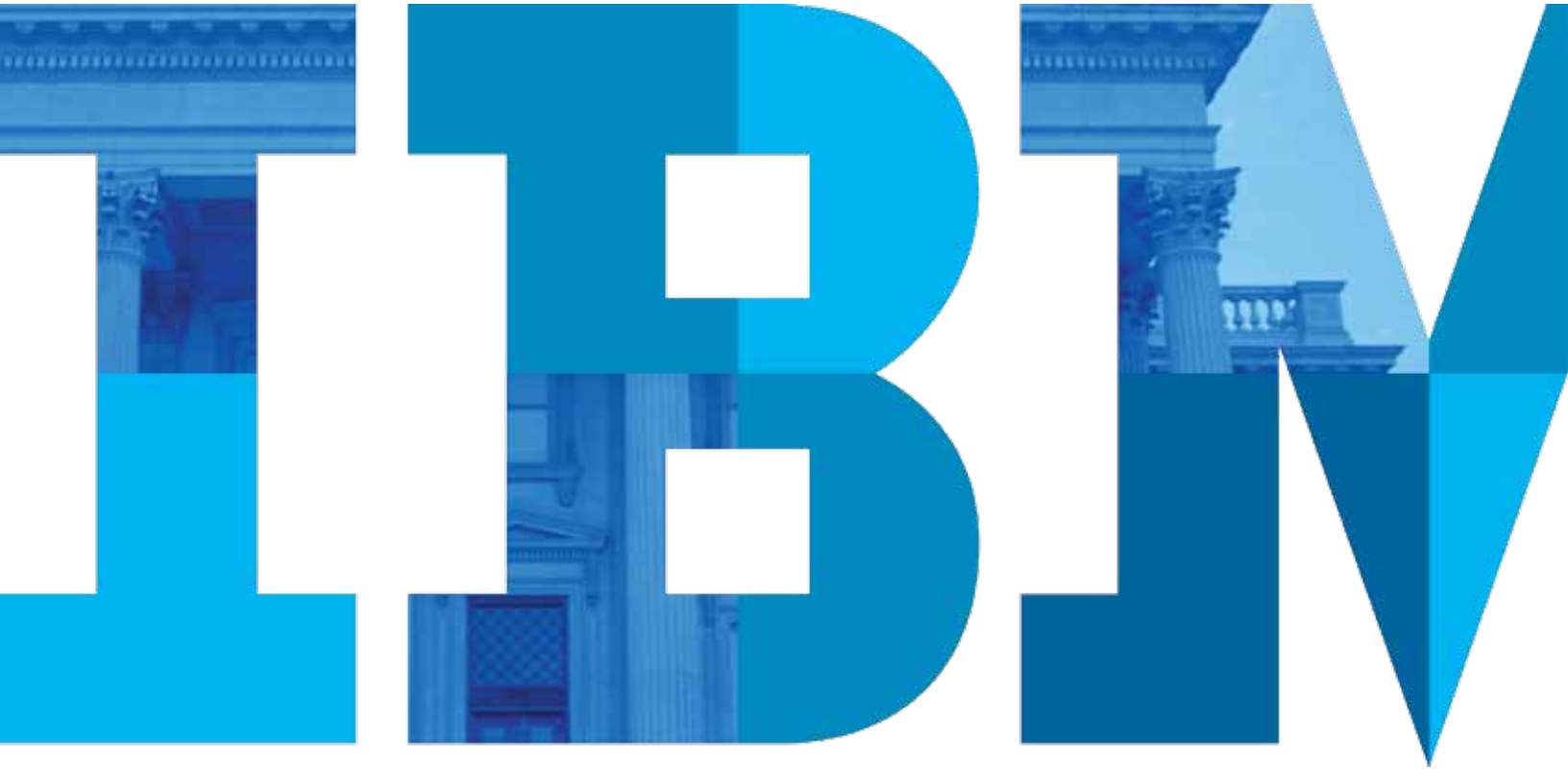
The path to smarter government



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Introduction

Increased demands for services, rising costs and falling revenues, demands from citizens and legislators for program accountability: these and other challenges confront government leaders every day as they try to provide the level of services citizens expect. But rising costs and revenue shortfalls are affecting the ability of governments to meet these demands.

