State of Ohio Health Insurance Exchange Planning

Strategic Architecture Blueprints Report

FINAL

September 13, 2011

Table of Contents

Table of Figures

1 Executive Summary

Background

The Ohio Department of Insurance (ODI), Offices of Information Technology and Security (OITS) and Health Care Policy (HCP), in collaboration with the Ohio Department of Jobs and Family Services (ODJFS) Office of Ohio Health Plans, selected KPMG to assist the state in conducting an IT Gap Analysis. That analysis would assess current technological capabilities in comparison to the functional requirements of running an Ohio Health Insurance Exchange or of Ohio using a Federal Exchange. The project has four deliverables:

1. IT Gap Analysis
2. Potential IT solutions for an Ohio Exchange
3. Potential IT solutions for interfacing Ohio systems with a Federal Exchange
4. Roadmap and budget for an Ohio Exchange or interfacing to a Federal Exchange.

This strategic blueprint report deals with the first three deliverables. A second strategic roadmap report will deal with the final deliverable.

We identified two Exchange models that represent the extremes on the cost and resource continuum. These two business model options are interfacing with a Federal Exchange, or creating a State Exchange. They are described in Section 4, "Ohio Exchange Business Model Options."

Interfacing with a Federal Exchange, from the state's perspective, would require the least cost and resources. Implementing a fully-featured State Exchange which meets the requirements of the ACA and complies with CMS guidance published in the Exchange Reference Architecture (ERA) would represent the highest cost and resource commitment. In between these two cost extremes, there are endless options for implementing the exchange.

For the Federal exchange, we assumed that the state would seek to maintain the viability of all the basic functions the state provides today. For example, we assumed the state would retain control of Medicaid eligibility and enrollment.

Blueprint Analysis and Design Process

The project was segmented into 3 phases:

Figure 1: Project Approach Summary

Phase 1 – Gap Analysis

In Phase 1, the KPMG and the Ohio team identified potential IT assets that could be reused in the Ohio Health Insurance Exchange. An assessment of each IT asset to the functional and technical requirements of a Health Insurance Exchange (HIX) was conducted to gauge each asset's potential for reuse.

Phase 2 – Business Model Options

The business model options were elaborated in this phase. KPMG utilized its HIX reference model to lead the team through a discussion that identified the IT solution requirements of Ohio's business model options, along with the business processes that would need to be implemented for each.

Phase 3 – IT Design Options

In the final phase, the details of the IT design options were analyzed. For each option, KPMG produced artifacts that identified: (1) the logical application components, (2) the logical nodes required for deploying the logical components, and (3) the integration requirements with other external systems.

Major Findings and Recommendations

From the Gap Analysis phase (Phase 1), the following observations and recommendations were made:

Finding #1: From a technical standpoint, OAKS and ODIIS have the greatest potential for reuse as technical components.

- The Workflow Engine and Data Management components of OAKS scored relatively well technically.
- ODIIS has significant capabilities in Financial Transactions Processing, Data Management, Business Process Management, and Privacy and Security.

Finding #2: Mapping both functional and technical capabilities, both CRIS-E and MITS were mapped as "not reusable".

- Relatively low functional and technical scores for CRIS-E's and MITS resulted in both solutions appearing in the "not reusable" category.

Recommendation #1: Consider interfacing CRIS-E with the State or Federal Exchange for Medicaid eligibility processes.

- Despite CRIS-E's classification as "not reusable", and given its expected lifetime (i.e. not to be retired immediately), the Exchange solution should interface with CRIS-E to utilize its existing functional capability to support the Medicaid eligibility assessment processes.

Recommendation #2: Consider ODIIS for reuse as a technical component, however OAKS should not be reused for the Exchange.

- Given that ODIIS is the platform for ODI enterprise systems, its technical components should be considered for reuse in building Exchange solutions, particularly with the Federal Exchange.
- OAKS is still being scaled up to meet the state's internal needs. Given the aggressive timeline for implementation, OAKS is not positioned for deployment for use in the Exchange. Doing so would disproportionately increase the project risk.

In the Business Model Options phase (Phase 2), the following findings were made:

Finding #3: Development of a State Exchange would require implementation of 100% of all Exchange IT functions. Development of a Federal Exchange would only require 14%.

- Development of a Federal Exchange requires implementing only 14% of the overall functionality in the HIX reference model. The other 86% would be supplied by the Federal Exchange. Of the two options, use of a Federal Exchange will require less work to implement, and will likely cost less.

In the Elaborate IT Design Options phase (Phase 3), the following findings were made:

Finding #4: For the State Exchange, all of the logical application components defined in the "to be" blueprint are required. Utilization of the Federal Exchange would require implementation of 23% of the functionality of the State Exchange.

- Development of a Federal Exchange will require implementing less functionality since the federal solution will provide that functionality. From a cost standpoint, this will result in lower costs. This assumption will be confirmed in the roadmap document.

