



Blueprint for Selecting Improvement - Approach

Supplemental Information

January 5, 2004

Table of Contents

	Page
Supplemental Information	
➤ Acronyms and Terms	3
➤ Budget Appendix	14
➤ Financials Appendix	25
➤ HR/Payroll Appendix	28
➤ Tax and Revenue Appendix	31

Acronyms and Terms

Acronyms and Common Terms (Aa-Az)

- The following is a list of acronyms and common terms used often in this document as well as within the North Carolina agencies.

Acronym/Common Term	Definition
ACH	Automated Clearing House
ACTS	Automated Collection & Tracking System
ADATCS	Alcohol and Drug Abuse Treatment Centers
AOC	Administrative Office of the Courts
AP	Accounts Payable
APPC	Advanced Program-to-Program Communication
APT	Advanced Publishing Technology
AR	Accounts Receivable
Ariba	`
ASP	Application Service Provider
Assembler (language)	An early programming language having the same structure and set of commands as machine languages but they enable a programmer to use names instead of numbers

Acronyms and Common Terms (Ba-Db)

Acronym/Common Term	Definition
BPS	Budget Preparation System
BRS	Budget Revision System
BSIP	Business Systems Improvement Project. (Department of Transportation)
CAFR	Comprehensive Annual Financial Report
CBS	Core Banking System
CCPS	Crime Control and Public Safety
CICS	Customer Information Control System (IBM)
CIO	Chief Information Officer
CMCS	Cash Management Control System
COBOL	Common Business Oriented Language
COTS	Commercial Off The Shelf
CPS	Central Payroll System
CRM	Customer Relationship Management
CRP	Community Rehabilitation Program
CS	Consumer Service
CTI	Computer Technology Integration
DB2	Database 2: A family of relational database products offered by IBM
DBA	Doing Business As

Acronyms and Common Terms (Dc-Do)

Acronym/Common Term	Definition
DCD	Division of Child Development
DCF	Document Control Facility
DCR	Department of Cultural Resources
DFS	Division of Facility Services
DHH	Department of Health and Human Services
DIRM	Division of Information Resource Management within DHHS
DMA	Division of Medical Assistance within DHHS
DMH	Division of Mental Health within DHHS
DMV	Division of Motor Vehicles within DOT
DOC	Department of Correction
DOI	Department of Insurance
DOJ	Department of Justice
DOJJ	Department of Juvenile Justice
DOR	Department of Revenue
DOT	Department of Transportation
DOT-BSIP	Department of Transportation Business Systems Improvement Project

Acronyms and Common Terms (Dp-Fa)

Acronym/Common Term	Definition
DPH	Division of Public Health within DHHS
DSB	Division of Service for the Blind within DHHS
DSS	Decision Support System
DST	Department of State Treasurer
DVR	Division of Vocational Rehabilitation within DHHS
e-Bid	A program that provides internet solutions for on Department of Health and Human Services
EDI	Division of Information Resource Management within DHHS
EEO	Equal Employment Opportunities
EFT	Electronic Funds Transfer
EIS	Eligibility Information System
EJB	Enterprise Java Beans
ELF	Electronic Filing for Individual Income
ELTS	Employee Leave Tracking System
EPICS	Enterprise Program Integrity Control System
e-Quote	Functionality within e-procurement to facilitate on-line e-quoting from suppliers
ERP	Enterprise Resource Planning
FAMS	Federal Aid Management and Reporting System

Acronyms and Common Terms (Fb-le)

Acronym/Common Term	Definition
FMLA	Family and Medical Leave Act of 1993
FSIS	Food Stamp Info System
FTE	Full Time Equivalent
FTP	File Transfer Protocol
GAAP	Generally Accepted Accounting Principles
GASB	Government Accounting Standards Board
GEAC	Software solution for the North Carolina Accounting System
GL	General Ledger
GUI	Graphical User Interface
HEARTS	Healthcare Enterprise Accounts Receivable Tracking System
HIPAA	Health Insurance Portability and Accountability Act of 1996
HR	Human Resources
HTML	Hyper Text Language – Authoring Language for items on the World Wide Web
HUB	Historically Underutilized Business
HUD	Department of Housing and Urban Development
HW	Hardware
IEVS	Income and Eligibility Verification System

Acronyms and Common Terms (If-Jc)

Acronym/Common Term	Definition
IFP	Intelligent Forms Processing
Integrated System	Two or more system components merged together to behave as a single system that share a common database. Increasingly, the term integrated software is reserved for applications that combine functions like budget, accounting and procurement into a single package.
Interface	A boundary across which two independent systems communicate with each other. The interfaces can communicate real-time or in a batch (periodic) mode and may be fully automated or require manual intervention.
IPRS	Integrated Payments and Reporting System
IPS	Interactive Purchasing System
IRMC	Information resources Management Commission
IRS	Internal Revenue Service
IPRS	Integrated Retirement System Planning
IT	Information Technology
ITA	Integrated Tax Administration Services
ITS	Information Technology Services
IVR	Integrated Voice Response
JAVA	Java is a general purpose programming language with a number of features that make the language well suited for use on the World Wide Web.
JCL	Job Control Language

Acronyms and Common Terms (Jd-Osg)

