



A Plan for the Implementation of Enterprise Resource Planning (ERP) for the State of Texas

ERP ADVISORY COUNCIL
SUSAN COMBS, COUNCIL COORDINATOR



Prepared by

The ERP Advisory Council

(As established by House Bill 3106)



TEXAS ENTERPRISE RESOURCE PLANNING

December 15, 2008

The Honorable Rick Perry
The Honorable Tom Craddick
The Honorable David Dewhurst
Members of the 81st Texas Legislature

Ladies and Gentlemen:

Susan Combs,
Council Coordinator &
Comptroller of Public Accounts

ERP Advisory
Council Members

Gary Gibbs

Victor Gonzalez

Ramesh Kannappan

Scott Kelley

Dustin Lanier

Anna Presley-Burnham

Brian Rawson

Kay Rhodes

Gordon Taylor

Ron Weiss

Suzy Whittenton

Kenny Zajicek

In accordance with House Bill 3106 of the 80th Texas Legislature, the Enterprise Resource Planning Advisory Council is pleased to submit *A Plan for the Implementation of Enterprise Resource Planning (ERP) for the State of Texas*.

It has been our pleasure to work together on this very important project and work with the ERP project team. We are grateful for the time, energy and expertise state agency and higher education staff have devoted to this imperative effort to closely study our state information systems.

The enclosed report represents many months of effort between state agencies and institutions of higher education in an unprecedented collaboration. ERP Advisory Council meetings began in February 2008 and were held throughout the year. In addition, five key ERP workgroups and a CIO/CFO committee were launched to meet and delve deeper into more complex discussions.

Meeting agendas, minutes, materials and workgroup/committee descriptions are available on our ERP project Web site at www.TexasERP.org.

As you know, ERP is simple in theory but extremely complex in practice. But the benefits it may offer are critical. To preface the findings presented in our report, *A Plan for the Implementation of Enterprise Resource Planning (ERP)*, we first offer the attached quick overview.

We have evaluated this plan as it relates to each of our respective interests and needs, and conclude that it creates an integrated and workable platform that will provide the desired reporting uniformity across state agencies and institutions of higher education.

We support this plan and believe it is our state's best interest to consider its implementation. We look forward to addressing any questions or comments that you may have.

Sincerely,

**SUSAN COMBS**

Council Coordinator &
Comptroller of Public Accounts

MARTIN HUBERT

Deputy Comptroller
Texas Comptroller of Public Accounts

ERP ADVISORY COUNCIL MEMBERS

VICTOR GONZALEZ

Director of Innovation and Technology
Texas Comptroller of Public Accounts

SCOTT KELLEY

Executive Vice Chancellor for Business Affairs
University of Texas System

SUZY WHITTENTON

Director of Fiscal Management
Texas Comptroller of Public Accounts

KAY RHODES

Associate Vice Chancellor and
System Chief Information Officer
Texas Tech University System

DUSTIN LANIER

Director, Council of Competitive Government
Texas Council on Competitive Government

GARY GIBBS

Executive Director
Texas Commission on the Arts

BRIAN RAWSON

Executive Director
Texas Department of Information Resources

KENNY ZAJICEK

Fiscal Officer
Texas State Soil and Water Conservation Board

ANNA PRESLEY-BURNHAM

Program Manager
Texas Department of Information Resources

State Agency Chief Executive Officers

(excluding those listed above as council members)

RON WEISS

Director, Enterprise Support Systems
Texas Health and Human Services Commission

We support the work conducted by the council and believe that the recommendations related to our respective state agencies are appropriate.

GORDON TAYLOR

Chief Financial Officer
Department of Aging and Disability Services
Texas Health and Human Services
Commission Representative

ALBERT HAWKINS

Executive Commissioner
Texas Health and Human Services Commission

RAMESH KANNAPPAN

Project Director,
Enterprise Information Systems
Texas A & M University System

REX ISOM

Executive Director
Texas State Soil and Water Conservation Board



LETTER FROM UNIVERSITY CHANCELLORS

We want to thank Comptroller Combs for her leadership on this important issue and for the opportunity she has afforded higher education to participate in the process. We are supportive of the work conducted by the Council and believe that the recommendations related to higher education are appropriate.

KENNETH I. SHINE, M.D.

Chancellor ad interim

The University of Texas System

MICHAEL D. MCKINNEY, M.D.

Chancellor

Texas A&M University System

KENT HANCE

Chancellor

Texas Tech University System





A PLAN FOR THE IMPLEMENTATION OF ENTERPRISE RESOURCE PLANNING (ERP)

A QUICK OVERVIEW

ERP: A Single Set of Books

- Enterprise Resource Planning is a business/technology term for an information system based on a common database and common software tools that allow real-time information to be accessed, shared and compared easily and immediately across organizations, agencies, divisions or departments.
- For Texas state agencies and institutions of higher education, ERP would provide a “single set of books” for financial and human resources-related transactions.
- ERP uses a single “language” for financial data. At present, state agencies and institutions of higher employ multiple financial data languages.
- A successful ERP system would ultimately provide the tools needed to shine the brightest light on the state’s finances; give decision-makers seamless access to state data; and allow the state to make better use of the data at its fingertips.

The ERP Advisory Council

- House Bill 3106, passed in the 2007 legislative session, called for the formation of the ERP Advisory Council under the leadership of the Comptroller’s office, based on:
 - a desire for transparency in state government.
 - the need for state agencies and institutions of higher education to “speak the same language” while compiling and comparing data.
- Under House Bill 3106, the council’s tasks include:
 - providing a clear definition and scope of ERP for Texas.
 - initiate statewide planning for ERP with participants representing both state agencies and institutions of higher education.
 - researching and developing a plan for implementing a single set of state books.
 - providing a progress report each biennium on the plan’s implementation.



Benefits of a Single Set of Books

A successful ERP system will:

- give state decision-makers a single source for reliable, real-time information that can be compared across agencies.
- provide easy, direct access to the state's vast array of financial and human resources information.
- eliminate data conflicts often encountered when using financial accounting programs that do not interconnect or when double sets of books are kept and cannot be reconciled.
- provide better tracking and standardization of financial information, such as:
 - *method of finance* — the state could identify the funding source used to pay for any good or service (e.g., appropriated receipts, federal funds, grants, interagency contracts, etc.).
 - *appropriations/budgets/expenditures* — every state dollar could be tracked from the initial appropriation to a state agency budget and ending with the final expenditure.
 - *state assets and budget planning* — state assets could be tracked to improve budget planning and accountability.
 - *real-time transparency* — would allow the Legislature and citizens to “follow each dollar” and know how agencies and institutions are spending the funds they receive throughout the year.

- allow its users to estimate carry-forward or lapsing federal funds or grants. This is a difficult and problematic exercise at the statewide level today. With an ERP system, decision-makers could track and monitor expected federal receipts and compare them against actual usage across agencies and institutions of higher education.

Current Problems

The greatest justifications for a statewide ERP system are the shortcomings of existing statewide administrative systems and the “work-arounds” required by user agencies to address these deficiencies:

- *Texas ID Number System (TINS)*
 - a 19-year-old state-developed system that could break down, creating a situation in which the state would be unable to write checks or send direct deposit funds to vendors.
 - the current system does not provide a fail-proof method to identify all vendors who owe money to the state and therefore should not be receiving payments from the state.
- *State Property Accounting (SPA)*
 - this 15-year-old state-developed system was built as an inventory system and does not support accounting standards enacted since its inception. It requires time-consuming, expensive and inefficient manual reconciliation and reworking.
 - the State Auditor's Office has expressed concern that SPA's internal controls to maintain the integrity of transaction data are inadequate. Audit findings may affect the state's bond rating.



- *Payroll Systems (SPRS, HRIS, USPS)*
 - state agencies and institutions employ more than 20 human resources/payroll systems and three statewide payroll and personnel reporting systems, the oldest of which is 19 years old. The payroll/personnel systems entail significant redundancies and could be consolidated to reduce the complexity of the reporting function and cut the cost of operating and maintaining the state's data platforms.
 - consolidation also would drastically improve higher education payroll data and improve statutory compliance for reporting employee benefits.
- *Other Issues Resolved*
 - intensive manual effort must be expended to reconcile, update and adjust state data across various systems and interfaces. This effort represents a significant cost to the state and dramatically reduces the efficiency and effectiveness of its business processes.
 - a single set of books could eliminate the use of the Social Security numbers (SSNs). SSNs serve as the primary identifier of state employees and some payees and have been cited as a primary piece of information enabling the growing problem of identity theft.
 - agencies would have real-time data to determine how much cash is available in each category at any given time. This would help them avoid having payment requests denied due to a lack of funds.

Summary: The Business Case for ERP

- Many existing state systems are 10 to 20 years old and several are no longer supported by outside vendors. The state would have to spend about \$121 million to fix critical issues in these existing systems.
- Current systems do not share common data languages that would allow for better information access, tracking and comparison.
- The estimated cost for the ERP implementation plan is only \$35.4 million more than the \$1.3 billion the state estimates will be spent on current system upgrades and purchases over the next 11 years (the \$1.3 billion includes \$121 million to address critical issues for existing systems).



ACKNOWLEDGEMENTS

The ERP Advisory Council members would like to thank their respective agencies and institutions of higher education as well as the Comptroller's office for the opportunity to contribute to this most important statewide initiative.

We would also like to acknowledge the hard work and dedication of the Enterprise Resource Planning (ERP) workgroups that provided us with high-quality and timely recommendations for topic areas relevant to our plan. Each workgroup was led by a seasoned state professional who volunteered time to perform this important role. The workgroups and their leads were as follows:

ACCOUNTS PAYABLE (E-TRAVEL VOUCHER)

Machelle Pharr	Texas Department of State Health Services
----------------	---

STATEWIDE CONSIDERATIONS (UNIQUE TEXAS BUSINESS IDENTIFIER)

Kay Rhodes	Texas Tech University System
------------	------------------------------

GLOBAL DATA STANDARDIZATION

Dr. Clair Goldsmith	University of Texas System
---------------------	----------------------------

ASSET MANAGEMENT AND INVENTORY

Duane Sullivan	Texas Department of Transportation
----------------	------------------------------------

VEHICLE FLEET MANAGEMENT

Don Lewis	Texas Department of Transportation
-----------	------------------------------------

A large number of subject-matter experts from various state agencies and institutions participated in each of these workgroups. We are grateful for their willingness to share their time and knowledge. Each contributor is listed on the statewide ERP project Web site at www.texaserp.org.

Finally, we wish to acknowledge the work performed by the independent consulting firm of Salvaggio Teal & Associates (STA). Some sections of this document rely on data and findings presented in their September 17, 2008 report, Report on Business Case Analysis for a Statewide ERP System. The complete report is available on the statewide ERP project Web site at www.texaserp.org.

**TABLE OF CONTENTS**

I. Executive Summary	13
II. Current Environment	19
A. Statewide Environment	19
B. Agencies and Higher Education Environment	21
C. Key Findings	22
III. Why ERP?	27
A. Elimination of Legacy System Deficiencies	27
B. Technology Enablers	29
IV. The ERP Plan	33
A. Background, Purpose and Charge	33
B. Advisory Council's Approach	34
C. Key Requirements and Functionality	36
D. Recommendations	37
E. Assumptions Associated with Our Recommendations	43
F. Risks Associated with Our Recommendations	45
V. Exhibits	47
A. ERP Workgroup Reports - Summary	47
B. Independent Business Case Study – Executive Summary	53
C. Reconciliation of Seven-Year Project to 11-Year Business Case for BCA 3	65





SECTION 1. EXECUTIVE SUMMARY

The Enterprise Resource Planning Advisory Council (“Advisory Council”) is pleased to submit “A Plan for the Implementation of Enterprise Resource Planning (ERP) for the State of Texas” (Plan) to the Texas Legislature. We believe adoption of this Plan is in the best interest of the State of Texas.

It is important for anyone reviewing this Plan to first have an understanding and appreciation of the scope of the initiative. Within this Plan, we address an ERP solution to support a state government that serves a state with the 12th largest economy in the world. Texas’ 230,000 plus state employees and \$168 billion biennial budget comprise the third largest state government in the United States. In terms of a financial enterprise, Texas state government is comparable to such private sector companies as Home Depot and Proctor and Gamble. We believe this Plan not only takes into account the size and complexity of Texas state government, but also the government transparency expectations of our Texas citizens.

Background and Purpose

In May 2007, the 80th Texas Legislature passed House Bill (HB) 3106, which address the concept of ERP for the state of Texas. From a practical standpoint, the term ERP for the state of Texas refers to an integrated software package that provides functionality similar to that offered in the existing statewide administrative systems (e.g., USAS, SPA, USPS, SPRS) as well as critical additional functionality currently provided by agency and institution of higher education administrative systems. The scope of this ERP project follows the definition stated in Section §5.300 Enterprise Resource Planning of Title 34 Texas Administrative Code effective Jan. 8, 2008. That definition excludes higher education student system administration as well as community colleges.

HB 3106 requires the Comptroller to set clear standards for the implementation of ERP software for the state. The Legislation also requires the Comptroller to establish and coordinate an Enterprise Resource Planning Advisory Council (established Feb. 8, 2008) charged with the development of a plan that contains key requirements, constraints, and alternative approaches for the Comptroller’s implementation of ERP standards, including related core functionality and business process reengineering requirements.

HB 3106 establishes the Advisory Council members as the Department of Information Resources (DIR), Health and Human Services Commission (HHSC), Information Technology Council for Higher Education (ITCHE), Texas Comptroller of Public Accounts and two State agencies selected by the Comptroller with fewer than 100 employees (Texas Commission on the Arts and Texas Soil and Water Conservation Board).

The Advisory Council adopted guiding principles fundamental to the ERP Plan. Those principles are as follows:

- Through workgroups and committees, we will engage statewide agencies and institutions of higher education in the project;



- We will establish and implement standardized business processes where possible;
- We will establish and implement common data standards where possible;
- We must ensure future ERP system projects are compatible with statewide standards;
- We will not throw out what works; and
- We will adapt our processes to the software rather than the software to our processes when possible.

