# Being Smart About Intelligence

There is a saying that goes, "If you're so smart, why aren't you rich?" The message here, of course, is that intelligence for its own sake is not as important as what you do with your intelligence. This is a lesson many of us learn the hard way when we leave school and enter the workforce. This is also a lesson that many companies struggle to incorporate into their business processes. The mantra, "more information is better" exerts a powerful influence on business managers. But too often there is no explicit plan for how best to manage and make use of business information.

Building Silos

The amount of data involved in construction work has been growing continuously as projects have continued to grow in complexity. The first impulse of a contractor whose business is growing and who is facing a growing pile of data is to organize this data. Move bills, receipts, and invoices into an accounting pile; move job schedules, change order requests, subcontractor contracts, plans and specs into a project management pile; and so on.

This is a rational and useful impulse. Organization of data allows contractors to employ specific software applications to help staff work more efficiently. Accounting data can be routed to accounting applications to manage payables and receivables. Project or work order data can be moved into scheduling applications and file sharing applications to help manage all the moving parts and people involved in a construction job. Personnel data can be captured in human resource management applications.
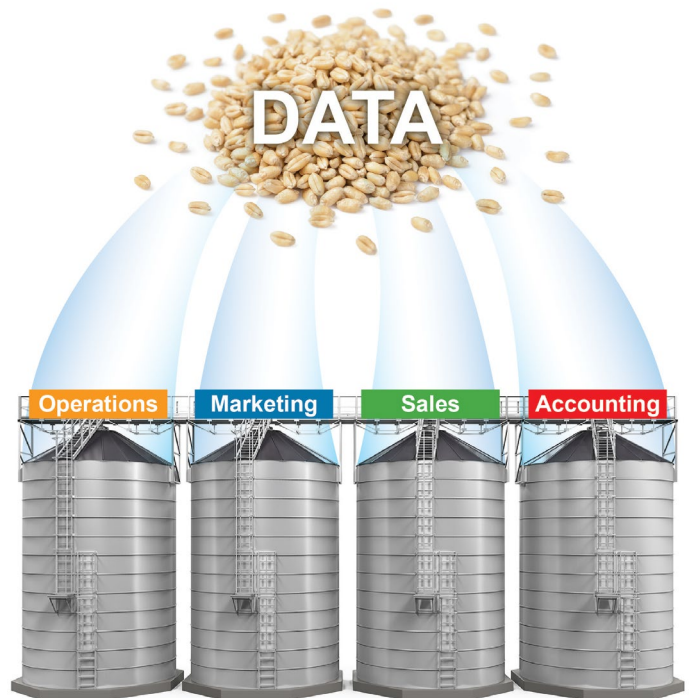
Building virtual silos of data helps companies build a better base of knowledge. Project managers can look for scheduling bottlenecks and vendor performance issues. Accounting can keep a close eye on project cash flow. Purchasing can better reconcile receivables against POs. These are examples of companies making better decisions informed by more accurate knowledge. This, however, calls to mind another saying, "A little knowledge is a dangerous thing."

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Creating Intelligence

In the world of business management, knowledge can be power. But as you electrical engineers out there know, for power to do real work, things (e.g., voltage and current) have to be in phase—or close to it. In business, this translates to making sure that information and action are in sync—that information drives action which creates new information to drive the next action, and so on. In a model where information for different functional groups is stored and processed in separate silos, this is far from guaranteed.
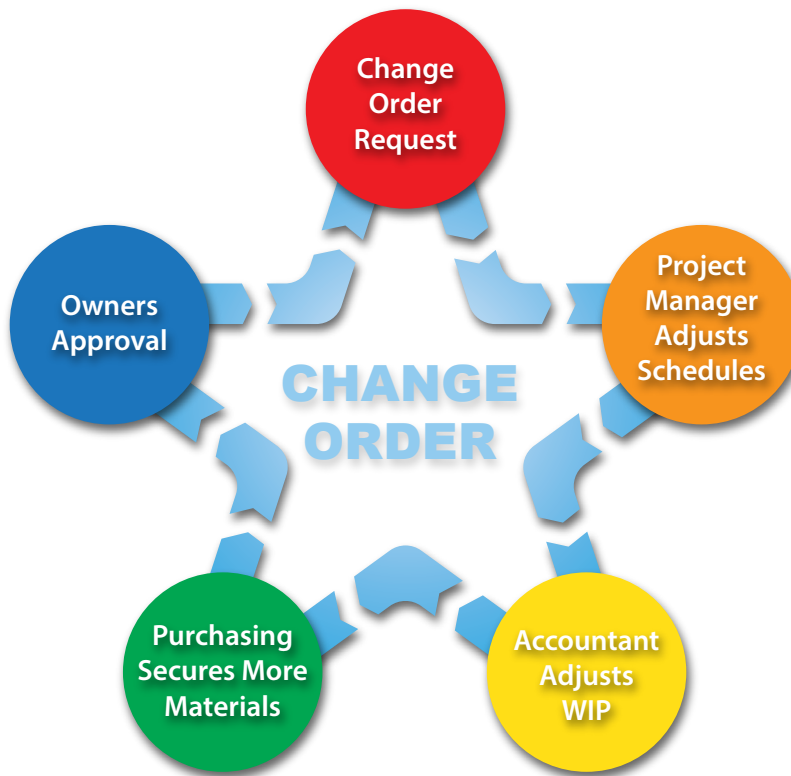
Consider the journey of a change order. Typically beginning with a construction or project manager in the field, it has the potential of requiring action from many different people from across the company—and from other organizations. Project managers may have to adjust their schedules, accounting may need to adjust WIP

