Roadmap to Replacing A State Budget System

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Overview

Budget systems underpin the work of state budget offices. These systems touch all aspects of budget development, from setting the base through final passage by the legislature and governors’ vetoes, and are often used for budget execution. Over the years, states have added functionality to their systems, using them to track performance measures and produce budget reports, which are often the most public aspect of a state budget. An agile and comprehensive budget system is an essential tool for budget offices. However, states may struggle to maintain an evolving level of technology in times of scarce resources and limited staff capacity. Replacing a budget system is an immense undertaking that requires not only monetary resources but also strategic planning, coordination with state information technology (IT) and procurement staff, outreach to agencies, and sufficient training for users who may be resistant to change.

Due to the importance of state budget systems, the National Association of State Budget Officers (NASBO) studied this topic as a critical issue to assist budget officers exploring an upgrade or replacement to their current system. NASBO surveyed members in 2016 to get a sense of their current systems, interviewed vendors to gain expertise from the planning and product side, and held a members-only discussion at the NASBO 2016 Annual Meeting to discuss the findings in-depth.

This issue brief aims to provide a helpful roadmap for state budget officers examining their current budget systems and contemplating a future replacement. It covers critical steps including securing executive support, planning, documenting the business process, developing a strong Request for Proposal (RFP), vendor selection, and implementation. The brief includes lessons learned from states who have replaced their budget systems and highlights both challenges faced and factors for success. By reviewing state experiences in this brief, budget officers can learn helpful tips for navigating a successful budget system replacement process.

Introduction

Budget offices use their budget systems differently, but in general the system supports budget development, the production of budget documents, the tracking of legislative changes to the budget, and budget execution. In most states, users external to the budget office will also use the system for one of these phases: agency staff will use the system to enter agency budget requests; the legislature may enter legislative changes; and the system will need to interface with the financial management system for budget implementation and the return of actual data to the budget system. Due to the number of users and processes involved, budget systems can evolve over time into extremely customized and complicated systems. Often, only the most senior IT and budget staff have the skills necessary to make programming changes to the system.

As part of its survey to members, NASBO asked questions regarding the age of states’ current systems. According to member responses, the median age of state budget systems is eight years, while 21 states had systems that were over 10 years old and some states had systems over 20 years old. When systems reach an advanced age, problems can occur with upgrades and maintenance as staff with knowledge of the systems leave or retire and new staff may not be experienced in older programming languages.

In a follow up to the question on age of a state’s system, the survey also asked members if they were planning to upgrade or replace their budget system in the near future. According
to the responses, 28 states plan on upgrading or replacing their current system. Of the states planning to upgrade or replace their system, the median age of their current systems is 11.5 years.

Often information technology projects are time consuming and require a large investment in scarce resources, both in dollars and human capital. Also, a failed project may result in several years before a subsequent attempt, which can affect budget work and deadlines as offices continue to use older technology. As highlighted above by the age of systems in several states, replacing a budget system is an infrequent task and a budget office may not have the requisite expertise; the director may have to hire a consultant or dedicate an experienced analyst to lead the project.

The following sections share state experiences to assist offices either beginning the process to replace their system, or planning a replacement in the near future. Through sharing successes and challenges, this issue brief aims to provide assistance to budget offices in order to help them achieve a successful system deployment.

Leadership Matters

Replacing a state budget system is a complicated and time consuming process; it is also a project that requires strong leadership to keep the project on track and focused on the end result. A new system may also result in changes to the business process, which can face opposition from users of the system as well as external stakeholders who consume the budget documents produced by the system. Due to the high profile of the budget system, strong executive support is critical to drive project collaboration and user acceptance.

The first step is identifying the executive level sponsor – who is the project champion? It is also important to plan for potential leadership turnover and how to keep the project on track if the champion leaves. After identifying the executive sponsor, the next critical decision is to select a staff level lead. This is the person from the state budget office who will oversee the project and is empowered to make decisions as the project progresses. The staff level lead can help control expectations, both among internal budget office users and external users in the agencies. If the office decides to convene a project team, it is important to include budget staff from agencies and ensure appropriate consultation with accounting and human resource agencies. Even as the state is identifying key staff to lead the project, it is just as critical that the contractor, when selected, provides an experienced project manager from their end. Ideally, this person will have extensive expertise in public sector budgeting.

