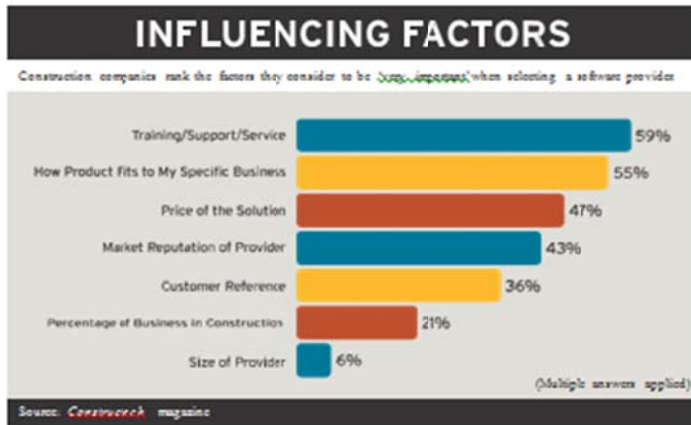


THE NECESSARY STEPS TO SOFTWARE SELECTION:
**Evaluating the Options & Making the Commitment to
Change**

Evaluating Options

The software landscape in construction has expanded over the past few years. Depending on the type of system you are looking for there could be a number of products that seem to be legitimate options at first glance. As you evaluate your options it is critical to look at several criteria:

- Functionality and technology fit
- Software vendor relationship
- Implementation and on-going services



What drives the selection process for construction companies?

- ✓ Services provided are at the top of the list at 59% and is followed closely by product fit.
- ✓ Price and market reputation including customer references come in next.
- ✓ Vendor experience in the construction industry is also a ranking feature that may have been included in market reputation.
- ✓ Software vendor size rounds out the list.

It is critical to find the best fit for your organization. Finding the right vendor can vary, with many different avenues to explore. This may start with something as simple as a typical Web searches, association references, and even peer recommendations. Try not precluding one of these for another. Starting with a broader set of options to evaluate may actually help you narrow your search more quickly. It's possible that you'll identify elements you absolutely don't want as you do a cursory review and that will conversely help you identify those elements that are most important to your company.

Remember if you're doing a web search you should leverage search engines by putting in the phrases that identify the challenges you have today. Searching phrases like 'specialty trades' will certainly provide a wide range of results. Refining your search to include things that are critical to you like a technology platform 'specialty trades Microsoft' may help narrow the field.

Your industry associations and peer groups will help you refine your search further. Be sure to ask questions that go beyond the product. If you ask the right questions you will collect the right information to make an informed decision, enabling you to maximize your chance to successfully select and implement the right solution for your company. As you evaluate your options it is critical to look at several criteria:

1. Functionality and Technology Fit

- Can the vendor handle your most important functional requirements?
- What industry-specific functional requirements will be necessary in the future? Can the vendor provide that functionality now? If not, do they have a path to get there?

- Does your functional footprint match the software vendor's?
- What third-party add-ons or ISV solutions may be necessary to round out your functional requirements?
- What strategic advantages does the software bring to the table for your company?
- What enhancements may be necessary to make the software work for your company?
- Will these enhancements take you off the upgrade path?
- Can you leverage your current systems and hardware for the selection and implementation of a new application?
- Is your technology so outdated that you will need to replace your platform no matter what?
- What technologies is your IT group proficient in?
- Will you be able to retrain current staff, or will you need to hire new people to adapt your company to a change in technology such as Software-as-a-Service (SaaS)?
- You need to find out what tools were used to develop the software. Is it proprietary or is it an open toolset?
- Will you be able to find people that can make customizations using the toolset provided with the software?
- What capabilities does the software vendor offer to make enhancements?
- What integration tools does the software use?
- Are they compatible with the technologies of the ancillary systems the ERP needs to integrate with?
- Application program interfaces (API) are often used to connect systems. Does the software have open APIs?

2. Software Vendor Relationship

- The vendor's strength can be a good indication of its ability to remain independent. A good way to evaluate the strength of a vendor is to look at its size.
 - What is its financial situation?
 - How many employees does it have?
 - How many locations?
 - How many installations has it completed?
 - Does the vendor seem to have momentum in the marketplace or does it seem to be losing market share?
- What are the vendor's plans for taking the software into the future? Is it in a direction that will help your company?
- Do you feel you can work with this vendor?
- Is it easy to communicate your needs to them?
- Does its culture match the culture you have worked to develop in your company?
- Will it be a good partner that will help you achieve your goals as a company?
- Will the vendor be adding new functionality that is of interest to you?
- Will you be able to take advantage of strategic capabilities not only in the initial implementation but in years two through five?
- Will the vendor be a long-term partner for you?

