BY STEVEN GROSS

ERP Implementation: A Best Practices Guide for Construction

If your organization has successfully completed the process of selecting an enterprise resource planning (ERP) system and is ready to implement it, the hard part is over, right? Think again: Selecting an ERP system is only the beginning. Developing and executing a well-designed implementation plan is key to its success.

When implemented correctly, ERP systems bring together people, data, and processes at construction companies in unprecedented ways. Imagine uniting all aspects of your company under a single database that captures daily results from jobsite personnel. These results are immediately applied to metrics developed by PMs, which in turn are used to generate revised forecasts of costs and revenue as well as cash flow projections and financial results.

Data is entered once, at the point of creation, and made available to all participants in the organization. The result? Offline recordkeeping and duplication of effort are eliminated, quality data is available on a timely basis, and all parts of the organization operate from the same playbook.

Company-Wide Integration

Successfully implementing an ERP system is markedly different from performing the accounting system conversion of the past. True ERP systems have a more comprehensive impact than accounting-specific systems.

Beyond accounting, ERP systems impact diverse groups of people and processes throughout the company, including project management, business development, estimating, and HR. What's more, the scope of an ERP implementation relates directly to the desired improvements to be realized from it.

Utilizing the Right Approach

For an effective ERP implementation, it is vital to follow a targeted approach – more so than with other more limited implementations. There are three reasons for this approach:

- *Higher stakes* – Management expectations are high, as ERP success brings faster and better reporting along with improved workflow and efficiency.

- *Substantial costs* – There is generally a hefty price tag attached to the project in terms of software, IT services, and staff hours.

- *Company-wide ramifications* – There are people to please across the organization. Failure to implement the system correctly can diminish the ability to generate necessary reporting and can quickly become a career-limiting exercise.

A Roadmap for Success

Like a well-executed construction project, ERP implementation has many components and involves specific strategies, tactics, and tools. These include defining the scope of the project, managing costs, and coordinating schedules.

Unlike a construction project, ERP implementation does not have a single, well-defined customer, but rather many internal customers and stakeholders. These people include company executives, department managers, key users, and end users – individuals with different expectations and requirements. Complicating matters further, dedicating time to the ERP implementation is not necessarily a top priority for project participants who have other responsibilities.

The results of ERP implementation may not be as concrete as those of construction projects. Therefore, implementation objectives need to be properly defined, vetted, and prioritized among the various processes and personnel within the organization.

The following best practices exemplify successful ERP implementation planning for a construction company.

Ensure Top-Down Support

Executive support for ERP implementation is an absolute necessity; a project without this level of support will likely fail. The company's leadership vision is needed to help define and prioritize the improvements that will be achieved as a result of the project. Without this, end users are less likely to adopt new initiatives and more likely to be resistant to change facilitated by the ERP.

It can be said that an ERP without executive sponsors (or project champions) probably will not address the strategic needs of the company and will be starved for resources. Developing a business case for the expected returns from the project is an excellent way to achieve executive support.

It is also essential to win support at the middle management and departmental levels to ensure that all functional areas are on board. Be sure to regularly involve both team leaders and end users in the project and consult with them as ERP requirements are collected.

Assemble an Implementation "A Team"

While it's important for the ERP software vendor (and any third-party consultants you have retained) to bring its best people to the table, skilled internal representation is also needed to inject critical intellectual capital into ERP planning, design, and decision-making.

Involve people from each functional area of the company. Assign personnel who have an intimate knowledge of the company, its customers, and processes to the project. Recruit staff members who have the respect of their peers – they will have the clout to get things done and become role models when new processes are rolled out. From this team, select an internal PM.

Once the team is assembled, ensure that it can dedicate the time needed for the project. Assign others within your organization to pick up a portion of the team's workload or bring in temporary staff.

Define ERP Implementation Objectives

This is one of the most important steps in the roadmap; it is where the company clearly defines which improvements are to be achieved with the new ERP system. It starts with a thorough assessment of the company's needs and performance of the various functional areas.

Through this process, problem areas are identified and opportunities for improvement are recognized. Interview the management team and key users to identify and document processes that can be improved (e.g., functions performed offline on spreadsheets, external systems that need to be integrated, and key management reporting expectations).

The key here is to approach the ERP implementation as a business process improvement exercise, not simply an IT system implementation. Business needs should drive process improvement; you are not implementing new technology for technology's sake.

Present the Case for Improvement

A business case should be created to support the findings from the steps completed thus far and used to bolster ERP implementation objectives. It is important during this step in the process to connect ERP technologies with the objectives you have defined. Consider including these best practice improvements in your business case:

- Identify 6-8 key metrics to be incorporated in management dashboards or exception reporting that will be generated from ERP. The goal is to push management information out to key users rather than make them dig for it.

- Implement enterprise content management (ECM), document imaging, and workflow throughout the organization to automate processes, reduce paper, and speed up project management approval of job costs.

- Connect superintendents and foremen to the ERP system with easy-to-use mobile devices to capture daily labor hours, quantities, and equipment usage.

- Incorporate all aspects of project cost control, including the tracking of pending change orders, potential cost events, forecasting, and labor productivity, into the ERP system. Eliminate duplicate entries and offline recordkeeping.

- Speed reporting cycles and improve key information input and sharing timelines. Reduce the time allotted monthly to review project performance and generate financials.

- Offer self-service portals to employees for electronic distribution of pay stubs, benefit reporting, and W-2 forms.

