

Pay IT Forward:

Doing the Public's Business with Digital Technologies
while Reducing Pressure on the General Fund

>>executive summary

The National Governors Association (NGA) claims that states are suffering their worst economic crisis since World War II. Like states, the National Association of Counties (NACo) reports that counties are slashing budgets with the grim understatement, "The fiscal strength of the 1990s has been replaced by economic uncertainty." The National League of Cities (NLC) says cities are also raising fees and taxes while cutting infrastructure spending and city staffs in order to deal with the worst fiscal conditions for municipalities in the last two decades.

The depth, breadth and staying power of the public-sector revenue recession have created demand for new ways of funding government operations as general fund revenues are jealously guarded for direct service delivery. It is a moment for the information technology (IT) sector to stand and deliver – and demonstrate public value in doing the mission-critical work of government.

There are also larger questions in view here. Can yesterday's rules – policy, budgetary, taxation, funding, managerial or operational – anticipate and respond to the structural changes that have characterized the opening decade of the new century? Can new strategies and models deal effectively with budget shortfalls and continue to serve government and citizens alike well into this century?

Without underestimating the difficulties of instituting new approaches, the current fiscal problems bring with them an opportunity to fundamentally rethink how government gets done. Elected officials and administrators alike have declared that almost everything is on the table. Such an environment makes possible conversations (and changes) that would have been much less likely during good times. This forward-leaning, future-oriented strategy is perhaps best described as *Pay IT Forward*, referring to a method of multiplying helpful actions described in the book and movie *Pay It Forward*.¹

This white paper documents a growing body of evidence that IT is being used to reduce pressure on the general fund in three important ways:

- 1) Increasing revenues without raising taxes by helping government collect more of what it is rightfully owed and pay only what it rightfully owes;
- 2) Reducing or eliminating upfront investment from the general fund for the implementation of IT infrastructure and applications through financing arrangement with third parties; and
- 3) Realizing operational efficiencies and increased organizational effectiveness by automating, transforming and – where necessary – replacing processes.

Specifically, *Pay IT Forward* documents more than a dozen IT-related strategies currently in use by government to make better decisions, increase revenues, reduce expenditures, and open the doors for new opportunities and innovation while reducing pressure on the general fund. The cases and examples profiled here show operational savings of 12 to 30 percent or more. The millions in hard-dollar savings – not to mention soft-dollar cost-avoidance and service enhancements – are coupled with over a billion dollars in increased revenue, all without raising taxes.

¹Catherine Ryan Hyde, *Pay It Forward: A Novel*, Pocket Books, 2000.

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>> INTRODUCTION

>> Long Night's Journey into Day

*"Puis le lendemain, on fait quoi?
(And what will we do the morning after?)"*

-The Late Honorable Robert Bourassa
Former Premier of Quebec

And what will we do the morning after? The question comes during long, dark nights for public treasuries that, to date, have lasted through two biennia. It may be a third biennium before dawn comes to some jurisdictions.

Those charged with doing the public's business fully expect the sun to rise in the morning – but wonder what the new day will be like. Can yesterday's rules – policy, budgetary, taxation, funding, managerial, or operational – anticipate and respond to the structural changes that have characterized the opening decade of the new century?

Of course, 279 years of history suggests that the country's foundation is durable and the frame has endured any number of renovations during the build-out of the American experiment.

Yet the ground on which that foundation rests has moved. Some movement has been violent and sudden, as the 3,500 mile moat called the Atlantic Ocean was breached by terrorism. Other movement has been the slow rumble at the fault line of sharply reduced revenues in government coffers and a significant spike in demand for government services and, in some cases, new types of services to respond to geopolitical, societal and community changes. In some cases, this reduction in available public resources has been purposeful with the specific intent to reduce government. However, few if any mandates or responsibilities have been removed from public responsibility. These structural deficits can only be addressed by higher revenues or by truly doing more with less.

Services are governments' primary product.² The delivery of those services at the needed scale requires IT. Over the last four decades, government's use of IT has exponentially increased the operational capacity of public agencies to deliver services and meet their respective missions and mandates. The apportionment of scarce public resources among these competing demands

²This is not to discount the vital role of government in maintaining sovereignty and codifying, implementing and enforcing laws, only to suggest that much of that activity results in the delivery of a service of one type or another.

falls to elected and appointed leaders. In prosperous times, the challenge is to invest the public interest – and be judged by the results. In lean times – including protracted periods such as the present circumstances – the leadership options narrow to a set of tough choices among bad options.

>> Reconciling Friends: Services and IT

Understandably, in such cases, the urgent overtakes the important – and tactical considerations can distort the strategic view. Such distortion is seen in budget debates when mission-critical infrastructure – including IT – is pitted against services (social, health, education, safety and justice).

Simply put, IT cannot compete with kids, cops and courts – nor should it. Yet the clash is unavoidable because of the intense competition for general-fund dollars. Or, is it?

There is a growing body of evidence that IT is being used to reduce pressure on the general fund in three important ways:

- 1) Increasing revenues without raising taxes by helping government collect more of what it is rightfully owed and pay only what it rightfully owes;
- 2) Reducing or eliminating upfront investment from the general fund for the implementation of IT infrastructure and applications through financing arrangements with third parties; and
- 3) Realizing operational efficiencies and increased organizational effectiveness by automating, transforming and – where necessary – replacing processes.

Any or all of these approaches may require organizational change, process reorganizing or legislative amendment. Without underestimating the difficulties of making these changes, the sustained public sector revenue recession brings with it an opportunity to fundamentally rethink how government gets done. Given the fiscal crisis, elected officials and administrators alike have declared that almost everything is on the table. Such an environment makes possible conversations (and changes) that would have been much less likely during good times.

It is this dark moment that may be a once-in-a-generation window of opportunity to re-tool government to meet today's pressures – and better position it to adapt and respond well to the next set of demands. Shoshana Zuboff and James Maxmin offer one intriguing possibility in a recent book, *The Support Economy*. As the name suggests, the authors argue that the

traditional manufacturing economy and the experience economy of the dot-com era have both run their course. Instead, they argue for a support economy in which the individual is served by ad hoc networks of advocates in the marketplace that aggregate services from a broad federation of providers.³ The authors focus on what that change means for the private sector, but the premise hints at governments' historic strengths as a widely federated service provider could be well positioned if they get the networked information exchange models right.

>> Beyond the Perfect Storm

The uniqueness of this moment is perhaps best seen not just in numbers⁴ (because they change in real time like the clicking of the national debt clock), but also in the confluence of factors.

The confluence was described by the NGA as a freak of nature – *The Perfect Storm*. The name stuck. *The Perfect Storm* has become the metaphor of choice for describing the dire budget circumstances in states and localities across the country. The perfect storm budget scenario typically involves the peculiar convergence of:

- Rising risks and security costs, including terrorism and legal exposures;
- Revenue shortfalls and purposeful reduction in available public resources;
- Reduction of the base of taxable and taxed things as economies move online, underground, globally, and toward the intangible and tax codes and tax collection has not kept up;
- Reliance on the unreliable, including capital gains and one-time windfalls, to meet unanticipated needs or compensate for planning lapses;
- Runaway Medicaid, prison and mandated benefits costs;
- Retirement bow waves and layoffs;
- Ramifications of governments in transition, including setting new directions and eliminating old programs that do not fit with the new priorities; and
- Reengineering in the private sector that has lowered the cost structure of services and processes and raised the pressure on governments to do the same.

Any one of these factors would require a deliberate response but, together, they represent a structural change that demands a structural response.

³ Shoshana Zuboff and James Maxmin, *The Support Economy: Why Corporations are Failing Individuals and the Next Episode of Capitalism*, New York, Viking Penguin, 2003.

⁴ The sucking sound, it turns out, was the drawing down of state reserve funds by what the NGA calls "a spectacular 70 percent" since fund balances peaked in 2000. There is no shelter from the storm to be found in depleted rainy-day funds as legislatures patched together balanced budget during their last two sessions. At the local level, the NLC reports that 67 percent of city officials it surveyed believe their city will be less able to address financial needs in the coming biennium than the one that just past – the highest percentage since the end of the last recession.

>> Priorities of Government

In a number of jurisdictions, those deliberations were informed by the results of a systemic review of government programs – and a prioritization of current activities against available resources. Every activity was sorted into one of three buckets:

- 1) What government was currently doing and must continue;
- 2) What government was not currently doing but needed to start; and
- 3) What government was currently doing but ought to stop.

The funding streams that had supported the third bucket – that is, the one with the lowest priority activities – would be allocated to the first two buckets.

Predictably, the first two buckets were well oversubscribed. An analysis of statements by state executives (representing both new and incumbent administrations) identified seven common themes:

- Ensuring safe communities
- Enhancing economic vitality
- Preparing a productive workforce
- Improving public health and education
- Safeguarding the well-being of vulnerable children and adults
- Maintaining robust transportation and communication infrastructure
- Protecting and promoting natural resources and recreational opportunities⁵

The process of cleaning up after the perfect storm left governments cash poor. During long hard deliberations, state legislators and executives wrestled with combinations of tax increases and spending cuts. Similar discussions were taking place in council chambers in cities and counties, where they had to contend with contracting levels of support from state government.

