



Business case for: *DHS Systems Automation and Modernization*

*Oregon Department of Human Services / Oregon Health Authority
Office of Information Services*

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Table of Contents

- 1. EXECUTIVE SUMMARY..... 5
- 2. PURPOSE..... 7
- 3. PROBLEM STATEMENT - PROBLEMS, CHALLENGES, AND OPPORTUNITIES..... 9
- 4. DESIRED BUSINESS GOALS & OBJECTIVES 14
- 5. ALTERNATIVES..... 16
 - a) A. ASSUMPTIONS 16
 - b) B. COSTS 17
 - c) C. BENEFITS..... 18
 - d) D. RISKS 19
- 6. FINANCIAL ANALYSIS..... 20
- 7. IMPLEMENTATION APPROACH/TIMELINE..... 24
- 8. RECOMMENDATIONS..... 25

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Executive Summary

In the 2007-2009 biennium, the DHS Children, Adult and Families division (CAF) initiated the Self Sufficiency Modernization project (SSM) to automate manual processes and modernize aging self sufficiency data systems. The goal was to establish new avenues for improving access for clients to apply for self sufficiency benefits including Supplemental Nutrition Assistance Program (SNAP), Medical, Temporary Aid to Needy Families (TANF) and Employment Related Daycare (ERDC).

Oregon's self sufficiency eligibility systems were designed and implemented in the 1970s and early 1980s and were primarily intended to generate payments. The eligibility process was, and still is, mostly done through manual and paper driven processes.

In 2011, SSM was expanded from a singular technology focus to include modernization of the approach DHS uses to perform work and deliver services. The DHS Modernization effort replaces the former SSM and recognizes the connection between transforming service delivery and technology. Technology re-engineering and replacement is one tool supporting a myriad of service delivery elements including access, eligibility, enrollment, notification, service/benefit utilization, from maintenance to closure.

Automation and modernization of Oregon's self sufficiency system is critical to ensure uniform access for clients across the state. Current systems are largely branch office dependent. Client information required to determine eligibility (demographics, household and financial information) is captured today using a paper process. Information is then manually keyed by caseworkers into multiple systems. There is limited online access for clients to apply for services or estimate eligibility. Eligibility determination by caseworkers is manual and error prone.

Self sufficiency client service begins with client interest and then moves through the application process into client intake, client eligibility determination and provision of benefits. The intent of the DHS Modernization effort (renamed in the 09-11 biennium) is to provide virtual channels of access to clients to determine availability of programs and services, allow clients to apply for programs/services electronically without having to come to a field office and ultimately be able to track and manage their service accounts remotely.

The DHS Modernization project is using an incremental solution delivery approach, starting from a client facing front-end, through caseworker workflow automation to backend system replacement. This project contains inter-dependencies and inter-relationships that are defined to deliver incremental solutions supported under the construct of the overall Self Sufficiency Modernization Program using structured release management practices.

Total expenditures for the Modernization Program are projected at:

07 – 09	\$ 3.20 million
09 – 11	\$ 9.44 million
11 – 13	\$ 23.20 million
13 – 15	\$ 49.90 million
15 – 17	\$ 39.00 million
<i>Total</i>	<i>\$124.74 million</i>

A preliminary model for direct and indirect cost savings has been created. Potential cost benefit value from all DHS Modernization efforts could exceed \$49 million annually. Our

intention is to continue to refine and validate this model. A list of benchmark metrics is included that can be used throughout the Program lifecycle to help track our progress towards these savings goals.

The goal of Modernization is to automate complex activities such as eligibility determination which benefits clients and improves caseworker accuracy and efficiency. Long term, DHS envisions a more integrated solution environment serving client needs and supporting caseworker efforts more efficiency and effectively.

Purpose

Oregon's self eligibility systems were designed and implemented in the 1970s and early 1980s and were primarily meant to generate payments. The eligibility process is still mostly manual and paper-driven. DHS has incorporated the LEAN system to streamline and increase service delivery efficiencies. However the touch points and basic service delivery model remain unchanged. DHS is now assessing transformational ways to improve service delivery and increase the right level of client interaction and support without increasing staff levels.

Transformation of DHS services, initially focused on eligibility is critical to ensure uniform access for clients across the state; current access to data and management of case files are largely branch office dependent. Client information required to determine eligibility is heavy touch and paper based. Substantial manual effort including keying of data into systems and calculation of eligibility is manual. Case files and case management is paper-based and therefore not readily transferable between caseworkers.

Existing systems do not meet the needs of caseworkers or clients, and continue to put children and families in need at risk. There are two primary legacy systems -- SNAP (FSMIS) and the Client Maintenance System (CMS). There are over 35 additional subsystems used to provide, track and maintain caseworker/client interaction information for SNAP, TANF, ERDC and Medical benefits to clients. These systems have over 100 interfaces to other systems within DHS and OHA and with other external entities.

DHS Modernization will support technology needs and business transformation enabling future business strategies to align to a renewed business architecture. The result will be consistent service delivery and maximized economies of scale in social interfaces without geographical constraints that utilizes a full range of technology options including mobile computing, seamless data access and data sharing. This will lead to multiple positive outcomes, greater efficiency for caseworkers and the ability to send referrals based on need and outcomes.

