

DRIVING PROFITABILITY

WITH A FIELD-CENTRIC APPROACH TO COST MANAGEMENT

Manage heavy construction costs where
and when they occur - in the field

Keep projects on schedule and on budget

The 6 essential steps

6 Essential Steps

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Driving Profitability

With a Field-centric Approach to Cost Management

Heavy construction contractors have traditionally taken an accounting based approach to cost management, relying primarily on their financial or ERP systems. Now, modern operational software solutions – fortified by advanced mobile capabilities – are paving the way for a more proactive, real-time approach to managing costs where and when they occur: in the field.

As margins get tighter and projects get larger and more complex, status-quo cost management methods can no longer cut it when it comes to staying on budget and on schedule:



Lag Time for Performance Data—Managers and executives can't evaluate labor, productivity, materials and equipment utilization accurately and on a daily basis, so they can't make timely, data-driven decisions to adjust operations in the field and protect profitability.



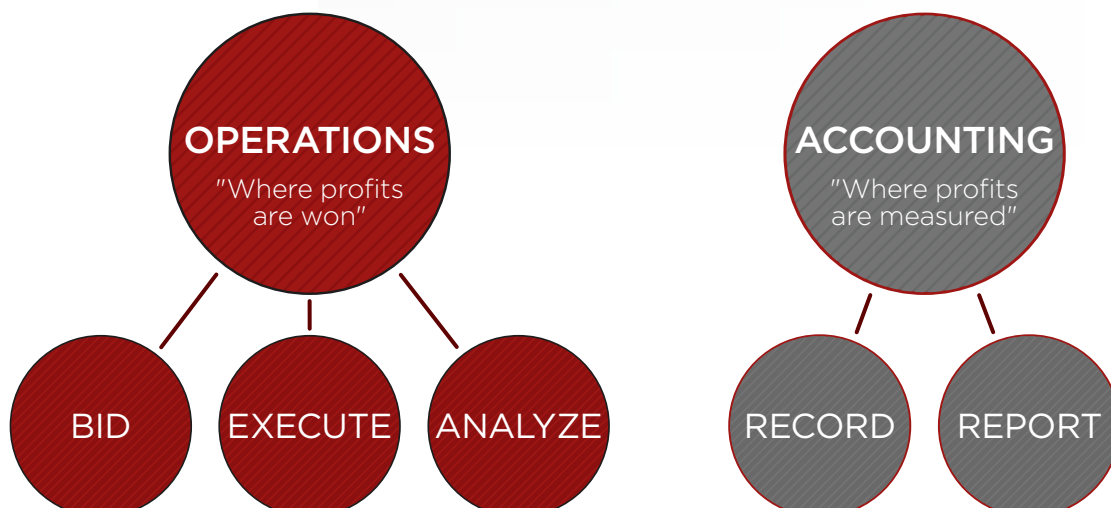
Lack of Visibility in the Field—The team responsible for managing projects in the field doesn't have a clear understanding of the overall performance expectations or an accurate picture of where they stand versus the plan/budget on a day-to-day basis.



Inefficient Resource Utilization—Disconnected processes based on paper, whiteboards, phone calls – or software applications that don't talk to each other – prevent the field, maintenance and scheduling/dispatching teams from working cohesively to deploy crews, equipment and materials in the most cost-effective manner.



No Feedback Loop—Actual labor, equipment and material costs incurred in the field don't carry through and inform the estimates and budgets for future projects.