3. Implementation and On-Going Services

- How many employees does the VAR have?
- Does it have sufficient resources to implement for you and to provide product support after go-live?
- What other applications do they implement?
- Does the implementation team have real-world experience in your industry?
- Is this a local VAR or is it a national chain?
- If you have a need for a national or international implementation, do they have the resources to support the size of your project?
- Are there particular industries that the VAR seems to focus on or has a lot of experience with?
- How does the VAR mesh with your internal IT team?
- If you do not have an internal IT team, how will the VAR support your technical requirements?
- Do they have enough resources to properly assist you?
- Are they conversant on the technology that you are most interested in?
- Can the VAR integrate the system to other systems you are using such as a separate billing system for a unique business requirement?
- Maintenance - After implementation will you pay an annual maintenance fee, or monthly subscription fee?
- Support - You should find out what the phone support hours are, if there is a callback guarantee, and what the coverage is both geographically and during off hours.
- Training – What type of training offerings are available?

Collecting Information

Collecting the right information to make an informed decision when selecting a solution is critical, however it is also important to keep in mind the software should provide you with more than a basic functional fit, it should provide a strategic advantage to drive operational efficiency and expand your business. You are buying a tool that you can use to support the business functions of your company and give you a competitive advantage.

Your ability to gather the right information is directly correlated to providing the right information and questions to the vendors so they can provide answers tailored to your company's needs. For example, if you ask a vendor if they provide business intelligence and reporting – most would say yes. If you said, as Senior Management I need to stay up-to-date on project status, view change order requests/approvals, and review billing information. I need all of this information collected from a single source, and I need to share different parts of the reporting with different people in my company based on their role. You may receive a different answer.

Narrowing the Field – Customer References

Once your company has narrowed it down to two or three vendors it is a good time to embark on the reference process. References can come from many different areas. For starters, software vendors will provide a set of references for you to speak with. But it is important to note that these are oftentimes the best customers from experience of implementing and using the system. While references can be a

valuable tool to your selection process, it is important to understand what a reference should provide. Above all, a good reference should be able to validate that when you implement the solution you can do so as close to the hours and amount quoted by the vendor. Keep in mind that every implementation is different and every company has different resources at their disposal, meaning your experiences will not match up 100%. One company could have an IT staff of two people, a CFO, and a controller and was really dedicated to running projects; while another company could have had outsourced IT staff and the CFO is the controller.

It is also important to be careful to not select a vendor based solely on a reference recommendation. One key component to narrowing the field is to examine the underlying technology of a vendor's solution. You need to know whether or not your vendor is working with the latest technologies or stuck using legacy technologies. This is not to say that your vendor needs to be out on the "bleeding edge" of technology, just that they are working with flexible and scalable technology that will not become dated as you grow as a company.

What can be difficult is that a lot of vendors will talk bits and bytes when it comes to their technology systems. For example, some vendors say their applications run on SQL Server. This implies they take advantage of everything the SQL Server relational database has to offer. However, that is not always the case. Do your due diligence asking follow-up questions about their use of SQL Server, for example. You could realize that they just make their technology work on it, but because they have older technology as their core system it does not allow them to take advantage of all the SQL Server things—essentially taking a robust database and turning it into a flat file system.

Integration

It is also important to talk about your vendor's ability to handle all areas of your business and what it means to be integrated out of the box. Be aware that the word 'integration' is considered to be the most overused, yet under-delivered aspect of software.

A system can pass an invoice amount to an account receivable module in a financial application and be considered integrated. True integration is a system that actually creates a bill and along with it, the accounts receivable transaction and all the data that goes along with it, allowing users to see every step of the process in great detail.

True integration means all the processes are actually woven into the product, not just a process of handing off pieces of information between modules. Truly integrated software is one in which you cannot tell when you are in one product vs. the next or how the flow of information goes back and forth within the system. Non-integrated products typically necessitate starting up a process that requires a multitude of steps.

RESOURCES

Every implementation is different and every company has different resources at their disposal.