Finding #5: Integration requirements for ODIIS and OAKS differ across both options.

- If Ohio uses ODIIS for plan certification and risk management with the Federal Exchange option, we assume that integration is required with the Federal Exchange.
- OAKS integration would be minimal and performed primarily for summary-level financial transactions. It would be required with the State Exchange, but is not required with the Federal Exchange. The State Exchange would need to develop automated support for the Accounts Receivable sub ledger. This would include premium billing and collections and an Accounts Payable sub ledger, Carrier premium and Broker commission remittances, and Navigator payments. OAKS would provide General Ledger only. Given the timeline for implementation, OAKS should not be considered for any customer facing transactions for the Exchange. As such, the integration with OAKS for the State Exchange is around the

7

recording of Accounts Receivable and Payable entries from the subledgers to the general ledger.

2 Project Approach

KPMG used the following three-phase approach to produce 3 deliverables:

1. IT Gap Analysis;
2. Potential IT solutions for an Ohio Exchange; and
3. Potential IT solutions for interfacing Ohio systems with a Federal Exchange

The sections that summarize the events of the phase are shown below the illustration.

1 Conduct Gap Analysis → **2** Define Business Model Options → **3** Elaborate IT Design Options

Section 3
Gap Analysis

Section 4
Ohio Exchange Business Model Options

Section 5
Ohio HIX IT Architecture: Design Options
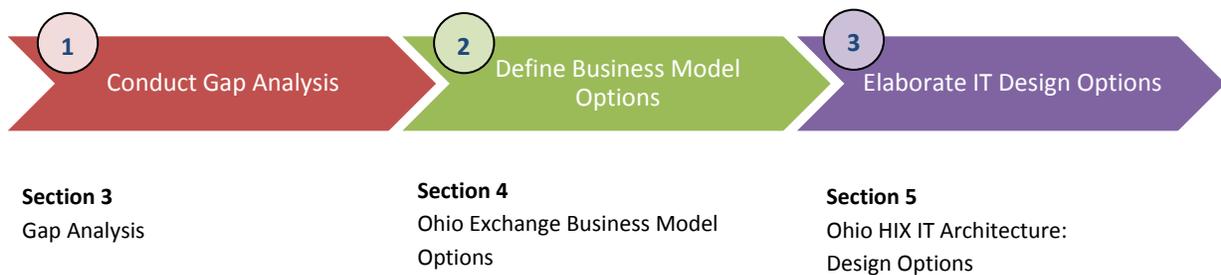
Figure 2: Project Approach with Sections

Phase 1 – Conduct Gap Analysis

KPMG worked with the Ohio team to identify potential IT assets that could be reused in the Ohio Health Insurance Exchange. A gap analysis was conducted between each IT asset's current functional and technical capabilities against the required functional and technical capabilities for a HIX.

KPMG used 4 steps to complete this process:

1. Review of the HIX Logical Component Model Reference Architecture to gain an understanding for the components that will be present in the future Ohio HIX.
2. Identification of relevant current IT assets that could be reused in the Ohio HIX.
3. Assessment of the identified IT assets functional and technical capabilities against future needs.
4. Analysis of the assessment results to identify potential reusable assets.

A description of the approach, assessment and the results from this phase are provided in Section 3 – Gap Analysis. The results from this phase showed the potential for current Ohio IT assets to be reused in each of the two options.

Phase 2 Define Exchange Business Model Options

In this phase KPMG facilitated a workshop with the working group to:

1. Define the Exchange business model options.
2. Confirm preliminary process assumptions for each of the model options.
3. Confirm business processes required for Exchange operations, by option.
4. Acquire the necessary input required to assess the relative complexity of the IT solution for each of the Exchange options.

A description of the approach, Exchange options and the results from this phase are provided in Section 4 – Exchange Business Model Options. The Exchange options and the discussion and decisions about these options were used to elaborate the IT design options in the next phase.

Phase 3 – Elaborate IT Design Options

The design details for both options were elaborated in this phase to show what logical components, logical nodes, and integration specifications would need to be implemented in order to realize the HIX under both the state and federal Exchange options.

This phase included 4 steps:

1. Review of the business process needs for each of the two Exchange options.
2. Construction of the logical component models for both options.
3. Construction of the deployment models for both options.
4. Construction of the integration model under both options.

A description of the approach and models from this phase are provided in Section 5 – Ohio HIX IT Architecture: Design Options.

3 Gap Analysis

Introduction

To support the planning of Ohio's Health Information Exchange (HIX), the team assessed the current state of Ohio's relevant IT assets. The purpose of this assessment was to determine which, if any, Ohio IT assets would be good candidates for reuse to support the Ohio HIX. The basis for this exercise is that existing IT assets could be used in part or whole to automate one or more components of the Future State Health Insurance Exchange depending on their functional and technological fit.

This section provides an inventory and brief description of the systems that were assessed, identifies the functional and technical components that they could replace, and shows the results of the gap analysis done to determine their functional and technological fit.

