

Construction Metrics That Really Matter

HOW TO LEVERAGE CONSTRUCTION METRICS AND KPIS FOR PROFITABILITY AND LONG-TERM GROWTH

Long-term construction profitability requires a methodical approach based on timely, accurate, and complete information. Focusing on financials as the primary indicator of project and company success may be easy. But large, complex projects take a long time to complete and involve many factors that also demand scrutiny. Technology that measures and reports on complete and wide-ranging construction metrics will propel businesses into one profitable project after another.

Construction leaders know the importance of metrics to drive better decisions, improve operations, reduce risk, and leverage growth opportunities. But when construction businesses do not know which measurements are important, it leads to information overload. Incomplete, untimely, or error-prone data make it challenging to determine project successes and failures, promote customer relationships, gauge employee engagement, and improve safety and productivity.

This eBook describes the importance of tracking key performance indicators, diverse metric types, and common mistakes construction executives make. Learn which metrics to monitor for improved productivity with actionable data to drive organizational growth and efficiency.

GETTING STARTED WITH CONSTRUCTION METRICS



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Use Metrics to Improve Construction Operations

Every construction company measures metrics to gauge success levels. Construction leaders have a multitude of KPIs to watch, considering the sheer number of parameters within each project. This can include profit analysis, cash management, schedules, and productivity on a larger scale. Each point has supporting metrics, such as change orders and Requests for Information (RFIs), subcontractor management, safety, and compliance.

Using metrics provides benefits such as efficiency of operations, competitive positioning, alignment of resources, increased profits, reduced risks, and better decision-making. Cloud-based technology empowers leaders with data access anywhere at any time.

“With the implementation of Acumatica, our focus has been able to shift from the actual manual putting together of the WIP reporting to tracking KPIs and things that are more meaningful to the business.”

– CASSANDRA MOORE, Director of Accounting & Finance,
Alpha Insulation and Waterproofing

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PROFITABILITY

Profit margins vary depending on construction market segments. Monitor industry ups and downs and how they relate to business success. React to price fluctuations and adjust bids and budgets to remain profitable. Identify inefficiencies that could cause projects to go over budget.

DECISION-MAKING

Better decision-making starts with a solid view of the health of the entire construction business. Strategic planning can only happen with the ability to drill down into metrics like subcontractor crew productivity, retainage, and change orders. Role-based security protects access to sensitive company information while giving people the data they need to perform their jobs.

EFFICIENCY

Construction project efficiency is paramount to a company's success. Leaders capture benchmarks for estimate accuracy, team productivity, project quality, and safety to ensure efficiency standards are met. Once established, these metrics are monitored for changes over time. This tracking helps construction leaders understand where

there is room for improvement, spot problems, and take corrective measures before they affect profits.

COMPETITIVENESS

Winning the contract is only the beginning for companies competing for business. Clients expect the companies they hire to follow timelines and quality standards as the project progresses. Construction metrics enable businesses to understand strengths and weaknesses. These views help leaders adjust to become more competitive and win more work.

REDUCED RISK

Key performance indicators help predict and avoid risks during a construction project. Watch KPIs for compliance and safety violations. Track upcoming compliance and safety deadlines to prevent work stoppages and fines.

ALIGNMENT

It is up to construction leadership to establish a culture that drives alignment with metrics throughout the organization. Each department should set goals and standards that align with those larger organizational metrics.



Avoid These Common Metrics Mistakes

Measuring performance only works with accurate, complete, and timely data. Unfortunately, many construction leaders only focus on the past, or lagging indicators. It is sound practice to monitor leading indicators proactively before problems erupt. Another common mistake occurs when construction leaders get bogged down with internal issues without comparing themselves against industry peers.

BAD DATA

You must collect accurate, complete, and timely data to drive intelligent business decisions. Inaccurate and out-of-date information results in poor choices, unhappy customers, and missed business opportunities.

LACK OF STRATEGIC ALIGNMENT

What is your company's mission statement? This is a crucial question to answer before you establish key performance indicators. When goals are set by construction leadership, the entire company can tailor the KPIs they watch with those points as drivers for success.

LAGGING VS. LEADING INDICATORS

Lagging indicators examine what has already happened. When leaders only look at metrics in the past, it is difficult to plan for the future. Both lagging and leading indicators help monitor construction metrics and proactively resolve issues.