The legislation requires the Comptroller to report to the Legislature on progress made toward implementing the Plan prior to each legislative session. This report must include any planned modifications and/or upgrades to existing statewide and agency-specific administrative systems and the associated financial impact of those modifications and upgrades.

In November 2007, the Comptroller's office developed a survey that was sent to all state agencies and institutions of higher education. The survey captured high-level information about administrative systems and expenditures related to the application scope listed in HB 3106. Additionally, the Comptroller's office asked survey participants to identify the amount of expenditures that were planned over a five-year time horizon to replace, upgrade or maintain these systems.

In June 2008, the Comptroller's office hired an independent consulting firm (Salvaggio, Teal & Associates) to develop a comprehensive business case analysis (BCA) and the related strategic planning associated with ERP, collectively referred to as the "Study." The Study was completed on Sept. 17, 2008 and reviewed with the Advisory Council and Comptroller on Sept. 24, 2008. The purpose of the Study was to provide the ERP Advisory Council and the State Comptroller with alternatives, data and other information necessary to determine whether implementing a statewide ERP system is economically feasible for the State of Texas. The following three alternative scenarios were analyzed:

- **Business Case Alternative 1: Status Quo (BCA 1)** — The State continues on its current path and each agency and institution of higher education continues operating their existing administrative systems as currently planned. The 11-year cost for this approach per the business case was \$1,342,400,000.
- **Business Case Alternative 2: Statewide ERP Platform Deployment (BCA 2)** — Replace the existing statewide legacy administrative systems (USAS, USPS, SPA, SPRS, HRIS, TINS) with a new, fully integrated, commercially-available ERP system that would provide all functionality identified in HB 3106. One statewide ERP system for all State agencies and all Higher Education would be established and operated by the Comptroller. The 11-year cost for this approach per the business case was \$1,813,400,000.
- **Business Case Alternative 3: Hub Model (BCA 3)** — Replace the existing statewide legacy administrative systems (USAS, USPS, SPA, SPRS, HRIS, TINS) with a new, fully-integrated, commercially-available ERP system that the Comptroller's office would operate as an Application Service Provider (ASP) for all state agencies with the exception of the Health and



Human Services (HHS) agencies and institutions of higher education. The HHS agencies and Higher Education would operate under a decentralized processing model as data reporting “Hubs”. They would interface into the Statewide Data Warehouse platform and their transactional data would interface into the new ERP system. The 11-year cost for this approach per the business case was \$1,377,800,000.

Of the three alternatives, Salvaggio Teal & Associates (STA) recommended BCA 3.

Summary of Advisory Council’s Recommended Plan

While the recommendation in this Plan regarding the ERP solution is based on the Study conducted by STA, the ERP Advisory Council’s final recommendations are based on our assessment of the project scope, timeline, and budget, as well as the legislative appropriation cycle and best value for the state of Texas.

From a financial and business perspective, the Advisory Council believes that BCA 3 is by far the best of the three alternatives evaluated in the Study. The business case Executive Summary, which is Exhibit B of this document, provides an 11-year perspective. Under BCA 3 approximately \$249 million would be needed over a 7-year ERP implementation period. The reconciliation between the 11-year business case and 7-year project is presented in Exhibit C. The Advisory Council recommends that an additional contingency amount be reserved equal to \$37 million (15 per cent) of the total estimated project budget to address unforeseen costs and/or costs that could not adequately be addressed as part of the STA study due to specific information not being available at the time the study was performed. This brings the recommended project total to \$285.7 million, which would be spent as described below:

FY10/11	Planning; statewide ERP requirements development; Procurement of ERP software and integration services; contingency established; develop ERP blueprint	\$83,813,000
FY12/13	32 Agency deployments	82,774,000
FY14/15	92 Agency deployments; replace statewide system; hub interfaces completed	73,534,000
FY16	11 Agency deployments; replace remaining statewide systems; software upgrade	<u>45,606,000</u>
Total ERP Project Cost		<u>\$285,727,000</u>

In arriving at the contingency, we considered the risks associated with the state’s ability to successfully implement a project of this nature, as well as the perception of the state’s ability to adapt to such a significant change. The Advisory Council recommends following a planning, development and deployment schedule that postpones the start and completion of the project



by approximately one year when compared to the Business Case Study. The contingency includes the time value of money with the shift of the project one year into the future.

Given that the contingency is to address “unknown” costs, the contingency amount is being presented as a total add-on to the estimated project cost as opposed to being allocated across project years and phases.

Total ERP Project Cost	\$248,458,000
15% Contingency	<u>37,269,000</u>
Total	<u>\$285,727,000</u>

These collective costs are what would be considered “new funding” until the Comptroller is able to retire the existing statewide administrative systems. The following table provides project and ongoing operations costs by fiscal year for recommended BCA 3.

The Assumptions provided in the ERP Advisory Council’s Plan are very important to the recommendations regarding BCA 3. Changes to any of the Assumptions or any future negotiations with vendors may materially impact the project’s timeline, cost, scope, resources and expectations.

Figure 1

Projected ERP Costs								
<i>(Amounts in thousands)</i>								
Cost Category	Fiscal Year							Total
	2010	2011	2012	2013	2014	2015	2016	
Total Project Costs	\$ 1,805	\$ 41,339	\$ 41,860	\$ 22,883	\$ 29,668	\$ 12,817	\$ 16,147	\$ 166,519
Total Operations Cost		3,400	3,502	14,529	15,255	15,794	29,459	81,939
Contingency (15 percent)	37,269							37,269
Total Annual ERP Cost	\$ 39,074	\$ 44,739	\$ 45,362	\$ 37,412	\$ 44,923	\$ 28,611	\$ 45,606	\$ 285,726
Cumulative ERP Cost	\$ 39,074	\$ 83,813	\$ 129,175	\$ 166,587	\$ 211,510	\$ 240,121	\$ 285,726	

Under the recommended BCA 3:

- State agencies (with the exception of Health and Human Services and institutions of higher education) would migrate to a new statewide ERP platform operated by the Comptroller’s ASP service;
- Health and Human Services and institutions of higher education would operate as reporting hubs and interface directly into the Statewide Data Warehouse, and their transactional data would interface into the new ERP system;
- Existing statewide legacy administrative systems (USAS, USPS, SPA, HRIS, SPRS, TINS) would be replaced by the statewide ERP system that would provide all functionality identified in HB 3106;



- Each hub would be able to operate its own platform with the only restriction being that the hub reporting capability conforms to the statewide data standards required for statewide reporting; and
- The statewide ERP baseline code would be made available to every Hub for its use, if desired, and would be maintained according to the ERP vendor's recommended schedule.

Our recommendation of BCA 3 is based upon the following reasons:

- It addresses HB 3106 requirements and the functionality required by the Comptroller's Rider 16 regarding fleet management.
- It complies with the ERP Advisory Council's guiding principle of "not throwing out what works" by leveraging the considerable work done to date by institutions of higher education and Health and Human Services in implementing their own ERP systems.
- The State will achieve business process standardization based on best practices, economies of scale and efficiency gains through the implementation of a single, unified platform for almost all state agencies while still allowing for the differences in the functional requirements of the hubs.
- It provides for significantly enhanced statewide reporting for both higher education and the state agencies, which will greatly facilitate a "single source of the truth" and taxpayer transparency.
- It eliminates the use of Social Security Numbers as the primary identifier in the statewide administrative systems, thus helping to reduce identity theft opportunities.
- It provides for compliance with Section 508 of the Americans with Disabilities Act regarding accessibility.
- It eliminates much of the fragmentation associated with the state's existing administrative systems environment.
- Total project implementation costs are considerably less than the costs of implementing the alternative ERP scenario (BCA 2) presented by STA in their business case analysis.
- It is the model most often utilized by other states to meet their statewide administrative system needs, resulting in lower overall project risk.
- It eliminates proliferation of agency ERP and other administrative shadow systems, while allowing higher education to maintain its own ERP solutions that are integrated with other ERP functions such as patient care, student information, learning management and library systems.
- It provides a plan that allows the state to significantly upgrade the functionality and reporting capabilities of its statewide administrative systems and retire the legacy systems (USAS, SPRS, USPS, HRIS, SPA, TINS) over a period of seven years.



- It establishes a common language for reporting expenditures through use of commodity codes (NIGP) and focuses the use of Comptroller Object Codes on financial reporting (CAFR, GASB), thereby allowing for consistent reporting and better analysis of how the state's money is spent.
- It provides for a statewide procurement system that will be fully-integrated with the financial accounting, asset management, and Inventory management modules, as well as the Online Ordering System currently in development by the Comptroller's office.
- It provides for better tracking of the state's assets, thus helping agencies and the Legislature in budget planning by identifying replacement costs and schedules.
- Hubs will gain the benefit of centralized reporting at the system or enterprise level through data warehouses that will be used to gather and normalize disparate institutional data to support effective statewide reporting goals.
- It allows for the hubs to consider ERP consolidations through an evolutionary process should their existing systems reach the end of their useful lives.

Recommended Deployment Approach

Only the state agencies (excluding Health and Human Services and institutions of higher education) would be deployed under this model. The participating agencies would be logically organized into deployment groups or waves. All functional modules would be deployed for all agencies within a specific group or wave. The first phase would include the development of a model that would become the "blueprint" for deploying all functionality among agencies. Deployment phases would be executed sequentially until all agencies have been deployed on the statewide ERP system.

For cost estimating purposes, STA and the Comptroller project team developed a detailed deployment schedule for State agencies under the hub model. The schedule was used solely for the purposes of developing STA estimates and the Comptroller has not made any decisions or plans regarding the deployment schedule should an actual ERP project be funded by the Legislature. Additionally, ITCHE members and HHSC representatives assisted in determining the years in which the Hub data warehouses would be placed into production.

In summary, although the costs associated with implementing ERP will be significant, the Advisory Council believes there is a compelling business case for the State to proceed with implementation of a new statewide ERP system.



SECTION 2. CURRENT ENVIRONMENT

This section is to provide a high-level understanding of the state's current administrative systems environment and key findings related to those systems that were documented in the Study. The specific statewide systems are explained followed by a high-level diagram of the current administrative systems environment of state agencies and institutions of higher education.

Statewide Environment

In 1987, the 70th Legislature enacted legislation that required the Comptroller's Office to make uniform the collection and reporting of statewide accounting, payroll and personnel data. Through this legislation, the Uniform Statewide Accounting System (USAS) was established. Since 1987, the USAS effort has grown to include the following systems or planned projects:

Statewide System or Project	Implementation Date
Human Resource Information System (HRIS) ¹	1989
Texas Identification Number System (TINS) ²	1989
Uniform Statewide Accounting System (USAS) ²	1993
State Property Accounting System (SPA) ²	1993
Uniform Statewide Payroll/Personnel System (USPS) ³	1994
Standardized Payroll/Personnel Reporting System (SPRS) ³	2002

1 = Currently utilized by higher education only

2 = Currently utilized by state agencies and institutions of higher education

3 = Currently utilized by state agencies only

The state spends approximately \$9 million per year to maintain and operate the existing statewide administrative systems such as USAS, TINS, SPA, etc. Additionally, the Comptroller and the state agencies/institutions should spend approximately \$121 million to "rewrite" critical components of the statewide administrative systems and deploy these new systems across Texas government over the next few years. These rewrites are intended to address major system deficiencies, address risks associated with the current use of Social Security numbers, and lack of compliance with Section 508 of the Americans with Disabilities Act regarding accessibility.

***Human Resource Information System (HRIS)***

The Human Resource Information System (HRIS) is a custom-developed, in-house system implemented in 1989 as part of the first phase of the overall Uniform Statewide Accounting System (USAS) implementation. HRIS operates on a mainframe platform and was designed to automate payroll and personnel reporting, and to serve as a central repository for all state agency and institutions of higher education personnel and payroll data. Currently, only higher education report to HRIS, with 59 institutions reporting from their internal payroll/personnel systems. Institutions are responsible for processing and calculating their own payrolls and reporting the resulting data into HRIS. This data is then used to roll up payroll and personnel information at the statewide level. In addition to ad-hoc requests, statewide information is used to prepare required reports for oversight agencies.

Texas Identification Number System (TINS)

The Texas Identification Number System (TINS) is an in-house system that was implemented in 1989 and provides vendor/payee information to other critical statewide systems. TINS captures information on individuals and entities that have received or may receive payments from the state of Texas, including state employees, state agencies, and other governmental entities. System functionality includes payment inquiry, warrant print, payment distribution and banking network processing. Additionally, TINS captures information on individuals and entities that are indebted to the state and facilitates the withholding of payments until their obligations to the state are met. Currently, all state agencies and institutions of higher education report to TINS.

Uniform Statewide Accounting System (USAS)

USAS was implemented in 1993 using a modified version of the R*STARS mainframe software product. USAS was established to provide State agencies and institutions of higher education with financial accounting software including General Ledger, accounts payable and limited accounts receivable, grant accounting, project accounting, and contract tracking functionality. USAS provides both Generally Accepted Accounting Principles (GAAP) and cash-basis accounting, performs budgetary and encumbrance accounting, cost allocation, payment processing and document tracking, and satisfies statewide accounting requirements. Currently, 80 state agencies use USAS as their internal accounting system, and 102 state agencies and institutions of higher education report to USAS from their internal accounting systems. USAS data is also used to roll up financial information at the statewide level. In addition to ad-hoc requests, statewide information is used to prepare required reports for oversight agencies.

State Property Accounting System (SPA)

The State Property Accounting (SPA) system is a custom-developed, in-house application that was implemented in 1993 to track capital and controlled assets. SPA contains the capital asset balances for the state of Texas. In addition to ad-hoc requests, this data is used in the Comprehensive Annual Financial Report (CAFR) to prepare the Capital Asset Note to the Financial Systems. The total balance for Capital Assets for the state according to the 2006 CAFR was



\$97.8 billion, which was 54 percent of the state's total assets. The SPA system is also used to withhold from state agency and higher education appropriations an amount equivalent to 50 percent of the value of lost property, as prescribed by Article IX, Section 12.04 of the General Appropriations Act. Currently, all state agencies and institutions of higher education use SPA as their internal fixed-asset system or report to SPA from other internal fixed asset systems.

