

STATE OF CALIFORNIA

California Department of Corrections and Rehabilitation

Enterprise Information Services



Business Information System Program

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2016 NASCIO Recognition Award Submission

Budget Forecasting Function (BFF)

Nomination Category: Enterprise IT Management Initiatives

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Executive Summary

As the largest Enterprise Resource Planning (ERP) system to be implemented in the State of California's Public Sector, the California Department of Corrections and Rehabilitation (CDCR) Business Information System (BIS) Program developed the Budget Forecasting Function (BFF) in the Systems, Application and Products (SAP) ERP solution, which was implemented by CDCR in 2008. The SAP public sector solution enables the CDCR to optimize limited resources and budget constraints while delivering a budgeting and forecasting tool that integrates Supply Chain Management, Human Resources, and Finance/Budgets with real-time data. The program supports business processes and technology across a wide range of government functions, from accounting and procurement to human resources. The program provides department-wide fiscal transparency and accountability.

The development and implementation of the BFF was a collaborative effort between CDCR's BIS Program and Budget Management Branch (BMB). Departmental executives selected the Division of Rehabilitative Programs (DRP) and BIS budget analysts/managers as the pilot program prior to rolling out the new BFF to 35 institutions along with numerous Headquarters and satellite operations. CDCR's Enterprise Information Services, BMB, and DRP executives worked together to identify funding and staffing needs to complete this project. BIS and BMB staff, along with subject matter experts from the field, coordinated BFF training sessions for all budget personnel and managers within the CDCR.

CDCR currently has an annual \$10 billion budget as well as 61,000 staff and \$10 billion in assets. Prior to the implementation of BFF, the department was monitoring its budget solely within Microsoft Excel worksheets. The time required to maintain the numerous worksheets resulted in more data entry hours and fewer analysis hours. The BFF remedied this time-management dilemma and delivered a budgeting tool that requires minimal data entry in an all-in-one, paperless system.

Budget Forecasting Function									
Budget View - Actuals/Projections Totals									
Funds Center Group Text	Program	Program Text	ComItemGrp	Cl Grp Txt	Budget	Total Actual	Program Projection	Total Program Forecast	Prog Surpl/Deficit
4651 - Business Information System Proje	10	10-Administration	01	Salaries & Wa	3,770,548.00	2,725,905.09	1,004,720.87	3,730,625.96	39,922.04
			02	Staff Benefit	1,479,294.00	1,070,771.16	397,779.42	1,468,550.58	10,743.42
			03	Staff Benefit	24,379.00	16,545.03	5,515.02	22,060.05	2,318.95
			04	Temporary H	122,113.00	88,771.94	30,164.38	118,936.32	3,176.68
			05	Overtime	17,325.00	14,011.65	3,000.00	17,011.65	313.35
			06	General Expe	39,317.00	8,872.89	28,680.26	37,553.15	1,763.85
			07	Printing	1,339.00	1,337.04	0.00	1,337.04	1.96
			08	Communicati	7,000.00	3,665.26	3,334.74	7,000.00	0.00
			09	Postage	10,000.00	39.27	9,960.73	10,000.00	0.00
			11	Travel	40,000.00	14,699.09	25,300.91	40,000.00	0.00
			12	Out-of-State	7,923.00	1,331.73	5,490.00	6,821.73	1,101.27
			13	Training	100,000.00	33,198.35	66,801.65	100,000.00	0.00
			14	Facility Opera	0.00	0.00	0.00	0.00	0.00
			18	Cons&Prof S	3,286,597.00	2,051,910.22	1,209,796.78	3,261,707.00	24,890.00
			18.5	Departmenta	4,273,218.00	2,658,866.65	1,614,351.35	4,273,218.00	0.00
			19	Information	2,434,491.00	1,597,324.63	644,870.20	2,242,194.83	192,296.17
			21	Subsist & Per	500.00	101.33	398.67	500.00	0.00
			26	Distributed A	2,682,917.00	2,652,729.00	30,188.00	2,682,917.00	0.00
		10-Administrat			12,931,127.00	7,634,622.33	5,019,976.98	12,654,599.31	276,527.69
4651 - Business Information System Pr...					12,931,127.00	7,634,622.33	5,019,976.98	12,654,599.31	276,527.69
					12,931,127.00	7,634,622.33	5,019,976.98	12,654,599.31	276,527.69

Business Problem and Solution

Problem: Prior to the implementation of the BFF, 325 field and headquarters budget analysts spent two weeks each month compiling data from SAP and preparing Excel worksheets for input into the Monthly Budget Plan (MBP). The completed worksheets were e-mailed to the headquarters budget office, at which time headquarters analysts began the process of merging and verifying the integrity of the data. The compilation of the worksheets was reliant on data from many areas and sources within the organization. There was no single source for budgetary information. In addition, budget analysts did not project expenditures using standard methodology and were not taking advantage of the department's fully automated and integrated system. The worksheets from the 35 institutions and multiple headquarters programs were consolidated for an enterprise budget report. This data was 45 days in arrears and did not provide timely and accurate budget reporting.



Solution: The development of the BFF has eliminated the need for the manual preparation of worksheets, which eliminates the 45 day delay in budget use and projections. It provides real-time, instant, and automated budget projection data. The BFF utilizes the Finance, Supply Chain Management, and Human Resource data that is integrated within the department's ERP system and used by 6,000 end users who generate thousands of transactions daily that affect the department's \$10 billion budget.

