

The Construction Executive's Interactive Guide to Business Visibility

PART 3: ANALYZING



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DON'T JUST SEE IT.

UNDERSTAND IT.

In Parts 1-2 of this series, we explored **Reporting**, which can tell your organization “what already happened,” and **Monitoring**, which describes “what’s happening right now.” Alone these two types of business visibility help you understand how your organization, your people, and your projects are performing. However, to truly shape the vision for your construction firm and make continuous improvements, it’s essential to use business analytics to understand “why it happened.”

In this interactive guide, we will explore why analyzing your construction business is important, common obstacles to adopting business analytics, and the related technologies organizations should look to implement. In addition, we will provide tips and best practices you can implement right away to make incremental improvements in the way you shape your business strategy.



THE CASE FOR ANALYTICS

Many construction executives and senior leaders are skeptical of data-driven decision making. After all, how can analytics possibly offer better answers to business questions, such as which types of projects should our company avoid, than you can? Especially if you have 20-30 years of experience in the field.

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Yet no matter what industry or line of work you look at, it's been proven that analytics-based decisions can help organizations gain a competitive edge.
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To illustrate the point, take a look at the sports world. For more than 100 years, professional baseball was guided by the core belief that to field a winning team you needed the strongest hitters and hardest throwers. Typically teams such as the Yankees, those with the largest payrolls, would dominate the competition. Then in the early 2000s along came the Oakland Athletics, a squad with a tiny budget but the good sense to use analytics in new and creative ways.

The A's used rigorous statistical analysis to challenge the way scouting was done and roster decisions were made. They signed hitters who consistently got on base and focused not on flame-throwing strikeout artists but pitchers who force opposing hitters into groundball outs. They avoided stolen base attempts and bunting because they were easy outs for their opponent. As a result they were able to gain a true competitive edge and make an historic and unexpected postseason run.

Oakland's Moneyball strategy proved that the old ways of competing—methods traditionalists knew to be true—were flawed. Likewise, construction executives can also use analytics to gain a competitive advantage.

[Let's explore how.](#)

When analyzing your business, take into consideration external factors as well as internal data to provide a holistic basis for decision making and planning.

- Conduct a competitive analysis.
- Look at economic trends and forecasts such as those offered by [AGC of America](#).
- Identify the latest needs of your most valuable customers.
- Watch for changes in your market's preferences and dynamics.



IN THEIR OWN WORDS

What your peers and experts say about analytics.

“Contractors need to understand where they make or lose money by job, job type, project manager, and region. They need to align their staff to key performance indicators so they remain focused on the right business areas.”

Bruce Vanderzyde
CEO
Anterra Technology

“They (professional peer group) have all the data I have on my company, and they interview my employees anonymously. They can see things in my business that I can’t see.”

Chris R. Sheridan
President
Chris R. Sheridan & Co.

“Each job is unique, but it’s important to remember that there are many similarities in every project you undertake, and that what you learn from each job can be applied to future jobs—insight that will help you be more profitable next time.”

Leslie Shiner
Owner
The ShinerGroup

“It’s a good practice to step back at least once a year and identify which areas you want to focus on in your business. Then through an annual visibility audit make sure the processes and data are in place to measure your progress towards reaching those goals.”

Dennis Stejskal
Vice President, Product Management
Construction and Real Estate Solutions

THREE WAYS

ANALYZING

CAN HELP



1

Improve Profits

The right analysis tools can help you spot patterns and trends in your work. For example, an HVAC contractor might determine that installing a certain type of air conditioning unit for a certain type of customer in a specific region has an outsized effect on profitability. Armed with that information, the company's executives might discontinue sales of less profitable systems, step up marketing in that region, or develop new strategies.

2

Prevent Repeated Mistakes



Nothing holds back a construction firm like a mistake that's repeated project after project, year after year. This is especially true when you start looking at costs like labor, materials, equipment, and energy consumption. How much would the same bad labor decision cost a general contractor over a period of 20 years? Analyzing your operations across all projects can help you pinpoint these trouble areas and make changes.



3

Manage Workforce Better

For nearly any construction firm, nothing causes the profit and loss statement to swing one direction or the other like labor. Thus, a company that understands its workforce needs better than its competitors can gain an edge in the labor market. Analyzing productivity both at an enterprise level and down to the individual worker will help you determine what exactly needs to change in order to get the right level of productivity from your labor.

WHAT SHOULD YOU ANALYZE?

The temptation is to say “everything.” However, for most small and mid-sized construction firms, the reality is that it’s neither cost-effective nor feasible to apply analytics to every aspect of the organization.

Focus is essential.

It’s a good practice to step back at least once a year and identify which areas you want to improve in your business. Perform an annual visibility audit. Start by thinking about what you want to analyze from a competitive perspective.

Ask yourself:

- “How do we choose to compete?”
- “What distinguishes us from the competition?”
- “What information or insight would help us blow them away even more?”
- “Can we measure this and take action upon it?”

It may seem counterintuitive to focus on existing strengths instead of weaknesses but when it comes to analytics, that’s often where the payoff is biggest. (Think Walmart, which saw its supply chain as its biggest strength yet continued to analyze it, scrutinize it, and perfect it to create an epic competitive advantage.)

Establish benchmarks.

