

# In Brief

ERP INSIGHTS | ACCOUNTING | PERSPECTIVES | Q&A



## ERP INSIGHTS

# We Require Requirements

BY MIKE MUCHA



**E**nterprise resource planning (ERP) system implementations offer much promise for improving business processes, empowering employees with tools to become more effective, and ultimately transforming the entire organization. ERP projects also involve considerable risk, require significant investments in both time and money, have the capability of stressing an organization's culture and its people, and have no guarantee that project goals will be achieved. Most governments also have limited experience with ERP implementations with major projects only occurring once every ten to 15 years. While some organizations going

through the process are able to achieve amazing success stories, others don't fare as well and can experience failure. The most likely outcome, though, is somewhere in the middle. Yes, ERP projects are difficult, but also not impossible. In many cases, difficulty doesn't come from the technology, but rather the organizational changes necessary to achieve the project goals that often go along with implementation of best practices, streamlined processes, or modern functions.

ERP projects include many complex components that involve a variety of stakeholders, all of whom must come together if the project is to succeed. Gaining support and alignment requires a clear project vision, achievable goals, and a well-defined scope. Establishing where the finish line should be is and making that known to everyone involved makes the project much easier to manage and much more likely to achieve success.

For the past 25 years, GFOA has provided resources and services to help organizations navigate the path to an ERP system replacement, and one component that is essential to our approach is the development of functional requirements. When used

correctly, functional requirements are a valuable tool throughout the entire project. Requirements help communicate scope to internal project stakeholders and set clear expectations about how the system will support future business processes. Requirements also then communicate the scope to potential vendors so they can propose the appropriate software and services. In their proposals, vendors will confirm that the requirements will be achieved, and the government's evaluation team can properly analyze proposals to determine which offers the best value. From there, requirements define the scope of the statement of work and can serve as a benchmark for testing and project sign off.

## WHAT ARE REQUIREMENTS?

Requirements describe major tasks, outcomes, or functions that the configured ERP software will need to do to support business processes. GFOA prefers to differentiate requirements that address "what" the system must do versus requirements that identify "how" the system should do something. To focus more on outcomes, we try to avoid "how" requirements. Also, by specifying what [but not how] the government allows for

the opportunity that the software vendor will provide a better way of meeting the requirement.

One important clarification is that functional requirements shouldn't describe system features of what the system has the ability to do. They should describe functions that are actually built into the system by the consultants tasked with configuring the project and that are available for staff to use. There is a big difference between "has the ability to do" and "does." For example, every morning when I wake up, I have the ability to go to work and complete my required tasks. But what's important to my supervisor is that I actually go to work and am productive.

All requirements should also be organized by business process or steps in a business process. Functional requirements serve as a checklist or set of criteria that defines the scope of what you need the ERP system to do to achieve your new business processes. Requirements then describe parts of a transaction or process, calculations, and major outcomes (such as, reports generated, information stored, approvals). Exhibit 1 shows sample requirements that support the purchase requisition process in a standard ERP system. Each requirement is written as a standard to be achieved by the ERP system or project, and each one can be verified or tested. Organizing requirements by process makes organizing testing efforts much easier.

## HOW DO WE DEVELOP REQUIREMENTS?

One trap governments face with ERP projects is configuring the new system to work just like the old one. To mitigate this risk, GFOA advises governments to work on improving policies and processes before engaging any technology vendors and developing requirements that support a future vision. Steps in GFOA's recommended process include:

- **Analyze existing processes.** Governments should document existing business processes to capture key elements. For many processes, this could also include drawing a process map. Bringing together stakeholders from multiple departments to document and discuss current processes is also valuable. Stakeholders are often knowledgeable about their portion of the process, but unaware of steps

taken in other parts of the organization. Better understanding of the full current process makes identifying opportunities for improvement easier.

