

CA - PMM

Project Name: Migration from Legacy System to the CDPH Information Technology Infrastructure

OCIO Project #:

Department: California Department of Public Health (CDPH)

Revision Date: 9/13/10

Concept Statement

Description

Brief description of the proposed project:

Funding Source: 100% Health Statistics Special Fund (HSSF 0099)

Center: Health Information and Strategic Planning (HISP)

Start Date: 07/01/2014

End Date: 03/20/2017

Is BCP Needed: 13/14

CDPH 2008-2010 Strategic Plan: 1, 3, and 5

CA IT Strategic Concepts and Strategies: 1 (1, 2, 3, 4) and 4 (1, 5)

AIMS: 1 (2, 3, 4, 5), 2 (1, 2, 3, 4), 3 (1, 3), and 4 (2, 3, 4)

Project Description: For at least the past 30 years, the California Department of Public Health (CDPH) and the Health for Information Strategic Planning (HISP) have developed, improved and operated the Legacy (Mainframe) birth, death, fetal death, data processing and editing system. As the HISP has moved to the Internet and web browser based vital records systems, a need has developed to fundamentally change the way data is processed in the Center. With the advent of web-based systems, the data arrives on a flow basis rather than in the old batch process. The HISP would like to leverage this change in data flow and consolidate existing legacy data so as to be able to quickly process and disseminate this important information and data back out to our customers. This will require that the HISP to change or convert its current data processing system and databases and, at the same time, migrate to a more modern client server data processing model well aligned with the industrial best practice.

Need Statement

High Level Capabilities Needed:

The new process must interface with current HSB birth and death registration systems to convert the current batch-processing based Legacy system to a web-based system that will allow data to flow between current HSB systems on an ongoing, real time basis. These systems are client-server based. In-house staff is well-versed in the current system functionality and database design. Capturing and packaging data for dissemination in the formats needed by HSB customers will allow processing to be done in a more timely manner.

IT Projects will meet the requirements for accessibility for disabled persons as stipulated in the IT Policy Letter (ITPL) 10-10; State Administrative Manual (SAM) Sections 4819.2 and 4833; and Statewide Information Management Manual (SIMM) Sections 20, 25, 30.

CA - PMM

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What is Driving This Need?

This project supports the following CDPH goals:

Goal 1: Increase Quality and Years of Healthy Life, Reduce Disparities and Promote Health Equity

Goal 3: Improve Quality and Availability of Data to Inform Public Health Decision-Making

Goal 5: Improve Effectiveness of Business Functions C142

The current batch processing functionality of the Legacy system has resulted in significant edit exceptions and delays in providing data to outside customer agencies (for example, providing death data to the Social Security Administration) and difficulty in finding staff with the expertise to support the legacy programming.

Conversion to more modern data processing models will allow the HSB to be able to more quickly and efficiently process the data arriving via the automated systems. At the same time, the new system will be more flexible and easier to support. As this new system will utilize current well-known standards, it will be simpler to find support staff and system operators. These changes will make the HSB more capable and more timely in the completion of its business and can be leveraged to be able to do more with the same or fewer staff. As mainframe systems age, the expertise to maintain these systems is more and more difficult to locate. This conversion will remove that major burden from IT and allow IT the time to concentrate on business problems instead of maintaining an aging system.

Risk to the Organization if This Work is Not Done:

The current legacy system is aging and the expertise to maintain the system is slowly being lost. The older the existing system becomes, the greater the risk it will fail outright, or HSB will find itself in a situation where it can no longer meet the needs of the business. As long as vital records processing is linked to the legacy processing cycle, HSB can not utilize data it is collecting via its other systems to the best of its ability. This impacts the delivery of data to customers and the current delays and processing will continue until improvements are obtained. These processing delays have resulted in delaying receipt of payment from the customer agencies.

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Benefit Statement

Intangible Benefits

Process Improvements (describe the nature of the process improvement):

Conversion to more modern data processing models will allow the HSB to be able to more quickly and efficiently process the data arriving via the automated systems. At the same time, the new system will be more flexible and easier to support. As this new system will utilize current well-known standards, it will be simpler to recruit support staff and system operators by tapping into a larger pool of candidates. These changes will make the HSB more capable and provide more rapid completion of its business and can be leveraged to be able to do more with the same or fewer staff. As mainframe systems age, the expertise to maintain these systems is more and more difficult to locate. This conversion would remove that major burden from IT and allow IT the time to concentrate on business problems instead of maintaining an aging system.

Other Intangible Benefits:

Improving the timely delivery of data to our customer agencies will improve our working relationships with those agencies. In the past, the Department has received criticism for its inability to provide data in a timely manner due to the Legacy system. This has produced a ripple effect by delaying processes in some of our customer agencies.

Less redundant processing of data uses will occur from having to "recode" and reorder data into the Legacy format. Implementation of this project will produce savings in processing time, staff time and energy use. Additionally, this project aligns with the CA IT Strategic Plan as follows:

Concept 1. IT As Reliable as Electricity

Strategy 1: By making the data into a more flexible standard format; so it will be more flexible and accessible to customers

Strategy 2: By consolidating and incorporating/migrating Legacy batch processing data into a centralized data warehouse with higher security and capacity storage

Strategy 3: By developing a web-base interface ease data access with high compliance security incorporate

Strategy 4: Through the creation of HSB-Central Vital Event Data Warehouse and System, meeting a higher standard of service to our customers

Concept 4: Information as an Asset

Strategy 1: By modernizing the Legacy system and

Strategy 5: Our information will be more readily accessible.