Uniform Statewide Payroll/Personnel System (USPS)

The Uniform Statewide Payroll/Personnel System (USPS) was implemented in 1994 using a modified version of the GEAC Human Resources mainframe software product. USPS was established to process personnel and payroll transactions, utilizing a standardized payroll calculation. Currently, USPS is the internal payroll/personnel system for 113 State agencies and approximately 56,000 employees. This data is also used to roll up payroll and personnel information at the statewide level. In addition to ad-hoc requests, statewide information is used to prepare required reports for oversight agencies.

Standardized Payroll/Personnel Reporting System (SPRS)

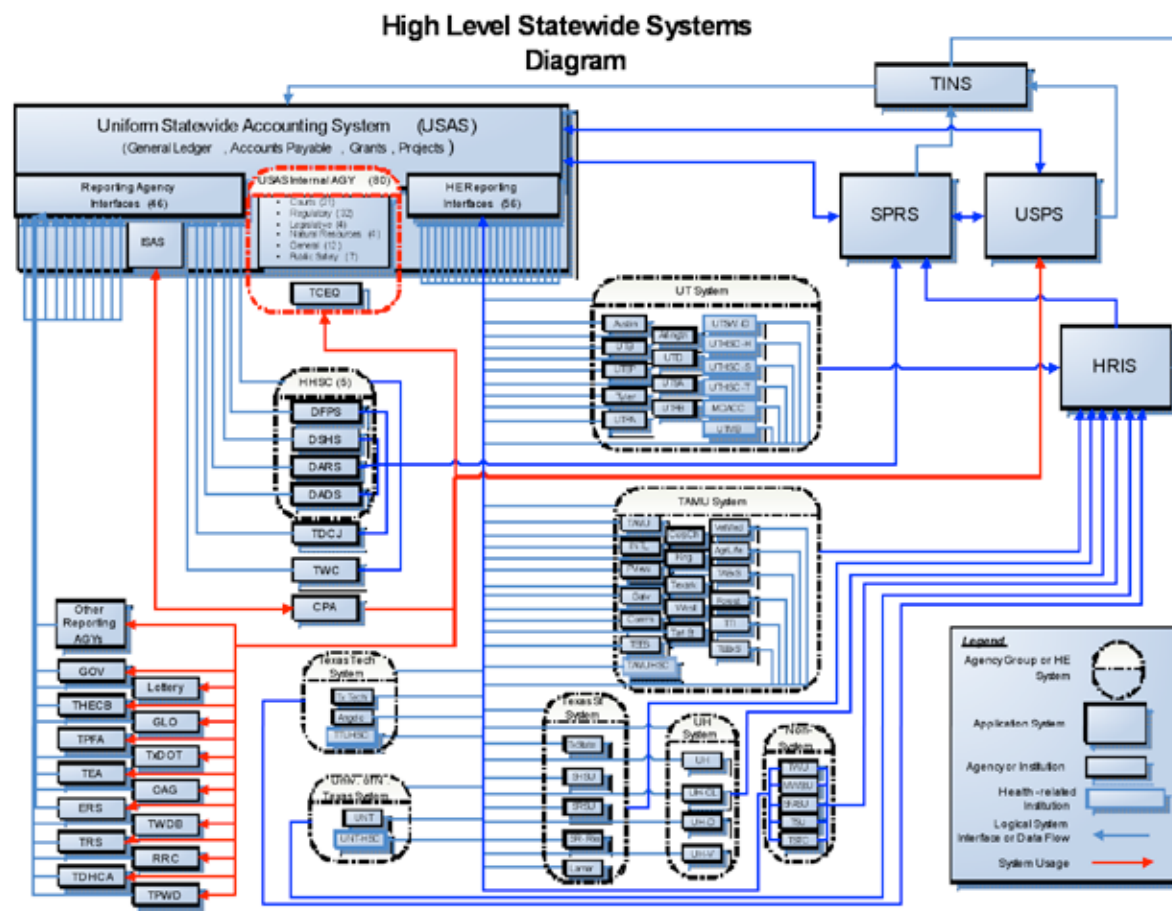
The Standardized Payroll/Personnel Reporting System (SPRS) is a custom-developed, in-house application implemented in 2002 for state agencies that elected to implement either a commercial, off-the-shelf payroll/personnel software application or design their own internal payroll/personnel processing system, rather than using USPS as their internal payroll/personnel system. SPRS agencies are responsible for processing and calculating their own payrolls and reporting the resulting data into SPRS. Currently, eight state agencies report to SPRS from their internal payroll/personnel systems. Combined, these agencies have approximately 94,000 employees. SPRS data is used to roll up payroll and personnel information at the statewide level. In addition to ad-hoc requests, statewide information is used to prepare required reports for oversight agencies.

Agencies and Higher Education Environment

Eighty agencies use USAS as their primary accounting system, and no interfaces are required. One hundred and two agencies and institutions have been designated as reporting agencies, and 102 interfaces have been developed from agency and institution-specific solutions to USAS. Agencies and institutions also must report personnel and payroll information into statewide reporting systems, including USPS, SPRS and HRIS. The following diagram depicts the state of Texas' main applications and the relevant integration/interface points for the various systems across the state. The diagram does not reflect the numerous additional administrative systems and associated integration/interface "touch points" that must be maintained to provide the complete range of functionality needed by State agencies and institutions of higher education.



The following diagram that follows documents the “high-level” integration points between state agency/institutions of higher education systems and the various statewide administrative systems.



Key Findings

- Because the current statewide administrative systems do not meet many of the state’s business needs, the state’s administrative business processes are less efficient and effective than they could be. For example, the state is unable to track detailed sources of funding (e.g., federal funds), resulting in a significant information gap regarding what money was used and in what ways. To address critical unmet needs, agencies have spent significant amounts of money on their own ERP and/or “best-of-breed” systems. Instead, these funds could be spent toward implementing a statewide ERP system benefitting all agencies. The following are a result of these deficiencies:
- A total of 1,220 administrative system functional modules (General Ledger, Accounts Payable, etc.) are currently used to address the functional areas addressed in HB 3106. More than 20 human resources/payroll systems are in operation across the state, and three state-



wide payroll and personnel reporting systems are in existence for validation and reporting (USPS, SPRS, HRIS). There are significant redundancies in functionality and capabilities of these systems that could be consolidated to reduce the complexity of the reporting function and significantly reduce the cost of operating and maintaining the platforms.

- Of the total number of functional modules in operation across the state, roughly a third are custom developed solutions and roughly a quarter are the Comptroller's statewide modules. The remaining systems are a mixture of various commercial off-the-shelf systems (COTS) and somewhat evenly spread across Oracle /PeopleSoft, SunGard/Banner and Sage/MIP (software vendors/products) with the "Other" leading all categories at 13 percent.
- Each agency and institution (except those utilizing the USAS and USPS platforms as their processing system) must interface their systems into the existing statewide systems, resulting in more than 250 interfaces in operation that must be managed, maintained, and reconciled across the state at both the statewide and agency/institutional levels.
- Data is fragmented across a wide array of systems and platforms, which makes it difficult to generate management information on a timely and accurate basis due to differences in formats, cycle times, and controls across all systems, which leads to manual, labor intensive processes when preparing reports. This effort represents a significant cost to the state and dramatically reduces the efficiency and effectiveness of the state's business processes.
- Each of these systems has its own ongoing operating and maintenance costs for hardware, software and infrastructure which, in the aggregate, could represent significant potential savings through consolidation and standardization.
- The state does not utilize a statewide procurement system at this time, which causes the following deficiencies:
 - Other than the agencies that already use ERP systems, the majority of other agencies follow manually-intensive business processes or maintain "stand-alone" systems or spreadsheets to address their procurement needs. Manually-intensive processes and redundant data entry tend to be slow, error-prone and costly;
 - Lack of integration of procurement function with financial accounting and other administrative systems;
 - Most purchasing organizations lack the transaction data (at the proper commodity-code level) required to effectively negotiate with suppliers; and
 - Most procurement managers spend much of their time "chasing paperwork" rather than managing their supplier base or negotiating better prices.

In light of these deficiencies, the Comptroller initiated a recent project to develop an Online Ordering System (OOS). The OOS is intended to enhance the online ordering process by providing an online ordering portal that will provide a centralized procurement method for qualified purchasing entities. However, it is anticipated that the ERP's purchasing module will serve as the basis for procurement data and integration with the other ERP modules.

- The existing statewide administrative systems were developed and implemented based on user and state business requirements that are now more than 15 years old. As new state and



federal requirements have emerged, the state continues to patch or rewrite the systems to meet or comply with the new, point-in-time requirements. The cost of maintaining these systems continues to escalate due to the difficulty of locating skilled personnel to make the changes, as well as the overall limitations of the original system architecture (e.g., often changes must be made to the actual computer code instead of simply changing data-table entries to make the changes).

- Most systems are not compliant with Section 508 of the Americans with Disabilities Act regarding accessibility. The state's existing administrative systems do not provide for such accessibility, therefore, physically impaired workers cannot use these systems at this time. The state has considerable exposure to lawsuits initiated by physically impaired workers. Two states, Pennsylvania and Arkansas, have already incurred such litigation.
- Much of the state's financial, personnel and other administrative data originates and resides in various ERP and "stand-alone" systems that are not updated across systems in a "real-time" mode. Maintaining data in independent databases or shadow systems can produce inconsistent information. This fragmented environment also results in a lack of data standardization and agencies and central authorities not "speaking the same language."
- Because the data is fragmented, it is also difficult to generate management information in a timely and accurate manner. The existing administrative systems have insufficient reporting tools to facilitate ad hoc reporting. The end result is that report requests from state leadership and the Legislature often require a considerable amount of time to develop. Additionally, system users often need to access multiple statewide systems or make requests to the agencies and institutions to obtain the necessary data. Because of these multiple sources, reports typically require notes explaining the timing and accuracy of the data.
- The state's administrative systems are costly to maintain and operate (e.g., data must be reconciled among the various systems, and numerous interfaces must be maintained). Additionally, the Comptroller and the state agencies/institutions need to spend approximately \$121,102,000 combined to "rewrite" TINS, SPA, SPRS for institutions of higher education and USPS, and deploy these new systems across Texas government over the next few years. These "rewrites" are intended to address major system deficiencies, eliminate the need for HRIS, address risks associated with the current use of Social Security number, and lack of compliance with Section 508 of the Americans with Disabilities Act regarding accessibility.
- The existing statewide administrative systems are difficult to use because they lack the modern, Web-based, common user interfaces that system users are accustomed to using (e.g., e-mail, office applications, Internet browsing). Often state employees must work with several of these systems, and each system has its own unique "look and feel."



- The current travel expense reimbursement process is manual for most agencies. This process is slow, and traveler, is unable to determine the statuses of their reimbursement requests. As a result, considerable time is spent responding to phone calls and e-mail messages regarding the status of travel reimbursements. The existing automated systems were designed to meet individual agency needs and may not be flexible enough to accommodate varying requirements of agencies and institutions of higher education.





SECTION 3. WHY ERP?

Before explaining “Why” ERP it is important that the reader clearly understand “What” ERP is. An ERP system is a suite of fully integrated software applications that are used to perform administrative business functions such as financial accounting, procurement, and personnel administration. 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 and reconciliation tasks. The functionality provided by ERP systems is usually provided in major groupings or modules. These modules typically address the major administrative functions within state government: financial accounting and management, human resources and payroll administration, procurement and logistics and budget development. Additionally, certain features such as automated workflow and electronic approvals, security, reporting/data warehousing and the development toolset, cross all functional modules.

In addition to the existence of a viable statewide approach to ERP as contained in BCA 3 recommendation of the Business Case Analysis, there are two major classifications of drivers that we believe support the implementation of a Texas statewide ERP system. They are elimination of legacy system deficiencies and technology enablers.

Elimination of Legacy System Deficiencies

The greatest justifications for implementing a statewide ERP system are attributable to the shortcomings of the existing statewide administrative systems and the “work-arounds” required by user agencies to address these deficiencies.

A fully-integrated ERP system will address the deficiencies noted in Section 2 by providing for the following:

- Replace the state’s existing statewide ERP systems over a 7-year period and eventually eliminate many of the “shadow” systems currently maintained by agencies because the existing statewide systems do not meet their functional needs. This action would eliminate much of the fragmentation found under the current environment.
- System-wide integration of the various ERP modules offers integration that has been built by, and will be maintained by, the software vendor. Continued vendor upgrades increase functionality in an ERP environment at a faster pace than with legacy systems.
- Offering individual agencies a viable alternative to purchasing a new accounting system or upgrading their existing system to meet internal accounting and reporting needs.
- Standardized business processes built on “best practices” that are inherent in ERP systems for the public sector.
- Provides for data standardization to support a “single source of the truth” and taxpayer transparency.



- Establishes a common language for reporting expenditures through use of commodity codes for procurement spending analysis and chart of accounts for financial reporting purposes, which provides for consistent reporting and better analysis of how the State's money is spent.
- A statewide procurement system that will be fully integrated with the financial accounting, asset management and inventory management modules.
 - Reduce cost of goods and services through the following: increased competition for the State's business; enabling strategic sourcing benefits; lowering inventory costs for the State; reducing printing and mailing costs
 - Improve process efficiencies for the state through the following: reduced procurement cycle times; reduced time and effort required to complete purchasing activities; improved monitoring of the procurement process; leveling of the "playing field"
 - Leverage the benefits of the OOS while identifying the capabilities of procurement functionality available within the ERP solution and determine if an OOS bolt-on as currently defined is necessary long-term
- More efficient processing and control of documents through automated workflow, reviews, approvals, and inquiries on document status and the elimination of possible "bottlenecks" in approval process.
- Elimination of duplicate data entry as pertinent data is entered once and then carried throughout the system.
- Reduction of data integrity concerns and the effort required to reconcile duplicate data in multiple databases.
- Consistent and complete statewide federal funds analysis and management for more effective draw-down of federal dollars, including the ability to estimate carry-forward or lapsing federal funds; monitor, coordinate and establish the priorities for the use of federal funds statewide; and review agencies' federal funds budgets, expenditures and transfers on an ongoing basis.
- More efficient and accurate research capabilities through enhanced ad hoc reporting and inquiry functionality associated with new technologies.
- Elimination of the use of Social Security numbers (SSN) as the primary identifier in the statewide administrative systems, thus helping to reduce identity theft opportunities and the related legal risks and costs associated with incident response, investigation and public relations.
- Compliance with Section 508 of the Americans with Disabilities Act regarding accessibility.
- Better tracking of the state's assets, thus helping agencies and the Legislature in budget planning by identifying replacement costs and schedules.