Planning is Important

As the old adage says, “measure twice and cut once.” A similar approach should be taken when deciding to replace a budget system. States must establish a realistic timeline that allows sufficient time for planning, system selection, testing and training. Planning may be the most critical step in the process, because this is when states examine their current business practices, decide on potential changes and engage stakeholders. Several states indicated in their survey responses that a successful project should not just layer a new system over the current process; instead budget offices should take the time to understand how the new system can improve their processes and create efficiencies.

When building a project timeline one aspect to include is contract negotiation. NASBO members indicated this step may take more time than originally planned for and it is worth the advance work to contact the relevant parties ahead of time (attorneys and procurement staff from the state procurement agency) and discuss options to expedite reviews. One option may be simultaneous reviews by legal staff, procurement and IT.

The planning phase is also critical to building stakeholder engagement and buy-in, and budget offices should resist pressure to limit time spent on planning and development, and instead jump more quickly into implementation.

“Estimate the resources needed and double it.”

-NASBO Member

Allowing sufficient planning time leads to a stronger request for proposal and can smooth the implementation process. This phase of the project begins stakeholder engagement and buy-in, and budget offices should resist pressure to limit time spent on planning and development, and instead jump more quickly into implementation. This first phase should enable the budget office to answer the basic question of “what is the business case for a new system?”
Understand Your Business Process

Part of the planning process is documenting your current budget process, which should include both the central budget office and agency budget offices. The documentation can help build system requirements and ensure system development ties into the vision established during the planning phase. In order to fully document the process, the project team should talk to intensive users of the current system, understand the full budget process end-to-end, and focus specifically on reporting requirements. The project team should look at this stage as an opportunity to review and evaluate business processes to determine if changes are warranted. As part of this evaluation, the project team should ask what steps are no longer needed, and what steps are limited by current technology or could be enabled or replaced by new technology. This is also a chance to ask stakeholders how the process can be improved; this could include improving accuracy, reducing the overuse of individual spreadsheets, eliminating duplication, or aligning with other initiatives. This is a critical time to identify business challenges and explore if a new system can address the challenge, as it is more difficult to solve a business problem than a technology problem.

Another opportunity presented during documentation of the state’s budget process is the identification of silos, and establishing ways to connect or eliminate the silos. Silos often exist between agency budget offices and the central budget office, the budget office and accounting, or between the executive and legislative branches. Identifying silos can be accomplished through a survey to agencies, the collection of business requirements, or querying the status of various systems being used by the agencies. If agencies are using several different systems to develop their budget requests, how can one new integrated system replace the various disparate systems to reduce data entry and duplication of effort?

Business documentation and surveying agencies allows the project team to continue its outreach to users, who may be the most resistant to change. By asking for their input on documentation and system development, the team is starting to build buy-in for a new system. Goodwill built during the planning stages can help smooth any challenges with implementation further down the road.

Due to the importance of the planning and documentation phases, a state may consider hiring a consultant to conduct the planning process or assist with business process documentation and evaluation. A state should consider what internal resources it has and the expertise of staff related to these important stages. The project team must also ask at this point if the state is willing to change their business process with a new system. If the state decides to use a consultant, it is critical that the budget office and agency staff are still very engaged in the process. The planning and documentation phases continue to drive towards the underlying vision and answer the questions “what business problem is the budget office trying to solve? What is the business case for replacement?”

Building A Strong Request for Proposal

By this point in the process a state has identified a project leader, has potentially assembled a project team, and has documented and evaluated their current business processes, all according to a realistic timeline that allows sufficient time for each of those steps. The culmination of this work leads to development of a strong request for proposal (RFP).

Several states identified a best practice for developing a strong RFP: use a Request for Information (RFI) to inform the state’s RFP. Using an RFI allows the state to understand vendors’ system capabilities and also scan for available technologies and products. Through the RFI process, states should request product demonstrations and ensure the demonstration is “out of the box,” enabling states to gain

“Our state spent a great deal of effort gathering information on business processes for the purpose of creating requirements for the new system. We spent little time prior to issuing the RFP on examining those processes to determine if they were the best or still necessary. It would have been good to spend more time on business process examination/re-engineering prior to issuing the RFP.”

-NASBO Member
understanding on what is available at a baseline and the feasibility of configuring the baseline product, before determining whether any customized capabilities need to be built. End users should also be involved in the RFI process and demonstrations to provide their feedback and expertise as well as building buy-in. States found that skipping this important step and jumping straight to an RFP tends to replicate current processes.

