

# Project Portfolio Management: A Critical Tool in Managing E-government Investments

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## Summary

Governments throughout the world are striving to transform themselves to become more customer responsive and resource efficient through e-government (e-gov) implementation. A key strategy includes the alignment of inter-agency objectives, building organizational consensus, and prioritizing resource investments. The article addresses how project portfolio management helps decision makers ensure that e-gov projects are based on their relative importance in order to minimize risk and maximize benefits.

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*“Agencies need to step out of their individualism and look at the larger issue. They need to stop defending the old way agencies built systems and see how systems can be shared across agencies,”*

Laura Callahan, Deputy Chief Information Officer (CIO) at the US Department of Homeland Security.

*“By now it is a truism that a big IT project has less than 50-50 chance of achieving its goals whether in the private sector or in government. What is surprising is that hundreds of big federal IT projects have run their courses, with varying degrees of success, but the same fundamental errors keep occurring.”*

(Government Executive Magazine)

*“We have moved from the information age to a new age we have yet to fully define. This coming age is making it difficult for e-gov specialists and government officials who have to implement it, because there is not enough understanding yet of the nature of the information and the impact it is having, as a new future and a new culture are being created.”*

Thomas B Riley, Executive Director and Chair, Ontario, Canada Commonwealth Center for Electronic Governance.

While the above remarks are typical of those regarding e-gov activities and the need to redesign government is a common theme, both global and local implementations find agencies and organizations facing internal and external issues regarding scarcity of resources, narrowing windows of technological opportunity, and constantly changing environments. In addition, e-gov projects are continually being added, changed, and removed in response to political activity and changing business and constituent demands. As a result, the “needed” projects require data, skill, funding, and other resources that may exceed an organization’s ability to provide, almost mandating that project priorities be constantly scrutinized and changed. In addition, the growing rate of diverse and unpredictable changes in technology, the demand to reduce information processing time, the increasingly demanding inter-governmental and international information sharing, require consistent and effective project and portfolio management.

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Project portfolio management is a “structured” process that helps managers select, prioritize, and manage all projects based on their relative importance and contribution to the organization’s overall strategic and operational strategies. Portfolio management includes four major components: Culture and Environment, Project Selection and Prioritization Process, Portfolio Management and Control Process, and Portfolio Evaluation Process.

- **Culture and Environment** addresses the overall managerial, operational and decision-making environment. It fully integrates internal resources (human, material, and monetary), logically provides for ongoing identification, selection, control, and management of project and organizational resources. The primary objective of portfolio management is to maximize the return on project-related investments and benefits from it, while effectively minimizing risks to the projects and the organization.
- **Project Selection and Prioritization Process** emphasizes the use of well-defined criteria against which organizations make decisions about which projects to fund and determine each project’s priority based on its overall contribution to organizational goals and objectives. In any project environment, there can only be one priority project. Overall, the process is to ensure existence of an environment in which decision makers are willing to make the hard decisions. Not all projects proposed will add value.
- **Portfolio Management and Control Process** concerns how each of the multiple projects within the portfolio will be consistently monitored and controlled to ensure that the projects within the portfolio are meeting stated goals and performance criteria. An element of Portfolio Management and Control is management’s responsibility to ensure that appropriate tools and processes are in place for collecting and disseminating accurate, timely, and measurable project performance data. Based on project performance data, management can determine a project’s ability to meet goals and objectives and then make decisions regarding project continuation, modification, acceleration, or cancellation.
- **Portfolio Evaluation Process** continually evaluates the overall portfolio composition and the effectiveness of the portfolio management process. Portfolio objective and investment reviews are often only conducted during the annual budget cycle, but in reality are most effective when conducted quarterly, and as a minimum should be conducted semi-annually. A well-defined portfolio evaluation process provides management the opportunity to assess the overall effectiveness of the portfolio management process and incorporate lessons learned at logical points.

An effective e-gov strategy includes establishing a portfolio management process that helps align government and agency objectives by building organizational consensus to clarify rank and prioritize financial, human, and material resource investments.

Governments throughout the world are looking more and more to integrated technology, procedures, or policies to transform themselves by focusing on increasing communication efficiency and responsiveness, eliminating cumbersome processes and becoming more citizen-oriented, and reducing waste. Toward this end, national and Local Government are taking their lead from industry and incorporating best practices such as centralizing IT planning, piloting projects in one agency and sharing the knowledge gained with other agencies, using technology to collaborate across organizational and country borders, establishing product and technology standards, and emphasizing data and information security as a key priority.

