

North Carolina state government is a large, complex organization that relies on its core business management systems (personnel/payroll, budget, accounting, tax & revenue, banking and retirement) to provide quality and timely services to its citizens, as well as to retain the trust of the public for fair and equitable collection of revenues, cost effectiveness of investments, and propriety of expenditures.

The State continues to experience challenges from budgetary constraints while the public desires expanded services and taxpayers demand more effective and efficient operations. With an annual General Fund budget of \$26.8 billion and over 264,000 employees, the State would be a Fortune 50 company if it were a private organization. Large, complex computer systems and sophisticated telecommunications networks are required to perform the business functions of the State. Robust financial and human resource systems, employing modern technology and linked together electronically, are necessary for meeting this need.

The State's current core business systems have limited functionality. They rely on dated technology, do not communicate well with each other, are difficult to change for new operational requirements, and are hard to operate and maintain. Moreover, they do not provide information needed for management decision making under today's much more demanding needs, and they are at risk of failure due to old age, withdrawal of vendor support, and being run by a workforce that is rapidly reaching retirement age.

These concerns prompted the State to identify the need for further analysis of its current business systems and determine the feasibility of developing and implementing a new business infrastructure. In the 2001 session of the General Assembly, legislation was enacted to authorize a State Business Infrastructure Study. Session Law 2001-491 directed the Office of the State Controller (OSC) to determine the feasibility of developing and implementing a new business infrastructure for the State. The study, under the direction of the OSC with assistance from the Office of State Budget and Management (OSBM), the Office

of Information Technology Services (ITS), and

the Office of State Personnel (OSP) commenced in February 2003. Deloitte Consulting was engaged utilizing competitive bid processes to complete the study through a two-phased approach.

Phase I – Inventory and Assessment - Completed April 4, 2003

Goal: To develop a high-level inventory and assessment of the business systems, subsystems and integration/ interface components that provide financial, human resource, and payroll information and support to programs in State government. This included the identification of technical and business requirements, problems and risks, and the approximation of present costs incurred for operations and maintenance.

Phase II – BluePrint for Selecting Improvement Approach – Completed October 31, 2003

Goal: To determine and document viable options for implementing a business infrastructure that would include integrated operations for budgeting, accounting, payroll, human resources, revenue collection, cash management, investments, and other business functions of State government. Descriptions and risks for each alternative approach are provided, along with benefits, constraints and other relevant considerations.

The systems included in the State Business Infrastructure Study support the following business functions: financial management, cash management, payroll, human resources, budget management, procurement, treasury, retirement, and revenue accounting. For these core systems, a range of data was required to be collected. Specifically: core system purpose and capabilities; planned system enhancements; system interfaces; costs associated with existing systems operation; industry best practices; and, functional gaps/operational risks. The findings listed below resulting from the Phase I Inventory and Assessment project, further emphasize the State's current technology environment. At a high level, these findings are as follows:

- The State's administrative systems do not easily and routinely communicate with each other (i.e., lack of integration)
- The core business systems were developed using what is now dated technology
- The inability to maintain qualified staff to support dated technology increases the risk of system failure
- At the present time, the State does not have a documented core business systems enterprise (statewide) strategy
- A general lack of employee, employer or customer self-service exists within today's business system infrastructure
- The current business systems and processes available to support business functionality and management fail to meet industry best practices or efficient processing standards
- The inability of the core systems to meet agency business requirements results in the development and ongoing maintenance for a host of agency-based systems, and
- The current systems are generally paper based and signature driven and do not provide automated workflow, which would route documents electronically for review and approval

During Phase II, Deloitte developed a business case outlining the potential alternatives. Objectives of this phase were: build upon the information collected during Phase I; develop multiple courses of action for the State; communicate the degree of risk assigned to alternatives; evaluate viable implementation alternatives; and, recommend the best approaches to improve the State's core administrative business processes and infrastructure.

The Phase II criteria used to evaluate optional approaches for each system and develop comprehensive, enterprise action plans included: risks including potential or likelihood of business, technical, and security failure; current strengths and weaknesses of systems and their short-and long-term business and technical viabilities; benefits, including cost savings, operational efficiencies, and better information for management decision-making and policy-formulation; costs, including one-time investments and long-term ownership (such as upkeep and enhancement); current state budget condition and state/national

economic realities; and State priorities and funding cycles.