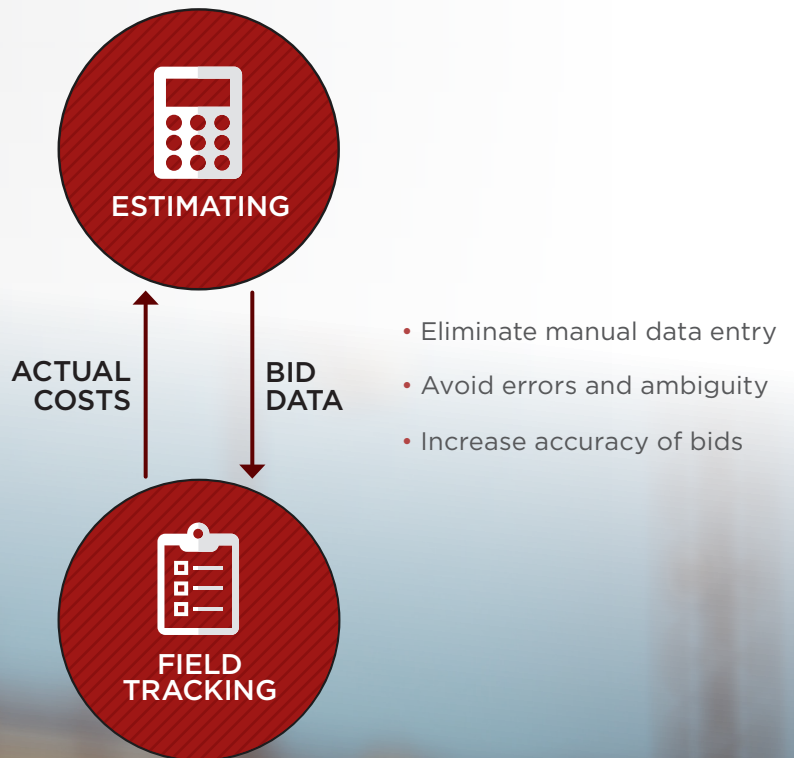
“Track links the information from estimates to our field tracking process automatically, eliminating the added work and inconsistencies of reentering data and managing disconnected systems.”

**-Alex Kalmar
Steed and Evans**

1 Transfer Data Seamless *Between the Bid and the Field Log*

Unified software applications for estimating and performance tracking allow bid data to be translated and transferred directly to the field log. Eliminating the need to manually interpret and re-key the data eliminates ambiguity and errors.

As they are setting up and planning a new job, superintendents, project managers and foremen know exactly what the scheduling and budget expectations are. Conversely, contractors benefit when data on actual costs incurred in the field travels back to the estimating workflow to improve the accuracy of future estimating, budgeting, planning and scheduling.



2 Collaborate Across Workflows

Unified Operational Software

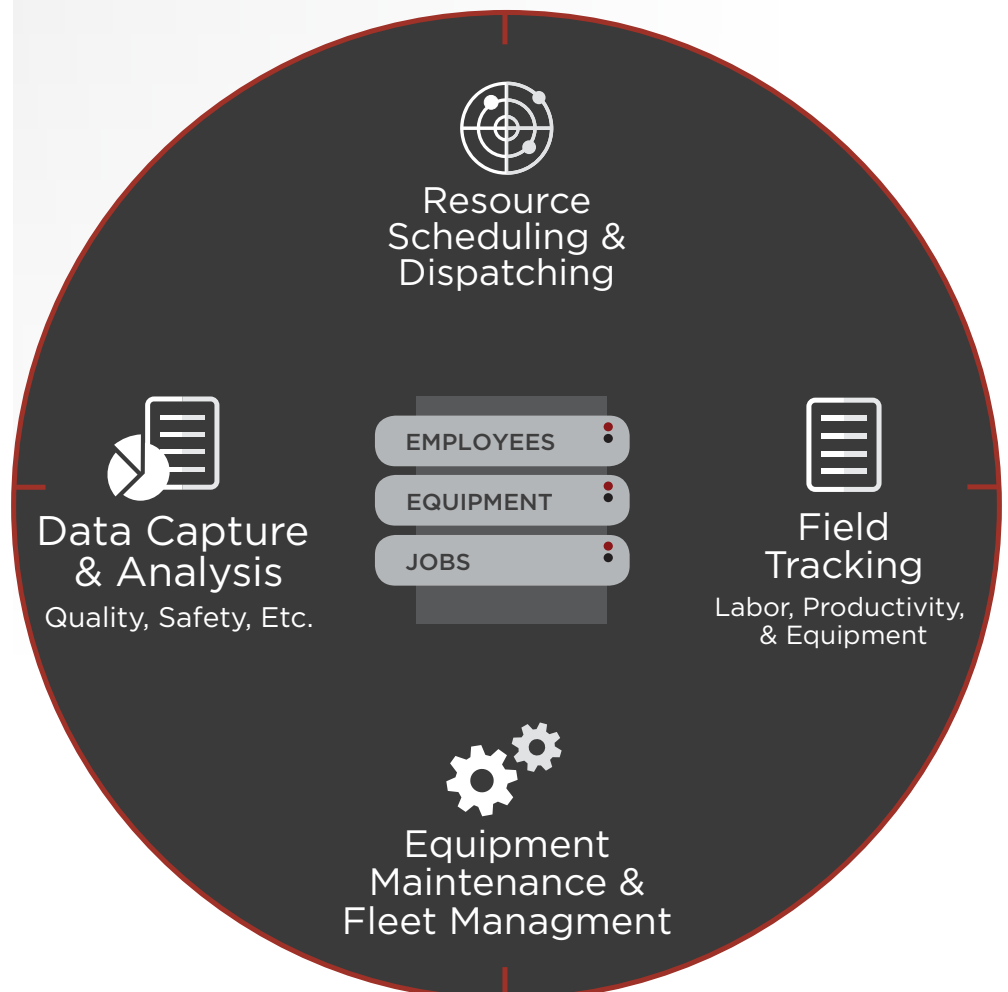
“We definitely see an advantage in a suite covering the full estimating and operations workflow, with elements that communicate seamlessly with each other.”

