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FEATURE STORY

Joseph E. Addiego III

way to go live a framework for new IT implementation

The best way to ensure success in purchasing and implementing a new health IT system is to approach every step systematically.

AT A GLANCE

Implementation of a health IT system is an initiative that requires a clear game plan. That plan should entail:

- Careful initiative planning and vendor selection led by an individual with the appropriate technical expertise
- Contract negotiations led by an individual who understands the inherent traps and pitfalls of such negotiations
- Choice of a qualified project manager
- Ongoing monitoring of the project's status.
- Implementation including conversion of the right amount of legacy data at the right time
- Assignment of a point person or persons to monitor results following implementation

The U.S. healthcare industry will spend upward of \$61 billion on health IT systems in 2004, up from about \$55 billion in 2003, according to research by Cambridge, Mass.-based Forrester. A recent report by Scottsdale, Ariz.-based Instat/MDR says these figures are likely to increase annually by 6 percent over the next few years (*The "Industry" Effect: IT Trends and Expenditures in the U.S. Healthcare Industry*, October 2004). This trend reportedly is driven by the fear of increasing medical errors, new regulations and requirements, and greater financial support from the federal government.

Given the growing need for health IT systems, the multiplicity of systems from which to choose, the substantial investment required (in terms of both time and money) to select and implement such systems, and the disastrous consequences that can result from a system implementation failure, hospitals need to approach the purchase and implementation of a new system with a specific game plan. A good plan has seven stages.

Stage One: Planning

The planning stage is perhaps the most important phase in the purchase of a health IT system. Before proceeding, you should analyze how great the need is for the new system. Considerations include whether certain processes should be automated or the legacy system needs replacement. Then, you must perform a risk analysis that, in the very least, meets the HIPAA security and privacy requirements. An independent third-party consultant with the appropriate technical expertise should be hired to assist in these analyses.

Upon completion of these critical first steps, it's time to assemble a qualified, dedicated team to take ownership of the project and push hard for its success.

Ideally, this team should include the expert consultant, an individual from the IT department who has some relevant technical expertise, a high-level executive who is authorized to make critical business decisions (often, the CFO), and at least two of the IT products end users.

Let's assume that you are the senior financial executive on that team. Your role is to act as a champion for the project to encourage others within the organization to make the effort necessary for it to succeed.

Your team should use results of the requirements analysis to develop a picture of how the new automation will fit best into your organization's everyday working environment. Specifically, identify those features that are critical to the successful everyday use of the system, and those that are not essential but that would be useful "add ons."

The planning stage should culminate in setting a budget for the project, which could narrow the choices of available products. Be sure to set aside a sufficient portion of the budget to upgrade existing hardware in addition to purchasing new software. In many organizations, legacy hardware lacks the processing power to run the new software.

Stage Two: Choosing the Vendor

The vendor selection process also is best undertaken with the assistance of a third-party expert—preferably the same person employed at the planning stage—who can compare the organization's business requirements with the product functions and features offered by the vendors that the hospital should consider. This expert also should assist in developing a request for proposal that sets forth the technical and functional requirements of the desired product.

The RFP should be sent to as many different vendors as possible, with requests for them to submit formal proposals in a format that facilitates systematic and analytic comparison. Also, request informational literature, and ask if a vendor is willing to provide a limited demo version of its products. After reviewing the material and testing the demo, ask two or three of the vendors to demonstrate full versions of the product.

A key point here is to demand a *live* demonstration of an actual *working* product. Beware of vendors that are not willing to do more than offer brochures and slide show presentations.

During the live demonstration, ask the vendor to duplicate actual tasks and processes that will be used after implementation, and insist that a team member be allowed to test run the program. Don't be swayed solely by the demo, however, as it can be manipulated by the vendor.

Also be wary of vendors that tout "bells and whistles" of their systems that are yet to be developed. Vendors could use the promise of future features to entice customers to buy their programs but fail to develop them, or worse, develop them ineffec-

IT IMPLEMENTATION FRAMEWORK

To ensure the successful implementation of a health IT system, the initiative should involve a framework consisting of at least the following seven stages. Accountability for performing the steps that make up each phase typically will be assigned to various key players throughout and after the implementation.

Stage One: Develop a Plan

Key Players

Project team:

- Independent third-party consultant with expertise in IT needs assessment and risk analysis
- Senior executive with decision-making authority (e.g., the CFO or CIO)
- IT leader with relevant technical expertise
- Two end-user representatives

Action Steps

1. Assesses IT needs (Third-party expert)
2. Perform risk analysis in accordance with HIPAA requirements (Third-party expert)
3. Identify features critical to the system's everyday use, as well as desirable, but not necessary, add-ons (Project team)
4. Set budget for project, accounting for the need to upgrade existing hardware and purchase new software (Project team)

Stage Two: Choose the Vendor

Key Players

Project team (possibly substituting original third-party expert with a new consultant with expertise in vendor selection)