Oracle software (called a "stack") purchased by DHS and OHA in 2011 facilitates agency ability to establish a foundation based on business functions - comprehensive case management (intake, assessment, determination, authorization of services) including intelligent, informed referrals to community and provider services. DHS will be able to track service success and send enhanced referrals based on outcomes with a system that tracks provider services and quality and who we send. Instituting and leveraging data warehouse and master data management capabilities will enable DHS to establish performance metrics and share data in ways not currently possible because of the limitations of existing siloed systems. Technology solutions will enable expanded service access providing increased flexibility for clients through increased client touch points. Combined business service transformation and technology solutions will maximize client self service and improve client choices with respect to how much they need to engage in person.

Modernization includes re-engineering the client experience, the way case workers interact with clients, the interface between the client and DHS, delivery of benefits and replacement of aging technology systems far past their usability. Current manual, paper intensive processes are cumbersome and make information sharing extremely difficult will be automated and streamlined.

Automating eligibility determination will lead to increased accessibility, quality, accuracy, timeliness and improved accountability. Information will be stored and accessed through a

data warehouse that supports federal, state and local operational management and statistical reporting.

Strategically, technology solutions will enable unified case management, a data warehouse based on the principles of master data management, data strategy and data architecture, and a payments system that will replace multiple, disparate payments solutions. The solutions implemented will lay a technology foundation that will further leverage and extend support for other DHS services including intake and screening, case management, permanency, certification, case planning, licensing, provider systems, protective services and developmental disabilities.

More broadly though, our efforts include examining and transforming how we design our facilities, the facility needs, how we connect with our clients and how we expand choices for client engagement. Service delivery locations will utilize the new technology in concert with the need for face-to-face contact.

To achieve these goals and the expanded view of agency modernization, DHS has extended the end date for overall modernization from the initial estimate of 6 years to 10+ years. This will extend overall costs, but the end result will be a significant reduction in the total technology systems used to support DHS – from the current 80+ to a handful of enterprise solutions. This will result in far greater efficiency for case workers in all areas – the ability to view clients and cases in a holistic manner, and having just one version of the truth for data. Technology support will be dramatically improved, time spend implementing policy and other requests will improve significantly and total cost of technology ownership should decline over time.

Problem Statement - Problems, Challenges, and Opportunities

*“We can’t solve problems by using the same kind of thinking we used when we created them.”
- Albert Einstein*

Oregon’s self eligibility systems were designed and implemented in the 1970s and early 1980s and were primarily meant to generate payments. The eligibility process is still mostly manual and paper-driven.

DHS has incorporated the LEAN system to streamline and increase service delivery efficiencies. However the touch points and basic service delivery model remain unchanged. DHS is now assessing transformational ways to improve service delivery and increase the right level of client interaction and support without increasing staff levels.

Transformation of DHS services, initially focused on eligibility is critical to ensure uniform access for clients across the state; current access to data and management of case files are largely branch office dependent. Client information required to determine eligibility is heavy touch and paper based. Substantial manual effort including keying of data into systems and calculation of eligibility is manual. Case files and case management is paper-based and therefore not readily transferable between caseworkers.

Existing systems do not meet the needs of caseworkers or clients, and continue to put children and families in need at risk. There are two primary legacy systems -- SNAP (FSMIS) and the Client Maintenance System (CMS). There are over 35 additional subsystems used to provide, track and maintain caseworker/client interaction information for SNAP, TANF, ERDC and Medical benefits to clients. These systems have over 100 interfaces to other systems within DHS and OHA and with other external entities.

Automation and modernization of these systems is critical to ensure uniform access for clients across the state; current systems are largely branch office dependent. Client information required to determine eligibility (demographics, household and financial information) is captured today using a paper process. Information is then manually keyed by caseworkers into multiple systems. Online access for clients to apply for services and online estimation of eligibility is limited. Eligibility determination by caseworkers is manual and error prone.

Caseworkers rely on more than 35 aging, disparate systems to provide services to clients. These systems utilize aging, difficult to sustain technology. In addition, it is becoming increasingly difficult to hire knowledgeable staff who have skill sets for understanding and maintaining these legacy systems because the development languages are obsolete in the industry.