MISSING PEER BENCHMARKS

Understanding your competitors and their successes leads to growth within your organization. Use the CFMA Benchmarker tool to measure your performance against industry peers. Submit your financial data for inclusion in their annual survey.



Metric Types

Use descriptive analytics to identify lagging indicators to understand what happened. Expand into diagnostic analytics to determine why things happened and predictive analytics to recognize when they might happen again. Prescriptive analytics help to avoid issues before they occur. Advances in technology have created a fifth metric category—cognitive analytics—where artificial intelligence with machine learning improves metrics and automates procedures to mitigate issues without human intervention.

DESCRIPTIVE

The term descriptive analytics is commonly used for lagging or historical indicators. This is because they help us analyze events and data in the past. Descriptive analytics provide a foundation for other types of metrics.

DIAGNOSTIC

Diagnostic metrics help contractors to understand why something happened. They are often based on descriptive analytics collected over time with the help of artificial intelligence to spot anomalies and discover how interrelated processes impact each other.

PREDICTIVE

Predictive KPIs use descriptive and diagnostic metrics to identify the likelihood of future performance. Examples include equipment breakdown forecasts or customer bankruptcy predictions that may result in excessive bad debt write-offs.

PRESCRIPTIVE

Prescriptive analytics combines descriptive, diagnostic, and predictive metrics to suggest how to prevent issues from occurring before they happen. They often rely on mathematical modeling and business rules.



Strategic Metrics Everyone in Construction Should Consider

There are thousands of financial, compliance, safety, and project metrics that construction companies monitor to drive operational improvements. But what are the most critical metrics that everyone should consider? Below are recommendations for key performance indicators that successful construction business leaders need to monitor.

FINANCIAL

Net Income: A company's profits are net income after subtracting taxes and expenses. Follow the numbers over time to get insights into your financial performance and plan future decisions around these strengths and weaknesses.



Cash Position: Collecting unpaid invoices is an ongoing challenge for construction companies. An inability to collect burdens your ability to pay subcontractors and suppliers. Manage AR and AP data to avoid project delays and see when to bid on more projects.

Bank Balance: Aggregate financial data to track trends and avoid bank fees and penalties. Connect all stakeholders to see a holistic view of the company's health.

Project Budgets: Track budgets, payroll, invoices, and billing to see cash flow and give everyone in the field and office project budget updates. Predict industry trends and fluctuations in material prices to react with agility.

Project Win Rates: Your sales pipeline is a leading indicator of future revenue and demand. Monitor win rates to understand why you won or lost a bid.

PROJECT PERFORMANCE

Project Revenue: Construction projects run on slim profit margins. As the inevitable RFIs, change requests, and change orders filter in during a project, the budget must be adjusted to reflect those changes.



Project Timelines: Access to KPIs gives visibility into planned and unplanned costs and changes that may impact the project's milestones and timelines.

Worker Productivity: Compare budgeted hours with actual hours on a project after completion. Adjust future bids to prevent labor costs from cutting into the profit margin.

Compliance Metrics: In conjunction with safety metrics, this data measures how your compliance teams perform on the job site. Quantify data showing a project's performance according to compliance standards.

Material Margins: Construction material prices are constantly in a state of flux. Leaders must leverage price decreases and react to increases to stay within budget.

SAFETY

Incident Rates: Data that tracks incidents, injuries, and near misses helps prevent and lower the number of future incidents. This is an OSHA rate based on logs contractors are required to keep. Contractors will watch for trends in the data to determine causes and preventative measures.



Lost Time: Employees and employers lose when an injury prevents someone from working. But safety violations on the job site can also derail a project timeline. Leaders track these numbers to create a safer and more productive work environment.

QUALITY

Downtime: This measures cost and time when factors like weather, equipment malfunctions, or material shortages disrupt the work schedule.



Rework Costs: Measure the cost of redoing work due to mistakes made from not following the plans correctly or performing wrong or subpar work.

Customer Satisfaction: Gather data from customers with questions and surveys about their overall satisfaction. This includes information about quality, deadlines, and communication with the teams.



Align Strategic Corporate Goals with Departmental Metrics

Department managers regularly review metrics with executive leadership to ensure that the KPIs they are measuring do not conflict with corporate goals. Document the metrics you are watching and specify why you measure the results, how the data is collected, and what goals you expect to achieve. Below is a list of construction metrics for each area of your business. Select metrics that are easy to measure and impact positive organizational change.

