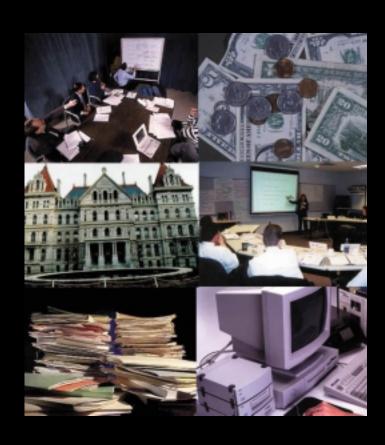# Insider's Guide
to
Using Information in Government

An introduction to the Insider's Guide

The **Insider's Guide to Using Information in Government** (http://www.ctg.albany.edu/guides/usinginfo/) is the main product of three years of research by the Center for Technology in Government (CTG). This material came from our work with teams of people in government who faced and solved problems using the information government collects, creates, and maintains.

This executive briefing provides an overview of the six topics covered in the Web-based **Insider's Guide** and the case stories that illustrate them. Whether you're creating an integrated database, launching a new service project, or evaluating program performance, these six factors will impact your initiative.

Strategy—Understanding your program need, negotiating your environment, and evaluating existing infrastructure and culture are parts of strategy.

Policy—Information policies guide decisions, rest on democratic principles, and ensure the quality and availability of information.

Data—Quality, content, and usefulness are key factors in understanding and dealing with data issues.

Costs—Relationships, change, and the degree of data and task integration are often intangible, but substantial, costs to be considered.

Skills—Data analysis, project management, technology, and communication skills are all necessary in working with information.

Technology—Adopting new technology affects the business of government—from internal work processes to improving customer service.

The **Guide** presents eight real-life case stories that bridge the gap between these six topics and the actual practice of government work. They tell stories about developing new and innovative ways of putting information to use in government, including:

♦ developing a homeless information management system

♦ revitalizing a 18-year-old state-wide central accounting system

♦ implementing new property tax legislation

♦ streamlining staffing decisions in psychiatric hospitals

♦ transforming statistical data from print to an updated and easily accessible Web site

♦ improving the way a multi-billion dollar agency invests in technology

♦ breaking down information stovepipes with a city-wide knowledge bank

♦ managing the complexity of communicating with more than 3,000 local governments

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Problems Facing Government Managers

To better understand the problems government managers face when using information in government, CTG held an open workshop for New York state and local government. More than 90 participants identified the problems they face when using information to do their jobs.

Strategies and policies

Many executives and policy makers, according to government managers, hold a limited understanding and appreciation for the value of information for program planning, monitoring, and evaluation. They also said that a lack of understanding of the nature and level of financial, technical, and human investments necessary to use information well have resulted in inadequate use of existing information, and lost opportunities to create shared resources that would benefit many.

Information quality and availability

Much of the discussion focused on information itself. A key problem was simply knowing what information already exists. Other problems included concern about sensitive, personal, and confidential information as well as the risk of drawing incorrect conclusions from inaccurate, out-of-date, incompatible, or poorly defined data.

Organizational issues

Data ownership, stewardship, and related organizational issues were also prominent. Turf issues that reflect inter- and intra-organizational competition rather than cooperation were cited by many.

Uncoordinated systems

Inadequate, inappropriate, and stand-alone technologies and systems were also serious problems. Isolated systems mean that merging, comparing, and integrating data for analysis, evaluation, and decision making are inordinately difficult and expensive, and seldom attempted.

Workforce and skills concerns

A consistent set of concerns had to do with workforce issues. Among them was the increasing difficulty of attracting and retaining IT professionals. Serious concern was also expressed regarding information handling and analytical skills across all kinds of jobs.

Over the ensuing months, we engaged in eight problem-solving projects with a variety of government agencies. The **Insider's Guide** presents the learning that took place across the many organizations who participated in these projects.

The Big Lessons

Many points of view are an asset, not a liability

Unless you are the sole designer and sole user of your system or program, other points of view count. It takes time and special skills to draw out the different perspectives that matter in your initiative. Get these different ways of looking at the world out in the open as early as possible. Work with people in groups to craft a shared understanding of the effort. Use these different perspectives to describe the big picture that no one can see fully on their own.

Untested assumptions are not a short-cut

Assumptions can be very helpful as long as they are explicit and periodically tested against reality. One commonly untested assumption is that a new system stands on its own. In most cases it is connected in complicated ways to lots of other things. Another problematic assumption is that a system is readily usable. Again, seldom true—especially when it will be used in different locations by different professionals. A third risky assumption is that data integration is a technical problem. It is, but it's also an organizational, political, intellectual, and managerial one.

Data can't speak for itself

Accessing, managing, sharing and disseminating data pose difficult challenges. Data collected for one purpose may not be suitable for another. Meta data may be inadequate or simply missing. Different terms can have the same meaning or the same terms used by different organizations can have different meanings. The list of challenges goes on. Allow plenty of time and resources to tackle them and be judicious about which ones matter most.

