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# ABT Program

## Detailed Implementation Plan

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July, 2008

# Revision History

<b>Version</b>	<b>Prepared by</b>	<b>Date</b>	<b>Reviewed by</b>	<b>Approved by</b>	<b>Note</b>
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# **1 Executive Summary**

## **1.1 Introduction**

The Accountable Business Transformation (ABT) Program is a major step forward in bringing contemporary business practices to the county. This program will implement integrated, efficient and effective financial, human resource and budget business processes that will allow the county to gain greater efficiency in providing high quality, effective and valued service to our customers. ABT will employ strategies that address people, processes and technology changes throughout the county to effectively utilize a selected suite of integrated applications: Oracle Financials (EBS), PeopleSoft HCM<sup>1</sup> and a countywide Cognos budget system. To accomplish this, the ABT Program segmented its body of work into five stages:

- Business Case – the county's justification for the ABT program. This stage was concluded with the council's approval of the ABT Program Charter in October 2006.
- High Level Business Plan (HLBP) – the HLBP developed the ABT Program scope, the functional requirements for a countywide budget system, and identified business processes to include in the Oracle and PeopleSoft implementation. The HLBP was approved by the council in September 2007.
- High Level Business Design (HLBD) – This stage determined the high level business process requirements to be integrated with the targeted Oracle and PeopleSoft environments. The HLBD was prepared in February, 2008.
- Detailed Implementation Plan (DIP) and Cost/Benefits Update – this stage consists of two efforts:
  - The Detailed Implementation Plan (this document) which refines the scope that was identified in the HLBP and HLBD and plans for the implementation phase of the project. The DIP includes a comprehensive cost estimate for implementing and maintaining the ABT Program scope.
  - The Cost/Benefits update which identifies the benefits associated with proposed ABT implementation activities (to be completed in June – 2008).
- System configuration and migration – this implements the approved Detailed Implementation Plan (migration planned for years 2009 – 2012, and full budget system implementation )

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<sup>1</sup> Target systems approved by policy set by Motion 12024

The ABT Program obtained the services of two consulting groups to accomplish the Detailed Implementation Plan and Cost/Benefits Update effort. CIBER, Inc was engaged to develop the Detailed Implementation Plan and the Hackett Group was hired to conduct a Cost Benefit Comparison study to inform the Cost/Benefits Update.

This document focuses on the Detailed Implementation Plan portion of the final planning stage and is based on the twenty three deliverables developed during the DIP process. The Detailed Implementation Plan is divided into three levels of detail:

- The first level of detail, the executive summary, is a high level review of the major findings and/or structure of each deliverable.
- The second level is contained in the detailed implementation chapters, which gives a more detailed view of the information. These chapters provide summaries of the key elements contained within the deliverable documents.
- The last level of detail, the deliverable documents, is located in the Appendices.

The objectives of the Detailed Implementation Plan project can be grouped into two sets of deliverables:

- A functional deliverable set that includes:
  - A phasing and transition plan that leverages new, existing and redefined business processes rolled out by department and agency. There will be a transition period as the new functionality is rolled out to each department so a transition plan is included to support temporary business processes, resources and interfaces.
  - A Fit Gap Analysis Plan to build on information gathered in the HLBD to close the open items from that phase, and a strategy of how a fit/gap discovery phase will develop the detailed requirements needed for system configuration
  - Program Management tools to track issues, risks, gaps, redefined business processes and modifications
  - Change Management and Education/Training execution strategy and plan
  - A comprehensive software testing strategy that includes infrastructure
  - Interface, Data and Reporting strategy and plan
  - Proposed project staffing and resource loaded project plan
  - Defined ABT success criteria and a process to measure progress
  - Post implementation support plan
  - A cost benefit analysis
- A cost deliverable set that includes:

- A detailed budget proposal for hardware, application software, other software, consulting services, resources for the ABT program team and participating agencies, costs for building, contingency, and associated costs.

To meet these objectives the ABT Program Team followed a five step methodology to complete the DIP:

- **Planning:** Logistical tasks necessary to set the project in motion were completed in the Planning phase. These included system/network access, preparation for the project kickoff, and development of a work session schedule for ABT team members and agency business owners.
- **Validate:** During the Validation phase the team reviewed existing ABT documentation. In this phase the team identified gaps in processes, resources, data, tools and technology. The team also reviewed and assessed existing documentation provided by the ABT Program – Business Case, High Level Business Plan, and High Level Business Design.
- **Design:** During the design phase the team leveraged the information gathered in the validation phase and conducted work sessions and interviews with key team members to gather more information. This information then fed into the deliverables.
- **Develop:** Once the validation and design phases were completed and approved by the ABT Program Managers, the team began to develop the deliverables required to meet the ABT objectives based on information that was gathered. These deliverables then went through multiple resources for review and approval, including the Project Sponsors, ABT Leads, and independent Quality Assurance.

**Approach:** The process concluded with the Approach phase. The team provided a summary of findings, then grouping our recommendations logically and presented them to the ABT Program Team and department leads. **This Detailed Implementation Plan is the final summary of all of these findings.**

A key to this process was county stakeholder participation. Throughout each phase the team engaged ABT Program governance, county representatives, and other stakeholders to review the findings and/or recommendation strategies. This process resulted in valuable discussions and feedback necessary to develop the level of information presented in the Detailed Implementation Plan. County participants included:

- ABT Operations and Change Management committee members
- Finance and Business Operations Division management and staff
- Human Resources Division management and staff
- Information Technology Service Delivery Managers of county departments

- Information Technology Managers of separately elected departments,
- ABT Quality Assurance consultant, and
- ABT Management Team members.

Finally, listed below are some key accomplishments from the DIP.

- Conducted work sessions around work plan items generated during the development of the HLBD
- Created a phasing plan for applications and related hardware and software
- Created a post implementation support model that includes a new competency center approach
- Completed an independent technology architecture assessment to determine the hardware and software technology for the ABT Program
- Created a comprehensive resource plan that includes the number of resources, when they are needed, and what their role will be on the project
- Created a comprehensive cost plan that includes resource costs, hardware and software costs, and general project overhead (rent, supplies, etc)

## **1.2 ABT Program Scope, Schedule and Budget**

This document, Detailed Implementation Plan (DIP), provides a summary of information developed during the Detailed Implementation Planning phase. The plan presents the activities, analyses and decisions completed in the DIP phase; resulting in ABT and CIBER's recommended Scope, Schedule and Budget to implement the ABT Program.

### **1.2.1 ABT Program Scope**

Phase I: Core Implementation, of the ABT Program will initiate business process redesign activities and implement specific Oracle and PeopleSoft modules in years 1 to 3 that support the following business process improvement initiatives. Additionally, Phase I will include the full implementation of budget system initiatives over years 1 to 5.

#### **Finance Initiatives**

1. Implement a Single, Integrated Oracle Financial System ( General Ledger, Fixed Assets, Cost, Projects, Grants)
2. Re-design Detailed Account to Report (A2R) Processes and Organization, Leveraging New Oracle Functionality
3. Implement Quick Wins to Improve General Accounting and Cost Accounting
  - Reduce closing cycle time
  - Improve standard reporting
  - Reduce or eliminate excess journal entries by establishing materiality rules

4. Redefine Procure to Pay (P2P) Strategies for Major/Common Commodities and Services, Leveraging New Oracle Functionality
5. Re-design Detailed P2P Processes and Related Policies
6. Implement Common Oracle Purchasing and Payables Applications
7. Expand, Enhance, and Roll-out P-Cards
8. Implement Common Supplier- Provided Enabling Technologies, e.g. Automated Vendor Catalogues, and Electronic Fund Transfer (EFT)

### **Human Resources, Payroll and Benefits Initiatives**

9. County-wide Human Resource Management System with workflow and self-service
10. Single Payroll System with common pay cycle
11. Time and Attendance PeopleSoft Module

### **Budget Initiatives**

12. Re-design the Budget Process, Leveraging New Budgeting Tool Functionality Linked to a Oracle Financials and PeopleSoft Human Capital Management (HCM)
13. Implement a Single, Integrated Business Intelligence Application for Planning and Budgeting

Phase II of the ABT Program include:

- Data archival study
- Leave administration
- ePerformance
- Recruitment: Talent Acquisition Management, Candidate Gateway
- Governance, Risk and Compliance (Internal Controls Mgr)
- Reporting: implement a metrics reporting solution
- Enterprise Learning Management

The proposed scope to be presented for funding will include only the Phase I activities. Phase II funding will not be requested at this time.

## 1.2.2 ABT Program Schedule

Detailed Implementation Schedules are presented in Appendix Q-Resource Loaded Project Plan for the Oracle and PeopleSoft implementations and in Appendix T-Budget System Implementation Plan for the budget system implementation. The following Chart is a summary of timelines associated with the initiatives identified in the ABT Program's Phase I Scope.

ID	Task Name	2009				2010				2011				2012				2013			
		Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3
1	<b>Finance Initiatives</b>	[Gantt bar spanning Q4 2009 to Q4 2011]																			
2	Implement a Single, Integrated Oracle Financial System (Gen Ledger, Fixed Assets, Cost, Projects, Grants)	[Gantt bar spanning Q4 2009 to Q4 2010]																			
3	Re-design Detailed Account to Report (A2R) Processes and Organization, Leveraging New Oracle Functionality	[Gantt bar spanning Q1 2010 to Q2 2010]																			
4	Implement Quick Wins to Improve General Accounting and Cost Accounting	[Gantt bar spanning Q1 2010 to Q2 2010]																			
5	Redefine P2P Strategies for Major/Common Commodities and Services, Leveraging New Oracle Functionality	[Gantt bar spanning Q1 2010 to Q2 2010]																			
6	Re-design Detailed P2P Processes and Related Policies	[Gantt bar spanning Q2 2010 to Q3 2010]																			
7	Implement Common Oracle Purchasing and Payables Application	[Gantt bar spanning Q3 2010 to Q4 2010]																			
8	Expand, Enhance, and Roll-out P-Cards	[Gantt bar spanning Q4 2010 to Q1 2011]																			
9	Implement Common Supplier-Provided Enabling Technology e.g. Automated Vendor Catalogues, and EFT	[Gantt bar spanning Q1 2011 to Q2 2011]																			
10	<b>Budget Initiatives</b>	[Gantt bar spanning Q4 2009 to Q4 2011]																			
11	Re-design the Budget Process, Leveraging New Budgeting Tool Functionality Linked to a EBS and PS HRM	[Gantt bar spanning Q4 2009 to Q1 2010]																			
12	<b>Implement a Single, Integrated Business Intelligence Application for Planning and Budgeting</b>	[Gantt bar spanning Q1 2011 to Q2 2011]																			
13	Implement Capital Budget System	[Gantt bar spanning Q2 2011 to Q3 2011]																			
14	Implement Operating Budget System	[Gantt bar spanning Q2 2011 to Q3 2011]																			
15	Implement Budget Performance Management and Reporting	[Gantt bar spanning Q3 2011 to Q4 2011]																			
16	<b>Human Resources, Payroll and Benefits Initiatives</b>	[Gantt bar spanning Q4 2009 to Q4 2011]																			
17	County-wide HRM System with workflow and self-service	[Gantt bar spanning Q4 2009 to Q1 2010]																			
18	Single Payroll System with common pay cycle	[Gantt bar spanning Q4 2009 to Q1 2010]																			
19	Time and Attendance PS Module	[Gantt bar spanning Q4 2009 to Q1 2010]																			

## 1.2.3 ABT Program Implementation Budget

The ABT Five Year Implementation Budget is presented in chapter 7.5. The recommended scope and budget for the ABT Program is presented in the Phase I Implementation Plan and Budget which includes activities for years 1 – 3 for Oracle and PeopleSoft implementation and the full implementation of a budget system during years 1 – 5. Total costs for the Phase I implementation is \$84 M which includes a \$19.4 M (30%) contingency. The following table provides an overview of costs over Phase I.

	2009	2010	2011	Total
<b>Single Financial System</b>	13,064,481	11,840,820	4,192,404	29,097,704
<b>Single Human Capital Management System</b>	11,637,992	9,428,135	9,596,921	30,663,047
<b>Single Budget System</b>	1,086,039	649,568	1,462,350	3,197,956
<b>Subtotal</b>	25,788,512	21,918,522	15,251,674	62,958,708
<b>Budget System Yrs 4 &amp; 5</b>				1,636,329
			TOTAL	64,595,037
			30% Contingency	19,378,511
				83,973,548

## 1.3 Key Decisions, Recommendations, and Results

### 1.3.1 Key Decisions

There were two decisions that needed to be made at the beginning of the DIP work in order to plan for the ABT implementation project. The first decision was whether the county should stay on the production versions of PeopleSoft and Oracle EBS or instead migrate to the latest software versions. If migrating, the second decision was whether to do upgrades or re-implementations to get to the latest software versions. These two decisions have far ranging implications for the county and can drive the technology direction for years to come.

During a re-implementation, the project team takes a deep look at the current systems and does a fresh mapping to the future software. All configurations are re-evaluated and possibly changed to take advantage of the new functionality that comes from the newer version. An upgrade carries the existing configurations forward to the new version and verifies that they still work under the new software version.

Below are the key decision points that the team reviewed:

- **Clean configurations**

As the county moves more agencies onto the system, it will put significant pressure on the existing software configurations. If the initial configurations do not accommodate future growth, or if configuration maintenance has not been particularly rigorous, the county may find itself constrained by the software, instead of enabled by it. Numerous configurations within the system were mentioned during the HLBD and DIP discussions as not being optimal or preventing the county from conducting business without manual workarounds.

Assessments need to be made for each module to determine if the system is operating optimally. New configurations or business changes will be necessary to gain the efficiencies that the county seeks.

