ERP selection and BEST practices

By Kurt M. Koenig & Laurence C. True
Selecting the right vendor and software, and executing the conversion so the new system produces tangible positive results for the company is costly, time-consuming, and temporarily disruptive.

For all of these reasons, it’s imperative to clearly define why you are changing and then find the right partner. The goal of this article is to help ensure that:

- The objectives you define up front will serve as a practical framework for evaluating software, communicating expectations to prospective partners, and executing a selection and implementation process that moves your company forward.

- Your selection process maintains focus on desired business outcomes as you meet with and assess prospective partners and products and select a finalist.

- Your company and its chosen partner strike an appropriate balance between the needs and interests of both parties.

- Both parties proceed with implementation and training so that the results envisioned are achieved and your company is a happy, referenceable client.

This article also shows how a results- and relationship-driven approach that improves the software selection process by focusing on what combination of vendor partnership and software capabilities best addresses your most important business objectives. The old-school feature/function checklist approach that used to drive software selection is no longer ideal for the following reasons:

- The inevitable checklist focus on feature/function detail too often causes selection teams to lose sight of important business objectives.

- Clarity and relevance of checklist content varies widely with the authors’ language skills and knowledge of the requirements. Even the best-written checklists contain any number of items that are open to multiple interpretations and/or subject to misinterpretation.

- When consultants are involved, their checklists often start from off-the-shelf templates and then are tweaked to varying degrees for individual companies. More often than not, this means your team and vendors will have to wade through a thicket of boilerplate items that may have little or no bearing on your real business objectives.

- Approaches to checklist responses differ widely from vendor to vendor. Some vendors are quite liberal in answering “Yes” to most or all requirements. Others can be quite conservative in their interpretation and response, and may answer “No” to requirements that they may in fact be able to meet either through existing functions, toolsets, or minor changes to the software. If you are relying on checklist scores to compare vendors, then you are likely to be comparing apples and oranges.

### The Better Way

Before selecting new enterprise software, a contractor must ask why, what, and how:

- **Why** are we thinking about making a change?

- **What** are the measurable business improvements we expect from the new software? **What** do we need to do to realize those business improvements?

- **How** will our organization update its processes and use the new software?

One set of outcomes virtually every company seeks when implementing new ERP software is improved efficiency; better and more timely information management; and reduced cost of operations and maintenance by replacing a hodgepodge of disconnected systems with one integrated system. To get these benefits, it is important to assess and address your company’s readiness to use integrated software to its full potential.

For example, if accounting and project management have had little interaction, what policy and procedure changes will be needed to help them work more closely? As mobile
technologies extend ERP software into the field, how will you move from paper-based reporting to real-time information? How do you capitalize on integrating document management and workflow with your ERP software? The process we describe provides a framework for you to identify both business process improvements and software capabilities needed to realize your objectives so your company can hit the ground running with its new software.

To develop this framework, your company must spell out its business objectives before it begins the selection process. Laying the right groundwork will help you select the right vendor/partner and prepare your team to use the new system.

In most cases, attitude and compatibility between a contractor and its vendor/partner have more to do with the success of the software than the software itself. If the purchaser is satisfied that the decision to form a relationship with the chosen partner was correct and the partner is aligned with the purchaser's goals and approach, then the result will generally be positive for both parties. Having clearly defined business objectives from the outset minimizes challenges and provides a benchmark for measuring success.

It's not always easy but, with the right game plan and attitudes on both sides, it is achievable.

**Leadership**

Realizing the desired outcomes requires a concerted team effort throughout the entire process:

- Setting objectives for the new system (i.e., why we are changing and what are the business results we hope to realize?)
- Tying those objectives into the company's plans and weighing the organization's readiness to embrace the needed changes
- Communicating the objectives and getting buy-in from your team prior to the selection process
- Evaluating options and selecting the new vendor/partner and software
- Implementing the system
- Using the system effectively
- Maintaining a continuous improvement mind-set

Overall, the single most important success factor for selecting and implementing new ERP software is top-down management commitment and leadership. Your team should feel that the selection focus is balanced across the needs of operations, finance, IT, and other important areas of the company. This alignment, supported from the top and articulated from the outset of the selection process, is the most effective way to implement the process and culture changes you'll need to get the most from your new software.


