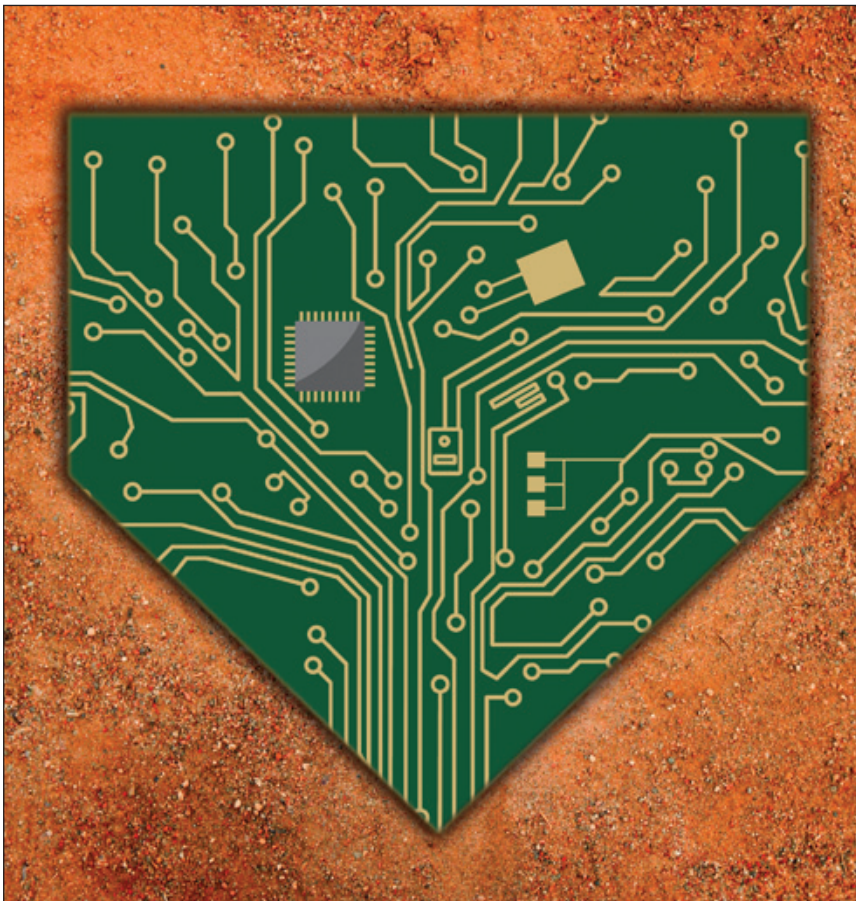




BY RICK GOTT

CONSTRUCTION MONEYBALL: *Turning Information into Power*



As portrayed in the 2011 film *Moneyball* (based on Michael Lewis' 2003 best-selling book *Moneyball: The Art of Winning an Unfair Game*), the Oakland Athletics' General Manager Billy Beane manages his baseball team by applying statistics to objectively analyze players, resulting in success despite the team's financial constraints.

Contractors that manage and measure their projects, equipment, personnel, and timelines by turning information into power can also build success. In order to do more with less and still achieve operational efficiency, contractors need accurate and real-time financial and project information.

That's why Enterprise Resource Planning (ERP) solutions have become a mainstay of the industry. However, even the most powerful, reliable, and feature-rich ERP systems are ineffective if contractors cannot access the wealth of data these systems house.

Deriving value from an ERP system means driving information into the hands of the people who need it – when and where they need it – in real time. Because different people at different levels of an organization have a wide range of information needs, contractors must rely heavily on ERP business intelligence (BI) applications and analytics.

With easy-to-read dashboards; in-depth customized reporting; and forecasting, budgeting, and planning applications, BI tools can help contractors understand how the company is performing by identifying trends and bringing critical data points to the forefront.

Let's take a look at how BI applications are successfully being used by three different functions within a company: financial management, HR management, and project management.

Real-time information input, access, and sharing allow CFMs to know what is going on within the company. Access to the facts not only results in good planning, but also the ability to quickly adjust and keep projects moving on time and on budget.

FINANCIAL MANAGEMENT

Cash is king, and the timing and amount of cash flow in and out of a company is a critical day-to-day metric.

In order to ensure profitability, construction financial managers (CFMs) need to know their companies' cash flow from the current fiscal quarter down to the daily receipts, including cash position by job, who owes the company and who the company owes, and the amounts and timing of cash flow. Profitability is also paramount, and must be managed at the job level, business unit or division, and across the enterprise.