Priorities of Government



What government must **STOP**



What government must **START**



What government must **DO**

Source: Center for Digital Government, 2003

The Public's Priorities for Government

- 1) Economy
- 2) Health Care
- 3) Education
- 4) Employment
- 5) Homeland Security
- 6) Taxes
- 7) War
- 8) Terrorism
- 9) Foreign Policy
- 10) Social Security
- 11) Medicare/ Medicaid Reform
- 12) Balanced Budget

Source: Opinion Dynamics, May 2003

⁵ Center for Digital Government, *Citizen 2010: Leading for Results, Governing through Technology*, 2003.

For their part, citizens also had a list of what they saw as priorities for their government. The top 12 responses to an Opinion Dynamics poll in May 2003 illustrated the dilemma faced by policy makers.

The list is book-ended by economic concerns and the need for a balanced budget – with taxes in the middle. The other nine popular responses were all common issues that (together or separately) could undermine the economy, derail a balanced budget, or force a tax hike.

>> Conflicting Signals

There are other observers of the public budgeting process that come with a scrutinizing eye. Among them are credit-rating agencies, the judgment of which determines the cost of borrowing money by government. For its part, Moody's Investors Service had a negative outlook on fully 40 percent of states during the 2003 legislative season. Its message to budget writers was clear: "Maintaining credit ratings will depend on how rapidly structural balance can be restored and reserve replenishment achieved."⁶

An analysis of data from the U.S. Department of Commerce Bureau of Economic Analysis found that state spending had increased 20 percent since the beginning of the public sector recession in 2000.⁷

For its part, the NGA conceded that cuts in many jurisdictions had been to budget growth, not the budget base. Until now. The NGA now estimates a record 19 states expect to cut baseline spending – not just cuts in budgetary growth in the year ahead.⁸ For FY 2004, the public sector revenue recession is expected to grow to \$70 billion across the 50 states.⁹

Even as overall budgetary expansion continued, states began pulling back on their technology investments. By one estimate, budget appropriations for state government IT has already been trimmed by 5 percent since 1999.¹⁰ By another estimate, state appropriations for IT may continue to fall by as much as 35 percent this decade.¹¹ As discussed below, the ratcheting down on IT appropriations comes after a quarter century of technology-powered productivity gains.

⁶ Robert Kurtter, *Dramatic Revenue Declines Weaken State Finances*, Presentation to the Council of State Governments Eastern Regional Conference, Boston, Mass., (Moody's Investors Service) February 8, 2003.

⁷ Dennis Couchon, *Bad moves, not economy, behind busted state budgets*, USA TODAY, June 23, 2003: A1.

⁸ NGA, *Fiscal Survey of States*, June 2003. NGA claims that its "Fiscal Survey of States is the most accurate gauge of the health of states' budgets. It assembles data self-reported by states on their general fund budgets."

⁹ Carl DeMaio et al, *The Citizens' Budget 2003-2005*, The Performance Institute, 2003.

¹⁰ Randy Bauer, Bob Jauch, and Linda Luebbering, *View of Technology by State Legislatures and Budget Officers*, An Update to the 2002 Annual Conference of the National Association of State Chief Information Officers, St. Louis, MO, October, 2002.

¹¹ Bill Eggers, *Cutting Fat, Adding Muscle: The Power of Information Technology in Addressing Budget Shortfalls*, Deloitte Research Public Sector, June 2003: 3.

Growth in state and local government spending

1998	5.4%
1999	7.0%
2000	8.2%
2001	8.1%
2002	4.9%

*Source: U.S. Department of Commerce, Bureau of Economic Analysis, May 2003

>> Restoring Structural Balance

The competing demands for scarce taxpayer funds are reconciled in the general fund, which has been ground zero in the budget crisis. The general fund remains the primary source for funding the stuff of government – including capital investments in critical infrastructures and direct service delivery. Even if the general fund were dedicated to direct service delivery alone, it would still be over subscribed.

The constitutional requirement for a balanced budget in all but one state can be at odds with maintaining structural balance among operational capability, political support and public mission – one is often sacrificed for the benefit of others.

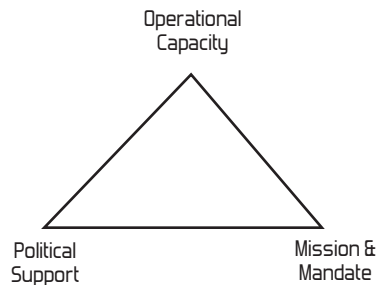
Structural balance is not static. According to Harvard Professor of Government Mark H. Moore in *Creating Public Value: Strategic Management in Government*, maintaining balance requires public officials to “consider the possibility that things change – that new political demands will emerge, or that new technological possibilities will appear. To the extent that these changes redefine what is valuable for their organizations to do, managers have to be alert and respond with suitable adjustments.”¹²

Moore defines value through a strategic triangle in which each point on the triangle represents a different vantage point for understanding the dynamic of public organizations – operational capacity, political support and mission.

Taken together, the triangle “focuses managerial attention outward [mission], to the value of the organization’s production, upward, toward the political definition of value [political support], and downward and inward, to the organization’s current performance [operational capacity].”¹³

Moore argues that the concept “may even help public sector executives accommodate themselves to a reality they have long fought – namely, that their mandate for action is both ambiguous and vulnerable to change, and that an efficient response to that reality may require organizations to be

Moore's Strategic Triangle



Adapted from the “Strategic Triangle” in Mark Moore, *Creating Public Value: Strategic Management in Government*, Cambridge: Harvard University Press, 1995

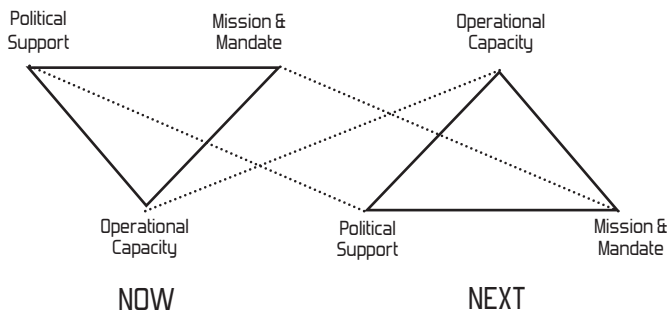
¹² Mark H. Moore, *Creating Public Value: Strategic Management in Government*, Cambridge: Harvard University Press, 1995:73.

¹³ *IBID.* Italics in the original, parenthetical references added.

adaptive and flexible rather than rigidly focused on achieving a clearly defined objective.”¹⁴

Restoring structural balance is not just about taxes, spending and reserves. It reflects a wider set of policy decisions about how government acts. The sustained public sector revenue recession – and government’s response to it – has lain bare once hidden ambiguities and vulnerabilities. A reasonable case can be made that the strategic triangle has been

Restoring Structural Balance



Adapted from the “Strategic Triangle” in Mark Moore, *Creating Public Value: Strategic Management in Government*, Cambridge: Harvard University Press, 1995

turned on its head by a tumultuous opening decade of the century. Seen this way, government operations and capacity are teetering under the weight of competing interests in a political tug of war over budgets and mission or mandate.

Proper public stewardship demands the restoration of structural balance – or the righting of the triangle. The restoration of balance is the function of changes large and small. To that end, we shift to consider the tactical options available to ensure sufficient and malleable operational capacity.

>>Whither the General Fund

Budget is policy. State and local governments have confronted that reality since the turn of the century in the face of a sustained, structural budget crisis. The broad outlines of the crisis are well known: An economic downturn, coupled with inflexible tax structures, sharply reduced revenues to government. At the same time, government confronted a significant spike in demand for public services – social, health, education, safety, and justice.

Even a short list of priorities spends all of the general fund – and more. That is why, in the words of New York CIO Jim Dillon, “Taking pressure off the general fund is the way to a budget writer’s heart.” The effects of

¹⁴ *IBID.* 70.

reducing demand on federal and other funding sources may have negligible effect, if any, compared to the pronounced impact on the general fund.

General fund budgets are the current, operational plans that states use to finance most broad-based state programs and services, representing about half of state expenditures. The rest is drawn from dedicated state funds (such as for education or transportation), from bonds and from federal grants-in-aid.

