

# **State of Delaware**

**Department of Health and Social Services**

**Health Benefits Exchange Planning**

**Draft Current Environment “As-Is” Assessment**

**July 30, 2011**

## **Version History**

<b>Version</b>	<b>Date</b>	<b>Comments</b>
Draft	May 27, 2011	PCG delivered first draft to DHSS
Revised v2	June 24, 2011	Revisions based on DHSS Feedback
Final	June 30, 2011	Final version based on validation of revisions.

## Table of Contents

<b>1. EXECUTIVE SUMMARY.....</b>	<b>3</b>
<b>2. PURPOSE, SCOPE, APPROACH.....</b>	<b>5</b>
<b>3. ASSUMPTIONS.....</b>	<b>6</b>
<b>4. CURRENT ENVIRONMENT.....</b>	<b>7</b>
4.1. Program .....	7
4.1.1. Program Administration .....	7
4.1.2. Technical Support Organizations .....	8
4.1.3. Current Enrollment and Eligibility Process .....	9
4.2. Technical .....	13
4.2.1. Software / Hardware .....	13
4.2.2. Electronic Data Interchange.....	20
4.2.3. Network .....	22
4.2.4. Security .....	23
4.2.5. Business Continuity .....	24
4.2.6. System Development Life Cycle .....	25
<b>5. OPPORTUNITIES AND CHALLENGES.....</b>	<b>26</b>

## Table of Figures

Figure 4-1: DE Eligibility Process Map.....	<b>Error! Bookmark not defined.</b>
Figure 4-2: ASSIST to DCIS II User Access and Application Data Flow .....	19
Figure 4-3: DHSS Interfaces.....	21
Figure 4-4: DHSS Generic Three Tiered Network Architecture .....	22

## Table of Tables

Table 4-1: DCIS II Subsystems .....	15
Table 4-2: Network Configuration.....	22
Table 4-3: Security Software .....	24

## 1. Executive Summary

In March 2010, the Patient Protection and Affordable Care Act (PPACA) was passed by Congress and signed by the President. The Health Care Reform law mandates the creation of Health Insurance Exchanges that allow consumers to access and evaluate plans from commercial insurers and to apply for health subsidy programs (e.g., Medicaid, CHIP, premium subsidies through the Exchange) that best meet their needs by submitting an application online, in person, through the mail, or over the phone by January 2014. To that end, the Delaware Department of Health and Social Services (DHSS) has requested that Public Consulting Group (PCG) do a complete assessment of the current environment for both the business and technology infrastructure with the end result being a report that provides the current “As-Is” picture, the potential “To-Be” snap shot and what options are available to Delaware in order to support the ACA mandate of January of 2014.

To conduct this analysis, the PCG project team reviewed materials that document DHSS’s current program and technical environments. The project team also met with staff from the Division of Social Services (DSS), the Division of Medicaid and Medical Assistance (DMMA), the Information Resource Management (IRM) group, the DSS Information Systems Unit, and the DMMA Information Systems Unit to better understand the current environment and to identify the changes that would be required to support the new eligibility process and design. This information was then considered in light of the project team’s experience in knowledge of industry best practices, and familiarity with the Health Care Reform law to identify critical decisions that Delaware needs to make to implement the Health Insurance Exchange’s eligibility requirements.

Overall PCG feels that Delaware’s eligibility environment is fairly well positioned to support a fully-functional HBE, however many significant challenges remain. Delaware has exhibited strong technical support teams, and has a stable and secure IT infrastructure to support DHSS’s core business needs. Similarly, the State’s experience implementing the ASSIST application and the already planned enhancements bodes well for its capability to successfully implement the technology solutions that will be necessary to support an Exchange. DHSS also exhibits strength on the programmatic side as well through its “no wrong door” policy and flexible approach to serving its clients.

Delaware, however, still must work through many obstacles in its efforts to establish a Health Benefits Exchange. The DCIS II system, based on mainframe architecture may

prove difficult to modify to adapt to the on-demand, real-time eligibility determination process envisioned under HBE. In addition, DHSS's eligibility business process is largely manual and paper-based, and will need to greatly increase its capacity for automated data matching and validation in order to move to a more real-time eligibility determination process for most applicants. DHSS's distributed customer service model may also struggle to provide the consistency and quality in the consumer experience desired by CMS, especially with the increase in program complexity an HBE will bring.

The successful establishment and operation of Health Insurance Exchanges across the country will likely determine whether the Health Care Reform law will meet its goal of extending coverage to tens of millions of Americans. In order to successfully implement the law, Delaware will need to decide whether to establish an Exchange (at the state level vs. relying on a federal exchange); how a state Exchange would be governed and administered; how it would be financed; and the manner in which the Exchange would interface with Delaware's Medicaid and Delaware Healthy Children's Program .

In order to meet the January 2014 deadline to have a streamlined eligibility process in place to serve all publicly-subsidized health coverage programs that may be available to Delaware citizens, the State will need to act aggressively. The "To Be" visioning sessions will explore the options available to Delaware based on the existing infrastructure, what is required of the Exchange to support eligibility determination for public programs, and all available funding opportunities through CMS. By completion of the "To Be" analysis, Delaware should understand the option that best meets the needs of both the Exchange and DHSS as it relates to eligibility determination.

---

## 2. Purpose, Scope, Approach

The purpose of this project is to assist the Delaware Department of Health and Social Services (DHSS) in evaluating its current program and Information Technology (IT) environment as it pertains to the capability needed to support the requirements of a Health Benefits Exchange (HBE) in order to comply with provisions of the Patient Protection and Affordable Care Act of 2010 (ACA). A major requirement of the HBE is to determine eligibility for all publicly-subsidized health coverage programs, including the premium subsidies available under the Health Insurance Exchange, Medicaid, CHIP, and the Basic Health Program (which may be offered at the State's discretion).

The project scope includes:

- Providing a high-level overview of current infrastructure, applications, interfaces, and business processes that are presently used to:
  - Support potential client enrollment in state sponsored/administered programs.
  - Determine eligibility for all existing programs.
  - Calculate premiums, discounts, tax credits.
  - Perform billing and collection activities.
- Preparing a report to summarize and document the results of the current environment "As-Is" assessment.

To complete this project, the PCG project team performed the following tasks:

- Reviewed existing documentation provided by DMMA and IRM.
- Met with program and IT subject matter experts to clarify existing documentation and develop additional information needed to complete the project.
- Developed documentation to depict the existing programs and IT infrastructure as they pertain to the capability needed to support the requirements of the HBE.