Technology Enablers

Besides correcting deficiencies associated with the State's existing administrative systems, the most compelling reason for implementing an ERP system lies within the technology enablers that support the system. A more detailed discussion of key technology enablers can be found in the Report on Business Case Analysis for a Statewide ERP System at www.texaserp.org/case_study/case_study_info.html. Key technology enablers found in ERP software include:

- **Integration with a Common Database** — The most distinguishing factor of an ERP system is its integration across all system modules. Integration in an ERP system is supported by a single database across all functions (or at least a single database for human resource/payroll functions and another for financial management/procurement functions). In this way, data elements (e.g., account codes) are not duplicated when used for more than one purpose. With no duplication, every function has access to the most recent information, and once any change is made, it is immediately available to all functions. Reports are generated using a single, up-to-date data source that helps to provide the State's leadership with a "single source of the truth."
- **Real-Time Processing** — Many of the current administrative systems perform a majority of their transaction processing via batch jobs that process only a few times a day or during a nightly batch run. This limitation results in delays between the time an action is entered into the system and when the data is available for use by the end user. In contrast, ERP systems use real-time (or near real-time) processing, so transaction results are immediately available to all system modules.
- **Increased Functionality / Best Business Practices** — Today's ERP systems provide a considerable amount of functionality to meet governmental financial management, procurement, asset management, human resources/payroll, and other administrative business needs. The application modules that often comprise ERP systems have been designed in accordance with industry-standard best business practices. While best practices have not been defined by any governing body or research firm for the private or public sector, such practices have evolved over time with each new software release and have been validated with each ERP implementation. Best practices, together with the flexibility provided by other technology enablers inherent in ERP software today, allow governments to conduct their administrative business processes in a more efficient and effective manner. Best practices promote standardization of business processes across government, and it is critical that the State embrace these practices in order to implement the ERP software with minimal customization.
- **Web-Based / Open Architecture** — Today's leading ERP solutions are designed to be accessed via Web browsers. Vendor products are transitioning to a "pure Web-based" architecture whereby no code resides on the client other than the web browser. Web-based ERP solutions result in easier deployment and lower costs of IT infrastructure, network administration and information access. A Web-based system facilitates providing wider access at a lesser cost to the state. End users can gain access to the ERP system at anytime as long as they have access to a Web browser and the proper security authorizations. Another advantage of Web



browsers is the ability to use accessibility tools to obtain compliance with Section 508 of the Americans with Disabilities Act. The leading ERP systems also comply with open-architecture standards. Open architecture provides a means whereby the ERP system can be linked to specific “best-of-breed” software if the need arises (e.g., possibly to meet fleet management requirements). Open architecture also provides the ability to interface the ERP system to common desktop “office-suite” applications (see Desktop Software Integration below).

- **Scalability** — Scalability allows the state to size its system components to meet the ever-changing business needs. Increased capacity can be added, upgraded or removed as computing needs change, without substantial changes to the application. Scalability considerations include increasing memory, adding additional processors, and installing additional disk storage.
- **Portability** — Portability provides the flexibility for application software systems to run on multiple hardware platforms or provides built-in capabilities for switching between platforms without requiring reinstallation or additional customization, thus allowing the State to adapt the system to the technical landscape as it changes over time.
- **Graphical User Interface** — ERP systems utilize a graphical user interface (GUI) that provides user-friendly features similar to other office functions on the user’s desktop, such as intuitive icons, pull-down menus, point-and-click navigation, pop-up windows, scroll bars, radio buttons, the use of color for clarity and emphasis, and tool bars to assist in the user’s learning and ongoing use of the system. They also provide online help menus and online documentation, as well as screens that can be customizable to user roles to enhance the end user experience.
- **Efficient Modification Where Necessary** — Assuming that an open architecture is used, the business rules associated with the system are separated from the rest of the architecture, thus, it is easier to change the business rules (a common occurrence in government) than if they were included in the user interface or the database design.
- **Extensive Development Toolset** — ERP systems provide for a single (often proprietary) toolset to support software configuration, customization, and ongoing administration of the system. Although use of the toolset requires specialized training and technical knowledge, the development toolset is typically integrated with the functional ERP software and is supported by the vendor. The development tools are also utilized in establishing workflow, managing security and in implementing a software upgrade.
- **Application Modularity** — An ERP system consists of a series of application modules (e.g., general ledger, accounts payable, purchasing, asset management, payroll). These application modules are designed to be “stand-alone” if necessary, though some modules require that others be in place to fully utilize the functionality provided. This modular approach allows governments to selectively implement ERP functionality based on functional need, priorities, funding availability and staff availability to implement and support the system. The entire ERP solution may be built on a piecemeal basis. Additionally, the government can substitute a third party solution in lieu of the ERP module if necessary to meet a specific business need.



- **Advanced Reporting Tools** — ERP systems typically provide a suite of ad hoc reporting/query tools to allow properly trained end users to develop their own custom reports. Electronic report routing capabilities are often provided with some of the systems.
- **Security** — ERP systems provide a robust security function across all ERP modules, including role-based security, screen- and field-level security. With this robust functionality comes a new culture around security set up, approvals and administration, as well as staffing resources.
- **Automated Workflow and Approvals** — ERP systems provide automated workflow capabilities that support electronic document routing, review and approval, provide for inquiries on document status and provide an efficient document filing and retrieval process. Automated workflow also facilitates the implementation of a “paperless” environment, eliminates “paper document shuffling,” and often reduces the layers of approval.
- **Drill-Down Capability** — ERP “drill-down” capabilities allow an end user to drill down on a field on a screen or report through successively lower levels of detail all the way to the initial entry source document.
- **Comprehensive Audit Trail** — ERP systems provide online access to a comprehensive history of all changes made to a record in the system.
- **Flexible Chart of Accounts** — The flexibility provided by the chart of accounts is the greatest factor in determining the usefulness of a financial system. ERP systems provide for a flexible and customizable chart of accounts structure that is supported by relational database technology, sophisticated ad hoc reporting tools to improve financial and budgetary reporting, and minimize the proliferation of “shadow” systems across state government.
- **Desktop Software Integration** — ERP systems provide the ability to easily extract data from the ERP system into common desktop “office-suite” applications such as Microsoft Office for data manipulation and analysis. Most ERP software also supports the import and export of data to/from the ERP system, which can facilitate the uploading and downloading of information from different systems or sources.





SECTION 4. THE ERP PLAN

Background, Purpose and Charge

In May 2007, the 80th Texas Legislature passed House Bill (HB) 3106, which addressed the concept of ERP for the state of Texas. From a practical standpoint, the term ERP for the state of Texas refers to an integrated software package that provides functionality similar to that offered in the existing statewide administrative systems (e.g., USAS, SPA, USPS, SPRS), as well as critical additional functionality currently provided by agency and institution of higher education administrative systems. The scope of this ERP project follows the definition stated in §5.300 Enterprise Resource Planning of Title 34 Texas Administrative Code effective Jan. 8, 2008. That definition excludes higher education student system administrations as well as community colleges.

HB 3106 requires the Comptroller to set clear standards for the implementation of ERP software for the State. The Legislation also requires the Comptroller to establish and coordinate an Enterprise Resource Planning Advisory Council (established Feb. 8, 2008) charged with the development of a plan that contains key requirements, constraints and alternative approaches for the Comptroller's implementation of ERP standards, including related core functionality and business process reengineering requirements.

HB 3106 establishes the Advisory Council members as the Department of Information Resources (DIR), Health and Human Services Commission (HHSC), Information Technology Council for Higher Education (ITCHE), Texas Comptroller of Public Accounts, and two State agencies selected by the Comptroller with fewer than 100 employees (Texas Commission on the Arts and Texas Soil and Water Conservation Board).

The Advisory Council adopted guiding principles fundamental to the ERP Plan. Those principles are as follows:

- Through workgroups and committees, we will engage statewide agencies and institutions of higher education in the project;
- We will establish and implement standardized business processes where possible;
- We will establish and implement common data standards where possible;
- We must ensure future ERP system projects are compatible with statewide standards;
- We will not throw out what works; and
- We will adapt our processes to the software rather than the software to our processes when possible.



Advisory Council's Approach

In developing this ERP Plan for the State of Texas, it was the advisory council's approach to consider work products, information and communications provided by numerous sources.

Five ERP Workgroups, consisting of agency and higher education subject matter experts, presented reports including findings, recommendations and other considerations related to the following focus areas. See Exhibit A for a summary of the five workgroup's reports.

- Accounts payable (e-travel voucher)
- Statewide considerations (unique Texas business identifier)
- Global data standardization
- Asset management and inventory
- Vehicle fleet management

The Advisory Council has continued to meet on a monthly basis with the Comptroller. The meetings have been in public forum to ensure the opportunity for public comment as we have moved forward with the ERP initiative. The CFO/CIO ERP Committee was established to further statewide ERP communications and provide a forum for agency and higher education administrators to offer suggestions and ask questions.

The Advisory Council has continued to consult with the Information Technology Council for Higher Education (ITCHE) to obtain their input and advice. This includes representatives from:

- The Texas A&M University System;
- The Texas State University System;
- The Texas Tech University System;
- The University of Houston System;
- The University of North Texas System;
- The University of Texas System; and
- Texas Woman's University (representing independent institutions of higher education).

In November 2007, the Comptroller's Office developed a survey that was sent to all state agencies and institutions of higher education. The survey captured high-level information about administrative systems and expenditures related to the application scope listed in HB 3106. Additionally, the Comptroller's Office asked survey participants to identify the amount of expenditures that were planned over a five-year time horizon to replace, upgrade or maintain these systems.

In June 2008, the Comptroller's Office hired an independent consulting firm (Salvaggio, Teal & Associates) to develop a comprehensive business case analysis (BCA) and the related strategic planning associated with ERP, collectively referred to as the "study." Included in the study was a subset of the 182 State agencies. This group was composed of 24 of the State's largest and most complex agencies and represents at least 97percent of the state's total fiscal 2007 expenditures. System stakeholders were included that represent the existing statewide administrative systems (USAS, SPA, TINS, USPS, SPRS, HRIS). The Study was completed on Sept. 17, 2008, and reviewed with the Advisory Council and Comptroller on Sept. 24, 2008. The purpose of the



study was to provide the ERP Advisory Council and the Comptroller with alternatives, data and other information necessary to determine whether implementing a statewide ERP system is economically feasible for the state of Texas. The following three alternative scenarios were analyzed:

- **Business Case Alternative 1: Status Quo (BCA 1)** — The State continues on its current path and each agency and institution of higher education continues operating their existing administrative systems as currently planned. The 11-year cost for this approach per the business case was \$1,342,400,000.
- **Business Case Alternative 2: Statewide ERP Platform Deployment (BCA 2)** — Replace the existing statewide legacy administrative systems (USAS, USPS, SPA, SPRS, HRIS, TINS) with a new, fully integrated, commercially-available ERP system that would provide all functionality identified in HB 3106. One statewide ERP system for all State agencies and all institutions of higher education would be established and operated by the Comptroller. The 11-year cost for this approach per the business case was \$1,813,400,000.
- **Business Case Alternative 3: Hub Model (BCA 3)** — Replace the existing statewide legacy administrative systems (USAS, USPS, SPA, SPRS, HRIS, TINS) with a new, fully integrated, commercially-available ERP system that the Comptroller's Office would operate as an Application Service Provider (ASP) for all State agencies with the exception of the Health and Human Services (HHS) agencies and institutions of higher education. The HHS agencies and Higher Education would operate under a decentralized processing model as data reporting "hubs." They would interface into the Statewide Data Warehouse platform and their transactional data would interface into the new ERP system. The 11-year cost for this approach per the business case was \$1,377,800,000.

High Level Comparison of Business Case Alternatives

Cost Elements	Total Cost for FY2010 - FY2020 (\$ millions)		
	Alt 1 (Status Quo)	Alt 2	Alt 3
ERP Costs (Implementation and Operation)	\$ -	\$ 930.3	\$ 335.2
plus: Legacy Costs -- Ongoing	\$ 1,122.8	\$ 785.8	\$ 945.5
Subtotal	\$ 1,122.8	\$ 1,716.1	\$ 1,280.8
Amount in Excess of Status Quo	\$ -	\$ 593.3	\$ 158.0
plus: Legacy Costs -- New Projects/Investments, excluding Statewide Rewrites	\$ 98.6	\$ 97.3	\$ 97.0
Subtotal	\$ 1,221.3	\$ 1,813.4	\$ 1,377.8
Amount in Excess of Status Quo	\$ -	\$ 592.0	\$ 156.5
plus: Legacy Costs -- New Projects/Investments -- Statewide Rewrites Only	\$ 121.1	\$ -	\$ -
Total Cost	\$ 1,342.4	\$ 1,813.4	\$ 1,377.8
Amount in Excess of Status Quo	\$ -	\$ 470.9	\$ 35.4
% in Excess of Status Quo	0.0%	35.1%	2.6%



Key Requirements and Functionality

HB 3106 defined the organizational scope to include all State agencies and institutions of higher education, and the functional scope to include the following application areas:

- General Ledger;
- Accounts payable;
- Accounts receivable;
- Budgeting;
- Inventory;
- Asset management;
- Billing;
- Payroll;
- Projects;
- Grants; and
- Human resources, including administration of performance measures, time spent on tasks and other personnel and labor issues.