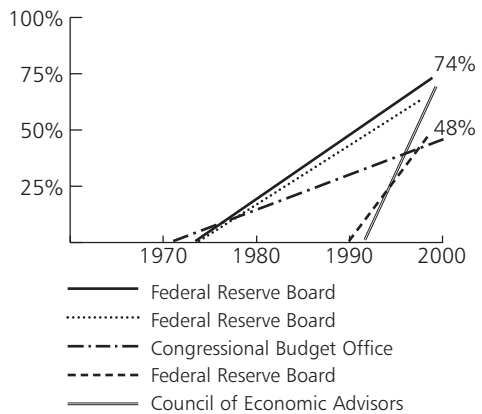
General fund appropriations have historically funded IT programs, an unfortunate pairing, since it subjects long-term IT projects to the ups and downs of economic and budget cycles. Growing demands and shrinking revenues – a circumstance not expected to improve without changes on both the demand and revenue side, increasingly characterize the general fund. Information technology is unique in that it can support strategies that help with both sides of the equation.

>> Productivity Gains and Efficiencies

The delivery of services at the scale required by government can be done only with the multiplying effect of IT. Over the last four decades, government's use of IT has exponentially increased the operational capacity of public agencies to deliver services and meet their respective missions and mandates.

The closing decades of the last century were focused on the "T" of IT and the build-out of technology infrastructures and applications, with the related budgetary priority of demonstrating IT's return on investment. The new century puts a premium on the "I" of IT and the creation of value through governments' increasingly effective use of the information it holds in public trust. Specifically, a better understanding of that information makes it possible for government to plan

Productivity Gains through Information Technology (1973-2000)



better, anticipate emerging needs more effectively, and run more efficiently. The massive volume of that information defies manual methods, and its aggregated value is only realized through sophisticated, automated management.

Initially, out of necessity, information served technology. Technology was used to accumulate, parse and sort the underlying data to meet specific legislative or business requirements. Now, in a subtle but important shift, technology can do much more than process large volumes of transactions – it can shape data into information, and information into knowledge, enabling government to identify and exploit trends and anomalies in the way services are delivered and paid for.

Productivity gains attributed to IT over the past 25 years range from 48 to 74 percent, according to studies conducted by the Congressional Budget Office¹⁵, Federal Reserve Board¹⁶ and Council of Economic Advisors¹⁷.

These productivity gains have been realized, at least in part, in the public sector over the last quarter century – imbedding technology into the mainstream of governing and doing the public’s business. Clearly, even in leading jurisdictions, there remains room for greater efficiencies and their commensurate productivity improvements.

In assessing technology investments in the past, return on investment has focused narrowly on its payback – that is, how long it takes technology to pay for itself through savings or cost avoidance. Moving forward, assessing information investments requires a broader view of IT’s value – including the increased capacity to make better-informed decisions, optimize operations, and enable government to do the public’s business in challenging times.

Reducing inefficiencies is the cornerstone of the “payback” model of justifying technology investments, in which return on investment is calculated on the basis of savings and cost avoidance. That cornerstone remains in place under a *Pay IT Forward* strategy.

Technology and the information that it helps manage are critical components of the structural solution – owing to their unique capabilities in creating new capacity and improving government performance. Given the public sector revenue recession, new technology investments may seem out

“Information technology presents governors with an unparalleled opportunity to improve state government. Adapting technologies pioneered in the private sector, states are using and disseminating information more effectively, conducting transactions more accurately and effectively, providing services more effectively, providing services more conveniently, and fundamentally changing the way state governments operate.”

- NGA Information Technology Task Force, 2002

¹⁵ Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2001-2010*, Washington, DC, Congress of the United States, January 2000.

¹⁶ Stephen D. Oliner and Daniel E. Sichel, *The Resurgence of Growth in the late 1990s: Is Information Technology the Story?*, Washington, DC, Federal Reserve Board, May 2000; and Karl Whelan, *Computers, Obsolescence, and Productivity*, Washington, DC, Federal Reserve Board Division of Research and Statistics, February, 2000.

¹⁷ The Council of Economic Advisors, *The Economic Report of the President* (H. Doc 107-2), Washington, DC, United States Printing Office, 2001.

of reach – unless the technology can pay for itself or provide direct hard-dollar benefits to the general fund, or both. Technology is unique among delivery channels in this regard – and warrants careful consideration as an investment priority to realize the gains.

A *Pay IT Forward* strategy is the confluence of building a new platform for governing, extending the value of earlier IT investments, and adding capacity through more effective use of the information maintained in technology systems – all with a view to serving a growing digital majority.

>> Serving the New Digital Majority

By 2003, fully 72 percent of all American households were online¹⁸ – including 46 percent of African American households and 42 percent of Hispanic households.¹⁹ Couple that with the coming of age of the first generation of Americans for whom a network-connected computer is just another household appliance²⁰ – 73 percent of whom use the Internet as part of their daily lives.²¹

The online population in the United States now totals at least 169 million.²² Importantly, this new digital majority is demonstrating a growing appetite for self-service, with some 30 percent reporting they have done business with government online.²³ Their activity translates to adoption rates for digital government services in excess of the conventional 33 percent benchmark for designation as a mass medium.

Even a 33 percent online adoption rate takes one in three people out of line. This allows public employees to focus their energies on people who cannot or choose not to use online services, whose needs may require personalized attention, while volumes of routine transactions are handled through automated means.

The transition to citizen self-service through the Internet demonstrated the potential for taking pressure off the general fund by moving routine transactions to a cheaper channel. Online government services have reduced the

Nation Leading Online Service Adoption Rates

Impounded vehicle service	98%
UCC filings	83%
Vital statistics	75%
Business registration renewal	75%
Accident reports	73%
Business registration (Initial)	70%
Business licensing	67%
Patient eligibility verification	59%
Professional license renewals	38%
Campsite registration	38%
Transportation credentials	20%
Parking ticket payments	13%
Driver's license renewals	12%
Income tax payments	11%
Vehicle registration renewals	11%

Source: NIC, Center for Digital Government, 2003

¹⁸ Ipsos-Reid, December 2002

¹⁹ Knowledge Networks/SRI, July 2002

²⁰ AOL Direct Marketing Services, April 2003

²¹ Brandchild, 2003

²² Nielsen-NetRatings/ITU/CIA's World Factbook, 2002

²³ Taylor Nelson Sofres, 2003

cost to government for delivering a unit of service by 30 to 79 percent.²⁴

The business value of a *Pay IT Forward* approach does not end with self-service. Add to the mix the strategic value of business intelligence extracted through more sophisticated use of information held and maintained by government.

>> The Other Revenue Dilemma: Governments that are Owed More than They Know

The public sector revenue recession has focused attention on the tax revenues that get away – or, more correctly, are not collected in the first place. Many jurisdictions do not collect all the tax revenues that are owed to them, because they are unable to accurately assess what is owed across the various tax types or identify taxpayers who are slow-, no- or partial-pays. A recent review by the Center for Digital Government indicates that 41 states cannot accurately tally total uncollected revenues. Only nine states can systematically locate delinquent taxpayers and prioritize their records to see where the best recovery prospects are.

Increasingly sophisticated diagnostic, analytic and predicative technologies offer an attractive proposition to taxing authorities in the midst of a continuing revenue recession: collect more money without raising tax rates.

This emerging practice does not yet have a single name. Many public agencies use the term “revenue recovery” while the auditing and IT industries prefer “tax discovery.” The two terms work together well – “recovery” suggests finding what was lost while “discovery” brings with it the sense of exploration and intones the legal obligation to keep these activities within the four corners of the constitution.

If the approach works – and it apparently does as evidenced by the experience in five states where a combined \$1.5 billion has been returned to their respective treasuries – why isn’t everybody doing it?

The reason is at least threefold. First, tax agencies would have to break the illusion that we are all paying our fair share. Some clearly are not – and they are not just fat cats with high-priced accounting help. They are the people whose relative value in terms of uncollected receipts is unknown. Only nine states can systematically locate delinquent taxpayers – and prioritize their records to see where the best recovery prospects are, which are defined by a combination of high unpaid balances and how long they have been owed. (There is an inverse relationship between the age of the tax debt

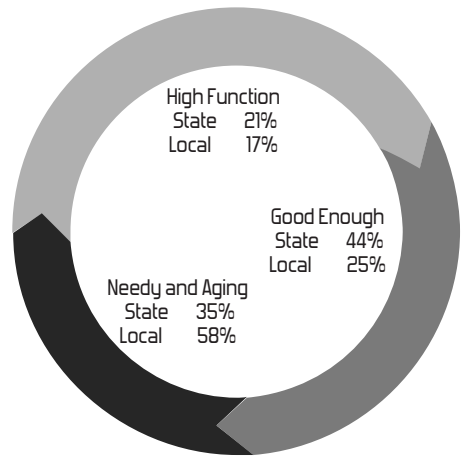
²⁴ Center for Digital Government, *Citizen 2010: Leading for Results, Governing through Technology*, Winter 2003: 17.

and the odds of recovery.) The second and third are technological and fiscal respectively – the challenges of retrofitting existing tax systems and paying for the enhancements.

The Center for Digital Government recently examined the status of over 100 tax systems across the country – with an 80/20 split between state and local – through the eyes of the people who ran them. Approximately one-fifth of both state and local respondents indicated their systems are at or near state-of-the-art with high functionality; just fewer than half of state systems and a quarter of local systems were considered good enough for current operations; and a third of state systems and more than half of local systems were aging and in need of replacement.