### 3. Assumptions

At the outset of this project, it became necessary to establish assumptions upon which the As-Is assessment would be based. The assumptions include:

- The As-Is assessment focuses on existing DHSS capability that may be leveraged to support HBE functionality. With this in mind, the project did not attempt to research HBE core business areas, based on the CMS document *Exchange Reference Architecture: Foundation Guidance*, that are known to be new, logically assuming there would be no existing capability. While DHSS has capability similar to all of the core business area in general, new capability will have to be created to support the needs of the HBE. Core business areas researched include:
  - Eligibility & Enrollment
  - Financial Management – only as it pertains to premiums, billing and collection.

Core business areas not researched include:

- Financial Management – as it pertains to other required HBE functionality
  - Plan Management
  - Customer Service
  - Communications
  - Oversight
- PCG assumes there are no major changes planned for the programs and IT infrastructure researched that were not communicated during the research to develop the As-Is assessment.

---

## 4. Current Environment

### 4.1. Program

#### 4.1.1. Program Administration

This section details how Delaware is programmatically structured to process eligibility for its Medical Assistance and other social service programs. It will describe the agencies involved in determining eligibility, their mission, scope, organizational structure, interrelationships, and key elements of the eligibility business process.

##### **Department of Health and Social Services**

The mission of the Department of Health and Social Services (DHSS) is to improve the quality of life for Delaware's citizens by promoting health and well-being, fostering self-sufficiency, and protecting vulnerable populations. Comprised of 12 Divisions, DHSS is a cabinet-level organization that oversees an annual budget of approximately \$650 Million and employs nearly 5,000 people to administer all of Delaware's public welfare and assistance programs, including, but not limited to, Medicaid, Delaware Healthy Children's Program, Transitional Assistance to Needy Families (TANF), and Supplemental Nutritional Assistance Program (SNAP).

##### **Division of Social Services**

The Division of Social Services (DSS) is a unit within DHSS that administers Delaware's Temporary Assistance for Needy Families (TANF), Food Supplement Program (aka Food Benefits), and Subsidized Child Care, General Assistance and Refugee Cash Assistance programs. DSS is comprised of three organizational sections: Program and Policy Development, Support Services (including Information Technology), and Service Delivery. DSS employs approximately 415 permanent staff and provides the primary front-line staff that determines eligibility for all public assistance programs, including Medicaid and Delaware Healthy Children's Program, with the exception of Long Term Care Medicaid eligibility determinations, through a common application and determination process. To facilitate client access and the enrollment process, DSS staffs 19 service centers throughout the State that are comprehensive client service offices for multiple programs operated by 267 eligibility social workers.

##### **Division of Medicaid and Medical Assistance**

The Division of Medicaid and Medical Assistance (DMMA) is a unit within DHSS that administers all of Delaware's medical assistance programs including Medicaid, Delaware

Healthy Children's Program, and Long-Term Care Programs. DMMA's mission is to improve health outcomes by ensuring that the highest quality medical services are provided to vulnerable populations of Delaware residents in the most cost effective manner. Like DSS, DMMA is comprised of three organizational sections: Program and Policy Development, Support Services (including Information Technology), and Service Delivery. DMMA is also the agency that determines eligibility for all long term care and home and community-based waiver programs.

Delaware's medical assistance program is comprised of a variety of programs including Medicaid, Medicare Supplemental programs, the Delaware Healthy Children's Program (Delaware's CHIP Program), Family Planning Assistance, and the Delaware Prescription Assistance Program (DPAP). As of March 2011, Delaware's medical assistance programs provided benefits to 197,596 residents, almost 75% of whom were enrolled in a commercial managed care organization. Eligibility for a Delaware medical assistance program is generally determined by a means test, income and/or assets. All medical assistance programs also have technical eligibility criteria.

#### **4.1.2. Technical Support Organizations**

This section below provides a brief overview of the organizations responsible for developing, managing and maintaining Delaware State IT systems including the manner by which they are structured and how they interface with one another and with DHSS's program units.

##### **Information Resource Management**

The Information Resource Management (IRM) unit is responsible for providing DHSS Divisions with direct programming support of automated systems, as well as consulting support and advice on automated systems software and development. IRM consists of Applications Development, Technology Planning, Base Technology, Telecommunications, Security and Training and Help Desk support groups. IRM works closely with DHSS program resources, the Department of Technology and Information (DTI), and the DSS Information Technology Group with a particular goal of integrating the IT infrastructure with the business needs of DHSS.

##### **Department of Technology and Information**

The Department of Technology and Information (DTI) is a separate cabinet level agency responsible for supporting the State of Delaware's mainframe computer operations, wide area data network and setting statewide IT policy and standards. DTI is responsible for

supplying mainframe and Wide Area Network (WAN) systems support to DHSS as well as other state agencies. Additionally, DTI provides 24x7 data center operations support. DTI also provides State agencies with some technical consultant services.

### **DSS Information Systems Unit**

The DSS Information Technology Group serves as the Division liaison between IRM, other contracted information systems, other vendors who manage DSS information systems, as well as business users (Operations and Policy); other primary responsibilities include application/system testing, helpdesk coverage and project management. The primary responsibility of this group is to translate business needs into IT requirements and vice versa to ensure that Division business requirements are properly communicated to technical staff and that Division program staff understand IT policies and standards.

### **DMMA Information Systems Unit**

The DMMA Information Technology Group serves as the Division liaison between IRM, other contracted information systems, other vendors who manage DMMA information systems, as well as business users (Operations and Policy); other primary responsibilities include application/system testing, helpdesk coverage and project management. The primary responsibility of this group is to translate business needs into IT requirements and vice versa to ensure that Division business requirements are properly communicated to technical staff and that Division program staff understand IT policies and standards. The DMMA ISU also manages the Medicaid Fiscal Agent contract.

## **4.1.3. Current Enrollment and Eligibility Process**

### **Social Service Program Eligibility Process**

This section provides an overview of the business process, roles and responsibilities of DSS staff, and technologies used in determining eligibility for Medicaid, Delaware Healthy Children Program, TANF, and SNAP in Delaware.

To obtain medical assistance and other public assistance services in the DSS Divisions, individuals have four main entry points.

- Apply online using the Application for Social Services and Internet Screening Tool (ASSIST);
- Complete a paper application and submit the application to any client service center;
- Call a client service center and request an application be mailed; or
- Visit a client service center and apply in-person or pick up an application.

ASSIST application data may also be collected and verified from external data sources, such as KIDS Medicaid. Delaware operates under the concept of “No Wrong Door” to services and thus, individuals can access information and apply to any program they may be eligible for through any of the above channels. Delaware also utilizes a common application that, with some exceptions, allows the Divisions of Social Services and Medicaid and Medical Assistance to collect all the data elements needed to apply for multiple programs (Medical Assistance, TANF, SNAP, Child Care, and General Assistance) from the applicant at one time.