Prioritize & Approve in Phases

Place the "big rocks" first. The number of opportunities for improvement identified while planning an ERP implementation can be significant, and implementation resources are usually limited. This is why it is critical to consult with top management to identity the top priorities to execute.

A step-by-step approach to implementing change can help your team avoid the critical mass overload that can accompany ERP implementations. For many companies, it makes sense to utilize a phased approach: implementing core functionality and a few key improvements initially, followed by subsequent phases that address additional objectives.

Securing top management approval is extremely important to ensure that everyone is on the same page and the team

has the authority to execute the plan. This helps reinforce that implementation objectives are a direct result of needs.

Develop the Plan

Create a comprehensive blueprint for success. Lay out a plan that addresses the "what, when, how, and by whom" considerations for each critical task. If you are using a phased approach, scope out all phases as part of the initial project plan in order to best prepare for subsequent phases. Spend considerable time on budgeting resources, especially HR, which is usually the most constrained expense in an ERP implementation.

Allowing adequate time for people to work on the project is paramount. Limit scope creep by developing your plan to achieve the defined objectives and no more than that. If additional tasks are to be accomplished, then include them in future phases and revise downstream plans accordingly.

Key Factors for ERP Success
Key factors can be grouped into five categories and directly impact construction ERP system implementations.

Business Environment The characteristics or culture of your company	Management The practices that will support the implementation	People The project team, end users, management staff, and other company employees who will utilize or be impacted by the ERP	Process The current and desired business processes utilized by your company	Technology The functions, features, and underlying architecture of the selected ERP system
Company culture where employees share common values and are receptive to change.	Top management commitment and support and appointment of a project champion or executive sponsor.	Competence of the PM and team.	Thorough assessment of the company's needs and requirements.	Selecting the right ERP system as a best fit for your company.
Ability to leverage culture to effect change.	Clearly defined goals, objectives, and scope, as well as well-established priorities.	Commitment of the team to the project (percentage of time dedicated).	Functional review of existing processes with desired improvements clearly documented.	Existence of management dashboards and analytics.
Leadership cognizant of the cost of the "other" ROI: return on inaction.	A formally defined internal PM.	Well-defined roles and responsibilities.	Development of a business case defining benefits to be realized from the ERP implementation.	Fully featured ECM capability, including workflow and archiving.
An organization dedicated to continuous improvement.	Project teams held accountable for completing tasks.	End users consulted about their needs/ requirements and involved with the project.	Definition of how process changes will impact organizational structure and job descriptions.	Mobility option for connecting field staff.
An environment facilitating continuous motivation and cultivation of employees.	Utilization of a project steering committee.	Clear communication to employees about process changes and job impacts.	End user training designed with process changes in mind.	Integrated field and accounting functions.
Desire to integrate what is managed in the field with what is accounted for in the office.	Regular project communication and status meetings.	Extensive hands-on training.	Development of a comprehensive test plan.	Self-service employee portal.

Be sure to develop a realistic project schedule. Avoid linking the ERP go-live date to arbitrary or externally defined timelines. Finally, the plan should contain sufficient detail so that it can be used by individuals to generate to-do lists.

Prepare for Change

Change can be stressful, even when it is positive. ERP implementations inevitably introduce new processes and require users to perform new tasks. The more you can prepare the management team and staff for change, the better.

In order to mitigate the impact of each change, secure employee buy-in as early in the process as possible. Clear and frequent communication is the key to capturing support. Open discussions with staff about the process changes set in motion by the ERP and how they will benefit the company are also very useful. It's important for employees to understand where they fit in. Extensive hands-on training and frequent exposure to the system can put end users at ease.

The more you can make people comfortable and familiar with the new system, the less stressful – and more successful – the change will be.

Measure, Monitor & Communicate

ERP systems are designed to improve the timeliness and quality of information available to end users throughout the company, which facilitates improved communication and leads to better decision-making. Two key challenges in managing ERP implementations are a lack of communication and slow decision-making. It is vital that team members communicate regularly and facilitate timely decisions among stakeholders.

The project steering committee (staffed by key management personnel) should receive regular updates and be consulted by the project team when critical issues cannot be resolved. It is crucial for the PM to proactively identify project risks and consult with executives to address them. It is also important to manage the plan according to critical milestones. This keeps all project participants working together and prevents one area from delaying another.

Dispel the notion that the ERP implementation is just an IT project; involvement from the entire organization is necessary for the ERP to be successful.

ERP Challenges in Construction

In general, ERP buy-in facilitates revenue growth, increases productivity, and helps manage costs. However, there are certain challenges inherent in the process:

- Construction managers can sometimes adopt a "shoot from the hip" approach to management. The degree to which your company resists this contributes tremendously to ERP success. Planning is a key part of the process; a disciplined assessment of current practices is necessary for determining ERP best practices.

- A gap can exist between the operations and accounting staff. These two groups are often worlds apart in how they view and utilize information. As a result, it can be difficult to unite them under a single system.

  However, many companies are finding ways to bring these functions together through ERP systems. The savings in administrative time, overhead, and other costs are considerable.

- Field personnel do not necessarily have the skills to function effectively as end users of ERP systems without substantial training and support. This must be addressed in the planning process. An effective solution is an ERP system that can connect field staff with an easy-to-use mobile device or tablet.

Conclusion

There is significant payback in successfully implementing a construction ERP system. To realize all of the potential benefits and achieve success, you must invest sufficient time to plan, organize, and manage the implementation process.

Like achieving anything worthwhile, successful ERP implementations require dedication, hard work, and the right approach. ∎

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