What if enhancements to high-function systems, the refreshing of good systems and the replacement of the others could pay for themselves? That is exactly what happens under an arrangement alternatively known as gain sharing or benefits funding. At its core, gain sharing involves paying vendors for the new system through a share of the increased tax revenue. Governments may pay retail pricing for the new systems, but they are not required to produce an up-front investment.

Tax Systems Life Cycle Status



Source: Center for Digital Government, 2003

>>13 OPTIONS

FOR REDUCING RELIANCE ON THE GENERAL FUND

The gain-share model is one of 13 options for reducing reliance on general fund appropriations to which we now turn our attention. The Center for Digital Government has aggregated a basket of options for state and local governments to offset program costs, and those of the technology that supports them.

The 13 options profiled here are differentiated from one-time accounting devices sometimes used by states and localities – such as creating a “thirteenth month” to increase revenue (or delaying a payment to decrease expenditures) in a given year for the purpose of meeting the annual balanced budget requirement – in that they can be used on a sustaining basis to ease pressure on general fund revenues.

The options can be sorted into those that are pursued through “Internal Means,” which may or may not involve a third party, and those pursued through “External Means,” which, by definition, do involve third parties.

The options are summarized in the matrix that follows, followed by a synopsis of each. The matrix encapsulates key characteristics for deciding which options are best suited to address particular needs in government. The matrix provides a comparison of the 13 options on the following six characteristics:

STRATEGY

Estimates the relative time to market of each strategy, indicating whether they are suited for short- or long-term implementations, or both. The former can help with quick wins and provide temporary relief to the general fund; the latter requires lead time and long-term commitment, but in turn, brings with it the opportunity to develop permanent self-sustaining initiatives.

NATURE OF EFFECT

Assesses whether an option is likely to be sustained over time or is better suited to be a one-time bridge mechanism. The former is vital to continuing programs or new permanent functions for which there are inadequate general fund resources; the latter fits for transitional periods (migrating service delivery from means to another) or to pay down one-time capital investments.

²⁵ The options were compiled and perfected through the contributions of, and consultations with, the Center’s Senior Fellows Richard J. Varn, George Beard and Keith Comstock – in addition to Susan Benton, Mark Struckman and the Center’s research team.

NATURE OF BENEFIT

Assess the most likely financial outcomes from each option. Some may reduce pressure on the general fund by increasing revenue collection. Others may help stop leakage from the general fund by recovering over payments and reducing fraud, waste and abuse of public assistance programs. Still others can help public entities avoid cost or demonstrably save hard dollars through efficiencies and new ways of doing business.

INTERGOVERNMENTAL OPPORTUNITIES

Recognizing increasingly common efforts at cross-agency and multi-jurisdictional collaboration, this criterion indicates the options suited to intergovernmental implementation. The majority of the options examined here are consistent with the dynamic of collaboration, but two options are best attempted by agencies acting alone.

NEXIS OF DECISION

Indicates where decisions should be made in order to implement an option. Some options require an act of legislature to be implemented; others can be implemented by the executive branch and its agencies within their existing statutory authority.

DEPENDENCIES

Assesses the groundwork necessary prior to implementation for an option to be viable. The groundwork required is quite variable among the options, but often may include these primary areas:

- Qualifying the opportunity – determining whether there are sufficient hard-dollar savings or increased revenues to make the upfront investment by third parties worthwhile;
- Authorization – indicating whether the change requires specific legislative amendments or can be made under existing enabling statute;
- Organizational changes – indicating whether extensive business process re-engineering is necessary to implement; and,
- Core competence – indicating whether an option brings with it reliance on a third party.
- Others – Signals that they have unique considerations and dependencies that need to be addressed in order to implement. (These are identified in the individual option descriptions.)

Without repeating its content, the matrix is followed by a synopsis of each option.

>>13 Options

for Reducing Reliance on the
General Fund Categories

Diverted Reversions
Reallocation & Channel Migration
User Fees
Grants, Charitable Gifts & Endowments
Bonds & Loans

INTERNAL OPTIONS					
STRATEGY					
Short Term					
Long Term					
NATURE OF EFFECT					
One Time					
Sustaining					
NATURE OF BENEFIT					
Increased Revenue					
Loss Avoidance					
Hard Dollar Savings					
Cost Avoidance					
INTERGOVERNMENTAL OPPORTUNITIES					
Preferred Options					
NEXIS OF DECISION					
Legislative					
Executive					
Agency/Subdivision					
DEPENDENCIES					
Qualifying the Opportunity (Financially)					
Authorization (Legislative Changes)					
Organizational Changes (Process Re-engineering)					
Core Competence (Reliance on Third-Party Providers)					
Others (See individual descriptions)					

< Option 1 >

>> Diverted Reversions

SUMMARY:

Funds that would otherwise revert at the end of the fiscal year are diverted in whole or in part to technology infrastructure investments.

PUBLIC POLICY RATIONALE:

Reduces reliance on general fund by capturing unanticipated receipts for infrastructure investment and refurbishment.

HOW IT WORKS:

- Dedicated to one-time acquisition and development efforts.
- Seeded through appropriation, the infrastructure fund is maintained and grown through interest earned on other fund balances plus excess revenue from racing and gaming receipts.
- Often the source of enterprise or opportunity funds.

DEPENDENCIES:

- Routine, recurring maintenance or operational expense is ineligible.

RESULTS:

- In FY 2002, Iowa's IT program received \$13 million from fund, 24 percent of total available funds.
- The Louisiana Technology Innovation Fund seeds technology projects and has invested \$3 million since 1997.
- The Nebraska IT infrastructure fund has received an estimated \$25 million since 2001 through receipt of two cents of the 64-cent per pack cigarette tax.

WHERE IT WORKS:

- Alabama
- Arkansas
- Arizona
- California
- Delaware
- Georgia
- Illinois
- Iowa (since 1993)
- Kentucky
- Louisiana (since 1997)
- Maryland (since 1996)
- Maine
- Minnesota
- Nebraska (since 2001)
- New York
- Oregon
- Pennsylvania
- South Dakota
- Tennessee
- Virginia
- Washington

< Option 2 >

>> Reallocation and Channel Migration

SUMMARY:

Channel substitution can be thought of as electronic government with an aggressive cost-reduction mindset.

It is a strategy for converting and replacing customary, over-the-counter, M-F, 8-5 information requests and transactions with electronic formats over a network, typically the Internet. This "de-massing" approach succeeds by removing labor, facilities and material costs that are embedded in physical processing that occurs over-the-counter and through-the-mail.

Channel substitution is equally appropriate for use by government in recasting many of the paper-based information and forms-based services it provides to citizens, partners, suppliers, and employees.

WHERE IT WORKS:

- All 50 states
- Hundreds of local jurisdictions
- U.S. Department of Agriculture and its state and local counterparts for electronic procurement

PUBLIC POLICY RATIONALE:

- Channel migration reduces pressure on the general fund by dramatically reducing the cost per unit of service which, given volumes of transactions over time, fundamentally changes the cost model for service delivery.
- Build once, use many times. Automate the routine and create value by dedicating staff resources to helping people with non-routine circumstances that require personal attention.

HOW IT WORKS:

- Driving volumes of routine transactions to cheaper service delivery channels.
- Reducing the number of duplicative yet dissimilar forms, integrating multiple agencies into a common intake system.
- Former labor costs can be reallocated to pay for the system and its support.

DEPENDENCIES:

- Promotion and incentives to encourage adoption of cheaper channel.
- Eventual rationalization of conventional channels to capture efficiencies.
- Sufficient transaction volumes/frequencies to justify the conversion.
- Citizens, suppliers, partners sufficiently ready, willing and wired to do business electronically.

(continued on next page)

RESULTS:

- Channel substitution savings of 30 to 79 percent on the cost per unit of service in some service categories (see *Citizen 2010*), provided there is a commitment to use of the electronic channel to replace, not merely augment, the physical delivery model.
- The city of Los Angeles paid for a new \$28 million supply chain management system through savings realized by consolidating purchasing, closing 40 percent of its warehouses, slashing inventory levels and the number of contracts it maintained in half, while increasing the percentage of earned early payment discounts from zero to 92 percent of all invoices.

>> CASE STUDY:

Reallocation: Better Process, Less Paper and More Productive People

Documents are the lifeblood of both service-providing and regulatory agencies. Information is needed to make decisions that have direct impact on people's lives and the reliability of critical infrastructures – not to mention the attendant economic consequences. Yet the value of that information is often obscured by the administrative burden of collecting and retrieving it.

FileNet worked with large public-sector organizations to address both ends of the obscurity dilemma. On the collection side, the Washington State Department of Health and Human Services (DSHS) seized an opportunity to convert all of its 6,605 paper forms into an electronic format on a common eForm platform – all in about six months. In doing so, DSHS made a thousand fewer printing orders – taking 15 million copies of paper forms out of the workflow, realizing savings of \$517,407. Coupled with \$200,000 in related administrative savings, DSHS is able to reallocate almost three quarters of a million dollars annually.