The State receives an average of approximately 9,000 applications per month for all programs combined, the majority of which arrive in the form of paper applications. Only a small number of applications, approximately 1-3.5%, are received through the ASSIST web portal; however the percentage of web applications has increased steadily since the ASSIST tool was implemented. Most applications are initially handled and processed by DSS staff in one of 19 client service centers, however Long Term Care applications are handled within the LTC units of DMMA. The initial process differs slightly depending on the source of the application, however, once the application process has been initiated, the client registration process is the first step that must be completed. During this stage, basic household demographic information is entered into the Delaware Client Information System (DCIS) system. Although eligibility workers only need to enter in one member of a household to proceed with an application, they will typically enter all information that the consumer has provided. For applicants that are determined to be “already known” to the system, the eligibility worker will utilize the DCIS to determine if the client is submitting a duplicate application, or whether the applicant needs to have their case reinstated from a previous closing.

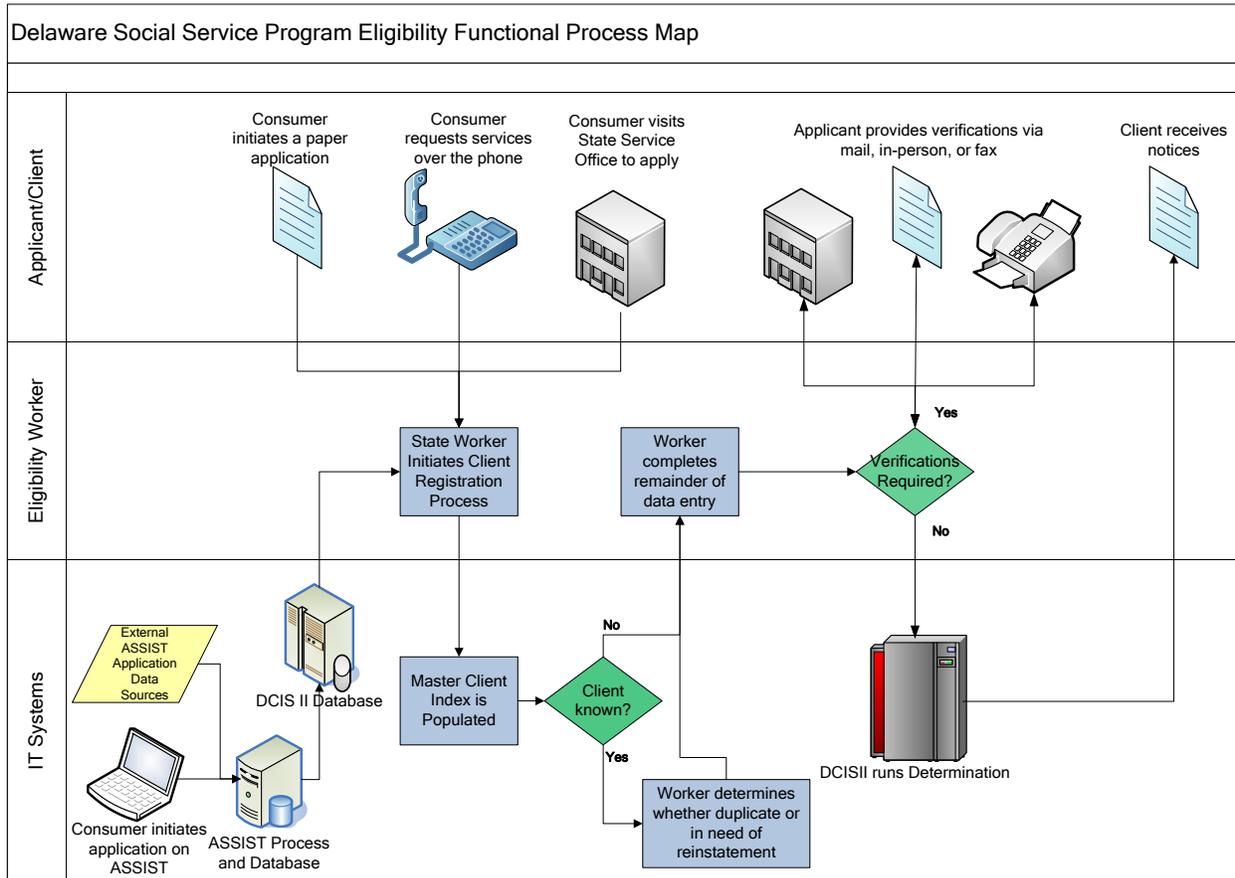
Once the client registration process has been completed, the eligibility worker and applicant will work together to complete the remainder of the application process, including determining which programs the applicant wishes to apply for, collecting and/or entering all required technical and financial eligibility information, requesting and processing verifications, and entering the completed application data to the DCIS to run the eligibility determination. The application data entry is performed in DCIS. The

system maintains a driver flow to assure that all necessary data is collected based on the worker's answer to questions. Once the application entry (AE) subsystem is complete the worker is driven to the Standard Filing Unit (SFU) and Eligibility Determination and Benefit Calculation (EDBC) subsystem where the system evaluates the individual's benefit request and demographics to assign them to the correct family grouping, makes an eligibility determination based on technical and financial means tests and finally calculates the benefit level if the individual or filing group is eligible. Depending on the programs the applicant wishes to apply for, additional verifications may be required to complete the eligibility determination process. It has been the experience of the State that many applicants arrive prepared with the necessary verifications at the time of application; however, if additional verifications are not provided at the time of first application, the case will be put into a pending status in DCIS and a notice will be generated and sent to the household to request the needed documentation. Like the initial application process, the verification feedback cycle is almost entirely paper-based.

Once the application data entry process has been completed the application is then submitted to DCIS to run the determination for all programs that have been requested by the applicant. Some data matches, both automated and manual are performed during the application and verification process, the most utilized of which is an interface with the Social Security Administration that is used to validate citizenship and identity. Additional data matches occur on periodic, ongoing schedules after the application and eligibility determination process has been completed. Once the determination has been completed, DCIS provides real-time feedback of the result to the worker, who then confirms the DCIS benefit determination and any noticing required for action on that case throughout the day will be added to the nightly noticing batch job. The time it takes to process an application from the point of initial contact to the final determination varies widely depending on the complexity of the application and whether the applicant is able to provide the necessary documentation in a timely fashion.

Figure 4-1 below is a graphical representation of Delaware's eligibility determination process at a high-level.