- **Determine opportunities for improvement.** After processes are documented, stakeholders can brainstorm options to improve the process. At this stage, applying concepts from a Lean process improvement approach can help you identify waste or non-value added steps. When you're coming up with improvements, you'll likely identify options that can be implemented immediately, instead of waiting for a new system. For others, new technology will be required to support new business processes.
- **Define future business process expectations.** In evaluating options, you will start making decisions about what the new process will look like. Before engaging technology vendors, define what you want the future process and policies to look like. You will eventually want to make full use of your system and make sure you are using the ERP system as it was intended, but ERP systems often offer many configuration options, and you need a general sense of direction going into the project. From there, you can optimize the detailed process with the system's bells and whistles.
- **Identify functional requirements to support future process.** What starts as a general vision for a new process will need to identify objective standards communicating a scope of work for a potential vendor. When you start defining requirements, you are really putting the process vision into operation by establishing acceptance criteria that will define the project scope.
- **Clearly communicate process expectations and requirements in a request for proposals (RFP).** Communicate the requirements to potential vendors within the context of business process expectations and the changes needed to get from where you are now to where you want to be with the new system. The scope of an ERP project is not just purchasing software, but also purchasing the consulting services needed to set up the software, convert data, train users, and manage teams along the way.

Requirements as described in this article can be used for new ERP implementations, to upgrade projects, or to simply assess features of your current system. In fact, the broader concept of developing requirements or clearly defining the scope of a project, an RFP, or a contract is an established best practice supported by project management, technology, and procurement standards. From a technology project perspective, requirements are essentially the same as test scripts developed from your business processes or use cases to provide a form of quality assurance and to ensure that scope is met. From a procurement perspective, as communicated in NIGP's Global Best Practice on specifications, requirements serve as the specifications that define scope for the vendor.

## NIGP Global Best Practices—specifications

Using specifications (or requirements) in competitive solicitations and contract documents is a best practice supported by NIGP's Global Best Practices. Performance requirements describe the desired result or commodity and are not concerned with specific details of the commodity's physical characteristics or features. The best practice defines some of the benefits of using requirements in contracts, all of which are applicable and relevant to ERP contracts.

- Allow potential vendors to use their expertise, creativity, and innovation to provide a solution. The potential vendor chooses the method of achieving the outcome.
- Place a higher degree of risk on the awarded vendor, who is responsible for achieving the outcome and will be evaluated based on defined criteria (the requirements).
- Provide opportunity for innovation. Allow potential vendors to suggest unique solutions to defined needs.
- Allow end users to benefit from the latest products and technologies.
- Corrective action may be applied if service levels are not achieved (for example, warranty remedies for failure to satisfy the requirements).

Read more at [nigp.org/our-profession/global-best-practices](https://nigp.org/our-profession/global-best-practices).

## EXHIBIT 1 | SAMPLE REQUIREMENTS THAT SUPPORT THE PURCHASE REQUISITION PROCESS IN A STANDARD ERP SYSTEM

NUMBER	REQUIREMENTS
1	All staff have access to enter purchase requisition
2	Purchase requisition can store the following information: <ul style="list-style-type: none"> <li>• Vendor (optional)</li> <li>• Price</li> <li>• Account</li> <li>• Justification for purchase</li> <li>• Commodity code</li> </ul>
3	Purchase requisition identifies if purchase is related to: <ul style="list-style-type: none"> <li>• Contract</li> <li>• Work order</li> <li>• Project</li> </ul>
4	Purchase requisition can be initiated for multiple fiscal years
5	Purchase requisitions initiate approval process
6	Purchase requisitions pre-encumber funds
7	Approval process for purchase requisitions includes approvers based on: <ul style="list-style-type: none"> <li>• Dollar amount</li> <li>• Department/organizational chart</li> <li>• Type of purchase</li> </ul>

At this point, future processes have been defined and requirements set. You can now solicit proposals from vendors.