Approach

Step 1	Step 2	Step 3	Step 4
Review HIX Logical Component Model Reference Architecture	Identify Relevant Current IT Assets	Assess Current IT Assets	Conduct Fit-Gap Analysis

Step	Objective
Step 1 – Review HIX Logical Component Model Reference Architecture	• Familiarize the working group with HIX Logical Component Model • Review / adjust / finalize the functional and technical components that will be used to assess each IT asset
Step 2 – Identify Relevant Current IT Assets	• Determine which current IT assets are potential candidates for automating one or more HIX logical components
Step 3 – Assess Current IT Assets	• Document each asset's ability to fulfill the technical and functional components identified in Step 1
Step 3 – Conduct Fit-Gap Analysis	• Determine how well the IT assets identified fit the functional and technology requirements for the component

Figure 3: Gap Analysis Approach Summary

Step 1 – Review HIX Logical Component Model Reference Architecture

For the working group to gain an understanding of the types of systems that should be identified for potential reuse in the future state, KPMG introduced the HIX Logical Component Model.

The HIX Logical Component Model illustrates the logical information systems that are needed to fulfill the requirements defined by the CMS Exchange Reference Architecture. The CMS ERA provides detailed information for Enrollment and Eligibility as well as Plan Management core business areas. The Logical Component Model provides additional functional detail for the other four Exchange core business areas to provide a comprehensive set of Exchange functionality. Some State exchange business model options may use more or less functionality than is defined in this component model.
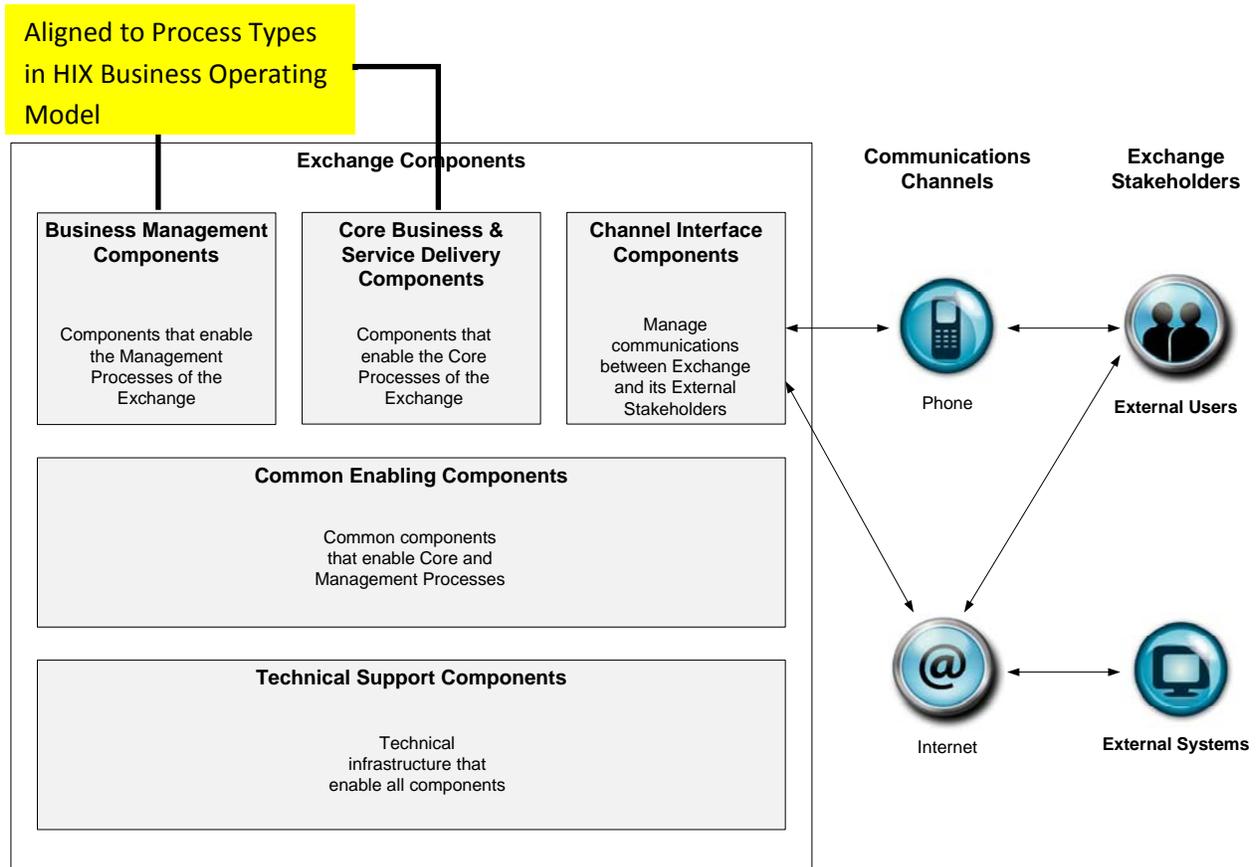
Figure 4: Structure of HIX Logical Component Model

Table 1 describes the different component groupings.