-Doug Tait
W.C. Spratt, Inc.

The three operational workflows with the biggest impact on job costs in the field are scheduling/dispatching, performance tracking and equipment management. When specialized software applications used to manage these workflows are unified and use a single, shared operational database, data flows freely. Employees can collaborate and work more efficiently to keep projects on schedule and on budget.

A single database for employees, equipment and jobs means a single source of truth. Everyone works off the same data, eliminating errors and ambiguity. Updates made or actions taken in one application are visible across the platform in real time. That gives employees easy access to the accurate, timely information they need to make better decisions.

- One operational database, a single source of truth
- Real-time visibility enterprise wide
- Expanded collaboration for maximum efficiency



“The real-time data provides us the ability to adjust work items anytime and have the field personnel review and react to situations before it’s too late.”

**-Dave Turner
C.A. Hull**

3 Track Performance in Real Time *Know Sooner and React Faster*

Many heavy construction contractors rely on a performance tracking process that involves field logs and time cards (usually paper) compiled weekly and delivered to the office. That data on labor, equipment and material costs is then re-keyed manually into an accounting system in order to produce reports. The problem is, those reports reflect what happened one to two weeks ago, and by then, it may be too late to correct or recover from factors pushing a project off schedule or over budget.

Alternatively, electronic field logs and performance tracking software allow management to take a field-centric rather than an accounting-centric approach. Data entered into the electronic log is visible in real time. Managers can generate reports and evaluate costs on a daily basis, allowing them to react faster and make informed adjustments to field operations.

Bypassing the accounting system and communicating progress daily also provides practical and motivational advantages for the field team. They know where they stand against the budget and what they need to do on a day-to-day basis to keep projects on target.



