State of New Mexico
Budget Systems Redesign
Fiscal Year 17

Redesign Document

Department of Finance and Administration
And
Legislative Finance Committee

By
Budget Systems Redesign Team
Vincent and Associates, Project Manager
Introduction:

Under a joint powers agreement between the Department of Finance and Administration (DFA) and the Legislative Finance Committee (LFC), a team was assembled to continue the work of a 2009 study of the budget systems in use by New Mexico state government. The goal of this project is to develop a path forward for the replacement and integration of the current systems into a more comprehensive enterprise budget system. This includes having an on-line system that provides the desired functionality requirements of the budget groups of these two organizations as well as those budgeting requirements of all other state agencies. The resultant budget systems should interface where beneficial with the current accounting system (SHARE) and be flexible for future integration.

As part of the 2009 study an “As-Is” report was developed and this current redesign project will build on this assessment and concentrate on identifying the potential solutions to move forward. These solutions will provide more integration and potentially more functionality to reduce the number of “external” spreadsheets and systems.

A major element of the financial data activity for the state begins with the process of budgeting. As with other states, the budget represents the legal authority for agencies to spend money that was appropriated by the legislature. The budget also provides an important tool for the control and evaluation of sources and the uses of resources. The budgeting system should allow the financial staff to execute and control activities that have been authorized by the appropriations. It should also provide the financial staff the tools to evaluate financial performance on the basis of comparisons between budgeted and actual expenditures and revenues.

Sound budgeting practices begin with comprehensive financial planning that is essential for good decision making. The link between financial planning and budget preparation gives the budget document a unique role within the state. Budgets are typically the definitive policy document because the adopted budget represents the financial plan used by the state to achieve its goals and objectives.

New Mexico adopted the line-item budgeting approach from the beginning and more recently also included a performance-based budgeting approach that includes narrative descriptions of each program. While the state organizes the budget into quantitative estimates of costs and accomplishments and focuses on measuring and evaluating outcomes, the performance-based data is only loosely tied to the line-item budgeting tools. Rather, the line-item budget is only augmented with this supplemental program and performance information.

There are several modules that comprise the budget systems currently in use within New Mexico state government. These systems have evolved over the past couple of decades to meet the individual functionality requirements. While there is some integration, there are a number of inefficiencies inherent in having multiple spreadsheets and systems containing the same data elements.
The basic systems used for budgeting functions are:

- Budget Review System (BRS) – also called Budget Preparation System (BPS);
- Performance Based Budgeting System (PerfBud);
- Operating Appropriation System (OASYS);
- Budget Adjustment Review System (BARs);
- Difference Sheets System (BRSDiff);
- General Appropriations Act Section 4 System (GAAMain);
- General Appropriations Act Other Sections System (GAAOther); and
- State’s General Accounting System (SHARE).

In addition to these systems used by DFA and LFC, agencies may have other systems and/or spreadsheets that are used to build and track their budgets internally.

The current system referred to as the Budget Review System (BRS) or the Budget Preparation System (BPS) has evolved over the past couple of decades from a mainframe budgeting tool to a windows-based application using the Microsoft office development environment. The original purpose of the system was two-fold – one to assist the budget analysts at DFA and LFC to review and make recommendations on agency budgets and two to assist agency budget staff in developing a budget request. This purpose has expanded to include the development of the operating budgets and the additional data required for calculations of the personal services and employee benefits amounts. The systems have evolved over time to meet the changing needs of the users and to expand on the original functionality.

In addition to the core budgeting systems (BPS and BRS), there are several other auxiliary systems - performance based budgeting system (PerfBud), operating appropriation system (OASYS), budget adjustment review system (BARs), difference sheets system (BRSDiff), general appropriations act section 4 system (GAAMain) and general appropriations act other sections system (GAAOther). While these subsystems have more specific functionality, they are still a part of the overall budgeting function. These systems are described later in this document.
Deliverable 1: Preliminary As-Is Report

Stakeholders of budget systems

Relationships and roles

The stakeholders of the budget systems are spread throughout state government as every agency must develop a budget request and track their approved operating budget throughout the fiscal year. The original budget systems have been a coordinated effort between the Department of Finance and Administration (DFA) Budget Division and the Legislative Finance Committee (LFC). Along with the SHARE implementation, the budget systems are the primary tools used by the staff of the Budget Division and LFC throughout the year. The budget review/preparation system is used by staff from the other agencies for two primary cycles:

- operating budget preparation after the legislative session and before the beginning of the fiscal year; and
- for preparation of the budget request for the next fiscal year.

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>System</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Budget Division staff</td>
<td>All</td>
<td>Primary tools for budget analysts</td>
</tr>
<tr>
<td>LFC analysts</td>
<td>BRS, BARs, Difference sheets, GAA</td>
<td>Primary tools for budget analysts</td>
</tr>
<tr>
<td>Legislative agencies (budget staff)</td>
<td>BRS</td>
<td>Operating budget and budget request</td>
</tr>
<tr>
<td>Executive agencies (budget staff)</td>
<td>BRS</td>
<td>Operating budget and budget request</td>
</tr>
<tr>
<td>Judicial agencies (budget staff)</td>
<td>BRS</td>
<td>Operating budget and budget request</td>
</tr>
<tr>
<td>DFA CAFR unit</td>
<td>BRS data</td>
<td>Upload of operating budget data</td>
</tr>
<tr>
<td>Public</td>
<td>Budget data</td>
<td>For transparency</td>
</tr>
</tbody>
</table>

Budget Systems Redesign Project Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Functional Area</th>
<th>Dept / Consultant</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Name</td>
<td>Functional Area</td>
<td>Dept / Consultant</td>
<td>Phone</td>
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</tr>
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</tr>
<tr>
<td>Roberta Martinez</td>
<td>CYFD</td>
<td>Large</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Overview of Current Budget Systems

Request Cycle

<table>
<thead>
<tr>
<th>Budget Request from Agencies</th>
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</thead>
<tbody>
<tr>
<td>(4 level budget structure)</td>
</tr>
</tbody>
</table>

The current system referred to as the Budget Review System (BRS) or the Budget Preparation System (BPS) has evolved over the past couple of decades from a mainframe budgeting tool to a windows-based application using the Microsoft office development environment. The original purpose of the system was two-fold – one to assist the budget analysts at DFA and LFC to review and make recommendations on agency budgets and two to assist agency budget staff in developing a budget request. This purpose has expanded to include the development of the operating budgets and the additional data required for calculations of the personal services and employee benefits amounts. The systems have evolved over time to meet the changing needs of the users and to expand on the original functionality.

Columns are provided for prior year operating budget, prior year actual expenditures, current year operating budget, base and expansion request and base and expansion recommendation.

Request includes expenditure data in 104 line items and revenue by 5 sources (general fund, other transfers, federal revenue, other revenue and fund balance).

Request also includes FTE counts by permanent, term and temporary positions.

A separate module tracks data for employees and positions and calculates employee benefit costs and vacancy rate information.

Recommendation Cycle

<table>
<thead>
<tr>
<th>Budget Recommendation (DFA and LFC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(typically use only 2 levels of budget structure)</td>
</tr>
</tbody>
</table>

Columns are provided for prior year operating budget, prior year actual expenditures, current year operating budget, base and expansion request and base and expansion recommendation.