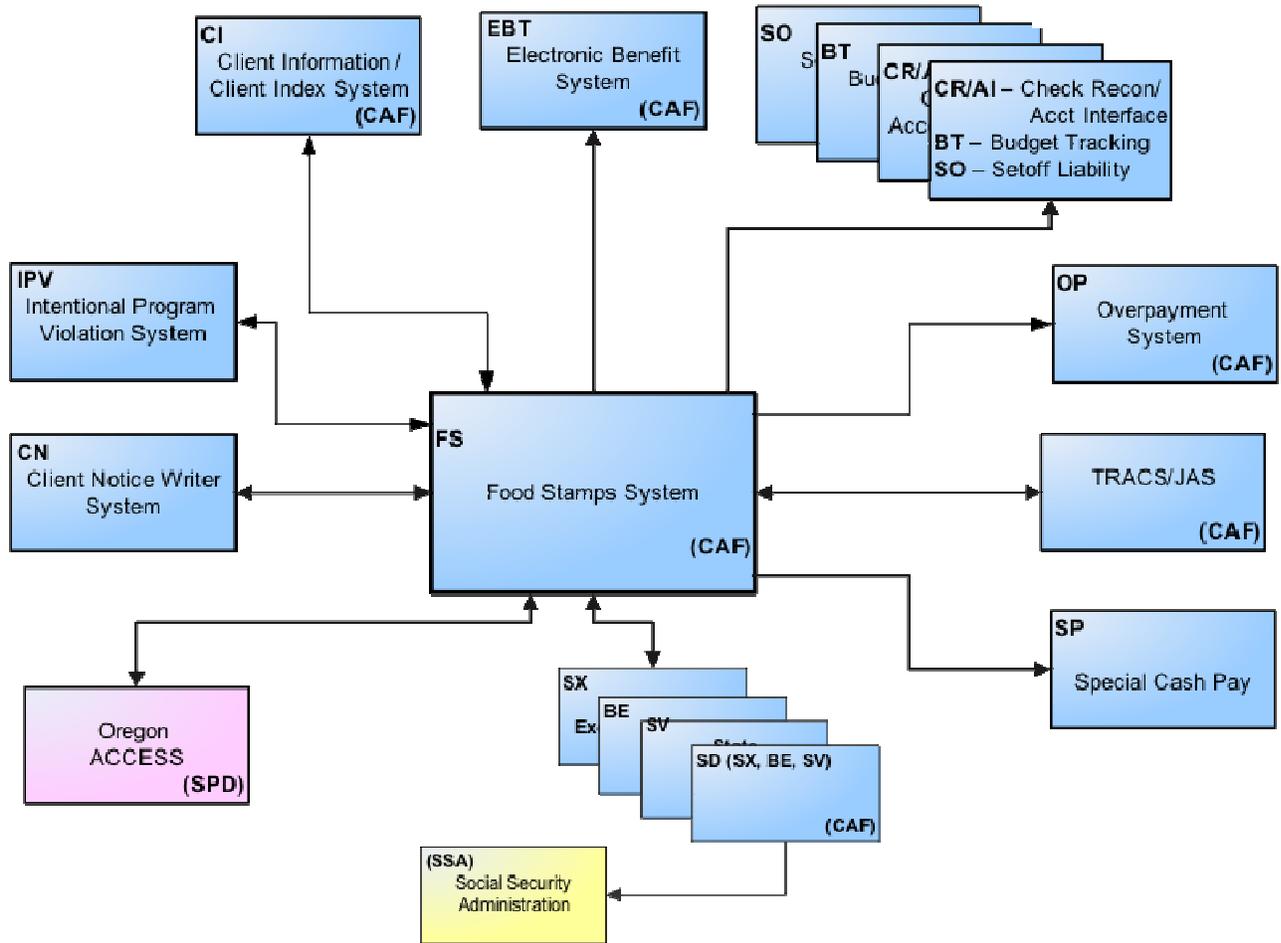
DHS and OHA systems have myriad of custom-build, non-standard interfaces to other systems, resulting in a technical environment not conducive to making timely, efficient changes in response to federal or state mandates and to support caseworker needs.

Caseworkers must log the same data multiple times into different system; information is not readily shared between systems.

There are two primary legacy systems – SNAP (FSMIS) and the Client Maintenance System (CMS) – in addition to more than 35 additional subsystems used by Self Sufficiency to provide, track and maintain caseworker / client interaction information for SNAP, TANF, Employment Related Day Care and Medical benefits to clients. Self Sufficiency systems have over 100 interfaces to other systems within DHS, and with external entities.

