# NASCIO Recognition Award Nomination - 2009

# IT Project and Portfolio Management


## State of North Carolina

## Enterprise Project Management Office

## June 3, 2009

## Executive Summary

The Enterprise Project Management Office (EPMO) was established in 2004 to assist the State CIO (SCIO) in his legislated responsibility to improve the management of Information Technology (IT) projects in state government. While many states recently have implemented various forms of Enterprise Project Management Offices, Project and Portfolio Management Processes, and IT Investment Governance, the State of North Carolina, Office of Information Technology Services, is celebrating the fifth anniversary of the EPMO's creation and implementation of processes, governance, standards, and accountability measures for IT projects.

This nomination will illustrate the project approval process and the value of portfolio management in state government. It will also show how state agencies have adopted processes used by the EPMO to improve IT project success. Collaboration between state agencies has also improved in the five years since the EPMO was established, again leading to improved project success and significant savings for North Carolina citizens.

North Carolina Project and Portfolio Management

## Business Problem and Solution

### Business Problem

In 2002, the SCIO recognized that IT projects were failing or were being delivered at significantly greater than planned or expected costs. The existing governance process was inconsistent, ineffectual, and did not present IT project information in a meaningful format for good decision making. The magnitude and urgency of poorly run projects resulted in the formation of new governance, new policy, and new processes impacting every executive branch agency, providing improved visibility and accountability of IT projects. The importance and priority of IT projects in North Carolina is reflected by a five-year total cost of ownership (TCO) of over $1 billion dollars for the IT project portfolio.

### Solution

**Key Area 1: Project Approval and Accountability**

The project approval process is the foundation for early and proactive reviews of projects as they move through the project life cycle. The delivery of business systems and programs to provide services to citizens, businesses, and employees is critical to an agency's mission. This is driven by successful implementation of IT projects, a key outcome of the project approval process.

For IT projects with a five-year life cycle cost of $500,000 or more, approval occurs at three gates (decision points) during the IT project life cycle. The first gate is from "project initiation" to "planning and design"; the second gate is from "planning and design" to "execute and build"; and the third gate is from "execute and build" to "implementation." The following are critical inputs into the state project approval process:

1. The agency IT project manager is responsible for managing and controlling the IT project.
2. The agency business sponsor is responsible for approving the project charter, approving change requests as the project progresses and signing off on the final acceptance of the business system.
3. The agency CIO reviews and approves the IT project. Agencies may also include other agency personnel in the approval cycle such as the CFO, Project Management Office (PMO) or Deputy Secretary.
4. The SCIO's EPMO Quality Assurance (QA) team provides monthly IT project assessments of scope, cost, schedule, staff utilization and risk based on data entered by the agency IT project manager. This function provides an early warning system for potential IT project problems. The QA team provides an objective view of IT project progress.

5. The state approvers — Office of State Budget and Management (OSBM), Office of State Controller (OSC), State CIO, Deputy State CIO, EPMO, and ITS Architecture and Engineering and Security and Risk Management Offices — provide their expertise, knowledge and approval as IT projects go through the project gates.
6. The EPMO's Project Manager Advisors (PMAs) advise, mentor and consult with the agency project managers to identify potential project problems, assess risk, provide business case assistance, provide procurement reviews, and help with corrective action plans to get a project back on track. The PMA provides a subjective view of project progress for both agencies and the State CIO.
7. The last step is for the State CIO and Deputy CIO to approve the project phase, providing knowledge and insight to help ensure a successful IT project.

## Key Area 2: Portfolio Management

In times of economic turmoil and declining revenues, it is even more critical that state governments make the right investment in IT projects and maximize returns. Portfolio management provides the basis for making key decisions on IT investments. The key components to help optimize IT technology investments are:

1. The portfolio management of IT projects helps an agency prioritize the value of an IT project to the business.
2. Business case analysis, benefits, costs, and change requests are reviewed and approved by the State Office of Budget and Management, the agency budget office and the agency business sponsor. This provides financial review and business acceptance of IT projects.
3. IT projects across agencies can be reviewed for redundancy or leveraging of enterprise-wide technology services.
4. As an IT project is completed and the business system is in production, the application maintenance and support is transitioned to application portfolio management. So even though the development project ends, application portfolio management begins to account for the operational and support needs to maintain the application. The State of North Carolina maintains a database of information on approximately 1340 business applications run by state agencies in the executive branch of state government. Application criticality, operating system, support staff, disaster recovery, and application dependency are all tracked, as are the annual costs of maintenance.

## Key Area 3: Maturity and Adoption of Project and Portfolio Management

Collaboration on projects aids in risk reduction and helps to improve IT project success. While strong project management governance and policy can produce good results, it is only after the EPMO and state agencies have matured and adapted to project management principles that the burden associated with governance is reduced. Teamwork, reporting, communication and decision making on IT projects are improved and consistent across the state agencies. This leads to efficiently run IT projects with improved service delivery:

1. Project management definitions, communication, best practices and lessons learned are shared, and agency project managers have a consistent and effective process to manage IT projects successfully.
2. Teamwork between the agencies and state approvers helps ensure that budget, architecture, security, project management principles and management questions are identified and answered proactively very early in the project life cycle.
3. Agency project managers learn and grow in project management knowledge by consulting with the EPMO's PMAs and following the EPMO's best practices. PMP preparation classes and as-needed training are provided by the EPMO to improve agency project manager skills.