Request includes expenditure data in one hundred and four (104) line items and revenue by five (5) sources (general fund, other transfers, federal revenue, other revenue and fund balance).

Request also includes FTE counts by permanent, term and temporary positions.
A separate module tracks data for employees and positions and calculates employee benefit costs and vacancy rate information. This data is rarely changed in this cycle but is used to develop the recommendation.

**Review and Appropriation Cycle**

| Difference Sheet process to compare recommendations between DFA and LFC | (typically use only 2 levels of budget structure) |

Data is combined from DFA and LFC recommendations to compare side by side. Reports are generated as a tool for presenting recommendations to the legislative committee(s).

**Performance based budgeting**

| Tracking and reporting on performance measures |

While the BPS and BRS systems are used to request and review budget numbers, the performance based budgeting system (PerfBud) tracks the performance measures. The system records the targets and actual measurements for five fiscal years and also contains narrative text detailing the measures. Reports are generated in much the same manner as in the BRS system as a tool for presenting recommendations to the legislative committee(s).

**Legislative Session and General Appropriation Act (GAA)**

| Budget Document is prepared by each (DFA and LFC) | (typically use only 2 levels of budget structure) |

Just before the legislative session, an appropriation distribution spreadsheet is provided to agencies to assist with the expenditure and revenue distribution of the recommendation data.
The GAA data bases (GAAMain and GAAOther) are populated as committee approves agency budget recommendations. GAAMain holds committee data for section 4 of the general appropriation act and GAAOther holds the committee data for sections 5, 6 and 7. When fully reconciled, data is extracted and merged with the performance based budgeting data to create the legislation using Word and WordPerfect.

A general fund tracking spreadsheet is also created early in session to track all appropriations and revenue in all legislation.

**Establish Operating Budget (OASYS)**

<table>
<thead>
<tr>
<th>Operating Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>(agencies distribute the legislative appropriations to line items and lower budget levels)</td>
</tr>
</tbody>
</table>

DFA budget analysts use data from the GAA and other legislative appropriations to establish a new operating budget data set. Because the budgets are appropriated at the category level and at the program code level, the responsibility for establishing the line item budget is left to the agency budget staff. Additionally the agency budget staff may also create their budget at a level below the program code (i.e. department or reporting category). Even though the operating budget will be established in SHARE from the program code level data, the agency may track their budget from the lower level.

When the DFA budget analysts have included all of the appropriated amounts from the legislative session, the reports are provided to agencies. The budget system (BRS/BPS) is provided to agencies to enter operating budget information necessary for SHARE upload. After the agency enters the data at the line item level and returns the data to the budget division, the data across all budget areas are reconciled with the appropriations. Once the data is reconciled, a flat file is created from this data set and provided to the SHARE staff to establish the operating budget.
Other auxiliary functions

Budget Adjustment Request (BARs)

<table>
<thead>
<tr>
<th>Budget Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(agencies can request approval for budget adjustments)</td>
</tr>
</tbody>
</table>

The budget adjustment request (BARs) data base tracks request from agencies for adjustments to their current operating budget. The hard-copy request is submitted to the budget division and is routed through LFC and CAFR for approval. Upon approval, the established operating budget is modified in SHARE.

General Fund Tracking

| General Fund tracking and other budget data reporting |

Data from the budget systems is used for various reporting and business intelligence activities. An example of this is the year-to-year comparisons of line item data such as personal services and employee benefits. Another example is a what-if scenario to view the effect of reducing the general fund appropriations by a certain percentage. This data is typically exported from the current data systems and manipulated in Excel.

Summary of 2009 Budget Process As-Is Assessment

There were many issues identified in this report which should be addressed with any new system. These issues typically identify inefficiencies in the current budget systems which are due to the lack of integration of the various budget functions.

The report states the following: "Multiple systems are utilized by the principle organizations responsible for the NM budget process, and these systems are not integrated. The majority of the budget process functions are performed outside of these systems and much of the information is captured via paper forms. In addition, there is no complete documented process flow for the current budget process." This paragraph identifies at least three major requirements for a new system:
• Integrated and enterprise-wide functionality;
• More comprehensive functionality included to reduce reliance on spreadsheets; and
• Well-defined and documented business processes.

In addition to these more “enterprise” issues, the study identified variations in the common operating budget processes and stated “Processes important and/or peculiar to the various state agencies ought to be accommodated where possible” in a new budget system. Examples of these variations include:
• Preparation of the internal requests;
• Tracking of the budget through the process;
• Use of spreadsheet for tracking different aspects of the budget;
• Use of spreadsheet to provide additional or explanatory information to the legislative or executive agencies;
• Integration with agency data bases and/or spreadsheets; and
• Different timing constraints for agencies to prepare their budget requests (e.g. the judicial branch begins the budgeting process in April to create the budget parameters for the entire branch).

The assessment report also identified common tasks which are not part of the current budget system but should be considered for a new system to reduce the amount of manual operations:
• Creation of agency-specific calendars of events and milestone dates;
• Extraction and/or reporting of historical data from budget data, SHARE and possibly internal agency systems;
• Generation of initial estimates of future needs (projections);
• Exchange/viewing of historical information and estimates of future needs between collaborating organizations; and
• Association of budget lines with identified performance measures and strategic plans.

Current Functionality List

<table>
<thead>
<tr>
<th>Function</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detail level data entry of expenditure by line item account</td>
<td>Integration with spreadsheet</td>
</tr>
<tr>
<td>Detail level data entry of revenue by source</td>
<td>Integration with spreadsheet</td>
</tr>
<tr>
<td>Detail level data entry of personnel information</td>
<td></td>
</tr>
<tr>
<td>View and/or report on expenditure and revenue data by category</td>
<td>Table-driven line item and category codes</td>
</tr>
<tr>
<td>Data columns for prior operating budget, prior FY actual, current</td>
<td></td>
</tr>
<tr>
<td>operating, request and recommendation</td>
<td></td>
</tr>
<tr>
<td>Maintenance of budget code structure</td>
<td>Summary and detail level codes</td>
</tr>
<tr>
<td>Assignment of business unit to analyst</td>
<td>For both DFA and LFC</td>
</tr>
<tr>
<td>Extract revenue data to comma-separated values (CSV) format</td>
<td></td>
</tr>
<tr>
<td>Entry for expansion request to include text and amounts (by line items)</td>
<td>Integration with spreadsheet</td>
</tr>
<tr>
<td>Integrate expansion data with request and recommendation base data</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Capability of multiple revenue entries based on fund code, year and chapter and appropriation item</td>
<td></td>
</tr>
<tr>
<td>Entry of operating transfer data by account and transfer destination</td>
<td></td>
</tr>
<tr>
<td>Integration between operating transfer data and line items in expenditure</td>
<td></td>
</tr>
<tr>
<td>Integration of personnel data with line items in expenditure data</td>
<td></td>
</tr>
<tr>
<td>Operating Budget module</td>
<td></td>
</tr>
<tr>
<td>Expenditure Report by line item with various columns (S9)</td>
<td></td>
</tr>
<tr>
<td>Revenue, FTE and Category-level Expenditure Report (S8)</td>
<td></td>
</tr>
<tr>
<td>Revenue, FTE and Category-level Expenditure Report in special format for budget books (Table 1s)</td>
<td></td>
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</tbody>
</table>