Employees have ready access to any form, anytime from any networked machine within the agency. The mundane, repetitive tasks of stocking and restocking over 300 types of forms have been eliminated – as have the daily round trips of employees to the supply room. With the paper-intensive overhead eliminated, Tri Howard, DSHS Forms and Records Management manager, says the agency can “Now redirect our efforts to the end users ... and devote more time to serving our 1.3 million Washington state clients.”

The Missouri Public Service Commission (MPSC) started at the other end of the document management challenge. Its 200 employees handle the paper filings related to rate increases, quality of service, customer complaints,

and compliance in regulating more than 1,000 investor-owned public utilities plus another 100 or so rural and municipality-owned utility companies.

A single case involves handling hundreds of pieces of paper which, taken together, have added up to over nine million documents on file at the commission's headquarters in Jefferson City. The existing mainframe-based case management system often left staff with the need to walk up and down 10 flights of stairs to retrieve case-related documents. What's more, the MPSC estimated its workload would increase by 20 percent per year.

The paper repository has been digitized and those documents are available at employees' desks using a standard Web browser. Fully 80 percent of workload is now completed using electronic documents through the commission's enterprise content management system, slashing response times from months to minutes.

>> CASE STUDY:

Channel Migration: Eligibility Verification for Health Services

The state of Tennessee provides a managed healthcare program, called TennCare, for 1.4 million state residents who are eligible for Medicaid or the state health plan for the uninsured or uninsurable. TennCare is delivered through a network of 20,000 doctors, dentists and hospitals. They need to verify an individual's eligibility before providing service.

To avoid turning people away who do not have their TennCare card with them when medical attention is needed, health care providers relied on TennCare's call center to check verification, requiring additional staff intervention to do the look up in response to over 105,000 requests each month.

While EDS embarked on a comprehensive re-write of the TennCare eligibility and claims management system, NIC set to work on an online application to do instant verification look-ups. TennCare hoped to move half the verification workload from the call center to the online service. In fact, 100 percent of that workload – some 2.2 million searches – has migrated to the secure, HIPAA-compliant, Web-enabled service.

The shift saved TennCare almost 20,000 person hours in 2002 and is on track to save another 40,000 hours of staff time in 2003. Health care providers are saving time and money too. One small hospital reported \$13,000 in hard-dollar savings because it was able to discontinue a subscription to a medical billing company for information it now gets through TennCare online.

< Option 3 >

>> User Fees

SUMMARY:

Surcharge applied to those who receive unique benefit from the use of given public property or infrastructure.

PUBLIC POLICY RATIONALE:

Those who receive benefit contribute to its development and maintenance.

HOW IT WORKS:

- Analogous to toll roads or park access fees, users of a public facility pay for a benefit they received while non-users do not.
- Transaction fees from government-to-business applications provide greater value to business trading partners while generating a recurring revenue stream and support IT enterprise or reserve funds.
- For example, attorneys who choose real-time secure access to sensitive client information held in state systems pay an additional fee to offset the cost of authenticating them as authorized users. (Attorneys using conventional channels need not pay for online authentication, but would incur the costs of copying and couriers.)

DEPENDENCIES:

- User fees offset the cost of providing a unique benefit.
- In contrast, convenience fees have had the effect of retarding the adoption of the cheaper delivery channel, potentially thwarting the results sought through reallocation and other means.

RESULTS:

- Through online transactions, the Virginia Department of Motor Vehicles realized a 54 percent increase in driver's license renewals and a corresponding increase in \$7 million in revenue over two years.
- Over a six-year period, the Indiana Bureau of Motor Vehicles realized a 75 percent increase in driver's license renewals and a gain of \$3 million in the collection of the attendant statutory fee.
- Rhode Island has generated an additional \$1.5 million in general fund revenue through a new online interface to driver's records.

WHERE IT WORKS:

- Alabama
- Arkansas
- Hawaii
- Idaho
- Indiana
- Iowa
- Kansas
- Kentucky
- Maine
- Montana
- Nebraska
- New Hampshire
- North Carolina
- Rhode Island
- Tennessee
- Utah
- Vermont
- Virginia

< Option 4 >

>> Grants, Charitable Gifts & Endowments

SUMMARY:

Third-party support dedicated to particular functions of government, including seed money for proving new concepts or methods.

WHERE IT WORKS:

- All 50 states, especially effective in public television and radio

PUBLIC POLICY RATIONALE:

The aggregation of public and private funds to support public policy and service initiatives of common interest.

HOW IT WORKS:

- Creation of a revenue stream through cash infusion, interest earnings from investments and vendor donations (the latter often focused on research and development).
- Grants.gov provides a united storefront for 600 granting agencies and grants worth more than \$300 million.
- The National Science Foundation annually awards 10-20 grants worth \$8 million to support multi-jurisdictional collaboration in digital government.
- The U.S. Government Department of Commerce Technology Opportunity Program awards 25 grants per year, each averaging \$500,000.

DEPENDENCIES:

- Recipients must plan to meet the ongoing cost (including maintenance) of any infrastructure or applications purchased with one-time money.
- Consistency with larger public policy priorities.
- Acceptance does not presume on the outcome of subsequent investment decisions.

RESULTS:

- Often key to public sector innovation because it limits putting at risk taxpayer funds, while allowing potentially important activities that would have not found support through other means.

< Option 5 >

>> Bonds & Loans

SUMMARY:

Borrowing provides immediate money to build or acquire necessary technology especially when conventional fund balances have been depleted.

PUBLIC POLICY RATIONALE:

Public debt for public purpose, and often the only available means to initiate important projects in difficult times.

HOW IT WORKS:

- Technology bonds allow government to spread the cost of strategic IT investments over several years, while removing projects from the appropriations process.
- Common bond types include:
 - *General Obligation*: Serviced from the general fund, backed by full faith and credit of the state, and usually requires public vote;
 - *Revenue Bond*: Serviced and secured by revenue from the initiative, requires no vote, suited to longer term obligations;
 - *Certificate of Participation*: Share of ownership defaults to certificate holder in case of default, requires no vote, suited to short-term obligations.

DEPENDENCIES:

- Hard-dollar ROI. In a preferred approach, loans would be repaid through hard-dollar savings resulting from implementation.

RESULTS:

- Massachusetts' first bond issue came in 1992, followed by renewals for \$310 million in 1996, and \$300 million in 2001.
- Other states and localities use revenue bonds and certificates of participation on a project-by-project basis.

WHERE IT WORKS:

- Massachusetts
- North Carolina
- Tennessee
- Washington
- New York City
- Phoenix
- Tucson
- Hundreds of local educational districts

>> Sales Tax Simplification

SUMMARY:

A state-led effort to develop a national framework for collecting sales tax on all remote sales, including Internet, catalog and mail-order purchases.

PUBLIC POLICY RATIONALE:

- Reduces pressure on the general fund by collecting revenue more efficiently and consistently.
- Consistent application of sales tax to all retail sales, regardless of channel. Failing to tax all online sales puts main street stores at a competitive disadvantage and cut into state and local tax receipts.

HOW IT WORKS:

- Seeks to redress uneven application of sales tax. Under federal law, Internet retailers must charge applicable sales taxes if the buyer is located in the same state where the seller has a store or distribution center. Like catalog and mail-order purchases, collection and enforcement remains illusive for the states under current federal law.
- Under most state laws, the purchaser is required to pay a use tax on taxable items purchased outside of the state. As a practical matter, the use tax is avoided on all but the largest purchases, particularly automobiles where proof-of-use sales or use tax payment is required for registration.

DEPENDENCIES:

- The states need congressional approval to implement the Internet sales tax framework nationwide, but also must modify their own separate sales tax laws to comply with their national proposal.

RESULTS:

- Three dozen states have joined the Streamlined Sales Tax Project and have enacted the project's model legislation in their respective states.

WHERE IT WORKS:

(States where Streamlined Sales Tax Project has been enacted legislatively)

- Alabama
- Arkansas
- District of Columbia
- Florida
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Michigan
- Minnesota
- Missouri
- Nebraska
- Nevada
- New Jersey
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming

< Option 7 >

>> Revolving Funds

SUMMARY:

Internal-service-providing agencies are also able to reduce or rebate changes to customer agencies by taking advantage of year-over-year reductions in the cost of computing.

WHERE IT WORKS:

- Alabama
- Iowa
- North Carolina
- Washington State
- Many local jurisdictions

PUBLIC POLICY RATIONALE:

Rate-paying agencies receive benefits from efficiencies realized by the service-providing agency.

HOW IT WORKS:

- It is Moore's Law in action, with public agencies capturing the benefits of computing's historic cost curves to the benefit of the general fund.
- The service-providing agency sets rates for the following year, based on its present costs. A surplus is built up over the year that follows because of additional metered workload, competitive downward pressure on third-party costs, and internal efficiencies.
- The surplus is allocated back to ratepayers proportionately through a combination of rate reductions and rebates.