Component Group Name	Description
Business Management Components	Components that enable the management processes of the Exchange. These are the components that are mainly used for managing the Health Information Exchange resources (e.g.: asset management, human resources management).
Core Business & Service Delivery Components	Components that enable the core processes and the service delivery processes of the Exchange. These are the components that contain the core functionality used in the Health Information Exchange (e.g.:

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Component Group Name	Description
	eligibility assessment, enrollment processing, etc.)
Channel Interface Components	Components used for managing the communications that occur between the Health Insurance Exchange and any external stakeholders. This includes functional components such as unified communications technology and portal software.
Common Enabling Components	Common Enabling components enable the Core Business & Service Delivery components and the Business Management components. Core Business & Service Delivery and Business Management components are supported by these underlying enabling technology components (e.g.: information management, business process management, etc.)
Technical Support Components	Technical support components are the underlying technologies that are used by all components (e.g.: rules engine, workflow engine, etc.)

Table 1: Logical Component Group Descriptions

The detailed version of the HIX Logical Component Model is shown on the next page. All of the components within the component groups, described above, are illustrated. The profiles for each of the components shown can be found in Appendix F: HIX Logical Component Profiles.

Exchange Components

Communications Channels Exchange Stakeholders

Business Management Components

Financial Management & Reporting
Budgeting
Accounting
Performance Reporting

Information Technology
Data Centre Operations
Configuration Management
Service Level Management
Project Management

Asset Management

Human Resource Management

Procurement Management
Contract Management

Core Business & Service Delivery Components

Plan Certification & Risk Management
Certification, Recertification & Decertification of QHPs
Rate Quality of Plans
Estimate Coverage Costs
Benefits and Actuarial
Plan Management
Risk Adjustment & Transitional Reinsurance

Premium & Tax Credit Processing
Premium Tax Credit & Cost Sharing
Calculate Premium Tax Credit & Cost Sharing
Premium Billing, Collections & Reconciliation

Eligibility & Enrollment Operations

Eligibility Assessment
Eligibility Determination
Individual Responsibility Determination

Comparison Shopping
Customer Shopping Experience
Provide Comparative Plan Information
Calculate and Compare Net Cost of Coverage

Enrollment Processing
Apply and Enroll in Plan or Program
Renew Enrollment
Terminate Enrollment

Appeals Management
Adjudication of Eligibility Appeals
Notice and Appeal of Employer Liability

Broker/Navigator Relationship Management
Incentive Compensation and Design Management
Training, Certification and Compliance
Assist Consumer Choice & Enrollment
Assist Employer Choice of Plans
Broker/Navigator Relationship Management

Marketing & Outreach
Outreach and Education

Customer Service & Account Management
Customer Service
Customer Inquiry & Issue Resolution
Customer Account Management
Employee Account Management
Employer Account Management
Carrier Account Management

Channel Interface Components

Unified Communications
Interactive Voice Response
E-Mail
Fax
Test Messaging

Exchange Portal
Employer View
Employee View
Consumer View
Carrier View
Broker/Navigator View
Customer Service Rep View
Administrative View

B2B Gateway
SFTP
EDI
Web Services

Common Enabling Components

Information Management
Reporting
Business Intelligence
Records & Document Management

Master Person Index
Deterministic Matching
Probabilistic Matching
Roles Management

Knowledge Management
Content Management
Metadata Management

Financial Transaction Processing
Receipt Processing
Payment Processing

Business Process Management
Alerting & Notification
Document Generation

Technical Support Components

Privacy and Security
Identify and Access Management
Audit Trail
Message Encryption
Data Security

Rules Engine
Rules Catalogue
Inference Engine
Event Processing Engine

Workflow Engine
Process Scripting
Current Status Verification
User Authority Validation
Script Execution

Data Management
Database Management
Data Warehouse
Extract-Transform-Load

Service Management
Service Registry & Repository
Service Manager
Enterprise Service Bus
Non-Repudiation
Guaranteed Delivery

Phone

Internet

External Users

Exchange Stakeholders::External Users::
External Users
Employer
Employee
Consumer
Broker/Navigator
Carrier
Human Service Program Manager