An ERP system change demands sound and tangible justification. We are strong believers in the Why-What-How discipline of mapping objectives, solutions, and project plans. People (especially contractors, who are often task-driven) tend to jump to “What are we going to do?” and “How are we going to do it?” without clearly defining _why_ they are doing it. This has two pitfalls:

1) It introduces a high risk of failure. Without measurable outcomes, you can lose focus on the most important results and spend a significant amount of time and money for very little reward.

2) Quantifiable business outcomes provide a tangible way to set priorities and measure success. You can check such tasks as “integrate purchasing and A/P” or “implement A/P invoice routing and approval” off the list as you complete them. Business drivers like “control disbursements to stop vendor overpayments” and “reduce A/P invoice cycle time so we can bill faster” help you assess whether the cost and disruption were justified, and whether your company is better off.

Putting “why” business objectives ahead of the “what” and “how” provides a framework for evaluating every step and decision in the process and vastly increases the likelihood of success. Whenever possible, state your “whys” as quantifiable and measurable outcomes with the least possible reference to software to help:

- Prioritize outcomes
- Maintain focus on the most important outcomes
- Identify needed business process changes or improvements
- Assess your company’s readiness to make those changes and realize the outcomes regardless of your ERP platform
- Itemize vendor attributes and system capabilities
- Establish a framework to measure success at key milestones and ensure objectives are met during implementation

To better understand the Why-What-How approach, take a look at the sample chart at the end of this article. It starts
with one measureable “why” business objective: Bring in all jobs at or above the as-sold margin (i.e., eliminate margin fade). This is a critical success factor for every contractor, is stated without reference to computers or software, and is clearly measurable. To help illustrate, several “what” goals are listed that support the objective, and for each goal there is at least one specific “how” action. The last two columns help determine your company’s readiness to produce the desired result and build a list of software features or capabilities that can help get your company where it wants to be.

The list of “why” business objectives should be short (ideally not more than five items), and reflect big-picture outcomes that are likely to remain constant for the relative long term. As you can see in the table, one objective can entail multiple “what” goals and many business processes and system features. Remember, changing systems is a rare opportunity for your company. It’s important to clearly define the desired outcomes even if your reason for starting the search is as simple as “Our old software is no longer supported.”

Knowledge Is Power

IT has evolved to play a key role in virtually every business activity and interaction, and the trend is accelerating. Here is one of the most important takeaways from this article: Your company must embrace and be knowledgeable about best business practices for companies like yours, and about the technologies that your peers, partners, and competitors are using to help implement those practices. Contractors are building this knowledge in a number of ways.

Hiring

The expansion of IT into all facets of business has led to a corresponding expansion in the role of IT management. Not too long ago, the senior IT person in many companies was the best person at setting up and maintaining computers and networks, had a title like IT Manager, and reported to the CFO or controller. Now, rather than a hands-on technician, most companies sophisticated enough to have a CFO also have a CIO who is an expert in the use of technology to achieve business results.

Learning

The pace of technical change is rapid and accelerating. The time you invest in staying current with the practical ramifications of these changes will be repaid many times over. (CFMA’s financial and IT benchmarking tools are a great place to start assessing how your company stacks up against its peers in the industry.)

Networking

Contractor peer groups and forums share real-world insights about how companies are using everything from core ERP systems to mobile technologies, document management, workflow, and the Internet. Reach out and connect with your peers.

Assemble the Right Team

It is imperative that you involve key employees to select and eventually implement the software. The broad impact and potential rewards mean that management must overcome the traditional reluctance to dedicate key individuals; the long-term rewards will repay the short-term costs many times over.

Your team should include an Executive Sponsor, a selection and implementation PM, subject matter experts (SMEs), and possibly a consultant. The PM and perhaps a few others will be fully dedicated to the ERP selection process. Other team members will have varying time commitments but should be able to give 100% dedication when called upon.

Executive Sponsor

This should be a visible and respected member of the company’s C-level executive team. It is important that your software selection be even-handed and not perceived as biased toward IT, accounting, operations, etc. The Executive Sponsor should be someone who sees the big picture and has sufficient organizational clout to reconcile any overlapping and sometimes contradictory needs and preferences of your various constituencies.

While the Executive Sponsor need not be involved in every telephone call and meeting, he or she must be sufficiently engaged to see that the company’s IT vision is being adhered to throughout the process. This includes actively participating in developing the Why-What-How document, assembling the team and ensuring its ongoing availability, and being active in partner discovery sessions and demonstrations, due diligence findings, partner negotiations, etc.