“Our stakeholders and project managers in the field have access to reporting data in real-time, and that has been huge for us.”

– AASHA CUNNINGHAM, Director of Accounting & Administration,
Phoenix Renovation & Restoration

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FINANCIAL

- Project Income/Expenses
- Cash Flow
- Days Sales Outstanding
- Aged Accounts Receivable / Accounts Payable
- Working Capital
- Return on Assets
- Debt to Equity Ratios
- Project Budget Accuracy

HUMAN RESOURCES

- Recruitment Success Rates
- Personnel Retention/Turnover
- Skills and Training
- Employee Engagement/Satisfaction

SALES

- Pipeline Health
- Opportunities
- Bid to Win Rate
- Customer Satisfaction
- Lost Jobs

BID MANAGEMENT

- Estimate Time to Completion
- Bid Win-Loss Rates
- Estimate Accuracy

EQUIPMENT

- Rental Costs
- Maintenance and Safety Records
- Inventory Allocation

MATERIAL PROCUREMENT

- Material Costs
- Inventory vs. Drop Shipments
- Cost Overruns vs. Budget
- Change Orders/RFIs

JOB SITE OPERATIONS

- WIP Reporting
- Subcontractor Management
- Equipment Allocation
- Safety Incidents
- Project Compliance
- Change Orders/RFIs
- Job Site Downtime
- Project Timeline Accuracy

FIELD SERVICE

- Dispatcher Success Rates
- Technician Travel Time
- Service Call Efficiency
- Appointment Scheduling

QUALITY

- Cost of Poor Quality
- Product Defects and Reworks
- Quality Audits
- Punchlist Completion Time



Technology for Improved Metrics Management

The easy part is to take the first step by defining metrics and key performance indicators. The tricky part is collecting and presenting the data meaningfully to stakeholders. Manual data manipulation and complicated spreadsheet analysis are error-prone and time-consuming. As a result, contractors need specialized ERP applications and connected business intelligence to streamline data collection with automated alerts or notifications. Modern cloud ERP applications like Acumatica provide construction business leaders with a foundation to combine data from multiple systems with configurable inquiries, tailored reports, actionable role-based dashboards, and dimensional data analysis to ensure data integrity and timeliness.

“My Acumatica executive dashboard is my go-to. It has all my metrics with AR, build-out WIP, invoicing for the week, billable hours, project income and expense. Those are the things I want to see all the time, every day.”

– REBECCA OGLE, Chief Financial Officer,
Safety Management Group

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DATA COLLECTION

Automate data collection to improve the accuracy of your data. Configure imports from external apps for comprehensive and timely analysis.

Optical character recognition (OCR) for scanned documents or barcode scanning for warehouse and manufacturing transactions also elevates data quality.

Connect customers and vendors via online customer portals to facilitate collaboration and ensure one central location for all data. Capture all project data from the field with Acumatica’s mobile application.

REPORTS AND INQUIRIES

ERP systems track all company transactions, such as accounting, project management, and customer communications. Reporting functions access the raw information from the ERP database.



Acumatica Construction Edition has a complete set of actionable reports and generic inquiries that can be used out-of-the-box to access real-time data. These are easily tailored, and new reports can be created using Acumatica’s Report Designer without coding experience.

An Acumatica generic Inquiry is a tool that gives users the ability to pull data from the Acumatica ERP database and display it in a customizable form. A generic inquiry can serve as a base for dashboard widgets, pivot tables, or an entry point for data entry.

With Reporting and Generic Inquiries, you can:

- Schedule reports to run as needed
- Generate signed PDF documents
- Customize reports with your branding
- Create data views with filters and formatting



“Navigation is just a click of a button and information is now all in one place. I don’t need to change applications to approve different items. Because of that, I’m less likely to have something fall through the cracks or drop the ball on something.”

– BRUCE YOUNG, President & Co-Founder,
Curran Young Construction

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DASHBOARDS



Customized role-based dashboards are a convenient way to display essential data. With Acumatica ERP dashboards, you can monitor current financial, operational, and organizational information and analyze real-time trends and KPIs related to your job. Manage complex data through live dashboard widgets with flexible visualizations, including:

- Custom inquiries
- Charts and Gauges (line, column, bar, etc.)
- Data tables
- Data from external sources
- Power BI tiles
- Key Performance Indicators
- Shortcuts to forms, reports, and dashboards

Live dashboards with drilldowns make it easy to view job-specific data in greater detail. Every Acumatica dashboard is mobile-ready and compatible with any web-enabled device, giving users full access from anywhere they work.