MOBILE TECHNOLOGY IS VITAL TO DATA-DRIVEN DECISION MAKING

DATA COLLECTION

- Location-based
- Real-time
- Automated

DATA ACCESS

- Structured
- Enterprise-wide
- Collaborative

DATA ANALYTICS

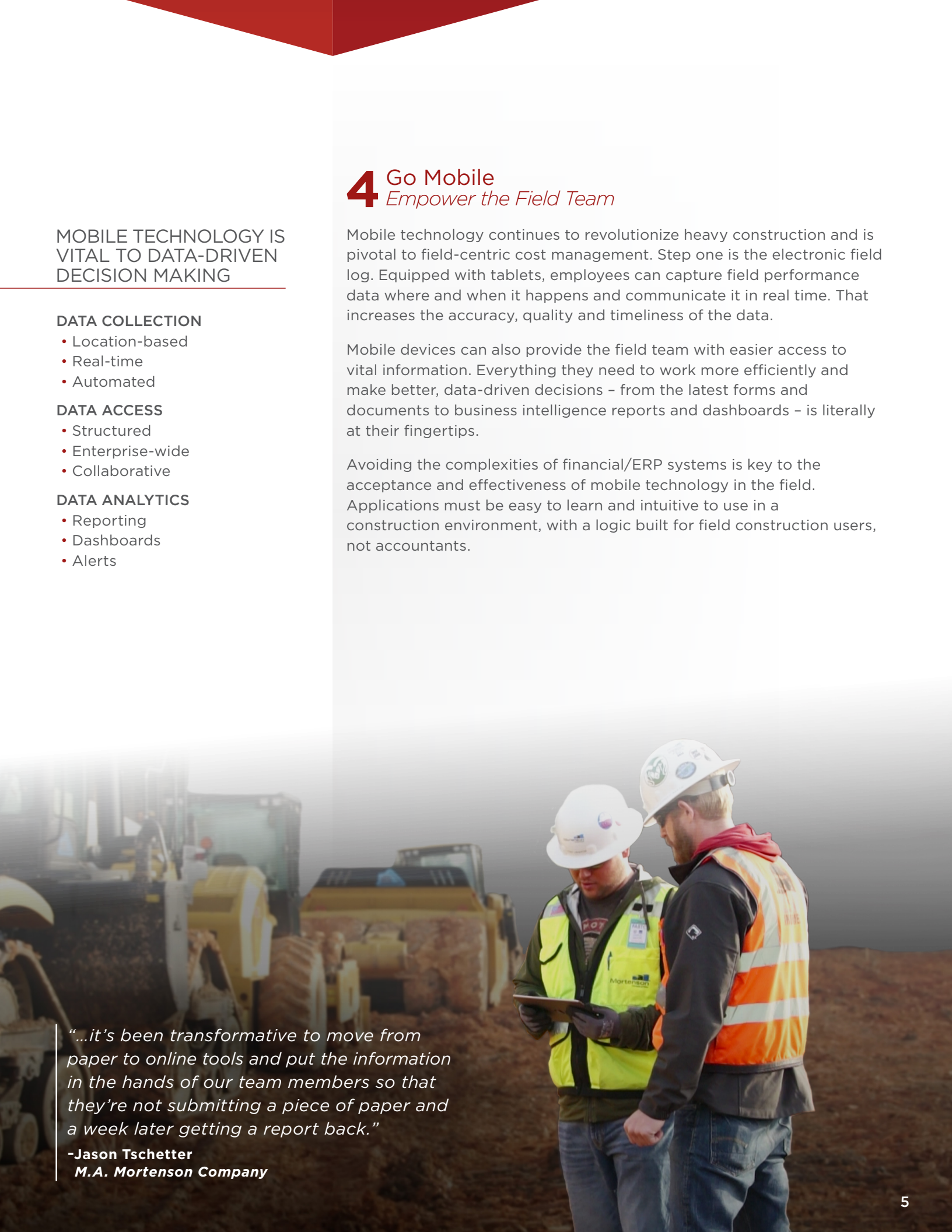
- Reporting
- Dashboards
- Alerts

4 Go Mobile *Empower the Field Team*

Mobile technology continues to revolutionize heavy construction and is pivotal to field-centric cost management. Step one is the electronic field log. Equipped with tablets, employees can capture field performance data where and when it happens and communicate it in real time. That increases the accuracy, quality and timeliness of the data.

Mobile devices can also provide the field team with easier access to vital information. Everything they need to work more efficiently and make better, data-driven decisions – from the latest forms and documents to business intelligence reports and dashboards – is literally at their fingertips.

Avoiding the complexities of financial/ERP systems is key to the acceptance and effectiveness of mobile technology in the field. Applications must be easy to learn and intuitive to use in a construction environment, with a logic built for field construction users, not accountants.



"...it's been transformative to move from paper to online tools and put the information in the hands of our team members so that they're not submitting a piece of paper and a week later getting a report back."