After utilizing the RFI process to gain knowledge of available products, developing business requirements is the important next step to building an RFP. In tackling this critical step it is imperative that states do not use recycled requirements from prior IT projects, and also to avoid blueprinting the current business process. When writing requirements, assess the business case first and view all requirements through that lens. States should also think of requirements as a whole and ask how they fit into the business case and fit with each other, instead of focusing on disparate requirements. Throughout the project, the business case – not the technology – should drive the RFP.

Prioritizing requirements and avoiding vagueness also strengthens the RFP. If a state lists each requirement as a “must,” it may result in a higher bid than is necessary. Vague requirements can cause problems and lead to misinterpretations and disagreements further along in the process. Utilizing feedback from the project team and agency staff, states should ensure requirements are specific and support the overall business case.

Beyond the requirements, the information included in the RFP should assist the vendors in responding appropriately. Examples of processes, reports, and screen shots all help inform potential vendors and strengthen vendor responses.

NASBO staff asked states and vendors what information should be included in the RFP to elicit strong proposals and received the following responses:

- a description of the “as is” process to set the current baseline;
- a clearly communicated objective;
- a calendar with required milestones;
- examples and data for specific requirements;
- current system pain points for vendor to address (i.e. disparate submissions versus one submission, inability for people to share work, inability for agencies to communicate in current system);
- all required interfaces;
- and all reporting requirements with examples when possible.

States should avoid questions in the RFP that are at such a high level that all vendors will answer “yes,” as this does not help in the selection process, and states should also be clear in identifying what they do not want in a new system.

“The state needs to clearly communicate objectives – are you looking for the project to improve the business operation, or just to replace/upgrade technology and keep the process and workflow the same?” – Vendor

Focus on Functionality

Several states pointed out in their survey responses that a system is only as valuable as the data that can be extracted from it. Throughout the planning and development phases, a focus on functionality is critical to meeting the vision for
Vendor Selection

Selecting the right vendor and budget system solution for the state is one of many important decisions a project team will need to make. To assist with this phase the team should have a strong sense of what the budget office will and will not use the system for (the business case), using that as a lens for evaluation. When assessing the flexibility of capabilities, it should be easy to add new capabilities and drop those that are no longer needed. A state should also ask the vendor about the future of their solution – is it near the end of life or due for major upgrades? During this phase, the project team should also seek to understand the complete functionality of the system, to ensure it is used as more than just a means for data entry. This can be accomplished during a prototype period when the vendor must demonstrate functionality. As part of the vendor selection process, it is also important to review relevant vendor references and make an effort to speak with past customers about their experiences working with vendor; this is critical for both the software vendor and the implementation vendor.

The evaluation and selection process should ensure that the budget system requirements can be met by either an enterprise resource planning (ERP) system or a “best of breed” vendor response. If the state is in the process of selecting an ERP system, it is important for the budget office to not just default to that system’s budget solution. As members and vendors pointed out, the budget system should not be an afterthought. When evaluating systems, the project team should also seek end user input and involve agency staff; legislative staff could also be consulted, especially if the reports provide the traditional information but may look different under a new system, causing confusion for consumers of the budget information. State IT staff are also critical in this process to understand the total cost of ownership of the budget system, to include hardware hosting, software licenses, upgrade arrangements and personnel to work on the system.

At this point in the process the project team should also explore the differences between customization and configuration, and how they each affect costs and upgrades of the potential systems. “Customization” involves changing the code of the product and is most often done only by the vendor while “configuration” is a tweak to the current code that can be done by either the vendor or trained state staff. In interviews with vendors and surveys of states, many respondents indicated that customization may make it...
harder and more expensive to improve the system or get vendor upgrades, and states should decide where they can be flexible to avoid over-customization. Some states have implemented new budget systems with no customization.

When evaluating systems it is also important to consider future upgrades and maintenance needs. Will a state invest in their employees to accomplish these future adjustments or will they have the vendor handle changes? It is important to take advantage of upgrades and improvements the vendor makes to the software, which is typically a deliverable with respect to paying ongoing software maintenance costs. It is also critical to have an agile system that can evolve over time as budget processes change with minimal consultation with the vendor, both for the sake of time and cost. States should also challenge vendors about configuration capabilities and seek to ensure sufficient knowledge transfer to budget office staff so they can accomplish a change without significant training.

Focus on core system/business requirements when developing or deploying a new system; customization outside of core business needs comes with risk and added cost.” – NASBO Member

It’s All About Implementation

There are several aspects to implementation for which the project team must plan, from change management to testing and training. Many states estimated their average project implementation period was 1.5 years and this should be built into the timeline. Points to consider when planning the implementation include avoiding the sacrifice of functionality to meet budget deadlines and considering if a phased-in implementation is the best approach for your state.