AI & MACHINE LEARNING

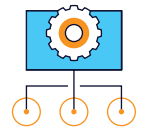


Artificial intelligence with machine learning makes improving data accuracy for metrics easier than ever. Modern ERP systems like Acumatica embed artificial intelligence with machine learning into the core application platform. Use AI to

streamline accounts payable, expense matching, bank reconciliation, and other business processes.

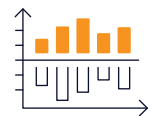
Machine learning enables the system to improve on data collection and processing tasks. For example, you can “teach” Acumatica to recognize expenses from business supply companies as office supplies, automatically coded to the corresponding general ledger account.

NOTIFICATIONS WORKFLOW



Generic Inquiries are used with Business Events to push notifications to management and alerting them to potential issues so they can take proactive actions in real-time. For example, set up alerts about compliance documents set to expire, project cost overruns, or change requests that need approval so stakeholders can take proactive actions in real time. In addition, custom workflows can be triggered to send alerts and notifications to employees, customers, or vendors.

POWER BI ANALYTICS



Leverage Acumatica’s business intelligence and analytic tools, such as Microsoft Power BI, to aggregate data from multiple sources. Easily extract actionable information for strategic decision-making and present it visually to stakeholders.

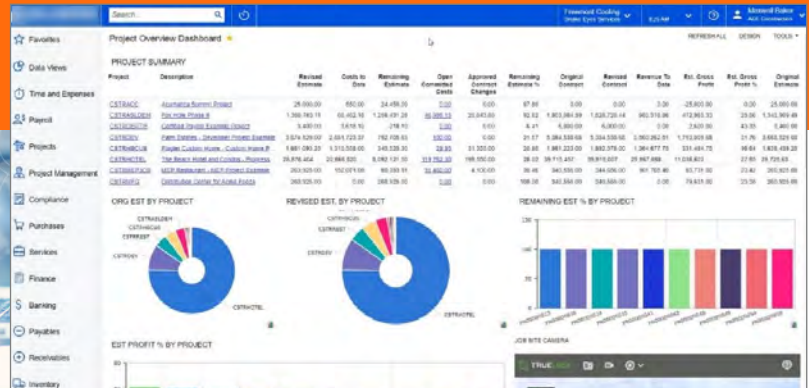
Combine data from Acumatica with external data, such as CRM applications, remote time entry, and Human Capital Management solutions, to gain new insights into operations.

Discover Why Construction Leaders Rely on Acumatica for Their Success

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Acumatica Analytic Applications

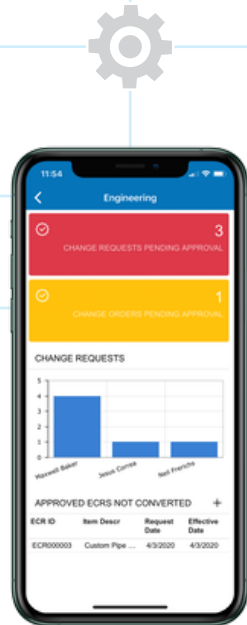


Role Based Dashboards

Interactive Reports

Configurable Generic Inquiries

Native Mobile Apps



DAILY FIELD REPORT Company: Firewood Cooling Page: 2 of 4
User: Maxwell Baker Date: 11/11 AM

PROJECT ISSUES

Project Issue ID	Summary	Status	Priority	Project Task	Project Issue Type	Last Modified By	Last Modification Date
IS-00007	Heavy Duty Paving Change - See Plans	Open	High	DEMOLITION	Civil	admin-Maxwell Baker	6/17 PM

PHOTO LOGS

Photo Log ID	Status	Date	Project Task	Description	Created By	Last Modified By	Last Modification Date
PL-00005	N/A		Fill dirt		admin-Maxwell Baker	admin-Maxwell Baker	10:25 AM
PL-00011	N/A				admin-Maxwell Baker	admin-Maxwell Baker	5:17 AM

Discover a Better Way to Manage Metrics with a Comprehensive ERP Application Built on a Future-Proof Cloud Platform

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Achieve Actionable Business Insights

Metrics are meaningless without action. Therefore, every company must develop plans to continuously monitor and improve metrics with documented procedures to act on insights gained through key performance indicators. Measures should include training and corrective actions with project management.