For e-gov initiatives to be successful, active partnerships between government, citizens, and the private sector need to be established and projects with the greatest probability of success, both technical and business, need to be undertaken. E-gov success requires a fundamental change in how governments (as a whole) work, especially with respect to how they deal with information, and how government officials view their roles and responsibilities and how they interact with the public.

Several articles and reports over the past 12 months have highlighted many goals, objectives, and benefits to be derived from e-gov initiatives including:

- Improved services to citizens and businesses.
- Improved productivity (and efficiency) of government agencies.
- Clear priorities within economic sectors.
- Improved communication and increased public participation in governmental activities.

A recent report sponsored by the US General Services Administration identified five primary benefits for the public at large resulting from e-gov initiatives:

- 1 Reduction in the cost of government operations.
- 2 Encouragement of economic development through tourism promotion and fulfillment of business needs.
- 3 Consolidation and integration of information and communication technology systems, thereby saving money and making information easier to access and use.
- 4 Increased access to all levels of government - national, regional, and local.
- 5 Improved government's services provided to citizens.

While organizations and governments, especially developing nations or smaller less-visible agencies, may struggle to find the resources, technical skills, and financial backing to implement all of their desired e-gov initiatives, it is important to remember that any initiative must deliver value. Often value is simply a matter of perception, a 2003 Danish report titled, Value Creation in e-gov Projects, stated that value can be captured on one of four dimensions:

- **Value to investors:** Financial return on investment to government.
- **Value to users:** Creating value through improved services or reduced cost to citizens and businesses.
- **Value to employees:** Creating improved skills and tools that enable public sector employees to create value to investors and users.
- **Value of infrastructure:** Creating infrastructure solutions that enable value creation to investors or users in or the e-gov or private sector projects.

Regardless of the specific goals, objectives, or how value is defined, one thing is very clear, as with “for-profit” businesses e-gov projects should be aligned with the overall e-gov vision. Once the strategic and operational alignment is defined, several strategies can then be considered for selecting, planning and executing the most logical, value-added projects. A key element in effective project selection, prioritization, and implementation is to ensure that a culture and environment are established that encourages the challenging shift from “business as usual” to a new way of thinking and acting.

## Project Portfolio Management in an E-government Environment

Project portfolio management (PPM) is not a piece of a software tool or a set of technical tools. It is not a one size fits all solution. Simply adding computers, software, or a set of networked peripherals will not improve the lives of the affected citizens, nor will just automating existing procedures, policies, and practices. Portfolio

management is the integration of structured and flexible processes, measurable and accurate project performance data, and criteria-based decisions consistently applied at the appropriate organization level. To be effective, a PPM process should provide for an integrated approach to manage internal resources (human, material, and monetary) that provides for ongoing identification, selection, control, and management of project and organizational resources. A primary objective of PPM is to effectively minimize risks while maximizing the return on and benefits of project-related investments. Smart executives will adopt portfolio management processes that qualify and quantify e-gov investments and clearly demonstrates project alignment with goals and objectives.

However, despite the increase in global project management investments, many governments and agencies are still hindered by incomplete and inaccurate project data, as well as, outdated or inadequate processes and information systems. As a result, e-gov projects tend to cost too much, have few resources, take too long, and fail to significantly improve service or performance. In addition, there has also been considerable research and documentation to show that an organization's ability to improve its project-oriented performance depends upon how well its project selection, prioritization, execution, and management processes are aligned with corporate business needs, goals, and objectives. Improper and ineffective PPM processes must be overhauled, inappropriate tools, techniques, and methods must be replaced, appropriate and useable project financial and performance measurement systems need to be developed and implemented, and relevant project and organizational information must be stored in an accessible media format, and used.

E-gov in the developing world must also accommodate certain unique conditions, needs, and obstacles. These may include a continuing oral traditional, lack of infrastructure, corruption, weak educational systems, and unequal access to technology. Too often, the lack of resources and technology is compounded by a lack of access to expertise and information.

Given the high priority of e-gov projects and the required level of resources, experience has demonstrated that without a formal PPM methodology and toolset to help determine which projects to fund, project prioritization and resource allocation and commitment will most likely only be achieved by those with the perceived political clout. It is important that the organizations should establish an environment where:

- Executives and agencies work together.
- Resources are shared and fully utilized.
- Effective communication occurs between executives, portfolio managers, and project managers.
- All organizations are working on the right e-gov projects.
- Bureaucracy in minimized and integrated processes are maximized to streamline project execution.

Before committing the time, resources, and political will necessary to successfully implement an e-gov initiative, understand the basic reasons for pursuing (and not pursuing) e-gov. Getting internal and external stakeholders to fully accept e-gov initiatives takes time and a conscious effort. In other words, the value-added question, "what's in it for me?" must be addressed.