**Figure 4-1: DE Program Eligibility Process Map**



### Customer Service Support

Customer service for Delaware social service programs are handled by many different groups, including two dedicated call centers. All client service center workers also take a part in providing customer service, and the State has pursued a flexible and open model to providing customer support by offering many different pathways and access points. The primary front-line customer service organization is the Customer Relations Unit. This call center handles approximately 63,000 calls annually with seven full-time and one part-time employee. The Customer Relations Unit provides beneficiaries with general information relating to DSS and DMMA programs and assists with some case management duties; however its employees do not make any changes to a client’s case record. If a client needs to report changes to his or her case record, such as a change of address, income, or other important eligibility information, they are directed to call the DSS Change Report Center. This call-center, handling only changes to client records, receives approximately 41,000 calls annually with eight full-time employees. Clients

seeking information or requiring a change to their case record can also call or visit any State Service Center.

## 4.2. Technical

### 4.2.1. Software / Hardware

For the purposes of this report, the core systems that currently support the enrollment and eligibility determination functions of Delaware's Medicaid and other State sponsored/administered programs are briefly described below and include the following:

- Application for Social Services and Internet Screening Tool (ASSIST)
- Delaware Client Information System (DCIS II)
- Medicaid Management Information Systems (MMIS)

#### ASSIST

The ASSIST screening tool is a public-facing Internet Web-based application that allows potential clients to self screen and/or apply for benefits online. ASSIST provides a simple solution for the public to inquire and apply for public assistance and benefits from any location with Internet access. Through ASSIST, applicants can be pre-screened – based on a set of pre-eligibility rules – for potential eligibility for many, but not all, of Delaware's State-sponsored health programs. There are no technical constraints prohibiting ASSIST from supporting all programs.

ASSIST provides clients with a description of benefits and services available and the client chooses which they are interested in screening for. ASSIST then requests a mixture of generic information and information specifically required for the benefits and services requested. It does not ask for duplicitous or superfluous information. At the conclusion of this process, ASSIST presents the user with potential qualification information based on the information entered and the user can then choose to apply or save the information to complete at a later time and exit the application. If the user chooses to apply they enter all additional data required to complete the application process, acknowledge their rights and responsibilities listed (electronic signature) and submit the application. ASSIST posts their information to ASSIST database tables. On regular intervals ASSIST data is transferred to DCISII staging tables. DCIS II displays high level ASSIST application information for assignment to a case worker to contact the applicant and complete the application process.

ASSIST is based on an older version of the Pennsylvania COMPASS system. DHSS maintains and enhances its own version of the source code, but can still incorporate new release of COMPASS when necessary.

ASSIST is undergoing a major upgrade that is scheduled for release during first half of 2012. The remainder of the ASSIST current environment description will be written as if the functionality available from the upgrade has already been implemented.

The ASSIST technical architecture is based on a standard Web-enabled technical model. It allows a high degree of scalability by adding servers (virtual or physical) to the tier requiring better performance. The technical implementation of the application is split across the following tiers:

- Presentation Tier
- Business Logic Tier
- Database Tier

The Presentation Tier supports the end user presentation-rendering component fulfilled by a desktop Web browser such as Microsoft's Internet Explorer. ASSIST complies with all State of Delaware Web standards.

The Business Logic Tier is constructed using the Microsoft .NET 3.5 technology platform and the C#.Net programming language. Business logic is also implemented using the Corticon business rules engine. This tier is deployed across a suite of Windows Server 2008 R2 based Application Servers located at Delaware's Biggs data center.

The Database Tier is fulfilled by the Microsoft SQL Server database management system (DBMS) deployed on Database Servers located at the DTI data center.

Once the potential client has entered their application into ASSIST, SQL Server DTS packages push the data to a holding area. The holding area uses the IBM DB2 database management system to store data. DCIS II pulls data from the holding area into a DCIS II DB2 database so that it can be incorporated into the DCIS II workflow and accessed by DHSS eligibility workers. Eligibility workers can use the application information gathered by ASSIST; contact the applicant to gather additional information and process the application through the DCIS II system.

## **DCIS II**

DCIS II supports Eligibility determination for all Delaware State-sponsored/administered programs except the Delaware Prescription Assistance Program (DPAP). DCIS II is a Citrix published application (z/OS operating system) using the COBOL programming

language for business and data processes and the PowerBuilder programming language for the user interface/data capture and some basic data edits. DCIS II utilizes the DB2 DBMS deployed on the mainframe.

Some Delaware medical assistance programs require the payment of calculation and payment of premiums which may be similar to premium functions required by the Exchange. DCIS II determines the category of assistance for clients based on the information supplied on the application, and then passes the determination to MMIS as an Aid Category code. MMIS determines the client payment responsibility for benefits coverage and the appropriate amount to bill based on this Aid Category.

The technical implementation of the application is split across the following tiers:

- Presentation Tier
- Business Logic / Database Tier

While the DCIS II presentation tier is separate, the business logic and database / data access tiers are tightly coupled. Separating business logic from data access logic (the code in a program that controls the storage and retrieval of data from databases or files) would be difficult.

DCIS II does not have a public facing interface. It is exposed to the internet for a small number of contractors and staff using the Citrix Secure Gateway. DCIS II does not utilize any real time messaging capability at the present time. All data exchange interfaces are done in a batch mode through the exchange of files.

DCIS II is a modularized application, with different subsystems serving different overall system functionality. Subsystem functionality is accessed by PowerBuilder as Web services.

The table below lists each subsystem and its primary purpose.