**Budget Adjustment Requests:**

- Current request made by submitting hard-copy form
- Relevant information is keyed into data base and made available to DFA and LFC analysts
- Form is tracked through approval process
- Reports available in detail and summary

Agencies use a multitude of spreadsheets and some other systems for part of their budgeting processes. CYFD uses RoadMap and a Cost Allocation system. Environment Department uses subaccounts to track their federal grant funds. DOT and DPS use the project cost accounting module of SHARE to track federal funds and other grant monies.
Deliverable 2: Preliminary Desired System Characteristics and Business and Technical Requirements

Since the budgeting process is an integral part of the sound financial management for state government, a new budgeting system should provide the business tools for the state’s financial staff to develop a budget but also to allow this same staff to evaluate trends, needs and issues by providing sound forecasting tools.

As part of the evolution of the budget systems, there has been a shift in the thinking of how the budgeting process fits within the state’s financial systems. The general philosophy changes are reflected in this paragraph. “Given the importance of demonstrating compliance with the approved budget, the financial reporting system must control the use of financial resources and ensure that budgetary appropriations and allocations are not exceeded. To demonstrate compliance, accounting systems are usually operated on the same basis of accounting used to prepare the approved budget. Thus, the actual financial information captured by the accounting system is in a form comparable to the approved budget. Through budgetary integration, the financial accounting system becomes the primary tool to prove financial accountability.”

Additionally the budgeting process has evolved from an annual exercise of creating the next fiscal year’s appropriation to a continuous cycle of planning, modeling and monitoring. The forecasting and budget control aspects have become much more important and need to be integrated into the budgeting process and financial management.

The current business processes for budgeting have evolved over decades and are primarily based on a compartmentalized operational viewpoint rather than a longer-term enterprise-wide viewpoint. As a result, the current budget systems were designed primarily for the specific tasks of the individual business processes. As these processes have matured, the usefulness of providing historical comparison data and budget projections has grown but the current systems are not efficient in this functionality.

For example the Budget Review System was developed as a tool to allow agencies to prepare their budget requests and to allow the DFA and LFC analysts to analyze and make recommendations. While it does contain actual expenditure and revenue data and operating budget data along with the request and recommendation data, the system was not designed to compare historical data over a period of more than a few years or to make budgetary projections based on historical data. The same holds true for the other budget systems in that each is relevant for a fiscal year but not beyond.

Through discussions with budget analysts from both DFA and LFC and with agency budget staff, the desired system characteristics and functional requirements have been identified and detailed. These

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Budget Systems Redesign Project - State of New Mexico

characteristics and requirements will help to define the desired solution for an enterprise-wide budgeting system.

**System Characteristics and Requirements**

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise-wide system – system should incorporate functionality for all of the budgeting activities to include tools for agencies to manage their budget</td>
<td>High</td>
</tr>
<tr>
<td>Integration with SHARE – system should be able to upload operating budget data to SHARE data and provide means to incorporate actual expenditure data from SHARE</td>
<td>High</td>
</tr>
<tr>
<td>Integration with human resources management – the primary need here is to be able to calculate the employee and benefits costs associated with budgeted positions</td>
<td>High</td>
</tr>
<tr>
<td>Can move in parallel with SHARE upgrades – it is imperative to maintain compatibility as SHARE is upgraded or as the budget system is upgraded</td>
<td>High</td>
</tr>
<tr>
<td>Includes these modules:</td>
<td>High</td>
</tr>
<tr>
<td>• Budget request / recommendations</td>
<td></td>
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<tr>
<td>• Operating budget</td>
<td></td>
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<tr>
<td>• Budget monitoring</td>
<td></td>
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<tr>
<td>• Integration of budget adjustment requests (w/ workflow)</td>
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<tr>
<td>• Human resources budgeting</td>
<td></td>
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<tr>
<td>• Performance based budgeting</td>
<td></td>
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<tr>
<td>• Extensive reporting and extraction capabilities (business intelligence tools)</td>
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<td>• “Canned” reports</td>
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<tr>
<td>• Ad-hoc reporting</td>
<td></td>
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<tr>
<td>• Multi-year projection for budgeting</td>
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<tr>
<td>• Longitudinal data (i.e. Medicaid data for 10 years)</td>
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</tr>
<tr>
<td>Match appropriation, budget and accounting structures</td>
<td>High</td>
</tr>
<tr>
<td>• Accounting structure (by fund) vs Budget Structure (by program)</td>
<td></td>
</tr>
<tr>
<td>Integration of two sets of recommendations for comparison – because DFA and LFC develop their recommendations separately, the two sets of recommendation data are then compared to discuss the differences</td>
<td>Medium</td>
</tr>
<tr>
<td>Data extraction capability for production processes related to creating GAA – the set of recommendation data along with the performance measure data are used to develop the general appropriations act for the legislature</td>
<td>High</td>
</tr>
<tr>
<td>Other functions that would benefit budgeting agencies as well as other agencies – the budget system should incorporate the special needs of the agencies in manipulating the budget data in multiple ways</td>
<td>Medium</td>
</tr>
<tr>
<td>Efficient user interface with fast response times – system should incorporate an ease-of-use interface while also maintaining efficient speeds</td>
<td>High</td>
</tr>
<tr>
<td>Conversion of historical data to new db – current data sets are available that go back at least ten years for actual expenditures, operating budgets and recommendations</td>
<td>High</td>
</tr>
<tr>
<td>Biennial budgeting as a possibility – current budgeting is done annually but there is a possibility in the future for developing a two fiscal year budget</td>
<td>Low</td>
</tr>
<tr>
<td>Incorporate all agency budget forms – current forms will need to be printed from the budget system or new forms will need to be approved</td>
<td>Medium</td>
</tr>
<tr>
<td>Matrix of revenue and expenditure at some level – currently revenue and expenditure</td>
<td>High unless</td>
</tr>
<tr>
<td>Category</td>
<td>Change in Process</td>
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<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Data are separate and the only time in the budget process where a matrix relates the two is during the appropriation cycle; New Mexico is one of the few states that has this matrix as part of the appropriation</td>
<td></td>
</tr>
<tr>
<td>Usability and ease of training with training materials – initial and ongoing training materials are essential to the success of implementation of a new budget system</td>
<td>High</td>
</tr>
<tr>
<td>Error detection and validation based on business rules – the system should accommodate and incorporate the state business rules; i.e. tracking of limit on budget transfers</td>
<td>High</td>
</tr>
<tr>
<td>Possibly a separate module for agencies that integrates data to analysts module – depending on the full functionality, some agencies with special needs may need to utilize a separate module with some integration capability</td>
<td>Medium</td>
</tr>
<tr>
<td>Data extraction for production of budget documents with graphing capability – after recommendations for the fiscal year are complete, each group (DFA and LFC) develop their own budget recommendation document containing budget data and performance measure data for each program</td>
<td>Medium</td>
</tr>
<tr>
<td>Interface capabilities with MS Office products (Excel, Word, Access)</td>
<td>High</td>
</tr>
<tr>
<td>Quick reference dash board view of data – to support more data analysis and transparency, the expenditure and revenue budget data should be available for a dashboard type access; this should allow for access to historical data in ways formatted by the user; this should include comparisons of expenditure and revenue data across multiple years and with the data broken down by budget code, revenue source, category and/or line item;</td>
<td>Medium</td>
</tr>
</tbody>
</table>
## Functionality List