The budget systems and processes many governments use compound these challenges. Cumbersome budgeting processes that must pull information from multiple systems make it difficult to prepare and act on budgets cleanly and quickly. New regulations for accounting compliance and the need for quick and efficient financial closes are forcing a realignment of budget and finance responsibilities. The need to manage and reduce financial and operational risk is more important now as governments are seeking ways to increase effectiveness.

Today, governments are turning to analytical tools to assist in managing this crucial part of the complex process of providing the highest level of service to citizens efficiently and effectively. In the US, a strong push for a performance-based budgeting approach that ties budget allocation to actual program performance continues as an outgrowth of the impetus for smaller government. In Europe, the EU has mandated that member nations take steps to implement a strong budget and finance process with controls that will avoid the challenges of the recent financial crisis.

A transformation from processes that are rooted in the past to processes that can drive "smarter government" now and in the future is the key to success in the public sector climate.

The need for "smarter government"

Unlike private sector companies, government agencies have no "shareholder value," a measure that they can readily point to that shows the legacy of how a government has performed year in and year out. However, citizens and government agencies do use other measures to:

- **Create a strong legacy of transformation.** Elected officials want to leave government better than they found it. That desire forms the foundation on which they run, and campaign promises are translated into specific policy objectives, which become the goals of government agencies. Analytics gives visibility and enables better measurement of the success and failure of programs and, ultimately, the success and failure of the political agenda.
- **Spend public funds responsibly.** No elected official or career civil servant wants to be identified with activities (real or not) that waste government funds. So spending wisely and responsibly is essential. Analytics tools that track and measure the effectiveness of expenditures help organizations spend responsibly.
- **Promote smarter decision-making.** Government agencies feel the pressure to work smarter and make better decisions. Gut-reaction decisions are no longer defensible to citizens and other stakeholders. Having the right data and knowing that it is correct can help ensure that decisions are based on facts, not feelings.
- **Facilitate transparency and accountability.** Open government is not a fad. Government leaders around the world, including presidents and prime ministers, have made commitments to government openness. Analytics tools enable transparency and accountability.
- **Realize results-based government.** In the end, the results matter. Did government meet the stated goals and objectives or did it fail? Why did that happen? What could have been done differently? Analytics helps answer those questions to keep programs on track and on budget.
- **Achieve the best outcomes for everyone, from everyone.** This is the lynchpin of government: it provides the right services to the citizens who need it within budget. This "public trust" is what everyone involved with government strives to achieve. Analytics helps achieve this ultimate goal.

The path to a smarter government begins with the budget and finance process.

The challenges of managing government budgeting and finance

Governments today face multiple challenges in managing government budgeting and finance (Figure 1). These challenges add a level of complexity to how government organizations create and update budgets, report to stakeholders and tie spending, funding and revenue to programs and services.

Figure 1: Budget and finance challenges faced by government.

To build a business case that addresses these challenges and complexities, government leaders must answer some critical questions in these areas:

- **Managing revenue streams and expenses and reducing costs.** Managing revenues and expenses is critical for governments, given the ever-changing economic picture. Are you looking at ways of taking costs out of providing citizens with services? Are revenue and other sources of funds tightening? Are you able to view revenue and expense variances? Can you project revenue and expenses for the next year?
- **Providing results-based, transparent government.** Governments are under increasing pressure to tie budget allocations to measurable results for programs and citizen services. Are you using a results-based budgeting framework? Is the financial information aligned directly with goals and objectives? How confident are you in the plans, budgets and forecasts you share with your departments and leadership? Is financial information shared internally and externally? How comfortable would you be with exposing your current data to public scrutiny?
- **Having one unified financial vision.** Government organizations can be divided into separate and isolated units and divisions, making it difficult to get a unified picture of the finances of the entire organization or to align different sets of data and combine it in a meaningful way. Is your financial information integrated or is it housed in separate silos? Is there any information that you need that is not available in spreadsheets or that you cannot access? How many different financial data sources do you pull information from?
- **Moving away from multiple, complex budget spreadsheets.** Like many organizations, governments use spreadsheets for budgeting, an approach that is complex and cumbersome and prone to errors and version control. Are budgets prepared in spreadsheets that are difficult and time-consuming to prepare? How do you handle formula errors and version control? Who is the keeper of the budget? Are you 100 percent certain that you are seeing the right information for the decisions you need to make?
- **Addressing increasing regulatory pressures.** Governments face increasing regulatory pressures. How do you comply with regulatory reporting requirements? How do you manage risk? How do you reconcile variances and report results to various stakeholders?
- **Reducing fraud, waste and abuse.** A streamlined, efficient and accurate budgeting and finance process is needed to address fraud, waste and abuse in government. How do you determine whether or not improper payments have been made? Are you looking at all areas where fraud and abuse might occur and not just high-visibility areas? Do you know what your risk exposure is for fraud, improper payments, waste or abuse?

The technology challenge of realizing smarter government budgeting and finance

Most governments have a hodgepodge of systems and software that is used to prepare budgets, manage finances and meet reporting requirements. Often this includes ERP systems, accounting software, spreadsheets and long-established finance systems. Each of these presents challenges and opportunities for managing the government budget and finance process.

ERP Systems

In government, it is not unusual to have multiple ERP systems spread throughout different agencies and departments. This is particularly acute in national and regional governments where individual agencies decide on their own ERP strategy versus a government-wide ERP strategy. Budget and finance departments must gather and aggregate information from the different systems to prepare a comprehensive, single view of the budget and finance picture of the organization.

Many ERP systems come with budget and finance capabilities to manage cost and revenue transactions, to track spend, to create financial reports and to prepare budgets. However, these systems are limited in their capabilities and often require significant realignment of the budget and finance, along with extensive user training. Many of the financial analytics capabilities that government organizations need are lacking in ERP systems. These capabilities include coordinated budget preparation among numerous stakeholders, extensive financial reporting, financial dashboard and scorecards, and integration with existing finance systems.

ERP systems, although strong foundations of an enterprise-wide resource-planning capability, can be weak where more robust, more comprehensive budget and finance capabilities are needed.

Spreadsheets

Because of the number of different data sources from which budget information must be gathered, spreadsheets are an integral part of budget preparation and financial reporting, not out of choice, but out of necessity. Spreadsheets are often the only method available to collect the information from these systems into one consolidated view.

These spreadsheets can be complex with numerous formulas that might link to other spreadsheets, which can mean errors that throw budget calculations off. Identifying those errors can be time-consuming and frustrating for budget and finance staff. In addition, because of problems with version control, spreadsheets can be overwritten, recent budget data lost and days or weeks of work wasted.

Spreadsheets have limited analytics capabilities that prevent real-time collaboration during the budget preparation process. Pulling in external data from other systems is cumbersome and reporting is nearly non-existent.

Existing financial systems

Many government organizations rely on financial systems that have been in use for decades. These systems have strong accounting foundations and were designed for analysis of the budget and finance needs of government. However, these systems have limitations: lack of in-depth analytics capabilities, few or no reports and analysis that non-finance decision-makers can use and limited data integration capabilities.

These systems have a rich data store that can be, but often is not, mined and used for budget preparation, financial reporting and financial risk management.

Commercial accounting software

Niche accounting applications offer a strong accounting foundation for government organizations. These applications are often designed for day-to-day accounting processes rather than long-term strategic planning. Although valuable to accounting staff, these applications, like ERP systems, lack strong financial management capabilities, are weak on analytics and often offer limited planning capabilities.