“With Acumatica, we have a single source of truth that’s actionable, which cuts down on errors, cuts down on confusion and ultimately makes us more profitable.”

– SHEL WAGGENER, President,
American Asphalt Repair & Resurfacing

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DOCUMENTATION

Define each metric and how it is obtained. Identify stakeholders who are responsible for managing each metric and subsequent corrective actions. Establish timeframes to reevaluate metrics. The metrics you watch today may be irrelevant for a project the following year. Modern ERP applications like Acumatica include embedded wikis for documenting metrics. Wikis are an ideal platform for metrics management as they link seamlessly to ERP screens and tasks. Further, wikis support attachments such as documents or images.

TRAINING

Employee training is crucial to ensure that existing and new employees understand the importance of metrics and their role in data collection, assessment, and corrective actions. Leverage embedded wikis as training aids for employees, create training videos on wiki pages and generate recurring training tasks with CRM to ensure that employees frequently review metric policies and procedures.

BUSINESS EVENTS

Use business events to monitor events in the Acumatica system as users perform business processes. These actions, data changes, or conditions require attention. As a result, setting up business event notifications helps ensure that nothing is missed, avoiding the need to spend time monitoring them manually. Leverage ERP workflows to manage corrective actions and trigger business events to create and assign tasks for users in the system.

CORRECTIVE ACTIONS

When metrics reveal problems, business leaders must have a documented corrective action plan. Embedded CRM is useful for logging cases or reported problems, documenting actions, and assigning user corrective action tasks. Business workflows facilitate collaboration across departments. For example, financial metrics may indicate project productivity issues. Corrective measures may involve corrective actions between project managers and crews on the job site.

ELEVATE CONSTRUCTION PERFORMANCE WITH ACUMATICA REPORTING

Organizations cannot afford to prepare construction reports in a reactive way. Stakeholders establish high standards for project performance to ensure that projects are delivered on time and within budget.

[Watch an overview of Acumatica’s powerful reporting features.](#)





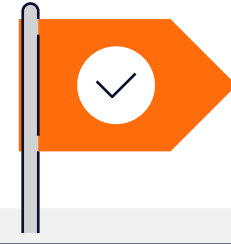
Make Construction Metrics Easy with Acumatica

Construction leaders need real-time business insights to drive growth and innovation. But many construction companies depend on disconnected systems and legacy ERP applications to connect information across disparate platforms, creating data silos.

Modern cloud applications like Acumatica empowers construction executives and departmental managers with real-time insights through role-based dashboards, live reports, and inquiries with drilldowns. Acumatica's business intelligence, analytics, and automated business events and workflows empower leaders with tools to manage their business objectives efficiently.

Built on a future-proof cloud platform with native artificial intelligence and machine learning. Acumatica provides an unparalleled construction platform with robust financials, native customer relationship management, and powerful business intelligence applications.

Boost sales, maximize resources, and improve profits with best-in-class applications for comprehensive data collection across all areas of the construction project lifecycle. Acumatica Construction Edition holistically supports general and specialty contractors, home builders, and land developers' unique needs, helping businesses grow through agility.



“We’re relying on Acumatica Construction Edition to help us be more efficient, more productive, and allow us to do more with less over the coming months and years.”

– SEAN BARNETT
CHIEF FINANCIAL OFFICER
SPOHN ASSOCIATES

ABOUT ACUMATICA

Acumatica Cloud ERP provides the best business management solution for digitally resilient companies. Built for mobile and telework scenarios and easily integrated with the collaboration tools of your choice, Acumatica delivers flexibility, efficiency, and continuity of operations to growing small and midmarket organizations.





THE ANSWER COMPANY

About The Answer Company

Since 1994, The Answer Company has been transforming construction businesses with custom technology solutions. As the team grew, so did the construction practice, making The Answer Company the largest construction technology consultancy in Canada. Our experts combine their deep industry knowledge with a wide range of cutting-edge tech solutions to drive tangible results. From designing and deploying robust ERP systems to optimizing work flows, automating manual processes and leveraging real-time data and insights, we give our clients the power to make informed decisions, enhance productivity and employee satisfaction, and achieve sustainable growth to drive profitability.

For more info, visit: www.theanswerco.com

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