts on an FCC reactor turnaround."

BrandSafway also offers advanced tools like SmartJob™ for personnel time tracking and management, and SmartTag™ cloud-based inventory management. Both help capture data and create robust metrics for KPI improvements. Coupled with multisite benchmarking, customers can obtain a clear picture of how their sites perform relative to similar sites, with links to metrics for savings, productivity, safety and project duration.

"We help customers identify inefficiencies," explained Newton. "For example, scaffold modifications on a turnaround or a large project can be as much as 40 percent of the hours. By using smart digital tools, we can cut



Using BrandNet and 3-D services, BrandSafway can provide visibility into a project and identify any inefficiencies — before work gets underway on-site.

that by half or more. This allows us to deliver greater output per hour, a high priority for projects trying to provide a flat budget."

"AWP, BrandNet and Navisworks allow us to plan the work and then work a plan, helping us improve safety and greatly reduce modifications," agreed Robb Headrick, a BrandSafway area manager. "We can do more with less equipment and materials and a smaller crew."

And the numbers can add up quickly. "By integrating the 3-D model into BrandNet, we drastically reduced alteration costs on a 1,000-foot-long walkway with multi-

level dance floors, saving our customer more than \$600,000," said Kyle MacDonald, an AlumaSafway area manager. "On another project, a turnaround, we were able to cut two days off the schedule by flying a scaffold in through the top of a cat cracker for more than \$250,000 in cost savings."

Innovative products and services

In addition to digital tools and technology, BrandSafway's innovative products and services — from freestanding hoists and rope access to patented products like BrandTech® Precision Welding and the QuikDeck® Suspended Access System — provide customers with significant savings and improved safety.



BrandSafway's highly trained and certified rope access teams provide the means to reach otherwise inaccessible areas safely and cost-effectively.

For example, BrandSafway was able to slash 12 days off a boiler repair and inspection by using a combination of QuikDeck suspended platforms and Spider® swing stages. "Using swing stages instead of scaffold for boiler tube inspection and repair can save hundreds of thousands of dollars," explained Jeff Shannon, Alliance manager, BrandSafway.

Innovations in refractory are also having a significant impact. "When a planned turnaround project at a refinery turned into an unexpected relining requiring a total of 244,000 anchors (welds), BrandTech enabled us to complete the turnaround in six

weeks, reducing the schedule by eight days," said Eduardo Almeida, director of Innovation, BrandSafway.

**"We drastically reduced alteration costs on a 1,000-foot-long walkway with multilevel dance floors, saving our customer more than \$600,000."
— Kyle MacDonald, AlumaSafway**

A computer-driven stud welding technology, BrandTech allows for the installation of 1,000-1,500 anchors in a 12-hour period, increasing productivity by up to eight times and with an

2020

error rate of just 0.5 percent. Quik-X, which was designed specifically for FCC units, takes just 15 anchors as opposed to 27 for a conventional system, so they install almost twice as fast.

Bottom line: The industry is advancing rapidly, and the pace will keep accelerating. BrandSafway is uniquely positioned to help customers digitize and optimize their worksites with new, smarter tools and innovative resources.

"When customers present us with a situation where a solution doesn't exist, our depth of expertise, proprietary products and digital resources enable us to respond to the challenge with new and innovative solutions," said Dave Witsken, president, Energy and Industrial, BrandSafway. "We have more tools and options than anyone else in the business, and as a multiservices provider, we consolidate site overhead for greater savings and the efficiency of a single point of contact."

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

PRODUCTIVITY

Data-Driven Jobsites



"I've been on projects like this for 20 years, and on every project, without fail, scaffold has been a major topic of discussion due to access delays. On this project, we don't even talk about scaffold. Everything's flowing smoothly."

- Project Leader, New Alkyltion Unit
Construction, West Coast Refinery

INNOVATION

Real Differentiated Value



"Installing standard scaffold would have delayed tearing out the damaged half of the slope until after completing water wall work in the boiler. Fortunately, the QuikDeck® solution recommended by BrandSafway worked great."

- Regional Project Manager,
Construction and Service Contractor

BRAND SAFWAY™

At Work For You™

"BrandSafway truly cares about their employees and their customer. There are none better at what they do!"

- Regional Manager,
Power Industry, USA

"The professionalism and ideas you bring to the table and the way you guys handled yourselves in stressful situations tells us that you're exactly the type of contractor we want on this site."

- Canadian Refinery Manager

PEOPLE Workforce for the New Decade



Project Bootcamp



Multi-craft/Multi-skill

SAFETY Our Foremost Value



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