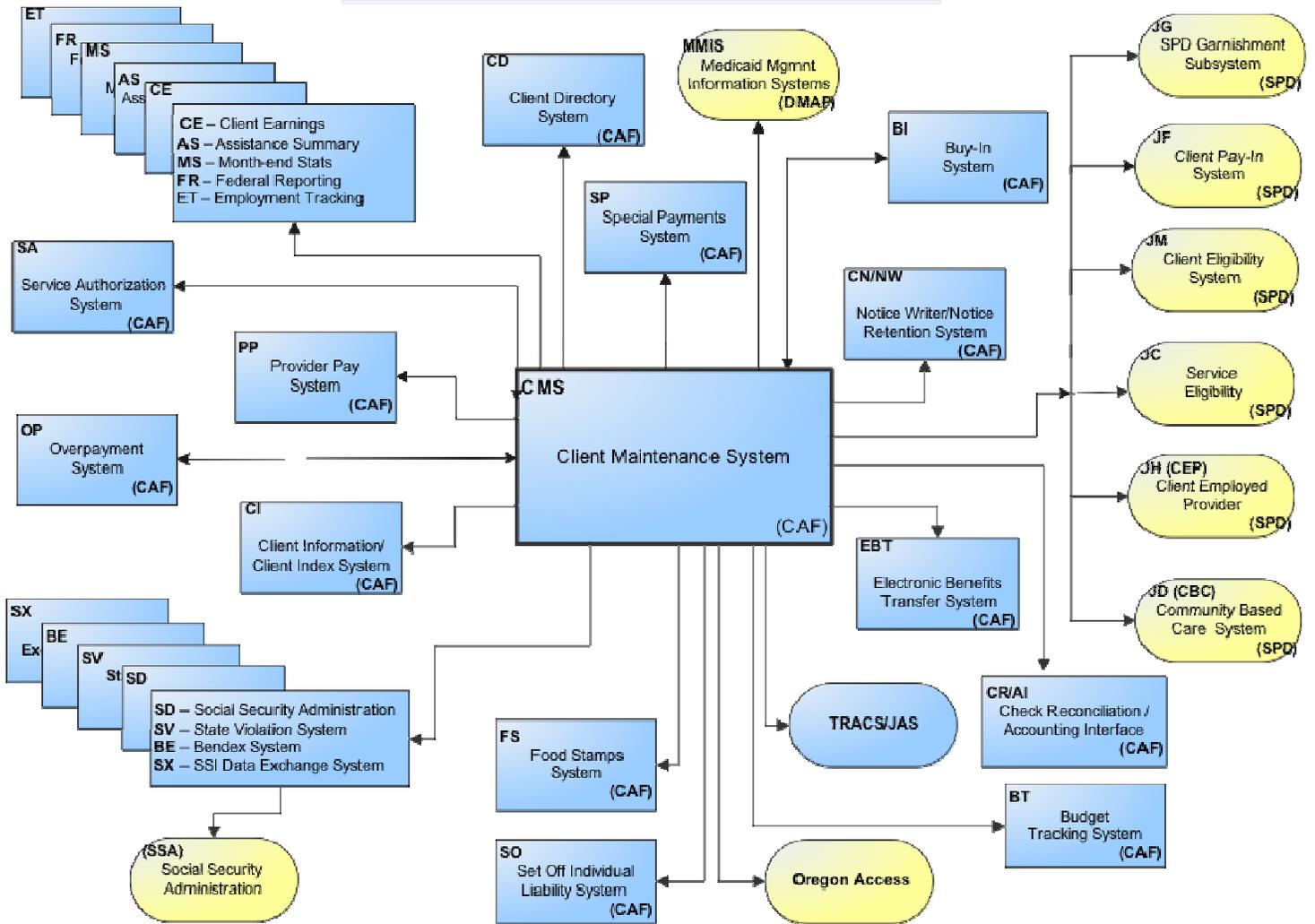
Graphic showing the current primary state of the Food Stamp system and Client Maintenance System are shown on pages 9 and 10.

FS – Food Stamps System
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CMS – Client Maintenance System

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Problems/Challenges

- Caseworkers spend a disproportionate amount of time performing data entry and dealing with system inefficiencies, time that could be much better spent providing direct services to clients.
- Information systems were developed in the 1970s and early 1980s and are now 30-40 years old, have weak interoperability, and require manual and duplicate data entry.
- Significant effort is required to implement code changes in response to policy and legislative actions. These code changes are time consuming, repetitive, and expensive because of the complexity of the legacy systems and the utilization of outdated technologies not centered around service oriented architecture and reuse principles. The programming languages used for these systems are no longer readily supported by the general IT industry.
- Increase error rate probability due to manual decision processes and complexity of eligibility rules. These errors lead to both over- and under-payment of program benefits.
- Require staff with a unique talent-set to maintain. Because the legacy systems utilize outdated programming languages, it has become increasingly difficult to hire new staff that understands the legacy technology. Furthermore, the agency understands that significant numbers of currently employed technicians will qualify for retirement soon. Comprehensive succession planning is critical.
- A comprehensive view of a client's service support is not available. All case data is not available to all caseworkers, limiting knowledge of what services a client is receiving and the ability to track other services essential to improving family wellbeing.
- System inefficiencies reduce case worker contact with families. Inefficient system and lack of automation of medical determination contribute to high medical eligibility error rates, excessive administrative and clerical workload for caseworkers, resulting in less time spent providing direct services to clients in need.
- Data duplication increases data security risks and reduces data integrity. This also impacts reporting accuracy and efficiency for client-based programs. SNAP, TANF, Day Care and Medical do not have use of a data warehouse for obtaining uniform data. Duplicate information is stored in multiple systems, with different data structures, security protocols, access and authentication processes.
- Time-consuming and burdensome mandatory reporting is made more difficult by the current manual processes. Mandated reports require pulling information from multiple, unconnected systems to produce program outcome information and provide data on accuracy, improvements and accountability. Report data are summary only, requiring staff to manually extrapolate detail for reporting purposes.
- With more than 35 systems used to support self sufficiency service delivery and over one hundred interfaces between these systems and other systems within and outside of the agency, there are significant potential points of technical failure.
- Many systems utilize obscure or outdated programming languages for which technical resources are in a limited supply and require unique staff skill sets.
- "Emergency" staff to make the mandatory code changes are impossible to acquire. This creates significant risk in the department's ability to support and sustain these solutions.

