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# **Enterprise Resource Planning System Feasibility Study**

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**A Cost/Benefit Analysis for Statewide  
Implementation of an Enterprise Resource  
Planning (ERP) System**



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*Prepared by:*



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## Executive Summary

### BACKGROUND AND OBJECTIVES

The State of Wisconsin (State) Department of Administration (DOA) initiated an ERP System Feasibility Study (Study) in November 2004 to research the feasibility of implementing an Enterprise Resource Planning (ERP) system to meet the State's financial management, procurement, human resources, payroll administration and other administrative business needs. The consulting firm of Salvaggio, Teal & Associates (STA) was engaged to assist in the study. This report documents the results of the study.

An ERP system is a suite of fully integrated software applications that are used to perform an organization's administrative business processes such as financial management, procurement, personnel, and payroll administration. In State of Wisconsin terms, ERP is a software package that provides functionality similar to current State systems (e.g., WiSMART, Central Payroll, PMIS, State Budget System, and numerous agency administrative systems) but in one, fully integrated system. What distinguishes ERP systems from "stand-alone" best-of-breed administrative software solutions is the integration that allows for more efficient processing and eliminates redundant data entry. A detailed definition of ERP systems is provided in the *Background and Scope* section of this report.

World-class businesses have found that implementing an ERP system is a fundamental way to improve the efficiency and effectiveness of their business operations. Until recently, the government functionality of ERP systems has lagged behind private sector functionality, but ERP functionality for the public sector has matured considerably in recent years. States like Pennsylvania, Missouri, and Montana have employed ERP systems as a way to achieve more efficient government, streamline administrative business processes, and provide improved service to employees, vendors, and other stakeholders via self-service functionality. In fact, more than twenty (20) states have implemented or are in some phase of implementing ERP software.

### APPROACH AND METHODOLOGY

The ERP System Feasibility Study included the following high-level tasks, the results of which are summarized in this report to the State's Chief Information Officer (CIO):

- ◆ Conducted initial planning sessions to confirm overall project scope;
- ◆ Reviewed and evaluated statewide administrative systems currently in use;
- ◆ Reviewed documentation of the State's hardware/systems infrastructure for potential of existing technology to support or integrate with ERP solutions;

- ◆ Conducted interviews with key administrative systems stakeholders at the enterprise-level and the largest user agencies, and documented results as support for our recommendations;
- ◆ Developed an “As Is” vs. “To Be” business model that documents those systems that would be replaced/potentially be replaced by a statewide ERP system;
- ◆ With assistance from State staff, quantified the major areas of savings and efficiencies to be derived from business process improvements associated with the implementation of a statewide ERP system;
- ◆ With the assistance of State staff, gathered high-level information on the costs of current systems, including full-time equivalent (FTE) positions involved in the use and support of each major system that would be replaced by a statewide ERP system;
- ◆ Calculated and documented the estimated costs of implementing and maintaining a statewide ERP system; and
- ◆ Prepared this written report documenting the results of our study.

## OUR FINDINGS

Our findings as a result of this study are documented in detail in the *Study Findings* section. The results of this study should be considered as high-level guidance for moving forward with ERP. Study findings are provided in five categories:

- ◆ “As-Is” vs. “To-Be” Systems Environment
- ◆ General Findings
- ◆ Process Improvements
- ◆ Financial Analysis
- ◆ Headcount Analysis

Study Findings are summarized as follows:

### *“As-Is” vs. “To-Be” Systems Environment*

The “As-Is” and “To-Be” Systems Environment diagrams were created from interviews with subject matter experts and from systems survey responses from the seven agencies included in the Study. Our findings indicate that ERP systems represent an opportunity to consolidate systems into a more streamlined environment with greater functionality and access to data.