<table>
<thead>
<tr>
<th>Desired Functionality</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Collection</strong></td>
<td></td>
</tr>
<tr>
<td>Data entry of expenditure data at the detail level by line item accounts</td>
<td>Integration with spreadsheet</td>
</tr>
<tr>
<td>Data entry of revenue at the detail level by revenue source</td>
<td>Integration with spreadsheet</td>
</tr>
<tr>
<td>Data entry of personnel information at the employee level and also at the position level</td>
<td></td>
</tr>
<tr>
<td>View and/or report on expenditure and revenue data by category and line item accounts</td>
<td>Table-driven line item and category codes</td>
</tr>
<tr>
<td>Data columns for prior operating budget, prior FY actual, current operating budget, agency request and analyst recommendation</td>
<td></td>
</tr>
<tr>
<td>Data columns also need to include an operating budget column reduction for those times where the budget is adjusted after being established</td>
<td></td>
</tr>
<tr>
<td>Entry for expansion request to include text and amounts (by line items); user input to describe and justify expansion items;</td>
<td>Integration with spreadsheet</td>
</tr>
<tr>
<td>Entry of operating transfer data by account and transfer destination to show funds transfers within business units and between business units</td>
<td>Same as above</td>
</tr>
<tr>
<td><strong>User Customization of Application</strong></td>
<td></td>
</tr>
<tr>
<td>Maintenance of budget code structure (structure compatible to SHARE data and sufficient for agency reporting requirements)</td>
<td>Summary and detail level codes</td>
</tr>
<tr>
<td>Assignment/Tracking of business unit to analyst</td>
<td>For both DFA and LFC</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td></td>
</tr>
<tr>
<td>Maintenance of personnel data through interface with human resources system</td>
<td>Integration with HRMS</td>
</tr>
<tr>
<td>Extract expenditure, revenue and personnel data through user selected and/or defined queries to CSV format (flat file)</td>
<td></td>
</tr>
<tr>
<td>Operating Budget module – means to retrieve appropriation data from legislative system and reconcile data for eventual upload to SHARE as an operating budget (see appropriation data structure and OpBud forms)</td>
<td>The data could be shown as an adjusted budget or contain both the original budget plus any adjustments</td>
</tr>
<tr>
<td>Integration of BAR data – this may be handled completely in the SHARE system but if not, would need to be a functionality of the budget system</td>
<td></td>
</tr>
<tr>
<td><strong>Other functionality</strong></td>
<td></td>
</tr>
<tr>
<td>Integrate expansion data with request and recommendation base data; ability to view and/or report on data with inclusion of expansion data</td>
<td>This could be a separate table or could be included as part of the request and recommendation data</td>
</tr>
</tbody>
</table>

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### Budget Systems Redesign Project - State of New Mexico

<table>
<thead>
<tr>
<th>Capability of multiple revenue entries based on fund code, year and chapter and appropriation item; integration with appropriation data and SHARE data needs to establish operating budgets</th>
<th>This is dictated by the format of the data that SHARE requires for establishing the operating budget lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration between operating transfer data and line item accounts in expenditure data; while data entry would be focused on the actual transfer, the expenditure data should reflect this transfer; additionally the system should provide a match capability for the transfers in and corresponding transfer out</td>
<td>There are nine line item accounts for personal services and nine line item accounts for employee benefits; these are calculated from the personnel records but the budget request also needs to reflect an estimate of vacancy savings</td>
</tr>
<tr>
<td>Integration of personnel data with line items in expenditure data; while data entry would be focused on the personnel record, the expenditure data should reflect the impact of this personnel including calculations of benefits broken out by personal services and benefits line item accounts</td>
<td></td>
</tr>
</tbody>
</table>

**Reporting and Document Publishing**

| Expenditure Report by line item with various columns (S9) | Used to report on the detail of the line items |
| Revenue, FTE and Category-level Expenditure Report (S8) | Used to report on the data at the category level |
| Revenue, FTE and Category-level Expenditure Report in special format for budget books (Table 1s) | Used to report on the data at the category level in a slightly different format than the S8 |

**Functionality Notes:**

The four levels for tracking of budget data are business unit, program, department and reporting category. The various stakeholders of the systems will maintain and report on data at different budget code levels during different phases of budgeting. The DFA and LFC analysts typically will enter and view data at the program level while agency budget staff may have requirements to enter and view data at the department and/or the reporting category levels. The new system will need to allow the user to enter data at any of the levels but also be able to view and report on the data at any of the higher levels. Budgets are developed at summary or cost/responsibility center levels and can be viewed at any level of the reporting level hierarchy or by even by major policy area, and at various levels of detail.

The personnel module will need to accommodate the allocation of the personal services and employee benefits costs for a position across multiple budget codes. Personal services budgets are developed at the detail position level, with the system performing all calculations based on current employee information and projected rates, and automatically updating the budget.
The enterprise personnel system reflects the current positions and employee data. A budgeting module needs to reflect not only the current data but also any budgeted changes. The personnel module needs to assist in calculating the budget impact of salary increases and employee benefits changes. The personnel module should allow for dynamic and detailed forecasting of employee and benefits costs.

While the connection between budget data and performance measure data is fairly loose, the integration of strategic planning and performance measurement data may be more important in the future. There is a general consensus that the relationship between funding and performance measures will continue to be fairly loose as far as budget systems.

Currently budgeting is an annual process but there is a possibility in the future for developing a two fiscal year budget.

While the scope of this document does not include the functionality for budgeting for capital projects, this functionality should be considered for future enhancement.

Budgeting systems should provide maximum flexibility through report generators for analyzing data across multiple periods and through various detail levels based on user-defined parameters.

Financial staff will need the ability to extract historical data for multiyear comparisons and trending analysis, i.e. study of Medicaid budget and expenditure over a ten year period. Currently the SHARE data is available in CSV format by individual fiscal years and a new budgeting should be able to work within the same environment.

Two other products of the budget system were identified:

- Production and review of special appropriations and supplemental appropriations;

  Prior to the legislative sessions, agencies will submit their requests for special and/or supplemental appropriations. Special appropriations are those that don’t fit within the normal budget request such as “oversight of the Affordable Housing Act and regional housing authorities by the New Mexico mortgage finance authority”. Supplemental appropriations are those that require additional appropriations to sustain a program for the current fiscal year. An example would be “for a projected shortfall in state matching funds in the healthy forests program in fiscal year 2016”. These requests are considered by DFA and LFC analysts and a recommendation is made to the legislature. These requests are either funded in whole or partially or not at all.

  and

- IT project/budget requests and review

  Prior to the legislative sessions, agencies will submit their requests for information technology projects through a C2 form. These requests are considered by DFA and LFC
analysts and a recommendation is made to the legislature. A budget for information technology projects as a whole will be developed.