### Significance

Since 2004, 20 IT projects (> $500,000) were canceled based on the state's project approval oversight process and with agreement by the agencies. The cancellations occurred after $662,247 was spent on the projects. Based on the original budgets for these 20 canceled projects, the potential for wasted expenditures due to IT project failure could have exceeded $29 million.

The employees of the State of North Carolina have matured and adopted project management governance and best practice processes. Improving the management of IT projects can only be accomplished by the agencies and state project approvers working together and fostering the willingness to continuously improve project management capabilities.

### Key Statistics

- In 2005, 48 active IT projects (> $500,000) were under oversight of the State CIO. In 2009, that number had more than doubled to 99 active IT projects (> $500,000). This is a growth of 102%.
- In 2005, 150 agency employees followed the state project approval process. In 2009, 460 agency employees are following this process, a 207% increase.
- The QA team wrote, reviewed and monitored an average of 180 project issues per month in 2008.
- The percentage of projects that need State CIO attention has decreased from 7.3% in 2006 to 5.38% in 2008.

- One hundred thirty agency employees have completed the EPMO PMP preparation class. The pass rate was 94.12% in 2006, 90% in 2007 and 90.91% in 2008.
- The number of approved change requests involving budget modifications has grown from 60 in 2006 to 156 in 2008, a growth of 160%.
- In 2008, the state approvers reviewed 247 project gate approvals.

**Active Project Totals - May 1, 2009**

| Status | Project Totals | TCO Budget |
|---|---|---|
| Planning & Design | 47 | $584,025,203 |
| Execution & Build | 22 | $152,178,963 |
| Implementation | 29 | $371,298,506 |
| Registered | 67 | $20,781,051 |
| **Totals** | **165** | **$1,128,283,722** |

## Benefits

Measuring benefits is very difficult, especially when the application requires governance and a new way of doing business. Many times benefits don't flow or can't be measured until adoption and maturity of the business. IT Project and Portfolio Management tools, automation, processes and governance have allowed the State of North Carolina to realize improved efficiencies and reduced cost over five years. At the same time, stopping failed projects early in their life cycle or taking corrective actions to prevent project failure has prevented wasted IT expenditures.

In 2004, the EPMO spent approximately $3.5 M on staff, tools and infrastructure for the Project and Portfolio Management efforts. By 2009, the costs had been reduced to approximately $2.0 M per year due to staff efficiencies and reductions. These reductions were possible even though the number of projects being reviewed and monitored more than doubled.

Gartner and other research groups estimate that approximately 20% of all IT projects fail. Based on the state's current portfolio, if only 2.5% of projects are stopped early or prevented from failing it would save the state approximately $5.5 million/year

Other benefits include:

1. Consistent Project Reporting – The agencies control and manage their IT projects, but monthly status reports and data preparation for project gate approvals require the agency to provide insight into scope, cost and schedule.

2. Visibility of Projects – The State Office of Management and Budget, Fiscal Research Division of the General Assembly, Office of the State Controller, and ITS sections of Architecture and Engineering, Security and Risk Management, Statewide Procurement and the Office of the State CIO have visibility into IT projects and can advise, require action plans or take action on troubled IT projects.
3. Early Warning Signals – The QA team and PMA align themselves with the IT project team and advise and consult with the agency project manager. Finding project problems early in the life cycle allows needed corrective actions to take place proactively.
4. Faster Decision Making – Project and application portfolio data are readily available and consistent across state agencies to help with business decisions.
5. Financial Understanding – Business case, benefits, and project and operational costs are approved and can be reviewed at any point in the life cycle of a project or application.
6. Prioritization of IT Projects – IT projects can be prioritized to ensure that key resources and funding are available for critical projects and programs.
7. Improved Project Manager Skills – It is critical to retain and grow the knowledge and skills of project managers in the State of North Carolina. Enabling employees to manage projects successfully builds employees' skill sets and helps the state achieve the business benefits of the project.
8. Service Delivery Improvement – IT projects and the business systems that are delivered to citizens, businesses and employees must meet architecture, security and performance standards. The teamwork created by project collaboration allows agencies to deliver systems with sound architecture, improved security and expected performance while meeting project management and fiscal requirements.
9. Common and Shared Project Processes – The agencies understand project management, "walk the talk" and have instilled the value of project management in their own agency organizations. This leads to less rework, less risk mitigation and successful IT projects.

**Flexibility into the Future**

Creating the foundation for project and portfolio management has allowed the SCIO and the agencies to expand and grow in other areas. Application portfolio management, IT Expenditure Reports, IT Business Plans, IT Expansion Budgets and, in the near future, Balanced IT Scorecards for Performance Management have evolved from the State of North Carolina's Portfolio and Project Management efforts. During the current economic turmoil, project data has readily and quickly been available for North Carolina to make smart decisions on projects that can be put "on hold," should be canceled or can continue forward. IT Project and Portfolio Management is a proven and valuable business function in the State of North Carolina.