The BFF is a very user friendly tool. Based on two selection criteria input by the end-user, the BFF displays all data entries that affect the department's budget in one screen. The BFF includes actual expenditures plus budgetary projections by fiscal month, and automatically calculates surplus/deficit by line item, program, and/or department. The BFF automatically calculates projections by fiscal month based on pre-determined formulas and system logic. The BFF includes all salaries and wages, benefits, worker's compensation, temporary help, overtime and operating expenses and equipment. The projections for personal services and related benefits will automatically adjust based on future salary increases. In addition, as vacancies occur and the salaries and wages projections are removed, the related benefit projections are also automatically zeroed out. The BFF tracks vacant positions and allows for future forecasting as positions are filled. Once a vacant position is entered into the system, the BFF automatically selects the salary range of the vacant position based on the class code. Analysts are then able to determine the applicable salary without having to depend on a separate source of data.

Purchase order/requisition line items are displayed within the BFF and are automatically projected based on the delivery date of the goods or services. Once goods/services are received, the BFF will calculate the balance of the purchase document and project the remaining expenditure over the remaining months. Analysts can manually change automated projections based on special circumstances. These exceptions will carry over from month to month with no need to re-enter the data on a monthly basis. Any manual adjustments to the automated projections require an explanation that is displayed directly in the BFF. Manual entries are easily identifiable for additional analysis or follow-up. Because the BFF contains all of the line items that consume budget, the analyst has more time to analyze the data in one location without having to run multiple reports or prepare multiple worksheets. The BFF also has drill-down capability, which allows the analyst to view original purchase documents, goods receipts, invoices, and journal entries without having to exit the program and go into another program. Program areas have the ability to forecast modifications to allotment and expenditures based on anticipated changes in mission. The forecast models do not hit against actual allotments and can be tailored based on updated parameters.

The BFF program is assigned to departmental program budget analysts and budget managers, with reporting capabilities assigned to executives. The design of the BFF and subsequent reports allows for generating reports from a global perspective all the way down to the individual line item and/or program. The BFF permissions are secured by assigning location authorizations to field budget analysts for editing capabilities while Headquarters' budget analysts have view and edit access department-wide. There is approximately 1,400 CDCR staff that has access to the BFF program and corresponding reporting capabilities. In addition to the added value of the BFF program to CDCR staff, the data that is derived from this program will ultimately be used by the California Department of Finance during the state's budget development process.

Significance of the Project

The initial business requirements that led to the development of the BFF were documented over a four month period of time and included the input from eight subject matter experts. However, the requirements and solution continued to evolve through collaboration between business process owners, end-users and functional teams from all divisions within the department. This led to adaptive planning, evolutionary development, early delivery, continuous improvement, and a quick and flexible response to changes to the program. From the initial workgroup to development, testing, and training, the BFF was launched inside one year with an approximate cost of \$450,000, which encompassed personnel related costs as the program was developed using CDCR's existing ERP system.

The program was developed to capture spending plans, personal services expenditures associated with over 61,000 individual employees, salary increases, position vacancies, line items for goods/services and direct pays/transfers and provides an automated projection tool that also includes the flexibility to note exceptions to how projections are made based on special circumstances. The projections are based on real-time data and provide instant and accurate reporting capabilities.

Effective July 1, 2015, all CDCR programs and institutions began using the BFF to maintain and monitor an annual budget of \$10 billion, which includes over 550,000 assets, and meet CDCR's mission of fully utilizing its ERP system to provide timely and accurate budget data that increases efficiency of the process while improving analysis. The development of the BFF enables the department to effectively manage the current and future budgetary needs responsible for supervising and rehabilitating 180,000 inmates/parolees throughout the State of California.

Benefits of the Project

The development and implementation of the BFF as an enhancement to the existing SAP system that was implemented by the CDCR in July 2008, has replaced the Excel based MBP and has eliminated the need to maintain multiple worksheets and manual processes for tracking actual expenditures and budgetary projections. Because the BFF automatically projects budgetary expenditures based on pre-determined formulas tied to actual expenditures, the program has also eliminated the manual entry process that could potentially result in keying errors. The BFF eliminated the 30 percent budgetary projection discrepancies that resulted from use of the manual Excel worksheets. The BFF has improved accuracy in budget forecasting, improved timeliness of budget reporting to management, and increased the efficiency of the budgeting process.

As a result of the BFF's development, the department has been able to produce annual spending plans for managing its annual \$10 billion budget with real-time reporting. The BFF will display the budgetary expenditures and projections within minutes of executing the program. The budgeting tool quickly alerts CDCR of any potential fiscal surplus or deficit. The department has real-time budgetary data for use when making decisions that affect the daily operations of the Institutions and correctional programs and its 61,000 employees and 180,000 inmates/parolees located throughout the State of California.

The BFF is an extraordinary tool for the department to use in the collection of expenditures and projections related to salaries and wages, benefits, worker's compensation, temporary help, overtime and operating expenses and equipment. The BFF has been well-received by the department and is currently the budgeting tool of the future.

Several different layouts have been established within the BFF for quick analysis.

- **Budget View** - summarizes all of the commitment line items into budget, actual expenditures, projections, total forecast and surplus/deficit. This layout is used to display the budget at a high level.
- **Purchasing Planning** - displays all of the commitment line items from purchase requisitions and purchase orders. It includes goods receipts and projections by fiscal month.
- **Personnel Cost Planning** - displays all of the personal services items, such as the employees personnel number, position number, name, monthly salaries and wages, benefits, worker's compensation, temporary help, and overtime. It also includes all current vacant positions. The expenditures for the Personnel Cost

Planning comes from the monthly State Controller's Office payroll interface, which is posted in the department's SAP system. This layout displays all of the actual expenditures and projections for Personal Services.

- **Direct Pay Planning** - displays all of the expenditures and projections for expenditures not related to the payroll interface or supported by a purchasing document. These expenditures include all non-purchase order related expenses such as travel expense claims, accounting journal entries, and non-purchase order invoices.