Selection & Implementation PM

This is typically someone at the director or managerial level, and may even be a member of the executive team. This person must really know the company, share the vision of the Executive Sponsor and the management team, and be visibly committed to the goals and the “why” of the project. Project management skills are critical in this role, as the selection team PM is responsible for coordinating all aspects of the selection process, including:
• Developing and maintaining the project plan
• Coordinating all internal and external participants
• Scheduling all activities (e.g., meetings, milestone dates, document production and distribution, etc.)
• Communicating to internal stakeholders project progress, issues, and scope and schedule changes
• Expediting and escalating roadblocks and issues (as needed)
• Managing partner due diligence and negotiations

**Subject Matter Experts**

This group is comprised of managers or otherwise tenured, knowledgeable individuals from such areas of the organization as functional (e.g., operations, administration, accounting, payroll, equipment, inventory, HR, etc.), line of business (e.g., construction and service and/or hospitals, education, retail, state DOT, municipal DOT, etc.), and other supporting perspectives (e.g., reporting, document management, workflow, collaboration, IT infrastructure, etc.).

Wherever possible, recruit individuals who have a firm grasp on the company's objectives and processes, and how those translate to the system selection and implementation project. Familiarity with the responsibilities of people in similar roles in other departments or product lines is also helpful. The number of SMEs needed depends on the size and complexity of your business. As a general rule, an SME should be responsible for no more than two applications, which should be related (e.g., HR and payroll or purchasing and subcontracts).

**Consultants**

Many individuals and firms offer IT and business consulting services. Some focus on construction while others focus on IT selection across multiple industries. Since your company needs to build internal expertise about best practices and information technology, we encourage you to carefully consider where you need to supplement your internal resources and what the boundaries of engagement are. For example, it may be useful to separate business advice from technology assistance. But if your team is struggling with defining business objectives (see the Why-What-How chart), then engaging a consultant to talk about technology solutions is “putting the cart before the horse.”

Here is how we have seen the right consultants add value:

• Facilitate internal discussions with a company's team to define its agreed upon business goals.
• Share information about best practices.
• Help you assess the right mix of business process change and technology to realize your goals.
• Manage and/or provide supplementary resources during implementation.

Some contractors outsource the entire software selection process to consultants. The perceived benefits are:

• Reduced impact on internal resources.
• Knowledge that your team may not otherwise have.
• Impartial opinions to help you get to the best solution.

In an ideal world all of these are attainable. Be alert to the following risks:

• The consultant offers to act as a buffer between your company and your prospective software partners, which creates multiple problems because:
  - Communication about your needs and the vendors' solutions is diluted and garbled. Similar to the old party game “Telephone,” you tell the consultant your needs; he interprets and translates that into a requirements document for the vendors; they interpret the consultant's words and prepare a response; and then the consultant relays the responses back to your team. Each handoff increases the risk of miscommunication.
  - What should be a partnership-building process turns into an adversarial situation in which buyers are deprived of important information about the results different software can actually produce. In our experience, attitude and quality of relationship between your company and a potential vendor are often more important than expected value from the software's features and functions. To form a judgment about which vendor will be the best long-term partner for your company, direct interaction between the teams in greater depth and a more flexible format than a scripted demonstration are essential.
  - The consultant's engagement and your relationship with him or her will eventually end, while your vendor will be a long-term partner. Given the importance of quality of relationship, if you need a buffer between the vendors and your team during selection, then your consultant may have you looking at the wrong vendors.
• The consultant insulates your team from developing the knowledge and skill sets they will need to understand the relationship between your business requirements and the technology solution.
For objective analysis and direction, avoid consultants who resell specific products, offer specific endorsements, or have other business relationships with vendors that may sway their thinking about who might be the best vendor for your company. If you choose to work with a consultant, then make sure that the advice is unbiased.

**Define & Document Requirements**

For all of the reasons previously mentioned, purchasers are now advised against asking vendors to complete checklists. It is more important that you explain to the vendor your company’s size, business objectives, geographic territory, and specific business issues that need improvement than to focus on details like the desire to integrate purchasing with A/P.

However, documented requirements remain important to help compare vendors and challenge assumptions as you learn more during the process. The difference is in the focus and level of detail in your requirements document, and what you do with it. The following section highlights how to determine your requirements.

**Create a List of Needs**

Create a high-level list of needs based on your Why-What-How document and assign a weight to each need based on the potential business benefit it can help your company achieve. Keep the rankings simple: Must Have, Nice to Have, Desirable.