### WHAT ARE POTENTIAL VENDORS OFFERING?

Standard vendor proposals offer descriptions of software products or provide explanations of consulting methodologies designed to implement the software products. They also typically make claims about their expertise or identify differentiators showing why a certain product leads the market, takes an innovative approach, or delivers superior service. What they often don't contain is a description of specific business processes the system will support or how the system will be set up to meet accounting standards, comply with payroll calculations defined in a union contract, interface with existing software products, or facilitate any of GFOA's best practice statements. For this, vendors will need to respond to a government's requirements affirming the requirements will be met, and even provide information as to how. In its simplest form the RFP with its requirements define a problem to solve. The vendor's proposal identifies specific tools (the software) and an approach (consulting services) that together

comprise the solution to solve the problem. Moving forward, a government and the vendor it selects will agree to a statement of work and scope that is defined by the requirements. Having both the requirements and the responses confirming the vendor's scope for satisfying the requirements is essential.

### WHY DO VENDORS RESIST INCLUDING REQUIREMENTS IN A CONTRACT?

To be fair, not all vendors resist including requirements in a contract. Some view requirements as an effective way to define scope and hold the vendor accountable to promises made during the sales process. And some understand that requirements can benefit both parties by clearly setting criteria for acceptance of the project. Completing all the requirements enables the vendor to invoice for any payment associated with final acceptance or project close-out, or to demonstrate that intermediate deliverables are working toward achieving the defined end scope. There are also vendors that resist or flat out refuse to include requirements in the contract. Below are some of the more common justifications for avoiding the accountability imposed by requirements.

**1. Requirements are vague.** The purpose of a requirement is to provide an

objective standard for the configured system to achieve—although the quality of requirements isn't always consistent. Ideally, both the vendor and the government should be able to assess whether the ERP system has met a requirement, coming to the same conclusion. The intent of vague requirements can be hard to understand; they are, therefore, very difficult or impossible to test. It's in the best interest of both parties to clarify unclear requirements. Failing to do so leads to a potential dispute. Clarifying and discussing the vague requirements eliminates this concern and allows all requirements to be included in the contract.

**2. Requirements aren't really requirements.** If you found the requirements on the internet and they don't apply to your project, then they probably don't have much value in the contract anyway. But if you developed your own requirements or reviewed an existing list and determined that all the requirements are relevant, they provide accountability and there should be no problem in including them in the contract.

**3. Software vendors can't control how the system is implemented and shouldn't be held responsible for the system being configured incorrectly.** Project requirements really serve two purposes. The first is to ensure that the software you purchase is capable of performing the tasks your project requires. The second is to ensure that the software was configured appropriately to meet your needs. If the software vendor is not involved in software configuration, it may be fair to leave the requirements out of the software contract. In this case, the firm responsible for implementation should include the requirements and use them to define the scope to ensure that services will be provided to satisfy the requirements.

**4. Requirements should not be applied to software-as-a-service contracts.** As ERP systems migrated to the cloud, some cloud vendors tried to claim that getting a vendor to commit to requirements would actually hurt the government, as it would prevent the vendor from rolling out new

features in the promised upgrades that the cloud would make possible. This is simply not true. Requirements that define what the system will need to do in no way hinder the software vendor's ability to innovate on how it will accomplish a requirement. In fact, with newer software-as-a-service products, requirements become even more important as it's much more likely that the vendor's new product doesn't yet offer the functionality that was promised, or the consulting approach underestimated the work effort required to implement it. Having requirements in the contract is therefore that much more important.

**5. Leadership from the vendor won't allow it.** It's not surprising that the leadership or decision makers for the vendor will look out for the vendor's best interests and try to avoid accountability or making commitments to follow through on sales promises. It's also reasonable for the leadership or decision makers from the government to not want to do business with a firm that takes this approach. In one of GFOA's recent projects, the vendor tried to make the argument that requirements should only be used as part of the procurement and demo process to find the best vendor. The firm claimed that from that point on, governments should adopt the vendor's approach, and vendors shouldn't be required to follow the requirements. Don't be fooled. It's difficult to think of any scenario where this would be acceptable. Most RFPs or government contracts should set the expectation that the vendor not only include their responses to the requirements in a contract, but also provide a warranty for services. A vendor that takes exception to this requirement is making a significant change to a material term of the contract that may even make the entire proposal non-responsive to the RFP.