When discussing a "budget calendar" it was noted that each agency is different but that more guidance from DFA and LFC would be helpful. This includes developing a calendar with milestones early enough to facilitate the scheduling within each agency. Some agencies develop a budget from the top down while others develop from the bottom up. Each agency still needs to fit their internal processes into the timeframe of the milestone dates.

See Appendix A for current budget forms required as part of the budget request and operating budget systems.
Deliverable 3: Review of Potential Solutions

The prior sections provide an overview of the functional tools that a budgeting system needs to provide for the budget and agency staff to collect and analyze budget data. While the current systems in New Mexico are not strong in the areas of budget monitoring and business intelligence, these are key functionalities needed as we move forward.

The hope is that the current software application offerings will provide the capabilities to integrate with the state’s existing ERP to provide more efficient data collection tools while also providing the business intelligence tools needed to analyze and monitor the budget data. The first priority for a new budgeting system is a proven off-the-shelf application that is currently being used by other states and that will satisfy the defined functionality. Other factors of importance besides a functional fit are the long-term viability within this state’s technical architecture, ease of configuration, minimal customization and support capacity.

This section will identify potential solutions available to the state and assess the potential of these solutions to match the system and functional requirements as defined in the prior section. According to an article by Jason Beal titled “Navigating the Budgeting Solution Landscape” there are “seven software providers that have a substantial presence in the planning and budgeting solution market at the state level”. Although the level of activity in this area is relatively small, the recent trend has been toward budgeting solutions that are provided as part of a more global solution by ERP vendors. In the past five years, these vendors have further developed their ERP offerings and shifted focus toward the monitoring and decision-making tools related to budgeting. Today’s leading budgeting solutions for the public sector integrate budgeting, ERP, and strategy or performance management with business intelligence tools. At least ten states have licensed and are in some stage of implementation of these new solutions over the past five years.

The vendors who have the largest presence in state government budgeting software are:

- Affinity Global Solutions – Budget Analysis and Reporting System (IBARS);
- CGI – (Advantage ERP Performance Budgeting/BRASS);
- Oracle – (Hyperion/Public Sector Planning and Budgeting);
  - Performa (BIDS Budget);
  - SAP - (Public Budget Formulation) and (BPC);
  and
- IBM Cognos – (Public Sector Financial Management and Reporting).

These six application offerings are described in further detail and in relation to the functional needs of the defined requirements in the matrix in Appendix B. The applications have been compared in the matrix with the criteria that has been identified as critical to the success of a new budget system. The assumption is that this new budget system will meet the needs of the agencies as well as the budget staff for both the executive and the legislative entities. The goal will be to minimize the reliance on multiple systems and spreadsheets with an enterprise solution that interfaces with the current ERP solution (SHARE).
In general the available applications look like a good fit for the budget system requirements. The six applications reviewed have all been developed for public sector budgeting and are implemented in one or more states. While no two states are identical in their approach to budgeting, there are many similarities among the budgeting processes across the different states. The differences are wider when viewing the financial management applications but the budgeting systems typically work in conjunction with the state’s financial management application.

Integration with PeopleSoft

Of the companies reviewed, two (Affinity Global Solutions and Performa Group) have not developed their own financial management application and those two interface with a number of the other applications. The other four (CGI, IBM Cognos, Oracle Hyperion and SAP) include their budgeting application as a part of their own financial management application. The strength of all six companies is a web-based application that facilitates the budget cycle activities from budget preparation to enactment, publishing and execution. Over the past ten years, Oracle acquired both PeopleSoft and Hyperion and subsequently integrated these products into an enterprise financial management system that includes budgeting. In every instance discovered, the interface between the financial management system and budgeting involves an extract capability for the actual expenditure data and an upload capability for the operating budget data. Because of the security risks, the applications are not typically integrated with “hooks” into the financial data.

Integration with Personnel data

Of the companies reviewed, two (Oracle Hyperion and SAP) have developed their own personnel module as part of the financial management application while the other four (Affinity Global Solutions and Performa Group, CGI, IBM Cognos) integrate the personnel data into their budgeting application from various sources. The general method of integration for all six is to use file transports (extract snapshots) of the personnel data at scheduled times or on demand. The differences are reflected in the data structures and the amount of logic available for personnel and benefits calculations.

Data collection

Each application reviewed provides for single point of entry through configurable web forms similar to Excel columns. Budgets typically may be entered at a detailed or summary level based on the agency. The application include text boxes for further explanation of the numbers and typically an application administrator can define text boxes with parameters such as title, size and requirements and may include Y/N fields, defined drop-downs.

Business Intelligence and reporting tools

The six applications include the ability to easily and quickly access relevant data including real time calculation and consolation of data through reports and ad-hoc queries. This extends to the personnel data with salary and benefit forecasting. Some like IBM Cognos (Financial Statement Reporting) include a module specifically for the reporting and modeling of the financial data which can be extracted. Users,
subject to security access, typically can create their own reports and analyses without IT support. Oracle
Hyperion incorporates graphical and textual reports into HTML, PDF and the MS Office tools.

Long-term viability

Each of the companies reviewed is a large information technology company with the exception of
Affinity Global Solutions which has a staff of twenty and is located in North Dakota. The Performa Group
is located in Australia. CGI is the fifth largest information technology company in the world with
corporate offices in Montreal and government support offices in Fairfax, Virginia. Each company has
budgeting solution implemented in at least one other state.

Required customization and ease of configuration

These applications typically do not require customization but the implementation involves substantial
configuration. Because of the movement toward cloud-based applications the potential for
customization is reduced considerably. The systems are built for maximum configurability so that each
state can model their own data and process needs. This includes configurable forms even by user type
and configuration of business processes and user defined business rules.

Flexibility of forms

The Affinity Global Solutions application includes table driven column titles and formula features. The
columns may be uniquely defined by version type to support different budget preparation phases plus
budget execution. The Oracle Hyperion and SAP applications allow input forms that are tailored to the
budgeting requirements of each budget process and budget type and includes specific data for these
budget processes. The CGI application includes configurable budget forms and the application
administrator can define text boxes with title, size and requirements.

Publishing capabilities for budget document

These applications include a publishing tool either integrated into the budgeting application or as a
third-party add-on. Affinity Global Solutions and Oracle Hyperion have integrated publishing tools that
link to supporting documents for textual material and allow graphics, textual materials and spreadsheets
to be combined into a final budget document. CGI and SAP use publishing products that extract
financial data directly from the budgeting module and combine with the textual and graphical materials
to create a budget document. In the state of Michigan, the CGI application is also used to create the
general appropriations act for the legislature.

Flexible data storage and views

Affinity Global Solutions, Oracle Hyperion and SAP allow for budget data changes to be made at a
detailed or summary level to support different needs for agencies, the executive budget office and the
legislature. This will solve the current dilemma created by agencies needing to enter data at a lower
level while the budget is analyzed at the program level only. It also allows for one agency to use one
level while another might use a different level for data entry.
Budget monitoring with projections

Even though this is a manual activity at the current time, the ability to monitor the budget and do projections is a requirement of the new budgeting systems. The applications reviewed have the capability for budget monitoring and projections by extracting data from the PeopleSoft financials. The data is then available for display or report through a menu or dashboard system.