Acronym/Common Term	Definition
JETS	Java Enabled Tax System
LEA	Local Education Authority. School units within the department of Public Education.
LRC	Legislative Research Commission
MARS	Members Allowance Reporting System
MICS	Management Information Control System
MS	Microsoft
NCAS	North Carolina Accounting System
NCDA	North Carolina Department of Agriculture
NCDOT	North Carolina Department of Transportation
NCOA	National Change Of Address
NSF	Not Sufficient Funds
ODBC	Open Database Connectivity
OFP	On-line Filing and Payment
OPUS	Offender Population Unified System
OS	Operating System
OSBM	Office of Budget Management
OSC	Office of the State Controller

Acronyms and Common Terms (Osh-Sad)

Acronym/Common Term	Definition
OSHA	Occupational Safety and Health Administration
OSP	Office of State Personnel
Outsourcing	Outsourcing is increasingly understood to mean the retention of responsibility for services by an organization while the day-to-day performance of those services is devolved to an external organization, usually under a contract with agreed standards, costs, and conditions.
P&C	Division of Purchasing and Contracts
PC	Personal Computer
PMIS	Personnel Management Information System
PO	Purchase Order
RCA	Revenue Collection and Analysis System
RDBMS	Relational Database Management System
RFI	Request for Information
RFP	Request for Proposal
RFQ	Request for Qualification
RPS	Retiree Payroll System
SAA	Special Assistance for the Aged
SAB	Special Assistance for the Blind
SAD	Special Assistance for the Disabled

Acronyms and Common Terms (Sap-Va)

Acronym/Common Term	Definition
SAP	A software company providing ERP business solutions
SBI	State Bureau of Investigation
SCC	Subsidized Child Care
SCD	Special Assistance for Certain Disabled
SCS	Salary Control System
SoSKB	Secretary of State Knowledge Base
SQL	Structured Query Language
SSN	Social Security Number
STA	State Technical Architecture
STARS	State Titling and Registration
SW	Software
TAS	Tax Administration System (Accenture)
TOMS	Technology On-line Management System
UI	Unemployment Insurance
UNIX	A multi-user, multitasking operating system developed by Bell Labs
UOM	Unit of Measure
USUB	Unauthorized Substance
VA	Veteran's Affairs

Acronyms and Common Terms (Vb-Zz)

Acronym/Common Term	Definition
VendorLink	An on-line registration system with the Division of Purchase and Contract to support the State's bidding process.
VR	Vocational Rehabilitation
VSAM	Virtual Storage Access Method

Budget Appendix

Budget – Alternative Vendors

- Within the context of package-based and ERP solutions, we analyzed the costs and functionality of five leading vendors.
- The vendors reviewed were:
 - Comshare's BudgetPLUS
 - SRC's Budget Advisor
 - Hyperion's Pillar and Planning
 - Legacy Solution Inc.'s BARS
 - Adaytum's ePlanning;
- While all package-based solutions considered have been proven in the budget preparation market space, it appears Comshare, Adaytum, and Hyperion are market product leaders. Legacy Solutions, Inc. has been implemented by 12 state governments which clearly differentiates its ability to address the public sector market.
- The ERP solutions analyzed include:
 - SAP
 - PeopleSoft
 - Oracle

Stand-Alone Budget Package Vendor – Comshare

Vendor: Comshare	
Product: BudgetPLUS	
Web-enabled	Yes, BudgetPLUS is a true web product, with web architecture.
Multiple Year Budgeting	Can provide forecasting, current budget year, next budget year and five year plan data with versions.
Oracle Database	Yes
Security	Can provide selective access for pre-defined time periods.
Position Management	Handles position changes and can accomplish upgrades, downgrades, adds, deletes, redeployments.
Interface with ERP Systems	Able to interface easily with both SAP and PeopleSoft.
Capital Planning	Comshare has a capital planning module, however it is not designed to deal with capital projects, only acquired assets.
Allocation and Distribution of Overheads	Can easily allocate budget values from overhead departments to line business departments based on percentages provided by SAP.
Supporting Schedules	Can easily maintain support schedules and automatically update line items based on changes within the support schedules.
Budget Reporting & Analysis	Yes, however requires an additional reporting module, which is based in Crystal Reports, however can be integrated between BudgetPLUS product and reporting module.
Project Duration (Requirements through Implementation)	Yes, typical implementations run about 3 to 6 months.
Approximate Cost	Approximately \$300,000 to \$400,000 (does not include implementation services or 20 percent annual maintenance fees.
Other Comments	None

Stand-Alone Budget Package Vendor – Adaytum

Vendor: Adaytum	
Product: e.Planning	
Web-enabled	Yes
Multiple Year Budgeting	Provide forecasting, current budget year, next budget year, five year plan with versions.
Oracle Database	Adaytum's literature states that they are capable of running on an Oracle database, however, it is not clear if there are any current installations of the e.Planning product running on an Oracle database. Most installations are running on Microsoft SQL database.
Security	Can provide selective access for pre-defined time periods.
Position Management	Handles position changes very well and can accomplish upgrades, downgrades, adds, deletes, redeployments.
Interface with ERP Systems	Can interface with SAP and PeopleSoft.
Capital Planning	Some capital planning capabilities, however this functionality is not built into the base product. Rapid ad-hoc business modeling available with the ability to hold text.
Allocation and Distribution of Overheads	Can easily allocate budget values from overhead departments to line business departments based on percentages provided by SAP.
Supporting Schedules	Can easily maintain support schedules and automatically update line items based on changes within the support schedules.
Budget Reporting & Analysis	Reporting is accomplished through Business Objects. Integration can be done, however it is not as smooth of an integration as with some of the other packages.
Project Duration (Requirements through Implementation)	Approximately 4 to 5 months.
Approximate Cost	Approximately \$425,000 including 20 percent annual maintenance fee (does not include implementation services).
Other Comments	Adaytum has a dedicated version of their product geared towards education and government: Maricopa County Arizona, Dallas Area Rapid Transit have implemented Adaytum.