**Plan for the Long Term**

Most ERP systems have a lifespan of more than 10 years. So, in addition to looking at your company’s current needs, think about where you would like your business to be in three, five, and 10 years and plan accordingly. For example, assess how well systems will support both planned and unanticipated changes in your business:

- How easy will it be to absorb a possible future acquisition?
- How well will the system handle your needs if more offices/locations are opened?
- Does the system have the flexibility to accommodate changes from new customers and additional lines of business?

**Focus on Objectives**

Since you have made a decision to change and improve your business, avoid the surprisingly frequent pattern of trying to replicate your current system. Think more about objectives and less about process – a sometimes difficult but essential part of an effective software evaluation. Different systems will offer different and often better ways of addressing old and new needs. Carefully evaluate whether each requirement is driven by process or by result, and delete or rewrite requirements that are driven by “how we’ve always done things.” Be prepared to think outside the box. Your Why-What-How document will help ensure that requirements are tied to business outcomes.

**Connect Technologies with Business Objectives**

Consider how you can use new technologies to realize your business objectives tomorrow and in the more distant future. All of the functions listed below are available from construction software vendors that are staying on top of the technology curve:

- Analytics
- BIM (needs and requirements)
- Business Intelligence
- Cloud
- Collaboration
- Dashboards
- Electronic Document Management
- Imaging
- Integration
- Mobility (data collection, coherent and useful output)
- Self-service
- Workflow

All of the above are opportunities for your team to learn from potential partners and their customers. Ask the vendors to show you how they have incorporated these technologies into their product offerings. Match the capabilities to the business outcomes in your Why-What-How document. If the system you choose doesn’t offer these technologies in ways that support your business objectives, then you run the risk of putting your company behind the eight ball for years. Just be sure to go beyond the buzzwords and jargon to connect potential applications of these technologies with your tangible business outcomes.

Talk to customers who are using them – what results were they looking for? How have things turned out? What internal process changes were required to get the benefits? All of these will help you and your team assess where the biggest opportunities for improvement are, and also what steps can prepare your company to reap the benefits.
CREATE A BUDGET

Establish a budget and request initial cost estimates for:

- **Software** – Include all layers of the “stack” – database, applications, etc.
- **Hardware** – This often takes the form of recommended configurations that can be priced by your hardware provider of choice.
- **Implementation** – Billable vendor and third-party services, and an estimate of your people’s time. The latter requires dialogue about scope and schedule.
- **Data conversion** – Transforming and migrating data from the legacy and any ancillary systems to the new application. This is also a fruitful area for cost/benefit analysis and scope definition where vendor experience can be a helpful resource.
- **Other costs** – IT training for new or different technology, business intelligence and reporting needs, etc.

COMPARE VENDORS

Create a systematic way to compare vendor qualifications, viability, etc. Experience and track records of successful partnerships with companies similar to yours are especially important.

**Whom Should You Consider?**

Companies are rejecting the traditional process of listing 4-8 prequalified vendors for initial consideration, qualifying 3-4 vendors for detailed RFP response and review, and selecting 2-3 of the best qualified vendors for detailed demonstrations and due diligence because it has been found to be inefficient, expensive, and time-consuming. In addition to the points discussed earlier, the checklist approach inhibits assessment of one of the most important partner/contractor relationship success factors: compatibility between your company and the partner.

The pool of qualified partners for contractors of any size and business profile (lines of business, geographic footprint, etc.) is so small and well-known that most purchasers can quickly identify and start working with the two or three best-qualified vendors through the following steps:

- Ask your key personnel what they are hearing from other companies, at association meetings, etc. Foster a culture in which your senior operations, finance, and IT staff are keeping up on what’s working for similar companies as part of their general networking activity. Rob Koester, Murphy Company CFO says, “The first thing I did when we were ready to launch our ERP selection project was ask my CIO, ‘What’s the next step?’ He told me, ‘There are only two vendors that are really qualified to meet our needs,’ and briefly outlined the reasoning behind his statement. So we proceeded directly to evaluation of those two alternatives, which saved us a ton of time and money…and resulted in a vendor relationship that is working very well for us.”
- Ask your peers at comparable companies what they are using, what they like and don’t like, what the vendor is like to work with, and what they hear about different packages from others in the industry. Peer recommendations are the strongest indicator of vendor and product capability.