How legislative budgeting fits

New Mexico is fairly unique in the budgeting process with both the executive and legislative entities developing a recommendation. In most state, the executive is tasked with developing the initial budget recommendation and that budget is then provided to the legislature. Because of this uniqueness, the implementations by the six applications reviewed vary. The Affinity Global Solutions application uses versioning and auditing on requests for quick reconciliation of changes. Budget versions are available for an unlimited number of ‘what if’ scenarios so the legislative branch can create their own budget scenarios. The concern will be the extensive security to ensure data confidentiality. The approach with the CGI, Oracle Hyperion and SAP applications would involve defining additional columns and having an intermediary that was autonomous and could control access to columns. The Performa Group application has a flexible access control mechanism that secures both information and processes to enforce organization security policy. This application includes the ability to allow or restrict access to individual fields within a data form on a per user basis. These applications also include full data auditing which shows each change to every data field along with the user who made the change.

Workflow for budget approvals

The Affinity Global Solutions, IBM Cognos, Oracle Hyperion and Performa Group applications use complex role-based workflow for data entry, editing, review and approval. Each automates the approval and review processes and uses defined business rules to validate the captured information. These application would allow the state to configure a workflow for the agency, department and executive requests with reviews at the appropriate stages.

Tracking performance measures

The tracking of performance measures is more different across states than the actual budget data. The applications reviewed handle performance measurements more or less but typically this is just part of the narrative support that is provided. Tracking performance measures may be the one area where the business processes of the state may have to evolve more toward the capabilities of the applications.

Use of dashboard for user interface

The Affinity Global Solutions, CGI, Oracle Hyperion and SAP applications use modeling tools for reporting and incorporate dashboards for the ad hoc analysis of the budget.

Security features
Each application reviewed is implemented with role-based access to the data. The typical access is granted by column but the Performa Group application control access at the field level. Either method should be sufficient to create roles that control access by agency and budget staff, including the legislative staff.

**States that have implemented**

The number of states that have implemented one of these applications varies from one up to nine states. Affinity Global Solutions and Oracle Hyperion have the most at nine states while IBM Cognos only is implemented in North Carolina.

**Technology base**

Each of the applications are implemented with web-based tools and two (Affinity Global Solutions and Oracle Hyperion) of the applications are offered as either a Software as a Service (SaaS) or on-premise solution.

**Implementation**

The general consensus from the review is that the implementation requires a minimum of eighteen months and typically will be closer to two years. Affinity Global Solutions and CGI typically provide the implementation services while the others have relationships with a third party for those services. The Performa Group has a partnership agreement with Infor to provide their implementation.

**Other notes**

Affinity Global Solutions also hosts the application for Kansas, New Jersey, Wyoming, South Dakota. They have worked with North Dakota for twenty years, Wyoming for eighteen years and Montana for sixteen years. They support an interface with PeopleSoft in Montana and North Dakota.

CGI has integrated their budgeting application with PeopleSoft in Vermont.

SAP has a large user community and support the financial application in many universities.

**Conclusions**

While the application and implementation costs are unknown at this time, the applications are available on the market that will meet the functional requirements for the budgeting system as defined in this document. About one-half of the states have already implemented one of these applications and have integrated the budgeting data with the financials. Other states have developed their budget system in-house but not to the degree that is now available in the marketplace.
Deliverable 4: Request for Information