Though not included in HB 3106, the following functional areas were added to the plan scope:

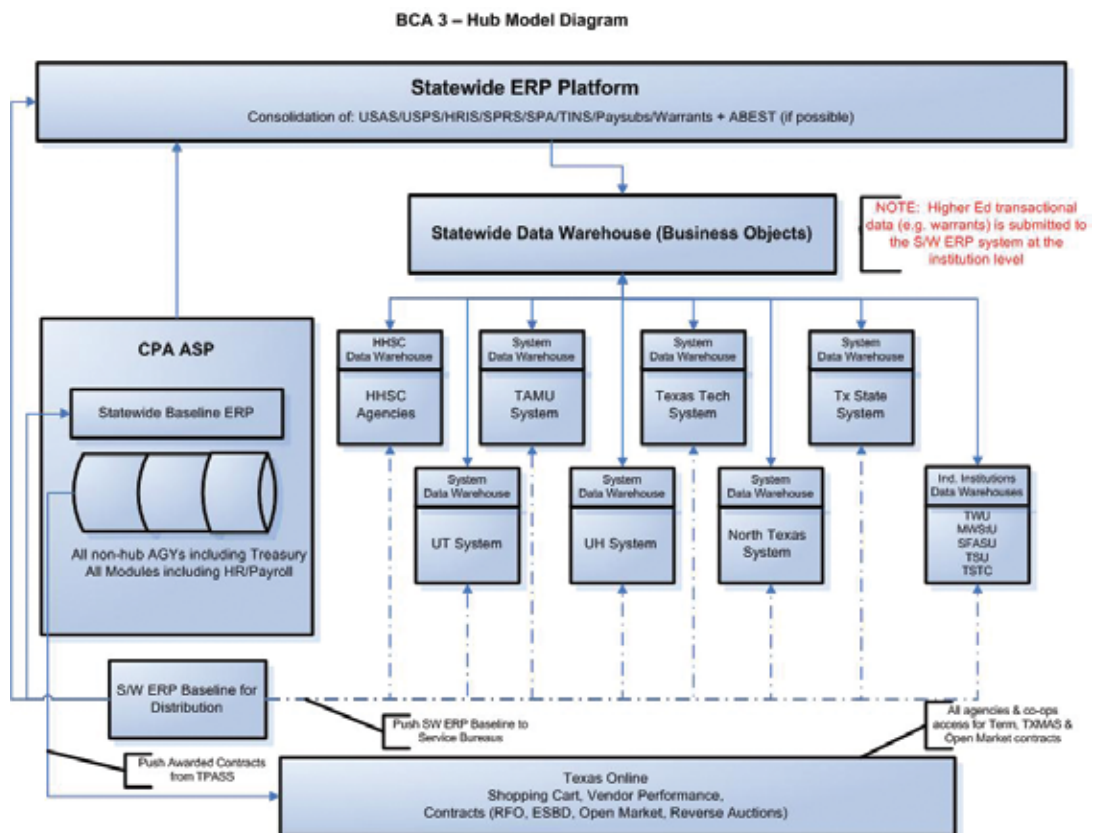
- **Procurement.** The functionality is an integral component of an ERP system and procurement falls within the Comptroller's authority. Procurement is the functional area that typically obtains the greatest process efficiencies and potential cost savings in the transition to an integrated ERP system.
 - **Fleet Management.** Fleet management functionality is required to address the Texas Comptroller of Public Accounts (Comptroller or Comptroller's Office) Rider 16, GAA 2008-2009, which requires the Comptroller to implement and maintain a state fleet data management system for agencies to report fleet operating expenses and uses, as required by Chapter 2171.101, Government Code. The system must be accessible through a Web-based interface, provide forms for efficient entry of data required by the State Vehicle Fleet Management Plan, allow agencies to batch load relevant data from internal legacy systems, provide fiscal and managerial reports for both direct asset management and oversight needs, and be flexible enough to accommodate future agency or legislative needs.
 - **Data Warehousing.** It is assumed that a statewide data warehouse is required in order to provide functionality necessary to meet the state's present and future analysis and reporting requirements, and to address the Comptroller's new standards for transparency and accountability in state spending.
-



Recommendations

The advisory council recommends that the Comptroller implement BCA 3, the Hub Model, which was presented in the business case analysis prepared by STA and is shown in Figure 2. Under BCA 3, State agencies (with the exception of the Health and Human Services agencies and institutions of higher education) will migrate to a new Statewide ERP platform operated by the Comptroller's ASP service. The HHS agencies and institutions of higher education would operate under a decentralized processing model as data reporting "hubs." They would be interfaced into the Statewide Data Warehouse platform and their transactional data would be interfaced into the new ERP system. Should it be determined after requirements analysis that additional Hubs are needed, this model may be expanded. Under this model specific agency/institution transactional systems would be interfaced to the Statewide ERP System for addressing major functional needs such as financial and payment processing. The existing statewide legacy administrative systems (e.g., USAS, USPS, SPA, HRIS, SPRS, TINS) will be replaced by the Statewide ERP system that will provide all functionality identified in HB 3106.

Figure 2





A separate data warehouse will be established by each higher education system, independent higher education institutions, and by Health and Human Services. Each hub will develop its own data warehouse capability, and every hub component, agency or institution, will be required to provide data to its hub data warehouse.

Component institutions in higher education and Health and Human Services will be able to operate and maintain whatever platform and application set they choose with the only restriction being the system data warehouse conforms to the statewide data standards for statewide reporting. Each hub will follow its own business processes as defined by their business requirements and as dictated by their specific application set. The Statewide ERP baseline code will be made available to every hub for its use, if desired, and will be maintained according to the ERP vendor's recommended schedule.

The advisory council recommends following a planning, development and deployment schedule that postpones the start and completion of the project by approximately one year when compared to the Business Case Study.

We recommend this solution for the following reasons:

- It addresses HB 3106 requirements and the functionality required by the Comptroller's Rider 16 regarding fleet management.
- It complies with the ERP Advisory Council's guiding principle of "not throwing out what works" by leveraging the considerable work done to date by Higher Education and Health and Human Services in implementing their own ERP systems.
- The state will achieve business process standardization based on best practices, economies of scale and efficiency gains through the implementation of a single, unified platform for almost all state agencies while still allowing for the differences in the functional requirements of the hubs.
- It provides for significantly enhanced statewide reporting for both higher education and the State agencies, which will greatly facilitate a "single source of the truth" and taxpayer transparency.
- It eliminates the use of SSNs as the primary identifiers in the statewide administrative systems, thus helping to reduce identity theft opportunities.
- It provides for compliance with Section 508 of the Americans with Disabilities Act regarding accessibility.
- It eliminates much of the fragmentation associated with the State's existing administrative systems environment.
- Total project implementation costs are considerably less than the costs of implementing the alternative ERP scenario (BCA 2) presented by Salvaggio, Teal & Associates (STA) in their business case analysis.



- It is the model most often utilized by other states to meet their statewide administrative system needs, resulting in lower overall project risk.
- It eliminates proliferation of agency ERP and other administrative shadow systems, while allowing higher education to maintain its own ERP solutions that are integrated with other ERP functions such as patient care, student information, learning management and library systems.
- It provides a plan that allows the state to significantly upgrade the functionality and reporting capabilities of its statewide administrative systems and retire the legacy systems (USAS, SPRS, USPS, HRIS, SPA, TINS) over a period of seven years.
- It establishes a common language for reporting expenditures through use of commodity codes (NIGP) and focuses the use of Comptroller Object Codes on financial reporting (CAFR, GASB), thereby allowing for consistent reporting and better analysis of how the State's money is spent.
- It provides for a statewide procurement system that will be fully-integrated with the financial accounting, asset management, and Inventory management modules, as well as the Online Ordering System currently in development by the Comptroller's office.
- It provides for better tracking of the state's assets, thus helping agencies and the Legislature in budget planning by identifying replacement costs and schedules.
- Hubs will gain the benefit of centralized reporting at the system or enterprise level through data warehouses that will be used to gather and normalize disparate institutional data to support effective statewide reporting goals.
- It allows for the hubs to consider ERP consolidations through an evolutionary process, should their existing systems reach the end of their useful lives.

The ERP cost to be funded under BCA 3 is:

Total ERP Project Cost	\$248,458,000
15% Contingency	<u>37,269,000</u>
Total	<u>\$285,727,000</u>

This includes costs incurred during the 7-year project timeframe for pre-implementation services, the implementation project, ongoing support costs during this period and the contingency. These are the costs that would be considered "new funding" until the Comptroller is able to retire the existing statewide administrative systems. The following table provides cost categories by fiscal year for recommended BCA 3 (net of the 15 percent contingency).

The Assumptions provided in the ERP Advisory Council's Plan are very important to the recommendations regarding BCA 3. Changes to any of the Assumptions or any future negotiations with vendors may materially impact the project's timeline, cost, scope, resources and expectations.



Figure 3

Projected ERP Costs								
<i>(Amounts in thousands)</i>								
Cost Category	Fiscal Year							Total
	2010	2011	2012	2013	2014	2015	2016	
Total Project Costs	\$ 1,805	\$ 41,339	\$ 41,860	\$ 22,883	\$ 29,668	\$ 12,817	\$ 16,147	\$ 166,519
Total Operations Cost		3,400	3,502	14,529	15,255	15,794	29,459	81,939
Contingency (15 percent)	37,269							37,269
Total Annual ERP Cost	\$ 39,074	\$ 44,739	\$ 45,362	\$ 37,412	\$ 44,923	\$ 28,611	\$ 45,606	\$ 285,726
Cumulative ERP Cost	\$ 39,074	\$ 83,813	\$ 129,175	\$ 166,587	\$ 211,510	\$ 240,121	\$ 285,726	

Contingency Requirements and Utilization Management

The advisory council has recommended that a contingency amount be reserved equal to 15 percent of the total estimated project to address unforeseen costs and/or costs that could not adequately be addressed as part of the STA study due to specific information not being available at the time the study was performed. The contingency would also cover costs associated with the Advisory Council's recommendation to postpone the start of the project until the beginning of fiscal year 2010 and complete the project during fiscal year 2016.

The advisory council recommends that the Comptroller's Office manage any activities that potentially impact contingency funding based on direction provided by a new ERP project oversight committee. Any requests to utilize the contingency funding should be initiated through the execution of a formal contingency use request process.

Recommended Deployment Phasing

The advisory council recommends that the phased deployment by agency group approach in the Study be utilized for deployment of the ERP solution across State government. Using this approach, state agencies would be logically organized into multiple deployment groups or "waves," as suggested below:

FY10/11	Planning; statewide ERP requirements development; procurement of ERP software and integration services; contingency established; develop ERP blueprint
FY12/13	32 Agency deployments
FY14/15	92 Agency deployments; replace statewide system; hub interfaces completed
FY16	11 Agency deployments; replace remaining statewide systems; software upgrade

***ERP Software Considerations***

The advisory council recommends that the state evaluate all relevant ERP software options to achieve best value for the state of Texas. The recommended BCA 3 will allow for maximum flexibility for the state of Texas, which includes the diversity across the hubs in their software and business processes.

Given the current Texas software environment there may be cost savings and benefits associated with utilizing PeopleSoft for the statewide ERP solution.

Complexities Associated with Higher Education

HB 3106 required that institutions of higher education be included in the Statewide ERP Plan. The recommended BCA 3 requires that each higher education system operate as a reporting entity and interface directly into the Statewide Data Warehouse that will be operated by the Comptroller ASP service. Institution transactional systems will be interfaced to the Statewide ERP System for addressing major business processes at the statewide level.

Caution should be exercised regarding any future statewide ERP plans that require institutions of higher education to move to a common ERP solution for the following reasons:

- The focus of state government ERP implementations is typically on financial management and human resources/payroll functionality. Higher Education implements these modules but also student information, financial aid, library, and learning management modules to meet the administrative business process needs of their students, faculty, and staff. Selection of student information, financial aid, library, and learning management systems is often driven by institutional size, program scope and complexity. At times, a “best-of-breed” approach may be appropriate with functional integration of ERP modules being the requisite requirement.
- While a “one-size-fits-all” approach (with limited exceptions) is feasible for State agencies participating in a statewide ERP project, such an approach will not work for higher education without providing for considerable unique configuration for health-related components and large flagship academic institutions. Additional complications arise because most institutions have student and other academic systems that share tables with their existing ERP systems (e.g., student billing and receivables maintained in current financial management systems are required to interact with student information and financial aid systems). These additional complexities would add considerable costs and risks to the statewide ERP Project.
- Considerable effort and funding has been expended to date by the State’s institutions of higher education to move to ERP systems to address their financial management, human resources/payroll, student information, financial aid, and other administrative business process needs.

Research provided by the National Association of State Auditors, Comptrollers, and Treasurers (NASACT), and cited by STA, validated that only the State of North Dakota utilizes a model whereby state government and higher education operate under the same ERP system.



Integration Challenges

While the advisory council supports the concept of full integration to the maximum extent possible, there are instances in which integration challenges arise as the state may best meet a specific business need through the use of a “best-of-breed” software product. A “best-of-breed” approach means that the state would choose the best software product available for a specific business function and then build the necessary interfacing “points” between that system and the statewide ERP system. STA suggested that the state may want to research alternative “best-of-breed” solutions for the following functional areas prior to committing to an ERP product line for all functionality identified under HB 3106 and Rider 16:

- **Fleet Management** – a specific business need that is typically addressed through the acquisition of a “best-of-breed” solution that is then interfaced with the statewide ERP system. Best-of-breed fleet management software is typically more robust and feature-rich than the solutions offered by the major ERP vendors; they are also more reasonably-priced.
- **Time and Labor** –The Comptroller must ensure that the time and labor module will meet all time reporting requirements prior to committing to its use as the statewide ERP solution for state government time reporting.
- **Budget Development** – Based on the research done by STA, most state and local governments utilize one of the following solutions for developing their enterprise budgets:
 - Custom-developed software;
 - Personal computer spreadsheets;
 - Best-of-breed budget development software; or
 - Budget development module within ERP software.