One method of ensuring a product is truly integrated is to look for third-party certification that says the product's code has been tested and performs as promised. Microsoft, for example, has an established certification process with its business partners that helps ensure the product is truly integrated with its systems.

PREPARE

The best way to prepare is to look ahead and determine what your needs will be down the line.

Buying different best-of-breed solutions are a way some contractors believe they can find the best pieces to complete the process. However, many have found that all the integration and double entry work necessary, not to mention the cost of maintaining the integration or the overhead, can end up costing two or three times the cost of the original piece of software.

Contractors have found great advantages in working with one vendor to deliver an entire solution totally integrated. That does not mean the vendor needs to write every piece of software.

What it does mean is that out of the box, all of the work needed for the piece of software to communicate is taken care of. This means you no longer need to worry about having a large IT group to make all of this integration work. This is essential as IT groups begin to shrink within construction firms. Research from Constructech magazine shows 35% of contractors use one person to run their IT department, while 14% have no internal IT department at all.

The best way to prepare is to look ahead and determine what your needs will be down the line. While you may not require things like mobile, Web portals, and customer-relationship management out of box, you may want the option to add this down the line. Develop a clear understanding of your vendor's ability to add such functionality down the line and what it will mean to your current implementation and everything that is integrated.

A True Test

Arguably no point during the entire selection process is more important than the product demo phase. This is the time when the rubber truly meets the road. While it is hard to dispute the value of a good product demo, you should never purchase a system based solely on the product demo. Never get caught up in the controlled demonstration put on by the vendor. Instead, it is important to know what you are looking for during this phase.

During the demonstration, never be afraid to ask your vendor to put its money where its mouth is when it comes to its software. When bringing vendors in for a demonstration, have it work with your data rather than test data. For example, ask your vendor to take a typical estimate out of your bidding system and bring it into its software. From there ask the vendor to perform different functions, such as generate a purchase order or a sub agreement, create a billing, pay a sub, create a change order, etc.

This process takes the vendor out of its controlled environment, providing a true test of how the software will operate in your environment.

Of course it will also be important to have members of the selection committee in the demonstration, and make sure product questions get answered before or during the product demonstration. This will ensure the team understands how the product will work and give members the opportunity to get all questions addressed.

Making the Commitment

Budget

Once you determined that new software is necessary, the process of setting a realistic budget is essential to success. Typically companies believe they can spend a few hundred thousand dollars on a system and be fine. Some suggest, however, that for a \$100 million contractor, for example, you should be looking to spend two or three times that amount.

When establishing a budget, a good rule of thumb is to allocate around 1-1.5% of your average revenue for the past three years

This is due in part to all the people involved and the setup of all the pieces of the system, which will be covered in later sections. When establishing a budget, a good rule of thumb is to allocate around 1-1.5% of your average revenue for the past three years. Once you factor in software purchase, plus implementation costs, some estimate this figure goes up to approximately 3% of your average revenue for the past three years.

It is important to note that this number should reflect revenues of a typical year, not one that has dipped as a result of poor economic conditions, as this number does not accurately depict your requirements on average. For example, if your company averages \$100 million annually, but as a result of poor economic conditions average \$60 million last year instead, you should work with the \$100 million number with the thought that \$60 million figure was an anomaly.

Expect to allocate 10-20% of the cost of the software license on training, and 18-25% on maintenance for a full year.

When establishing a budget, companies need to factor in all costs, including software license, database license, hardware, implementation costs, training, annual maintenance, and internal costs. For example, SoftResources, which specializes in software evaluation, says companies should expect to allocate 10-20% of the cost of the software license on training, and 18-25% on maintenance for a full year.

Personnel

The decision to switch has been made, a realistic budget has been set, now you must decide how to approach the evaluation and selection process. This is a critical step, yet one companies often underestimate. In some cases, the person within the organization is tasked with finding a new system is selected based simply on convenience. In other words, a bookkeeper or accountant may be selected to conduct the process because they have the time to commit, but the reality is this person may not have the breadth and depth of experience to handle such a project.

First and foremost, companies must make the decision of either picking a system with their own internal resources or opt to go with an outside resource, like a consultant. However, internal vs. external doesn't need to be a mutually exclusive decision. In many cases, a consultant can provide a complimentary service to your internal selection committee, helping the team be efficient, ask better questions, understand what they are seeing—essentially helping them read between the lines.

