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Building a Better Construction Business with Key Performance Indicators

Every kind of construction company—general contractors, home builders, land developers, subcontractors and specialty contractors—rely on measurements to monitor business activities and performance, document successes and challenges, and help direct management decision-making. Of course, we measure a number of parameters simply to comply with mandatory accounting and reporting requirements, and smart management will incorporate those measurements into valuable intelligence.

These measurements can be used to help run the business and improve performance in new construction and tenant improvement, real estate development, custom and production home, multi-family and mixed-use, and commercial projects. Thousands of performance measurements have been defined over the years including many "common" measurements that virtually every business can use—things like profit and loss, cash flow, project commitments, and the like. In addition, specific industries have measurements that apply to their situation and needs.

There can be too much of a good thing, however. Information overload is a real problem when the important gems of intelligence are buried in masses of data. Decision-makers can easily miss the critical early warning while spending entirely too much of their valuable time buried in reports.

Among this wide array of possible measurements, each industry has a relatively small number of measures that are particularly important for monitoring the overall health of the business. Commonly called Key Performance Indicators, these measurements are often gathered together into an executive dashboard display with graphics that provide an at-a-glance picture to help executives quickly zero in on opportunities or challenges.

These dashboards offer drill-down for analysis of the details and can be adapted to provide key measurements to individual departments or functions within the organization, focused on the specific measurements that are important in their individual span of interest.

Most construction management software, sometimes called back office, construction accounting, or ERP (Enterprise Requirements Planning) systems, offer such an Executive Information System with a variety of pre-defined KPIs which the various users within the company can pull together and tweak to fit their specific situation.

We are in what might be called a golden age of business intelligence and KPIs. While the proliferation of connected sensors and smart devices, commonly referred to as the Industrial Internet of Things (IIoT), provides unprecedented visibility and control, it also multiplies the information overload problem. Fortunately, technology is also presenting solutions to that problem in the form of powerful yet user-friendly analytics and data visualization tools that are, in effect, extensions or enhancement to the Business Intelligence / Executive Information systems we've just discussed. And all of this data, analytics, and business intelligence is made practical and functional by the cloud because only cloud deployment offers the connectivity, integration, security, scalability and capacity necessary to harness all of this data and make the intelligence accessible wherever it's needed, whenever it's needed.

Types of KPIs

When we think of measurements and KPIs, we are most likely thinking about what can be called historical measurements – summaries and analyses of events and data. KPIs compile this data into usable forms that targets the specific interest of the viewer; the functional area of the business and the needs of that specific industry and activity.

Many KPIs are financial, as finance is the common language of general business management. Common financial KPIs in every industry monitor sales, costs, margins, cash flow, and asset utilization. But many more KPIs are operational measures that managers and executives use to focus in on specific activities and interests relative to schedules, materials, completion status, backlog, change orders, and more. All of these kinds of KPIs can be classified as historical measurements since they focus on analysis of data from activities that have already occurred. Of course we can speculate and try to project how things will play out in the future, and we do that, but that is not built into the structure of the measurements.

Historical KPIs can be set up with alerts and warnings that monitor and detect exceptions, calling attention to the issue through graphic characteristics like traffic lights (green = all okay; yellow = an indicator that something is not quite optimum; red = cause for concern) or "push" alert messages sent via email or text.

Predictive KPIs use what you can think of as leading indicators to project performance expectations into the future. Management can use these projections to steer decisions and actions aimed at avoiding undesirable outcomes or enhancing desirable results. Predictive KPIs for the construction industry may use bid activity to project cash flow and resource utilization, track billings and purchases to estimate future project progress, or harness external data like economic trends and demographics to predict future business prospects.

KPIs for the construction industry

Here are some KPIs that are particularly important in construction:

Cash Management

KPIs can bring together bank balances, billings and invoices into a comprehensive view of cash flow that you need to make contractual commitments, meet payroll, and manage the business. Acumatica Construction Edition responds in real time as business conditions change, updating your cash position and providing immediate access to the details behind it.

*Control project costs and improve productivity.*

Project Management

KPIs include expenses vs. budget, to track projects with drill-down to active and completed tasks, time by employee, and project profitability. Drill down to see budget/actual, change orders, subcontractor commitments, compliance issues and payroll details.
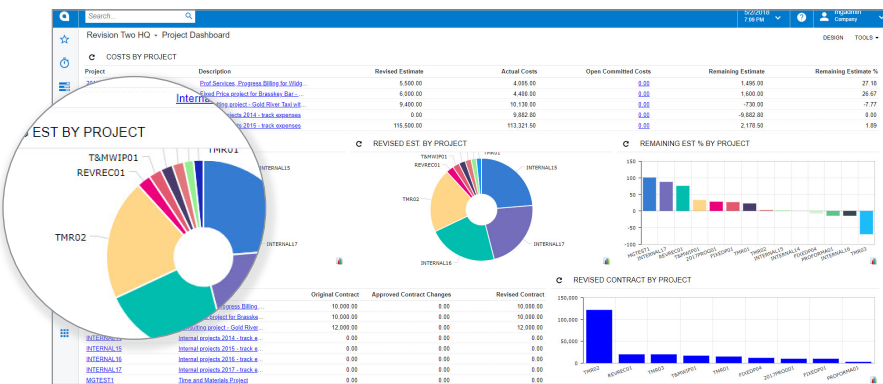
Easily manage projects and budgets.

