



California Department of Finance

# California's eBudget Solution

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## Executive Summary

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Every year, California is faced with the prospect of putting together a budget that allocates one hundred billion dollars across a state of 38 million people. Every year, this arduous process starts with the Governor putting together – with the Department of Finance – a January budget. This budget is then examined and commented upon by legislators, the press, and the general public. Until 2005, these two steps – putting together a budget and publicly vetting the budget – were based on processes that were 30 years old. These processes were inefficient. They limited the availability of budget information and, in turn, limited the ability of California state government to put together the best budget for its people.

The eBudget solution uses the latest in web-based technology to automate the publishing of the budget and give everyone with an Internet connection 24/7 access to the California budget. It also uses a Java interface and an Oracle database to transmit sensitive budget data from state departments and agencies to the Department of Finance electronic.

This solution was developed in less than five months under extreme time and political pressure. The ineffective method of disseminating budget information had to be replaced, and Natoma Technologies, Inc. – under the direction of the Department of Finance – had the eBudget system operational and in production for the Governor's January 2005 budget. Since then it has gone through two budget cycles, fulfilling the anticipated benefits of reducing the cost of putting together a budget, making the manual budget process automated, and increasing the public's access to State of California financial information.

The eBudget solution fixes the problems of the legacy budget process and improves government operations while realizing a financial return on the implementation cost and saving the state and taxpayers money.

The budget process in California affects every single service the state provides. When you think of the budget in terms of K-12 teachers, roads being built, the elderly receiving a prescription or law enforcement being supplied with the best safety equipment it is easy to see how this process, that was previously shrouded in mystery, affects all 38 million of California's citizens. That shroud has been cut down by eBudget, making the data, information and knowledge relevant to passage of a state budget not the privilege of a few insiders, but the right of all interested entities.



## Description

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### **Business Problem**

*“Whenever the people are well-informed, they can be trusted with their own government.” – Thomas Jefferson*

For the 232 years since the Declaration of Independence was written, there has been a debate in this country about the role of government. This debate – spanning two centuries – has manifested itself in a litany of ways: Federalist vs. Anti-Federalist, Federalist vs. Democrats, Democrats vs. Whigs, and Republicans vs. Democrats. If we made a ledger consisting of every distinct position held about the role of government by every American during these 232 years, in the end, we would possess a book with enough pages that no man in one lifetime would be able to read it. This is generally a very good thing. Different points of view, when held in earnest, can be vetted, debated and amalgamated into a decision that does the greatest good for the greatest number of people. This process, though, is contingent on people having access to the information they need to form their own mind. Good government, as Thomas Jefferson informs us, demands transparency.

This lofty introduction to the importance of transparency in democracy may seem a little esoteric. You may have read this and thought that, on accident, someone had submitted a political science essay, or a history paper instead of an IT award submission. You may think that the high ideals of Jefferson have little to do with IT policy. You may be right, but, if you take a moment to read further, you may also change your mind. This submission highlights an IT initiative that not only supports the functions of government, but also fulfills its highest calling– an initiative that solves an operational problem and makes government more transparent. A solution as firmly plotted in the profound as the day-to-day.

Every year, California is faced with the prospect of putting together a budget that allocates one hundred billion dollars across a state of 38 million people. Every year, this arduous process starts with the Governor putting together – with the Department of Finance – a January budget. This budget is then examined and commented upon by legislators, the press, and the general public. Until 2005, these two steps – putting together a budget and publicly vetting the budget – were based on processes that were 30 years old. These processes were inefficient. They limited the availability of budget information and, in turn, limited the ability of California state government to put together the best budget for its people.

Prior to eBudget, the process for developing the documents used to prepare the Governor’s Budget had remained unchanged since Ronald Regan was governor! It was a manual process: the Department of Finance (DOF) collected data from more than 200 state agencies and departments through hand-annotated printer’s galleys (11x17 inch paper), spreadsheets, or data from mainframe legacy budget systems. All three sources of data were manually keyed into a publishing program at the state printing plant. Galleys



were turned around multiple times with hundreds of closely controlled hard-copy handoffs going back and forth between the printing plant and state agencies.