### *General Findings*

Key findings include:

1. Numerous stand-alone systems maintained at the enterprise level and in specific user agencies are required to meet the State's administrative business needs. Currently, there are more than 122 systems that support human resources, payroll administration, and financial management areas. Based upon current assumptions of ERP scope, approximately thirty-eight (38) HR/Payroll and fifty-nine (59) financial management systems could be eliminated. The functionality of the remaining twenty-five (25) systems is considered to be outside the current assumed scope of the ERP project.
2. The State currently has no enterprise-wide procurement, asset management, or human resources systems in place. The State does not currently have the ability to track State, University, and municipality "spend" on goods and services at the commodity level. A number of the State's future centralization and efficiency initiatives (e.g., strategic sourcing) will require the ability to analyze the State operations on a macro level to maximize the results of these initiatives.
3. The technology underlying many of the State's administrative systems is dated. Some of these systems are twenty to thirty years old. Aging systems are often difficult to modify as the ongoing business needs of the users change over time. This also exposes the State to the risks of technical obsolescence and increased difficulty in retaining staff with appropriate knowledge of those systems.
4. The current statewide systems do not meet the user agency business needs, as indicated by the "front-end" systems and numerous agency-level systems that either enhance or duplicate functionality that would be expected in a statewide system. As a result of these unmet needs, the State's business processes are less efficient and effective, and agencies continue to spend significant amounts of money on systems with functionality that is contained in ERP systems -- money that could be spent toward the implementation of a single, statewide ERP system. For example, DHFS and DOC expend approximately \$1 million per year to maintain and support their shared Fiscal Management System.
5. The statewide systems used for financial management (WiSMART), position control (PMIS), payroll administration (Central Payroll System), and budget development (State Budget System) are not integrated. Considerable reconciling effort is spent to keep these systems synchronized. Additionally, the numerous "silos" of data and lack of integration across statewide systems inhibit the State's ability to provide timely and accurate statewide reporting at the enterprise level.

Payroll processing requires the coordination of a multitude of systems and processes to complete recurring and annual payroll tasks. The State does not maintain enterprise position history, employee history, or payroll history. Lack of common, sophisticated time scheduling, reporting, and management tools has led to payment of extensive overtime to employees. One agency interviewed incurred \$25 million in overtime in the last fiscal year when it had planned to spend less than half that amount. Additionally, the State has complex human resources and payroll requirements associated with its nineteen (19) bargaining unit agreements. We anticipate that a high percentage of the State's human resources and payroll requirements (including collective bargaining agreements) can be met through Tier 1 ERP software solutions.

6. ERP software functionality is a good fit for meeting the State's business requirements. Though a detailed study has not been conducted, we anticipate that Tier 1 ERP software solutions will meet 85% to 95% of the State's functional requirements without customization.
7. The State's current strategic technology direction is compatible with commercially available web-enabled Tier 1 ERP solutions, as well as several of the Tier 2 solutions. Tier 1 software vendors are viewed as industry leaders by prominent information technology research firms and are considered the most viable companies for meeting the needs of the largest and most sophisticated governmental organizations. Tier 2 vendors are often viewed as industry climbers who work aggressively through new software releases to add functionality and/or features currently provided by the Tier 1 vendors.

#### *Process Improvements*

A total of 95 process improvement opportunities were documented as part of this study and can be found in the *Study Findings* section. These improvements address potential process/integration efficiencies, functional enhancements, cost savings/avoidance, staff reductions, use of technology enablers, employee and vendor self-service, and reduced cycle times.

#### *Financial Analysis*

Based on an eleven-year planning period, the ERP Project is expected to offer the State a 77% internal rate of return (IRR) on its invested capital and pay back its initial investment in year four (4) of the project, based on the calculated system savings, projected process improvement savings, and an estimated total ERP project cost of \$135 million (over eleven years).

#### *Headcount Analysis*

A portion of the estimated *Value Pocket* savings (approximately 12.5%) would come from reductions in State personnel (approximately 151 FTEs). In the course of evaluating systems for replacement by ERP, agencies reported approximately 40 FTEs associated with the maintenance of systems that would likely be replaced by ERP. Total reductions of approximately 191 FTEs could be achieved through

implementation of an ERP solution. These FTE reductions would likely be distributed across the following functional areas:

Functional Area	Estimated FTE Reductions
Accounting	66
Budget	19
HR/Payroll	23
Procurement	43
Systems Support	40
<b>Total FTE Reductions</b>	<b>191</b>

It is assumed that most of these FTE savings would be realized over time through attrition, employee retirement, reassignment to approved but unfilled positions, and the like.