Most of STA’s state and local governmental clients have chosen not to purchase the budget development module after a thorough evaluation of the software’s capabilities.

As with time and labor, the Comptroller needs to analyze whether the budget development module(s) will meet specific appropriation, operating, capital, and other budget development requirements before committing to its use as the statewide ERP solution for state government budget development.

Funding Options

As discussed previously, the ERP cost to be funded is \$285,727,000 (\$248,458,000 plus 15 percent contingency of \$37,269,000). This includes costs incurred over the seven-year project timeframe for pre-implementation services, the implementation project, ongoing support costs during this period and the contingency. These are the costs that will require additional appropriations until the Comptroller is able to retire the existing statewide administrative systems.

Although the costs associated with implementing ERP will be significant, the advisory council believes there is a compelling business case for the state to proceed with implementation of a new statewide ERP system.



There are two primary considerations for ERP system funding models:

1. Should debt financing, new state appropriations, or some combination of the two be used to pay ERP implementation costs?
2. Should the ERP costs be appropriated to a central authority, be allocated to individual agencies, or some combination of the two?

It is the Advisory Council's recommendation that additional funds be appropriated to the Comptroller to fund the ERP costs. Additional information concerning the funding options can be found in the Funding Plan section of the Study.

Estimated Method of Finance

Although the Advisory Council's recommendation is for general revenue appropriation to the Comptroller, a portion of the general revenue appropriation will be offset by federal and other state funds through the use of the statewide cost allocation plan (SWCAP). Of the approximate \$285.7 million proposed project budget, the estimated costs to the various funding sources are as follows:

- \$142.9 million general revenue
- \$18.7 million general revenue dedicated
- \$78.2 million federal funds
- \$45.9 million other funds

Assumptions Associated with Our Recommendations

The following assumptions are very important to the advisory council's recommendations regarding BCA 3. Changes to any of these assumptions may materially impact the project's timeline, cost, scope, resources and expectations.

- Funding for the project will not come from agency savings as a result of ERP or agency budget reductions.
- The requirements development and fit/gap phases will occur during periods in which state agencies and institutions of higher education have resources available to participate.
- The state is committed to change business processes and requirements when possible, as opposed to customizing the ERP software solution.
- The core of the new ERP system will be configured, tested and implemented for a subset of agencies during an implementation period, starting in fiscal 2010.
- After the initial agency deployment in 2012, the ERP system will be rolled out in multiple waves, over a five-year period. The roll-out will start in fiscal 2012 and end in fiscal 2016.
- It is assumed that a full-time equivalent number of hours per year are 2,000 for both contractor resources and State resources.



- An average inflation factor of 3 percent was applied to non-state staff costs. An average inflation factor of 2 percent was applied for state staff.
- A software upgrade will occur during Year 7 of the project. However, it is not expected to be a major architectural upgrade.
- If PeopleSoft is selected, the software upgrade during Year 7 is not expected to be Oracle Fusion; however, if the upgrade is to Oracle Fusion, the cost will be significantly greater.
- The estimated costs associated with BCA 3 are based on continuing the relationship with Oracle's PeopleSoft ERP software suite. If a different software provider is selected, the cost may increase as the state would not be able to leverage the work performed to date on the various PeopleSoft projects in Texas state government and higher education.
- It is assumed in BCA 3 that institutions of higher education and Health and Human Services are hubs. Hubs may, or may not, choose to implement internally the statewide ERP solution. Because of this, Hub costs related to implementation of the ERP solution are not included in the project costs.
- All hubs (as per BCA 3) must interface with the ERP solution and establish data warehouses as required. The costs associated with these initiatives are included in the BCA 3 costs.
- Each hub will follow its own business processes as defined by their business requirements and as dictated by their specific application set.
- A statewide ERP project steering committee comprised of a cross-section of state agency and higher education executive management will be formed to provide high-level project oversight and guidance with authority to make decisions.
- Strong project governance standards are applied equitably and fairly in a manner that ensures opportunity for input by all state agencies and higher education.
- The Comptroller establishes a strong project management team with appropriate levels of authority and project status reporting.
- State agencies and institutions of higher education will commit sufficiently skilled state staff resources to the project for extended periods of time during system development.
- State agencies and institutions of higher education can reach agreement on critical decisions such as statewide system requirements and whether software to requirement gaps can be addressed through other means than system customizations.
- The Comptroller's statewide administrative systems will be eliminated as scheduled.
- State agency and higher education administrative systems and/or interfaces will be replaced as scheduled.
- There are no external constraints that will adversely impact the ERP deployment schedule.



- It is not expected nor estimated within the project costs that the ERP system will address all programmatic or “specialty” functionality and system needs of agencies or higher education. It is understood that the ERP solution cannot reasonably be a replacement for all peripheral systems (e.g., hospitals, student administration, library, etc.).
- The ERP project will not begin until the project is approved by the legislature, funding is secured and available and agency and higher education resources are available to participate. This would not be any sooner than June 2009 and September 2009 is preferable.
- The costs associated with documenting agencies’ unique business requirements are included within the project.
- Either through the current statewide contracts or the proposed project budget it is assumed that there are sufficient Oracle tools and database licenses; if not, additional costs will be incurred.
- The business requirements development phase will include only minimal business process reengineering. Most business process reengineering will occur once the ERP software solution is confirmed and appropriate resources are available for the software to requirements fit/gap phase.

Risks Associated with Our Recommendations

The risks associated with the implementation of BCA 3 are greatly influenced by the various multiple elements and activities that will need to be managed concurrently.

Project risks include the following:

- Lack of participation and/or data standardization for reporting needs from Hubs both at data warehouse and transactional levels
- Scope “creep” impacting project timeline and future upgrades due to approved modifications to baseline ERP software.
- Lack of project funding, including eligibility of costs for federal funding
- Lack of state sponsorship of the project
- Lack of strong project management with appropriate authority
- Key project dependencies (e.g., licenses, requirements development, fit/gap, RFPs) are not completed on schedule
- Inability of state agencies to reach consensus on business requirements, policy, best practices and software to requirements fit/gap
- Inability of state agencies and institutions of higher education to reach consensus on data standardization for reporting from the data warehouses and the interfaces
- The new statewide ERP oversight committee does not resolve issues in a timely manner



- Lack of participation by state agencies and institutions of higher education in project activities
- State agencies may seek to be a hub in order to avoid changing their business processes
- If PeopleSoft is selected, very little is known about Oracle's Fusion direction, costs, upgrade process and other requirements that could impact ongoing ERP system maintenance, licensing and costs.
- ERP projects of this length & magnitude may experience significant project team turnover causing the loss of key personnel.
- Inability of agency management and end users to accept and manage the business and process changes required.
- Scheduled project deadlines and milestones are not met.
- ERP software may not be able to fully accommodate state and agency policies or procedures without modification greater than estimated
- Empowerment of project teams may not be respected or accepted.
- Turnover in key executive state positions could affect high level support for the project.
- Loss of project's priority status over time could result in refocus of project resources to other responsibilities,
- Contracted implementation assistance does not meet expectations
- State requirements may change while the project is in progress.
- Inability of state agencies and Comptroller to reach consensus on deployment schedule.



EXHIBIT A

ERP WORKGROUP REPORTS – SUMMARY

In February 2008, information gathering workgroups were formed with representatives from all interested State agencies and institutions of higher education. The purpose of forming workgroups was to begin researching topics in areas included in HB 3106 regarding enterprise resource planning (ERP) and to report findings and recommendations to the ERP Advisory Council for use in preparing a report for the legislature. Over 185 employees representing 48 state agencies and institutions of higher education participated in five ERP workgroups. Participants spent numerous hours researching issues and contributing to the workgroup reports. Each participant is commended for their contributions to the ERP initiative. The full reports are on the www.texaserp.org Web site as well as the names of all workgroup participants.

The first four workgroups completed their reports in May and presented their findings and recommendations to the Advisory Council on May 28th. Two of the original workgroups continued on with a second phase and updated their reports in August/September. A fifth workgroup was created and also completed its report in September. These workgroups presented their findings and recommendations to the Advisory Council on Sept. 25th. Highlights from all five workgroup reports include the following:

Inventory & Asset Management Workgroup

The Inventory and Asset Management Workgroup was established to identify statewide and agency-specific business needs for inventory and asset management. The workgroup was led by Duane Sullivan of the Texas Department of Transportation and was comprised of 36 participants representing 26 state agencies and institutions of higher education.

Highlights of the Findings include:

- Some agencies have no need to track consumable inventories while others maintain inventories of up to \$190 million. Currently there is no statewide system to track consumable inventories;
- SPA is the statewide system for maintaining an inventory of personal property, but users have additional needs beyond the capabilities of SPA. These include tracking inventories, accumulating the costs of owning, operating, and maintaining personal property and distributing those costs to projects, grants, and programs; tracking funding information; reporting IT asset information to the Department of Information Resources (DIR); and accounting for the differences in financial planning and reporting requirements and state budgeting;
- Desired features of an ERP solution include robust ad hoc reporting capabilities, Web-based cataloging, stock management, bar coding technology including hand-held devices, and the ability to meet unique and security sensitive reporting and monitoring requirements; and
- Although core fields are captured within the Statewide Property Accounting System, reporting needs within each user vary extensively.

***Highlights of the Short Term Recommendations include:***

- Forming new user groups to deal with common concerns such as fleet management and consumable inventories management, including pharmaceuticals;
- Making SPA information available on the Comptroller's FM Query tool; and
- Maintaining SPA end-of-month datasets in order to provide historical information related to depreciation.

Highlights of the Long Term Recommendations include:

- Consideration of legislative changes to consolidate and standardize the requirements for reporting real property,
- Creating a multi-agency workgroup to develop a list of core and non-core asset-management-system data elements and requirements, and
- Incorporating enhancements to SPA to address current system deficiencies.

Accounts Payable Workgroup

The Accounts Payable Workgroup was established to design an electronic travel voucher for use by employees of state agencies and institutions of higher education. Additionally, the workgroup considered the needs of the Texas Procurement and Support Services Division of the Comptroller's office as well as those of the traveler agencies. The workgroup was led by Machel Pharr of the Texas Department of State Health Services and was comprised of 40 participants, representing 23 state agencies and institutions of higher education.

Highlights of the Findings include:

- The current travel expense reimbursement process is a manual process for most agencies. This process is slow and the traveler is unable to determine the status of their reimbursement request. As a result, considerable time is spent responding to phone calls and e-mail messages regarding the status of travel reimbursements; and
- The workgroup determined that the existing automated systems were designed to meet individual agency needs and may not be flexible enough to accommodate varying requirements of the state agencies and higher education.

Highlights of the Short Term Recommendations include:

- Designing a Web-based travel system that meets the needs of travelers, state agencies and institutions of higher education, and
- Including workgroup agencies in the development of system requirements and end user testing.

Highlights of the Long Term Recommendations include:

- Proposed resolutions to address legislative and rule changes that will improve the travel reimbursement workflow, and



- Additional phases of work that will allow for the booking of travel and approval of travel through the travel voucher system, as well as incorporating the reconciliation of travel advances.

During its second phase, the Accounts Payable workgroup produced detailed system requirements for a Web based travel voucher system.

Statewide Considerations Workgroup

The Statewide Considerations Workgroup was established to study and make recommendations concerning the format and use of a Texas unique business identifier (UBID) for individuals and entities receiving payments and/or doing business with Texas state agencies and institutions of higher education in order to stop using social security numbers and federal identification numbers as the primary key. The workgroup was led by Kay Rhodes of the Texas Tech University System and was comprised of 34 participants, representing 20 state agencies and institutions of higher education.

Highlights of the Findings include:

- More than 50 unique identifiers are in use by various agencies;
- Statewide, over 100 systems/processes utilize an SSN and/or UBID;
- Many agencies have made significant investments in ERP systems;
- Several agencies use SSNs as a UBID;
- Multiple interfaces to statewide systems and other systems exist that depend on SSNs; and
- Multiple data exchanges with entities outside the state exist.

Highlights of the Short Term Recommendations include:

- Formalizing organizational accountability for SSNs by requiring all agencies to establish policies on the use and security of SSNs, and
- Defining at the agency level, a plan to protect the confidentiality and integrity of SSNs including key areas such as safeguards for SSN collection and storage, and reducing the use and disclosure of SSNs.

Highlights of the Long Term Recommendations include:

- Developing a unique business identifier (UBID) for Texas that is not based on SSNs, and will minimize the risks of SSN use, while not replicating the same paradigm that allows for identity theft,
- Developing policies and procedures for the authentication of individuals and businesses requesting a UBID, and for minimizing or avoiding duplicate UBIDs,
- Building central-system to agency-system crosswalks to link SSNs with the new UBIDs,
- Generating UBIDs through a new statewide ERP system which could be used as primary identifiers, and



- Continuing to maintain SSNs and Federal Employee Identification Numbers (FEINs) in the system as required for reporting and interfacing activities. However, the SSNs and FEINs would not be displayed on screens and reports, except to authorized users with specific business needs.

Global Data Standardization Workgroup

The Global Data Standardization Workgroup was established to identify statewide and agency-specific business needs for coding that will be used for processing and reporting various activities related to the purchase of good and services. The workgroup was led by Clair Goldsmith of the University of Texas System and was comprised of 43 participants, representing 34 state agencies and institutions of higher education.

Highlights of the Findings include:

- Fifty-four percent of agencies and institutions of higher education surveyed responded that their current internal accounting, purchasing or budgeting systems do not meet their current needs;
- Seventy-eight percent of agencies and institutions of higher education surveyed responded that the current statewide systems do not meet their current needs;
- Although USAS is widely used for many state agencies, it lacks the ability to provide detail reporting and the ability to record transactions by Method of Finance;
- ABEST lacks the capability to provide detailed reporting; and
- SPA is not user friendly, lacks detailed reporting, and does not meet agency needs for tracking consumables inventory.