- Technical staff allocated to support these systems spends the majority of their time providing maintenance (break-fix). Any system modifications or changes, whether to repair an existing problem or respond to legislative mandates, require extensive testing due to system complexity and system interfaces. Changes to any system have a very high probability of impacting other systems. Resolving system problems are challenging, time consuming and expensive. Support is further complicated by the multitude of platforms and languages used in the various systems. This complexity requires staff to be well-versed in a broad array of computing disciplines. The risk profile for systems support is high, due to the high level of staff fragmentation, low ratio of staff to individual systems, and lack of system documentation.
- New federal requirements: The Deficit Reduction Act (DRA) of 2005 added new work rules across virtually every major health and human service program, especially child support, TANF and Food Stamps.
- Antiquated systems that are difficult to modify: Major self sufficiency systems are old, with varying levels of system documentation, adding substantially to the time and cost required to make changes.
- Complicated eligibility determination process: Manual processes and highly complex rules with multiple decision points and large quantities of application information impact staff and clients.
- Internal case management challenges: Case management challenges exist due to lack of effective integrated case management processes that track and report client information across multiple programs.

Opportunities

“Change is the law of life. And those who look only to the past or present are certain to miss the future.” - John F. Kennedy

- The Blind Commission will have access to more timely and accurate statistics of people with challenges. This supports better identification of needs and improves services to the vision-impaired.
- Children and Families Commission access to improved reporting supports better coordination, community mobilization and coordination among community groups, government agencies, private providers and other parties of programs and initiatives for children 0-18 and their families.
- The Economic and Community Development Department will have access to improved reporting. This supports improved investing in human capital and promotes innovation.
- Housing and Community Services access to better statistics will result in better forecasting.
- The Oregon Department of Justice will have easier access to data on services to children.

Desired Business Goals & Objectives

The primary focus of DHS Modernization in 2013-15 will be to continue the incremental, modular approach to transform the business service model and implement technology solutions. Planned efforts will focus on solution delivery case management, financial payments and data architecture, strategy and data warehouse functions.

This functional focus applies to business and technology transformation activities and lays the foundation for future DHS Modernization activities beyond eligibility.

Field staff and DHS clients will benefit through improved internal processes and external client experience. Benefits that Oregon expects from self sufficiency modernization include:

- 1. Adding new channels of access for customers to improve the client experience:**
 - Streamlined decision cycles and improved service response time
 - Increased avenues of client access to DHS services
 - Increased client satisfaction through use of modern, interactive, accessible technology
- 2. Improving caseworker capacity and retention due to ability to focus more time on direct client services:**
 - Increased productivity for caseworkers due to heightened ability to focus on case work
 - Increased ability for field supervisors to manage caseworker caseloads and monitor case work
 - Increased process efficiency due to workflow refinements
- 3. Reducing training time for new staff due to automation of complex medical determination:**
 - Reduced case-worker learning curves
 - Reduced error rate due to automation of manual decision trees
 - Reduced errors due to reduction of repetitive and duplicative manual data entry
- 4. Improving system and reporting information for management staff:**
 - Improved tracking of program outcome measures through improved data accuracy and access
 - More efficient interfaces with Child Welfare, Seniors and People with Disabilities and Public Health
 - Improved monitoring and tracking;
 - Ability to provide adequate and efficient documentation of services and referrals
 - Improved system response time and ease of use
 - Improved accuracy and completeness of client case forecasting using on-line session statistical data
 - Improved accuracy of federal and state reporting by capture of essential reporting criteria and data

- Improved data accuracy due to reduction of repetitive and duplicative data entry
- Reduced response time and risk of implementing new policies, legislative mandates, business rules and operational changes, and time and cost to implement federal guidelines through standardized development protocols
- Reduced technology response time to code policy changes and legislative mandates
- Improved security to bring DHS into compliance with state and federal requirements

5. Reducing internal process complexity for staff and managers:

- Increased accuracy of forecasting for DHS budget allowances
- Increased accuracy of benefit level determination resulting in reduced overpayments

6. Improving program information for DHS management:

- More efficient data and program support for service programs and federal grant programs
- Ability to provide information needed to improve performance, increase efficiency and deploy limited resources more effectively, supporting integrity, stewardship and responsibility
- Comprehensive service statistics including accuracy, timeliness and performance in meeting key outcome goals
- Information across program services assisting resource allocation, budgeting processes and legislative requests

7. Enabling and supporting strategic initiatives, and meeting DHS infrastructure needs:

- Aligned technology systems and support for CAF needs
- Aligned to the DHS technology roadmap
- Aligned to industry-standards and best-practices
- Aligned to the principles of code re-use and service oriented architecture principles
- Reduced system and procedure complexity
- Reduced number of technology platforms and interfaces, and reduced development and testing time for system changes
- Technologies with sustainable architecture
- Transition planning and training to transform the skills of current maintenance and development staff from obsolete technologies to current technology skill sets
- Improved ability to hire technical staff that have the skill sets needed to make system modifications

As underlying technology shifts to a modular architecture, changes to application systems in response to legislative rule changes will be easier to develop, test and implement. This change will lead to long-term improvements in technology support efficiency and effectiveness. These improvements will provide caseworkers more time to focus on improving the accuracy, timeliness and quality of the support they provide to Oregonians in need.

Alternatives

DHS procured enterprise-class Oracle software solution in 2011 which serves as the foundation for modernization and delivery of expanded technology capabilities. A brief summary of alternatives/options is listed below:

1. Expand and enhance current systems.

Neither feasible nor cost effective.

2. Purchase or transfer a comprehensive self sufficiency system solution secure system integrator capabilities to support implementation.