## **Project Selection and Prioritization**

The capacity to make more informed e-gov project prioritization and spending decisions becomes an increasingly critical business imperative. Gaining the highest value from project resources necessitates tough project funding, allocation, and timing decisions.

When assessing these areas, it is important to ensure that selected projects are aligned with strategic goals and objectives, based on a clear and unambiguous vision and mission statement. The stated goals and objectives, as well as strategies for accomplishing them, should be explained in the long and short-range business plans.

In addition, it should be determined to which extent each organization's individual goals and objectives are outlined and defined in the overall strategic plan. It is also important that the sponsoring organization has an established policy for adhering to the portfolio management process which includes requiring that each agency have an accurate inventory of existing and potential projects, including the costs and benefits of each.

The portfolio management process should provide sufficient information to support a mechanism for prioritizing and sequencing e-gov projects and utilizing project assets. When implemented consistently and effectively throughout the organization, portfolio management helps answer several key questions:

- What is possible -Do we have the capacity?
- What is needed-Does it make good business sense?
- What projects (opportunities) should be pursued?
- What project should be continued?
- What projects should be accelerated or modified?
- What projects should be terminated?

Much of the information written on e-gov projects indicates that most projects can be classified into one of three categories:

- Government to Government (G2G) sharing data and conducting electronic exchanges between governmental organizations.
- Government to Business (G2B) streamlining procurement and acquisition activities.
- Government to Citizen (G2C) facilitating increased civilian interactions with the government.

Because each of these areas have unique goals and application requirements, the selection criteria and implementation timelines for the various e-gov opportunities will probably be different than typical e-business or e-commerce implementations.

As with most e-business implementations, government executives and agency directors are under pressure to calculate Return-on-Investment (ROI) for all e-gov projects. Saving money should not be the broad vision that should motivate e-gov. Quantifying value is not necessarily about financial return. While the return to a "for-profit" business may be an increase in the financial, the primary return on e-gov is increased efficiency, however it is measured by the myriad of stakeholders. Unfortunately, important e-gov projects often are overlooked and rejected by many organizations because the primary selection criteria only focuses on ROI, cost/benefit, or at worst, no defined decision criteria at all. As e-gov investments continue to come under more scrutiny, selecting the right projects becomes even more important. Moving beyond simple financially-based decision criteria enables governments and their agencies to invest in the projects that most closely match the desired goals and objectives.

For e-gov initiatives, if portfolio management decisions are based only on capital, implementation, and operating costs, without considering both tangible and intangible costs and benefits the result will be an unbalanced portfolio with even less measurable outcomes.

It is important that a selection and prioritization process is implemented (including appropriate decision models and objective criteria), which includes various organizational, political, and stakeholder factors that are value-weighted to ensure that the portfolio contains the right mix and number of e-gov projects.

While there are numerous selection and prioritization criteria for information and communication technology projects but there are specific factors to be considered for e-gov projects such as:

- **Political sponsorship and desire:** Political leaders must not only support e-gov initiatives with words, but with actions they need to publicly take "ownership" of the project and commit their time on a sustained basis.
- **Information policy:** Willingness to share information across government and agency boundaries and with the public at large.
- **Infrastructure:** Investment in the information and communication technology infrastructure may be needed for certain e-gov applications.
- **Human capital:** Sufficient numbers of skilled, literate people (including managers).
- **Existing and expected budgetary resources:** Availability and control of funds, whether funding is centralized or decentralized, is decision making consolidated in one department or allocated to many departments.
- **General e-gov climate:** Amount of trust and willingness to cooperate on the part of stakeholders, specifically with respect to information and data security.

## Project Management and Control

Effective management is as vital for the success of e-gov projects as it is for all government or business operations. A set of management mechanisms at the national, local and project levels is needed, including the establishment of quantifiable, clearly defined performance measures that identify specific business and technical outcomes.

The primary emphasis of the management and control process is on upper management level portfolio reviews, not project level reviews. However, many of the decision elements are applicable to both levels of review. It is important that projects within the e-gov portfolio be routinely monitored and when necessary, modified to ensure that expected benefits are maximized, and costs and risks are minimized. The same is true with respect to each agency's overall portfolio. It should be expected that executive managers and agency directors will regularly monitor portfolio performance. Specifically, portfolio managers should:

- Make logical and often difficult decisions.
- Change the structure and make up of the portfolio, when necessary.
- Ensure that lessons learned are integrated into the project selection and prioritization process.