Stand-Alone Budget Package Vendor – Hyperion

Vendor: Hyperion	
Products: (1) Pillar (2) Planning ^[1]	
Web-enabled	Pillar product is not web-enabled, however Hyperion's newest product Planning is web-enabled. Planning is a true web product, with web architecture.
Multiple Year Budgeting	Can provide forecasting, current budget year, next budget year and five year plan data with versions.
Oracle Database	The core numbers (data) must reside in Hyperion's proprietary databases, Essbase. Oracle could be used as a peripheral database.
Security	Can provide selective access for pre-defined time periods.
Position Management	Hyperions' Pillar product can handle position changes but because of the distributed databases, hence redeployment may be more problematic than via web. Hyperions' Planning product being web-enabled can handle position changes easier than their Pillar product.
Interface with ERP Systems	Hyperion's Pillar uses small-scale database, could cause performance problems with large amounts of data interfacing with SAP and PeopleSoft. Hyperions' Planning uses flat files only, therefore there could be problems transferring multidimensional data (e.g., GL account, cost center, and internal orders for activities).
Capital Planning	It is not clear whether Hyperion's Pillar product has capability of handling this functionality. Hyperion's Planning product does not have a dedicated module for capital planning and budgeting however the underlying database can handle this.
Allocation and Distribution of Overheads	It is not clear whether Hyperion's Pillar product can handle allocation and distribution of overheads. Hyperions' Planning product can easily handle this functionality. In the Planning product, there is a business rules engine where you can write rules for distribution and allocation of overheads.
Supporting Schedules	Hyperions' Pillar product can produce support schedules but cannot update the line items automatically. Hyperion's Planning product can produce support schedules and automatically update line items.
Budget Reporting & Analysis	Hyperion Pillar and Planning products can produce reports that are ready for publication to constituents. It appears that you must use a separate proprietary reporting module.

^[1] Hyperion recently released their Planning product which has enhanced functionality when compared with Hyperion's Pillar product. Because of the relatively new nature of the Planning product, there are only a few organizations that are currently using the Planning product, however there several organizations are currently in the process of implementing the Planning product.

Stand-Alone Budget Package Vendor – Hyperion (Cont'd)

Project Duration (Requirements through Implementation)	Approximately 3 to 6 months.
Approximate Cost	Approximately \$400,000 (does not include implementation services).
Other Comments	<p>Hyperion's newest product Planning is relatively new in the marketplace, however approximately 25 organizations have purchased the Planning product. Some of these installations are live. In conversations with Hyperion, it would appear that the Planning product is a better fit for the Port Authority as compared with the Pillar product, however the functionality of both products is described above.</p> <p>It was learned through Hyperion, that both the Metropolitan Transit Authority (MTA) and the Long Island Rail Road (LIRR) is using Hyperion's Pillar product.</p>

Stand-Alone Budget Package Vendor – SRC

Vendor: SRC	
Product: Budget Advisor	
Web-enabled	Budget Advisor product is not web-enabled. Would have to purchase additional module called iNet to make the product web-enabled.
Multiple Year Budgeting	Can provide forecasting, current budget year, next budget year and five year plan data with versions.
Oracle Database	Yes
Security	Yes
Position Management	Yes
Interface with ERP Systems	Yes
Capital Planning	Yes, with significant configuration.
Allocation and Distribution of Overheads	Yes
Supporting Schedules	Yes
Budget Reporting & Analysis	Yes, would need to purchase additional intranet reporting module.
Project Duration (Requirements through Implementation)	Not Available
Approximate Costs	\$270,000 (does not include implementation and consulting services).
Other Comments	

Stand-Alone Budget Package Vendor – Legacy Solutions Inc.

Vendor: Legacy Solutions Inc.	
Product: Budget Analysis and Reporting System (BARS)	
Web-enabled	Yes
Multiple Year Budgeting	Yes, can handle current year budget, forecast, future year budget and total of five planning years. (Can handle 15 year forecasting as well).
Oracle Database	Yes, requires Oracle 8.1 or higher.
Security	Can provide selective access for pre-defined time periods.
Position Management	Yes
Interface with ERP Systems	Yes, interfaces with SAP and PeopleSoft.
Capital Planning	Yes
Allocation and Distribution of Overheads	Yes
Supporting Schedules	Yes
Budget Reporting & Analysis	Yes. Fairly robust reporting capabilities. As per Legacy Solutions, many of their clients have not implemented a separate ad-hoc reporting application as they are able to pull the reports they need from the base product. Legacy Solutions prefers to import data from SAP and PeopleSoft instead of using real time interfaces.
Project Duration (Requirements through Implementation)	9 months to go live, 12 months with budget book preparation.
Approximate Cost	\$1 million (includes base product, interfaces, reporting and implementation services).
Other Comments	Dedicated to the public sector market, with 20 percent of all State governments using BARS.