For those not a part of the administration, the process of getting information on the budget was also manual and just as convoluted. Interested parties needed to get a hard copy of the budget in order to have access to information. This presented multiple challenges for those desiring a copy. First, you had to know where to look or who to ask in order to get a copy of the budget. When you did locate a copy of the budget, you had to either drive to get it or have it delivered. There was no instantaneous access. Then, you carried around a bulky book, bringing it to the Xerox when you found a page of interest, and, when you left the office, unless you carried the mass of a book around, you did not have access to budget information. Of course, in a book there are no search functions, so navigating the pages in order to find the items of interest was time consuming. Finally, once you found the information you were looking for, if you wanted to compare it to previous budgets, you had to repeat the process all over again with an archived budget.

Because information was available only through these budget books, it was constrained by distances and space. Citizens in Sacramento had better access to budget information than citizens in San Diego, not because their desire or need was greater, but simply because Sacramento was closer to where the budget books were printed. Clearly, the way California managed its budget data, information and knowledge limited its ability to achieve the highest level of efficiency, transparency and, in the case above, equality.

### **Solution**

The eBudget solution improves constituents' access to budget information by automating the publishing of the California State Budget. It was designed to use the latest in modern, highly scalable, Web-based technology to meet this end. Using a round-robin message distribution technique, incoming requests are routed to one of two eBudget data sites on an alternating basis. Each data site has a server dedicated to the web presentation and a server dedicated to transmitting .pdf documents. By using this network architecture and keeping the size of each static web page to less than 80 kilobytes, users experienced almost instantaneous access to system information, which means that when a teacher is trying to figure out whether or not K-12 school funding is going up or down in a specific year, that information is available to her and not stored away somewhere in Sacramento.

The eBudget system also eliminates the legacy printer's galley process by using Word Processor or spreadsheets for the majority of the data input. These documents are now electronically exchanged between state agencies and the Department of Finance, making the formation of a budget not only more efficient but also more secure. The files are uploaded to highly scalable and secure Oracle database and combined with data extracted from Finance's legacy budget systems. The Web-based budget presentation is generated from this database. Additionally, more than 250 .pdfs are generated from the data stored in Oracle and made available to anyone accessing the web-based presentation.



To meet the business and technical requirements of the eBudget Project, the Department of Finance chose Java (J2EE) for the web site/interface development and Oracle for the database. The Java and Oracle technologies provided a highly secure and scalable environment to maximize the system's reliability and performance needed to deliver the eBudget content to all users within the legislatively mandated deadline without any system "crashes" or performance problems. This has been true from the moment the system went live at the Governor's budget release in 2005.

The Java/Oracle solution provided the flexibility to integrate data from the Department of Finance data sources and present the Web content including text, tables, charts, and .pdf downloadable documents with exceptional performance to a large user community.

This solution was developed in less than five months under extreme time and political pressure. The ineffective method of disseminating budget information had to be replaced, and Natoma Technologies, Inc. – under the direction of the Department of Finance – had the eBudget system operational and in production for the Governor's January 2005 budget.

### **Significance**

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The eBudget solution enhances the way the budget is compiled and the way it is transmitted to the public.

eBudget more effectively manages the data and information necessary for the Department of Finance and the Governor's Office to put together a budget. The eBudget system improves government operations by completely eliminating the time consuming, error-prone and archaic process of communicating information from state departments to the Department of Finance. The back-office eBudget solution includes a new data aggregation engine developed by Natoma Technologies, Inc. and an Oracle database where data files from state agencies can be electronically uploaded into the system and revisions can be electronically exchanged between the Department of Finance and the 200+ different state agencies. The probability for human error is greatly reduced over the prior budget process, and both the DOF and the 200+ state agencies save time and staff from not having to run back and forth to each other and the state printer during budget season. This represents the best practices for government operations regarding the formation of a budget.