A re-implementation has far greater advantages than an upgrade for cleaning the configurations and given the desire to achieve the significant business improvements and efficiencies described in the adopted ABT charter and adopted Vision and Goals statement.

- **Software changes**

PeopleSoft and Oracle deliver new and improved features and incorporate the current thinking on best business practices. King County's original implementations were done a number of years and several product releases ago. Although King County has upgraded the products through successful projects, it has not taken full advantage of the new functionality

and features.

A prime example is in the current Time and Labor configuration. Though using version 8.9, the rules are based on version 7.0 functionality that fits the needs of a small subset of county agencies (former Metro.) The current system is missing significant improvements and efficiencies introduced in subsequent versions. In some cases, this has caused manual workarounds prohibiting efficiencies that the system should provide. Version 9 provides additional enhancements and tighter integration with some of the functionality the county wishes to use. Software changes using new, countywide business processes support the need for a new version and a re-implementation.

- **Business/Organizational changes**

King County needs to review countywide business requirements and all of the configuration choices made within PeopleSoft and Oracle to verify that the software configuration is aligned with King County's business model and structured to let the county take full advantage of the capabilities built into the software. A re-evaluation of all configurations will provide an opportunity to match countywide requirements to new configurations supporting the need for a re-implementation.

- **Customization elimination**

The PeopleSoft and Oracle product suites provide a baseline foundation of functionality to meet business requirements. With each new version, these products increase the range of functionality that they provide. A number of the functionality customizations and bolt on applications created earlier by the county to meet business needs can be replaced by functionality delivered in the new versions of the software. Customizations in general should be avoided unless the business benefits greatly outweigh the impacts. Removing county customizations from the software will simplify future upgrade efforts and reduce complexity for software support. Re-implementation of a new version will enable the ABT program to evaluate and potentially reduce the number of customizations that have been carried forward in previous upgrades.

- **Product support from Oracle**

Oracle maintains general support for a software release for five years after its general release date and offers extended support for an additional three years at extra cost.

Moving to the latest software releases, PeopleSoft 9.0 and Oracle EBS 12, at the beginning of the ABT implementation provides general support from Oracle for the full three year implementation and extended support beyond the end of the ABT program, until approximately January 2015.

CIBER recommends a re-implementation to PeopleSoft HCM 9.0 and Oracle eBusiness Suite (EBS) 12. These key decisions are the foundation for the remainder of this document and all the deliverables for the Detailed Implementation Plan.

### **1.3.2 Recommendations and Results from work sessions**

#### Findings from Work sessions

The ABT team, along with CIBER, held a series of sessions over a six week period to help identify content that makes up the Detailed Implementation Plan. These sessions were held with ABT team members and department representatives to review specific areas that needed further clarification. This information was used to build and develop a solid DIP plan. During these sessions the team was able to verify the existing scope and business processes, review key decisions that were made in both the HLBP and HLBD, and review risks and issues.

Listed below are the highlights in each of the deliverables. More information for each deliverable is located in subsequent chapters within this document. Full deliverable documents are in Appendices A through U.

#### DIP Project Charter

A Project Charter helps define the structure of project execution. Highlights of the Charter include:

- Overviews of foundational issues – Vision, Objectives, Assumptions, and Critical Success Factors
- Meeting planning and ground rules
- Communication planning
- Methodology overview

Although limited to the DIP process, the Charter may serve as a model for the implementation phase and should be revisited for applicability and completeness at the start of the project.

#### Issues Management

CIBER reviewed the Issues Management plan as well as the Issues Log that the ABT team developed for the ABT Program. While we had minor adjustments to suggest, CIBER felt that the current plan was effective and will serve the Program well during the implementation.

#### Risk Management

Risk identification and mitigation is a necessity on any project, especially projects of this size and complexity. Based on past experience, CIBER created a Risk Management plan and process to assist the ABT program during the

implementation. The following key elements are in the plan:

- A methodology that includes identifiable inputs, outputs and metrics
- A risk tracking tool that is integrated with the project management website for ease of use
- Identified roles and responsibilities for handling risks
- Identification of risk categories that include Implementation, Development Environment, and Program Constraints
- A Risk Scorecard and scoring criteria

When used properly, this plan and process will assist the Program in identification and mitigation of risks during the implementation.

### Success Criteria

The Roadblock document was a key element in the development of the Success Criteria plan. This deliverable consists of a plan, process, tools and resources that will be utilized during the ABT implementation to ensure we meet the desired ABT Program objectives. Key elements include:

- A process that requires stakeholder identification, defining goals and objectives, identifying constraints, and measurable criteria
- A tracking tool that is integrated with project management website for ease of use
- Review and update of the “Roadblocks” document

CIBER believes that the success factors that have been identified are accurate and measurable for a project of this size and complexity. These will need to be carefully monitored and measured to ensure project success.

### Technology Architecture Plan

CIBER worked with Hewlett Packard (HP), the county’s hardware provider, to create a five year architecture plan that will support the ABT Program. The team created four variations based on business requirements, standardization, improving performance, and budget. As a final step CIBER reviewed and commented on the Oracle Technology Roadmap document. Highlights include:

- Bladecenters would be utilized, with the possible exception of the database servers
- Use of HP-UX as the operating system for lower costs and to allow for the redeployment of pieces of the current environment
- Agreement with Oracle’s recommendations for: Data Partitioning for PeopleSoft, Performance Management tools, RMAN and DataGuard (with qualifications), and Grid Control
- Disagreement with Oracle’s recommendations for: RAC, RAC Staging Environment, implementation of LINUX, Virtualization, and Real Application Testing

Based on comparisons with other HP and CIBER clients of similar size and complexity we believe that this is the correct configuration for the ABT program

going forward. Please refer to section 4.1 of this document or Appendix J – Technology Architecture Plan for ABT for the rationale related to the ABT Program technology recommendations.

### Interface Systems Strategy Plan

CIBER created the integration strategy plan, based on the work that the ABT team had compiled during the HLBP and HLBD phases. The team evaluated the assessment of the functionality provided within the various core legacy systems and side systems to make a recommendation for implementing PeopleSoft 9 for Human Capital Management (HCM) and Oracle EBS 12 for Financials respectively across the set of candidates. Included in the plan are:

- A recommendation of the legacy systems that will be retired or retained and integrated
- An integration approach that recommends that BPEL (Business Process Execution Language) as the primary tool for interface development
- A listing of core interfaces that need to be developed and implemented
- A plan of version control, code promotion, and approvals

Interfaces will need to be carefully identified, developed and tracked during the implementation. Given the large number of interfaces identified in the current side systems matrix, CIBER recommends an Interface Lead to assist in the development and tracking.

### Modification Strategy Plan

CIBER conducted sessions with the ABT team as well as agency representatives to identify areas where the Oracle EBS and PeopleSoft functionality can not meet county requirements. The team worked with the current support departments to create a list of modifications that currently exist within the system. Using that information CIBER created a deliverable with the following key elements:

- A recommended process for tracking configurations, modifications, user defined fields, and interfaces
- A modifications matrix of current and possible future modifications including high level cost estimates
- A formalized change control process for development change control
- An approach to developing modifications including naming conventions, programming standards, and tools.

It is important to note that not all of the modifications that are listed in the modification inventory will be re-implemented in the new system. CIBER recommends that the list be re-addressed during the discovery phase of each implementation to possibly eliminate some customizations with new functionality, business process change, or workarounds.

## Testing Strategy Plan

Testing will play a key role in determining the success of the project. To this end, CIBER created a robust testing plan to describe the testing strategy, the methods, tools, and resource roles required to achieve the desired testing results for the ABT implementation/migration project. The following are key elements in the plan:

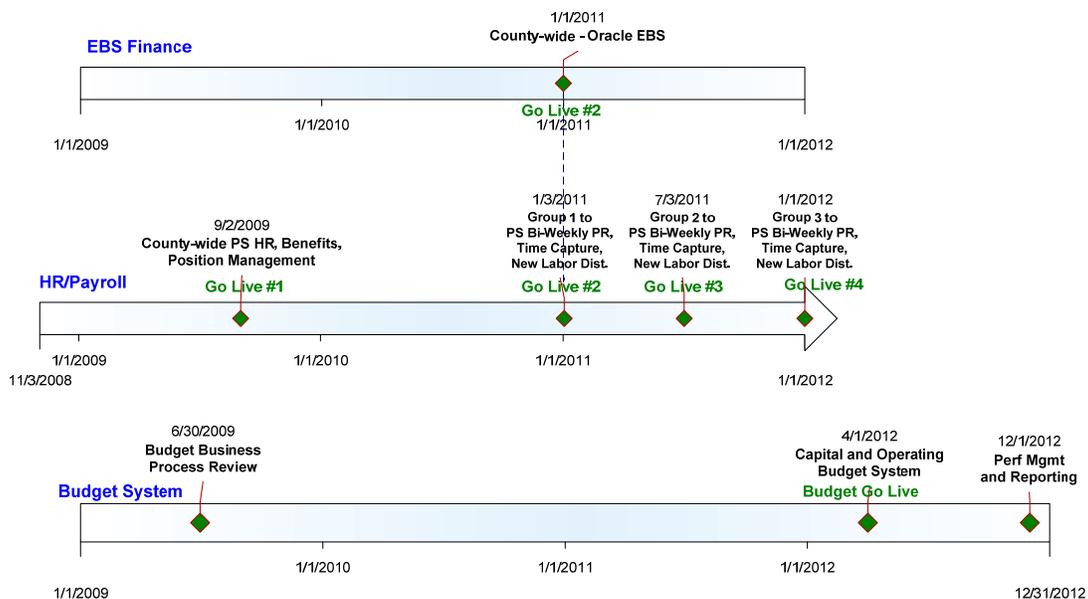
- A methodology to manage the testing process during the implementation
- A definition of test levels and types – Unit Tests, System Tests, Integration, Transaction, User Acceptance Tests, and Parallel Testing
- A requirement to have measurable entry and exit criteria to move from test cycle to test cycle
- Review of testing tools and technologies
- Definition of resources, roles, and responsibilities.

CIBER recommends a full time test lead to take responsibility for the testing cycles and execution of testing. Based on experience a test lead is a full time position on a project of this size and complexity.

## Functional and Organizational Phasing Plan

CIBER worked with the ABT team and agency representatives to develop a strategy that defines the approach, scope, grouping, timing and sequence for retiring legacy systems and deploying the new PeopleSoft and Oracle EBS systems, by function and by groups of King County departments/agencies. A high level overview of the phasing recommendation is provided in the following diagram and subsequent discussion.

### ABT Program Timeline



There will be parallel efforts for Oracle EBS, PeopleSoft HR/Payroll and the Budget System. The following describes the recommended phasing options and the inter-relationship between these parallel efforts.

- **Go Live # 1** – Re-implementation of PeopleSoft 9.0 moving the county to a single system for Human Resources, Benefits and Position Management. Current bi-weekly payroll groups on PeopleSoft 8.9 today will move to PeopleSoft 9.0 for payroll. This go live will be in September of 2009.
- **Go Live #2** – Roll out of Oracle EBS 12 to a single financial system county-wide in January of 2011. This event will include the roll out of a selected group of departments from MSA to PeopleSoft Payroll/Time and Labor for bi-weekly payroll.
- **Go Live #3** - Roll out of a second selected group of MSA users to PeopleSoft Payroll/Time and Labor for bi-weekly payroll in July of 2011.
- **Go Live #4** - Roll out the remaining MSA users to PeopleSoft Payroll/Time and Labor for bi-weekly payroll in January of 2012. At the completion of this Go Live, all employees will be on a bi-weekly payroll in PeopleSoft and the new Labor Distribution module will be used countywide.
- The **Budget Business Process Review** will be conducted with an expected completion date of June, 2009. The review will define the new business processes for both Capital and Operational budget development and maintenance, and set the stage for the technical design of the new system. Implementation of the new budget system will occur in April, 2012 allowing for the development of the **2013 CIP and Operating budgets**. In December 2012, the budget system project will implement performance management and reporting. Although the Budget System deployment is scheduled for 2012, it is still considered part of the Phase I core implementation and is part of the Years 1-3 appropriation request.

Other highlights of the Functional and Organizational Phasing Plan include:

- Phase II for years 4 through 5 would focus on production completion, value optimizations, and implementing additional functionality.
- A description of the other options that were reviewed and their reasons for rejection
- A list of phasing criteria that will be applied against the county to assist in determining an agency deployment schedule.

CIBER reviewed the pros and cons of different deployment and phasing options looking to maximize success while balancing cost, scope and risk. CIBER recommends this phased implementation approach.