BI applications can help monitor actual running job costs as they compare to project budgets, including pending change orders and outstanding billings. Knowledge of equipment and labor cost and utilization can help determine the appropriate time to maintain, dispose of, or acquire new equipment.

BI applications also provide such information as original contract summary, planned profit, contract analysis based on change orders and contract summary, and expected profit based on input from the field. They also provide instant access to regulatory data for compliance requirements and risk management purposes.

With their liabilities in check, CFMs can focus on big-picture objectives for the company, including upcoming contracts and anticipated profitability, as well as such key performance indicators (KPIs) as debt-to-equity and debt-to-income metrics and ratios.

Commonly Used KPIs for Financial Management

- Current ratio
- Total liabilities
- Total funded debt/Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)
- Revenue-to-equity
- Debt-to-equity

- Debt-to-income
- Revenue/operating profit
- Contract bookings
- Backlog
- Backlog depletion level
- Sales pipeline

HR MANAGEMENT

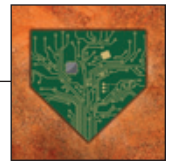
Projects are only as efficient as the people who run them, and effective HR management is critical for every construction company. By providing real-time access to data that drives decisions and deadlines, ERP solutions can help employees be more productive in the field. But, managing off-site personnel can be just as important when it comes to a project's success.

HR management can begin with storing applicant and candidate information in the ERP system over the course of one or multiple projects, so managers have intimate knowledge of an individual's background, work history, and skill set. BI tools can also streamline hiring and rehiring processes, facilitate benefits administration, and even optimize performance management.

BI applications can also decrease the time and resource burden on the home office. Workers in the field can log in remotely to manage their information, change addresses and contact data, view pay stubs, and even request copies of W2s. By automating the self-service process, information remains accurate and up-to-date.

Suggested KPIs for HR Management

- Employees by department
- Labor cost by employee
- Safe hours
- Employee by state
- Revenue per employee



- Margin by employee
- Profit by employee

PROJECT MANAGEMENT

BI tools provide PMs critical insight to help ensure their jobs remain profitable. They can rely on real-time data to manage people toward task deadlines; ensure materials are sourced, purchased, and delivered on time; and schedule preventive maintenance to keep hard assets in the field optimized and performing as expected.

Such critical information as the most and least profitable jobs and summary cash position per job with drill-down capability can be made easily available with BI applications. When detailed job analysis is necessary, a PM can be one click away from the job status by bringing the financial and field data together.

PMs can also view the financial and field data all at once, bringing together the most accurate Estimated Cost at Completion (ECAC) projections and margin profitability analysis.

BI tools can help PMs automate the maintenance of a safe jobsite so they can focus on Requests for Information, project plans, and submittals; conduct more effective negotiations; and deliver more efficient, high-touch customer service.

Sample KPIs for Project Management

- Hours earned
- Safe hours
- Productivity
- A/R aging
- Revenue per employee

KEEP YOUR EYE ON THE CONSTRUCTION MONEYBALL

Today, data is as essential for construction companies as heavy equipment. The ability to access information is critical for performance, and today's BI tools can unlock information that was once trapped in standalone construction accounting software, static in spreadsheets, or lost on scraps of paper.

Dynamic and flexible BI solutions are becoming the new tools of the construction trade and act like a living, breathing jobsite, enabling massive amounts of data to be used daily across departments and by different users within the organization with no limit to the depth of analysis or access time and point.

Real-time information input, access, and sharing allow CFMs to know what is going on within the company. Access to the facts not only results in good planning, but also the ability to quickly adjust and keep projects moving on time and on budget. ■

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Prior to joining Computer Guidance, Rick worked at Kinning & Reil, Inc., where he served as department manager.

Rick graduated from Northeast Nebraska College with a BA in Liberal Arts. He also received training in computer science at Northeast Technical College.

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For Your Owner

It's not just CFMs who want to know if the company is growing and profitable. In the information era, ERP solutions help expedite processes and empower personnel, and they should start at the top and stretch into every corner of the organization.

BI applications allow an owner to study cash position information overall by job and variances based on ECAC, as well as create summaries with job information.

In addition, cash flow data – from how much is required to operate the business to how much is available for potential equity distribution – is only one click away. Consolidated financial statements are easily accessible for use within the company or externally to satisfy banks, bonding companies, lenders, investors, and customers.

These key metrics have deep meaning to owners, and the most successful in the industry will demand 24/7 access to information regarding the health of the organization, its divisions, and even its individual projects.