External Systems

Exchange Stakeholders::External Systems::
External Systems
Social Security
Homeland Security
Financial Institution
Carrier
Broker/Navigator
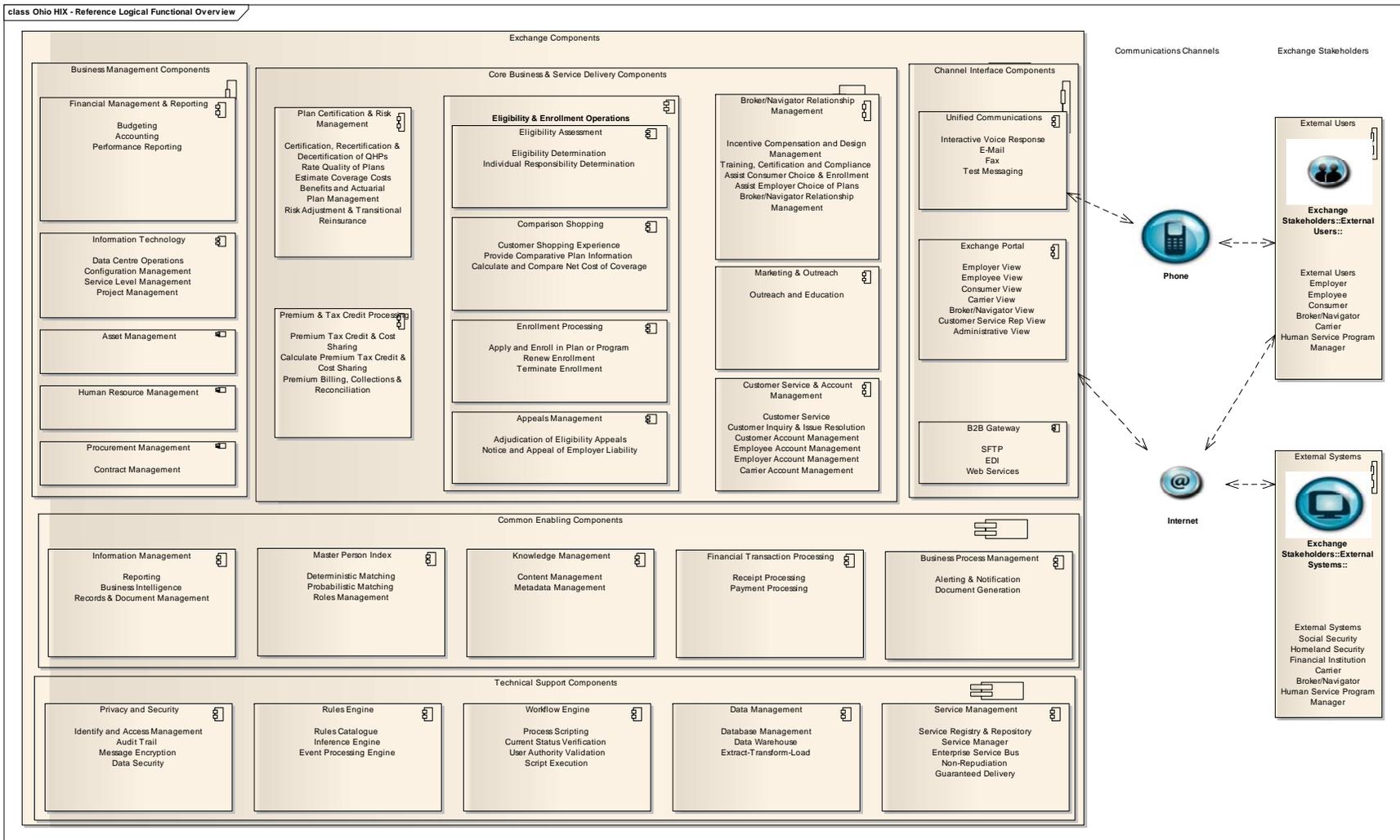Human Service Program Manager

Figure 5: HIX Logical Component Model (Detailed Model)

Using the HIX Logical Component Model, KPMG derived the functional and technical components and documented them in a worksheet that was used with Ohio staff to assist in the identification of relevant systems that need to be considered. An extract of the worksheet is show below for functional components.

Functional Component	Functional Component Description	Service Performed by Component
Eligibility Assessment	Enables assessment of eligibility of a party for a plan, program or service.	
Eligibility Assessment		Process Individual Exemption Renewal Request
Eligibility Assessment		Process SHOP Employee Renewal Request
Eligibility Assessment		Verify Individual Eligibility for Public Minimum Essential Coverage
Eligibility Assessment		Verify Individual Eligibility for Employer - Sponsored Minimum Essential Coverage
Eligibility Assessment		Determine Eligibility
Eligibility Assessment		Refer Potentially Eligible Individuals to M___ ___ CHIP for additional Screening
Eligibility Assessment		Determine Eligibility for Advance Pre___ __ Tax Credit
Eligibility Assessment		Determine Category for Cost-Shar___ g Reductions
Eligibility Assessment		spare
Eligibility Assessment		spare

List of services performed by Functional Component

Space for additional services

The purpose of this step was to review the functional and technical components contained in the Health Insurance Exchange Reference Model and determine if any of these functions were not relevant to Ohio, as well as identify additional functions which may not be accounted for.

A full listing of the functional and technical components can be found in Appendix J: Functional Components, and Appendix K: Technical Components.