## Fit/Gap Analysis Strategy Plan

To gain an understanding of work to date, the ABT team held multiple sessions with CIBER and agency users related to key decisions, changes or revisions to some of the open design items in the HLBD. Based on the results of these sessions CIBER created a deliverable that is broken into two major sections:

- The first is an overview of the strategy we employ during the Fit/Gap phase of a project. This includes descriptions of the inputs, processes, tools, and work sessions.
- The second section concentrates on key decisions, changes and revisions to the HLBD. Highlights include:
  - Finance Decisions
    - Re-implement Oracle Financials to version 12
    - Implement projects/grants with a project-centric structure across the entire county
    - Implement a custom Labor Distribution module between Oracle EBS Projects and PeopleSoft Time and Labor
  - Finance Changes to HLBP
    - Labor distribution will flow through Projects and not directly to the General Ledger
    - Labor transactions will contain the new project-centric chart of accounts structure
    - Use of encumbrances for non-personnel related transactions
    - Broader use of automated functionality for payments
    - Employ the usages and transfers functionality in Projects/Grants for certain types of interagency transactions
    - Oracle Inventory will be primarily used by Warranty Administration for fleet maintenance. Wastewater Treatment and Transit Power and Facilities will use Oracle Inventory to cost, track and issue material to support work order and maintenance systems
    - Oracle Accounts Receivables module will be used to create all invoices, and record all monies received for the county, except for those areas that use specialized systems, such as the property tax system and the CLASS system
    - Broader use of workflow to automate approval processes and eliminate paper
  - HR/Payroll Decisions
    - Re-implement PeopleSoft HCM to version 9
    - Implement workflow for supervisor notification of employee changes
    - Implement Position Management to improve workforce monitoring (vacancies) and establish new business process rules
    - Implement employee self service countywide (with business rules) to review and/or update personal information such as:

- Home Address
  - Phone Number(s)
  - Emergency Contact(s)
  - Marital Status
  - Name Changes
  - Ethnic Groups
- HR/Payroll Changes to HLBP
    - Implement Position Management as part of the HR reimplementation
    - Perform Foundation Table clean up work for:
      - Job Codes
      - Union Codes
      - Organizational Structure
      - Departments
      - Reports to Supervisor
    - Redesign business processes so that all HR data is maintained in PeopleSoft. This includes:
      - All new hires
      - All personal information, including name changes, address, birth date, etc.
      - Employee status changes, including long-term leaves
      - Terminations
      - FTE and pay rate (plan, grade or step) changes
      - Position changes and transfers
      - Job code changes
    - Defer roll-out of PeopleSoft Talent Acquisition Manager and Candidate Gateway will be deferred until the Production Completion phase (Year 4).
    - Implement business process change for new hires that will allow for:
      - On-line benefits enrollment
      - New employee orientation registration and tracking
      - On-line wellness assessment availability
    - Implement a "light" version of Absence Management that will assist in leave tracking and benefit eligibility. This light version will not integrate to Payroll or Time & Labor

### Business Process Redesign (BPR) Strategy Plan

The Cost Benefit Comparison Study conducted by The Hackett Group identified several business process initiatives that if implemented will result in significant benefits. The Detailed Implementation Plan maps closely to these initiatives. To obtain their benefits, CIBER recommends that we re-implement Oracle EBS Financials and PeopleSoft HCM so that the systems can be reconfigured to enable the implementation of best practices identified in The Hackett Group's business process initiatives

.In general, the ABT implementation team will develop countywide standard processes representing best practices and are supported by the selected applications / systems within each phase. In the event a County department / division has sound business reasons for maintaining their variations, these reasons will be documented and managed during implementation.

Overall objectives of the Business Process Redesign (BPR) effort include:

- Moving to improved, countywide business processes that are enabled by functionality;
- Utilizing technology to decrease or eliminate steps, rework, approvals, auditing and to increase department efficiencies;
- Leveraging employee and manager self service where possible;
- Shifting focus from transactional / administrative tasks to more strategic, value-added activities; and
- Increasing responsiveness to changing business needs.

#### Reporting Strategy Plan

The ABT implementation project will cover multiple systems and business areas. Specific reporting needs were identified during the DIP phase of the project based on current reporting needs. CIBER and the ABT team conducted workshops and gathered information to gain an understanding of the current reporting landscape as well as future reporting needs. Based on the results of these sessions, CIBER developed a deliverable with the following key elements:

- Current environment landscape that includes current systems and reports
- A future state that will consolidate the county's reporting into a single consolidated reporting structure that will utilize common tools for data retrieval
- Recommendations on toolsets for near and long term needs. These include current tools (web reporting) as well as future reporting tools
- A recommendation for ad-hoc reporting tools that can be used by a larger audience for data retrieval
- An inventory of current reports along with an algorithm for custom report development

During years 1-3 (2009 – 2011), we will continue to support existing reporting tools and data sources while phasing in new reporting tools to enhance access to information. During years 4-5 (2012 – 2013), management reporting outside of budget performance management reporting including in the budget system implementation will be added providing dashboard and Key Performance Indicator (KPI) capabilities to facilitate county efforts to manage to performance targets.

#### Data Management Plan

The implementation project will involve converting business functionality and data from side systems and two main legacy systems. CIBER created this deliverable

with the objective of providing a comprehensive data management plan that covers all aspects of managing data. Highlights of this plan include:

- A data management strategy that encompasses scope, approach, tools, and communications
- A plan for ongoing data management that revolves around data management tools
- A recommended approach for data archival that is broken into three stages:
  - Stage 1 – Archival of historical data during the deployments
  - Stage 2 – Archiving study to be done in the Production Completion phase to determine business requirements and tools for long term archival approach
  - Stage 3 – Decommissioning of systems and archiving data that was not converted into the systems
- Data Archival Plan for system performance and historical reporting

The county is taking a methodical and logical approach to archiving. The archival of data in Stage 1 will serve the county's needs through Phase II (years 4-5) of the ABT Program. During Phase II, a strategy will be developed and a tool will be selected for implementation. A long-term archiving strategy can not be accurately depicted until the completion of Stage 2. The implementation of a long-term archiving solution is out of scope for the ABT Program.

#### Organizational Change Management Plan

The ABT Program established an organizational change management plan during the High Level Business Plan process. CIBER reviewed the plan that the ABT team developed for the ABT Program. While we had minor adjustments to suggest, CIBER felt that the current plan was effective and will serve the Program well during the implementation.

#### Transition Period Strategy Plan

The transition from legacy systems to new systems is planned to occur with multiple phased implementations/deployments over a three-year period. This deliverable describes those specific transitions, the staff required to support those transitions and key transition activities both from a functional and system perspective. Key elements include:

- Functional aspects of the transition:
  - A support model and recommendation. This includes a general start time of two to four months before go-live and a general end time of three months after each go-live
  - Support team roles and responsibilities that include functional, technical, power users, and change management resources
  - Transition support response policies – this describes the definition of Level 1 and Level 2 support
  - Definition of an escalation procedure that includes department users, Level 1 and 2 support, and Oracle's Global support line

- Severity levels, response times, and general business hours.
- Technical aspects of the transition:
  - Strategy includes:
    - Descriptions on which system is the system of record
    - Chart of Accounts structure changes
    - Interfaces
    - Temporary business processes
    - Conversions
    - Reporting
    - A view of the system after deployment of PeopleSoft and Oracle EBS in January of 2012.

CIBER recommends that transition support be managed by the ABT Program during the transition period. It is also our recommendation that this process be centralized at the ABT Program management offices. Quality customer service, whether internal or external, not only ensures user satisfaction and productivity, but reinforces support for system viability and future projects.

#### Training Plan

Prior to the DIP the ABT Program developed a training strategy and plan that covers the following elements:

- Approach and methodology for developing and delivering training
- Training materials development
- Tools and Technology used for developing and delivering training
- Required staffing for developing and delivering training
- Schedule for delivering training
- Refresher training courses and courses for new employees to previously implemented departments and agencies
- Identification of audience, which includes project team members and end users.

CIBER reviewed the plan and suggested minor adjustments. CIBER feels that the current plan is detailed enough and will serve the Program well during the implementation.

#### Resource Loaded Project Plan

Based on information gathered in the DIP work sessions, CIBER developed a resource loaded project plan that includes the following elements:

- Quarterly staffing plan with activities
- Project Phases
- Project Tasks broken down to a maximum of 80 hour increments
- Project Schedule
- Project Resources

This plan is a baseline plan that will need to be constantly updated with information that is gathered during each phase of the implementation. CIBER is recommending that a project administrator be the gatekeeper of these updates. It will require a full time resource to handle the project updates and the risk and issues management updates.

#### Comprehensive ABT Resource Plan

CIBER created the comprehensive resource plan based on the information gathered in the work sessions. This information, along with estimates of scope based on projects of similar size and complexity, were input into the project plan to help determine the resource level. With this information CIBER created a resource plan with the following elements:

- Proposed Project Team roles and responsibilities
- Proposed team structure for each phase of the project
- Identification of the number, type and skill-sets of all resources needed for each phase
- Number and full-time equivalency of county staff dedicated to the project, or required as back-fill resources, and the area of expertise, experience and skill-sets needed for each resource by phase
- Schedule of when and how much involvement will be needed from county resources not dedicated to the project for such activities as data conversion reconciliation, user acceptance testing, technology implementation, or for support activities during the transition.

The plan is an accurate reflection of the resources that would be needed on a project of this size. CIBER believes that the project can be successful based on the ability to staff all of the resource needs with skilled individuals that understand how the county transacts business.

#### Post Implementation Support Plan

The ABT Program represents a significant change in the technologies and functional areas that the county will need to support within their production environment after the end of the implementation phases. In order to prepare the county for this support period, CIBER created a deliverable highlighting the following areas:

- High level definition of operation versus support tasks
- A best practice recommendation that includes the implementation of a Business Application Competency Center
- Roles and responsibilities
- Gradual build up of staff after each deployment of functionality in the Competency Center.

The competency center model that is recommended is an industry best practice model based on research by Gartner, CIBER, and other consulting firms. It is a practice that CIBER recommends to complex and large clients to both sustain the system and to enhance the functionality going forward.

### Cost Benefit Analysis Update

The county engaged The Hackett Group to perform a cost benefit comparison study to assist in developing a clear understanding of current performance. This was done by benchmarking key processes and comparing the results to world-class levels and industry standards captured in the Hackett database. The appropriate best practices were prioritized and identified for implementation through meetings with business owners, stakeholders and the ABT Program team.

The benchmarking and prioritization of best practices occurred in parallel with CIBER's development of the Detailed Implementation Plan. CIBER and the ABT team met with The Hackett Group on multiple occasions to analyze the impacts of process improvement initiatives identified by the Hackett Group on the ABT Program scope. The results of the Hackett Group study and CIBER's Detailed Implementation Plan are presented in a Cost Benefits Analysis update which identifies process improvement initiatives mapping to the ABT program scope, their associated costs and benefits over the next fifteen years and their overall Net Present Value (NPV) based on economic assumptions provided by the Office of Management and Budget.

Table 1: Costs/Benefits Summary provides a summary of the ABT Program implementation costs for Phase 1: Core Implementation Initiatives, at a nominal discount rate of 7% and contingency rate of 0% and 30% of estimated costs.

TABLE 1: Costs/Benefits Summary - Core Implementation

Initiative	Project Costs	Incremental Op. Costs	15 YR Benefits	Net Benefits	NPV @ 7% Disc. Rate
Single Financial System	\$29.1 M	\$17.3 M	\$137.4 M	\$91.0 M	\$39.6 M
Single HCM System	\$30.7 M	\$6.7 M	\$134.6 M	\$97.2 M	\$44.8 M
Single Budget System1	\$4.8 M	\$2.0 M	\$22.1 M	\$15.3 M	\$6.9 M
<b>Totals w/o Contingency</b>	<b>\$64.6 M</b>	<b>\$26.0 M</b>	<b>\$294.1 M</b>	<b>\$203.5 M</b>	<b>\$91.3 M</b>
30% Cont.	\$84.0 M	\$26.0 M	\$294.1 M	\$184.1 M	\$ 73.0 M

TABLE 2: Costs/Benefits Summary - Five Year Implementation

Initiative	Project Costs	Incremental Op. Costs	15 YR Benefits	Net Benefits	NPV @ 7% Disc. Rate
Single Financial System	\$34.8 M	\$18.6 M	\$137.4 M	\$84.0 M	\$34.4 M
Single HCM System	\$44.4 M	\$9.0 M	\$158.1 M	\$104.7 M	\$45.7 M
Single Budget System	\$4.8 M	\$4.2 M	\$22.1 M	\$13.1 M	\$5.7 M
Totals w/o Contingency	\$84.0 M	\$31.8 M	\$317.6 M	\$201.8 M	\$85.8 M
30% Cont.	\$109.1 M	\$31.8 M	\$317.6 M	\$176.7 M	\$ 62.9 M

Post Production Cost after project completion (2012) is not included in the ABT Budget. The 2012 projected post production cost is \$7.5 M for all three systems and functional areas. This cost includes software maintenance costs and staffing.

## 1.4 Conclusion & Next Steps

The Detailed Implementation Plan lays out the ABT Program Team and CIBER's recommendations for moving King County towards better business processes that will streamline and improve county services. A key component of this plan is to implement these processes on the most current releases of our target financial and human resources/payroll systems (Oracle EBS Financials v12.0 and PeopleSoft HCM v9.0). By doing so, the ABT Program avoids risk associated with implementing on an older release that may require an upgrade during the course of the implementation project; and enhances its ability to provide improved or new functionality that replaces side systems, custom programming and/or manual workarounds currently used by county businesses.

### Next Steps

Completion of the Detailed Implementation Plan is a significant milestone representing a tremendous effort by county organizations and staff. However, more effort is needed before the county begins the journey outlined by the Detailed Implementation Plan. As part of its overall recommendations, CIBER has identified the following work to be done by the ABT team and county organizations and staff to help prepare for the implementation work ahead:

- Finance
  - Chart of Accounts definition and structure
  - Continue the Side Systems matrix documentation
  - Cleanup Supplier/Customer records
  - Create listing of active projects by Agency
  - Cleanup item records
- HR/Payroll
  - Finalize HR Organizations and map to cost centers
  - Create business rules for managing positions
  - Create a list of reports to supervisors
  - Analyze current tables – job codes, leave types, etc for inefficiencies
  - Begin review/assessment of Benefits setups and processes

The summer activities that are listed above represent a large body of work. CIBER encourages the ABT Program Team to complete as much as possible to support a smooth transition to the implementation phase, ultimately leading to a successful implementation for the county.

## **2 Detailed Implementation Chapters**

Each chapter below is a summarized extract of key information from the deliverables located in the appendices at the end of this document. While these chapters were designed to stand independently, the reader may need to refer to the detail located in each appendix. Please refer to the appendix reference within each chapter.