-Jason Tschetter
M.A. Mortenson Company

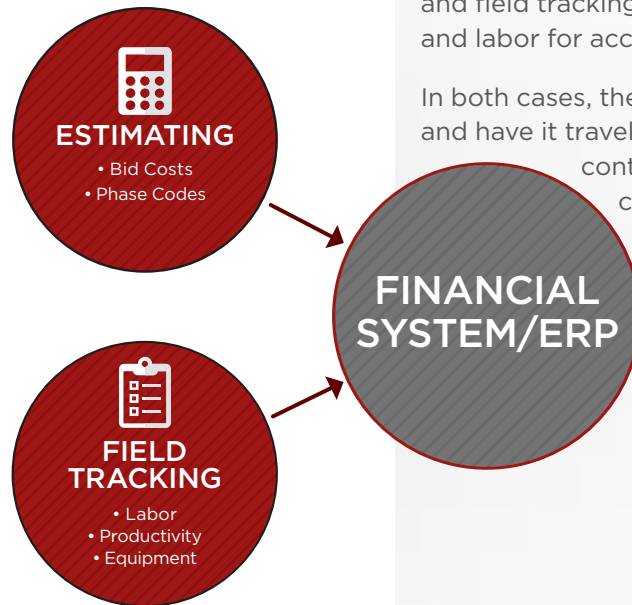
5 Integrate Operations and Accounting/ERP

Seamless, Electronic Data Transfer

A software platform for estimating and operations doesn't replace financial accounting or ERP systems – it complements them.

Software for estimating should transfer bid data and phase codes directly for budgeting and planning purposes. Likewise, the electronic field logs and field tracking software should transfer data on production, materials and labor for accounting, billing, payroll and other financial workflows.

In both cases, the ideal is to enter data once in an electronic format and have it travel seamlessly. By eliminating the need to re-key data, contractors can save time and cut administrative personnel costs (or free people up to do more productive tasks). More importantly, eliminating manual data entry increases data integrity by reducing opportunities for errors.



Managing Labor Costs

Two Scenarios:

TYPICAL WORKFLOW

- Errors in interpreting paper time cards
- Added cost for redundant data entry
- Executives see labor expenses 2 weeks later

Fill out paper time cards



Collect time cards weekly



Drive cards to the office



Re-key hours into payroll system



DIGITAL WORKFLOW

- Accurate, validated data on electronic time cards
- Verify and submit daily
- Direct export to payroll system
- Executives see labor expenses daily

Enter time on electronic field log



Verify and submit daily



Direct export to payroll system



EVENT-TRIGGERED ALERTS

...another powerful reporting tool for managing operations and costs in the field. Check a box on an electronic form or software application, and a message can be delivered automatically by e-mail, text or in the software application itself.

For example:

Did the incident result in an injury?

☒ Yes ☐ No

↳ Immediate alert to safety director

Does the deficiency prevent you from operating the equipment?

☒ Yes ☐ No

↳ Immediate alert to shop manager

6 Turn Data in Actionable Intelligence *Reports, Dashboard and Alerts/Notifications*

There is no doubt contractors can leverage software in the field to work more efficiently and to collect better and more timely data. Turning all that data into actionable intelligence is also a vital step in managing costs more effectively in the field. Once again, unified software applications for field operations workflows play a vital role.

With a deluge of valuable, digital data pouring in, aggregating that information and building reports manually is a losing proposition. Software automates data mining to improve and expedite the process. Contractors can generate standard, as well as customized or ad-hoc reports and dashboards and distribute them enterprise wide with minimal manual effort.

In the office and in the field, these software-driven reports and dashboards empower managers to make data-driven decisions rather than relying on gut instincts, partial information or a “that’s the way we’ve always done it” approach. Thorough, timely reporting also equips executives and managers to recognize emerging threats and opportunities that impact project outcomes more immediately. Finally, data and reporting from operations software and the financial/ERP system can be combined to drive longer-term analytics, trend analysis and strategic decisions impacting cost management.



Why Not Rely on Accounting/ERP Systems?

A Better Option for Field-centric Cost Management

Financial accounting and ERP systems are great – for their designated purposes. Frustration for contractors stems from the fact that these solutions are not built with the field in mind. The promise of an all-in single solution for accounting, estimating and operations also remains unfulfilled. One system simply can't do it all and still deliver the logic, features and functionality needed by financial executives in the office and employees in the field.