**Table 4-1: DCIS II Subsystems**

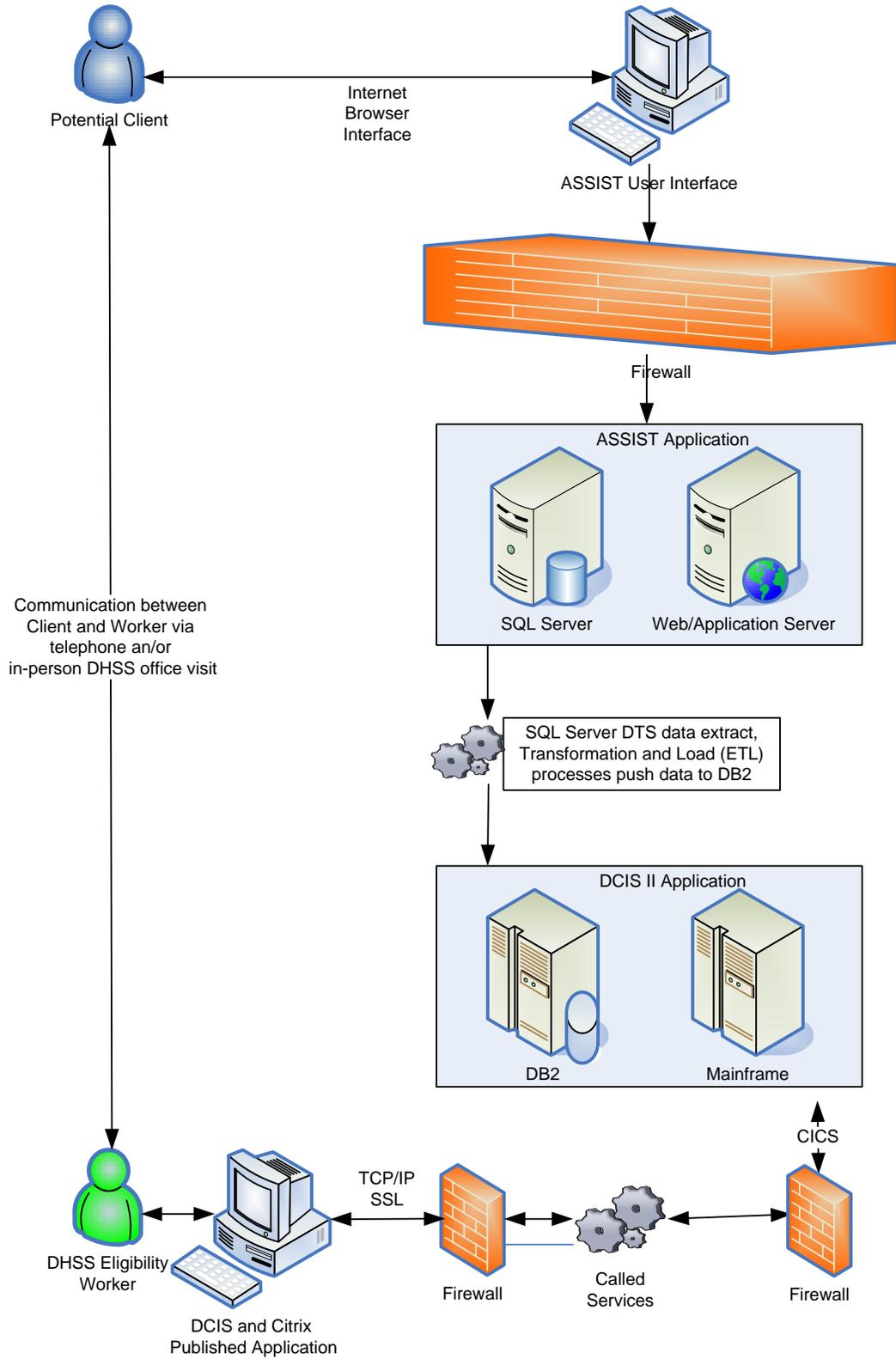
Subsystem Name		Subsystem Primary Purpose
AA	– Application Architecture	Provides the software management framework for the overall system.
AE	– Application Entry	Used by eligibility workers to collect all client data. Data collection may start with a data feed from ASSIST and then be augmented by the eligibility worker.
BI	– Benefit Insurance	Programs used to trigger benefits issuance, query benefits and perform reconciliation.

Subsystem Name	Subsystem Primary Purpose
CC – Child Care	Child care provider and site information. Also transaction correction.
CM – Caseload Management	Supports worker alerts, case comments, mass mailings and fair hearing functionality.
CN – Client Notices	Programs used to generate client notices and letters, view queue and historical notices, request letters and maintain notice content. Client notices are created in DCIS for Cash Assistance and Child Care programs. Client notices are created using OPUS (software) for Medicaid and Food Benefits. Content for MA and FB notices are kept in OPUS as well as DCIS CN subsystem.
CR – Client Registration	Supports the creation of client request for assistance (RFA) and initiate ASSIST application.
DX – Data Exchange	Supports interfaces with internal and external agencies and allows one to view the exchange information.
EDBC – Eligibility Determination and Benefits Calculation	Determines eligibility and calculates benefits.
ET – Employment and Training	Manages client employments and training referrals, enrollments and participation.
HM – History Maintenance	Manages audit trails and archival.
MC – Mass Change	Supports batch eligibility determination.
QC – Quality Control	Manages sampling.
RP – Reports	Generation of administrative reports for internal and external use.
RT – Reference Table	Manages data used in drop-downs, eligibility parameters, code constraints, etc.
SFU – Standard File Unit	Creates appropriate assistance groups.
SM – Security Maintenance	Supports application security, user roles/profiles, caseload security, caseload transfer, administrative structure.
SW – System Wide	Manages processes that are applicable across the entire application.

### Software Architecture Overview

The figure below illustrates:

- how potential Clients access ASSIST;
- how eligibility workers access DCIS II; and
- how applications flow from ASSIST into DCIS II.



---

**Figure 4-2: ASSIST to DCIS II User Access and Application Data Flow**

## MMIS

For programs that include a premium there are some processes similar to client invoicing, premium updating and premium collection within MMIS. MMIS includes a monthly process that creates an initial premium invoice transaction for these clients. The Aid Category code for the client passed from DCIS II is used to determine the monthly premium amount to be billed.

MMIS includes a client-based Premium Adjustment Detail (REPD) screen. The REPD screen allows authorized users to view or manually add detail premium adjustments transactions that will decrease the balance of the adjustment header (shown on REPA – Premium Adjustment Screen). A premium adjustment is issued to allow the overpayment of a previous month’s premium to be used when satisfying a future monthly premium. If the premium adjustment header balance is zero, the premium adjustment header status will be set to “closed.”

MMIS also includes a monthly process that accepts and applies premiums payments for clients of these programs. The transaction processes premium payments for clients from the Remittance Processing Center or the cash payment services. The files received from both agencies are in a standard Automated Clearing House (ACH) format. This is a banking transaction and does not have to comply with the HIPAA requirements. If errors occur during the processing, an error file is created. This error will be used as input in a report that will reformat and print the error file. The transaction uses the financial functional area to process the payment. The transaction records the receipt of the client’s payment, and then applies it to any open amounts receivable for the client.

MMIS and related business processes support the collection of invoiced amounts and the potential suspension or termination of clients from these programs if payment is not received.