## **3 Governance**

### **3.1 Issues Management Plan**

Issue management is a process for reviewing and addressing issues in a consistent and disciplined manner in order to control schedules, costs, and program quality. The issue management process ensures that concerns, questions, and unplanned requests are properly defined, escalated for management attention, resolved efficiently, and when appropriately authorized, incorporated within the scope of work of the ABT Program.

Issue management must handle technical problems or issues, as well as process, organizational, and operational issues.

#### **3.1.1 Issue Management Process Steps**

##### **Issue Identification and Description**

Issues that develop during the program/project need to be identified, and captured on an Issue Recording Form and submitted it to the Program Office.

##### **Issue Initiation**

Once submitted the ABT Project Administrator will enter the issue in the Program Tracking Database.

##### **Issue Analysis**

All new issues will be reported to the Program Manager for the following:

- Review
- Define the “official” priority
- Assign resources required to address
- Identify escalation requirements
- Accept status changes and resolutions

##### **Deposition Review**

- Issues have only two statuses – Resolved and Unresolved. Unresolved issues may be Active or Inactive.

- Individual unresolved issues will be discussed by the ABT Operations and Change Management Committee at their discretion.
- When an issue is resolved, the final disposition of the issue will be reported to the ABT Operations and Change Management Committee by the Program Manager.

### **Regular and Scheduled Reporting**

- Monthly, the ABT Operations and Change Management Committee will receive a report of all new and open issues.
- Monthly program status reporting to the Project Review Board (PRB), the Program Manager may report selected issues to the PRB.
- For all issues requiring management review and escalation, the issues will be reported to the Program Sponsor and the ABT Management Team.
- The discussion of issues will be a standing agenda item for all ABT Operations and Change Management Committee meetings. The Program Manager will be prepared to discuss any significant results of the issues, and to provide additional details about outstanding issues as requested during the meeting.

### **3.1.2 Issue Escalation Procedures**

All issues will be reported by the Program Manager to the ABT Operations and Change Management Committee monthly. The Operations and Change Management Committee will be responsible for resolving identified program issues. If the Operations and Change Management Committee cannot resolve an issue, the issue, may be escalated by the Program Manager through the ABT Governance Structure.

All escalated issues will include a report from the Program Manager, providing details about the issue, and about the specific points that have either caused the Operations and Change Management Committee to fail to reach agreement or require management intervention.

For further details please refer to Appendix O – Issues Management Plan.

## **3.2 Risk Management**

Risk Management is the disciplined and structured approach of planning, identifying, analyzing, and controlling risks that may arise throughout the ABT program. A risk is an uncertain event or condition that, if it occurs, has a negative effect on the project. Identified risks can be planned for, monitored and proactively managed in order to reduce their potential impact and/or, in some cases, be completely removed. The primary objective of risk management is to reduce or remove the potential negative impact from the program.

Proactive and disciplined risk assessment and response planning throughout the project life-cycle will minimize the potential threat of risks and reduce the amount of reactive fire-fighting that can consume project managers and team members if left unchecked.

### **3.2.1 Methodology**

#### **Inputs**

Inputs will include:

- County and ABT Program risk management standards
- ABT Implementation Project Charter, Statement of Work and Detailed Implementation Plan (DIP)
- Schedule and Cost Plan
- Resource Plan
- Project Constraints
- Project Status Reports – Work results and other project records provide information about project performance and risks
- Change Requests – Changes may require new risk analysis and response plans
- Project Repositories – Records from previous ABT phases such as Lessons Learned and issues/risk logs are good references to identify risks because they describe problems and resolutions

#### **Risk Management Process**

The risk management process follows these fundamental steps:

- Plan for risk management activities in the detailed implementation plan (DIP)
- Perform risk assessment in the planning phase of ABT implementation (and reassess throughout the ABT implementation)
- Assign responsibility for risks (Program Manager and Risk Owner)
- Analyze and score the risk for severity/impact and probability
- Develop a risk response plan (mitigation or contingency plan, otherwise known as a step-down plan to reduce or remove the risk)

- Escalate risk response appropriately in the event an agreeable response is not found
- Monitor, report and update risks regularly (summarize critical risks in regular status reports)
- When an identified risk is realized, execute contingency/mitigation plan (possibly requires approval for change request)
- Close risks as appropriate
- Continue regular risk assessment to identify new risks

### **Outputs**

Outputs will include:

- PMRx or other risk tracking log
- Status report summary of critical risks (ongoing)
- Project change requests (as necessary)

### **Metrics**

The principle metrics to be used to measure and improve the quality of this process are:

- A risk tracking log exists for the project
- Number of risks identified for the project
- Number of risks with effective mitigation or contingency plans and related risk score/exposure
- Number of risks with ineffective mitigation or contingency plans and related risk score/exposure
- Number of risks that were prevented
- Number of risks that occurred

### **3.2.2 Risk Tracking Tools**

CIBER recommends the use of the PMRx tool to log and track project risks and the use of risk assessment templates (using MS Excel) to capture the necessary risk details.

### **3.2.3 Risk Identification**

Initial risk identification will be performed during the ABT implementation planning phase and will be reassessed throughout the ABT implementation as risk characteristics may change or new risks may arise.

An ABT team member will be assigned to each risk, as the Risk Owner. The Risk Owner will be responsible for: researching and developing a risk response (step-down) plan; analyzing assigned risks to understand its impact(s) and probability of occurring, and developing a risk response (or step-down) plan with actions and due dates; analyzing, quantifying, and documenting the risk score based on severity and probability; developing and documenting a risk response for each risk

that meets the definition of “critical”, which is a calculated risk score greater than 12 (e.g. probability of 4, severity of 3, (4x3) equals 12).

Risk responses (mitigations/step-down plans) are planned, proactive actions designed to mitigate (reduce or eliminate) the probability and/or severity of a risk. As such, risk response plans must be planned and managed just like tasks in the master project plan.

Risks and risk responses should be reviewed weekly or bi-weekly, particularly for critical risks. When a reviewer finds a response inadequate or inappropriate, the reviewer will notify the Risk Owner who will address the review findings and redevelop and resubmit the response.

### **3.2.4 Manage Risks**

This activity defines the tasks to be performed throughout the project life cycle. It is ultimately the Project Manager’s responsibility to ensure risks are identified, assessed, managed, monitored and controlled and to identify new risks as they arise. The Program Manager will be responsible for the daily or weekly assigned activities in managing risks.

The Project Manager, Program Manager and Risk Owner must monitor identified risks, risk response plans and triggers to determine if action is required, such as invoking the contingency plan. Critical risks must be reported in regular status report with summary level information regarding their status and response effectiveness.

When a Risk is triggered – activate the Risk Contingency Plan and enter the following data into the Risk Log:

Data	Description
• Date Risk Occurred	The date the risk actually occurred.
• Actual Impact	The actual ramifications (positive or negative) to the project, due to the risk occurring, specified in terms of effort (hours), schedule (days) and budget (dollars).

It is important to have a current, complete and accurate record of the status of each risk; particularly critical risks. The status must include revised information of all applicable items collected in the PMRx Risk Log or Excel risk tracking spreadsheet.

A Risk is considered closed when:

- a. The probability of the risk event occurring falls to 0%, or

- b. The risk event has occurred and the impact to the project has been removed.

**Close Risk Management**

At the completion of the project, ensure documentation regarding the risk management life-cycle has been captured.

**3.2.5 Roles and Responsibilities**

The following table lists the Roles and Responsibilities for Risk Management.

Role/Resource	Responsibilities
ABT/SI Program Managers	<ul style="list-style-type: none"> <li>• Responsible for overall Risk Management.</li> <li>• Responsible for risk escalation resolution.</li> <li>• Responsible to execute risk contingency and resolve potential changes to scope, cost and/or schedule.</li> </ul>
ABT/SI Project Managers	<ul style="list-style-type: none"> <li>• Responsible for coordinating participation from the appropriate personnel regarding risk identification, assessment and response strategies.</li> <li>• Responsible to monitor and maintain risks and risk responses.</li> <li>• Responsible to escalate risks and risk responses.</li> </ul>
ABT/SI Project Administrators	<ul style="list-style-type: none"> <li>• Responsible for risk management administrative functions as designated by the Project Manager.</li> </ul>
ABT/SI Risk Owners	<ul style="list-style-type: none"> <li>• Responsible for assessing risks, providing responses and monitoring risks.</li> </ul>
ABT/SI Project Leads & Team Members	<ul style="list-style-type: none"> <li>• Responsible for identifying, analyzing and responding to risks.</li> </ul>

For further details please refer to Appendix P – Risk Mitigation Plan.

## **4 Technology Deliverables**

### **4.1 Technology Architecture Plan**

The county currently operates Oracle eBusiness Suite (version 11.5.10) and PeopleSoft HCM (version 8.9). The existing hardware for these environments includes HP-UX and Windows servers.

CIBER was tasked with defining a technology architecture for the five year plan for the county's Oracle eBusiness Financials (version 12) and PeopleSoft Human Capital Management (version 9.0) systems.

Objectives of the Infrastructure Assessment include:

- Standardize on a common Operating System, unless not technically feasible
- Maintain or improve performance and management of the infrastructure without significantly adding to the current cost of support
- Take advantage of existing investments whenever possible
- Leverage work previously performed for Oracle's Infrastructure Optimization Roadmap (version 2.4)

Based upon the business requirements gathered during the Detailed Implementation Planning (DIP) for ABT, review of existing county IT standards, review of Oracle's Infrastructure Optimization Roadmap and research of existing Oracle and PeopleSoft installations, CIBER has concluded that there are two options:

1. Standardize on HP-UX operating system running on a BladeCenter solution
2. Convert to a Linux environment running on a BladeCenter solution

A third option of standardizing on HP-UX running on stand alone servers with virtualization was considered. This option was eliminated when the delta in price exceeded well over \$1m in upfront acquisition cost. This option also had the highest long term recurring cost.

#### **4.1.1 Review of Oracle Infrastructure Optimization Roadmap Proposal**

Oracle performed an assessment of the county's infrastructure in the beginning of 2008. The assessment resulted in the nine (9) recommendations for infrastructure elements that follow. While Oracle suggests standardizing on Oracle Linux, CIBER reviewed the other 8 recommendations exclusive of OS. The goal was to

objectively consider the fit of the other 8 technical recommendations for the ABT project initiatives, then to derive the Operating System recommendation from the set of CIBER recommendations.

#### 1. Implement Real Application Cluster (RAC) database architecture

RAC is primarily used when the computing situation requires either 24x7x365 availability, and/or when the future capacity growth is unknown (extreme example: Google). If the computing environment does not have either of these needs (the county does not), the justification for RAC is significantly reduced. The decision to implement RAC, when the above primary requirements are not present, needs to be balanced with the increased complexity and load on the organization's DBAs and UNIX/Linux System Administrators. CIBER has had two clients (Levy & RTD) where RAC was implemented and upon CIBER's departure, the clients removed RAC due to the maintenance load on their lean IT support staffs.

There is an additional niche situation where RAC can be justified and that is when replacing name brand servers (e.g. HP HP-UX, SUN Solaris, IBM AIX) with commodity level Intel based servers running Linux. In this situation the cost benefits of buying inexpensive non-brand name Intel servers can be significantly lower (even with the additional Oracle RAC software licensing) than buying high-end UNIX system. The trade-off is again the increased complexity and in some cases the severe limitations of the commodity servers themselves. The greatest limitation, from a DBA perspective, is on the 32-bit x86 Intel hardware, the largest SGA possible is 4GB, which compared to a 64 bit HP UNIX environment with maximum of 4,000,000TB of SGA, severely reduces the amount of data that can be stored in memory. The 4 GB SGA constraint requires the database to retrieve data from disk, and reduces overall system performance.

Based upon business requirements CIBER recommends that the county forego adopting RAC.

#### 2. Use Oracle partitioning to better manage performance, backup and recovery

Oracle Data Partitioning is a software option that lets you sub-divide tables and indexes to increase query performance. An example of partitioning would be to take a very large custom table storing accounting transactions and partition it by accounting year or month. In that example, any query for data within a particular account year/month would only pull information from that partition rather than having to search through the whole non-partitioned table. Another example would be if the query crosses several accounting years/months, only those partitions needed to satisfy the query would be accessed; rather than the whole table. This capability significantly reduces query times.

The caveat is that the benefit of data partitioning is only realized in situations with very large tables. According to current Oracle information these would be tables that have 10 million or more rows of information in them. In the event that projected growth puts the county in this situation, the cost of Data Partitioning is justifiable. Data Partitioning can also be applied at a later date in the event that it is not initially needed but would be long term. The decision of when to adopt Data Partitioning can be made as the county approaches the 10 million row threshold. In today's environment of 6,000 employees utilizing Time and Labor with PeopleSoft, the county is already near 60% of this threshold. The addition of the remaining county employees to the Time and Labor system will exceed this threshold.

CIBER suggests that the county follow Oracle's recommendation to implement Data Partitioning for PeopleSoft but not for Oracle Financials at this time.

### 3. Implement integrated application performance monitoring tools

Oracle offers various performance monitoring and diagnostic and tuning plug-ins for their Enterprise Manager (EM)/Grid Control product. The performance monitoring tools provide the ability to automatically monitor and notify DBAs and Administrators of situations that need attention before they become critical. These performance monitoring tools are very beneficial in client environments that have lean IT staff.

Oracle's diagnostic and tuning plug-in is one set of tools that is recommended; particularly for use with installations that are running Oracle Applications, or PeopleSoft. The driver is that both software products use significant canned SQL and PL/SQL code that cannot be changed. In cases where this code is causing a performance problem this tool will help identify the offending code statements for Oracle Technical Support use. More importantly, the tool will enable the county to analyze the code and develop recommendations to improve performance without having to change the code. These recommendations can range from adding a new index to implementing a different SQL execution plan for the code.

CIBER recommends that the county adopt Oracle's performance monitoring tools.