Not only is the process of putting a budget together now streamlined, but the next step in the budget process – the public vetting by elected officials, the public, and the media – is now more efficient. The eBudget website serves all Californians and provides the general public unprecedented access to budget-related data. As the seventh largest economy in the world, the complexity and scale of California's budget is immense. Greater transparency and availability of budget data means a more informed public, and a more informed public improves the overall political process around the passage of



the state budget. The eBudget website, which is owned by the Department of Finance, gets more than 5 million hits per budget cycle; this represents 100,000 unique visitors not having to go through the lengthy process of manually looking up the proposed budget. Because of eBudget, 100,000 citizens now have the information to be full partners in California’s political process, and it doesn’t matter if they are in Sacramento or San Diego or Shanghai. It doesn’t matter if they are a lobbyist or a fire-fighter or a fry cook; simply being a person with an interest in California’s budget and Internet access is enough to have the same information on the budget as a two-term State Senator.

In addition to increasing the publics’ access to the budget, eBudget also improves how citizens can use the budget by making it easier to look up relevant information. All information for a specific section of the budget (i.e. higher education funding) can be found with the click of a link. From that link, one can see the amount of money going to specific departments in that subject area, the amount of money that department received the previous year, the percentage change in the funding level and a detailed breakdown of how the department spends its funding on programs it administers. This follows the best practices in making government transparent; not only is the information available but it is organized in a way which encourages citizens to use it.

The eBudget solution also gives professional users around the Capital and members of the media access to the Governor’s budget data immediately upon his announcement of the budget to the California Legislature. For the first time in history, because of this easy-to-use and easily accessible solution, everyone has the same budget data at the same time, which adds transparency and accountability into the political process.

### **Public Benefits of eBudget**

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In January 2005, the eBudget solution was made available to all its stakeholders; DOF, the Governor’s office, 200+ state departments and agencies, legislators, the press, and the people of California. Since then, the eBudget solution has gone through two full budget cycles and meets the expectations it entered with. The cost of implementing this system is far outweighed by the savings realized through the elimination of the manual legacy system.

<b>Total Cost of Solution</b>	<b>\$500,000</b>
<b>Estimated Savings per year</b>	
<b>Galley (paper)</b>	<b>\$600,000</b>
<b>Personnel Productivity Costs Avoided</b>	<b><u>\$2,000,000</u></b>
<b>Total Costs Avoided</b>	<b>\$2,600,000</b>
 <b>Return on Investment</b>	 <b>520%</b>



This financial benefit grows every year because the costly part of the solution – the infrastructure and design – does not need to be reinvented every year. This financial savings alone make the eBudget solution a success.

The benefits of the eBudget system cannot be found only in financial efficiencies brought to government operations, but also in the information brought to California citizens. Currently the eBudget Web site gets 5 million hits per budget cycle; this includes 100,000 unique visitors per budget cycle. That many citizens are now informed about California's proposed 2008-09 budget, whereas before they would have been uninformed or would have had to invest a whole lot more time in getting this information.

The budget process in California affects every single service the state provides. When you think of the budget in terms of K-12 teachers, roads being built, the elderly receiving a prescription or law enforcement being supplied with the best safety equipment it is easy to see how this process that was previously shrouded in mystery affects all 38 million of California's citizens. That shroud has been cut down by eBudget, making the data, information and knowledge relevant to passage of a state budget not the privilege of a few insiders, but the right of all interested entities.

I am sure that 232 years ago, when Thomas Jefferson wrote of transparency in government, he wasn't speaking specifically about the eBudget solution. How could he have? He didn't know what a computer was, much less the Internet or a Web site. And, as the case seems to be with Jefferson, while he didn't always dictate the specific solutions to the question of how to govern best, he did provide us an ideal, a goal by which to judge our actions. In this case, the eBudget solution meets Jefferson's standard; it fulfills his ideal. It gives regular citizens agency in the passage of the state budget, or, at the very least, the ability to be informed participants. The eBudget solution uses the effective management of data, information and knowledge to not only better governmental operations but also to better government. It is a great IT solution, because, it does not just speak to our pocketbooks, but also to the principles that oversee our concept of good government.