Early in the portfolio management process, decision makers need to define the overall performance criteria and the standards by which those criteria will be assessed. Because e-gov initiatives typically involve significant money, human resources, information, and political commitments, performance accountability is critical. To monitor and manage these commitments each organization should set benchmarks or establish "scorecards" against which key stakeholders can conduct "reality checks." All benchmarks should be specific and assessed consistently in order to measure progress accurately.

Because e-gov managers are increasingly being asked to justify IT services and expenditures, account for project implementation costs, and identify returns and value to the stakeholders, there is a tendency to use primarily financial metrics to measure performance. E-gov initiatives need to adopt portfolio management techniques that go beyond simply measuring cost reductions. Its executives and directors should avoid simplistic, short-term, cost cutting measures which may jeopardize strategic long-term business initiatives. Understanding that organizations need to communicate project value in financial terms to provide at least some sense of quantitative measurement, optimizing e-gov value must also consider subjective benefits and other so-called intangibles to maximize return to stakeholders.

## Portfolio Management Evaluation

Portfolio evaluation is the final area in the portfolio management process, with the primary purpose of comparing actual portfolio performance to overall strategic goals and objectives. The emphasis is assessing overall portfolio performance and capturing lessons learned to identify areas for change. The lessons learned effort should focus on how to improve the quality of the project selection and prioritization process, as well as increasing management and control efficiency and effectiveness. Key activities during the evaluation process are the post-project and post-implementation reviews and the evaluation of historical data.

If government and agency executives lack the necessary information, processes, and tools to effectively evaluate e-gov investments and choose appropriate alternatives based on lessons learned, then often business and technical decisions are based on some arbitrary criteria.

Whether the portfolio is an e-commerce, e-business, or an e-gov portfolio, reasons for project failure seem to be the same:

- Lack of clear sponsorship and leadership from executives and portfolio managers.
- Lack of effective communication and interaction with stakeholders.
- Lack of project and risk management skills and a structured, proven, and flexible management approach.
- Lack of understanding of and contact with industry at senior levels in the organization.
- Evaluation of projects based on short term ROI rather than long-term value.
- Trying to do too much, too quickly instead of implementing the portfolio via manageable steps.
- Inadequately applying resources and skills, both technical and managerial, to deliver the projects within the portfolio.
- Failure to learn from less successful portfolio implementations.

Many National, Regional, and Local Governments continue to seek information about best practices in measuring the payoff of e-gov initiatives. As a result, feedback from stakeholders the public, businesses, and official that use e-gov services is needed on a regular basis.

The project and portfolio information and data collected and evaluated throughout the entire portfolio management process become significant for senior executives and key decision makers when assessing the e-gov portfolio's ability to accomplish business objectives. When assessing the effectiveness of portfolio, decision makers need to ask several hard questions regarding the project portfolio, including two very critical ones:

**How effective was the portfolio in meeting objectives and how do you know?**

**Are the original objectives and assumptions on which the portfolio was structured still valid?**

## Final Thoughts

It is virtually impossible to list and discuss all the potential challenges facing organizations as they implement the e-gov solutions.

Regardless of the implementing level—national, regional, or locale-gov initiatives face similar challenges and obstacles. Because e-gov implementation can be an expensive and lengthy, government officials and decision makers must be aware of these challenges. For example:

- How to manage privacy, security, and confidentiality of citizen and government records.
- How to close the gap between those who have the necessary technology (citizens and organizations) and those who need, but do not have access to, required technology.
- The limited scope and responsibilities of public sector operations when compared with the global audience of private sector counterparts.
- Failure to modifying existing project management tools and processes to provide visibility into business reward and risk modeling.
- The continuous demand for and dependence upon new technology and integrated systems and access to legacy data requires inter-governmental and inter-agency cooperate to accomplish goals. Since governmental organizations throughout the world have not evolved at the same rate, there are different degrees of readiness and strategic alignment.

E-gov projects and portfolios are quite diverse in terms of scope, availability of resources, possibility or replication in other countries, level of elaboration as well as the role of National, Regional and Local Governments in the initiation of the projects. Successful inter-governmental and inter-agency implementation requires shared goals and objectives, a common vision, and a sense of solidarity among key stakeholders.

Organizations that apply rules of governance and a portfolio management discipline will achieve much greater return on their investment. Finding the optimum combination of technology, business metrics, and practical application for e-gov implementation is difficult, but the rewards can be great.

How are you positioned to get the most out of your e-gov projects? When was the last time you really looked at how you select, prioritize, manage, and evaluate the projects that are consuming your time, resources, and investment funds? Are you leading or trying to catch up?

It's time to start asking and assessing.

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