### 4. Standardize on Oracle Data Guard and RMAN Backup for disaster recovery

The decision to use Oracle's Recovery Manager (RMAN) for backup and recovery is easy. It comes free with the Oracle RDBMS and if the county is not using it today, it should.

Data Guard is one of a set of Oracle tools focusing on protecting data availability, tools that range from RMAN on the low end (i.e. basic backup and recovery) through Data Guard at the mid point (i.e., stand-by database and

replication) to RAC on the high end. These tools facilitate disaster recovery planning to allow business continuance regardless of whether an unforeseeable event affects the server, the data center or the city the data center resides in.

Data Guard is an appropriate solution for King County particularly once King County moves to the 11g database. Data Guard creates and maintains one or more standby databases that are consistent with the production database for disaster recovery purposes. Currently King County utilizes a nightly copy of the existing database as a reporting database. This could be used as the standby option in the future state environment running 10g DB.

With 11g, the county could create a standby database that can be open for reporting use while at the same time being updated from the production database. Essentially the county would have a standby database that is constantly up-to-date for both disaster recovery and for use as a report server. Because the ABT will be using the 10G database, Data Guard can be used to create the standby database at night and that database can be used for reporting. It will not be until later when the county is on 11g that the real-time feature can be used.

The trade-off is whether the licensing cost of the standby database option is offset by the ability to perform real-time reporting and to maintain some level of fail-over/disaster recovery.

CIBER strongly recommends that the county use RMAN. CIBER strongly recommends the county move to the use of Data Guard once 11g is in place. Until that time, cost must be factored into a decision given the reduced benefit that Data Guard offers. ABT should continue to replicate the production database nightly for reporting and standby purposes using either current methods or by beginning to use Data Guard.

#### 5. Implement RAC test/staging environment for each production system

If the county prefers to implement RAC, it will need to make sure that the testing environment and/or QA/Staging environment also be RAC. The county should always test on an exact configuration copy of production.

CIBER is not recommending the RAC environment at the county and therefore is not recommending a RAC test/staging environment.

#### 6. Leverage “GRID Control” for proactive database management

Grid Control’s greatest benefit is when it is combined with the performance monitoring, tuning and diagnostics plug-ins described above. The base software is “administrator friendly”, in that it provides a graphical interface for

the various standard DBA information items. Information such as; amount of free space, SGA memory usage, hit ratios are shown in graphs rather than the standard column and row format that is shown from a DBA script.

For Oracle Applications there is a patch that can be installed that integrates Oracle Application Manger (OAM) with Grid Control to provide a consolidated, end-to-end e-Business Suite management solution.

CIBER recommends implementing Grid Control.

## 7. Leverage Virtualization for development and test environments

Virtualization is a concept of hiding the physical nature of a server or computing resource from the end user of the application. It enables a single computer to look like multiple computers.

On the Intel/Linux platforms there are numerous Virtualization vendors to choose from, including: VMWare, Oracle and RedHat. The primary UNIX vendors (HP, IBM and SUN) each have their own proprietary Virtualization software.

The Virtualization decision usually comes down to a financial decision of whether the cost of buying one or two large systems, with VM software makes more sense than buying numerous smaller systems. One of the big benefits is the potential to decrease the data center footprint, thereby decreasing cost.

Availability requirements must be considered for environments running Virtualization. If a physical machine hosting four virtual machines goes down, recovery can be challenging, elongating an outage. In the business requirements section of the analysis, the county showed a relatively high tolerance for down time but the use of Virtualization at this point would add risk. Although being connected to a Storage Area Network (SAN) provides some possible mitigation, it is recommended that architectures including Virtualization run a High Availability solution as well.

Virtualization adds both complexity and cost to the management of the infrastructure, especially in an Enterprise the size of the county. Cost factors to consider include: High Availability as mentioned previously, the cost of administration and the cost of training resources.

CIBER recommends that the county forego Virtualization.

## 8. Implement Real Application Testing Strategy

This is an Oracle 11g RDBMS additional cost option that lets you capture workload information and then replay it for performance testing purposes. The

benefit is that the replay will let you make changes and then the replay will use those changes during the replay allowing you to observe the affect of the changes on database performance. The changes can be database initialization parameters, or new SQL code, or new PL/SQL code, or a new report, or adding new hardware like more CPUs. The biggest benefit is that you are able to test changes and outcomes against real world workloads, not simulations.

This tool is only an option with Oracle version 11g RDBMS and higher. Since the county will not be on this DB release during the implementation lifecycle, the county must forego this recommendation.

## 9. Standardize on Linux

CIBER agrees that the county should standardize as much as possible on one Operating System, it is debatable as to whether UNIX or Linux is the right choice. The recommendation has been derived from the other 8 elements of the CIBER assessment categories and is summarized in the following section. It is important to note that Oracle suggested its Unbreakable Linux in the Infrastructure Optimization Roadmap. The county standard for Linux as referenced in the “Existing Standards” section above is Red Hat Enterprise Edition.

Based upon this standard, CIBER would suggest Red Hat’s Linux if selected over UNIX.

### **4.1.2 Operating System Assessment**

CIBER has concluded its assessment of the necessary infrastructure for the ABT initiatives. The areas assessed in contrasting HP-UX versus Linux included:

- Business Requirements- Both infrastructures will meet the business requirements specified, hence, the scoring for this category is neutral
- Leverage Existing Investment- UNIX would enable the county to leverage at least one of the existing HP-UX Servers in the future state configuration. Existing Standards- Both operating systems are current standards for the county. Due to the option to use an existing investment in hardware, the scoring for this category favors UNIX.
- Oracle Assessment- Both operating systems will allow the county to utilize recommendations made by CIBER in this section. The scoring in this category is neutral.
- Install Base Representation- Although Linux is gaining momentum, the representative sample accounts in Public Sector still show a strong favoritism towards different flavors of UNIX, hence, the scoring for this category favors UNIX
- Budget – favors UNIX
  - Hard costs- Scoring in this category favors UNIX
  - Soft costs considered include:

- Training cost for any additional skill-sets for the Linux option
- The energy costs of running and cooling one solution versus the other
- The potential cost associated with outside assistance for Linux while the county matures its policies, procedures and skill sets associated with Linux

Although both choices of operating system could meet the county's needs, the decision in large part was driven by budget directive. CIBER/ABT was given guidance by county Finance Director during a business requirements meeting to be as cost effective as possible with the technology at or below current cost levels. CIBER estimates the HP-UX Blade Center solution is more cost effective on a 5 year projection by about \$1.2 million.

CIBER has concluded that HP-UX be recommended as the solution of choice for the county's deployment of countywide PeopleSoft HCM and Oracle eBusiness Financials.

### **4.1.3 Hardware and Technology Proposal and Procurement Schedule**

The Technology Architecture DIP document proposes specific server and storage hardware to meet the needs of the ABT program. A procurement and installation schedule is also provided for when hardware and software need to be procured to meet the project and phasing schedule of ABT. A schedule for the decommissioning or redeployment of existing server hardware is also included. The ABT phasing strategy plans for four "Go Live" implementation deployments. The schedule for hardware and software procurement and installation anticipates when each set of hardware/software will be needed and suggests alignment between the events. Instead of purchasing all hardware and software up front, CIBER feels it is prudent and cost effective to purchase and install in phases as well. During Years 1 – 3 hardware would be purchased for 3 separate installs. During year 4, hardware will be purchased for a final installation.

<b>Hardware Installation/Description</b>	<b>Installation Completion Date</b>	<b>Go Live Date</b>
Install 1 – For project to begin configuration work	Nov 2008	N/A
Install 2 – Prepare PeopleSoft production hardware for HR Go Live	May 2009	Sept 2009
Install 3 - Prepare Oracle EBS production hardware for Jan go live	Oct 2010	Jan 2011
Install 4 - Prepare hardware for Year 4 and 5 initiatives	March 2012	2012

For further details please refer to Appendix J – Technology Architecture Plan for ABT.

#### **4.1.4 Hardware and Technology Refinements Prior to Procurement**

The original intent of the DIP technology planning exercise was to have CIBER work with the Office of Information and Resource Management (OIRM) and ABT to plan for the technical hardware and software needed to support the ABT initiatives and to estimate the technology purchase and support costs. Due to resource issues this was not possible and instead CIBER was asked to work independently to propose appropriate technology for ABT based on current technology standards and information. The exercise was important in that it provided a basis from which ABT was able to estimate the cost of technology needed by the Program.

The ABT Program realizes that OIRM has the responsibility to set strategic technology direction for the county. Although CIBER has identified significant benefits associated with their recommendations, the benefits are not so compelling that should OIRM declare a different long-term strategic technology standard prior to purchase of the technologies, ABT would make adjustments. Prior to hardware procurement the ABT Program will work with OIRM to refine the recommendations made by CIBER and confirm the selected technologies for ABT are aligned with the county's strategic technology direction.

### **4.2 Interface Systems Strategy Plan**

The interfacing systems strategy plan addresses the need for the county to maintain tight integration across the enterprise between Human Capital Management (HCM), Financials, and Budget, and provide for the requirement of integration with certain side systems for the purpose of maintaining their operational readiness of department business processes. The plan addresses integration architecture scale and features, data integrity management and error handling requirements, and the need to leverage the reuse of data integration processes across multiple systems. The plan also recommended technology tools for the ABT program for system integration development.

The integration strategy plan evaluates the functionality provided within the various core legacy systems and side systems and makes a recommendation for switching to PeopleSoft 9 and Oracle EBS for Human Capital Management (HCM) and Financials respectively. The plan recommends the legacy systems that will be retired or retained and integrated.

The plan then addresses the integration requirements between Oracle EBS or PeopleSoft 9 and the side systems that are retained. The plan also recommends the approach that is taken for achieving the integration between Oracle EBS or PeopleSoft 9 and the side systems. While the New Budget System is yet to be identified, a place holder for Inbound and Outbound Interfaces between Oracle EBS and the New Budget System has been listed.

### **4.2.1 Temporary Integration Requirements**

The county technical and resource landscape were key considerations in the recommendation of integration tools. The essential elements for integration tool recommendations are:

- Application to application core and internal integration requirements, and
- Business to business external integration requirements
- Future Oracle EBS and PeopleSoft integration,
- Mature web-based management and administrative integration console with the ability to view integration state at the task step level
- Easy to use drag and drop graphical user interface for building translation and mapping logic
- Visual monitoring, drill downs and audit capability
- Business process orchestration language to manage process complexity, error handling, parallel processing, conditional processing, notifications and approvals
- Oracle adapter maintained by Oracle in the future, and
- Ability to work with disparate data sources, including mainframes

### **4.2.2 Strategies**

Strategies addressed within the Data Management Strategy Plan include:

- Recommendations for system retirements across the legacy enterprise and the side system landscape at the county
- Integration approach which includes the technology recommendation noted above, and
- Addressing reporting integration related to side systems retirements separately from interface requirements

### **4.2.3 Retirement Recommendations**

Core Legacy systems are recommended to be retired where the functionality is expected to be replaced by the new platform suite. Core systems identified for retirement include:

Legacy Core System	Replaced by Functionality in New Core System
POL	PeopleSoft Time and Labor.
MSA	PeopleSoft Workforce Administration and Bi-Weekly Payroll
ARMS	Mainframe General Ledger and Projects
AIRS	Oracle Receivables
BUC	Oracle Accounts Payable
IVIS	Oracle Fixed Assets
TRH	Oracle Cash Management
Essbase/PONS	New Budget System
CIP	New Budget System
Health Budget System	New Budget System
IBIS	Oracle General Ledger and Project/Grants

Side systems are also recommended for retirement where they fall into one of the following process categories:

- Leave Tracking
- Training Tracking
- Recruitment
- Position Tracking
- Competency Tracking
- Performance Tracking
- Salary/Compensation Tracking
- Labor Grievance and Disciplinary Tracking
- Payables System
- Receivables Systems
- Asset Management
- Some Inventory Management Systems
- Grants Accounting
- Purchasing and Procurement Systems

These categories represent functionality that is offered within the PeopleSoft and Oracle EBS beyond the obvious functions of Human Resources, Payroll and General Ledger. A more detailed analysis will be done during the implementation phase to determine if any of the below mentioned side systems needs to be retained.

During the DIP, 97 HCM related side systems fall into the retirement category based on analysis performed during the HLBD and the DIP, as do 121 Financial

and Budget systems, databases and spreadsheets. Note that the designated systems within the retirement category are not all formal business side systems, rather many are informal databases, manual processes and spreadsheets.

Where a side systems utility can be replaced by the new platform suite, they are designated for retirement. Side Systems are labeled for retention or interfacing where the standard functionality of the new platform suite does not map to the specialized nature of the side system, or where a modification is not deemed warranted. The side systems slated for retirement represent 36% of the side systems inventoried last year by the county during the HLBP. Upon further review of the original list of side systems, not all the systems named were used for HR or Financial processing. For the side systems that have functionality met by the core HR and Financial systems being implemented, the ABT Program has targeted 64% for retirement as shown in the table below.

Targeted Side Systems <sup>2</sup>	Total	To Be Retired	%
Financial Side Systems	209	121	58%
HR/Payroll Side Systems	129	97	75%
Total	338	218	64%

The Fit/Gap and Business Process Redesign (BPR) activities during the first phase of implementation will address business needs related to side systems and specialized department processes which comprise the extended set of processes ABT has in scope for tracking. From this activity, a refined and definite list of detailed user processes and related integration and reporting requirement will be produced and enter the development and test cycle upon approval. Approval to retain and interface side systems which are designated for retirement will require justification and approval by the Program Manager or delegate.