Step 2 – Identify Relevant Current IT Assets

Based on the understanding gained from the review of the HIX Logical Component Model, the working group identified the following IT assets as the only relevant systems that have any potential for being a reusable component within the future state. In addition to the systems below, we also interviewed state staff implementing the OH Health Information Exchange (HIE) system. The HIE will be implemented using the Medicity platform. This system was not formally evaluated because we found no evidence for reuse in our interviews.

Current IT Systems	System Description
MITS	MMIS - EDS Interchange system
CRIS-E	Currently handles Medicaid eligibility
ODIIS	Enterprise information system for OH ODI
OAKS	Financial & CRM system

The four systems identified have functionality that covers, to some degree, the requirements of certain of the Exchange components. Where a "yes" is indicated in the table, we noted that some of the functionality exists in that system. However, even the best functional and technical fits require updates to achieve full compliance with Exchange requirements. The functional and technical components that each system covers are highlighted in the two tables below.

Functional Component	Current Physical Systems			
	MITS	**CRIS-E**	**ODIIS**	**OAKS**
	Performs Function?	Performs Function?	Performs Function?	Performs Function?
Plan Certification & Risk Management				
Premium & Tax Credit Processing				
Eligibility Assessment		Yes		
Comparison Shopping				
Enrollment Processing	Yes			
Appeals Management				
Broker/ Navigator Relationship Mgmt.			Yes[1]	
Marketing & Outreach				
Customer Service & Account Management			Yes	Yes

Table 3: Current State IT Systems Functional Components

Technical Component	Current Physical Systems			
	MITS	**CRIS-E**	**ODIIS**	**OAKS**
	Performs Function?	Performs Function?	Performs Function?	Performs Function?
Information Management	Yes	Yes	Yes	Yes
Master Person Index		Yes		
Knowledge Management	Yes			
Financial Transaction Processing	Yes		Yes	
Business Process Management		Yes	Yes	
Privacy and Security	Yes	Yes	Yes	
Rules Engine	Yes			

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[1] ODIIS is a potential platform for development of broker/navigator relationship management tools, but these do not exist there today and would have to be developed.

Technical Component	Current Physical Systems			
	MITS	**CRIS-E**	**ODIIS**	**OAKS**
	Performs Function?	Performs Function?	Performs Function?	Performs Function?
Workflow Engine			Yes	Yes
Data Management	Yes	Yes	Yes	Yes
Service Management		Yes		
Unified Communications				
Exchange Portal		Yes		
B2B Gateway				

Table 4: Current State IT Systems Technical Components

Being potential candidates for the future state Health Insurance Exchange, each of these systems were then assessed for their level of fit for performing the duties of the functional and technical components identified.

Step 3 – Assess Current IT Assets

The KPMG team, along with Ohio staff, attempted to gauge each system's capability in performing functions for the various functional and technical components.

Each system was evaluated as to whether or not it performs the functions of each logical application component in the blueprint, and to what degree it performed that function well. In determining whether or not the system performed the function, the system was rated with a value of yes, no or unknown – unknown indicating that insufficient information was available to determine a "yes" or "no" value, in which case we scored it as a "no".

In determining the extent to which a system performs the functions of a component, the system was rated with values of High, Med, Low, if it performed the function. All functions have been weighted using a "function point counting" methodology that determines the relative functional complexity of each function. By adding up the function point counts of each function in a given component that is performed by one of the current systems, we can determine the relative percentage of that required functionality that the current system performs. For example, if a given system could perform a number of functions that represent 35% of the total function point count of a given application component in the "to be" blueprint, we would score it as "Medium" in the table below. The value "N/A" was used to indicate that the system did not perform the function. The value "Unknown" was also used to indicate if the system's ability to perform the function was not known or could not be determined in the available timeframe.

An extract of the worksheet where this information was collected is shown in the figure below. The detailed version of this document is shown in Appendix I: IT Assets Assessment Worksheet (Detailed View).

Figure 6: IT Assets Assessment Worksheet (Excerpt)

Using this information, the next step in the process was to analyze how well each of the identified IT assets fit the needs of each of the functional and technical components that they are able to support.

Step 4 – Conduct Fit-Gap Analysis

KPMG created a Gap Analysis Tool that used the input from Step 3 to calculate the current IT asset's potential for reuse. The assessment data provided in Step 3 was translated into scores which were then used to rate each system's ability to perform the functions and to determine if the system should be reused, augmented for reuse, or not used at all. Systems were only evaluated against components they were intended to support.

The KPMG Gap Analysis Tool provided 3 outputs to summarize the analysis.

1. **A matrix of system ratings against individual functional or technical components;**
   A matrix illustrating the scoring of each system against each functional component was produced. The table below describes the colors that are used in the matrix.