DEPENDENCIES:

- Federal and other auditors scrutinize operating margins; rate adjustments are often required to keep margins within an acceptable range.
- Margins also must be adequate to remain solvent. Within that acceptable range, they also provide a vital source of funds to maintain, upgrade or replace shared infrastructure and make investments that benefit the ratepayer base.

RESULTS:

- In Washington State, the Department of Information Services put \$15 million on the table – \$10 million in rebates for FY03 and \$5 million in rebates for FY04.
- Rate reductions in North Carolina totaled \$7 million in FY03.

< Option 8 >

>> Reuse and Sharing

(Services, Infrastructure & Applications)

SUMMARY:

Sharing of common infrastructures and applications, (including but not limited to e-government and administrative systems) within one level of government or among two or more localities.

PUBLIC POLICY RATIONALE:

Common, solution to common problem across agency or jurisdictional lines.

HOW IT WORKS:

- Reuse or legal borrowing of IP or public sector code developed by the federal government or another jurisdiction.
- Provides an entrée for agencies or jurisdictions where it would otherwise be cost prohibitive, while amortizing the investment costs for the host entity.
- Often faster time to market.
- Optimally, this can lead to process consolidation and harmonization and extend to intergovernmental infrastructure and system sharing.

DEPENDENCIES:

- Willingness and ability to partner in earnest in interdependent environment.

RESULTS:

- Consolidation under the new Virginia Information Technology Agency is expected to save the commonwealth \$100 million over three years. Florida expects to similarly save \$11 million.
- The National Association of State Insurance Commissioners hosts insurance filings for all 50 states.
- Washington State gives source code for its International Fuel Tax Administration and recreational permits to other jurisdictions.
- Collaboration between the city of Des Moines and the state of Iowa decreased the cost of deploying digital government applications for both while speeding up implementation.

WHERE IT WORKS:

- Washington State
- Iowa and Des Moines
- Virginia

Plus multi-state software sharing efforts by:

- NASCIO
- AASHTO
- AAMVA
- NASIC
- 511 Road Information Consortia

>> CASE STUDY:

Reuse and Sharing: A Single Face of Government across 99 Counties

In 2001, the Iowa State County Treasurers Association began a concerted effort to move the state's 99 counties toward online service delivery. The priority for the treasurers was to provide the same level of service in the smallest county as the largest urban area. To that end, they needed to remove financial barriers to participation – by counties and citizens alike. They needed a no- or low-cost solution.

Under an agreement with Iowa Interactive, an NIC company, the treasurers initiated a statewide online property tax payment service. Within nine months, 72 counties were live with localized interfaces, and all 99 were up and running in time for tax filing season. The shared system processed 5,100 payments in its first year, collecting \$6 million in property taxes. Iowa Interactive received a fee of \$1.50 per transaction to pay for the service. The system had users in every county during its first year, and the payments were automatically credited and paid to the appropriate county. The success of the tax payment service accelerated efforts to migrate drivers license renewals from the state to county treasurers who, using the same technical infrastructure, have expanded available times for renewing licenses by as much as 400 percent in some communities. Lee Duin, director of the Polk County Treasurer's Office, said the shared service has exceeded expectations on all fronts. He says his greatest surprise has been the number of residents who make a point to say "thanks" for improving service delivery.

< Option 9 >

>> Advertising & Sponsorships

SUMMARY:

Delivering the attention of those who use public facilities to the messages or images of the underwriters.

PUBLIC POLICY RATIONALE:

The audiences attracted to public facilities have commercial value, which can be captured and reallocated in support of a public purpose.

HOW IT WORKS:

- An extension of the advertising practices of public transportation, the sale of stadium naming rights and the like.
- Online advertising remains controversial.
- Those public entities using the approach favoring PBS-style underwriting and logo placement.
- As the online advertising market recovers, it is shifting toward high-relevance sponsored text links and away from banners and pop-up/pop-under advertising.

DEPENDENCIES:

- Public entities need to maintain the ability to exercise discretion when accepting advertising, backed by an intended use policy or similar criteria.

RESULTS:

The results to date have been mixed:

- The 2003 Nevada Legislature authorized Nevada Natural Resources Division of Wildlife to charge fees for advertisements on its Web sites and printed materials (AB 71).
- The Washington State Department of Transportation (DOT) has used PBS-style underwriting to support its online snow pass information site.
- Universities and public schools have used advertising to offset the costs of systems, computer labs and other facilities, equipment, software and content.
- Municipalities use advertising as part of agreements for cell towers, kiosks and public access channels, as have public broadcasting outlets, public affairs channels.
- The contractor in Honolulu, the city regarded as the pioneer in online advertising, requested to be released from its contract in 2000 after a market decline.

WHERE IT WORKS:

- Nevada
- Washington
- Honolulu (cancelled)
- Salt Lake City
- Public universities and schools
- Municipal governments

>> Gain Sharing: Tax and Revenue

SUMMARY:

Systems are funded through increase in revenue collections (also known as benefits funded).

PUBLIC POLICY RATIONALE:

State gets paid more of what it is rightfully owed without raising taxes.

HOW IT WORKS:

• In a public-private partnership arrangement, a private sector partner supplies project investment dollars up front and gets paid back from the incremental funds generated as a result of improvements implemented. Because these are revenues that were previously uncollected, they create a permanent increased revenue stream for the state.

- Identifies entities that have not filed or have underreported, and which ones represent the highest probability of tax recovery.
- Customizes collections to apply specific types of treatments to different groups of non-payers, increasing collections effectiveness.
- Maximizes voluntary compliance.

DEPENDENCIES:

- Qualifying the opportunity to ensure that there are sufficient untapped revenues to make an outside partner's investment financially feasible.
- May require legislative change to enable technology funding directly from the benefits that the project generates.

RESULTS:

- The experience of one group of four states with benefits-funded tax initiatives has returned approximately \$1.5 billion to the public treasury.
- The Indiana Department of Revenue introduced an online "I-File" service in 1999. Over the life of the program, it has saved the state \$1.9 million in data entry costs alone. Moreover, I-File saved the state an estimated \$2-3 per filing when compared to handling paper returns. A dollar per filing in savings is paid to NIC as compensation for the new online service – all of which is provided at no direct cost to the citizen, business taxpayer or general fund.

WHERE IT WORKS:

- Arizona
- California
- District of Columbia
- Hawaii
- Indiana
- Kansas
- Vermont
- Iowa
- Virginia

>> CASE STUDY:

Gain Sharing: Tax and Revenue: When Every Dollar Counts

In the last decade, the Virginia Department of Taxation (TAX) recognized the need to improve services. Increasingly complex tax laws, a growing taxpayer base, demands for better customer service, staff reductions, budget cuts, aging equipment, and outmoded technology presented monumental challenges.

Faced with the realization that TAX would be unable to maintain a high level of customer service or meet demands for new services without major change of its business processes and modernization of its technology platform, TAX began seeking a solution.

After TAX was twice unsuccessful at attempts to gain the funding necessary to replace its technology platform, the administration requested and the 1996 General Assembly authorized TAX to proceed with public-private partnerships to finance technology needs. Under such partnerships, compensation of private partners would be paid from increased tax revenues attributed to successful implementations from such partnerships.

TAX required a business partner that offered large-scale systems integration skills and experience with facilitating comprehensive reengineering and significant organizational change. This partner also had to be willing to underwrite the cost of all hardware, software and services, while accepting the risks associated with payments solely from tax revenue gains attributed to program innovations – and TAX selected American Management Systems (AMS) as its business partner.

Launched in July 1998, the Partnership Project objectives are to help the department deliver better service to its clients and to support the commonwealth's commitment to advancing electronic government.

After examining virtually every aspect of how TAX delivered service to commonwealth taxpayers, TAX and AMS employed best industry practices to revolutionize service delivery. Because of the comprehensive approach to Web-enabling TAX and expanding customer service, individuals and business taxpayers can now file and pay their taxes, register their business, establish payment plans, and access their account history through secure Internet, telephony, service counter and other channels.

This core business transformation has produced breakthrough performance and made TAX one of the leading tax agencies in the world. At a cost of \$166 million, this six-year partnership is the largest state revenue project in the country – and it positions Virginia for the citizen-centric, digital-government revolution that the global economy demands. In less than five years, the gain-share partnership has realized a total of \$159 million in additional revenue without raising tax rates.

Virginia and AMS are using a benefits funding model to cover project costs. Under this model, AMS initially funded the project, and in turn is

compensated as incremental tax revenues associated with innovations are achieved.

The funding strategy places early reliance on implementing fast-track initiatives to create an early benefits stream, often in the areas of customer service (which increases voluntary compliance) and collection of outstanding debt. For example, iFile and iReg provide Virginians with among the most complete access to electronic tax services and information anywhere in the country. To date, over 180,000 individual income returns have been filed online.