It is hard to integrate legacy financial data into these software applications and their use is most often restricted to accounting staff that know accounting rules. These applications are usually not available to program managers and other decision-makers who need insight into budgets, revenue and cost forecasts and program performance.

Smarter government through budgeting and finance with analytics

At the most fundamental level, good governance is about managing resources more effectively by balancing budgets, reducing costs, preventing fraud and abuse, and complying with strict financial reporting requirements. In addition, it is important to examine how each part of the budgeting and finance operation comes together as an integrated process.

This management process is outlined in Figure 2. Deceptively simple at first glance, each process comes fraught with challenges, yet each offers a clear opportunity for progress toward smarter government.

Figure 2: Managing government budget and finance challenges.

Revenue and expense management

Revenue and expense management are two sides of the same coin: managing the collection of revenue and managing costs and expenditures. To do it well, government leaders must answer some key questions:

- Are you looking at ways of taking costs out of providing services and programs to citizens?
- Do you have insight into all revenue sources? Are revenue and other funding streams tightening? Do you know your projected revenue for the next 1–3 years?
- How are you managing budgeting and financial performance requirements in tighter economic times?
- Are you able to view revenue and expense variances? What happens when you identify a variance?
- Do you have enough time to react to changing cost and revenue situations?

Managing revenue

Governments must assure they have the revenues to fund their programs and services but face constant pressure to limit tax increases. And yet, taxes continue to be the largest source of revenue for governments.

Therefore, governments must ensure that they can collect the all the taxes due them. These steps can help:

- Identify possible tax avoiders and evaders who do not appear in any tax system with identity analytics.
- Monitor tax payers to understand who pays taxes and who does not with a single view of tax payers.
- Monitor and manage current tax payments and tax revenue streams with scorecards, dashboards and reports.

- Analyze policy changes and economic trends to better forecast future tax revenue streams with predictive analytics and "what-if scenario" capabilities.
- Reduce and eliminate tax fraud with analytics technologies that provide the ability to "slice-and-dice" information in different ways and help uncover otherwise hidden tax fraud.
- Identify fraud and abuse suspects with predictive modeling capabilities.

In addition to taxes, some governments rely on other sources of revenue, such as grants from central governments and other organizations, license fees for housing construction, recreation or other activities. Although not as large as the tax revenue, they must monitor and measure the status of these streams just as effectively.

Governments must:

- Monitor and manage license fees with scorecards, dashboards and reports.
- Analyze and forecast fee revenue with predictive analytics and use "what-if" scenarios to model the revenue impact of fee structure changes.
- Monitor and manage grants and grants revenue.
- Analyze and forecast grant revenues with predictive analytics and use "what-if" scenarios to model the operational impact of changes in or the elimination of grants.

SKAT drives smarter tax collection with predictive modeling

In 2009, SKAT, the Danish tax and customs agency, saw an opportunity to simplify significantly the collection of more than €8.5 billion in debts from more than 600,000 citizens and businesses. If SKAT could find a way to divide the debtors into groups based on their ability and willingness to pay, they could tailor collection processes for each group and significantly reduce workload for the collection team.

Solution

SKAT is using IBM Business Analytics technologies to assess debtors based on a statistical model that predicts their probable payment behavior. Using the scores generated by the model, the debtors are sorted into different collection processing channels. The initiative has also led to a number of useful side projects, such as the creation of predictive models for late value-added tax (VAT) payments and bankruptcies.

Cost and expenses

Managing expenses and taking costs out of the "business" of government can help offset revenue shortfalls. In some cases, spending reduction is being codified into law as more legislatures pass strict balanced budget requirements and spending guidelines. These mandates to reduce spending increase the pressure on governments to manage expenses and reduce costs, become more efficient, identify waste and eliminate improper payments as an alternative to reducing services.

A critical activity for governments is identifying where cost savings can be found in programs and other services along with managing the expenses that are incurred in the day-to-day running of government. For example, governments can have an impact by better managing human capital costs or other operational costs such as cell phone usage, travel, vehicle maintenance and supply chain. In addition, identifying and preventing fraud and waste is important, whether it occurs in an agency, among suppliers or at the constituent level.