Sorry, no silver bullets

The simple fact about information problems is that there are no easy solutions. These problems are tough because they are meaningful and complicated. They take time, money, and effort. No particular method or technology will cut through the maze of complexity in short order. The good news is that there are many useful techniques and tools that can help you manage this kind of work to a successful conclusion.

Good enough is often good enough

Even with the best tools and intentions, it is safe to assume that you will not have enough time, money, or other resources to devise the perfect solution. But if you pay attention first to thorough analysis and then look for reasonable alternatives, you'll be able to make an informed decision about what is really important to do.

Strategy sets the stage

Whether in business or in government, strategic thinking is concerned with mission-critical objectives, with an emphasis on customers and stakeholders. Strategies place a high value on human, organizational, and technological resources and seek maximum return on those investments, rather than minimized costs.

A sound strategy includes:

♦ a clear and agreed upon picture of the business, policy, or program need
♦ an understanding of the needs of all stakeholders, including users, customers, who pays, who benefits, and who gets hurt
♦ consideration about how the new information system will fit in with existing older information systems, business processes, standard operating practices, and organizational culture
♦ an eye for future agency goals, anticipated legislation, budget cycles, and regulatory actions
♦ a communication plan made up of a brief, high-level statement to explain the expected outcome

Policies guide action

Policies are one of the basic building blocks of government. Laws, regulations, executive orders, and official statements guide how agencies fulfill their missions. Information policies guide actions and decisions about why, how, when, and who uses information. Government information policies can serve two different, but complementary, purposes—information stewardship and information use.

Information stewardship policies address:

♦ confidentiality, privacy, and records management
♦ system security, data definition, quality, and integrity
♦ long-term preservation of information with enduring social, legal, or historical value

Policies that promote the usefulness of your information address:

♦ innovative ways to use information to improve the quality or lower the cost of services, or to create new services or better ways of doing business
♦ interagency and intergovernmental information sharing
♦ information handling skills of public employees
♦ public access

The devil is in the data

Data quality issues occur in every system. The quality of the data often has to be enhanced to be sure it is "fit for use." Whether you are using a single source, reusing information for a new purpose, sharing it with others, or integrating multiple sources, the following issues must be addressed.

♦ Data standards are necessary for effective information use, especially when involving several agencies.
♦ Meta data is a crucial piece of the data quality puzzle. You need to know the background and history of the data in order to make decisions about its appropriateness for use.
♦ Contextual knowledge is indispensable to understanding the program environment in which data is collected and used.

Underestimating costs is costly

The costs of information technology initiatives are almost always underestimated. We tend to under-appreciate their complexity and we lack good models or guides for identifying all cost factors.

The following factors demand serious consideration in up-front analysis and cost estimation. The better we get at accounting for them, the more useful our cost models will become.

♦ The more complex the network of relationships, the more costly it will be to establish, maintain, and manage.
♦ The further your current environment is from your envisioned one, the more costly.
♦ The less similar existing technologies are to desired technologies, the more costly.
♦ The more interdependent the tasks, the higher the risk of failure.
♦ The more integration intended in the final product, the more costly.
♦ The more data sources and the greater their differences, the more it will cost to make use of them.

Become a skilled information user

Organizations, like people, must be adept information users. Regardless of the size and makeup of your team, you have to do these things well:

♦ analyze a situation and identify the problems it contains
♦ find, assess, and use information and technical tools to address the problems
♦ produce and communicate a usable product
♦ evaluate the results
♦ manage a project that probably involves many people from more than one organization

No organization has the perfect mix of skills, abilities, and experiences for every situation. Start by giving assignments to people with the proper skills to carry them out. Or assign activities to those who have the aptitude, desire, and responsibility to develop the necessary skills. Additional skills can be acquired through training, mentoring, brokering, contracting, or outsourcing.

Technology choices matter

Technology choices are choices about the present and the future. Whatever technology is chosen for your project will have powerful long-term implications throughout your organization. New technology often comes with new business rules, practices, and processes that are very hard to change. Because of these long-term effects, every initiative needs to pay attention to three things.

♦ Mapping out business processes allows you to identify how well current and new technologies support them.
♦ Making users an integral part of planning and decision making helps a system fit well with the real work of the organization.
♦ Recognizing and accounting for diversity in environments and infrastructures helps ensure that technology will work wherever it is deployed.

Stay abreast of cutting-edge technologies as well. Many government organizations are now working with researchers to develop and test technologies that handle very complex problems such as environmental modeling, emergency management and response, and manipulation of huge data sets. These experimental systems may lead to future products that address a wider range of information problems.

Case Stories

Transitioning from Regulation to Service

Gathering, organizing, retrieving, and distributing information from and about 3000 local governments is a fundamental part of the job of **Office of the New York State Comptroller, Division of Municipal Affairs** (MA). Formal information systems exist for handling financial data. However, MA also relies on a wide range of non-financial information. The diversity of sources and users, the ways in which information is received and distributed, and the physical separation of the field offices from the central office make information management difficult. This project is paving the way for improving communications with local governments through a system that will coordinate contact information.