## Additional Supporting Software

### Identity and Access Management (IAM)

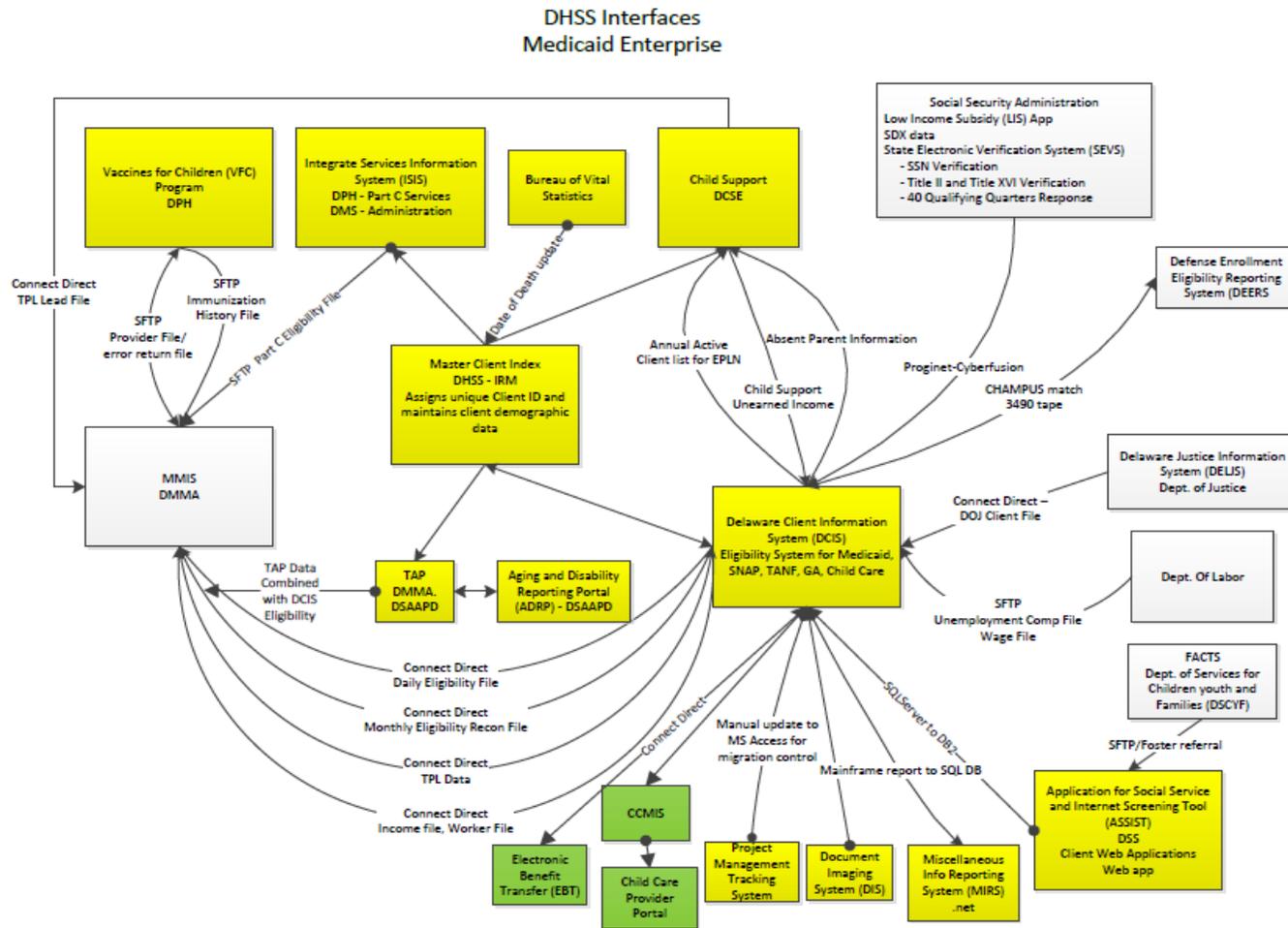
Delaware's Department of Technology and Information (DTI) is using Oracle Identity and Access Management Suite as the foundation for its identity management infrastructure. Delaware leverages its identity management infrastructure to offer secure citizen services online. Delaware is well equipped to deliver citizen services while helping to protect personal data.

---

#### **4.2.2. Electronic Data Interchange**

All DHSS electronic data interchange (EDI) is done asynchronously. SFTP and SFTP based products are the primary way data is shared with external entities. SFTP and SQL Server-to-DB2 is used for some EDI between internal DHSS system, but the primary internal and external DHSS EDI tool is Connect Direct, a point-to-point file transfer product. Connect Direct uses the SNA protocol over dedicated lines between the entities involved to transfer the data.

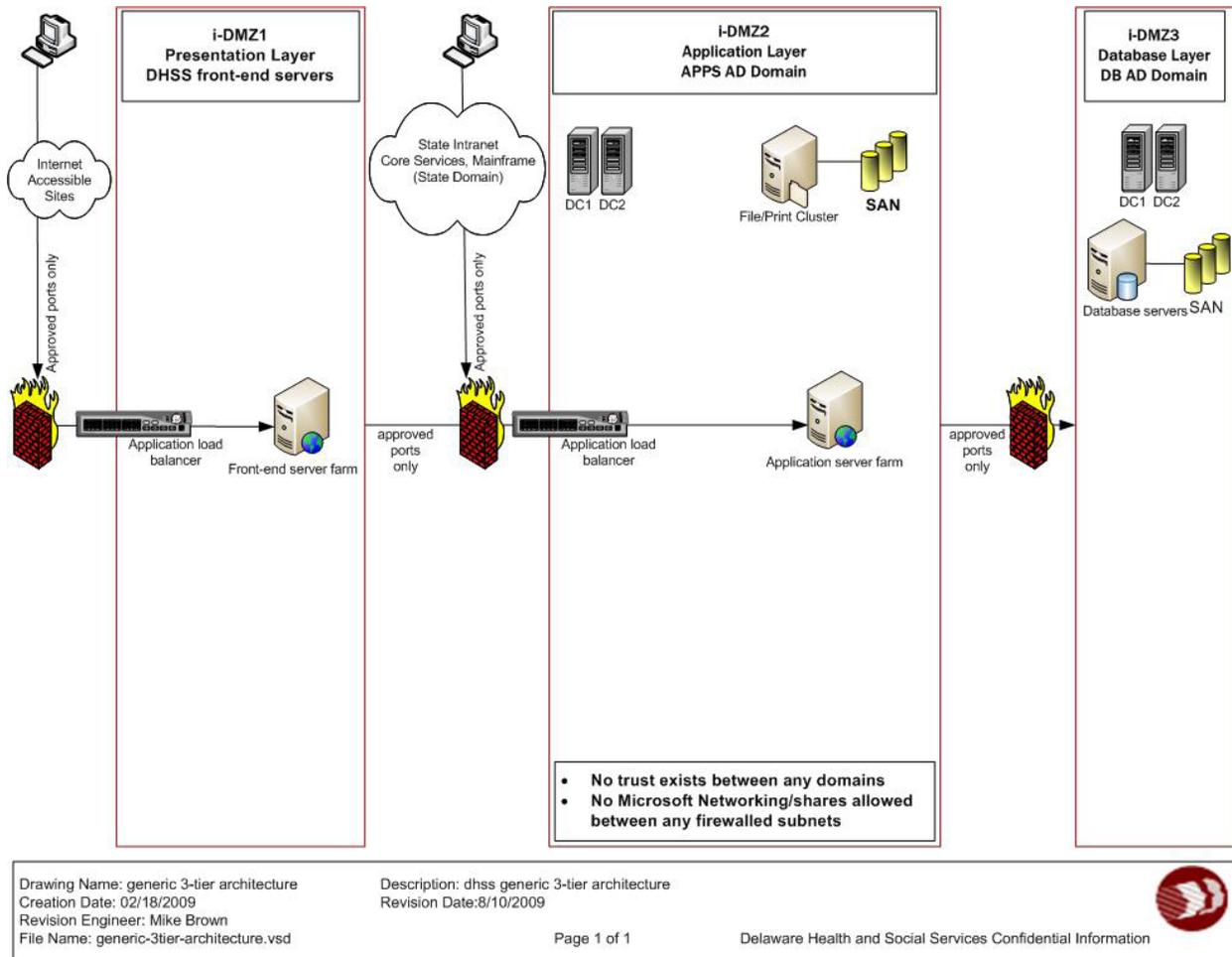
As the diagram below shows, eligibility data is shared from DCIS to several other internal systems and external entities. DCIS also accepts data from several internal systems and external entities. Some income and citizenship verification is supported by the Social Security Administration and Department of Labor interfaces, most of it is done manually via communication between the eligibility worker and the potential client.