**Discovery**

Having identified the qualified vendors, the next step is face-to-face dialogue. The specific goals are to:

- Ensure that the vendors understand your company and objectives so they can tailor a demonstration that uses your company’s information to show you how you will use their software to realize your objectives.
- Allow the vendors to collect representative data from your company to use in the demonstration. (This usually requires some amount of follow-up interaction.)
- Assess the quality of the vendor team. Do the questions reflect knowledge of your business? Is the vendor willing to take the time to understand your team’s underlying objectives and requirements? Do you sense that these would be good people to work with? Is the team interacting with you as a potential partner interested in understanding and helping you meet your business objectives, or as someone seeking to sell you products and services? This last question is key because you will be forming a long and close relationship with the partner you select.

Look at the vendors as sources of information and insight. Give preference to vendors that are willing to come to your office and lead discovery meetings with your team at their own expense and before trying to give you any sales presentation or pitch.

Vendors that have demonstrated experience building successful partnerships with companies like yours are experts in process improvement best practices. With the right partner, your team will come out of discovery with a better understanding of its objectives and requirements than it had going in.
Demonstrations

Next, develop the demonstration script (usually assembled by the selection team PM with input from other team members and the potential vendor/partner). What are the things that the selection team wants and needs to see? What are the things the partner believes is important for you to see based on the discovery sessions?

Make sure the script includes business outcomes in addition to features. For example, in addition to “Ability to price labor overhead on cost-plus billings,” provide an example of an actual job billing and the underlying cost detail. Ask to see billings produced from your data during the demo. Determine if it supports such business results as:

- Shortening the billing cycle
- Reducing the effort required to get billings out the door
- Improving accuracy of billings
- Handling the variety of billing formats required by your customers

Insist on using the information your company gathered during discovery in the demonstration. This serves several purposes:

- Your team will better digest and understand how the system works if each member is looking at familiar information.
- It’s an indicator of how the vendor will work with you in the future. Vendors that are not willing to prepare adequate, personalized presentations to help you see how you can work with them to meet your needs may not be the best candidates for a solid long-term partnership.
- Many vendors have well-thought-out demonstration environments where sample data is set up to make processes look as smooth as possible – sometimes smoother than in reality. Asking to see key processes demonstrated with your information will provide a more “real” picture of how the system will actually work for you.

Also, make sure vendors follow the script, allowing time to expand on elements of the script where they feel their product offers additional value, but always come back to the specified sequence and required items. Otherwise, vendors may show unscripted aspects of their software to divert attention from deficiencies in areas you have deemed important.

Here are some in-house tips for making the demonstrations a success:

- **Attendance** – Identify which members of your team will participate in demonstrations and then make sure they attend every demo that pertains to their area of expertise. This is the only way to get useful, comparable feedback on the different systems.
- **Focus** – Enforce rules regarding use of e-mail, phones, text messaging, and other distractions during demonstrations. You are at what may be the most important stage of your selection process – make sure the team is giving it the attention it deserves.
- **Evaluation** – Make sure your team scores each item in the demo script as the vendor presents it. In the course of multiple demos, it’s easy to lose track of who had or showed which features, functions, and outcomes most effectively.

Reference Checks/Site Visits

Thorough reference checks and, where feasible, site visits serve the vital function of verifying the information you have developed through the discovery and demonstration processes. Here are some suggestions for making the most of your reference checks:

- Insist on talking to and visiting companies that are as similar to yours as possible in terms of size, complexity, and lines of business. If the vendor cannot supply comparable references, that may be a reason to move on to another choice. For example, if your company has:
  - Multiple business units, talk to other companies with multiple business units and ask specific questions about how well the system handles related functionality like inter-company transactions, consolidated financials, and global visibility for corporate management.
  - Multiple lines of business, like construction and service, talk to other companies with those lines of business.
  - Union or multi-state payrolls, talk to other companies with similar payrolls.
- Ask specific questions about how well the system handles your key business processes, and the extent to which it helps the references realize the business benefits for which you are aiming.
- If you are contemplating any modifications, then ask about delivery of customer enhancements (e.g., How were they delivered? Were they timely?).
- Try to contact your own references in addition to those provided by the vendor.
Getting Down to the Finalist

Settling on a finalist is part science and part art. The scientific part consists of aggregating team feedback from the demonstrations. The more artistic aspect is weighing the less quantifiable measures:

- Is the vendor a firm with which your company can do business? This may be the most important question, because the ideal outcome is a long-term partnership in which the two companies work together harmoniously toward shared objectives. A visit to the potential partner’s offices by your Executive Sponsor and other key team members can help solidify your understanding on this point.