ERP Vendor – SAP

Vendor: SAP	
Product: SAP Business Planning System using SAP Data Warehouse	
Web-enabled	Yes (with mySAP.com)
Multiple Year Budgeting	Can maintain estimated values for forecasting, current budget year, next budget year and five year plan data with versions in the FM module and in Special Ledger.
Oracle Database	Yes
Security	Security would be aligned with current implementation at Port Authority.
Position Management	Can handle position changes in the SAP HR module or through interface with PeopleSoft. However, processing budget calculations (\$s) on future position changes would require modifications in SAP.
Interface with ERP Systems	Can easily interface with both SAP financials and PeopleSoft.
Capital Planning	Capital Budgeting functionality exists in the Project Systems module.
Allocation and Distribution of Overheads	Allocations and Distribution capability exists in the CO module.
Supporting Schedules	Modifications and interface with Excel would be necessary.
Budget Reporting & Analysis	Many FM and CO standard budget to actual reporting is available. May need Business Warehouse for more sophisticated reporting requirements for “what if” analysis.
Project Duration (Requirements through Implementation)	9 months
Approximate Costs	Approximately \$250,000 to \$500,000 includes base product and unlimited licenses (does not include maintenance or implementation costs).
Other Comments	Degree of customization would probably push the implementation timeframe out as well as increase the cost of implementation.

ERP Vendor – PeopleSoft

Vendor: PeopleSoft	
Product: PeopleSoft 8 Budget Planning for Education & Government	
Web-enabled	Yes, HTML-based product.
Multiple Year Budgeting	Can have multiple year budgets as well as have up to five iterations of the current year budget.
Oracle Database	Yes, Oracle 8 (or better) and SQL Server 7 databases supported.
Security	Users would be given access based upon their group classification. Can define read and/or write access to individuals. Functionality also includes date and time stamp for audit trail.
Position Management	Yes, because the budget planning module is a PeopleSoft product, PeopleSoft notes that it will extremely easy to download position and encumbent information from other PeopleSoft modules.
Interface with ERP Systems	Yes can interface with SAP to bring over master data, and cash and/or modified accrual basis.
Capital Planning	Can budget and track projects but not detailed budgeting for projects.
Allocation and Distribution of Overheads	Yes.
Supporting Schedules	Yes. Has what PeopleSoft calls itemization method
Budget Reporting & Analysis	Base product includes 14 standard reports. Product is also delivered with full line of reporting tools PeopleSoft offers including PeopleTools and Crystal reports.
Project Duration (Requirements through Implementation)	9 months
Approximate Costs	Approximately \$250,000 to \$500,000 includes base product and unlimited licenses (does not include maintenance or implementation costs).
Other Comments	This module is a new product and has only been implemented in one county in California thus far. There are other implementation s underway, however only one live installation at this point. PeopleSoft product cannot upload information to Excel spreadsheets, however can download information to Excel spreadsheets.

ERP Vendor – Oracle

Vendor: Oracle	
Product: Oracle 11i Government Budget Preparation Module	
Web-enabled	Yes, HTML-based product.
Multiple Year Budgeting	Can have multiple year budgets as well as unlimited number of current year budget iterations.
Oracle Database	Yes, Oracle 8i (or better).
Security	Role based security: users would be given access based upon their role. Can define read and/or write access to individuals. Functionality also includes date and time stamp for audit trail.
Position Management	Can handle position changes in the Oracle HR module or through interface with other HR systems. However, processing budget calculations (\$s) on future position changes would require modifications in Oracle.
Interface with ERP Systems	Yes
Capital Planning	Yes
Allocation and Distribution of Overheads	Yes
Supporting Schedules	Yes. Has what PeopleSoft calls itemization method
Budget Reporting & Analysis	Many standard budget to actual reports are available. Reports can also be developed by Oracle ad-hoc reporting tool. Oracle also provides for "What-If" analysis and OLAP tools for budget forecasting and trend analysis.
Project Duration (Requirements through Implementation)	9 months
Approximate Costs	Approximately \$250,000 to \$500,000 includes base product and unlimited licenses (does not include maintenance or implementation costs).
Other Comments	Oracle used a stand-alone budget preparation package to develop their budget preparation module.