projections, purchasing may need to secure more or different materials, and owners may need to issue approvals. For a typical change order to be executed effectively, all of these things probably need to happen, and all are interrelated. A set of information needs to be delivered to the right people at the right time with enough context to help them make decisions. In other words, information that is communicated and given context creates intelligence.

Context, and thus intelligence, comes from looking at a set of information in the light of all the other relevant information. Virtual silos, so useful in organizing and structuring data, can also inhibit the creation of intelligence by keeping key pieces of information isolated. But there is no need to knock them down. The job of "Enterprise Resource Planning" (ERP) software is to serve as a platform to connect and correlate information from disparate parts of an organization into a contextually coherent whole.

CHANGE ORDER

- Change Order Request
- Project Manager Adjusts Schedules
- Accountant Adjusts WIP
- Purchasing Secures More Materials
- Owners Approval

Serving up a common user interface and accessing a common database, a construction ERP still provides different applications to different users—accounting has their set, operations have theirs, etc.—while also providing the ability to share common information between applications. In other words, the job of ERP software is to provide business intelligence.

Making Smart Choices

The search for an ERP system typically begins once a contractor's business grows to a point where separate software applications are no longer sufficient. Beyond knowing that they need a common platform that shares information across departments, most do not have a framework in mind in which to evaluate their options. Because switching ERP systems can be costly and time consuming, having this framework in place before a search begins is important. Here are several key criteria to consider in order to make a smart decision:

Buy-in: An ERP system is only as useful as it is used. If it does not provide the applications that suit the needs of all groups, then people will find ways to work around it, compromising its value. Involve all departments in the evaluation of systems to help ensure they buy-in to using the one you select.

Technology: When buying a car, performance, handling, and looks are big considerations. But at some point most people also look under the hood. It's just as important to understand how a software system is built. This is especially true now, as the way we are using software is rapidly changing from working with desktop-bound windows-based applications to having our information and applications available anywhere from multiple types of devices. Make sure your system is designed to accommodate the way information is being shared and processed today, and look for software vendors with a track record of continuous development using the latest technologies.

Workflow: Sharing information between applications is, by definition, a requirement of an ERP system. This keeps everyone on the same page and reduces duplicate data entry and errors. But it is only the beginning of what a construction ERP system can (and should) do. Look for systems with tools that help manage the flow of information, moving data, documents, and requests for action between the right people at the right time. The result is a system that does more than just help you manage that flow of information—it helps you manage the flow of work across your organization.

Business Intelligence: Extracting information and reports from your ERP system should not require an advanced degree in computer science. Nor should you be limited by a set of pre-canned reports that your vendor has deemed important. Your system should include a number of user friendly tools to allow multiple users to see the business information they need in a way that helps them work. Look for a variety of reporting capabilities in a system, from user-configurable dashboards to tools that help users develop customized, sophisticated reports.

Ease of Use: Finally, regardless of initial buy-in, if a system is hard to learn and complicated to use, people will find ways not to use it. Just because ERP systems are powerful and comprehensive does not mean they have to be difficult to use. Avoid systems that have byzantine menu structures and convoluted internal processes. Look for systems that have intuitive navigation, that present intelligent options to the user depending on the task being performed, and that make it easy to move from one task to another.

Implementing an ERP system at your company will help improve operational efficiencies and help inform smarter decisions across the organization. Will it make you rich? Well, that still depends on what you do with that intelligence.

DEXTER + CHANEY