- Does the vendor have a successful track record?
  - How many years has the vendor been in business?
  - Has it been consistently profitable?
  - Has it demonstrated an ability to keep up with technical advances?
  - How long do customers stay with the vendor?
  - What do the vendor’s customers say about the quality of the relationship?
  - What’s the average employee tenure? Is it a good place to work?
  - What is the vendor’s technical and application support track record?

- What do others say about the vendor? What do you hear from peers, association members, and industry thought leaders?

- Is the implementation approach/strategy sound?

- Did the vendor create a demo that was tailored to your company?

- Did the vendor provide real solutions to the company’s issues and objectives?

Negotiations

The pricing and terms supplied in your partner’s proposal are typically the starting point for negotiations, which will usually focus on:

- **Scope (included products and services)** – You may find it easier to bargain with your partner for concessions on additional products and services than on price reductions. Keep your eyes open for chances to get additional value at this point in the process.

- **Price** – Established vendors will have set their prices at what they believe to represent the value received. Policies on discounts vary, but you will have better luck obtaining discounts if you are willing to offer incentives like accelerated payment terms.

- **Payment terms** – These are often tied to milestones such as software installation.

- **License terms and conditions** – Software licenses are crafted to protect your partner’s interest in their principal asset: the intellectual property embodied in the software. As such, the license terms and conditions are often non-negotiable. Attorneys who specialize in construction are sometimes challenged to understand and accept these concepts; engaging attorneys who are familiar with intellectual property law may facilitate discussions of license terms.

Next Steps

Once you have settled the negotiations and completed the agreement, you are ready to begin implementation.

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<th>WHAT</th>
<th>HOW</th>
<th>BUSINESS PROCESS</th>
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| **MANAGE LABOR PRODUCTIVITY** - ENSURE THAT ACTUAL LABOR COST RATES AND PRODUCTIVITY ARE IN LINE WITH ESTIMATES. | Establish labor cost codes that are simple enough to support accurate field reporting and detailed enough to provide meaningful performance feedback. | Agree on labor cost coding structure and content.  
- Standard across company? Allows comparison of productivity between jobs, PMs, foremen, customers, business units, etc.  
- Standard by type of work? Allows comparison for similar types of work while supporting appropriate detail for different job types.  
- Standard by customer, business unit, etc.?  
- Unique for each job? | Cost code fields support company requirements in terms of length, segmentation, and type.  
- Support for different cost code formats for different business units, types of work, customers, etc.  
- Tools to expedite job set-up using standard cost code lists and structures. |
| | Enter estimated labor hours, cost, and units of production for each labor code; keep estimates current with approved scope changes. | Processes, procedures, and tools to:  
- Translate cost estimate detail to cost-tracking detail with easy access to original cost estimate during construction, including hours, cost, and units.  
- Transfer from estimating to ERP system either electronically or via data entry.  
- Keep current with pending and approved scope changes. | Capture estimated labor cost, hours, and units of production via estimating interface or data entry.  
- Store and present source estimating documents from within job cost.  
- Maintain history of estimate changes.  
- Link estimate changes to change requests and change orders. |
| | Get accurate and timely reporting of labor hours expended and units of production from the field. | - Defined procedures for timing and content of reporting from field.  
- Reporting schedule by shift, daily, or weekly.  
- Monitoring and enforcement to ensure compliance. | Mobile tools to simplify and expedite field reporting with desired content and timing.  
- Visibility of missing or incomplete field reports. |
| | Produce and distribute accurate and timely comparison of estimated vs. actual labor cost and productivity to the right people in your company. | Define:  
- Meaningful content and format  
- Recipients  
- Schedule by shift, daily, weekly, or other  
- Delivery method(s):  
  - Hard copy  
  - Electronically to:  
    - Desktop  
    - Phone  
    - Tablet  
    - Other | Calculate comparisons of estimated vs. actual productivity.  
- Produce desired report formats.  
- Support reporting and delivery schedule (e.g., outside payroll processing cycle).  
- Support delivery to devices of choice. |
| | Highlight exceptions so action can be taken in time to prevent serious problems. | - Define exception metrics and parameters. | Support calculation and display of exceptions. |
**“WHY” BUSINESS OBJECTIVE:**
Bring in all jobs at or above the as-sold margin (i.e., eliminate margin fade).