The risk management system categorizes delinquent accounts and current tax receivables based on potential for collection and to assess the collection strategies that will produce the best return. To date, it has produced \$100 million in additional revenue. A related collections system has made collections casework and taxpayer compliance much easier. With customer self-service and case management automation, payments as a result of collections cases are now over \$245 million in about a year and a half.

To improve the efficiency of other business processes, AMS and FileNet developed the Total Automated Capture System (TACS) – an imaging and document management system that uses advanced recognition and correspondence processing technology that image enables the backend systems. Over 1.1 million individual taxpayer returns were imaged in 2001; 1.7 million in 2002; and over 500,000 through the first quarter of 2003. The rapid scanning of images has increased the speed of processing tax returns while reducing errors and turnaround times.

In June 2000, AMS and TAX began a multi-phased Customer Relationship Management (CRM) initiative – one that can now be afforded and paid for completely through the productivity of earlier initiatives in the Partnership Project. Nearly complete, the CRM solution is integrated with backend systems and offers a “consolidated view of the customer,” allowing the customer service representative to provide a higher degree of customer education and service. The CRM solution has improved efficiency and responsiveness to customers through intelligent call routing, load balancing and managing outbound correspondence. Its flexibility will allow TAX to accommodate future channels that evolve with new technological and processing trends.

The Partnership Project keeps racking up achievements. For example, a new remittance system was implemented late 2002. The process of preparing checks for deposit and capturing voucher data has been greatly improved through the use of advanced remittance technology, electronic-key-from image workflow, and character recognition software. Estimates predict a 60 percent reduction in the manual keying of checks.

By using the full range of digital technologies, constituent expectations of timeliness, quality and efficiency are met and customer service is raised to a new level. And all of this is achieved through a bold partnership approach to funding – all with no new taxes.

< Option 10B >

>> Gain Sharing: Fraud Reduction

SUMMARY:

The mirror image of the tax and revenue model (above), systems are funded by reductions in overpayments, false claims and other abuse.

PUBLIC POLICY RATIONALE:

State pays only those benefits for which the individuals are properly entitled.

HOW IT WORKS:

- In a public-private partnership arrangement, a private sector partner supplies project investment dollars up front and gets paid back from the incremental funds generated as a result of improvements implemented.
- Applicants are pre-qualified for public assistance through online eligibility systems, which verifies identity and income, cross checks with other benefits programs, and examines data for patterns of potential abuse.
- Automated auditing functions interrogate payment records to providers and suppliers for errors, double payments or overpayments and potential abuse.

DEPENDENCIES:

- Qualifying the opportunity to ensure that there are sufficient untapped revenues to make an outside partner's investment financially feasible.
- May require legislative change to enable technology funding directly from the benefits that the project generates.

RESULTS:

Between 1997 and 2001, Texas identified \$30 million in suspected Medicaid fraud, abuse and waste.

WHERE IT WORKS:

- California
- Kansas
- Oklahoma
- Texas

>> CASE STUDY:

Fraud Reduction: Detecting Abuse, Recovering Cash

The state of Texas identified almost \$30 million in suspected fraud, abuse and waste in the Texas Medicaid program since implementing an automated Medicaid Fraud and Abuse Detection System (MFADS) in 1977.

MFADS – developed, implemented and operated by EDS – had helped the Texas Health and Human Services Commission (HHSC) exceed the legislative-mandated target for identifying misused funds by 217 percent after four years of operation.

The automated fraud and abuse protection services provide desktop access to information and analysis to detect, prevent and recover monies lost to fraud, abuse and waste – using rules-based logic and sophisticated data mining. It both minimizes and deters fraudulent activity because of its ability to identify suspects.

MFADS is a sophisticated suite of tools deployed at the desktops in HHSC offices. It uses sensitive mathematical algorithms and advanced, broad-based neural network models to identify suspicious activities. Data is made available to state officials as graphs and charts that condense a health care provider's history and compare patterns and performance with his or her true peers.

For HHSC staff, the system presents massive amounts of information in a clear, graphic format. This information is central to settlement discussions, administrative hearings and in preparing cases for referral to the Office of the Attorney General.

< Option 11 >

>> Self-Funded

SUMMARY:

A third party launches Web properties on behalf of a jurisdiction in exchange for share of transaction revenue.

PUBLIC POLICY RATIONALE:

Maintain public accountability for the use of public records while taking advantage of a third party's expertise and economies of scale in developing online applications and marketing online government services to businesses and citizens.

HOW IT WORKS:

- Third party has operational responsibility for Web properties and services, directed and overseen by an arm's length public authority.
- New applications are launched quickly and cost effectively because the development costs are effectively amortized across multiple jurisdictions.
- Government shares a portion of the fees generated through transactions.
- A transaction-oriented official Web presence without owning it, or funding it through conventional means.

DEPENDENCIES:

- Sale of high-value public records.
- Market discipline: revenue from the 10 percent of fee-based applications support the other 90 percent that are made available without charge.

RESULTS:

- By 2006, Forrester Research estimates that online fees and tax collection will account for 15 percent of total treasury receipts.²⁶
- No taxpayer funds were used in developing the new portal in Montana, which is valued at more than \$1.3 million in application development and maintenance services.

²⁶ Forrester Research, *Sizing US Government*, August 2000.

WHERE IT WORKS:

- Alabama
- Arkansas
- Hawaii
- Idaho
- Indiana
- Iowa
- Kansas
- Kentucky
- Maine
- Montana
- Nebraska
- New Hampshire
- Rhode Island
- Tennessee
- Utah
- Vermont
- Virginia
- North Carolina
- Texas
- Arizona
- Numerous state departments of Agriculture for the registration of farm chemicals

>> CASE STUDY:

Self Funded: The Mainstream Channel for Service to the Citizen

MAINE.gov is an official state government portal with entrepreneurial DNA – much like its 17 sister organizations that provide states with a full suite of self-supporting citizen-friendly services without a single dollar from the general fund. NIC – through an operating unit called InforME – develops, deploys and operates online services at the direction and under the oversight of a public-sector board.

Revenues from the current suite of more than 300 online transaction services support 100,000 informational Web pages that help to meet the legislative direction to expand electronic access to public records. Moreover, with a “one free for every fee” approach to deploying services, InforME has been able to respond to the board’s requests for services in the public interest – including live help and a citizen alert notification from Maine.gov to notify the public of statewide emergencies such as abducted children (Amber alerts), terrorism, storms, and natural disasters.

The legislature also required that online services cost no more to consumers than through other channels. The portal operator had to provide online services without adding fees to the transactions – it had to work within the statutory fee structure that applied to the sub agents that handled licenses, permits and other transactions on behalf of the state.

Launched with the narrowest margins of any NIC state installation, InforME got serious about making it up in volume. With online license renewals for over 130 professions, Maine leads the nation in making it fast and easy for doctors, nurses, contractors, barbers, and 125 other professional and vocational groups to renew their state licenses at a time and place of their choosing.

The story is the same for online services for businesses. Secretary of State Dan Gwadosky saw an opportunity to move large volumes of routine government transactions online – and it worked. More than half (52 percent) of all corporate annual reports are filed online, as are 57 percent of all UCC filings. Almost all searches for UCC filings, vehicle registration records and title information are done online – each with adoption rates of 95 to 100 percent.

InforME has also been the nexus for intergovernmental collaboration. More than 50 municipalities partnered with the secretary of state to offer a common online vehicle registration renewal service across the state. The Rapid Renewal service – now used by seven percent of vehicle owners – automatically parses the renewal payments, sending town excise tax directly to the appropriate locality and the balance to the state.

The secretary of state anticipates that, within three years, 20 percent of all state revenues will be collected online.

< Option 12 >

>> Outsourcing

SUMMARY:

Third party manages data processing or network installation on behalf of the government entity that owns it.

PUBLIC POLICY RATIONALE:

- A decision that such operations are outside the core competence of a particular jurisdiction or public entity.
- Outsourcing streamlines operations and reduces pressure on the general fund by lowering the costs of operations.

HOW IT WORKS:

Third party provides personnel and expertise to operate a technical installation within the client organization, which usually retains ownership of the facility.

DEPENDENCIES:

A capability to identify (and willingness to acknowledge) operational inefficiencies that can be improved by a third party.

RESULTS:

- Pennsylvania expects to save \$140 million over five years by consolidating its 18 data centers to one and outsourcing its operation.
- Full outsourcing of all state IT operations at once has proven too unwieldy to make the transition in Connecticut and, more recently, Georgia. However, it has been made to work in three Canadian provinces.
- The government of Alberta augmented its historic reliance on 230 private agents for service delivery across the province with an outsourced information system that has increased the government's total transaction volume by 23 percent while reducing operating costs by 37 percent and creating a market for self service which now represents 30 percent of the total.
- Florida expects to save 30 percent and reduce headcount by 150 by outsourcing the management of state applications to one firm, and data center, desktop management and electronic government services to another.
- Arkansas saved \$30 million in Medicaid costs over 17 months after outsourcing the operation of eligibility systems.