Accounting/ERP systems fall short for tracking and controlling costs at the operations level – the critical point where project insights are gathered and data driven decisions that drive profitability are enabled

Here is how accounting/ERP systems and operational software platforms compare for field-centric cost management:

	ACCOUNTING/ERP SYSTEMS	OPERATIONS SOFTWARE PLATFORM
REAL-TIME DATA	Great for recording data and reporting about profitability after the fact	Data captured and shared across applications in real time; actionable data to react quickly to manage costs in the field
COLLABORATION	Add-on applications for estimating and operations; integration steps, delays and frustration to make disparate applications work together	Unified applications and a shared database for collaboration across workflows critical to managing costs: estimating, scheduling, field management and fleet maintenance
EASE OF USE	Fundamentally designed for accountants and follow accounting logic; cumbersome to use in the field and typically viewed as an added burden	Designed specifically to work the way construction workers work and make it easier for them to excel; intuitive and accepted quickly
DEVELOPMENT AND SUPPORT	Supplier's attention focused on core accounting product; innovation, updates and support for estimating and operations applications minimal and a low priority	100% focused on estimating and operations; more responsive to specialized features, training and support required by users

PUTTING THE PIECES TOGETHER

FIELD-CENTRIC COST MANAGEMENT SUPPORT BY
THE ONE PLATFORM

ACCOUNTING / ERP

(Accounting, Payroll, Job Costs)

- Data integration with applications for estimating and operations



ESTIMATING & BIDDING

- Win more bids at achievable budgets/margins



RESOURCE SCHEDULING

- Optimize crews, equipment and materials



FIELD TRACKING

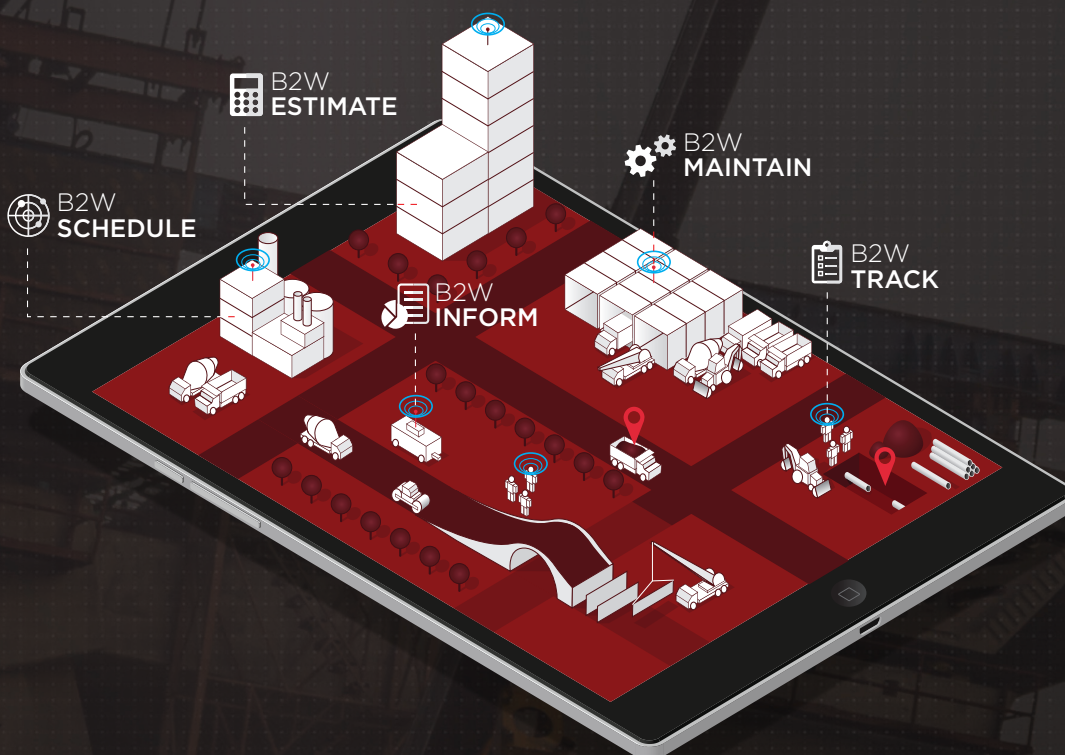
- Analyze and adjust performance in real time



FLEET MANAGEMENT

- Connect the shop, field and office to cut costs and increase uptime

UNIFIED PLATFORM | COLLABORATIVE DATA



SOFTWARE

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