**METRIC:**
Original vs. Projected Gross Margin %.

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<th>HOW</th>
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<tbody>
<tr>
<td>Get paid for all extra work at margins equal to or greater than the original bid margin.</td>
<td>Make all potential scope changes visible to the right people in your company on a timely basis.</td>
<td>Policies and procedures for identification and reporting potential changes.</td>
<td>Tools to capture and display potential changes.</td>
</tr>
<tr>
<td></td>
<td>Track committed and actual costs incurred on extra work.</td>
<td>Policies and procedures for issuing and recording extra work authorizations to subcontractors, and for procuring materials for extra work.</td>
<td>Keep history of all changes to subcontracts and purchase orders. Link subcontract and PO changes to change orders.</td>
</tr>
<tr>
<td></td>
<td>Obtain customer sign-off for extra work.</td>
<td>Policies and procedures for level of customer approval required before proceeding with extra work.</td>
<td>Tools to capture field authorization of extra work.</td>
</tr>
<tr>
<td></td>
<td>Accurate estimate, price, and current change requests.</td>
<td>Policies and procedures for estimating and pricing potential extra work.</td>
<td>Tools to capture estimated cost and proposed contract amounts for extra work. Generate, store, and retrieve change order proposals, change requests, and related documents from job cost/project management. Routing and approval of change order documents.</td>
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<tr>
<td></td>
<td>Monitor status of change requests.</td>
<td>Standard project review schedule and content, including information required for change orders.</td>
<td>Change order reporting that supports requirements.</td>
</tr>
</tbody>
</table>
### WHY BUSINESS OBJECTIVE:

*Bring in all jobs at or above the as-sold margin (i.e., eliminate margin fade).*

### METRIC:

*Original vs. Projected Gross Margin %.*

#### WHAT

**COMPARE ORIGINAL (AS SOLD), CURRENT (INCLUDING APPROVED CHANGES), AND PROJECTED MARGIN BY JOB, AND QUICKLY IDENTIFY THE CAUSE(S) OF ANY PROJECTED MARGIN FADE.**

#### HOW

**WHAT**

- Record and maintain contract and estimate amounts (needed to calculate original margin).

**BUSINESS PROCESS**

- Policies and procedures for developing and recording original estimate and contract amounts, and keeping current for pending and approved changes.

**SYSTEM FEATURES**

- Ability to record estimates and contracts at required levels of detail.
- Tools to expedite entry and/or upload estimate and contract information.
- Access to estimate and contract documents from within job cost.
- Ability to track history of all estimate and contract changes, and link individual changes to change orders.

**WHY**

- Define how projected margin should be calculated for your company.

**BUSINESS PROCESS**

- Identify factors impacting projected margin (often involves accurately projecting forecast cost at completion, tracking margin on approved change orders, etc.).
- Policies and procedures for capturing necessary information on a timely basis.

**SYSTEM FEATURES**

- Tools for:
  - Reporting labor productivity.
  - Calculating and displaying forecasts.
  - Aggregating into projected margin.
  - Highlighting exceptions (jobs with largest project margin variances).

**WHAT**

- Define how projected margin should be calculated for your company.

**BUSINESS PROCESS**

- Define:
  - Meaningful content and format
  - Recipients
  - Schedule (weekly, monthly, or other)
  - Delivery method(s):
    - Hard copy
    - Electronically to:
      - Desktop
      - Phone
      - Tablet
      - Other

**SYSTEM FEATURES**

- Calculate comparisons of original, current, and projected margin.
- Produce desired report formats.
- Support delivery schedule.
- Support delivery to devices of choice.

**WHAT**

- Produce and distribute accurate and timely comparison of original, current, and projected margin dollars and percent to the right people in your company.

**BUSINESS PROCESS**

- Highlight exceptions so action can be taken in time to prevent serious problems.

**SYSTEM FEATURES**

- Define exception metrics and parameters.
- Support calculation and display of exceptions.

**WHAT**

- Highlight exceptions so action can be taken in time to prevent serious problems.

**BUSINESS PROCESS**

- Define areas of highest risk and impact on projected margin (labor productivity, unapproved change orders, estimating errors, etc.).

**SYSTEM FEATURES**

- Presentation of exceptions:
  - Labor codes with largest rate or productivity variances.
  - Cost codes with largest project cost overruns.
  - Largest unapproved change orders.