Action Steps

1. Develop a request for proposal and send it to as many different vendors as possible, requesting limited demos, if available (Project team, guided by third-party expert)
2. Review formal proposals and test limited demos (Project team—also steps 3-4)
3. Ask two or three "finalists" to demonstrate full versions of their products, duplicating actual tasks and processes to be used after implementation, and allowing a team member to test-run the product
4. Vet the finalists regarding customer satisfaction, records for customer service after installation, and longevity in the industry

Stage Three: Negotiate Contract Terms

Key Players

Hospital's executive team (in particular, the senior executive member of the project team)

Outside legal counsel (optional but recommended)

Action Steps:

1. Engage outside legal counsel who has relevant experience (Executive team)
2. Start with a contract drafted by the hospital (Legal counsel and senior executive from project team—also steps 3-8)
3. Insist on a fixed schedule of specific deliverables, and specify objective standards against which these deliverables will be judged
4. Tie payment schedule to the successful completion of the deliverables
5. Set expectations and accountability for data conversion
6. Negotiate for a consequential damages clause giving the hospital the right to recover all damages incurred in the event of a product failure
7. Make sure contract includes a provision for possible disputes, including that any litigation be pursued in the hospital's community
8. Pay attention to *all* fees to be paid under the contract—not just initial fees

Stage Four: Appoint a Project Manager

Key Players

Hospital's executive team

Project team

Action Steps:

1. Consider product managers preferred or certified by the product vendor (Executive team and project team—also steps 2-3)
2. Ascertain each candidate's level of experience with the specific version of the product
3. Speak with other institutions and companies who have used the same manager

Stage Five: Monitor Ongoing Project Status

Key Players

Project manager

Project team

Action Steps

1. Ensure vendor adheres to schedule of deliverables specified in the contract (Project manager)
2. Ensure that the product is tested at each stage to confirm deliverables (Project manager)
3. Track progress to confirm adherence to schedule and budget (Project team)

tively, causing problems with the already-functioning aspects of their systems. The product should be ready to perform all the required system functions.

Finally, vet the vendors regarding their customer satisfaction ratings, customer-service records after installation of their products, and the extent of their track record in the industry. The vendor should be willing to provide a substantial list of past and present customers. To the extent possible, contact the vendor's current customers and ask them about their level of satisfaction and any problems they encountered in working with the vendor.

Stage Three: Negotiating the Contract

When the time comes to negotiate the contract, it's best to engage legal counsel who has relevant experience. A hospital that tries to negotiate a contract on its own behalf, without a full awareness of all the traps and pitfalls inherent in such negotiations, places itself at a distinct disadvantage. An experienced attorney will be able to handle all of these issues, helping the organization avoid or at least minimize disputes in the future. If you must (or choose to) negotiate yourself, either using in-house counsel or a member of your management team, insist on the following key points.

Develop the contract to your own specifications. Start with a contract drafted by your organization, rather than the vendor, to avoid biases that are typically built into a vendor's standard contract.

Insist on a fixed schedule of specific deliverables. Specify objective standards against which these deliverables will be judged, and require that objective tests be run to determine whether the deliverables have been satisfied.

Tie the payment schedule to the successful completion of the deliverables. Withhold a portion of the final payment until a minimum of 30 days after the last component of the software is installed. Never make full payment up front, and never make final payment until sufficient time has passed to verify that the software works properly in the live environment.

Be specific about data conversion. Include clear provisions regarding who is responsible for converting data and when it will be performed.

Negotiate for inclusion of a consequential damages clause. Such a clause gives you the right to recover all damages incurred (the cost of the software, plus any other damages that result from any delay or failure to implement the product successfully, including lost profits and the cost of hiring another vendor or consultant to fix the problem) should the product fail at any point. Although the vendor would be unlikely to agree to such a provision, it can be used as a bargaining chip in negotiations.

Specify that litigation regarding disputes be filed in the hospital's community, not the vendor's. Also, do not agree to a vendor's demand that all disputes be subject to arbitration, a process that can take longer and be more expensive than a case filed with the court system.

Be alert to all of the fees to be paid under the contract. It's easy to be so concerned with the initial fee in the negotiation process that you overlook the amount of the vendor's ongoing support and update fees. Shrewd vendors could lowball the purchase price and charge exorbitant support fees, knowing that once the product is installed and you rely on it, you will choose to pay these ongoing fees rather than switch systems altogether. Request that a certain number of patches and low-level updates be provided at no cost, but expect the vendor to charge for most updates, especially if they provide significant new functionality.

Stage Four: Choosing the Project Manager

Choosing the right project manager can make or break a health IT installation. For many projects, it works well to have the vendor both implement the product and serve as project manager. But if you prefer not to, or cannot, use this approach, select your project manager the same way you selected the product vendor. Pay special attention to how often the project manager has worked with the *specific version* of the technology in question, and speak with other companies that have worked with the same manager. Many product vendors maintain lists of preferred or certified implementation vendors. If possible, choose one of them, because they are more likely to be familiar with the product and its quirks.