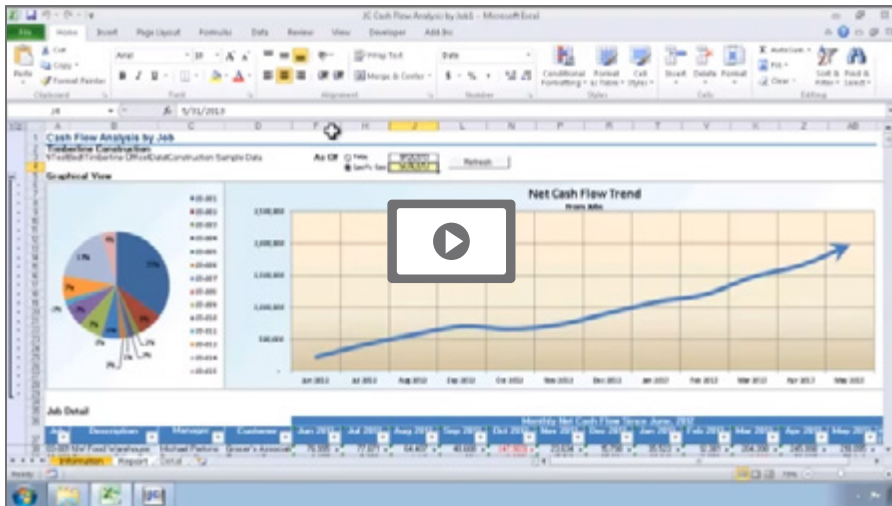
Once you have determined what areas you’d like to focus on, establish benchmarks related to your current performance and how you compare to other construction firms. Based on your business goals and benchmarks, define key performance indicators (KPIs), such as profit margins or liquidity, and determine how frequently you will monitor progress towards achieving each metric.

Three places to get benchmark data:

1. [Construction Financial Management Association \(CFMA\)](#)
2. [Construction Industry Institute \(CII\)](#)
3. Peer groups and industry exchange groups

ANALYZING CASH FLOW: THE LIFEBLOOD OF A CONSTRUCTION BUSINESS

How to get quick access to live cash-flow data:



It's no surprise, the majority of construction executives are eager to discover ways to improve their cash flow. After all, cash flow impacts all aspects of a construction project as well as the contractor's overall business health and stability.

Business analytics can help you better understand where your money is coming from, where it goes, and how to maximize it. When analyzing cash flow, you need to investigate three key elements:

- Actual cash disbursements
- Cash receipts
- Accumulated cash flow across projects and by individual projects

By closely scrutinizing your cash-flow-related data, you can significantly reduce the occurrence of negative cash flow as well as the amount of shortage.

WHAT

TECHNOLOGY

DO YOU

NEED?

Oftentimes, the biggest obstacle to adopting analytics is related to business culture, not technology. By focusing your analytics on the biggest and highest value opportunities, you can overcome many company cultural challenges and objections while refining your data and, ultimately, achieving your goals

Analyzing your business performance requires you to have high-quality data related to whatever process you are seeking to improve. Chances are your business does not lack data. However, it may suffer from a lack of integration, which prevents the information from different departments and functions from being used together. To solve for this, it is increasingly important for construction firms of all sizes to use integrated, construction-specific accounting and operations software.

Business intelligence tools are a must.

Assuming your business already uses an integrated, construction-specific software system, you will also need reporting or business intelligence tools that can extract, clean, and transform the data into a format that's meaningful for users.

New tools and technologies are emerging to make information come alive, including data visualization, process simulation, and predictive techniques. By taking advantage of these innovations, executives can quickly understand business details that would otherwise be hidden or indecipherable.

Five software features that add value to your analytics capabilities:

1 Ad-Hoc Custom Reporting

Empowers your personnel to ask their own questions of company data, without burdening IT.

2 Cross-Project Analytics

Provides details on “job demographics”—such as location, type of work, and owner—across all your projects so you can pinpoint what type of work you should focus on.

3 Spreadsheet Analysis

Enables you to import/export data to Microsoft Excel for configuring data and creating specialized and graphical reports.

4 Drill Down

Takes the user from a general or high-level view of the data to a more specific one to provide greater insight.

5 Automatic Report Scheduling

Allows essential information to be distributed to the right people on a recurring schedule in order to turn data analysis into action.

TECH TREND: BIG DATA

See how one building efficiency company is using Big Data to achieve big results.

Big Data is a term that is used to describe extreme levels of data volume, velocity, variability, and complexity that exist in today's organizations. Big Data is the by-product of the rapid rise in online transactions, machine-to-machine interactions, audio/video logs, RFID data, photos, and more. In the construction industry, technologies like Building Information Modeling (BIM) are part of the Big Data tidal wave and will intensify the need to store massive volumes of information.

Emerging technology solutions support the ability to collect this Big Data but, more importantly, provide the ability to understand and take advantage of its full value. One simple way to dip your toes in the Big Data pool is to subscribe to a service that tracks material and wage pricing trends.

FIVE REASONS

YOU SHOULD START

ANALYZING

PERFORMANCE

RIGHT NOW

1 Because today's construction environment is too complicated to make decisions based purely on intuition, gut instinct, and professional judgment.

2 Because it can help you identify problems you didn't even know you had.

3 Because your competition is likely exploring or already using analytics to discover advantages.

4 Because not every decision today can be made based on past experience and observations.

5 Because the technology is ready and more affordable than ever.

LEARN MORE ABOUT THE FIVE TYPES OF VISIBILITY EVERY CONSTRUCTION FIRM SHOULD HAVE

Read the entire five-part series on business visibility:

- 1 [Reporting](#)
- 2 [Monitoring](#)
- 3 [Analyzing](#)
- 4 [Predicting](#)
- 5 [Mobilizing](#)

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