**Figure 4-3: DHSS Interfaces**

### 4.2.3. Network

DHSS network architecture follows the generic three tiered architecture depicted in the figure below.



**Figure 4-4: DHSS Generic Three Tiered Network Architecture**

The network configuration is as follows:

**Table 4-2: Network Configuration**

Network Component	Configuration
WAN connectivity	Verizon's Transparent LAN Services (TLS) minimum 10Mbps, Verizon DSL, Comcast Cable

Network Component	Configuration
Standard protocols	IPv4, Ethernet, 802.11
LAN connectivity	Cisco switching
Storage	SAN; fiber or iSCSI connected
Authentication	Microsoft Active directory
Operating systems	Microsoft Desktop OS, Microsoft Server OS
Virtual Software	VMWare
Server Hardware	Blade
Citrix Architecture	XenApp, Secure Gateway, Web Interface
Backup	CommVault
File Exchange	SFTP, WinSCP, two-factor authentication
Document Sharing	Windows SharePoint Services (intranet only)
Imaging	IBM FileNet P8

#### 4.2.4. Security

Delaware follows a mature formalized security model at all IT infrastructure levels, including cyber security standards for internet connection. The methodology follows closely the methodology described in the CMS document *Harmonized Security and Privacy Framework – Exchange Technical Reference Architecture (TRA) Supplement*.

Delaware employs a Chief Security Officer and staffs a security team organization. The DHSS Security Officer (DSO) provides security training and awareness programs to all DHSS staff, including contractors. The DSO is responsible for seeing that criminal background checks are processed for all information technology employees and technical support contractors. All DHSS computing resources must be current with operating system and software security patches and virus protection software before connecting to the network, and be configured to stay current as new patches are released. All DHSS computing resources must run State standard virus protection software. The software's virus definitions must be kept current. The DSO is responsible for safeguarding DHSS data. Data is encrypted in transit via Secure Socket Layer (SSL) and Secure File Transfer Protocol (SFTP). DBMS software supports data encryption at rest. The DSO ensures Delaware security and privacy standards are HIPAA compliant. The same standards protecting Protected Health Information (PHI) can be utilized to protect Personally Identifiable Information (PII) and Federal Tax Information (FTI).

Security software and middleware configuration is as follows:

**Table 4-3: Security Software**

Platform	Software Product
Mainframe	ACF2
Client Server/Web	SSL MS Active Directory authentication
Desktop	Checkpoint EndPoint Security Suite
Email Encryption	Ironport
Flash Drive	Kingston Data Traveler (Encrypted)

### **Performance**

Performance is excellent at all network tiers, with peak utilization less than 50 percent of capacity. As transaction volume grows the environment is able to scale by adding additional servers, virtual or physical, at any tier level.

## **4.2.5. Business Continuity**

### **Backups**

DHSS assesses the business process supported by the data and/or systems and assign a Recovery Point Objective (RPO) and Recovery Time Objective (RTO). The backup of the associated media must correlate to the RPO/RTO. The archiving of electronic data files reflects the needs of the business and also any legal and regulatory requirements. The archiving of electronic data is consistent with the Delaware Public Records Law's requirements for records retention and disposition schedules, and use the procedures of the Delaware Public Archives (DPA) for authorizing records disposition.

Vendors providing offsite backup storage for State data are cleared to handle the highest level of information stored. Physical access controls implemented at offsite backup storage locations must meet or exceed the physical access controls of the source systems. Additionally, backup media must be protected in accordance with the highest State sensitivity levels for information stored.

Storage media protection and authentication controls at the storage system and media levels can provide strong barriers against unauthorized stored data disclosure, theft, and corruption. Backup media shall be stored in a locked, fireproof container (UL-rated for

media protection) during transport and while being retained at a pre-determined offsite location, far enough away in the event of a localized disaster (tornado, fire, etc.).

A process is implemented to verify the success of the electronic information backup. Backups are periodically tested to ensure that they are recoverable within the expected timeframe.

DHSS does not run in dual locations; they cannot immediately switch to a different location if there is catastrophic failure at the primary location. DHSS performs a cold start, rebuilding the systems data from the backups.

### **Business Continuity**

Business continuity is managed by the Delaware Security/Disaster Recovery Team (SDRT). Data Stewards create and maintain a Continuity of Operations Plan (COOP) that includes development, documentation, and implementation of a comprehensive plan of action to guide the complete organization in the return of essential business operations and, eventually, full business recovery following an unforeseen disruption. The Emergency Response Plan, IT and Business Recovery plans is documented in the COOP.

The COOP includes the implementation of the Emergency Response plan in order to contain the crisis, secure the health and safety of people, and prevent further spread or continuation of the crisis (e.g., a fire). The Emergency Response Plan accounts for a response level potentially resulting in the declaration of a disaster should critical business processes not be able to be performed as normal. A disaster declaration enacts IT and business recovery plans coordinated by the Disaster Management Team.