Color	Description
Green	Large amount of the component functionality is supported (70% - 100%)
Yellow	Significant amount of the component functionality is supported (30% - 70%)
Red	Minor amount of the component functionality is supported (0% - 30%)
Grey	Amount of component functionality support is unknown
White	The system was not designed to provide this functionality

Table 5: System Fit-Gap Rating Scale

2. **A rating of each system against overall functional or technical requirements**

A graph that illustrates the score of the IT asset's components against all functional and technical components that it was being assessed against was also produced. As an example, an IT asset that scores high in each of the components it is assessed against would have a high rating on the graph.

3. **A consolidated scoring of each system in terms of its reusability.**

    This diagram is a bubble chart which shows the functional and technical alignment of each IT asset, as well as the amount of technical and functional values that have been met.

Functional Findings

The table below summarizes the ability of each system to meet the functional requirements for each of the functional components of a health insurance Exchange. As can be seen in the table, the CRIS-E system obtained the highest score in the table, and appears to be the only system that could be reusable from a functional component standpoint.

Functional Component	Current Physical Systems			
	MITS	CRIS-E	ODIIS	OAKS
Plan Certification & Risk Management				
Premium & Tax Credit Processing				
Eligibility Assessment	🟥	🟨		
Comparison Shopping				
Enrollment Processing	🟥	🟥		
Appeals Management				
Broker/ Navigator Relationship Management			🟥	
Marketing & Outreach				
Customer Service & Account Management			🟥	🟥
Financial Management & Reporting				
Information Technology				
Asset Management				
HR Management				
Procurement Management				

Table 6: Functional Component Fit-Gap Rating

The next diagram illustrates how much functionality each of the above systems provides relative to the requirements of the functional components covered by the system. It indicates a relative rating of how effective a system is at meeting its overall functional requirements.
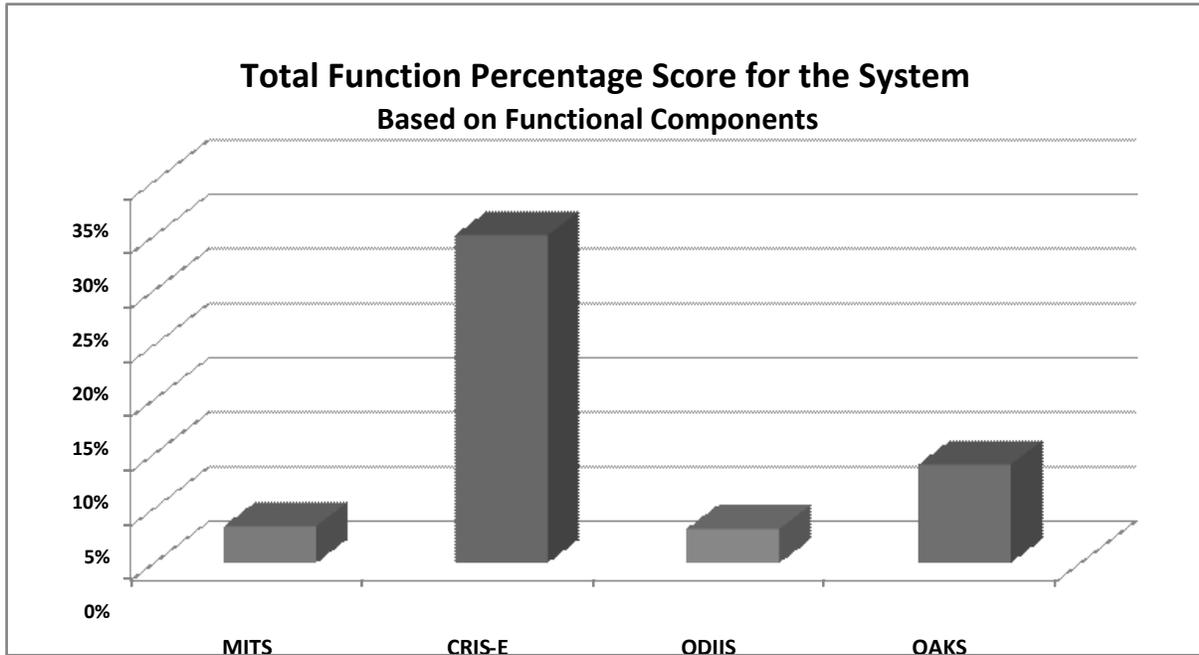
Figure 7: Total Function Percentage by System (for Functional Components)

Looking at the larger picture, the CRIS-E system is the only system that shows some potential for reuse in the Ohio insurance Exchange. However, its overall function score indicate that despite its strong showing in the Eligibility Assessment functional component category, it is much weaker in the Enrollment Processing functional component category, where it is also a candidate.

In the next section we look at the technical capabilities for all of the systems.   Although the CRIS-E system scores above others from a functional perspective, its technical assessment is less than 30%. Given its age and technical shortcomings, CRIS-E is not a viable candidate for reuse in the Ohio insurance Exchange. Please see the Technical Findings section below for those results and the resultant recommendation.