Governments must have access to all cost and expense information to be able to make critical decisions about cost and expense reduction and:

- Monitor and manage costs and expenses related to program execution and operations, including supply chain requirements, assets, maintenance and benefits with business intelligence capabilities.
- Analyze and forecast the impact of workforce benefits, salary expenses and pension liability expenses with predictive analytics to understand the long-term expense picture.
- Run "what-if" scenarios on the impact of market changes on all expenses, such as fuel costs, workforce health costs and more to understand the impact on budgets.
- Identify and eliminate improper payments and vendor fraud.

After governments have all the necessary information, analytical tools are available to help them more effectively manage the cost side of the budget coin. IBM experience shows that significant benefit can be obtained by using these tools.

BC Egg uses analytics to reduce costs

BC Egg realized that it needed to make smarter use of operational data to provide a better service to its stakeholders, including egg producers and the general public.

Solution

BC Egg has created a range of analytics solutions that help analyze data about many aspects of its operations and that access historic data from its existing system. BC Egg reduced the budget cycle from two months to less than two weeks, which is a 75 percent improvement and increased overall productivity, saving around $100,000 per year in additional staff hiring.

Budget planning, preparation and execution

Planning and preparing budgets is a complex process in government. Understanding revenue flows that will fund programs and tracking the costs to run programs have become more complicated. The push today for results-based budgeting has put pressure on government leaders to demonstrate results specifically tied to budgets. Today, government leaders are looking for answers to key questions:

- How do you currently plan, budget and forecast?
- How are you managing budgeting and financial performance requirements in tighter economic times?
- Are you using a results-based budgeting framework? Are you preparing budgets in spreadsheets or in a centralized budgeting system?
- How do you access the financial information you need to make your day-to-day budget decisions? How long does it take?
- Is there any information you cannot access? Why?

- Is the financial information tied directly to goals and objectives?
- How many different financial data sources do you pull information from? How many are integrated? What do you do if there is a new, unintegrated data source?
- How do you measure performance versus strategy at all levels of your government organization?

Budget preparation is generally not a pretty process. Complex spreadsheets are either exported from multiple IT systems from various agencies or the data from these spreadsheets is rekeyed manually into master spreadsheets with little or no controls in place. A unified financial vision is lacking because silos of information block the line of site into the full budget picture. Regulatory drivers are pushing finance departments to rethink how they will prepare future budgets to comply with increased demand for transparency and accountability during the budgeting process. Finally, each year, more emphasis is put on creating accurate and timely budgets, with a clean audit opinion, that can be closed on time at the end of the quarter and the end of the year.

Government leaders, inside and outside of finance, are striving to get a tighter grip on the budgeting process to:

- Gain a strategic view of revenue streams, budgets, costs and expenses government-wide or at the agency and departmental level and apply them in budget preparation.
- Use collaborative budget preparation and execution process that eliminates silos, saves time and reduces costs.
- Achieve a transparent budgeting process.

The recent budget landscape is shifting to results-based budgeting. Legislatures and other oversight entities are requiring that government leaders tie expenditures to results or face a reduction in budget allocations. In some cases, they are tying these measures into the performance evaluation for managers and executives. Allocating money to a set of programs at the beginning of the fiscal year and at the end of the fiscal year and reporting on where that money was spent are no longer sufficient. Demands for transparency and accountability mean that governments must not only identify the programs and services where budget investment has been made but they must also use metrics to demonstrate results. The goal is to improve program performance and to reduce spending or eliminate poor performing programs.