RFI

Deliverable 5: Final Report and Analysis

Final report
Appendix A - Current Forms and Reports

S8/S9

E Forms

OpBud Forms
<table>
<thead>
<tr>
<th>Product</th>
<th>Affinity Global Solutions</th>
<th>CGI</th>
<th>IBM Cognos</th>
<th>Oracle Hyperion</th>
<th>Performa Group</th>
<th>SAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget Analysis and Reporting System (EBARIS)</td>
<td>Tamil Nadu (671) 516-1348</td>
<td>Jan Bax (312) 485-6335</td>
<td>Public Sector Financial Management and Reporting</td>
<td>Public Sector Planning and Budgeting</td>
<td>BIDS Budget</td>
<td>Performance Budgeting Formulation</td>
</tr>
<tr>
<td>Associated ERP</td>
<td>none</td>
<td>CGI Advantage ERP Suite</td>
<td>same name</td>
<td>PeopleSoft</td>
<td>no</td>
<td>SAP Financial Management</td>
</tr>
<tr>
<td>Product strengths</td>
<td>budget cycle activities from budget preparation to enactment, publishing and execution, web-based, platform independent, highly configurable</td>
<td>full suite of tools for government agencies, including financial management, payroll, budgeting, human resources management, procurement and grants management</td>
<td>mostly a reporting tool with publishing capabilities using Word and Excel</td>
<td>Integrated budgeting and planning solutions enable public sector to manage existing and projected budgets using current and previous General Ledger and Human Resource Management (HCM) data</td>
<td>BIDS is a software product that creates and manages web-based forms to capture the financial, tax, and non-financial information required in the budget process.</td>
<td>add-on component to meet requirements of the end-to-end public sector budget formulation process, web-based application that can be integrated with SAP systems and non-SAP systems</td>
</tr>
<tr>
<td>Data collection</td>
<td>single point of entry reduces time spent on data entry; budgets may be entered at a detailed or summary level based on the agency</td>
<td>forms similar to Excel/ import/ export/conceptual building forms, application administrator defines list boxes w/ detail data, custom forms W/ Y/N drop downs, defined, etc.; required or not</td>
<td>personalized web data entry forms, standard formulas, rates, etc.</td>
<td>budget web-based data capture forms; allows trained end-users to change many aspects of the forms, processes and rules after the system is installed</td>
<td>budget web-based data capture forms; allows trained end-users to change many aspects of the forms, processes and rules after the system is installed</td>
<td>add-on component to meet requirements of the end-to-end public sector budget formulation process, web-based application that can be integrated with SAP systems and non-SAP systems</td>
</tr>
<tr>
<td>Integration features w/ PeopleSoft</td>
<td>have integrated with PeopleSoft apps in other states (Vermont); supports real-time &quot;hooks&quot; but normally use file transports</td>
<td>have integrated with PeopleSoft apps in other states (Vermont); supports real-time &quot;hooks&quot; but normally use file transports</td>
<td>actual payroll and staff data from HR</td>
<td>actual payroll and staff data from HR</td>
<td>actual payroll and staff data from HR</td>
<td>add-on component to meet requirements of the end-to-end public sector budget formulation process, web-based application that can be integrated with SAP systems and non-SAP systems</td>
</tr>
<tr>
<td>Integration with personnel data</td>
<td>able to sync personnel data</td>
<td>able to sync personnel data</td>
<td>BIDS complements many CMU/FIM products, publication tools and other systems</td>
<td>BIDS complements many CMU/FIM products, publication tools and other systems</td>
<td>BIDS complements many CMU/FIM products, publication tools and other systems</td>
<td>add-on component to meet requirements of the end-to-end public sector budget formulation process, web-based application that can be integrated with SAP systems and non-SAP systems</td>
</tr>
<tr>
<td>Personnel data</td>
<td>payroll vs. benefit modules include cost of changing employee categories up to 40 benefit categories</td>
<td>has personnel module with modeling capabilities</td>
<td>unclear</td>
<td>Budget by position and/or employee</td>
<td>Budget by position and/or employee</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Business Intelligence tools</td>
<td>access to historical, budget and actual expenditures and revenues for modeling and forecasting</td>
<td>incorporates business objects and report capabilities</td>
<td>primary purpose of IBM Cognos Financial Statement Reporting (FSR)</td>
<td>graphical and textual reports in HTML, PDF and MS Office tools</td>
<td>financial and non-financial information is easily captured and flows seamlessly between financial analysis and reporting</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Reporting tools</td>
<td>ability to easily and quickly access relevant data including real time calculations and validation of data through reports and ad-hoc queries; salary benefit forecasting</td>
<td>BPS Business Objects 40 report templates</td>
<td>primary purpose of IBM Cognos Financial Statement Reporting (FSR)</td>
<td>graphical and textual reports in HTML, PDF and MS Office tools</td>
<td>financial and non-financial information is easily captured and flows seamlessly between financial analysis and reporting</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Long-term viability</td>
<td>have worked with North Dakota for 25 years, 15 in Wyoming, 10 in Montana, staff of 29</td>
<td>5th largest IT company in world; City in every state</td>
<td>time of market leaders based on acquisition of business applications and tools; products moving to cloud</td>
<td>one of market leaders based on acquisition of business applications and tools; products moving to cloud</td>
<td>one of market leaders based on acquisition of business applications and tools; products moving to cloud</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Ease of configuration</td>
<td>highly configurable</td>
<td>application administrator can customize, corporate version with standard components</td>
<td>configurable forms with flexibility across users</td>
<td>large IT company with focus on public sector, large and active user community</td>
<td>large IT company with focus on public sector, large and active user community</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Required customization</td>
<td>BIDS handles implementation and support but will work with local</td>
<td>application administrator can customize</td>
<td>configurable forms with flexibility across users</td>
<td>configurable forms, automated business processes and user-defined business rules</td>
<td>configurable forms, automated business processes and user-defined business rules</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Flexibility of forms</td>
<td>multiple column titles and feature column; columns may be uniquely defined by variable type to support different budget preparation phases and budget execution</td>
<td>configurable budget forms; application administrator defines list boxes w/ Y/N drop downs, defined, etc.; required or not</td>
<td>configurable forms with flexibility across users</td>
<td>configurable forms with flexibility across users</td>
<td>configurable forms with flexibility across users</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Publishing capabilities for budget document</td>
<td>integrated publication generation, see Montana and Ohio (also do bill tracking here)</td>
<td>BID party document publishing product for budget book publishing capability, numbers and text, Microsoft Excel creates the report from here</td>
<td>mostly a reporting tool with publishing capabilities using Word and Excel</td>
<td>links to supporting documents for textual material, built-in publishing tools that allow graphics, textual materials and spreadsheets</td>
<td>links to supporting documents for textual material, built-in publishing tools that allow graphics, textual materials and spreadsheets</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Flexible data storage and access</td>
<td>budget changes may be made at a detailed or summary level to support different needs for agencies, the executive budget office and the legislature</td>
<td>application administrator has design tools for forms and forms</td>
<td>detail and summary levels</td>
<td>detail and summary levels</td>
<td>detail and summary levels</td>
<td>key personnel module but also has data integrations</td>
</tr>
<tr>
<td>Budget monitoring and projections</td>
<td>real time reporting and dashboards</td>
<td>Modeling and forecasting for current year budgets</td>
<td>capabilities for budget monitoring by extracting data from the source financial system</td>
<td>real-time capabilities for budget monitoring directly from the source financial system</td>
<td>real-time capabilities for budget monitoring directly from the source financial system</td>
<td>key personnel module but also has data integrations</td>
</tr>
</tbody>
</table>
### Affinity Global Solutions

- **How legislative budgeting fits**
  - Verifying and auditing on requests for quick reconciliation of changes; Budget versions are available for an unlimited number of what-if scenarios; Legislative branch can create budget scenarios, committee reports and budget bills with extensive security to ensure data confidentiality.
  - One possibility would be to have two instances; preferred method to have an intermediary that monitors autonomous and could control access to columns; could have CGI host as.

- **Workflow for budget approvals**
  - Configurable workflow for agency, department and executive requests and reviews.
  - Has workflow capabilities

- **Tracking performance measures**
  - Performance measurements and narrative support are provided; specific narrative sections designed in table driven and specific to each installation and the entry of mandatory sections is validated.
  - Performance measures built into law of budget.

- **Useful dashboard for user interface**
  - Reporting with dashboards; real-time reporting and dashboards

- **Security features**
  - Controlled access by column.

- **States that have implemented**
  - Kansas (HI), Maine, Montana (PeopleSoft), New Hampshire, North Dakota (PeopleSoft), Oregon, Vermont, Wyoming and New Jersey
  - Iowa, Kentucky, Missouri, Louisiana, Vermont (PeopleSoft); 2012-13, West Virginia, Colorado, Alabama, Michigan (last year), also L.A., NY, City.
  - North Carolina

- **Associated costs**
  - 1.6MM to implement based on Wyoming input.

- **Technology base**
  - Software as a Service (SaaS) or on-premise; JAVA, JSP, HTML, JavaScript, AJAX, XML, CSS, XSL, SQL, XML, PDF
  - Java, Dmy/SQL, application layer - Blais or WebSphere

- **Implementation**
  - 18 months minimum
  - 18 months in Ky and VT to 2 years in Michigan
  - 18 months minimum start to finish; WOLFS uniform accounting system and IMIS are capable of interfacing at all levels of the budget.

- **Other Notes**
  - Also host for KS, MI, WI, SC; 18 months minimum start to finish; WOLFS uniform accounting system and IMIS are capable of interfacing at all levels of the budget.
  - Vermont does not use real-time taxes, etc.

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### CGI

- **Oracle Hyperion**
  - Flexible access control mechanisms that secure both information and processes to ensure organization security policy; includes the ability to allow or restrict access to individual fields within data forms on a per-user basis; sensitive data is protected at all times; also includes full data auditing, including change to every data field, and records all updates users perform.

- **Perfoma Group**
  - Complex role-based workflow for data entry, editing, review and approval; automates the approval and review processes and uses business rules to validate captured information.

- **SAP**
  - Model training combined with SAP BusinessObjects for reporting, dashboards and ad hoc analysis throughout the budget life cycle.
  - Model training.

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### Questions:

- AGS
  - Expenditures are allocated to cost centers and funding sources - Matrix?
  - Publishing tool to combine budget and performance data?

- All
  - How to ensure data security between branches and for recommendations?

- AGS
  - CapCom Module and IF Capture module?