WHERE IT WORKS:

- Virginia
- Maryland
- Pennsylvania
- Alberta
- Nova Scotia
- San Diego

< Option 13 >

>> Strategic Sourcing

SUMMARY:

Creation of an internal marketplace to aggregate the state buy (or purchasing power) to attract best available value in the purchase of a wide range of goods and services.

PUBLIC POLICY RATIONALE:

- Reduces pressure on general fund by reducing the cost of acquiring the goods and services needed for meeting government's operational needs.
- Maximum return for scarce taxpayer resources through government acting as a smarter customer.

HOW IT WORKS:

- Aggregating or centrally negotiating purchasing and contracts, including reverse auctioning.
- Individual jurisdictions often exploit the data from automated purchasing or supply chain management systems to transition to strategic sourcing.

DEPENDENCIES:

- Organizational change.
- Mandating the use of a common system by public entities to make participation viable and attractive to private third party providers.

RESULTS:

- Kentucky cities are realizing an average 12.5 percent savings through reverse auctions.
- Based on demand, WISCA continues to expand the market basket of goods available through cumulative volume-discounted contracts.
- In an initial two-month period, states and localities purchased approximately \$7.5 million through the GSA Schedule 70 contracts, which offer competitive pricing on over 500,000 IT services and products.

WHERE IT WORKS:

- Virginia e-procurement (eVA)
- Maryland Marketplace
- Pennsylvania
- The 15-member states of the Western States Contracting Alliance (WSCA)
- The 30 states now eligible for "most favored" status under the General Service Administration (GSA) Schedule 70 contracts
- National Association of County (NACo) Cooperative Purchasing
- Political subdivisions in Kentucky through the National League of Cities reverse auction service

>> CASE STUDY:

Strategic Sourcing/Reverse Funding: The Commonwealth as Large and Smart Customer in the Marketplace

The Commonwealth of Virginia has a proud, rich and long history – its legislature first convened in 1619. Tradition matters in the Old Dominion – long-standing relationships are trusted and relied upon, and historical practices are slow to change. For its part, government traditionally did business amid myriad forms and paper-based processes.

A budget shortfall of \$5 billion in FY 2002 underscored the fact that there was at least one tradition that the commonwealth could no longer afford: less than efficient government purchasing practices. Yet, its historic values were entirely consistent with getting the greatest value for the taxpayer dollar.

The commonwealth did not know just how large a customer it was – or how effective a purchaser it could be. At issue was that it could not see to the edges of its own purchasing patterns. In total, the state buy is worth approximately \$6 billion a year – a fact that was largely invisible because of the decentralized nature of procurement among 342 public entities and 40 or more enterprise resource planning (ERP) systems already in place.

Centralization was not the answer – practically and politically, it was a non-starter.

Enter eVA – the statewide e-procurement and purchasing system. eVA's goal is to create a virtual procurement organization that embodies the beneficial aspects of both decentralized and centralized models. Specifically, eVA is designed to provide a common face of government to state vendors through a single registration point, one location to see all business opportunities, a single point for the submission of electronic bids, and standardized electronic distribution.

The commonwealth found a compromise in a solution that respects local autonomy by bringing together decentralized business rules and activities while creating enterprise data and delivering efficiencies to all users. The system standardizes the ordering process through what appears to the user as a centralized online marketplace, which ties together previously discrete catalogs. At the same time, each purchasing office can adhere to its unique business rules for purchasing while taking advantage of centralized collaboration – even unique financial rules for how eVA communicates with the office's financial system.

This decentralized approach to an enterprise solution had federated sensibilities well suited to the commonwealth. More than 200 state agencies and institutions, almost 300 local government entities, and three organizations within the legislative branch now use eVA. Over 13,300 vendors have registered on eVA, regularly accessing the site for bid opportunities, to receive e-mail orders and submit bid responses. More than 700 vendors have submitted catalogs or have connected their catalog Web sites to eVA. Vendor and eVA-hosted catalogs provide over four million items to eVA shoppers.

As Virginia's central business opportunity site, vendors now register at one place online to receive notification of all bid opportunities for the goods and services they sell, have catalog items seen by over 6,000 buyers daily and submit bids without ever leaving their home or office.

Since March 2001, eVA has processed over 155,000 transactions totaling over \$1 billion in orders. eVA provides interfaces to the dozens of ERP systems used by public entities, allowing them to get full value from their existing systems while receiving the benefits of faster, easier and more cost-effective purchasing.

eVA uses a reverse funding model that has not required up-front appropriations. Reverse funding relies on two funding streams: suppliers pay a one percent transaction fee to a maximum of \$500 per order; and they also pay registration fees annually. This model was developed through consultation with suppliers and vendors, large and small alike, who were asked what they would be willing to pay for value-added electronic commerce services like the ones offered through eVA. After some initial resistance, vendors and suppliers quickly came to see that real-time access to the large, aggregated customer base and increased order accuracy more than made up for the fees paid. Reverse funding requires an enterprise decision – to realize the efficiencies, and to make it viable for the private partner and vendor community, use of the system cannot be discretionary. Mandating both buyer and supplier use represents a significant cultural change, but the model has been critical to its ability to continue its development despite the commonwealth's intense budgetary constraints.

>> conclusion:

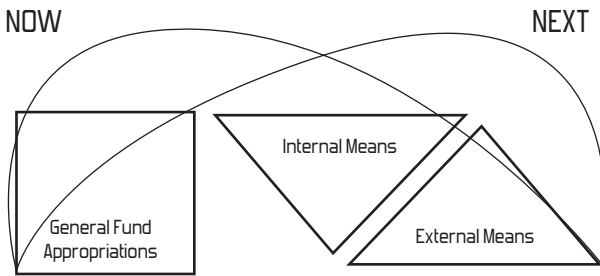
THE STRATEGIC INFLUENCE OF PUBLIC SECTOR IT

Among the enduring stories about the founding of the American Republic is the anecdote of Benjamin Franklin at the signing of the draft Constitution in 1789. Franklin, then in his early 80s, pointed to the engraving of a sun on the back of the Convention president's chair and said, "I have often ... in the course of the session ... looked at that sun behind the president without being able to tell whether it was rising or setting. But now at length I have the happiness to know it is a rising and not a setting sun." This is the morning after. Bourassa's question remains the pressing one – what will we do?

In the absence of someone with Franklin's prescience today, it seems reasonable to assert that maintaining structural balance (with a public service infrastructure that is both sufficiently nimble and robust to meet today's expectations and unanticipated future demands) requires government to reduce reliance on the general fund and mainstream once exotic practices as a legitimate means of doing the public's business.

The national associations of governors, budget directors, controllers and auditors all contend the public-sector fiscal crisis is structural and not cyclical. Budgetary poverty is no excuse for poverty of imagination and creativity – in fact, governments have done some of their best, most innovative work during the worst of times. What may have begun as stopgap funding approaches are likely to emerge as permanent means of funding the public's business. Many of the options discussed here have been used in government for decades – the current crisis has served to bring greater visibility to these options while helping to build out the capacity to meet current

Shifting Reliance away from General Fund



Source: Center for Digital Government, 2003

service delivery demands, and respond to the next challenge. This white paper is intended to help public executives look for money where it is – not where it was.

In this environment, there is no pure play.

That's true of states that have traditionally seen themselves as relying on the general fund alone. It is also true of states that have focused on only one alternative, including those that characterized themselves as "self-funded" states or were known by their use of some other single source. Indeed, the funding streams are not mutually exclusive. Structural balance may now require a deliberate approach to multiple hybrid approaches – combining funding options in ways that are appropriate to the policy and business requirements of the program area.

The effects of the current economic climate have been characterized by one commentator as "severe asset restructuring" and the "cost of living in a competitive capitalist country. If you want cheap flights, cheap steel and cheap phone calls, someone has to pay the price."²⁷ If you want cheap but service and support-oriented government, somebody has to find a way to pay the price of transition. The answer begins by shifting our focus from IT's pay back to "paying IT forward" by preparing government to do the public's business in changing and challenging times.

Government leaders face a strategic choice. They can try to adapt to the service demands and economic realities of the new century by propping up the traditional service delivery model – over the counter, through the mail and on the phone. Or, they can get aggressive about using the new cheaper channels to improve access, satisfy citizens and businesses – all of which at lower cost. The new model is not for the weak or the unwilling – but it holds particular promise for leaders who are imaginative and courageous enough to bet on the future, even if means making a break with the practices of the past.

²⁷ Allan Sloan, *A New Epidemic: Financial SARS*, Newsweek, May 12, 2003: 42.

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The Signature Series

Pay IT Forward: Doing the Public's Business with Digital Technologies while Reducing Pressure on the General Fund is a white paper on funding strategies in the Signature Series from the Center for Digital Government, an international research and advisory institute on information technology in government and education.

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