#### WHAT IS THE RISK OF SIGNING A CONTRACT WITHOUT REQUIREMENTS?

When governments sign a contract for an ERP system or for ERP implementation services, they actually know very little about the product, having never used it before, and must rely on the promises made during the sales process.

The vendor should provide services that achieve the requirements, and any deliverables or milestones should reference requirements where applicable in their acceptance criteria. Quality assurance on the project should trace the requirements through design, system configuration, testing, and ultimately final/system acceptance.

Contract documents that identify modules purchased or hours of services to be provided also provide very little protection. For example, if you purchase an "accounts payable module," what you just purchased is not clear. To get the functionality you want, you may need the "advanced accounts payable module." Similarly, if the consulting proposal calls for 500 hours of services, you have no idea if 500 hours will get you a completed project or one that is only halfway there. The requirements provide protection by clearly defining project success and the standards to be achieved before the project can be considered complete. For example, if your requirements defined that you needed to process invoices through an approval workflow, initiate electronic payments, and send 1099s, you would have protection if you later learned that one of those functions was not included in what you initially licensed or were promised.

Let's consider a similar, non-ERP example and assume that you are issuing an RFP to purchase a new house. Your defined requirements are that you need at least 2,500 square feet, four bedrooms, a finished basement, and a pool. You accept proposals from multiple housing vendors, and each one offers to build a house that meets each of your requirements. You interview builders, review pricing, and ultimately select the vendor that seems to offer the best value. Then you're presented with a contract that only requires the vendor to build you "a house." Do you sign? It's possible that you would still get the house you wanted—but it's also possible that the vendor would deliver a house that fails to meet your requirements, even though it still qualifies as a house. That vendor might also run into challenges during construction and eliminate the pool, to save time. And since there were no requirements in the contract for the pool, you still end up paying full price.

For at least the last 15 years, GFOA has met repeatedly with vendors claiming to have found a pre-configured template or accelerated method of implementing an ERP system. Often, the advantage to this approach is a reduced level of effort and a more competitive price. But there really isn't any "easy button," and to make this work, vendors will need to limit scope and avoid accountability. Instead, they offer their own definition of what project success looks like. GFOA has found that this approach often removes from scope many essential functions that governments need, like project and grant accounting, payroll, workflow, or reporting features. Similarly, many of the functions that offer the biggest return on investment or would require a more difficult process change to implement, are reserved for later phases. And without requirements, it's very difficult to find this out until after you are in the middle of implementation and starting to question the "good deal" that you signed.

#### HOW DO WE ENSURE THAT THE REQUIREMENTS IN THE CONTRACT ARE EFFECTIVE?

Including requirements in the contract should be a standard expectation for all governments—but simply including requirements in the contract is not enough. Requirements should be referenced in the following terms:

- 1. Scope.** The statement of work should specifically reference the requirements that help define the scope of the project. The vendor should provide services that achieve the requirements, and any deliverables or milestones should reference requirements where applicable in their acceptance criteria. Quality assurance on the project should trace the requirements through design, system configuration, testing, and ultimately final/system acceptance.



2. **System acceptance.** At the end of the project, after its gone live, the government should be able to confirm that all requirements have been met before signing off on the project.
3. **Warranty.** The vendor should provide a warranty in case requirements are not met. The standard warranty remedy is for the vendor to first re-perform services or, if that isn't possible, to refund any software or service fees associated with any warranty issues.
4. **Order of precedence.** Vendors will insert limitations on service, so watch for conflicting statements in other sections of the statement of work or agreement that limit the effectiveness of requirements. For example, if the requirements indicate that the vendor is responsible for developing interfaces to a third-party utility billing system, but also caps interface development at a set number of hours, you may hit the cap before satisfying the requirement. Where there is a potential for conflicting statements, governments should insist that requirements and a commitment to meeting the requirements takes precedence.