Financials Appendix

Financials – ERP Cost Calculation

- 2 Year Financial ERP Implementation and 5 year production costs

Estimated Financials ERP Costs								
Estimated Costs - Not Adjusted for Inflation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Totals
	-----Implementation-----		-----Benefits Period-----					
Integrator Costs	\$ 32,737,890	26,621,899	3,773,361	-	-	-	-	63,133,149
Initial Hardware Acquisition Costs	1,882,182	3,311,129	1,909,119	-	-	-	-	7,102,430
Initial Software Acquisition Costs	15,399,017	1,079,488	-	-	-	-	-	16,478,505
Integrator Staffing	15,456,690	22,231,283	1,864,242	-	-	-	-	39,552,215
State Costs	\$ 5,481,504	6,478,459	-	-	-	-	-	11,959,963
Implementation Hardware Maintenance	190,840	700,864	-	-	-	-	-	891,704
Implementation Software Maintenance	2,565,840	2,836,430	-	-	-	-	-	5,402,270
State Implementation Staffing	1,872,000	1,872,000	-	-	-	-	-	3,744,000
Implementation Overhead Costs	852,824	1,069,166	-	-	-	-	-	1,921,989
Annual Production Costs	\$ -	-	3,573,917	4,065,706	5,256,767	4,222,983	5,320,204	26,578,531
Production Hardware Maintenance	-	-	500,243	1,000,486	1,063,923	1,127,360	1,127,360	5,946,732
Production Software Maintenance	-	-	1,418,215	2,836,430	2,782,805	2,782,805	2,782,805	15,385,863
Current Operations	5,800,000	5,800,000	-	-	-	-	-	11,600,000
Program Management Office	-	-	-	-	-	-	-	-
Production Overhead	-	-	474,210	228,790	228,790	312,818	228,790	1,702,188
Upgrades	-	-	1,181,249	-	1,181,249	-	-	3,543,746
Grand Total	\$ \$44,019,394	\$38,900,358	\$7,347,277	\$4,065,706	\$5,256,767	\$4,222,983	\$5,320,204	\$112,271,643

Financials – ERP Cost Calculation

- Financial agency systems reduction benefit calculation

	Central Headcount	Division/ Agency Headcount	% Central Supporting Agency Financial Systems	% Agency Staff Supporting Agency Financial Systems and Interfaces	Total Staff Supporting Agency Systems
Number of Fiscal Employees	864	707	2%	3%	38.49
Number of IT Employees	834	1325	2%	3%	56.43
				Total FTEs Supporting agency Systems	94.92
Average state fiscal staff salary + benefits:			\$39,607		
Application Maintenance and Operations Costs - Staff Redirection					\$3,759,468
Annual HW & SW Upgrades & Licensing					\$500,000
Infrastructure Costs					\$300,000
Total costs supporting Agency Systems					\$4,559,468

HR/Payroll Appendix

State of Florida Outsourcing

- Florida is a large public sector employer with approximately 170,000 employees
- Seven year outsourcing contract with Convergys
- Expect approximately \$173 million in cost savings
- Convergys contract provides a set of world class tools
 - Staffing (tools and services for recruitment and selection),
 - Human Resources Administration (workforce data management; human resource learning; performance management),
 - Payroll Preparation (recording time and attendance; leave requests),
 - Benefits Administration (open enrollment and general benefits administration)
- Outsourcing transforms how human resource services are accomplished by focusing on
 - Employee self-service combined with customer service support,
 - Streamlining and automating paper-based processes,
 - Providing services to support a higher performing human resource network for the state

State of Florida Implementation Responsibilities

- Current state assessment of HR processes to identify unique business requirements and to facilitate the designing of HR processes
- Design processes based on a best practice HR service delivery model for the following HR functional areas:
 - Staffing
 - Payroll
 - Benefits
 - Organizational Management
 - HR Administration
 - ✓ Compensation
 - ✓ Data Maintenance
 - ✓ Learning
 - ✓ New Hire
 - ✓ Performance Management
 - ✓ Separation
 - ✓ Training
 - ✓ Workers Compensation
- Training materials, including detailed user guides and quick reference cards, to facilitate the navigation of the self-service tools and systems.
- Training sessions for more than 140,000 State of Florida employees, managers and HR professionals via web casts and instructor-led courses
- Develop a roadmap to define the role of the retained HR organization
- Develop and execute change management, training and communication plans

Tax and Revenue Appendix

Business Case – ERP Assumptions

- For this alternative front end enhancements reflect a different implementation mix for Years 1-2 due to anticipated transition to a new system in later years. Enhancement costs are approximated based on components implemented in other states. Enhancements include hardware/software and contractor implementation services for business process reengineering, data warehouse and decision analytics, receivable scoring, audit workbench and mobile collection.
- ERP Solution Costs Clarifications and Assumptions
 - The potential replacement for ITAS would run from Year 5 through Year 6 and is estimated at 24 months duration.
 - Florida is the only state currently implementing an ERP tax solution. Florida figures are used to approximate the costs for some components. Due to ERP limitations related to Personal Income Tax (PIT) component development and limited implementation experience some estimates are based on other similar state projects.
 - The numbers used are scaled to account for size differences between Florida and North Carolina.
 - The continuing cost for HW/SW maintenance is 20% of the HW/SW one-time implementation costs. This number is compounding as the total fee for HW/SW grows in Years 1-2 and Years 5-6.
 - The continuing cost for Contractor Resources represents the figure currently reported as DOR's IT contractor resources increased to accommodate additional system complexities.
 - In Years 1-2 and Years 5-6 implementation support costs for Change Management & Training Support, Application Support, Technical Support and Management Support would be incurred during implementation activities.
- Costs **NOT** captured unless otherwise noted include:
 - DOR system support, operations and Help Desk FTE costs are not included for equal comparison between ERP, Transfer Solution and Current System
 - FTE costs associated with using the system (e.g., data entry, system inquiry, manual processing costs in data preparation, manual systems being maintained to supplement the core system, etc.)
 - Data processing supplies or miscellaneous expenses unless noted
- Benefit calculations were estimated based on anticipated benefits obtained in other state (Virginia and Arizona) implementations and primarily result from increased collections. ERP Solution benefits are estimated lower than Transfer Solution based on assumption that additional customization possible with the Transfer Solution would result in enhanced North Carolina functionality above that of an ERP. ERP benefits are estimated higher than the Current System with Enhancements due to to the age and modification complexity of the existing system.