Highlights of the Short Term Recommendations include:

- Encouraging the use of the FM Query Tool by making it available at no cost to agencies and institutions of higher education and expanding functionality to include: SIRS, ABEST, all fields in USAS and SPA, and other new reports,
- Reviewing and researching USAS allocation capabilities (cost allocation module),
- Modifying USAS to include optional fields to capture an indicator for recycled goods and services as well as for emergency purchases, and
- Modifying TINS to include HUB indicators for gender and ethnicity.

Highlights of the Long Term Recommendations include:

- Identifying several system requirements regarding coding for goods and services, statutory and contractual processing and reporting requirements, system scalability, the flexibility to meet individual agency needs, and other system functionality requirements.



Vehicle Fleet Management Workgroup

The Vehicle Fleet Management Workgroup was established to develop system requirements for vehicle fleet management as well as analysis to determine what information is statutorily necessary and what information is necessary to assist each agency with managing their vehicle fleet. The workgroup was led by Don Lewis of the Texas Department of Transportation and was comprised of 49 participants, representing 20 state agencies and institutions of higher education.

Highlights of the Recommendations include:

- Developing system requirements with functionality to:
 - Track new vehicle information including off-road equipment,
 - Track mileage and fuel information,
 - Track maintenance, accident and repair information,
 - Easily import and export information with little or no manual processing to help with information sharing between systems, and
 - Provide for customizable reporting.

Highlights of the Additional Considerations include:

- If a full fleet management system is implemented, then the state must attempt to limit duplication and re-entry of common data between the fleet management system and the asset management system, and
- The Texas Procurement and Support Services (TPASS) division within the Comptroller's office is required to complete a biennial report to the legislature regarding the operation of each state agency's vehicle fleet. Agencies managing large fleets tend to need more detailed vehicle fleet information than the contents of the report created by TPASS.





EXHIBIT B

INDEPENDENT BUSINESS CASE STUDY

EXECUTIVE SUMMARY

© Salvaggio, Teal & Associates

SECTION 1. EXECUTIVE SUMMARY

Background and Purpose of Study

In May of 2007, the 80th Texas Legislature passed House Bill 3106 (HB 3106), which addressed the concept of Enterprise Resource Planning (ERP) for the State of Texas (State). From a practical standpoint, the term ERP for the State refers to an integrated software package that provides functionality similar to that offered in the existing statewide administrative systems (e.g., USAS, SPA, USPS, SPRS), as well as critical functionality currently provided by agency administrative systems.

The Legislation defined the organizational scope to include all State agencies and institutions of higher education, and the functional scope to include the following application areas:

- General Ledger;
- Accounts Payable;
- Accounts Receivable;
- Budgeting;
- Inventory;
- Asset Management;
- Billing;
- Payroll;
- Projects;
- Grants; and
- Human Resources, including administration of performance measures, time spent on tasks and other personnel and labor issues.

Though not included in the Legislation, the following functional areas were added to the Plan scope:

- **Procurement.** While not specified in HB 3106, the functionality is an integral component of an ERP system and procurement falls within the Comptroller's authority. Procurement is the functional area that typically obtains the greatest process efficiencies and potential cost savings in the transition to an integrated ERP system.



- **Fleet Management.** While not specified in HB 3106, the functionality is required in order to address Rider 16 which requires that the Texas Comptroller of Public Accounts (Comptroller or Comptroller's Office) implement and maintain a State fleet data management system for agencies to report fleet operating expenses and uses, as required by Chapter 2171.101, Government Code. The system must be accessible through a web-based interface, provide forms for efficient entry of data required by the State Vehicle Fleet Management Plan, allow agencies to batch load relevant data from internal legacy systems, provide fiscal and managerial reports for both direct asset management and oversight needs, and be flexible enough to accommodate future agency or legislative needs.
- **Data Warehousing.** While not specified in HB 3106, it is assumed that a statewide data warehouse is required in order to provide functionality necessary to meet the State's present and future analysis and reporting requirements, and to address the Comptroller's new standards for transparency and accountability in State spending.

In November 2007, the Comptroller's Office developed a survey that was sent to all State agencies and institutions of higher education to capture high-level information regarding their administrative systems and expenditures related to the application scope listed in HB 3106. The purpose of the survey was to determine which systems were in place in the various State agencies and institutions of higher education, and what funding was being spent to deploy, operate and maintain these systems. Additionally, the Comptroller's Office wanted to identify the amount of expenditures that were planned over a five-year time horizon to replace, upgrade or maintain these systems.

The survey identified the total estimated cost for annual operation and maintenance of the systems across State government at over \$88 million, including:

- Annual software maintenance at \$17 million;
- Annual hardware maintenance at \$9 million; and
- Staffing and labor performing system or application maintenance totaling \$62 million and representing approximately 950 FTEs.

Anticipated system upgrades, enhancements and replacements totaled over \$144 million over the six-year period, according to the survey results. This amount included the following elements:

- Planned system or application upgrades totaling \$27 million; and
- Planned system replacement or implementation costs totaling \$117 million.

Based upon a six-year time horizon, the November 2007 survey yielded total system and application costs for the applications included within the scope of HB 3106 to be \$672 million or roughly \$112 million on an annualized basis.



In late June 2008, the Texas Comptroller of Public Accounts (Comptroller or Comptroller's Office) initiated a study to develop a comprehensive business case analysis (BCA) and related strategic planning associated with ERP. The purpose of the Study was to perform a series of tasks that will provide the ERP Advisory Council and the State Comptroller with the data and other information necessary for determining whether implementing a statewide ERP system is economically feasible for the State of Texas through the analysis of the following three (3) alternative scenarios:

- **Business Case Alternative 1: Status Quo (BCA 1)** -- The State continues on its current path whereby each agency and institution of higher education continues operating their existing administrative systems as currently planned.
- **Business Case Alternative 2: Statewide ERP Platform Deployment (BCA 2)** -- Replace the existing statewide legacy administrative systems (USAS, USPS, SPA, SPRS, HRIS, TINS) with a new, fully integrated, commercially-available ERP system that would provide all functionality identified in HB 3106. One (1) statewide ERP system for all agencies and all institutions of higher education (HE) would be established and operated by the Comptroller.
- **Business Case Alternative 3: Hub Model (BCA 3)** -- Replace the existing statewide legacy administrative systems (USAS, USPS, SPA, SPRS, HRIS, TINS) with a new, fully integrated, commercially-available ERP system that the Comptroller's Office would operate as an Application Service Provider (ASP) for all State agencies with the exception of the Health and Human Services (HHS) agencies. The HHS agencies and institutions of higher education would operate under a decentralized processing model as data reporting "Hubs" and would be interfaced into the Statewide Data Warehouse platform and their transactional data would be interfaced into the new ERP system.

Approach and Deliverables

Four groups were identified to provide data and information to support the BCA analysis:

- A subset of 182 State agencies surveyed in November 2007. This group was composed of twenty-four (24) of the State's largest and most complex agencies as selected by the Comptroller's Office and represents at least 97% of the State's total FY 2007 expenditures.
- System stakeholders that represent the existing statewide administrative systems, including:
 - Uniform Statewide Accounting System (USAS);
 - State Property Accounting (SPA);
 - Texas Identification Number System (TINS);
 - Uniform Statewide Payroll/Personnel System (USPS);
 - Standardized Payroll/Personnel Reporting System (SPRS); and
 - Human Resource Information System (HRIS).



- Higher Education System Offices that represent all institutions of higher education except for Stephen F. Austin University, Texas Southern University, Texas Woman's University, Midwestern State University, and Texas State Technical College.
- Members of the Information Technology Council for Higher Education (ITCHE) that is composed of representatives of:
 - The Texas A&M University System;
 - The Texas State University System;
 - The Texas Tech University System;
 - The University of Houston System;
 - The University of North Texas System;
 - The University of Texas System; and
 - Texas Woman's University.

The deliverables associated with the Study include the following:

- Documentation of the alternative scenarios to be analyzed;
- High-level assessment of existing administrative systems;
- Development of Cost Estimates for the Status Quo, and the alternatives to be evaluated;
- Development of Avoided Costs (costs that would no longer be incurred if a statewide ERP system was implemented) for the alternatives to be evaluated;
- Development of Process-improvement Savings (process efficiency savings that would be achieved if a statewide ERP system was implemented) for the alternatives to be evaluated;
- Development and documentation of the business case to support each alternative to be evaluated;
- Recommendation of a specific alternative to be pursued to address the State's statewide administrative system needs;
- High-level implementation plan documenting a recommended approach for deploying the recommended solution across State government (and higher education as applicable); and
- Funding plan to support the recommended alternative to be pursued.

Key Findings

As a result of our analysis of survey responses and interviews with key stakeholders within the Comptroller's Office and across State government, we identified the following key findings:

- A total of 1,220 administrative system functional modules (General Ledger, Accounts Payable, etc.) are currently utilized to address the functional areas addressed in HB 3106. More



than twenty (20) human resources/payroll systems are in operation across the State and three (3) statewide payroll and personnel reporting systems are in existence for validation and reporting (USPS, SPRS, HRIS). There are significant redundancies in functionality and capabilities of the three systems that could be consolidated to reduce the complexity of the reporting function and significantly reduce the cost of operating and maintaining the platforms.

- Of the total number of functional systems in operation across the State, roughly one-third (1/3) are custom developed solutions and roughly one-quarter (1/4) are statewide systems. The remaining systems are a mixture of various commercial off-the-shelf systems (COTS) and somewhat evenly spread across PeopleSoft, SunGard and MIP with the “Other” leading all categories at 13%.
- Each agency and institution (except those utilizing the USAS and USPS platforms as their processing system) must interface their systems into the existing Statewide systems resulting in more than 250 interfaces in operation that must be managed, maintained, and reconciled across the State at both the statewide and agency/institutional levels.
- Data is fragmented across a wide array of systems and platforms, which makes it difficult to generate management information on a timely and accurate basis due to differences in formats, cycle times, and controls across all systems, which leads to complications in preparing enterprise (statewide) reports. This results in a lack of confidence by the State’s citizens and their elected leaders.
- Each of these systems has its own ongoing operating and maintenance costs for hardware, software and infrastructure which, in the aggregate, could represent significant savings through consolidation and standardization.
- In order to roll-up the fragmented data to a statewide level, manual, labor intensive processes must be performed to reconcile, update and adjust the data across the various systems and interfaces. This effort represents a significant cost to the State and dramatically reduces the efficiency and effectiveness of the State’s business processes.
- Because the current statewide administrative systems do not meet many of the State’s business needs, the State’s administrative business processes are less efficient and effective than they could be. As an example, the State is unable to track method of finance for all transactions, resulting in a significant information gap regarding what money was used and in what ways, which is especially critical in times of budget constraints. To address critical unmet needs, agencies have expended significant amounts of money on their own ERP and/or “best-of-breed” systems. Instead, these funds could be spent toward the implementation of a single, statewide ERP system that would benefit all agencies.
- The State does not utilize a statewide procurement system at this time, which causes the following deficiencies:
 - Other than the agencies that already use ERP systems, the majority of other agencies follow manually-intensive business processes or maintain “stand-alone” systems or spreadsheets to



address their procurement needs. Manually-intensive processes and redundant data entry tend to be slow, error-prone, and costly;

- Lack of integration of procurement function with financial accounting and other administrative systems;
 - Most purchasing organizations lack the transaction data (at the proper commodity code level) required to effectively negotiate with suppliers; and
 - Most procurement managers spend much of their time “chasing paperwork” rather than managing their supplier base or negotiating better prices.
- The existing statewide administrative systems were developed and implemented based on user and State business requirements that are now more than fifteen (15) years old. As new requirements have emerged, the State continues to patch or rewrite the systems to meet or comply with the new, point-in-time requirements. The cost of maintaining these systems continues to escalate due to the difficulty of locating skilled personnel to make the changes as well as the overall limitations of the original system architecture (e.g., often changes must be made to the actual computer code instead of simply changing data table entries to make the changes).
 - The State Property Accounting System is 15 years old. It does not support accounting standards enacted in recent years. Therefore, inefficient manual reconciliation and rework is required. Insufficient internal system controls necessary to maintain the integrity of transaction data have caused State audit concerns.
 - TINS lacks the ability to ensure that funds are not paid to individuals indebted to the State. Instead of netting all payments against amounts owed, the State pays some individuals in full and, therefore, misses an opportunity to recoup funds owed.
 - The existing statewide systems are not providing adequate protection for confidential state employee information and are not in compliance with the information security, data privacy and accessibility regulations, exposing the State to possible lawsuits and public relations risks.

Business Case Analysis Results

The State spends approximately \$9 million per year to maintain and operate the existing statewide administrative systems such as USAS, TINS, SPA, etc. Additionally, the Comptroller and the State agencies/institutions need to spend approximately \$121 million combined to “rewrite” the statewide administrative systems and deploy these new systems across Texas government over the next few years. These rewrites are intended to address major system deficiencies, eliminate the need for HRIS, address risks associated with the current use of Social Security Number, and lack of compliance with Section 508 of the Americans with Disabilities Act regarding accessibility.

From a financial-analytical perspective, Alternative 3 is by far the best of the three (3) alternatives evaluated in this BCA. Under Alternative 3, all but approximately \$35.4 million of the estimated \$335.2 million 11-year cost to implement and operate a new statewide ERP system



would be offset by systems costs that would likely be spent by the State on systems that provide functionality relatively comparable to that provided by a new ERP system (i.e., Avoided System Costs), but without achieving the process-improvement benefits that could potentially be realized by implementing an integrated statewide system (i.e., Value Pocket benefits). The estimated \$128.3 million in process-improvement benefits would exceed this \$35.4 million shortfall by \$92.9 million during the 11-year planning timeframe, and at a discount rate of 5% per annum, that \$92.9 million would provide a Net Present Value (NPV) for Alternative 3 of \$60.5 million and reach breakeven/payback in Year 8 of the initiative (see table below).