#### **4.2.4 Interfacing Strategy Plan Objectives**

The objectives of the plan are to first provide a structure of how interfaces will be configured and rolled out countywide. The second is to provide a high level overview of the currently identified interfaces for the ABT implementation and the recommendations of how the interfaces should be handled. This includes the platform and the development tools that will be necessary. In general, the strategy is an initial guide on the following areas and it will evolve over time during the ABT implementation:

<sup>2</sup> Includes side systems, reporting systems, interfaces and batch processes.

- Review of current technology landscape
- Side system retirement
- Future technology landscape
- Phasing (project timelines)
- Assessment of Integration solution Center and Standards
- Interface approach
  - Identification of interfaces
  - Tools to be used
  - Interface design and documentation
  - Unit and Integration testing
  - Code promotion and Version control
  - Approvals
- Roles and responsibilities
- Maintenance and support
  - Knowledge transfer from consultants for custom programs developed
  - Retooling of the county technical staff of maintaining the custom programs and to undertake new development using these technologies

For further details please refer to Appendix K – Interface Systems Strategy Plan.

### **4.3 Modification Strategy Plan**

In general, the modification strategy will serve as an initial guide and it will evolve over time during the ABT implementation. The strategy plan includes recommend processes and methodology to track Configurations, Modifications, User Defined Fields, and Interfaces.

Oracle EBS version 12, PeopleSoft version 9 and the new Budget System are general purpose software systems, as such some of the delivered functionality may need to be modified or extended to fit the needs of the county or specific departments. Modification can be defined as changing or adding logic to the delivered functionality or by extending the functionality by providing a “bolt-on” application or sub module.

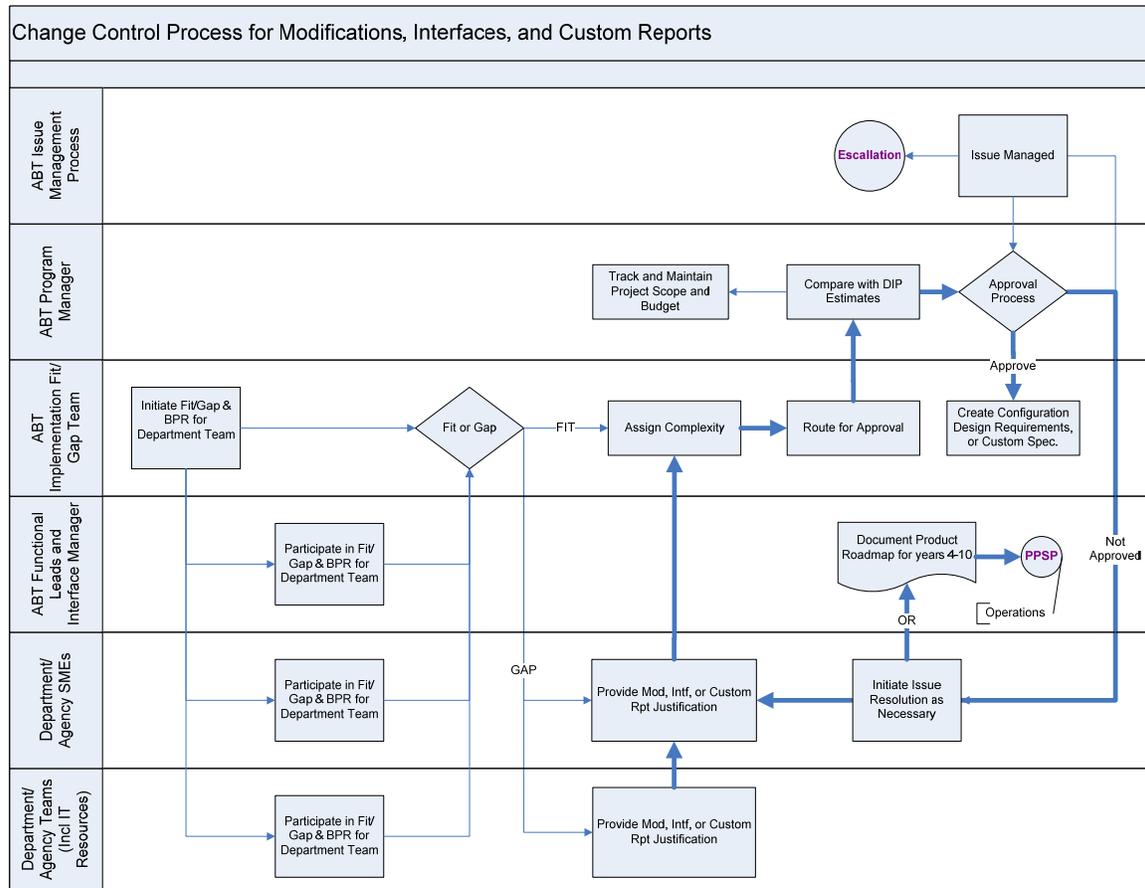
- It is highly recommended to avoid modifying the delivered functionality, but rather adjust the business process. Business process change should be considered where it can substitute for system modification and is adequately efficient and effective.
- A naming standard is recommended and will be designed so that all modified objects can be identified.
- It is recommended that the same naming standards be followed that are currently used for custom objects within Oracle IBIS and PeopleSoft 8.9.

- Modification of delivered objects, if needed, should be done only to a copy of the original object that is intended to be modified, renamed according to standard and saved in a separate location. This practice preserves the original version of the object and also prevents overwriting during upgrades to Oracle EBS 12 or PeopleSoft 9.
- Modifications are done using the same tools and technologies that are used to develop the original objects. As such, when modifying the object, the same version of the tools and technologies need to be used.

### 4.3.1 Key Elements of the modification strategy

- Establishment of project baseline, variation from which triggers the Development Change Control process
- Documentation and analysis of proposed changes, including alternatives
- Approval process
- Structured tracking

Below is a flow diagram of the modification process reflecting the key elements.



### **4.3.2 Modification approach**

Modifications are done to provide additional functionality or to change the behavior of the available functionality within an application. Modifications fall into two broad categories. Changing the delivered objects provided by the vendor of the software systems and extending the application by providing a bolt-on application.

Modifying vendor delivered objects: Modifications are done to objects that are provided by the vendor of the software systems to change the behavior to suit a specific need. Different tools and technologies are used within the different software applications. As such, any modification that is done essentially has to use the same technology to change the behavior as needed. The most common modifications are listed below.

- Changes to user interface screens.
- Changes to underlying program logic.
- Changes to an existing delivered report.
- Changes to a workflow process.

Software vendors provide the ability to change the behavior of user interface screens without having to make changes to the underlying code. As such, it is important to understand and differentiate the type of modification that is needed.

- Personalization is a change to a user interface screen to tailor the 'user interface screens' look-and-feel, layout or visibility of built-in content to suit a business need or a user preference.
- Extensions are changes to the business logic or adding new content to extend the functionality of an application. Extensions require that the underlying program code be modified to achieve the intended functionality.

Bolt-On Modifications: Software vendors may not deliver all the functionality that is needed. As such, additional functionality may need to be provided to meet specific business needs. Such requirements are categorized as extensions and usually need a combination of user entry screen, reports and specific program logic to achieve the intended functionality.

### **4.3.3 Modification standards**

Objects that have been modified need to be easily identified from objects that are delivered by the software vendor. The following modification approach is recommended for ensuring custom objects are preserved during software patching and upgrades.

- Custom Schema
- Custom Applications and Custom Folders
- Preserving the integrity of the Original Object
- Naming Standards

- Modification Tools

For further details please refer to Appendix N – Modifications Strategy Plan .

## **4.4 Testing Strategy Plan**

The Testing Strategy Plan addresses the methods, tools and resource roles required to achieve the desired testing results to confirm the system works as expected prior to implementation. It also provides analysis of testing resources, test issue management, and test environment management.

The testing plan strategy also reduces department testing iterations by aligning department testing scenarios with the appropriate phase of testing and ensures entrance and exit criteria is satisfied by the department.

### **4.4.1 Testing Strategies**

Strategies addressed within the Testing Strategy Plan include:

- Test organization
- Test planning
- Test specifications
- Unit, integration and system testing
- Test monitoring and assessment
- Product assurance

Testing will not exit or transition to the next step without satisfying exit criteria, including appropriate metrics on defects and functional success factors.

Quality Assurance will play a role in the testing phase as oversight, as will ABT Project Management, King County Business Owners, and Organizational Change Management.

### **4.4.2 Testing Plan Methodology**

The testing methodology proposed by CIBER and collaborated upon by the ABT team includes:

- Project preparation and related project control features
- Fit/gap analysis and the development of the blueprint, business requirements, test requirements, test narratives and test cases and preparation for testing custom business objects, data migrations, interface touch points and verifying custom reports
- Establishing testing objectives, or acceptance criteria, to ensure a proper definition and measure of testing success
- Establishing testing tools and environments suitable to accommodate the testing requirements

- Managing a testing team to address the testing types and cycles, as well as address testing requirements and test defects, and
- Performing component or unit testing, deeper functional and integration testing, regression and parallel testing and also user testing and business readiness

System acceptance and approval for production deployment is based on the successful achievement of testing objectives and acceptance criteria. Most of the planned testing is functional in nature (i.e. business process related), with the purpose of validating business requirements and confirming business readiness. However, the strategy also addresses the need to conduct technical tests, like system performance tests, to validate system requirements and to confirm system readiness.

For further details please refer to Appendix H – Testing Strategy Plan.

## **5 Business Process Deliverables**

### **5.1 Functional and Organizational Phasing Plan**

This document describes the process undertaken during the detailed implementation planning (DIP) engagement to develop the recommended functional and organizational phasing strategy (hereafter referred to as “phasing strategy”). The phasing strategy defines the approach, scope, grouping, timing and sequence for retiring legacy system(s) and deploying the new PeopleSoft HR/Payroll and Oracle E-Business Suite (EBS) financial systems, by function (e.g., payroll, budgeting, procurement, etc.) and by the county department/agency. This document is supported by and related to other DIP deliverables describing the ABT transition strategy, organizational change management strategy and detailed implementation plan.

#### **5.1.1 Implementation Strategies**

There are two fundamental implementation strategies available for software implementations of this size and nature: phased or big-bang. Phased implementation strategies divide specific functions and/or groups into phases for deployment, with each deployment separated by weeks or months to ensure an effective deployment of one phase before moving to the next phase. These cycles repeat until all functions/groups have been deployed. The phased implementation strategy can reduce overall risk and disruption to large, complex organizations and improve concentration on specific organizational or functional groups during training and deployment activities. Phasing, however, comes at a cost. These

costs include developing and managing required temporary interfaces, business practices and infrastructure.

A big-bang implementation deploys all functions and groups at the same time. Although the big-bang strategy shortens the transition and eliminates temporary interfaces, business practices and infrastructure, in some circumstances, it increases the overall risk and causes too much change and disruption to the business all at once. The big bang option was considered for a total deployment of HR/Payroll/Benefits and Financials countywide, but because it simply did not meet the criteria for success and risk avoidance/mitigation, the phased implementation option was viewed as the preferred option.

### **5.1.2 Phasing Approach**

The process began with an analysis of ABT's Scope and how it could be broken down into manageable segments. A decision was made to split the scope into two phases – Phase 1 for years 1 through 3 and Phase II for years 4 through 5. (During the first 3 years the core functionality of HR, Payroll, Finance, and Budget would be targeted and the remaining years 4 and 5 would focus on production completion, value optimizations, and additional functionality.) A discussion of the applications and their proposed implementation timeframe (years 1-3 or years 4-5) is provided in a table at the end of this chapter.

The functional phasing analysis focused on the interdependencies between the areas of HR, Payroll, Finance, and Budget. These interdependencies were measured by the amount and complexity of the integration points between the functional areas. The goal was to find if the functional areas had to be implemented at the same time or if we could stagger the implementations. It was determined Finance would need to be implemented prior or simultaneously with Payroll while HR and Budget could be implemented independently. Labor Distribution and Time Capture functions need to be implemented in conjunction with the implementation of PeopleSoft Payroll.

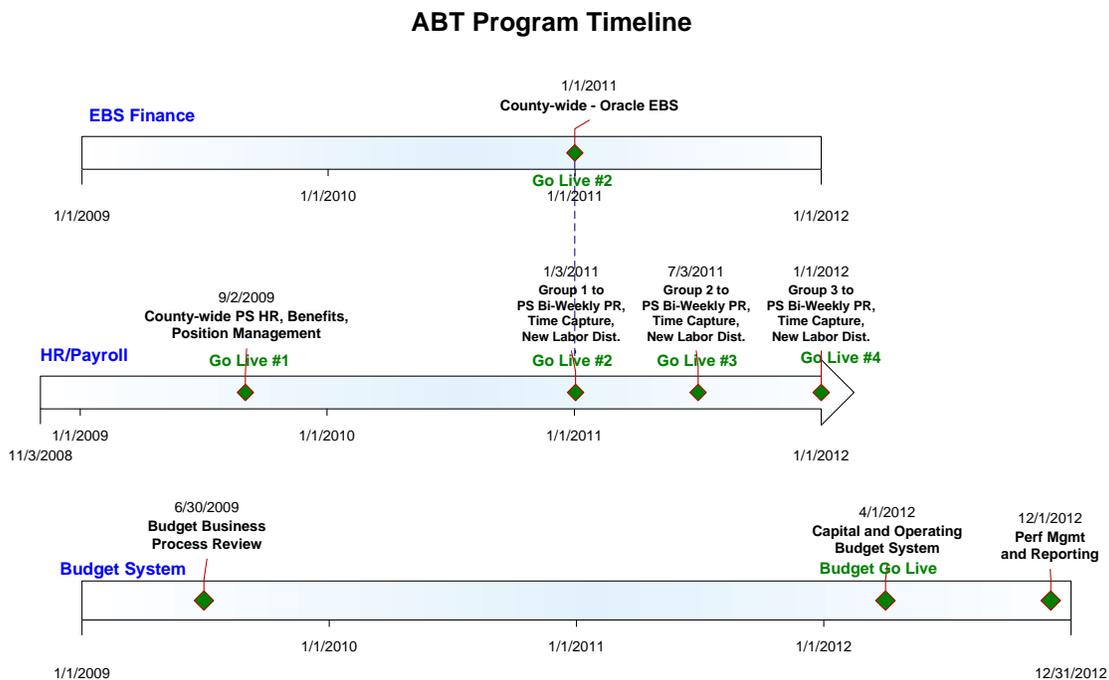
The organizational phasing analysis focused on when ABT would be able to transition smaller sections of the county especially in the area of a bi-weekly payroll migration. The organizational phasing requires coordination with the Labor Relations' efforts for migrating semi-monthly employees to bi-weekly payroll. A dedicated ABT negotiator will be spearheading this effort and providing insight for the possible timeframes for the transitions. A projection of how many users and when they will be migrated are included in the discussion of the recommended phasing option.