This approach establishes an on-going dependency on a system integrator for long term system support which is very expensive over time.

3. Purchase an enterprise solution set with the flexibility to configure to Oregon needs without the long-term support of a system integrator.

Oregon has chosen and is actively using this is the approach which is providing a high level of flexibility, relatively quick to market implementation and the benefits of a sustainable technology solution highly applicable for enterprise level use.

4. Custom develop a comprehensive new self sufficiency system.

This alternative was used to deliver some interim capabilities while determining the best overall solution to support eligibility needs and serve as an enterprise level foundation for other technology and business transformation . Custom developed solutions are expensive to develop and costly to maintain over time. It is also virtually impossible to keep custom applications up with technology progress and is challenging to establish solutions robust enough to serve as enterprise class platforms.

The Assumptions, Costs, Benefits, and Risks (below) are identified holistically across the initiative.

a. Assumptions

- All QA Vendor and QC Vendor costs are development costs, not maintenance costs.
- Development costs are projected costs for the 2013-15 biennium will be funded 50% FF and 50% OF. Resources with the necessary skills including project managers and developers will be readily available.
- Business partners will have adequate capacity to engage in requirements definition, design review and approval, solution selection and user acceptance testing.
- Staffing estimates include a mix of permanent, limited duration positions and consulting services.
- Annex facilities will be needed to house the project team

b. Costs

Oregon DHS has chosen an incremental solution delivery approach, starting from a client facing front-end, through caseworker workflow automation to backend system replacement. This project contains inter-dependencies and interrelationships that are defined to deliver incremental solutions supported under the construct of the overall DHS Modernization using structured release management practices.

This incremental approach enables delivery of functional solutions more rapidly than a single “big bang” project approach which requires multiple biennia before delivering a complete solution. Oregon’s new MMIS implementation is one example of a “big bang” project approach.

Total estimated costs – 2007-2017 (in millions)

	<i>2007-09</i>	<i>2009-11</i>	<i>2011-13</i>	<i>2013-15</i>	<i>2015-17</i>	<i>Total</i>
DHS Transformation / Business Process Re-engineering	\$0	\$0	\$1.50	\$2.60	\$10.00	\$14.10
Support and maintenance (<i>new solutions, infrastructure and services in parallel with sustaining legacy systems</i>)	\$0	\$0	\$1.00	\$10.80	\$6.00	\$17.80
Case Management <ul style="list-style-type: none"> • <i>Client Portal</i> • <i>Caseworker Portal</i> • <i>Eligibility Automation</i> • <i>Telephony</i> 	\$3.20	\$8.64	\$17.50	\$21.50	\$3.00	\$53.84
Data Warehouse / Financial Systems (<i>replacing Legacy Back end Systems</i>)	\$0	\$0.80	\$3.20	\$15.00	\$20.00	\$39.00
Total	\$3.20	\$9.44*	\$23.20	\$49.90	\$39.00	\$124.74

*** 2009-11 funding of \$12.76 million was estimated as follows for projects:**
Client online application - \$2.5 million
Caseworker online application processing - \$2.5 million
Eligibility automation - \$5.0 million
Telephony - \$0.5 million
Modernization planning - \$1.5 million

c. Benefits

Adding new channels of access for customers to improve the client experience:

- Streamlined decision cycles and improved service response time
- Increased avenues of client access to DHS services
- Increased client satisfaction through use of modern, interactive, accessible technology

Improving caseworker capacity and retention due to ability to focus more time on direct client services:

- Increased productivity for caseworkers due to heightened ability to focus on case work
- Increased ability of field supervisors to manage caseworker caseloads and monitor case work
- Increased process efficiency due to workflow refinements

Reducing training time for new staff due to automation of complex medical determination:

- Reduced case-worker learning curves
- Reduced error rate due to automation of manual decision trees
- Reduced errors due to reduction of repetitive and duplicative manual data entry

Improving system and reporting information for CAF management staff:

- Improved tracking of program outcome measures through improved data accuracy and access
- More efficient interfaces with Child Welfare, Seniors and People with Disabilities and Public Health
- Improved monitoring and tracking
- Ability to provide adequate and efficient documentation of services and referrals
- Improved system response time and ease of use
- Improved accuracy and completeness of client case forecasting using online session statistical data
- Improved accuracy of federal and state reporting by capture of essential reporting criteria and data
- Improved data accuracy due to reduction of repetitive and duplicative data entry
- Reduced response time and risk of implementing new policies, legislative mandates, business rules and operational changes, and time and cost to implement federal guidelines through standardized development protocols
- Reduced technology response time to code policy changes and legislative mandates
- Improved security to bring DHS into compliance with state and federal requirements

Reducing internal process complexity for CAF staff and managers:

- Increased accuracy of forecasting for DHS budget allowances
- Increased accuracy of benefit level determination resulting in reduced overpayments

Improving program information for DHS management:

- More efficient data and program support for service programs and federal grant programs
- Ability to provide information needed to improve performance, increase efficiency and deploy limited resources more effectively, supporting integrity, stewardship and responsibility
- Comprehensive service statistics including accuracy, timeliness and performance in meeting key outcome goals
- Information across program services assisting resource allocation, budgeting processes and legislative requests