Schedule of Estimated Net Costs and Benefits/Savings from Implementing ERP Alternative 3 (\$ millions)

Cost and Benefits/Savings Categories	Acquire Fin./Proc./HR/Pay			Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
	FY 2009	FY 2010	FY 2011									
ERP Costs (Implementation & operation)	(1.8)	(44.7)	(45.4)	(37.4)	(44.9)	(28.6)	(45.6)	(20.8)	(21.3)	(21.9)	(22.7)	(335.2)
Avoided System Costs	-	122.0	0.9	1.9	10.6	16.4	23.2	29.1	30.6	32.0	33.0	299.9
Net before Process-Improvement Benefits	(1.8)	77.3	(44.4)	(35.5)	(34.3)	(12.3)	(22.4)	8.3	9.3	10.1	10.2	(35.4)
Cumulative Net before Process-Improvement Benefits	(1.8)	75.5	31.1	(4.4)	(38.7)	(51.0)	(73.3)	(65.0)	(55.7)	(45.6)	(35.4)	
Process-Improvement Benefits -- Agencies (Value Pockets)	-	-	1.9	2.0	2.1	13.5	17.3	23.0	22.1	22.8	23.5	128.3
Process-Improvement Benefits -- Higher Ed (Value Pockets)	-	-	-	-	-	-	-	-	-	-	-	-
Net after Process-Improvement Benefits	(1.8)	77.3	(42.5)	(33.5)	(32.2)	1.2	(5.1)	31.3	31.5	32.9	33.7	92.9
Cumulative Net after Process-Improvement Benefits	(1.8)	75.5	33.0	(0.5)	(32.7)	(31.5)	(36.5)	(5.2)	26.2	59.1	92.9	
PV of Net after Process-Improvement Benefits	(1.8)	73.6	(38.5)	(28.9)	(26.5)	1.0	(3.8)	22.2	21.3	21.2	20.7	60.5
Cumulative PV of Net after Process-Improvement Benefits	(1.8)	71.8	33.3	4.3	(22.1)	(21.2)	(25.0)	(2.7)	18.6	39.8	60.5	
NPV (Yr 0 through Yr 10) @ 5% per annum	60.5											
NPV (Yr 0 through Yr 10) @ 8% per annum	48.1											

Note that of the estimated \$335.2 million 11-year cost to implement and operate a new statewide ERP system, approximately \$248.5 million would be spent over a 7-year implementation period (Yr 0 through Yr 6) on the ERP implementation, and the remaining \$86.7 million would be spent on operating and maintaining the new ERP system. The \$248 million would be spent as described below:

FY09 – Planning; Statewide ERP Requirements Development; Procurement of ERP Integration Services	\$1,805,000
FY10/11 – Develop ERP Blueprint; 32 Agency Deployments	90,101,000
FY12/13 – 92 Agency Deployments; Replace Statewide System	82,336,000
FY14/15 – 11 Agency Deployments; Replace Remaining Statewide Systems	74,216,000
Total ERP Project Cost	\$248,458,000



Alternative 2 is much less attractive than Alternative 3 from a financial-analytical perspective. We estimated that it would cost \$930.3 million to implement and operate a new ERP system under Alternative 2 over the 11-year planning timeframe of this BCA. As illustrated below, the Net Present Value (NPV) for Alternative 2 is -\$295.9 million, assuming a discount rate of 5% per annum, or -\$266.4 million, assuming a discount rate of 8% per annum. The investment would be far from breaking even during the 11-year analysis period of the BCA (-\$352.8 million – see the “Cumulative Net after Process-Improvement Benefits” row in the table below).

Schedule of Estimated Net Costs and Benefits/Savings from Implementing ERP Alternative 2 (\$ millions)

Cost and Benefits/Savings Categories	Acquire	Fin / Proc / HR / Pay		Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
	Yr 0	Yr 1	Yr 2									
	FALSE	FYE 2010	FYE 2011	FYE 2012	FYE 2013	FYE 2014	FYE 2015	FYE 2016	FYE 2017	FYE 2018	FYE 2019	
ERP Costs (Implementation & operation)	(2.6)	(4.0)	(162.9)	(163.3)	(100.4)	(77.6)	(70.9)	(150.9)	(60.8)	(96.6)	(40.4)	(930.3)
Avoided System Costs -- Agencies	-	122.0	0.9	1.0	30.1	24.3	28.7	40.4	43.0	44.7	46.0	381.2
Avoided System Costs -- HE	-	-	-	-	-	4.4	8.5	11.7	13.8	19.6	20.1	78.2
Net before Process-Improvement Benefits	(2.6)	118.0	(161.9)	(162.3)	(70.4)	(48.9)	(33.6)	(98.7)	(4.1)	(32.3)	25.8	(471.0)
Cumulative Net before Process-Improvement Benefits	(2.6)	115.5	(46.5)	(208.8)	(279.1)	(328.0)	(361.6)	(460.3)	(464.4)	(496.7)	(471.0)	
Process-Improvement Benefits -- Agencies (Value Pockets)	-	-	-	2.0	2.1	3.7	15.4	22.1	23.4	24.4	25.1	118.2
Process-Improvement Benefits -- Higher Ed (Value Pockets)	-	-	-	-	-	-	-	-	-	-	-	-
Net after Process-Improvement Benefits	(2.6)	118.0	(161.9)	(160.3)	(68.3)	(45.1)	(18.3)	(76.6)	19.4	(7.9)	50.9	(352.8)
Cumulative Net after Process-Improvement Benefits	(2.6)	115.5	(46.5)	(206.8)	(275.1)	(320.2)	(338.5)	(415.0)	(395.7)	(403.6)	(352.8)	
PV of Net after Process-Improvement Benefits	(2.6)	112.4	(146.9)	(138.5)	(56.2)	(35.4)	(13.6)	(54.4)	13.1	(5.1)	31.2	(295.9)
Cumulative PV of Net after Process-Improvement Benefits	(2.6)	109.8	(37.0)	(175.5)	(231.7)	(267.1)	(280.7)	(335.1)	(322.0)	(327.1)	(295.9)	
NPV (Yr 0 through Yr 10) @ 5% per annum	(295.9)											
NPV (Yr 0 through Yr 10) @ 8% per annum	(266.4)											

Please note that the totals in the schedule above may reflect variances due to rounding.

Summary Recommendations

The following are the key recommendations for the Comptroller and the ERP Advisory Council to consider when evaluating future ERP plans for Texas State government and higher education.

Recommended Business Case Alternative

STA recommends that the Comptroller implement the BCA 3: Hub Model scenario as its solution for addressing statewide ERP system needs. Under BCA 3:

- State agencies (with the exception of the Health and Human Services agencies) would migrate to a new Statewide ERP platform operated by the Comptroller's ASP service;
- Health and Human Services agencies and the Higher Education Systems would operate as reporting Hubs and interface directly into the Statewide Data Warehouse;



- Existing statewide legacy administrative systems (USAS, USPS, SPA, HRIS, SPRS, TINS) would be replaced by the Statewide ERP system that would provide all functionality identified in HB 3106;
- Each Hub would be able to operate its own platform with the only restriction being that the Hub reporting capability conforms to the statewide data standards and standard business processes required for statewide reporting; and
- The Statewide ERP baseline code would be made available to every Hub and would be patched and maintained according to the ERP vendor's recommended schedule.

Our BCA 3 recommendation is based upon the following reasons:

- The State achieves business process standardization based on best practices, economies of scale and efficiency gains through the implementation of a single, unified platform for almost all State agencies
- Provides for a statewide procurement system that will be fully-integrated with the financial accounting, asset management, and inventory management modules, as well as the Comptroller's Online Ordering System currently in development. A statewide procurement function would provide numerous benefits to the State, including increased competition for the State's business, lower inventory carrying costs, reduced printing and mailing costs, reduced procurement cycle times, reduced "maverick" spending, and a level "playing field" for small/disadvantaged businesses. Additionally, the State should obtain the spend intelligence necessary to make effective strategic sourcing decisions at the statewide level.
- Addresses HB 3106 requirements and the Comptroller's Rider 16 regarding fleet management.
- Complies with the ERP Advisory Council's guiding principle of "not throwing out what works" by leveraging the considerable work done to date by Higher Education and the Health and Human Services agencies in implementing their own ERP systems.
- Allows the State to significantly upgrade the functionality and reporting capabilities of its statewide administrative systems and resolves the fragmentation associated with the State's existing administrative systems environment.
- BCA 3 total project implementation costs are considerably less than the costs associated with BCA2 and are only \$35.4 million more than BCA1 over the 11-year planning timeframe of this BCA. For an additional \$35.4 million, the State could address numerous deficiencies with their existing systems – the State will need to spend approximately \$121 million in "rewrites" of the existing administrative systems, which will do nothing more than "pave the cow path." In addition, BCA 3 is a proven model that is most often utilized by other states and would result in lower overall project risk.
- Establishes a common language for reporting expenditures and provides for significantly enhanced statewide reporting which will facilitate a "single source of the truth" and taxpayer transparency.



- Allows the State to comply with recent data privacy, accessibility and information security mandates.
- Provides for better tracking of the State's \$104 billion in assets, thus helping agencies and the Legislature in budget planning by identifying replacement costs and schedules.
- Allows for the Hubs to address ERP consolidations through an evolutionary process as their existing systems reach the end of their useful lives.

Recommended Deployment Approach

Only the State agencies (excluding the Health and Human Services agencies and higher education) would be deployed under this model. The participating agencies would be logically organized into deployment groups or waves. All functional modules would be deployed for all agencies within a specific group or wave. The first deployment phase would include the development of a prototype deployment model that would become the “blueprint” for deploying all functionality among the remaining agency deployment waves upon the successful deployment for the initial agency wave. Each deployment phase would be executed sequentially until all agencies have been deployed on the statewide ERP system.

For cost estimating purposes, STA and the Comptroller Project Team developed a detailed deployment schedule for State agencies under BCA 3. This planning schedule will be made available to the Comptroller as part of project close-out activities. The schedule was used solely for the purposes of developing our estimates and the Comptroller has not made any decisions or plans regarding the deployment schedule should an actual ERP project be funded by the Legislature. Additionally, ITCHE members and HHSC representatives assisted us in determining the years in which the Hub data warehouses would be placed into production.

PeopleSoft as the Statewide ERP Baseline

Should the State acquire funding to pursue the acquisition of a new ERP system and associated implementation services, several procurement strategy decisions will be required, including a decision as to whether to acquire ERP software through a competitive bid process or seek to continue its investment already made in Oracle's PeopleSoft Enterprise Financial Management, Enterprise Supplier Relationship Management, and Human Capital Management software. STA recognizes that unique benefits exist should the State continue to utilize the PeopleSoft ERP software suite as the baseline software for the new Statewide ERP System. In fact, STA's recommendation of BCA 3 and the associated estimated costs for BCA 3 are based on the Comptroller continuing the relationship with PeopleSoft. STA estimates that there is up to a 30% reduction in total implementation costs as a direct result of “reuse” value of PeopleSoft. These “reuse” benefits include (but are not limited to):

- The PeopleSoft software has already been implemented by some of the large and most complex agencies and institutions of higher education in the State of Texas. This experience provides considerable documentation and lessons learned from these implementation experiences that cannot be replaced. Additionally, this experience considerably reduces overall project risk.



- The Health and Human Services, University of North Texas System and University of Houston Systems use PeopleSoft to address their administrative system needs within their component organizations. Additionally, the University of Texas System has made a significant investment in PeopleSoft software as well. This should streamline the statewide interfacing and reporting effort required of these Hub organizations.
- The Comptroller's technical resources have considerable experience with the PeopleTools proprietary toolset to support software configuration, customization, establishing security, and ongoing administration of the system, therefore, reducing the burden of training and retaining these resources.
- The Comptroller's functional resources have considerable experience with the PeopleSoft product to support the set-up and configuration as well as comprehensive training documentation and experience, which will help facilitate the training effort.
- Some of the State's requirements that were gaps have been incorporated into the statewide baseline, which will reduce the amount of time spent modifying the product for State of Texas needs.
- Some standard reports and queries have been created that can be leveraged for all State agencies, which will reduce the amount of time and dollars spent during the implementation.

The following states have implemented or are in the process of implementing the PeopleSoft financial management and human resources/payroll applications in a statewide environment: Connecticut, Delaware, Georgia, Indiana, Montana, New Mexico, New York, North Dakota, Ohio, Oklahoma, Tennessee, and Vermont.

Additionally, the following states have implemented or are in the process of implementing the PeopleSoft human resources/payroll applications only in a statewide environment: Hawaii, Kansas, Massachusetts, and Minnesota.

In consideration of expanding the use of the PeopleSoft ERP platform, STA also recommends that the State renegotiate the following issues with Oracle:

- The State should seek to obtain reduced rates for annual maintenance and future increases in maintenance fees should be based on reasonable parameters (e.g., lower of 3% of the previous year's maintenance fees or the increase in the Consumer Price Index).
- The State should only pay for software licenses based upon the agency deployment schedule and that annual maintenance should be calculated based upon only those agencies that have been deployed and for modules in use during the period.
- New functionality that arrives in the form of repackaging the PeopleSoft application suite (e.g., e-applications including eSettlement and eBill Payment) should be included in the negotiated licensing agreements with the State for the Statewide ERP platform.



**EXHIBIT C****Reconciliation of 7-Year Project to 11-Year Business Case For BCA 3**

7-Year Project (2010-2016)	\$248,458,189 (1)	
4-Year Ongoing Operations After Project (2017-2020)		<u>86,787,231</u>
11-Year Project and Ongoing Operations Total	\$335,245,420	
Legacy Systems Ongoing Costs (2):		
State Agencies	\$265,328,537	
Higher Education		<u>680,199,877</u>
Legacy Systems Ongoing Costs Total (2010-2020)	945,528,414	
Legacy Systems New Projects Costs (3):		
State Agencies	\$33,466,296	
Higher Education		<u>63,575,531</u>
Legacy Systems New Projects Costs Total (2010-2020)		<u>97,041,827</u>
BCA 3 11-Year Business Case Total (2010-2020)		<u>\$1,377,815,661</u>

(1) Excludes 15 percent contingency of \$37.3 million

(2) Ongoing costs for the current systems that will continue during all or part of the implementation of BCA 3

(3) Legacy systems' new projects that will continue during all or part of the implementation of BCA 3