### **5.1.3 Recommended Phasing Option**

CIBER and the ABT team reviewed four phasing options to determine the most cost effective solution with the least risk to the implementation timeline. The teams

evaluated various phasing options by grouping logical combinations of organizations and functionality, then methodically assessing each against the predefined selection criteria. Based on review of all of the information, it is CIBER's and the ABT team's recommendation that the option described below be implemented as the county's preferred rollout method for Phase I during years 1-3. A listing of the Phase I applications is discussed in a table at the end of this document along with the applications to be implemented for Phase II during years 4-5.

### Phase I: Single Oracle EBS (Financials) implementation, multiple rollouts of PeopleSoft Payroll



MSA and ARMS users will be migrated to PeopleSoft HCM and Oracle EBS in four steps, or Go Lives. (All rollout dates assume a project start date in November, 2008 after approved appropriations and release of funding.)

**Go Live #1** will occur in September 2009 and will be a countywide migration to PeopleSoft 9.0 HR, Benefits and Position Management. This migration will make PeopleSoft HR the county's HR system of record. Go Live #1 will also consist of an implementation of PeopleSoft version 9.0 for current PeopleSoft Payroll and Time & Labor users.

**Go Live #2** will occur in January, 2011 for the entire county making Oracle EBS the financial system of record. Oracle EBS modules to be implemented include General Ledger, Accounts Payable, iExpenses, iSupplier, Procurement,

iProcurement, Procurement Intelligence, Inventory, Order Management, Accounts Receivable, Advanced Collections, Cash Management, Fixed Assets and Projects/Grants.

Several semi-monthly agencies (Group #1) will be migrated to PeopleSoft bi-weekly payroll at the same time as the migration to Oracle EBS. Group #1 will use PeopleSoft Time and Labor as the rules engine for time allocation and Absence Management for leave tracking. PeopleSoft's Absence Management's functionality will be turned on to track absences and to begin building absence history for PeopleSoft payroll. For semi-monthly agencies waiting to transition to PeopleSoft bi-weekly payroll, MSA payroll transactions will be interfaced from ARMS to Oracle EBS. (Further details of the transitional interfaces can be found in the Transition Period Strategy Document.) A custom Labor Distribution module will be implemented for groups as they are moved to PeopleSoft payroll.

**Go Live #3** will occur in July 2011 for Group #2 of semi-monthly agencies moving to PeopleSoft and the bi-weekly payroll cycle. The determination of Group #2 agencies is dependent upon successful effects bargaining. As agencies are moved to PeopleSoft, their time collection systems will either be migrated to PeopleSoft Time and Labor or interfaced into the PeopleSoft Time and Labor module.

**Go Live #4** will occur in January 2012 and move the remaining semi-monthly agencies to PeopleSoft and the bi-weekly payroll cycle. As agencies are moved to PeopleSoft, their time collection systems will either be migrated to PeopleSoft Time and Labor or interfaced into the PeopleSoft Time and Labor module.

The **Budget System Project will also have a phased implementation approach.** A Business Process Review will be conducted with an expected completion date of June, 2009. The review will define the new business processes for both Capital and Operational budget development and maintenance, and set the stage for the technical design of the new system. Implementation of the new Budget System will occur in April, 2012 to support the development of the 2013 CIP and Operating budget. At that time, improvements to facilitate budget monitoring including improved integration between the budget system and PeopleSoft and Oracle EBS will be made. In December 2012, the budget system project will implement performance management and reporting. Although the Budget System deployment is scheduled for 2012, it is still considered part of the Phase I core implementation and is part of the Years 1-3 appropriation request.

CIBER is recommending this phasing option for the following reasons:

- ✓ This option will move the county to one financial system of record in the quickest amount of time (January 2011).

- ✓ There is limited risk since after Oracle EBS becomes the financial system of record, the system implementations between HR/Payroll and Finance do not need to be linked. The only true limitation at that point is that Oracle EBS Finance (including Labor Distribution) needs to go live before an agency is migrated from semi-monthly to bi-weekly payroll.

## **Phase II – Year 4 and 5 Initiatives**

After making a recommendation on what will be deployed in years 1-3, CIBER and the ABT team developed the optimal deployment schedule for Phase II (years 4-5). The ABT project team evaluated the functionality that could be reasonably implemented during the support period of the newly implemented Core systems. Phase II can be broken down into 3 areas of focus: Production Completion, Value Optimization and Additional Functionality.

### **Production Completion**

- ✓ Continue post implementation support for the last semi-monthly to bi-weekly migrations
- ✓ Decommission of ARMS/MSA
- ✓ ARMS Web reports will be retired by the end of Year 3.
- ✓ Human Resources Data Repository (HRDR) will be retired in Year 4
- ✓ Business Process Cost Benchmarking will be conducted in 2014 to provide evidence of improvements resulting from the ABT Program implementations.

### **Value Optimization**

- ✓ Reporting Functionality
  - Build a reporting database that serves as a common reporting database for countywide reporting.
  - Metrics based reporting capability is recommended to be built using Oracle Business Intelligence Enterprise Edition (OBIEE) tools (or an equivalent reporting tool that may be acquired as part of the Budget System procurement). The recommendation includes building Reports and Dashboards that can readily used by users as well as providing the users with views (subject areas) that can used to create ad-hoc queries and reports. OBIEE can run across both the PeopleSoft and Oracle systems.
  - IBIS Web Reports will continue to be available to the users, but will use the central reporting database as a data source rather than Oracle EBS or a Copy of Oracle EBS as the data source.
- ✓ Archiving Study

- CIBER and the ABT team are recommending an archival study and subsequent RFP process be conducted in years 4-5. The process of defining the business requirements of an archiving solution is a project that will need to be completed before an RFP can be issued for a tool. CIBER and the ABT Team have priced the cost of the study as well as the RFP process into the overall cost of the program.
- Further information on archiving can be found in the Data Management plan for ABT deliverable. In this deliverable CIBER and the ABT Team describe a two phased approach for archiving:
  - Phase I – Archiving data from a conversion perspective during project implementation.
  - Phase II – Archiving study for future needs.
- ✓ Recruiting Optimization
  - CIBER and the ABT team are recommending a review of the NeoGov functionality to determine if business needs warrant rollout of PeopleSoft’s recruiting modules. CIBER and the ABT team have priced the cost of the implementation of the PeopleSoft modules listed below.
  - Talent Acquisition Manager, (formerly eRecruit Manager Desktop), is an advanced applicant tracking PeopleSoft module designed to expedite the hiring process and allows employees and external candidates to search, view, and apply for jobs online.
  - Candidate Gateway, (formerly known as PeopleSoft’s eRecruit), enables the county to advertise employment opportunities and build relationships with employees and top candidates using an external portal solution.
- ✓ Performance Evaluation
  - ePerformance: Allows managers, employees, and HR administrators to collaborate on performance evaluations and goals, review performance history, and monitor and manage the overall performance process.
  - eCompensation: Allows employees to review their compensation history online. It allows employees access to their historical information such as the details of pay and job changes.
  - eCompensation Manager: Allows manager's to administer compensation programs for employees through compensation planning, administration, and reporting activities. Managers gain

easy online access to total workforce compensation information that they can then use to request or perform salary changes.

- ✓ Leave Administration through Absence Management:
  - Combines employee and manager self-service functionality to help the county track and analyze consolidated absence and leave accrual information. This includes:
    - Submitting absence requests for approval and viewing status.
    - Viewing current and projected absence balances.
    - Configuring request approval functionality, including multilevel approvals and alternate approvers.
    - Configuring absence accrual and consumption functionality, including a rules engine to compute the most complex accrual and consumption logic.
- ✓ Governance, Risk and Compliance (Internal Controls Manager): Allows organizations to monitor critical application access, configurations, and transactions to ensure that operations adhere to county or regulatory policy and will help identify breaches and correct them as early as possible.
- ✓ iProcurement: (Additional rollout). iProcurement is a phase 1 module that provides a Web-based shopping system that allows employees to create, manage, and track their own orders while the Purchasing department retains central control. In phase 2, additional web catalogs and new electronic “punch outs” will be made to expand the use of automated purchasing processes.

### **Additional Functionality**

- ✓ ELM (Enterprise Learning Management): Allows the county to proactively manage their learning environment, ensuring that employees acquire knowledge and skills consistent with corporate objectives. This solution will help achieve and maintain regulatory compliance by automating learning delivery, tracking the completion of certifications, and enabling the review of standard operating procedures. Advantages include:
  - Create catalogs of courses enterprise wide or by line of business, and drive learning training by job code or events
  - Cut learning costs and measurably improve business performance by automating the advertisement, registration, delivery, tracking, and reporting of all learning training throughout your organization
  - Manage learning outcomes by developing company-wide training programs
  - Maximize limited budgets and expand your audience using multiple learning channels, including web-based seminars.

### **5.1.4 Table of Scope Phasing – Phase I and Phase II**

Listed below are all of the items that ABT considered in scope:

<b>Modules</b>	<b>Phase I (Years 1-3)</b>	<b>Phase II (Years 4-5)</b>	<b>Not in Scope</b>
PeopleSoft modules: Workforce Administration, Position Management, Profile Management, Ben Admin, Payroll, Time and Labor, HRMS Portal Pack, ePay, eDevelopment, eBenefits, eProfile, eProfile Manager, UPK	X		
PeopleSoft module: Absence Management	X (partial)	X	
PeopleSoft modules: Talent Acquisition Manager, Candidate Gateway, eRecruit, ePerformance, eCompensation, eCompensation Manager, ELM		X	
PeopleSoft module: Enterprise Portal (Functionality provided by Portal Pack)			X
Oracle EBS modules: General Ledger, Accounts Payable, Accounts Receivable, Fixed Assets, Cash Management, Advanced Collections, iExpenses, Purchasing, iProcurement, iSupplier, Inventory, Order Management, Procurement Intelligence, Project Costing, Grants	X		
Oracle EBS modules: Internal Controls Manager		X	
Oracle EBS modules: Sourcing, Project Management, Treasury, iAssets, Procurement Contracts			X

For further details please refer to Appendix B – Functional and Organizational Phasing Plan.

## **5.2 Fit/Gap Analysis Strategy Plan**

The fit/gap analysis is a step in the implementation process to determine the appropriate “fit” of the county business requirements against the Oracle and PeopleSoft business applications and to determine a viable resolution for any “gaps”.

The overall objective of the fit/gap analysis is to ensure a majority of the county’s requirements are met.

The implementation fit/gap analysis will build on the work already completed by ABT in the HLBP, HLBD and DIP. During the DIP, work sessions were held to

confirm or refine high level business design results for Finance as well as Human Resources, Benefits, Payroll and Time & Labor.

**Key examples are listed below:**

**Finance**

- Migrate to a single source for financial management functions on a fully integrated system.
- Re-implement with a fresh install of Oracle EBS Release 12. System configuration changes (i.e. chart of accounts structure), system organizational changes (i.e. new Departments/Agencies), data cleansing/consolidation issues and configuration flexibility are the primary reasons for the re-implementation approach rather than the IBIS upgrade approach. (The Current IBIS Oracle EBS Release 11.5.10 will be retired).
- Define a chart of accounts (COA) structure as: fund, cost center, account, project, secondary fund, BARS function and TBD (for future use).
- Oracle EBS will become the cash/GL system of record at the county.
- Implement Oracle EBS Projects/Grants in a project-centric model across the entire county. . The projects/grants module brings great benefits for project and grant cost accounting. A project centric approach refers to using the projects module for both capital and operating budgets, albeit operating budgets will be structured in a straightforward way. This approach will standardize expense and budget tracking processes and ensure that expenditures will post directly to projects and automatically go to the general ledger keeping them both in synch. This model requires that all labor and expenditure transactions capture coding for project, organization, expenditure type, task and award (POETA; award dependent on award project). Projects/Grants will be used for Capital, Grants Sponsored and Operating projects (e.g. cost center projects). (Districts will not be projects-centric; districts will work with General Ledger accounts only.)
- Develop a custom labor distribution interface from PeopleSoft Time and Labor to Oracle Projects/Grants and provide labor-related information and reports.
- Implement National Institute of Governmental Purchasing (NIGP) 5-digit class item codes.
- Use Oracle Cash Management to reconcile bank statements for cash disbursements and receipts.
- Remove some advanced procurement modules from ABT scope: Services Procurement, Sourcing and Procurement Contracts. These modules do not meet King County's requirements nor align with King County's operating model. The core functionality (e.g. online bidding) is not allowed by State law.