Enabling and supporting strategic initiatives, and meeting DHS infrastructure needs:

- Aligned technology systems and support for agency needs
- Aligned to the DHS modernization transformation efforts
- Aligned to industry-standards and best practices
- Aligned to the principles of code re-use and service oriented architecture principles
- Reduced system and procedure complexity
- Reduced number of technology platforms and interfaces, and reduced development and testing time for system changes
- Technologies with sustainable architecture
- Transition planning and training to transform the skills of current maintenance and development staff from obsolete technologies to current technology skill sets
- Improved ability to hire technical staff that have the skill sets needed to make system modifications

d. Risks

- Not funding this package would leave Oregon self sufficiency systems in a state of continually increasing risk for catastrophic failure. This would compromise clients' safety and wellbeing along with caseworkers' ability to serve them as the population at risk increases.

Oregon's ability to adapt and respond to federal and state Health Care Reform requirements would be severely hampered by the existing systems which lack interoperability and do not lend themselves to extracting a complete view of the client. Investments made to date to bring online application capabilities to clients would not be fully leveraged without integration through automated eligibility determination and storage of client entered information into back-end systems.

Opportunities to leverage telephony solutions to benefit clients and reduce caseworker workload would be lost and the risk of keeping legacy systems would increase as the systems age and the staff supporting them retire or leave.

- Significant benefits available through automation of a consistent workflow process will not be realized if the business is unable to streamline down to consistent processes.
- If legacy systems are not eventually replaced, there is a risk of not being able to adequately support and maintain these systems.

Financial Analysis

Staffing model

The costs and staffing is based upon a hybrid sourcing model:

- Permanent Staff: New staff for key roles and positions. Since this work will span multiple biennia, having permanent staff lead and manage this effort will be a key success factor.
- Limited Duration: Permanent staff will be supported with positions that support the ongoing project work as well as business analysis and business process change. Given the size and scope of the work effort, having long-term resources that are not subject to hourly limitations becomes critical.
- Contract / Staff Augmentation: This is considered to be a pool of contract resources to support project needs as they come up. It could include filling temporary resource gaps, finding specific points of expertise, or supplementing existing resources for a project need.
- Outsourced Development: The large amount of development work will require extensive resource time to recruit and manage the development work. Using an external development team will reduce the management overhead required to accomplish the project goals.
- Vendor Solutions: We anticipate utilizing vendor solutions and expertise from Human Service Modernization implementations in other states. These solutions may take the form of “base transfers” or project consultation in specific areas of expertise.

Potential savings

Direct Cost Reduction: Reduced Medicaid payments due to eligibility determination Medicaid eligibility determination is complex, manual, and prone to errors in program assignment. Internal agency estimates reflect that 5 – 7 % of the population receiving assistance is not eligible. An accurate automated solution will be able to reduce program assignment and eligibility errors.

Total Self Sufficiency and SPD related Medicaid payments represent approximately \$1.67 billion annually. The field utilization rate for a new automated eligibility solution would start low and increase every year. It would not reach the full potential until most benefit applications could be processed electronically. Therefore, it should not be anticipated that all of the potential savings could be realized for several years after a solution is deployed.

However, **for every 1% correction there would be a potential savings of \$16.7 million annually.**

Indirect Savings: Field Service Improvements

One impact of new technology solutions is to create efficiencies within existing processes. These can be measured in terms of the reduced time it takes to process client applications and benefits requests. This type of gain increases over time as process changes become standardized. Modernization also enables a broader process change, created by re-engineered workflows which allow for a re-direction of resources and new ways to manage case workload.

DHS field workload evaluations show that casework is substantially understaffed. Time savings from automation solutions will ease the caseload burden and reduce the gap between workload need and workforce availability. The purpose of quantifying efficiency in financial terms is merely to provide a means to compare financial investment with productivity gain.

These figures represent a preliminary model based upon the results of the McKinsey analysis as well as internal determinations. The % task reduction represents the estimated time savings to be gained within an individual process task. The % of total time reflects the time spent on each process task in the current workflow.

<i>Process task</i>	<i>Modernization solution</i>	<i>% task reduction</i>	<i>% TOTAL time</i>
Reduce application pending rate	Online application, verification tools	25%	10%
Reduce total application review time	Electronic applications and workflow, verification tools	10%	10%
Reduce eligibility determination time	Automated, integrated eligibility	40%	25%
Reduce narration time through system integration	Integrated solutions, replacement systems	35%	35%
Eliminate data duplication	Integrated solutions, replacement systems	15%	15%
Other processes not subject to improvement	N/A	----	5%

Field Service Time Savings Value

(Note: Some of the figures are rough estimates. More accurate numbers will be incorporated as metrics evolve and refine.)

Self Sufficiency Model

Estimated total annual field costs allocated to casework = \$29 million

Average total percent of caseworker time for application and eligibility = 50%

Potential time reductions from automation solutions = 36%

Annual savings value = \$5.2 million (\$29 million X 50% X 36%)

SPD Model

SPD field staff will also benefit from the Self Sufficiency solution set and will gain substantial time savings. The value model will be similar to Self Sufficiency with some important differences. For this preliminary business case an estimate of 50% of the Self Sufficiency savings value is used (\$2.6 million).

