

Tips for Ensuring Successful Software Implementation

Software implementation can be as time-consuming, complex, and costly as any other project—but it doesn't have to be.

By Robert Weathers



Implementing an enterprise-level, mission-critical software system is an infrastructure project akin to other sizable projects, such as building a school. It's costly and complex, takes a year or more to complete, requires the collaboration of many different parties, involves uncertainties, results in a long-lived asset requiring ongoing maintenance, and improves the working conditions and productivity of all who use it over time.

As with any infrastructure undertaking, software implementation projects are subject to the trade-offs of scope, time, and quality—aspects that are expected to remain constant when, in fact, they are quite variable.

Cost Miscalculations

Believing that those factors are constants almost certainly means failure to get everything expected, delays in the implementation schedule, and end-user difficulty, each of which can result in higher costs than expected.

Hard costs are generally protected by how they're stated. In other words, the promise of a fixed number of service days at a fixed rate per day is seldom violated without the discipline of the formal change-order process. Soft costs frequently exceed expectations because districts almost universally make miscalculations during the software implementation process:

Underdefining the scope.

Almost without exception, the scope of work included in contracts that result from requests for proposals (RFPs) will be incomplete. Most school districts don't have the time or resources to define all tasks required and to address every aspect of implementation to the depth and clarity necessary for a complete and unambiguous scope of work.

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Vendors hesitate to countermand or expand on the scope of work provided because such expansion drives up costs and extends the time frame, which is usually nonnegotiable. In addition, it is impossible to foresee every technical and operational challenge that will arise over the course of the project.

Underestimating the time line.

Time lines established in RFPs are typically unrealistic for three reasons:

1. They understate the amount of time required to complete the procurement process.

2. The “go-live” date is usually the result of holistic top-down deduction (the perceived necessity to have the new system in place by the start of the next school year) rather than of derivative analysis (bottom-up analysis of the time required to complete the implementation activities).
3. School districts insist on in-depth review and approval of all application setup decisions, data conversion results, system outputs, and milestone deliverables by their subject-matter experts, but they do not factor in the amount of time required for fulfilling this process.

Oversimplifying complex tasks, such as data conversion and training. Projects may appear successful from a time line and cost perspective, but compressed schedules may lead to hurried data conversions that don’t address the poor data quality inherent in older systems.

Oversimplifying other key aspects of an implementation project, like quality training, is also a common error. Training that relies heavily on the train-the-trainer model (because it is perceived as less expensive) but that doesn’t include role- and performance-based assessments and certification of mastery will cause low user acceptance. This phenomenon is commonly expressed by complaints, such as the new system is buggy, slow, unreliable, and hard to use, or it doesn’t compare to the old system.

Successful Implementation

Because the perceived project constants are actually variables, what can school districts do about them? The following eight points can help districts gain control of the aspects of scope, time lines, and quality and can greatly improve the prospects for a cost-effective and successful implementation.

1. **Invest more time and effort up front.** Identify the planning team early in the process and take time to consider multiple inputs when establishing the project scope. Use the request for information process as a precursor to the RFP process. Develop detailed definitions of the conversion, business rule review and application setup, security considerations, piloting, deployment and post-deployment support, integration with other systems, and quantification by role for training requirements that will be included in the RFP.
2. **Insist that the time line relate to actual time needed for implementation tasks rather than a desire to go live by a certain date.** Calendar time is the most flexible and affordable resource districts have, and the most significant aspect related to project success, especially scope and quality. Both vendor and internal staff need the time to fully execute their tasks and

School district software implementation projects have the best chance for success by meeting the following conditions:

- Business and management expectations have been realistically established.
- The RFP development process is meaningfully inclusive of the end users (school office staff, teachers, parents and students, and district program administrators).
- The RFP is fully informed by multiple data points (requests for information, neighboring school districts, etc.), and it is thorough, clear, and well written.
- Projects do not start behind schedule because the procurement process takes longer than expected.
- District and vendor staff have adequate time to complete this difficult and complex work.
- Internal and vendor project management is performed by a professionally trained and certified project manager.
- End users’ affection for and comfort with the old system are not allowed to force customization as a prerequisite to implementing the new software.
- Districts perform their own user-acceptance and performance testing independently of the vendor.
- General deployment is preceded by a pilot of the new system (at least one school from each instructional level) combined with other change management techniques to build support for the new system.

do the job well in order to guarantee a complete and high-quality result.

3. **Assign a full-time project manager and hold project status review meetings at least every other week with district management, end users, and information technology staff.** By using an RFP that reflects a thoughtful, complete, and detailed description of the full scope of the project as a guideline, costs will be well controlled with little need for change orders—or ballooning soft costs—over the course of the project.
4. **Don’t shortchange (with time or budget) the major drivers of success.** Project management, conversion, application setup, security setup, piloting, training, and deployment and post-deployment support are more important than decisions about infrastructure, hosting, or whether or not the software contains every functional requirement that the users desire.
5. **Implement the COTS (Commercial Off-the-Shelf) software as is.** Gain experience using off-the-shelf software before documenting actual deficiencies for later custom development. Defining requirements by this level of detail and subsequent testing and sign-off

requires considerable time and effort on the part of internal subject-matter experts.

6. **Be careful about including business process reengineering or fit-gap analysis as task requirements.** Business process reengineering requires detailed documentation and comparative analysis of existing business processes with subsequent customization or an extensive change management subproject to gain user acceptance of the new business processes.

Fit-gap analysis or requirements review and verification are similar to business process reengineering, except that the focus is on ensuring that the functionality of the new system meets the district's needs. Of course, this question should have been answered within the RFP process. Both endeavors require a great deal

of time and effort and elongate project schedules, resulting in significant additional costs.

7. **Perform a user-acceptance test independently of the vendor when the system is ready to go live.** In a user-acceptance test, district staff exercise the functional requirements in a test environment and document any deficiencies. The deficiencies are returned to and resolved by the vendor. Then, the functionality is retested by the school district and the process repeats until the district believes that no deficiencies remain that are worthy of preventing the project's moving forward to piloting or general deployment.
8. **Don't undermine the infrastructure.** Slow response time that would significantly hinder user acceptance is easily prevented. The test for adequate user

response time should be based on system loads at peak usage cycles, not average user response over time. Peak usage events usually synchronize across the entire school system; that is, start of school, end of grading periods, attendance taking, and so forth.

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If there is any doubt as to the capacity of the infrastructure during peak usage periods, hire an independent contractor to conduct a load/stress test after completing the user acceptance test and before piloting or deploying the new software system.

Planning Is Essential

In the final analysis, the success or failure of an enterprise-level, mission-critical software system adoption is determined more by the initial setting of management expectations, scoping, calendar time allowed, level of discipline in project management, and levels of funding for key implementation tasks, such as conversion, application and security setup, testing, and training.

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