The Challenges of Data Integration

Providing access to data on the Web requires more than just clean data. The **New York State Council on Children and Families** partnered with CTG to develop the Kids Well-being Indicators Clearinghouse, a Web-based information resource of childhood statistical indicators. Learn how the project team faced the challenges in creating a resource that will be accessible and usable by a wide audience of constituents.

Being "Up-Front" With IT Investment Decisions

IT investment decisions are risky business. They are costly, rife with complexity, and just plain error-prone. The **New York State Department of Transportation** (DOT) is creating a standard process for evaluating and approving the agency's information technology investments. Their work considered the needs and goals of such a process and how to evaluate DOT's efforts to link business, management, budget, and IT investment processes. Their story focuses in particular on what the Department came to call the "up-front" parts of planning and information gathering. By shifting the decision making policies and practice, investment decisions now better support the agency's mission.

Creating a Knowledge Bank in New York City Government

Who better to lead the Herculean task of breaking down information stovepipes than the IT profession itself? The **New York City Department of Information Technology and Telecommunications** is creating a new knowledge bank to help IT professionals with many parts of their jobs including system planning and budgeting, procurement, staffing, and data management. The City's technology policies and strategies are now set by a new Technology Steering Committee to ensure decisions take advantage of the expertise of city agency staff. Information that in the past was used only by one agency will now be shared through the knowledge bank.

Implementation Planning for an Annual Reassessment Program

The **New York State Office of Real Property Services** (ORPS) recently launched a new annual property tax reassessment program to improve equity and increase aid to localities. Under the provisions of the new law, local property tax assessors and their municipalities could voluntarily implement annual reassessment, but they are not mandated to do so. Instead, the program encourages municipalities to reassess their property tax rolls annually to qualify for an increase in state aid. In order to encourage participation, ORPS worked with CTG and the local assessment community to identify the resources needed to successfully implement the program.

Revitalizing the New York State Central Accounting System

How do you go about revitalizing the 18-year-old financial backbone of one of the world's largest governments? **The Office of the New York State Comptroller** (OSC) is planning to redesign the state's central accounting system (CAS). Operated and maintained by OSC, the CAS has served the State well in the four areas of accounting, reporting, planning, and controlling for nearly two decades. In order to address revitalizing the CAS, CTG and OSC worked with representatives from the user community to identify what capabilities will be needed in the redesigned system.

The Making of the Homeless Information Management System

Government managers want to know how well their programs work, but many don't have the information to accurately evaluate them. The **New York State Office of Temporary and Disability Assistance, Bureau of Shelter Services** developed a prototype Homeless Information Management System (HIMS) to gather information that tracks services for homeless, at-risk adults and families and to determine their effectiveness. The HIMS data repository allows decision makers at the state, local, and provider levels to manage and evaluate temporary housing and service programs for homeless families and single adults.

Staff Management With Statistical Data From Psychiatric Centers

Central New York Psychiatric Center (CNYPC) managers must make frequent staff deployment decisions to deal with the dynamic pattern of admissions, discharges, and turnover within the mental health units. These organization-wide decisions rely on data collected at each facility, yet delays in data entry and aggregation mean decisions are often made with incomplete or out-of-date information. To improve this process, CNYPC developed a plan for an intranet application to meet the information management needs of the entire organization.

Visit the Web site, bookmark it, and come back to it whenever you face challenges with using information in government

http://www.ctg.albany.edu/guides/usinginfo/

Virtually every government program—from economic development to criminal justice, and socials services to transportation—is driven by information. The better prepared we are to collect, store, evaluate, and share that information, the better and more efficient our government will operate.

Each year, billions of taxpayer dollars are devoted to finding new and innovative ways to use information. Countless teams of local, state, and federal government professionals are working on these projects. The decisions they make today will impact the way information is used for the foreseeable future.

If this sounds familiar, the **Insider's Guide** has more to offer you.

Six topic areas or principles for using information in government

The **Insider's Guide** is a Web-based resource that can be used by teams and individuals to increase their knowledge about using information in government. While the six topics—strategy, policy, data, costs, skills, and technology—have been addressed briefly here, they are discussed in more depth in the **Insider's Guide**.

Cased-based lessons in using information in government

For us there is no substitute for learning by doing. But the next best thing to learning by doing is to read how others tackled similar challenges. The cases presented in the **Insider's Guide** represent the trenches for working with information in government. They are part of the **Guide** because they not only illustrate the six factors that impact most information projects, but also because they provide a treasure of lessons learned for anyone working with information in government.

Links to helpful outside sources

The **Insider's Guide** provides links to white papers, academic and trade journal articles, helpful tools, and additional government information. Visit some of the outside links for other examples and information. And then put this knowledge into play in your own organization.

Insider's Guide to Using Information in Government

Strategy   Policy   Data   Cost   Skills   Technology

Every day people inside government use information to develop
policies, make decisions, evaluate programs and deliver services.
This Insider's Guide draws from the experiences of real agencies
doing serious work to provide practical advice about using
information in government. It covers six related topics and
eight case studies plus links to many additional resources.

This Guide will help you see how these topics play out in any given
project. If you are starting a project of your own, it can help you
identify the right questions and lead you to resources that will help
you answer them.

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