Sage Construction and Real Estate

Achieving More Intelligent Construction Through Data Analysis

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Introduction

The construction industry has always been competitive and is even more so now, as many businesses are struggling to survive in a recovering economy.

With that increasing competitiveness comes added complexity. In order to gain an advantage in this changing environment, companies need to have the facts on hand to in order to make calculated, informed decisions.

Having information to draw constant and consistent yield from every project is key for success in any industry where exceptions can have a severe impact on profit, particularly in construction.[1] Data gleaned from operations and transactions—analyzing past performance, identifying trends in current performance, and highlighting the exceptions for action—can be manipulated into tactical information for planning, forecasting, and action.[1]

Professionals in the construction industry often have nothing to go on except their years of experience when making decisions. In the past, this "gut feeling" may have been sufficient. However, "today's fierce competition requires precision and process improvements to avoid any, if not all, risks associated with construction financial and project management."[1]

Construction companies have all the data required for these decisions—materials costs, labor needs, productivity metrics, and profitability, to name a few—but a problem arises in linking all this information, as it is often stored in disconnected software applications and databases. When decision makers cannot access important numbers and facts, the review process becomes misinformed, and the company is unable to act on the best business choices.

What is business intelligence?

Knowledge is power in every industry, and what you don't know can end up being your downfall. Business intelligence (BI) about your own company's processes and those of your competitors can determine whether you keep pace in the construction industry, shoot to the front, or fall behind.

For instance, a company with insight on a competitive construction environment may be able to foresee and plan for disruptions, be they pricing adjustments or market changes.

But what exactly does "business intelligence" mean? Business intelligence is a catchall phrase referring to the software applications that a company can use to turn its raw data into analytics, which can be used to identify potential areas for cost reductions, eliminate inefficiencies, highlight new opportunities, and help make better decisions.[2]

In addition, analyzing the information that you have at your fingertips can give a better understanding of the business as a whole and lead to greater collaboration across the enterprise. A centralized BI system creates simplified ways of sharing knowledge between departments, which will allow everyone involved in a project to use that data to improve processes.[2]

Products to assist you:

Sage 100 Contractor
(formerly Sage
Master Builder)

- Reporting Project
- Management
- Dashboard
- Custom Alerts
- Report Drill Down

**Sage 300 Construction
and Real Estate**
(formerly Sage
Timberline Office)

- Desktop
- Job Cost

Project Management

- Sage Estimating
- Explorer

1 blog.maia-intelligence.com/2010/05/17/bi-for-construction/

2 www.cio.com/article/40296/Business_Intelligence_Definition_and_Solutions

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One of the most common BI benchmarking tools employed by construction companies is the use of key performance indicators (KPIs), which measure whether the changes a business implements are actually producing positive results.[3] Regularly monitoring KPIs can help a company deliver its projects to clients efficiently and on time, within budget, without defects and safely, the group says, and often leads to reductions in project costs and shorter timelines.

Key performance indicators for construction companies

- Variance vs. budget
- Variance vs. forecast
- Percentage variance
- Incoming funds vs. invoices
- Accounts receivable ratio
- Debt ratio
- Invoice turns

- Project backlog
- Cash flow
- Over/underbilling
- Margin variance (by project)
- Labor productivity
- Working capital
- Unapproved change requests
- Committed/uncommitted costs

BI software allows companies to take a step back and look at their overall performance. This holistic view can help when considering the direction of the business or when simply deciding on whether a proposed project is the right fit. Companies can strategize to target bids that are more profitable and look at project histories to get a sense of what job types they should avoid. Analytic reports can lead to smarter operations overall.

How do you turn numbers and data into information?

A solid BI system should not only report the hard numbers associated with the construction business, it should also give context and explain both the factors that lead up to those numbers and what they mean for future actions.[2]

When setting up a BI system, it is important to realize that the information you get at the end is only as good as what you put in at the beginning. Therefore, it is critical that a company's raw data is clean, the magazine says.

It's equally important that the employees who will be using the BI software feel comfortable with it— "BI won't yield returns if users feel threatened by, or are skeptical of, the technology and refuse to use it as a result."[2] The next step in implementing a BI system is training users on how to input data and how to understand the information they get from the application.

While preparation is vital to success, companies should also act quickly and make adjustments to the system as users adapt—the demands you have of your BI system will change as your needs and your business develop and evolve. When building the database at the beginning of the project,

2   www.cio.com/article/40296/Business_Intelligence_Definition_and_Solutions

3   blog.maia-intelligence.com/2009/01/05/kpis-for-construction-industry/

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take an integrated approach so the company is not stuck with an unusable data strategy later. Before beginning, define your business objectives and the specific benefits you hope to achieve to see a return on investment. Conduct a regular check of these to benchmark your progress.

Greater visibility through software

Automating business intelligence can provide more visibility into a company's daily operations and processes, helping users achieve greater efficiency and gain a competitive edge.

Sophisticated construction-specific accounting and operations software solutions like Sage 300 Construction and Real Estate, Sage 100 Construction, and Sage 300 Trade Specialty (formerly Sage Timberline Enterprise) offer strong reporting features and come with hundreds of reporting templates, giving users the benefit of industry-tailored reports without the laborious process of drafting them from scratch. And even with the many premade reports to choose from, Sage users can also choose to design their own using report designer tools or dashboards to create customized tools that meet their companies' exact needs.

Integrated accounting and operations software solutions such as Sage 300 Construction and Real Estate, Sage 100 Construction and Sage 300 Trade Specialty provide you the data you need from all across your business. By using more than your financial and accounting data, your company can gain a holistic view on its business operations and provide more extensive input for your BI reporting.

Conclusion

Decisions can only be as good as the data on which they are based, and project managers who are using out-of-date information will not be able to fully realize the benefits of BI. Sage 300 Construction and Real Estate, Sage 100 Contractor and Sage 300 Trade Specialty software provide real-time data updates, ensuring that project stakeholders in every department never miss out on new additions of data.

A centralized system makes every department more intelligent, not only by making sure the entire enterprise has access to the information it needs, but by preventing users from being bogged down by the data they do not need.[4]

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4   www.thebusinessintelligenceguide.com/bi_tools/Dashboards/Using_Performance_Dashboards_in_Construction_Management.php

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