## **Human Resources, Benefits, Payroll and Time and Labor**

- Re-implement PeopleSoft HCM with a fresh installation of release 9.0 that includes Human Resources, Benefits Administration, Payroll and Time & Labor (current PeopleSoft release 8.9 will be retired). Retain Training Administration modifications to carry forward existing functionality in release 9.0.
- Migrate to a single source HCM system for Human Resources Management, Benefits Administration, Payroll and Time & Labor activities across all agencies and departments in the county.
- Implement Position Management in PeopleSoft and establish new business process rules.
- The initial implementation of PeopleSoft HCM 9.0 will make PeopleSoft the system of record countywide for Human Resources and position data. A temporary interface will be created to pass Human Resources data to MSA in order to allow MSA to continue to process payroll for employees being paid semi-monthly.
- Departments will be converted from the semi-monthly to bi-weekly payroll cycle using a phased approach as their labor contracts and other constraints allow. (Please refer to Functional and Organizational Phasing document for more details.)
- Implement eProfile countywide (with business rules) to empower employees to review and/or update personal information such as Home Address, Phone Number(s), Emergency Contact(s), Marital Status, Name Changes, and/or Ethnicity.
- Enable PeopleSoft workflow (where beneficial and appropriate) to provide Managers/Supervisors with auto-notification of employee changes thus allowing for more efficient manager and quicker turn-around approvals.

### **5.2.1 Implementation Fit/Gap Methodology**

Fit/Gap activities and deliverables will be the responsibility of the ABT project teams comprised of county and consulting resources. County subject matter experts will provide valuable information to develop and validate the results.

Fit/Gap activities include:

- 1) Conduct fit/gap work sessions for each business process to document current business requirements and business process flows.
- 2) Ensure understanding and soundness of results through participant review of draft documents.
- 3) Assess the relative fit of business requirements and processes against standard, vendor-supported functionality and industry leading practices, and determine gaps that require resolution.

- 4) Determine viable alternatives for resolving gaps consistent with ABT vision and goals, which may result in a re-design of current business processes, manual workarounds or technical solutions requiring software modifications..
- 5) Choose best alternative through analysis of ABT vision and goals alignment, cost/benefit trade-offs, issues, risks, process improvement and potential policy changes. Use the ABT governance approval and change control processes to select alternative, when competing interests cannot be met with one solution.
- 6) Deliver a full set of solution designs and processes that meet the county's business requirements as a conceptual model for configuring and testing the Oracle EBS/PeopleSoft applications.
- 7) Deliver complete and supporting business and functional requirements for data conversions, interfaces, reporting, security, and software modifications.
- 8) Finalize process designs & processes by the end of the design phase (prior to development).

### **5.2.2 Implementation Fit/Gap Deliverables**

Fit/Gap deliverables include:

- Meeting notes, actions and decisions
- Detailed business requirements documents
- Future-state business process diagrams
- Detailed work-around requirements document
- Detailed functional design documents
- Application Configuration documents
- Detailed implementation requirements and impacts for scope or effort changes (required for ABT change control following ABT governance approval process)
- Detailed data conversion requirements document
- Detailed interface requirement documents
- Detailed interface design documents
- Business Requirements/Fit/Gap Matrix

For further details please refer to Appendix C - Fit/Gap Analysis Strategy Plan.

### 5.3 Business Process Redesign Strategy Plan

The implementation of Oracle Financials Version 12 and PeopleSoft HCM Version 9 is designed to provide best practice business processes and system capabilities that will enable Finance and Human Resources to deliver enhanced services and reporting capabilities to the public, employees and managers. The ABT implementation team is committed to the development of countywide standard processes, supported by the selected applications / systems.

As a starting point, the business process redesign methodology will focus on the high-level business processes as identified in the ABT High Level Business Plan and High Level Business Design documents. The list of approved high-level business processes for HCM and Finance is included below:

Function	High Level Business Process
<b>HCM</b>	
	Recruit to Hire
	Leave Administration
	Performance Management
	Position Management / Succession Planning
	Time and Labor
	Training Administration
	System Access
	Payroll
	Benefits
<b>Financials</b>	
	Procure to Pay (AP, iExpenses, PO & iProcurement)
	Financial Accounting and Reporting (GL, FA, Inventory)
	Order to Cash (OM & AR)
	Cost Accounting (Projects / Grants and Labor Distribution)
	Capital Budget Development
	Operating Budget Development

A series of facilitated workshops will be conducted to review current business practices, analyze the sub processes and document the requirements that support the business process. Workshop participants will consist of cross-functional

county users, process owners, subject matter experts, technical staff and management from the various lines of business.

The workshops will also explore opportunities for process innovations that will enable process standardization, reduction of operational cycle times and the elimination of unnecessary steps and approvals.

Follow-up tasks from the workshop will document the redesigned processes that integrate with system functionality in Oracle Financials Version 12 and PeopleSoft HCM Version 9. The process redesign team will obtain agreement from the group they represent for countywide implementation of the reengineered process.

However, it is recognized that in the event a county department / division has sound business reasons for maintaining their variations and the variations are consistent with ABT's Vision and Goals direction, these variations will be documented and managed during implementation.

A traceability matrix will be used as the controlling mechanism during Implementation to link the functional Gaps (see fit/Gap Strategy) to the new process design, the associated test case and impact analysis for training plans.

For further details please refer to Appendix D – Business Process Redesign Strategy Plan.

## **5.4 Reporting Strategy Plan**

The Reporting Strategy Plan recommends addressing reporting out of PeopleSoft 9 and Oracle EBS Release 12 transactional database during the first 3 years of the ABT Implementation and moving towards a common reporting platform during years 4 and 5. The strategy plan also addresses the reporting data model, tools and technologies that will be used to achieve the stated objectives.

### **5.4.1 Reporting Landscape**

The recommendation for the reporting strategy is phased into two separate approaches:

- Reporting Landscape - Year 1 through Year 3: The recommendation for the first 3 years is to focus on operational reports and providing ad hoc reporting tools to cover the needs of day-to-day management.
  - Oracle EBS and PeopleSoft 9 will serve as the respective reporting databases for transactional reporting for Financials and Human Capital Management(HCM)

- Some reports will be developed using reporting tools that are available within Oracle EBS and PeopleSoft 9, while some other reports will be developed using new report development tools.
  - Reporting out of Harrier database and ARMS Web reports tool will continue as it is currently done. These reports will continue to be valid for departments who have not migrated to the new Oracle EBS system.
  - IBIS Web Reports will continue to be available through Year 3. Data will be provided to these reports from Oracle EBS transactional database. Though no new interfaces have been identified to support IBIS Web Reports from Oracle EBS at present, IBIS interfaces currently providing data to IBIS Web Reports will need to be modified to reflect Oracle EBS and PeopleSoft 9 data structures.
  - HR/Payroll Web Reports (PAYREPS) will be upgraded to match the PeopleSoft 9 schema. New source data may need to be mapped to the reporting solution during ABT phasing.
- Reporting Landscape - Year 4 and beyond: The recommendation for 'Year 4 and beyond' would be to build a reporting database that serves as a common reporting database for countywide reporting and to implement new reporting tools that can access HR and Financial data. Metrics based reporting provides a set of trend graphs and business intelligence reports that deliver the span and density of information needed for a given role. Managers can drill from the summarized information on each dashboard to detailed reports or to specific transactions in the underlying applications.
    - Metrics based reporting capability is recommended to be built using Oracle Business Intelligence Enterprise Edition (OBIEE) tools or an equivalent metrics based reporting tool that might be made available to the county through the Budget System selection process. The recommendation includes building Reports and Dashboards that can readily used by users as well as providing the users with subject areas that can used to create ad-hoc queries and reports. Metrics based reports can be built on Oracle EBS and PeopleSoft 9.
    - IBIS Web Reports will continue to be available to the users, but will use the central reporting database as a data source rather than Oracle EBS or a Copy of Oracle EBS as the data source.
    - ARMS Web reports are planned to be retired by the end of Year 3. This is dependent on various project milestones including HR Payroll Reporting success. Once agencies have moved off of ARMS the Harrier database may continue to have value for historical reporting purposes. If the ARMS or Harrier data is still needed it will be migrated into the consolidated reporting

database has a static historical data store.

#### **5.4.4 Inventory of Reports**

The Detailed Implementation Plan has identified several lists of reports. As with most new ERP implementations, estimating custom reports on a new ERP system from a list of existing reports will not provide quantification for reports that will no longer be needed, nor new reports that will be needed as a reflection of the new business processes.

- Reports that have been custom developed and are currently used in IBIS and PeopleSoft 8.9 will be migrated to Oracle EBS and PeopleSoft 9.0 respectively, based on current user needs. An effort will be undertaken to determine if any reports can be retired based on volume or availability within Oracle EBS and PeopleSoft 9.
- Oracle EBS and PeopleSoft 9.0 provide several standard reports within each module. During the implementation, each of these standard reports will be analyzed to determine if the report provides the required information. A limited number of custom reports will be developed where the standard reports do not meet the requirements.
- The implementation team will convert some of the highly used Oracle Standard Reports within Oracle EBS to PDF output. This will make the reports more legible and easier to use without having to print.
- Custom reports will be developed using the recommended tools only if standard reports do not meet the needs. To limit reporting scope, a set number of custom reports will be allowed based on the system integrator's contractual obligations.

For further details please refer to Appendix L – Reporting Strategy Plan.

## 5.5 Data Management Plan

The data management strategy plan recognizes the need to treat information as a corporate asset by ensuring that it is properly managed, secured, and available to all staff that needs it to perform their jobs. This goal eliminates redundant data entry, provides employees with appropriate access to data, and requires that all future information systems support enterprise requirements for information. This includes developing integrated information systems to support the management of corporate information and providing employees with efficient processing of data. It additionally includes integrating our administrative (financial/human resources) data for effective knowledge management.

This plan addresses changing data structures due to business process redesign and the migration from disparate systems to a single HRMS and Financial system. It recognizes that system migration is an ideal time to archive older data during the conversion process. The data management strategy includes: mapping data values for new system compatibility, conversion approach, process, tools and team roles and responsibilities. The plan also addresses the need to further examine on-going data archiving tools for future uses to address system performance, business data storage and retrieval, and information retention requirements.

The first part of the Data Management Plan lays out the data migration strategy by providing a blue print for migrating data from legacy systems. The second part lays out the steps that need to be taken for managing data and maintaining data integrity and data quality. The last part provides an archiving plan for the ABT Program. The high level objectives of data management plan are,

- Enable data storage and retrieval in the new production systems by describing the data that will be converted into the new systems.
- Ensure data integrity and data quality.
- Data Archival Plan for system performance and historical reporting.

The plan addresses two phases for the Data Management Strategy:

- Years 1-3 utilizes the approach to data migration as a means to meet the core objectives of the strategy for essential performance, integrity, and storage and retrieval requirements.
- Years 4-5 focuses on the requirement to enable a long-term data archive system which the benefits of will be best realized from a common, stable system and data platform and where users can make archive and retention decisions based on their experience with the platform.

### Data Migration Scope and Approach

This includes key decisions on what type of summary and transaction data to be migrated from the legacy tools and retiring side systems to the new production suite and which data will be retained within the reporting archive repository. These decisions will be revisited and confirmed during the project fit/gap phase. The approach walks through the plans for:

- Data Preparation
- Data Extract, Transform and Load
- Monitoring and Control
- Mock Conversion
- Handling Sensitive Data
- Conversion Approvals

### Migration Tools

Data integrity is core to the data management strategy plan, and also core to the data migration approach. The tools selected for the approach reduce the data integrity issues by utilizing the data integrity enforcement by the load rules within the system suite. Within the plan, migration tools are aligned to the nature of the targeted data as well as the systems related to the migration scenario. The different tools include; Programmatic Conversion (SQL Loader / SQL / PLSQL / APIs), Data Loader, Application Desktop Integrator (ADI), as well as manual data conversion.

### Coordination – Roles and Responsibilities

To ensure data extractions and transformations are appropriate, a team of data validation experts will be in place surrounding the different data sets throughout design, development and testing phases. These roles and responsibilities bridge the ABT Implementation Team, the King County Business Owners and the data users. They are outlined as follows:

- Department Data Owner: The role of the data owner will include reviewing and approving correct or appropriate source of data, perform data cleansing in the legacy system, correct or appropriate structure of data format / record and that the results of the conversion produced valid results.
- Department Data Analyst: The role of the data analyst will include review and approval of data and will include data mapping from old to new.
- ABT Functional Lead: Review and approve the mapping of functional impact back to design and validate and reconcile data after conversion of data.
- ABT System Integration Functional: Review and approve mapping to use case and screens. The SI will also provide a detailed conversion design document along with rules for transformation and data validation. The document will be used by the technical developers to write conversion programs.

These teams will engage in the appropriate communications for the development phase they are in:

**Data Cleansing:**

The ABT Technical team will provide error logs to ABT functional team so that cleanup may be done for those errors. Any changes to the conversion programs that may result will be fixed by the technical team.

**Development and Testing Iterations:**

The technical team will coordinate with project management for the scheduling and approvals for testing iterations.

**Data Validation:**

The technical team will coordinate with ABT functional team to validate the data converted into the target application. Any changes to the conversion programs that may result will be accomplished by the technical team.

**Conversion Approvals:**

The technical team will coordinate with the project management to get the approvals for each conversion identified in the conversion list

Data Archival

Data Archiving for years 1-3 of the program is addressed within the primary migration sets, and falls into two categories:

- Data archiving for System Performance: Data that is removed from the transactional database tables in order to enhance system performance. For example, to improve system performance, data that is over a certain number of years old and is not transacted against, is moved to separate tables within the database or written to a tape and deleted from the transactional database.
- Data Archiving for Historical Reporting: Data is stored outside of the transactional database for historical reporting or analysis. For example, Data that needs to be reported on, but has not been migrated to the production instance can be archived in a database for used as the data source for historical reporting.

Data Archiving for years 4-5 is addressed with a plan to baseline the data set within the production suite and establish programmatic rules by which to apply data archive, retention and reporting requirements against. The purchase of the tool to be used for this activity is not within the current plan.

For further details please refer to Appendix M – Data Management Plan.