DOR Integrated Tax Administration System—Transfer Solution Option

Transfer Solution Costs											
Annual Operating and Maintenance Cost Approximations	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Non-Recurring Cost Categories	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Business Process Reengineering		\$ 1,986,834									
Receivable Scoring		\$ 1,816,875									
HW/SW		\$ 1,275,000									
Data Warehouse & Decision Analytics		\$ 2,343,750	\$ 2,343,750								
HW/SW		\$ 2,162,500									
Audit Workbench			\$ 7,025,000								
HW/SW			\$ 2,037,500								
Tax Implementation						\$ 4,923,891	\$ 4,923,891	\$ 2,461,946			
HW/SW						\$ 4,250,483					
Executive Dashboard								\$ 1,048,334			
Corp Tax Implementation						\$ 2,881,705	\$ 2,881,705	\$ 1,440,853			
HW/SW								\$ 1,437,566			
CRM expanded functionality & Call Center Refresh							\$ 2,425,280				
HW/SW											
Income Tax Implementation						\$ 8,717,866					
HW/SW						\$ 1,437,566					
Mobile Collections		\$ 1,500,000									
Change Management/Training Support		\$ 1,168,200	\$ 1,168,200			\$ 1,168,200	\$ 1,168,200	\$ 1,168,200			
Application Support		\$ 751,880	\$ 751,880			\$ 751,880	\$ 751,880	\$ 751,880			
Technical Support		\$ 1,063,400	\$ 1,063,400			\$ 1,063,400	\$ 1,063,400	\$ 1,063,400			
Management Support		\$ 1,673,940	\$ 1,673,940			\$ 1,673,940	\$ 1,673,940	\$ 1,673,940			
Non-Recurring Cost Total		\$ 15,742,379	\$ 16,063,670	\$ -	\$ -	\$ 26,868,932	\$ 16,325,862	\$ 9,608,552	\$ -	\$ -	\$ -
Non-Recurring Cost Cumulative Total		\$ 15,742,379	\$ 31,806,049	\$ 31,806,049	\$ 31,806,049	\$ 58,674,981	\$ 75,000,843	\$ 84,609,395	\$ 84,609,395	\$ 84,609,395	\$ 84,609,395
Transfer Solution Recurring Cost Categories											
Transfer Solution Recurring Cost Categories	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Transfer Solution Recurring Cost Categories	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Staffing - Contractor Resources		\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000	\$ 1,800,000
HW/SW Maintenance	10%	\$ 343,750	\$ 547,500	\$ 547,500	\$ 547,500	\$ 547,500	\$ 1,116,305	\$ 1,260,062	\$ 1,364,895	\$ 1,364,895	\$ 1,364,895
Hardware Lease/Maintenance											
Software Maintenance/Licenses											
Training											
Data Center Technical Services		\$ 7,368,000	\$ 7,368,000	\$ 7,368,000	\$ 7,368,000	\$ 7,368,000	\$ 7,368,000	\$ 7,368,000	\$ 7,368,000	\$ 7,368,000	\$ 7,368,000
Miscellaneous Expenses											
Recurring Cost Total		\$ 9,511,750	\$ 9,715,500	\$ 9,715,500	\$ 9,715,500	\$ 10,284,305	\$ 10,428,062	\$ 10,532,895	\$ 10,532,895	\$ 10,532,895	\$ 10,532,895
Recurring Cost Cumulative Total		\$ 9,511,750	\$ 19,227,250	\$ 28,942,750	\$ 38,658,250	\$ 48,942,555	\$ 59,370,617	\$ 69,903,512	\$ 80,436,407	\$ 90,969,302	\$ 101,502,197
Grand Cost Total	0	\$ 25,254,129	\$ 25,779,170	\$ 9,715,500	\$ 9,715,500	\$ 37,153,237	\$ 26,753,924	\$ 20,141,447	\$ 10,532,895	\$ 10,532,895	\$ 10,532,895
Cumulative Approximate Cost Total	0	\$ 25,254,129	\$ 51,033,299	\$ 60,748,799	\$ 70,464,299	\$ 107,617,536	\$ 134,371,460	\$ 154,512,907	\$ 165,045,802	\$ 175,578,697	\$ 186,111,592
Transfer Solution Benefits Estimate											
Transfer Solution Benefits Estimate	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Transfer Solution Benefits Estimate	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Collections											
Write-Offs/VEC Lien		\$ -	\$ 549,682	\$ 2,488,050	\$ 2,032,066	\$ 571,068	\$ -	\$ -	\$ -	\$ -	\$ -
Write-Offs/3rd Party Lien		\$ -	\$ 574,762	\$ 246,822	\$ 139,270	\$ 51,228	\$ -	\$ -	\$ -	\$ -	\$ -
Decision Analytics (STRATA-prioritize TAX's delinquent accounts based on collection potential)		\$ -	\$ 3,933,724	\$ 5,941,910	\$ 13,842,278	\$ 25,034,817	\$ 24,000,000	\$ 24,000,000	\$ 24,000,000	\$ 24,000,000	\$ 24,000,000
Audit											
Field Audit		\$ -	\$ -	\$ 1,840,299	\$ 11,063,801	\$ 13,234,264	\$ 12,000,000	\$ 12,000,000	\$ 12,000,000	\$ 12,000,000	\$ 12,000,000
Discovery		\$ -	\$ 2,502	\$ 349,282	\$ 318,802	\$ 60,305	\$ -	\$ -	\$ -	\$ -	\$ -
Potential Benefits Total	0	\$ -	\$ 5,060,670	\$ 10,866,363	\$ 27,396,217	\$ 38,951,682	\$ 36,000,000	\$ 36,000,000	\$ 36,000,000	\$ 36,000,000	\$ 36,000,000
Cumulative Potential Benefits	0	\$ -	\$ 5,060,670	\$ 15,927,033	\$ 43,323,250	\$ 82,274,932	\$ 118,274,932	\$ 154,274,932	\$ 190,274,932	\$ 226,274,932	\$ 262,274,932