- AGS
  - Interface through an interface for net, object class, and object (Budget levels 2, 3, and 4, respectively) within WOLFS workflow?
Appendix C – Current Data Structures

Current Data Structures
Appendix D - Other miscellaneous reference information

References:

Navigating the Budgeting Solution Landscape – Jason Beal – www.isg-one.com

**CGI Advantage® ERP**
CGI’s state and local ERP solution, specifically built for government
For state and local governments, enterprise resource planning (ERP) means more than technology. It means transformation that increases efficiency, transparency, accountability and information access. Many public sector organizations struggle with ERP solutions that do not meet their needs, support their business, or match their processes. As a result, they face extensive customizations, process modifications and unpredictable costs.
CGI Advantage ERP is a powerful combination of modern technology and integrated business applications that are specifically built for government use. The solution complies with GASB and GAAP, and includes government-required functionality such as CAFR and CMIA processing to increase automation and information access. Because CGI Advantage ERP is highly configurable, it minimizes customization to reduce total cost of ownership (TCO).
With integrated functionality, workflow and configurable processes, the CGI Advantage ERP suite contains built-for-government software for:
- Financial management to provide organization-wide accountability through consistent accounting rules across all financial transactions, to track and control internal and external funding sources and fiscal and multi-year budgets
- Performance budgeting to automate the budgeting process for better planning to improve financial and operational performance and critical decision-making for day-to-day efficiency and long term forecasting
- Human resource management to streamline the HR and payroll process from hire to retire, including online recruiting, timekeeping and direct access for employees to manage benefits and leave
- Procurement to automate purchasing via catalog-based ordering and paperless approval processes that link directly to the government accounting system for automated matching and payment processing
- Business intelligence to unlock data quickly for more effective decisions and increased measurement of key performance indicators through sophisticated reporting, ad hoc query and visual, interactive dashboards.

CGI Advantage ERP supports government needs for flexible delivery options with managed services that can be used on client premises or hosted in secure cloud infrastructure, including a FedRAMP-compliant cloud system. In addition, our Software as a Service (SaaS) offering, CGI Advantage360®, provides
Budget Systems Redesign Project - State of New Mexico

robust, out-of-the-box ERP capabilities at a lower TCO. Learn more about our vision for Agile-Cloud Enabled Services (ACES).
CGI Advantage ERP helps manage your information so you can get back to the business of government.
To learn more, contact us at cgiadvantage@cgi.com or 1-800-321-0267

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Public Sector Financial Management and Reporting Using IBM Cognos FSR
IBM Cognos FSR is a secure database-driven platform that connects to your existing source systems and leverages Microsoft Word and Microsoft Excel to automate the production of financial reports and narrative disclosures, including XBRL, in a secure, transparent, and auditable environment. Users can create any type of report including:
- State and Local Government
- CAFRs
- Budget Formulation and Reporting
- Municipal Bond Offering Memorandums
- Internal Controls Documentation
- Regulatory Reporting

SAP
SAP Public Budget Formulation is an add-on component that provides a collaborative environment to accommodate the requirements of the end-to-end public sector budget formulation process.

SAP Public Budget Formulation is a web-based application based on SAP NetWeaver technology platform. PBF can be integrated with SAP systems and non-SAP systems. For instance, historical data such as the actual budget or the last approved budget can be used as a starting point to prepare the next budget. In addition, HR historical data can extensively be used to build simulations to budget the personnel expenses. Grant, Project and Performance data can all be integrated.

Our latest version PBF 8.1 was released on October 18 2013 and includes some enhancements like Excel Download, File Upload, Pay Period based PEP Calculations, Budget Form Copy functionality and more.

Maximus
Is It Time for the Public Sector to Move to ERP in the Cloud?
by Nathan Frey November 28, 2016

State and local governments that have long used enterprise resource planning (ERP) solutions are taking a new look at today's software market. They are setting out on a new search for value—finding a system they can be certain will help them stay current and control costs even in an uncertain future.

Not too long ago, public sector organizations looked to one ERP vendor for a complete on-premises solution. But, as these systems have matured, the true costs of administering and maintaining the infrastructure on top of the expense of frequent software upgrades have become overwhelming. With the advancement of cloud-based, software-as-a-service (SaaS) applications, public sector organizations are now revisiting their administrative needs and IT capabilities. While most still rely on on-premises ERP applications, many are actively evaluating and implementing cloud-based solutions for the first time.

Not unlike private sector organizations, the public sector is considering how cloud computing can help:

- Reduce IT costs;
- Lower total cost of ownership and better predict cash flow;
- Reduce staffing requirements, especially for costly technology staff;
- Focus in-house technical resources on work efforts better aligned with the organization's strategic mission;
- Simplify infrastructure and applications;
- Benefit from continual updates, resulting in a faster pace of innovation; and
- Streamline operations.

But not all cloud solutions are created equal. Some cloud solutions exist primarily as a shared computing environment, whereas SaaS solutions are products that reside in that environment. As more ERP vendors move to cloud-based offerings, delivery models are changing. Cloud is becoming the "new normal," and public sector organizations should prepare for change as these environments continue to evolve.

Before organizations look to SaaS solutions, they should answer the following basic questions:

- Do SaaS solutions offer enough of the functionality we need?
- Is our organization ready for multi-tenant SaaS solutions?
- Is an operating expenditure preferable to a capital expenditure in our budget?
- Are we willing to have our data maintained in shared data centers and possibly outside the U.S.?
- Can we manage the real or perceived risks of placing important applications and data with an external vendor?

If the answer to these questions is "yes," an ERP SaaS solution can offer some clear advantages. It can offer new flexibility for selecting and deploying solutions, and it can shift maintenance responsibilities to a third party. Security capabilities may be better in the cloud than on-premises solutions, and cloud computing allows an organization to stay current with their technology without the need for costly hardware and software upgrade cycles.

If an organization answers "no" to any of the questions above, it should proceed to the cloud with caution. While SaaS solutions for public sector are maturing rapidly, certain products do not yet have
the same features across all functional areas as their on-premises predecessors. Additionally, the “no-modifications approach” of a SaaS solution will likely require changes to business processes or manual workarounds to address unique, organization-specific requirements. And a cloud solution doesn’t mean internal IT is off the hook for supporting integration with other business or operational systems. Buyers should also look for hidden costs in connecting a SaaS solution to legacy systems. Contrary to popular belief, SaaS is not always cheaper, and prices could increase after implementation. A thorough evaluation of total cost of ownership can help an organization understand the full impact of a transition to SaaS, including existing fixed costs, differences in licensing models, and a comparison of service levels for cloud versus on-premises solutions.

When it comes to ERP systems, change usually proves to be a good thing, and functionality typically improves over time. ERP providers are investing heavily in SaaS solutions in response to the market, and SaaS may prove to be the predominant ERP model in the not-so-distant future. But, for now, moving from on-premises to a SaaS solution is a lightly traveled path in the public sector. State and local governments need to do their homework to ensure the roadmap presented by a potential SaaS provider will, in fact, take them where they want to go.

ISG helps public sector organizations navigate the complexities of technology offerings in the market today. Contact me to discuss how we can help you.


- [http://www.affinitygs.com/bars.htm](http://www.affinitygs.com/bars.htm)

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1 Navigating the Budgeting Solution Landscape – Jason Beal – www.isg-one.com