## RECOMMENDATIONS

The following recommendations are made as a result of this study:

1. State leadership should consider implementation of a statewide ERP system. All State agencies would be required to participate.
2. The functional scope of the ERP System should include the following functional areas:
  - ◆ **Procurement**
    - e-Procurement
    - Vendor Self-Service
    - Strategic Sourcing
  - ◆ **Financial Management**
    - General Ledger
    - Accounts Payable
    - Accounts Receivable and Billing
    - Cash Receipting
    - Asset Management
    - Grant Accounting / Management
    - Project Accounting
    - Budget Development (some ERP vendors may need to propose third-party solutions to meet budget development requirements)

◆ **Human Resources**

- Personnel Administration
  - Position Control
  - Compensation
  - Payroll
  - Time Reporting and Employee Leave Accounting
  - Benefits Administration
  - Applicant Services
  - Training and Employee Development
  - Employee Self-Service
3. The University System institutions should be excluded from participation in the statewide ERP system with one exception – we recommend the inclusion of the University and other governmental municipalities for eProcurement and strategic sourcing only. This will allow the State to further leverage the combined spend as a means of obtaining better pricing from the vendor community. Note that although the University System is excluded from participation, provision should be made for integration between University and ERP systems where continued exchange of data will be required.
4. Additional analysis should be conducted to confirm whether the Department of Transportation should be included in the scope of the ERP system or whether interfaces should be developed to/from existing DOT administrative systems. Our report assumes the inclusion of the DOT.
5. Additional analysis is required to determine whether an ERP system can meet the functional requirements for enterprise IT asset inventory management. If not, consideration should be given to maintaining the AIM-IT System and interfacing it to the new ERP system. Our report assumes that AIM-IT is replaced by the new ERP system.
6. It is recommended that the State initiate and implement an aggressive strategic sourcing effort as part of its ERP project in order to reduce the cost of goods and services purchased, and to assist in funding the consulting services required to successfully implement the new ERP system. Strategic sourcing is a process that creates quantifiable, hard-dollar savings by reducing the cost of purchased goods and services.

Implementation of an ERP system with full eProcurement capabilities is critical to strategic sourcing success as the ERP system will support the:

- ◆ Capturing and reporting on all procurement activity for price benchmarking;
  - ◆ Monitoring and controlling of maverick (off-contract) spending by agencies;
  - ◆ Tracking of savings incurred;
  - ◆ Tracking of performance metrics by commodity and vendor; and
  - ◆ Tracking of agency usage by commodity and vendor.
7. The ERP system should be implemented in three phases covering an estimated total of 42 months (3.5 years):
- ◆ Phase 1: The Procurement modules will be implemented in the first 18 months.
  - ◆ Phase 2: Implementation of the Financial Management modules will begin twelve months after initiation of the Procurement phase and continue over the following 18 months.
  - ◆ Phase 3: Implementation of the Human Resources and Payroll modules will begin twelve months after initiation of the Financial Management phase and continue over the following 18 months.

See Recommendation #2 above for a listing of functional areas included in Procurement, Financial Management, and Human Resources.

In a majority of ERP implementations, Financial Management and Procurement models are deployed simultaneously. However, following extensive discussions with State management, STA determined that the three-phased deployment plan described above is most properly aligned with the strategic initiatives of the State. This plan provides the most immediate savings to the State while allowing the costs to be spread over two biennia.

8. The State should establish an ERP Steering Committee to provide leadership and guidance for all future ERP System activities. Defining an appropriate governance structure for this large, multi-agency, multi-discipline project will be essential for obtaining initial buy-in and long-term support of agency and enterprise stakeholders.