Testing the system is another crucial part of implementation and the testing plan must be thorough and sufficiently complex; states should not rely just on vendors or outside experts when developing a testing plan. The testing plan should include a backup/recovery plan and the testing phase should allow enough time for user acceptance. Several states stressed the importance of stress/performance testing the requirements; for example, simulating 500 users utilizing the most intensive elements, to thoroughly test the system. Finally, states recommended having a good bug tracking system. It is important to understand how to balance staff time as analysts will be needed for testing in addition to handling day-to-day responsibilities, and this should be reflected in the testing timeline.

Budget offices must follow strict deadlines that are often externally imposed, either by statute or by the governor. Therefore, the project team could consider implementing in phases. One state shared their experience of implementing the budget execution phase first because it had the least amount of risk while allowing every user to touch the system; the team then debugged the system before the budget development phase. Another state had agencies submit their

“Change management is key to success and cultural adoption of technology. Need to assess change readiness first before bringing in new technology.” – Vendor

We included a prototype period in our contract terms, which required the vendor to implement and demonstrate key areas of functionality in a short period of time. This enabled us to interact with the solution in our intended environment and assess the viability of the solution before committing to the entire contract.”

– NASBO Member

Change management is a critical element to a successful implementation and cannot be underestimated as an important part of the planning process. Change management is defined as “the process, tools and techniques to manage the people side of change to achieve the required business outcome.” Communication is an integral component of change management and the project team should plan accordingly. Involving agency staff and other users throughout the planning and development process will help, but there should also be a strong communications plan developed as part of the project.
budget requests in the legacy system and then transferred the files to the new system so the first touch of the system by agency staff did not involve data entry. Finally, one state released their new system in modules and found it easier to test along the way. Each of these state examples highlight different ways states can approach implementation to increase their success.

Training users is integral to successful adoption of a new system and a good training plan should address internal (central budget office) users and external users. The project team should offer more than one opportunity for training and offer the training in different mediums to accommodate different learning styles. One state had weekly drop-ins for users to receive assistance from the project team to help smooth the implementation process.

**Lessons Learned**

**A. Top Reasons for Failure**

As part of the survey sent to members, NASBO asked states about successes and challenges faced when replacing a budget system. Below are some of the top reasons cited for less successful projects:

» State unwilling to change its business processes, instead duplicated current process in a highly customized technology.

» Underestimated the level of time and resources needed for this endeavor.

» Business cycle restrictions and failure to plan, develop, and implement around budget deadlines.

» Failure to ensure compatibility with the state financial system and Chart of Accounts.

» Incorrect understanding and interpretations of business requirements by vendor, project staff and subject matter experts.

» Unrealistic expectations.

“Need to be realistic about what a system can do; it cannot solve a business problem, it can just automate it.”

— Vendor

**B. Factors that Contribute to Success**

NASBO also asked states and vendors what were important factors that contributed to a successful deployment of a new budget system. Below are some of the top tips that can contribute to success:

» Allow enough time for planning and design phases, do the up-front heavy lifting.

» Include a broad spectrum of users in development and affirmation of requirements, as well as in the unit and acceptance testing of desired functionality.

» Do not just inventory business processes for creating requirements but instead examine and reengineer them.

» Allow enough time for implementation and testing.

» Build up capacity – if you do not have a project manager on staff with extensive experience in implementing IT systems, consider hiring one. Also, have an IT person on staff during development and ensure the state has someone with expertise in evaluating vendors.

» Plan for and explain change, including why and what is good about it.

» Understand the system is never done. There will always be additional work on reporting, administering the system, implementing changes, and working with vendors.

» Ensure frequent interaction with departments for buy-in, and plan for and anticipate frequent leadership change in the agencies.

» Document everything done during planning and development and why it was done, so staff knows why a decision was made, especially if there is staff turnover.

» Have the right expectations for the right window of time.

» The system must be agile and must be able to evolve in a dynamic way.

“This is a major effort. Plan, train, and budget accordingly.”

— NASBO Member
Conclusion

Replacing a state budget system is difficult and time consuming for budget office staff. It is also done infrequently and offices will likely lack staff expertise to head up a project of this scope. The project must also be accomplished concurrently to budget work, which reduces available staff capacity. However, smart planning for an effective deployment can help lead to improved processes, better information and more effective decision-making.


“Spend the time to look at your existing processes, how many processes/tasks are there because “we have always done it this way”? How many processes/tasks are in place because of old system requirements alone?”

– NASBO Member

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