Business Case – Software Transfer Solution Assumptions

- For this alternative front end enhancements reflect a different implementation mix for Years 1-2 due to anticipated transition to a new system in later years. Enhancement costs are approximated based on components implemented in other states. Enhancements include hardware/software and contractor implementation services for business process reengineering, data warehouse and decision analytics, receivable scoring, audit workbench and mobile collection.
- Transfer Solution Costs Clarifications and Assumptions
 - The potential replacement for ITAS would run from Year 5 through Year 7 and is estimated at 30 months duration.
 - North Carolina would utilize components currently being implemented with Arizona's Department of Revenue that could be used as a Transfer Solution. Arizona's figures are used to approximate the costs for specific components.
 - The numbers used by Arizona are scaled to account for size differences between Arizona and North Carolina. For approximation purposes, we believe increased competition in the industry will keep pressure on costs, allowing North Carolina to conduct the implementation at prices 1.25x's that of Arizona
 - The continuing cost for HW/SW maintenance is 10% of the HW/SW one-time implementation costs. This number is compounding as the total fee for HW/SW grows in Years 1-2 and Years 5-7.
 - The continuing cost for Contractor Resources represents the figure currently reported as DOR's IT contractor resources increased to accommodate additional system complexities.
 - In Years 1-2 and Years 5-7 implementation support costs for Change Management & Training Support, Application Support, Technical Support and Management Support would be incurred during implementation activities.
- Costs **NOT** captured unless otherwise noted include:
 - DOR system support, operations and Help Desk FTE costs are not included for equal comparison between ERP, Transfer Solution and Current System
 - FTE costs associated with using the system (e.g., data entry, system inquiry, manual processing costs in data preparation, manual systems being maintained to supplement the core system, etc.)
 - Data processing supplies or miscellaneous expenses unless noted
- Benefit calculations were estimated based on anticipated benefits obtained in other state (Virginia and Arizona) implementations and primarily result from increased collections. Transfer Solution benefits are estimated higher than ERP Solution based on assumption that additional customization possible with this solution would result in enhanced North Carolina functionality above that of an ERP. Benefits are estimated higher than the Current System with Enhancements due to the age and modification complexity of the existing system.