IBM sees a shift today in how governments plan for, prepare and execute their budgets. The process is more inclusive and interactive and takes a holistic view of budgeting. Technology is helping drive that change, especially analytics. IBM sees successful government organizations using technology to achieve those goals:

- Budget planning that is based on strategic goals and objectives that are tied to specific program performance measurements.
- Collaborative program budget planning that is based on the strategic goals of the government organization from top to bottom and bottom to top for one consolidated budget view.
- Workforce planning that includes salary and benefits costs, pension liabilities and hiring targets.
- Cost and expense forecasting that includes assets and supply chains tied to predictive financial management capabilities.
- Operational planning models that allow for what-if scenario planning to account for operational variances that can impact budgets.
- “What-if” scenario planning to mitigate financial risk based on program or budget changes.

Rotherham uses analytics to transform the budget process

The finance staff at this regional government council relied on multiple static spreadsheets to capture and manipulate data, which was resource intensive and unreliable — and prone to duplication.

Solution

The Rotherham council implemented a business analytics software solution to modernize its planning processes, which resulted in accurate financial information and the ability to respond to shifting priorities. The solution adds the capability to refresh financial plans regularly to capture changing financial climates. Additionally, the solution creates a single view of accurate planning information.

Financial reporting, regulatory compliance and managing risk

Some critical but often overlooked parts of the government budget and finance process include:

- Month-end, quarter-end and year-end financial reporting
- Managing the regulatory compliance required by law
- Meeting the International Public Sector Accounting Standards (IPSAS) that govern the government finance process
- Managing financial risk

Consolidated annual financial report (CAFR) and other financial report preparations are labor intensive, prone to error and are quickly out of date. Forecasts and reports are too infrequent. Insight into risk factors and causes is insufficient, which can lead to lowered risk ratings and higher costs. Financial close is a long, cumbersome process, and the applications and spreadsheets used are inflexible and do not support a dynamic financial environment.

In addition, low-value close activities take up the greatest portion of CFO and budget staff time because collaboration between staff and other parts of government is limited or even nonexistent. And finally, each year more emphasis is put on the importance of accurate and timely financial reports with a clean audit opinion. Government finance leaders are wrestling with some key questions and issues in this area:

- How do you access the financial information you need for financial close and reporting? How long does it take?
- Is the financial information tied directly to goals and objectives and do you report on that annually or quarterly? How does that connection manifest itself in the measurement and reporting tools that you are using?
- How many different financial data sources do you pull information from? How many are integrated? What do you do if there is a new, unintegrated data source?
- Do you have a handle on your financial and operational risk factors? How do you manage risk?
- How much time does it require for you to complete your financial close?
- How much time does it take you to prepare your CAFR and other reports?

Like the private sector, governments must comply with complex and strict financial regulations. In addition, finance officials are required to report to citizens, legislators and others. Too much time and too many resources are used today in the preparation of financial reports and for financial close. The process is largely a manual one, which has an impact on the timeliness and accuracy of financial reports and other critical documents. And, it will get harder and more complex as demands for results-based government increase.

Managing financial and operational risk is critical. Governments are beginning to study the impact of risk ratings on costs and are seeking ways to reduce and mitigate that risk, from investments in failed programs to the operational risks of running government services. More and more, governments are turning to technology, and specifically analytics, to manage these processes of reporting, compliance and risk management:

- Automation and streamlined preparation of monthly, quarterly and annual financial reporting and analysis, CAFR preparation and filings
- Automated preparation of required financial documents for public disclosure (budget books, annual reports and others)
- Consolidated financial reporting to national and regional governments, grantors and other stakeholders
- Financial risk management that provides insight into financial risk factors, predictive risk management capabilities and financial risk management reporting
- "What-if" scenario planning to mitigate financial risk based on program or budget changes
- Preparation of reports for legislative review
- Financial close preparation and reporting for monthly, quarterly and year-end requirements

Conclusion

The government budget and finance process is not for the faint of heart. It is complex, with statutory requirements for reporting, transparency, risk management and the identification and reduction of waste and fraud. The ever-shifting landscape means that governments today need to rely on technology and technology partners to help navigate this complexity. IBM has built a solid reputation for helping governments around the world manage their budget and finance activities. Let us help you.

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IBM Corporation
Software Group
Route 100
Somers, NY 10589

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