Project Tracking

KPIs track billing and revenue recognition by cost code, contract line item and other details. Project cost budget status compares actual and committed costs by task/sub-job.
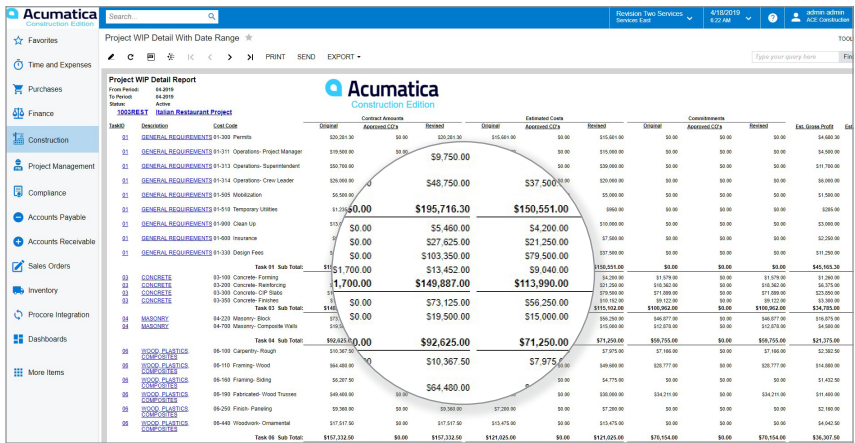
See detailed view of contract amounts, estimated costs, commitments and estimated gross profit by project.

KPIs will vary for each individual company to reflect their primary objectives, challenges and priorities at any given time. Therefore a KPI system must be both flexible and dynamic to enable the organization to define the right KPIs and change or replace them as business needs change.

All KPIs must support drill-down so the user can start with a general indication and click-through to successive levels of detail to be able to identify the reasons behind each indication or alert and formulate an appropriate action plan to improve the performance.

Acumatica's Construction Edition KPIs are built with reporting, dashboards and data analytics using Microsoft Power BI to provide powerful tools for maintaining the right KPIs for your business. Harnessing the power of Excel, Office 365 and search and inquiry capabilities of the Acumatica system delivers the best of BI tools in a truly usable and functional package to empower managers to monitor the health and prospects of their business.

Profit Analysis

KPIs track original and revised margin/markup and estimates, change orders and revised amounts. Drill down to analyze variances by line item, cost code, subcontractor and material. Catch deviations sooner and take preventive action to bring projects back in line.
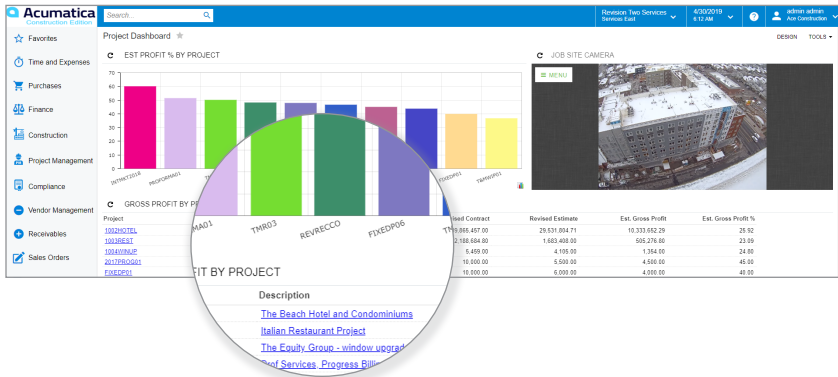
Real time access to job costs and profitability.
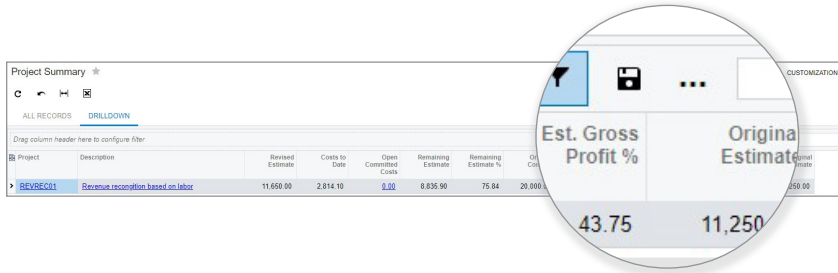
Track project profit with drill down capabilities to review line items by cost, revenue and profit.

Getting started with KPIs

Your Executive Information System will come with a selection of pre-defined KPIs 'right out of the box', as they say, and that's not a bad place to start. But consider these pre-defined KPIs to be training wheels that are helpful in letting you find your balance but are not intended for long-term use. Familiarize yourself with how these KPIs work, how to manage the alerts and warnings, and how to change them to make them more relevant and more useful in your business.