## GFOA IS TAKING A NEW APPROACH TO REQUIREMENTS

Looking back on GFOA's overall experience in working with local government clients to help plan for, procure, and oversee the implementation of ERP systems, there is still room for improvement on requirements. Some vendors can be resistant to a government's requirements as an accountability tool, and there is no doubt that requirements provide some level of protection for promises made during the sales process. There is also no doubt that clearly defining the scope for meeting requirements has helped governments avoid millions of dollars in change fees. It's also disappointing when governments settle for a go-live that only delivers a fraction of the promised functionality and very little progress toward improved processes or the adoption of best practices.

We remain frustrated by the continued negotiation challenges in getting vendors to agree to include requirements in the

contract. Perhaps there is a different way to approach ERP requirements that makes it easier for vendors and governments to improve the success rate for ERP projects. In taking a step back to evaluate, we can recognize that some of the requirements governments have developed have been confusing, vague, or irrelevant. We also understand that writing requirements can be difficult, and that starting over with developing a new set of requirements for every project is inefficient for both the government and for the vendor that needs to respond to something new each time.

So, in response to these problems, GFOA plans to develop a standard set of ERP requirements. The definition of these requirements will be refined over time to clarify intent, what is necessary to achieve the requirement, and how it fits with common local government practices. The requirements will also define a minimum viable product and provide a target for vendors and governments that want to implement a core ERP system for finance, procurement, and human resources/payroll. The requirements will also include references to GFOA's best practices.

GFOA's mission is to advance excellence in government finance, and we provide resources, tools, templates, and checklists to support local governments. These requirements will be similar to other resources that are available to members. GFOA would then also provide education and continue to advocate for their use to support overall adoption of best practices.


Over the next few months, GFOA will work toward releasing a series of resources, which will be available at [gfoa.org/erp-requirements](https://gfoa.org/erp-requirements), that set common expectations and better promote effective strategies for managing scope and accountability on ERP projects. We hope that using these resources will provide local governments (and vendors) with significant advantages by:

- **Clarifying confusing or vague requirements.** GFOA can refine a standard set of requirements, offer more explanation, and clarify any questions with a set of requirements that will be used over and over.
- **Defining minimum standards for modern ERP implementation.** Going live with the same functionality found in your 20-year-old legacy system is not

a successful project. GFOA will define minimum standards for modern ERP implementation scope, ensuring that the core functionality is in place and governments can benefit from a complete system.

- **Integrating GFOA best practices.** GFOA has many best practice statements that rely on ERP systems. By helping governments define implementation success by including best practices, GFOA will improve adoption rates of these important financial management practices.
- **Providing accountability.** GFOA will develop a standard approach to requirements traceability and recommendations for system acceptance, deliverable acceptance, and a warranty that includes accountability to the requirements.
- **Becoming more efficient in developing and responding to requirements.** By standardizing core requirements, vendors should be able to reduce the time it takes to respond to RFPs and ideally even reduce the time it takes to implement a system.
- **Offering more assistance with requirements traceability.** A common set of requirements will allow GFOA to more easily provide services to verify that requirements are met at multiple stages in the project.
- **Recognizing governments and vendors for implementation success.** GFOA may recognize governments (and potentially vendors) for successful ERP implementation.

## CONCLUSION

We look forward to this new approach and hope that it provides value not only for governments that are taking on new ERP projects, but also for assessing the scope of already completed projects. For more information on GFOA's ERP requirement resources or to volunteer to assist in developing or reviewing standard business process documentation or draft requirements, please visit [gfoa.org/erp-requirements](https://gfoa.org/erp-requirements). For additional questions, please contact Mike Mucha at [gfoa.org/bio/mucha](mailto:gfoa.org/bio/mucha). 

---

*Mike Mucha is deputy executive director for GFOA and director of GFOA's Research and Consulting Center.*