The total savings value for Self Sufficiency and SPD field services is estimated at \$7.8 million per year.

Improvement metrics

The following represent areas impacted by Modernization improvements. These will be tracked and used throughout the implementation cycles to build a process of continuous improvement.

1. Percentage of client applications that are submitted online.
2. Number of clients who utilize online eligibility estimation.
3. Reduced caseworker time on:
 - a. *Client application review*
 - b. *Client verification*
 - c. *Narration*
 - d. *Eligibility determination*
4. Improved accuracy rates for:
 - a. *Benefits estimation*
 - b. *Eligibility*
 - c. *Medicaid program determination*
5. Reduced benefits overpayment rate (per program area).
6. Caseworker utilization rate for new automation tools.
7. Reduced total application and eligibility processing time:
 - a. *Measured within a single branch or processing center.*
 - b. *Measured within a district.*
 - c. *Measured state-wide.*
8. Average time to make eligibility policy changes.
9. Improved system maintenance footprint.

Potential savings associated with implementation of a modernized self sufficiency system include:

- Reduced data storage costs due to consolidation of duplicate data from disparate systems.
- Reduced data security costs and risks due to data consolidation in the data warehouse.
- Reduced number of batch jobs due to integration of two major self sufficiency systems into one.
- Reduced number of distributed servers due to technology streamlining sunset of side-systems.
- Reduced number of reports needed to support the field, reduces SDC processing costs.
- Cost avoidance due to increased accuracy and reduced over payments.

Cost Assumptions

Estimated costs for DHS Modernization are based on known state costs and estimated contractor and vendor costs. It is expected that these figures will change over time due to internal and external environmental factors, i.e., cost-of-living adjustments, markets conditions, SDC services rates, etc.

Personal Services costs reflect current state salary rates for the identified positions through 2015. Services and Supplies reflect the fully burdened rates for the identified positions.

Implementation Approach/Timeline

DHS Modernization efforts began in 2007-09 to improve Oregonians' access to DHS services, automate manual processes and modernize aging systems. Efforts are anticipated to continue through the 2015-17 biennium and represent an estimated investment of over \$85 million to fully automate and modernize systems and services.

DHS has chosen an incremental solution delivery approach, starting from a client facing front-end, through caseworker workflow automation to backend system replacement. This project contains inter-dependencies and interrelationships that are defined to deliver incremental solutions supported under the construct of the overall DHS Modernization using structured release management practices.

This incremental approach enables delivery of functional solutions more rapidly than a single "big bang" project approach which requires multiple biennia before delivering a complete solution. Oregon's new MMIS implementation is one example of a "big bang" project approach.

The primary focus of DHS Modernization in 2013-15 will be to continue the incremental, modular approach to transform the business service model and implement technology solutions.

Planned efforts will focus on solution delivery case management, financial payments and data architecture, strategy and data warehouse functions.

Modernization program activity is organized into successive overlapping cycles – a series of activities (including projects) with a defining focus and governing principles.

Cycle One: Accelerated Automation Focus

- Component deliverables will provide immediate field service benefit.
- An incremental release model is being used to maximize delivery of improvements to the field and allow for regular updates to features and program area coverage.

Cycle Two: Integrated Services Focus

- Development attention on complete solutions with integrated components.
- Continued automation of manual processes.

Cycle Three: Legacy data conversion

Cycle Four: Unified Case Management Solution

Cycle Five: Replace and sunset legacy systems

Methodologies:

- *Program Management models*
- *Agile Development (where appropriate)*
- *Hybrid – Waterfall and Agile (where needed)*
- *PMI Project Management*
- *PMBOK*

Recommendations

Recommend approval of this business case and continuation of funding for automation and modernization of DHS Modernization initiatives in 2013-15.

Appendix

Alternatives Analysis

DHS procured enterprise-class Oracle software solution in 2011 which serves as the foundation for modernization and delivery of expanded technology capabilities. A brief summary of options is listed below:

1. Expand and enhance current systems

This approach would involve enhancing and consolidating two primary and over 50 secondary systems supporting the Oregon Self Sufficiency Program. Current systems are comprised of inter-related software programs, databases and manual interfaces with over 240 unique programmatic inter-relationships. Even if the systems could be modified to support CAF Self Sufficiency needs, the technical environment would not support DHS objectives, such as flexibility and policy support without fundamental redesign.

This alternative is neither feasible nor cost effective.

2. Purchase or transfer a comprehensive self sufficiency system solution and secure system integrator capabilities to support implementation

This approach establishes an on-going dependency on a system integrator for long term system support which is very expensive over time.

3. Purchase an enterprise solution set with the flexibility to configure to Oregon needs without the long-term support of a system integrator

Oregon has chosen and is actively using this is the approach which is providing a high level of flexibility, relatively quick to market implementation and the benefits of a sustainable technology solution highly applicable for enterprise level use.

4. Custom develop a comprehensive new self sufficiency system

This alternative was used to deliver some interim capabilities while determining the best overall solution to support eligibility needs and serve as an enterprise level foundation for other technology and business transformation . Custom developed solutions are expensive to develop and costly to maintain over time. It is also virtually impossible to keep custom applications up with technology progress and is challenging to establish solutions robust enough to serve as enterprise class platforms.