To prepare the business case, Deloitte evaluated several approaches to address the State's business needs. These alternatives included ERP (Enterprise Resource Planning) implementation, outsourcing, stand-alone packages, custom development, enhancements to current systems and best of breed. The evaluation resulted in three alternative approaches to replacement of the current business infrastructure. The alternatives vary from an extended implementation focusing on priority, most at risk, systems to a single ERP solution.

Option 1 – Leverage and Extend Existing Systems, HR/Payroll Replacement

- Initiate Program Office structure
- Initiate risk reduction measures for existing system high risk areas
- Identify and prioritize enhancements to legacy systems
- Define and implement an enterprise Data Warehouse to support legacy systems and future implementations
- Define HR/Payroll requirements, select and implement replacement strategy
- Develop strategies for future replacement of existing financials, budgeting, and tax and revenue systems

Option 1 has minimal initial costs/investment to address existing business needs, mitigates risks of immediate failure for key systems but increases likelihood of failure over time due to condition of existing systems and extended project time line.

Option 2 – Phased Implementation by Best of Breed

- Initiate Program Office structure
- Implement systems replacement - phased approach
- Define requirements, select & implement:
 - Data warehouse - year 1
 - HR/Payroll package replacement or outsourced – year 2
 - Finance and Budget implementation - year 3
 - Tax and Revenue systems - year 5

Option 2 is a compromise between available up-front funding and the timely implementation. It improves business processes, mitigates risks of business, technical, and/or security failures; however, it may be too costly in the near-term for the State's budget situation.

Option 3 provides the most benefits; however, it requires significant up-front investments at a time when funding may not be available due to the State's current budget situation. Option 3 is also considered a major change management challenge.

Option 3 – Single ERP Solution

- Initiate Program Office structure
- Support aggressive implementation of a phased ERP package(s)
- Define & Implement:
 - Data Warehouse
 - HR/Payroll
 - Financial and Budget
 - Implement Tax & Revenue

Recognizing the funding and environmental constraints that exist within State government at the present time, the State Business Infrastructure Steering Committee believes that Option 1 – Leverage and Extend Existing Systems, HR/Payroll Replacement provides the most feasible option for implementing a new business infrastructure. Because the primary near term focus is on defining requirements, the initial investment is minimal and the organizational impact is also minimal. Option 1:

- Addresses the immediate support staff risk for two of the legacy systems (Budget and Central Payroll) in the near term.
- Defines requirements and initiates implementation of the enterprise data warehouse starting with Tax and Revenue. HR/Payroll, finance, budget, and the enterprise data modules are added to the warehouse in years 2 and 3.
- Defines HR/Payroll requirements, selects outsourcing or package, and begins implementation in the near term. The implementation is completed by year 4.
- Identifies and prioritizes enhancements for financials, budget, and tax and revenue in the near term and completes the implementation of the enhancements in years 3 through 5.
- Reassesses the budget system at the end of year 3, the financial system at the end of year 4, and the tax and revenue system at the end of year 5.

For the State to be successful in replacing its financial and human resources systems it must put in place a program governance structure to manage, direct and monitor the activities of the various project teams. This effort must:

- Ensure sufficient legislative and executive support throughout the implementation, including sufficient funding.
- Designate a fully dedicated and empowered Program Manager, with an appropriate set of additional, committed and skilled functional and technical support resources, to perform contract negotiation, vendor management, and project management activities.
- Update/streamline its business processes to derive maximum value from the systems enhancement or replacement efforts.
- Prepare and implement a change management and communication plan.
- Review the state technology infrastructure to ensure its adequacy to meet the State's needs and support the system functionality.

Recognizing the possible adverse impacts of the continued use of the current business systems to the fiscal integrity of state government and the efficiency and effectiveness of its operations, the State of North Carolina must decide upon a replacement strategy that weighs the risks of potential system failures with the current state budget condition and State funding priorities.