If you do choose the consultant route—either exclusively or as a supplement to your internal team—it is important that the consultant have a familiarity with your line of work. The misnomer is that all consultants are experts in your field who will help you go through the entire process with unwavering expertise. However, this is not true in all cases. Be aware that if you do not choose the right consultant, he or she could be coming into your organization with little knowledge on your business or industry and therefore are forced to learn and document all of your processes in order to fully understand your business. Also understand that this route could add another layer of cost to the process, which may not provide a good payback.

Many times, a contractor will fail to investigate the full extent of what the consultant is writing and requesting. Also, it is important that the consultant brings you to a point where you can do a true apples-to-apples comparison of software. However, ensure the costs associated with getting to this process are established upfront.

It is a good practice for contractors to check references on consultants. Talk with other contractors that have used consultants, asking them whether or not they were happy with the service provided and whether or not they believe that the consultant truly understood their business—did they get good value from the amount of money spent?

A solid consultant will help facilitate product demos that are more meaningful, help in licensing agreements and implementation planning, and be key to guiding you early on during the needs analysis phase. A company that has not done this before tends to say this is what we want or need from a system because this is what we have always done. A good consultant can bring best practices to the picture rather than trying to find software that does it the old way.

When going the internal route, the first step harkens back to ensuring the person or people selected are not done so based simply on convenience. Companies should take the route of forming a selection committee made up of key members of the company that software. Ideally, personnel selected should be ones who understand all the operational and accounting aspects of your business. While IT may seem the ideal fit for this project, the fact is many times IT expertise is of secondary importance when making an operational decision.

NOT IDEAL

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The selection committee should involve members of your team that will be involved with the system on a daily basis. While the number of people that sit on such a committee varies from company to company, the types of people on your committee share common roles, starting with the key executive. Include a senior manager in each area of your business that will be affected by the software; i.e., a representative from operations, finance, service, project management, construction, etc.

These individuals don't necessarily need to be involved in every aspect of the selection process, but when it comes down to making a decision, they can be very instrumental in making them quickly and easily. Within that committee should be a subcommittee made up of two or three members. Having the larger committee sit through each and every demo can be a recipe for disaster and runs the risk of individuals becoming burnt out and unable to discern one product from another.

TEAM

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Achievable Expectations

The role of this committee will be to set realistic expectations on the system. Just as you set a realistic budget for the software, it is equally important to set realistic expectations for how that system will operate within your company.

Realize that the system out of the box should handle 70% of the routine business.

Within this selection committee you should conduct a needs assessment, identifying critical features. An important component of this assessment is to get feedback from different functional areas within your company related to the benefits that system should bring to the organization. This can help you define not only the need, but also the justification for each need. Fundamentally it gives you a good foundation that says: even if I cannot afford to do everything with the new software, I can at least see the highest level of return items.

Companies can end up hurting themselves during the implementation phase, and it starts as early as the selection process, by not knowing their ability or what their requirements are. If you simply place a great deal of demands on the process and expect to do it the old way, it can spell disaster.

Companies can end up hurting themselves during the implementation phase, and it starts as early as the selection process, by not knowing their ability or what their requirements are. Companies need to go through at a high level and identify all major needs within the business and ensure they are clearly defined; e.g., do you want mobile apps for everyone; do you require a graphical schedule board; how are maintenance contracts being done, etc. The best strategy is to choose top areas and list critical points under each.

One problem a company faces is that it goes out and asks all end users about what they do and what they want the system to do. It is important not to lose sight of the things you do on a routine daily basis—the 70% of the business that functions routinely. Don't simply focus on the 30% of the business that functions out of the ordinary—like specialized billing for one client. Realize that the system out of the box should handle that 70% of the business. If it just so happens that the system has the ability to handle that 30% exception to the rule, simply chalk that up to being a bonus. A focus on the core business is what will ultimately make this piece of software a success.

In conclusion, the technology business environment is constantly changing, evaluation of the vendor is as crucial as the evaluation of the functionality. The right implementation partner brings experience, industry knowledge, best practices, and technical capabilities to the table. You should regard your software as a key component of your organization that requires care, maintenance, and upgrading. By focusing on what you need and understanding the total cost of ownership of your software options, you make sure you pay the right amount for your software. When all criteria are used, you gather the information you need to give you confidence that you have made the right decision.