CA - PMM

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Concept Statement

Tangible Benefits

Revenue Generation (describe how revenue will be generated):
HSB has contracts and agreements with various agencies to provide birth and death data. Delays in providing this data has resulted in delays in receipt of payment. Since HSB is funded totally by these fees (special funds) any delays in payments have a negative impact on the HSB operating budget. Initial estimates of revenue generation are \$5,000,000 per year.

Cost Savings (describe how cost will be reduced):
N/A

Cost Avoidance (describe the cost and how avoided):
N/A

Risk Avoidance (describe the risk and how avoided):
N/A

Improved Services:
N/A

CA - PMM

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Consistency

"No" Responses 		Rationale	Action Required
Enterprise Architecture	Yes		
Business Plan	Yes		
Strategic Plan	Yes		

Impact to Other Agencies

Nature of Impact to Other Agencies

Agency: Various State and Federal Agencies
Describe the nature of the impact:
 The current delays and processing will continue until improvements are obtained and result in delaying data availability for local, state, federal and other government agencies (NCHS, SSA, DOJ, CHP, DHCS, CDSS) and other customers (UCD, UCLA, UCB). The impact to these customer agencies is very severe since they depend on benefit verification, cancelation, and research projection.

Agency: Department of Finance
Describe the nature of the impact:
 The development and implementation of this project will have a positive impact on the Department of Finance (DOF) for use in its demographic reports.

Agency: Employment Development Department
Describe the nature of the impact:
 The development and implementation of this project will have a positive impact on the Employment Development Department (EDD) by providing a verification tool regarding applicants for unemployment benefits and cancelation.

CA - PMM

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Agency: State Controller's Office

Describe the nature of the impact:

The development and implementation of this project will have a positive impact on the Sate Controller Office by detecting and preventing fraudulent benefit claim.

Solution Alternatives

Alternative 1:

Alternative Description: Consolidate various existing legacy systems into one standardize data format in a centralize data warehouse with new technology that is more secured and efficient with high capacity storage. Position agency to tap into new and existing technical resource in the market. Elimination of the Legacy systems, reduce support PY and reduce maintenance operation overhead cost.

Technical Considerations for Alternative 1:

Hosting Location: OTech

Developing a centralized data warehouse using Microsoft SQL or Oracle Relational Database Management Servers (RDBMS) that is more robust and secure with huge capacity storage. Then develop a distribution interface that will allow users and/or customer agencies to have real time data access.

ROM Cost: \$362,500 to \$1,087,500

Note: high end of range must not exceed 200% of low end of range

Alternative 2:

Alternative Description: Continue with current HSB operation that depend on legacy systems with a combination of intensive and slow manual labor; while not fully utilizing the data to its best advantage.

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Technical Considerations for Alternative 2:		
Hosting Location: OTech Extract data from current new systems, reformat, and feed into Legacy Systems that were developed 30 years ago.		
ROM Cost:	to	Note: high end of range must not exceed 200% of low end of range

Alternative 3:
Other Alternatives will be discussed during the Feasibility Study and documented in the Feasibility Study Report (FSR).

Technical Considerations for Alternative 3:		
Technical considerations for other Alternatives will be discussed during the Feasibility Study and documented in the FSR.		
ROM Cost:	to	Note: high end of range must not exceed 200% of low end of range

Recommendation

Comparison:

Alternative 1	ROM Cost		Risk
Consolidate	\$362,500	- \$1,087,500	<i>Improve services with appreciable increase in revenue</i>
Alternative 2	ROM Cost		Risk
Do Nothing	\$0	- \$0	<i>The Branch will continue to have very long delays in responding to requests, which have resulted in delaying receipt of payment from the customer agencies.</i>
Alternative 3	ROM Cost		Risk
	\$0	- \$0	

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Conclusions:

1	Proposed a common standard data format for all data sources before consolidation takes place
2	Develop a centralized data warehouse with open architecture for better security and future change
3	Develop a web-based client interface to access the data warehouse
4	Funding Source: 100% Health Statistics Special Fund (HSSF 0099)

Recommendation:

Approve development of this project using Alternative 1. This alternative supports the CDPH 2008-2010 Strategic Plan Goals: 1, 3, and 5 and CA IT Strategic Concepts and Strategies: 1 (1, 2, 3, 4) and 4 (1, 5), and AIMS: 1 (2, 3, 4, 5), 2 (1, 2, 3, 4), 3 (1, 3), and 4 (2, 3, 4)

Project Approach (if known)

System Complexity:		System Business Hours: (e.g., 24x7, 9am-5pm) :		
Architecture	<input type="checkbox"/> Mainframe	<input checked="" type="checkbox"/> Client Server	<input checked="" type="checkbox"/> Web Based	Num. of New Databases:
Technology	<input type="checkbox"/> New	<input type="checkbox"/> New to Staff	<input checked="" type="checkbox"/> In-House Experience	Interfaces:
Implementation	<input checked="" type="checkbox"/> Central Site	<input type="checkbox"/> Phased Roll-out		Num. of Sites:
M & O Support	<input type="checkbox"/> Contractor	<input type="checkbox"/> Data Center	<input type="checkbox"/> Project	<input type="checkbox"/> In House
Procurement Approach:				Number of Procurements:
Open Procurement?		Delegated Procurement?		
Scope of Contract	<input type="checkbox"/> Development	<input type="checkbox"/> Implementation	<input type="checkbox"/> M & O	<input type="checkbox"/> Other:
Anticipated Length of Contract:	Years /		extensions for	years