> **Define a small number of high-impact KPIs (for an individual user)—no more than 8 or 10—aimed at the critical factors for that department or project.**

As soon as you are comfortable, start to identify new KPIs that focus on the major functions of your business. The goal is to replace the training wheels with high-performance tires that are just right for you—whether they are racing slicks, mud and snow tires, those nubby mountain bike tires, or efficient highway cruisers.

Many companies getting started with KPIs will become excited by the new insights and visibility and keep defining new ways to look at the business. This is a good thing, of course, but often leads to a proliferation of KPIs that can quickly become counterproductive… again, too much of a good thing. Best practice is to have a relatively small number of high-impact KPIs (for an individual user)—no more than 8 or 10—aimed at the critical factors for that business, department, project or area of interest. A flexible Business Intelligence system will support drill-down for easy analysis and the easy creation of new ad-hoc measurements for those times when an unusual situation or new idea mandate a different view.

KPI development and use must be done with the involvement and cooperation of the ultimate users of the KPIs – never as a secret project that presents the finished product to the unprepared users as a done deal. The users must understand the system and the measurements and tailor them to their specific needs. This is the only way to build a personal connection—ownership—in the KPIs that is required for them to be effective.

Make sure that the KPIs are more than just window dressing. They must drive decisions and actions. If they are believed, trusted, and relevant, appropriate decisions and actions will follow. Be sure that incentives line up with measurements; people respond to the way they are measured only when incentives are properly aligned.

Systematizing the KPI process

Use your initial experience to refine and expand your KPIs. In fact, regular KPI 'maintenance' should be a part of your overall management strategy. Your business continually changes. Certainly, customer preferences and markets change. The advance of technology is having an impact on every business, and static measurement systems inevitably become less relevant and useful if not maintained.

The good news is that, today's KPI dashboards are truly flexible, adaptable, and user-driven. There's no need to draw up a detailed description of the changes and beg IT to recode the reports. User-friendly tools make changes and new reports simple and easy, putting the user firmly in the driver's seat. Acumatica Construction Edition is cloud-based so the information is readily available on any device, at any time, from anywhere. And Acumatica's cloud-based applications are built for real-time update and a high level of flexibility so your KPIs remain dynamic and responsive in every sense of the word.

Based on a broad system like Acumatica Construction Edition, linked to other data sources such as demographics, economic trends, weather, etc., your KPI dashboard is the control tower for your business. You gather data from current projects, bids and sales activities, and outside factors to build a dynamic and valuable view of every aspect of your business; then maintain that view to focus on the most important factors for your continued success. Acumatica makes it easy to collect, distribute and communicate that intelligence and information.

Conclusion / Recap

KPIs may have originated in large, complex organizations but their value is universally recognized, and technology has made powerful, flexible measurement systems with KPI capability both affordable and user-driven so smaller organizations can benefit as well.

Many traditional KPIs are historical in nature, focused on summarization, presentation, and analysis of data commonly found in construction management systems. User-managed alerts and alarms highlight activities and business areas that need attention, relieving busy managers from the need to pore over endless reports and screens. Built-in tools enable fast, intensive analysis to get to the heart of the problem and make sound, informed decisions.

KPIs are great for uncovering conditions or actions that are adversely affect operations (problems) so they can be addressed quickly before the losses pile up. KPIs are also good for identifying things that are doing particularly well, exceeding expectations, so that management can find out what is behind the improvement and how to replicate it throughout the organization.

Predictive KPIs take it all a step further by using current patterns and external information to project operational results like revenue, profit, margin, workload, etc. in the future. Using these projections, management can be proactive in adjusting operations to product better results and avoid undesirable outcomes.

Keep in mind that KPIs can and should routinely change. For example, when a company has critical issues in one area, it can create appropriate KPIs to monitor the situation and track the effectiveness of remedial actions. Once the situation has been corrected and stabilized, the KPI becomes less important and should be modified or replaced by one that tracks the next critical management issue. Note that this is an important procedure for limiting the growth of KPIs to the point where the forest obscures you view of the trees. Remember that the ideal number of KPIs to watch on a regular basis (daily?) is 8 to 10.

See KPIs in Action

If you're considering using construction KPIs in your business, the best way to get started is to get started. Too many companies put KPIs on the back burner. As a result, they miss out on valuable insights that can help them drive their business forward. One way to ease your transition into a KPI-driven business is to implement a cloud-based construction software platform that has built-in KPI functionality. That way, you'll avoid the burden of purchasing hardware, implementing at your office, and maintaining your system over time. With a cloud-based system, you simply pay a subscription fee and use the software through a browser.

Acumatica is the world's fastest growing provider of cloud ERP, with the industry's highest customer satisfaction rating trusted by companies across diverse industries. Acumatica is easy-to-use, full-featured and mobile software. With unlimited users, everyone can have a real-time view of your business anytime, anywhere.