The COOP identifies the critical people, roles and responsibilities, business processes, information, systems, assets, and other infrastructure considerations that are required to enable the business to operate. The COOP lays out a predetermined plan as assessed by a business impact analysis. All COOP plans are reviewed and updated to include, but not be limited to, employee contact information at least once every two years. However, it is highly recommended that plans be updated as change occurs within the organization.

#### **4.2.6. System Development Life Cycle**

Delaware System Development Life Cycle (SDLC) is mature and follows the same methodology described as the Exchange Life Cycle (ELC) in the CMS document *Collaborative Environment and Life Cycle Governance – Exchange Reference Architecture (ERA) Supplement*.

- IT applications go through the planning, analysis, development, testing and implementation phases described in the CMS methodology.
- Development, User Acceptance and Production IT environment are separate and distinct.
- The User Acceptance environment mimics the Production environment, allowing “apples-to-apples” evaluation of performance and scalability.

## 5. Opportunities and Challenges

This section will provide an assessment of the opportunities and challenges Delaware will face in implementing a Health Benefit Exchange and integrating the new requirements into its existing eligibility environment.

The Health Benefit Exchange, a key provision of the Patient Protection and Affordable Care Act (ACA), is designed to help uninsured individuals and small businesses purchase affordable health coverage, while also improving transparency in the marketplace and providing continuity of coverage. The main objectives of an Exchange is to attract and retain customers by offering “qualified” health plans, providing members with information to make more informed decisions, processing transactions effectively, enabling individuals to apply for exemption waivers from the individual mandate to maintain health coverage, and creating streamlined eligibility and enrollment systems for all medical assistance programs. There are many key business functions that are required including creating call centers, Web sites, technical support, effective public reporting and efficient and streamlined eligibility determination and enrollment processes. With all of these functions there is also a need to build out the existing technical infrastructure, typically resulting in the need for more hardware and software, and most importantly additional staffing to support the added work load.

In addition to the core functionalities of an Exchange, the federal Department of Health and Human Services and its Centers for Medicare and Medicaid Services have articulated a series of standards, conditions, and desired outcomes for HBE systems that are included in the CMS document *Guidance for Exchange and Medicaid Information Technology (IT) Systems*. These include:

- Consistency in consumer experience regardless of their standing or where they initiate the enrollment process from
- Real-time eligibility determinations for most consumers seeking services
- Best-in-class customer service and supports

- Integration of systems to avoid duplication of costs, processes, data, and effort on the part of either the state or the consumer
- Federal approach to data verification
- Service-Oriented Architecture
- Isolation of business rules

In light of the functional requirements for establishing a quality HBE and federal guidelines that must be met, the following sections details some of the key findings of PCG's "As-Is" Assessment of Delaware's eligibility environment.

## **Opportunities**

### Program

- DHSS already operates under a "No Wrong Door" policy, enabling a flexible, consumer-focused model that minimizes the navigational burden associated with multiple eligibility processes.
- DHSS employs a common application and determination process that minimizes the need for an individual to provide the same information multiple times to different entities.
- DHSS has a good Web presence and community connections to enable residents to access information and benefits.

### Technical

- With ASSIST, DHSS has experience developing and supporting multi-tiered public facing systems deployed on the Web, the same model CMS wants states to follow as they develop HBE support systems. This may make it easier for DHSS to quickly understand and integrate CMS Web services supporting HBE functionality.
- DHSS SDLC closely follows the methodology being described by CMS in developing and deploying the HBE. This may make it easier for DHSS to interact and collaborate with CMS and leverage shared services and automated business processes.

## **Challenges**

### Program

- DHSS's Eligibility process is very reliant on paper and manually intensive

- Applications received through the ASSIST Web portal are converted to a manual process past the point of receipt
- While DHSS validates some applicant provided information utilizing automated and manual data matches, other key pieces of information must be validated in a manual, paper-based process for verifying consumer-provided information
- DHSS has multiple entry points for customer service. While this provides flexibility and openness for the consumer, these multiple entry points could create confusion and misdirection. Also, many different resources providing customer service increases the training burden on the State and increases risk of incorrect information being supplied to the consumer.

#### Technical

- EDI between entities internal and external to DHSS may need to support real-time capability.
- HBE is new and will most likely go through many business rule changes. DHSS enrollment and eligibility depends heavily on mainframe applications that may make it difficult to quickly adapt to changes.
- DHSS may need to change business continuity capability to address the high level of availability usually expected of businesses operating on the internet.
- The average turnaround time for systems changes is very long, typical of most mainframe environments. Delaware has a significant backlog of changes that will complicate prioritization which could ultimately impact the state's ability to comply with the ACA mandate in 2014.

In general, DHSS's eligibility environment is fairly well positioned to support a fully-functional HBE, however many significant challenges must be overcome in order to meet the requirements of the ACA and federal guidance related to the HBE. Delaware exhibits strong technical support teams that work closely and collaboratively with one another, have had very little staff turnover, and are very knowledgeable about core IT systems and how they relate to satisfying business needs. Similarly, Delaware's technology architecture provides a stable and secure platform to conduct essential DHSS business functions, and technology managers have shown good strategic direction in moving towards a more modern architecture and technologies.

While many of the IT solutions that will be required to establish an HBE in Delaware will out of necessity be new to the State environment, its experience with the ASSIST application, and the already planned enhancements may provide a platform for some needed Exchange functionality. In addition to its technology environment, DHSS also exhibits strength on the programmatic side as well. Through its early adoption of a flexible, “open door” approach to serving its clients, its common application and attempts to reduce duplication of data and verification for its many programs, DHSS displays the type of consumer-orientated focus that will be required for an HBE.

Despite the many strengths of DHSS’s current environment, Delaware, like most states attempting to comply with the Exchange mandate of the ACA, faces many obstacles in its eligibility environment. The DCIS II system, while it has largely been sufficient for the State’s business purposes to date, since it is based on mainframe architecture may prove difficult to modify to adapt to the on-demand, real-time eligibility determination process envisioned under HBE. DCIS II’s tight coupling of its Business Logic and database / data access tiers will also present a significant barrier to creating the isolation of business rules and needed flexibility to respond to a rapidly changing business environment. In addition to these technological challenges, DHSS’s overall eligibility business process is too reliant on resource-intensive manual and paper-based processing. DHSS will need to greatly increase its capacity for automated data matching and validation in order to move to a more real-time eligibility determination process for most applicants. Lastly, DHSS’s distributed customer service model might struggle to provide the consistency and quality in the consumer experience desired by CMS, especially with the increase in program complexity an HBE will bring. It might be advantageous to explore a more centralized entry point for all member focused customer service to ensure a first-class consumer experience.