Integrated Tax Administration System (ITAS)—Current System with Enhancements

Annual Operating and Maintenance Cost Approximations		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Non-Recurring (One time) Cost Categories		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Receivable Scoring		\$ 1,453,500									
HW/SW		\$ 1,020,000									
Data Warehouse & Decision Analytics		\$ 1,875,000	\$ 1,875,000								
HW/SW		\$ 1,730,000									
Audit Workbench			\$ 5,620,000								
HW/SW			\$ 1,630,000								
Mobile Collections		\$ 3,347,880									
Change Management/Training Support		\$ 1,168,200	\$ 1,168,200								
Application Support		\$ 751,880	\$ 751,880								
Technical Support		\$ 1,063,400	\$ 1,063,400								
Management Support		\$ 1,673,940	\$ 1,673,940								
Total Non-Recurring Cost		\$ 14,083,800	\$ 13,782,420								
Cumulative Non-Recurring Total		\$ 14,083,800	\$ 27,866,220								
Recurring Cost Categories		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Staffing-State Employee Salaries & Benefits (Development, Maintenance, System Support, Help Desk)-removed for equal comparison between ERP, package and status quo options											
Staffing-Contractor		\$ 1,576,671	\$ 1,576,671	\$ 1,576,671	\$ 1,576,671	\$ 1,576,671	\$ 1,576,671	\$ 1,576,671	\$ 1,576,671	\$ 1,576,671	\$ 1,576,671
Technical Services (IT charges for Mainframe, Telecom, Networking, etc.)		\$ 6,407,465	\$ 6,407,465	\$ 6,407,465	\$ 6,407,465	\$ 6,407,465	\$ 6,407,465	\$ 6,407,465	\$ 6,407,465	\$ 6,407,465	\$ 6,407,465
Licensing/ASP/Maintenance Fees/HW and SW purchases		\$ 227,470	\$ 227,470	\$ 227,470	\$ 227,470	\$ 227,470	\$ 227,470	\$ 227,470	\$ 227,470	\$ 227,470	\$ 227,470
Training		\$ 131	\$ 131	\$ 131	\$ 131	\$ 131	\$ 131	\$ 131	\$ 131	\$ 131	\$ 131
Data Processing Supplies		\$ 46,930	\$ 46,930	\$ 46,930	\$ 46,930	\$ 46,930	\$ 46,930	\$ 46,930	\$ 46,930	\$ 46,930	\$ 46,930
Miscellaneous Expenses		\$ 191,322	\$ 191,322	\$ 191,322	\$ 191,322	\$ 191,322	\$ 191,322	\$ 191,322	\$ 191,322	\$ 191,322	\$ 191,322
Total Recurring Costs (sub-total)		\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989
Total - Recurring Cost by year		\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989
Cumulative - Recurring Cost		\$ 8,449,989	\$ 16,899,978	\$ 25,349,967	\$ 33,799,956	\$ 42,249,945	\$ 50,699,934	\$ 59,149,923	\$ 67,599,912	\$ 76,049,901	\$ 84,499,890
Total - Cost by year		\$ 22,533,789	\$ 22,232,409	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989	\$ 8,449,989
Cumulative Total - Cost		\$ 22,533,789	\$ 44,766,198	\$ 53,216,187	\$ 61,666,176	\$ 70,116,165	\$ 78,566,154	\$ 87,016,143	\$ 95,466,132	\$ 103,916,121	\$ 112,366,110
Current System + Enhancement Benefits Estimate		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Collections											
Write-Offs/VEC Lien		\$ -	\$ 412,261	\$ 1,866,038	\$ 1,524,050	\$ 428,301	\$ -	\$ -	\$ -	\$ -	\$ -
Write-Offs/3rd Party Lien		\$ -	\$ 431,071	\$ 185,116	\$ 104,453	\$ 38,421	\$ -	\$ -	\$ -	\$ -	\$ -
Decision Analytics (STRATA-prioritize TAX's del. Accts coll. Potential)		\$ -	\$ 2,950,293	\$ 4,456,433	\$ 10,381,709	\$ 18,776,113	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000
Audit											
Field Audit		\$ -	\$ -	\$ 1,380,224	\$ 8,297,851	\$ 9,925,698	\$ 9,000,000	\$ 9,000,000	\$ 9,000,000	\$ 9,000,000	\$ 9,000,000
Discovery		\$ -	\$ 1,876	\$ 261,962	\$ 239,101	\$ 60,305	\$ -	\$ -	\$ -	\$ -	\$ -
Total - Benefits by year		\$ -	\$ 3,795,502	\$ 8,149,773	\$ 20,547,163	\$ 29,228,838	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000	\$ 27,000,000
Cumulative Benefits		\$ -	\$ 3,795,502	\$ 11,945,275	\$ 32,492,438	\$ 61,721,275	\$ 88,721,275	\$ 115,721,275	\$ 142,721,275	\$ 169,721,275	\$ 196,721,275

Business Case – Current System Assumptions

- Enhancements to current system in years one and two are estimated based on components implemented in other states and reflect a different implementation mix than other two alternatives considered. Enhancements include hardware/software and contractor implementation services for data warehouse and decision analytics, receivable scoring, audit workbench and mobile collection.
- ITAS Cost Clarifications and Assumptions:
 - ITAS maintenance and operations costs captured from the 2002 Information Technology Expenditure Report dated June 30th, 2002 and represent costs for the one year period July 01 – July 02.
 - The Information Technology Expenditure Report identified data processing supply and miscellaneous expenses associated directly with ITAS. These costs are included.
 - The maintenance fees for ITAS also include new hardware and software purchases made by the agency. The amounts were blended together in the Information Technology Expenditures Report and are included in the cost estimate.
 - No annual inflationary cost increases were used for years beyond the base year.
- Costs are for the core agency supporting the system and include:
 - Contractor staffing resources for technical system development and maintenance
 - Maintenance, Licensing, and Application Service Provider (ASP) Fees
 - ITS charges for technical services (e.g., mainframe, networking)
 - Training costs to support the system
- Costs NOT captured unless otherwise noted include:
 - System support, operations FTE and Help Desk FTE costs were removed for equal comparison between ERP, Transfer Solution and Current System
 - FTE costs associated with using the system (e.g., data entry, system inquiry, manual processing costs in data preparation, manual systems being maintained to supplement the core system., etc.)
 - Infrastructure and capital costs like PCs, printers, imaging, equipment, and plotters.
- Benefit calculations for all alternatives were estimated based on anticipated benefits obtained in other states (Virginia and Arizona) through similar components (data warehousing, receivable scoring, etc.) implementations and primarily result from increased collections. Projections have been normalized to reflect size and complexity of these state projects. Benefits for the Current System with Enhancements Option are less due to the age and modification complexity of the existing system.

Tax and Revenue – Application Definitions

- **Decision Analytics:** A software based tool that provides objective and consistent rules based information to the state regarding taxpayer trends. Specific industries or tax groups can be targeted to aggressively address target groups or industries and route to appropriate subject matter experts for handling.
- **Receivable Scoring:** An integrated application that reviews the credit worthiness of various tax payer groups and determines an appropriate tactic for collection of taxes according to state defined criteria. Application selects an appropriate action per tax payer based on state defined requirements.
- **Audit Workbench:** An automated tool to assist tax auditors in the field to monitor compliance to existing state records. This two way application allows auditors to validate business and taxpayer records against tax filings, tax receipts and other key documents.
- **Mobile Collection:** A PDA, laptop or cell phone systems that allows capture and transmission of data between field auditors and a state's repository of tax information. This application allows field auditors to complete street walks and identify the existence or lack of information regarding various business entities or taxpayer groups within the state.