Stage Five: Monitoring the Project's Ongoing Status

The success of this step depends largely on whether the schedule for deliverables is adequately outlined in the contract and how rigorously the project manager holds the vendor to that schedule. The project manager should ensure that the product is tested at each stage to confirm that it satisfies the identified deliverables. Similarly, the institution's internal team should work closely with the vendor and project manager to keep them on schedule and budget. Make sure each deliverable conforms to specified requirements before moving on to the next stage of the project.

Stage Six: Implementing the Product

Before the product can "go live," the hardware and/or software must be installed. Typically, the contract will specify whether the vendor or project manager is to perform this task. Following installation, legacy data must be converted into a format that's compatible with the new product. Because this step often requires a substantial effort, it's best to keep four points in mind.

Test the product to confirm whether it is ready for the data conversion. For this test, convert only a limited amount of data or use a test data set provided by the vendor.

Convert only as much historical data as must be accessed in the new system. Trying to convert all your legacy data could overwhelm the new system during the insertion process. It's also important to back up all the data to be converted before the process begins.

Schedule the conversion for a time when organizational workloads are low. Because the data conversion can be time-consuming and disruptive to everyday work activities, it should never be performed during a busy time, such as the end of a quarter or billing cycle.

Stage Six: Implement Product

Key Players

Project manager/hospital staff with appropriate IT skills
Vendor

Action Steps

1. Install hardware and/or software (Vendor or project manager, depending on how duties are outlined in the contract)
2. Convert "legacy" data into a format compatible with the new product (Vendor, project manager/hospital staff, depending on how duties are outlined in the contract)
3. Verify that data were converted correctly (Project manager)
4. Run a full-scale acceptance test using the completely converted data set (Project manager)
5. Go live

Stage Seven: Monitor Results

Key Players

Hospital's executive team
Point person or results-monitoring team
Original project team

Action Steps

1. Assign a point person or team to monitor ongoing use of the software and field comments and complaints from end users (Executive team)
2. When issues arise, contact vendor to work through them (Point person or team)
3. Test, and verify the necessity for, all vendor patches and updates before they are installed (Original project team)

Stage Eight: Contend with Disputes

Key Players

Hospital's executive team (in particular, the senior executive member of the project team)
Outside legal counsel (optional but recommended)

Action Steps:

1. Engage outside legal counsel who has relevant experience (Executive team)
2. Communicate issues and demands to vendor's executives (Legal counsel)
3. If the matter is not resolved, consider making a settlement demand or initiating litigation

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Verify that the data were converted correctly. No matter how well the new system is designed, if badly converted data are installed, the system will not perform properly.

Next, perform a full-scale acceptance test using the completely converted data set and your institution's own hardware. Assuming this test is successful, it's safe to go live.

Stage Seven: Monitoring Results after Implementation

This step takes care of itself to a certain degree, because the end users will complain if the new system is not performing to their satisfaction. As was done in the purchase process, assign a team or at least a point person with responsibility to ensure the software continues to be used successfully over time. End users should report all problems to this point person or a member of the team.

When an issue arises, the point person should contact the vendor's help desk or support personnel to work through it. Most vendors also maintain a web site that provides fixes of common problems that can be applied without vendor intervention. Serious bugs that are not fixed or multiple complaints that go unresolved should be taken to a higher level in the vendor's organization, ideally a contact person designated for this purpose during contract negotiations.

Also, over time, the vendor will release patches, updates, and new versions designed to fix known problems or provide additional functionality. Make sure that these new elements are really necessary and—as in the installation and implementation phase—be sure to test them before installing them. Too often, vendors do not fully test updates before making them available—a circumstance that can lead to unexpected system crashes. One caveat is that as vendors roll out new versions of their products, they cease providing support for their older versions, in essence requiring their customers to keep pace.

The Last "Stage": Contending with Disputes

As with negotiating the contract, it's best to engage

experienced legal counsel to handle disputes. Even if you don't intend to file suit, an attorney can provide valuable behind-the-scenes advice.

The first move in any dispute should be to send the vendor a letter formally identifying the problems and demanding that they be fixed on a specific schedule. If the vendor refuses, weigh whether a lawsuit is warranted. Litigation is costly and time-consuming, and requires a commitment of significant resources to be successful.

Keep in mind, however, that litigation is as much of a burden on the vendor as it is on you. For this reason, it may be sufficient simply to draft a complaint and send it to the vendor with a demand for settlement, in cash, fixes, or both. Once the institution demonstrates its willingness to go to court, the vendor may choose to compromise rather than assume the expense and risk of litigation and any related negative publicity.

Conclusion

Every health IT project is unique, posing its own set of challenges and problems. The steps described above offer a basic framework for successfully addressing these issues and accomplishing the smooth selection and implementation of a new health IT system. Apart from these steps, what's required is diligence, commitment, focus, and energy on the part of each individual in your organization who is involved in the process. ●

About the author



Joseph E. Addiego III, Esq., is a partner, Davis Wright Tremaine LLP, San Francisco.

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Questions and comments about this article may be sent to the author at joeaddiego@dwt.com.