Technical Findings

Similar to the functional findings, a table was created to summarize the ability of each system to meet the technical requirements for each of the technical components for the Ohio insurance Exchange. This table is shown below. The same scoring mechanism is used as the one described earlier.

Technical Component	Current IT Systems			
	MITS	CRIS-E	ODIIS	OAKS
Information Management	🟥	🟨	🟨	🟨

Technical Component	Current IT Systems			
	MITS	CRIS-E	ODIIS	OAKS
Master Person Index		Green		
Knowledge Management	Red			
Financial Transaction Processing	Red		Yellow	
Business Process Management		Yellow	Yellow	
Privacy and Security	Red		Yellow	
Rules Engine	Red			
Workflow Engine			Red	Yellow
Data Management	Red	Red	Green	Green
Service Management		Red		
Unified Communications				
Exchange Portal		Red		
B2B Gateway				

Table 7: Technical Component Fit-Gap Rating

The results show that a number of systems have high technical capabilities across numerous technical components. However, when scored against all of the technical components that it is a candidate for, the results aren't as compelling.

Total Function Percentage Score for the System
Based on Technical Components
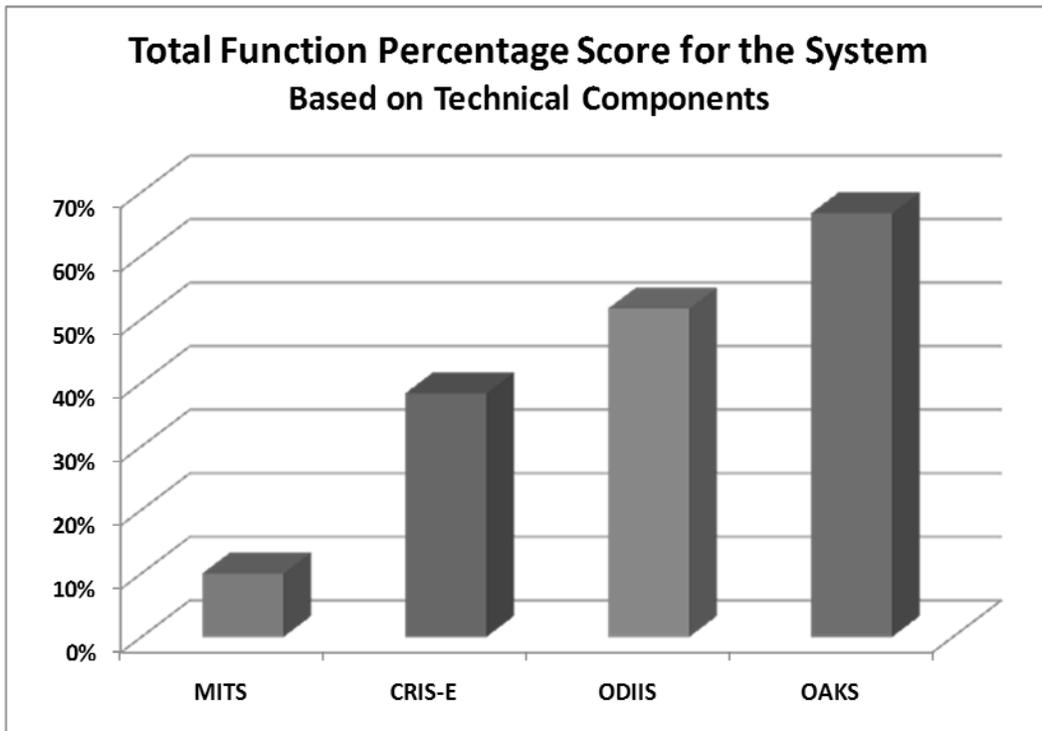
Figure 8: Total Function Percentage by System (for Technical Components)

Technically, the OAKS system scored the highest of all systems, and seems to have the highest potential for reusability from a technical component standpoint. The ODIIS system also scored fairly high and should be considered for reuse as well.

Finding:
From a technical standpoint, OAKS and ODIIS have the greatest potential for technical reuse.

OAKS has significant capabilities in the two areas against which it was assessed, technical fit as a Workflow Engine component, and technical fit as a Data Management component. Unfortunately, OAKS is an enterprise level system which is still being scaled up to meet the state's internal needs. Given the aggressive timeline for Exchange implementation, OAKS is not positioned for deployment for use in the Exchange.

ODIIS has significant capabilities across Financial Transactions Processing, Data Management, Business Process Management, and Privacy and Security. However, its technical capabilities as a Workflow Engine were quite low.

CRIS-E has capabilities in Master Person Index management information management and business process management. It has limited capabilities with respect to Data Management, Service Management, and Exchange Portal. It also does not meet the CMS insurance Exchange architecture, requiring use of a Web Services Architecture (using XML, SOAP and WSDL or REST) and Service Oriented

22

Architecture approach for design and development leveraging the concepts of a shared pool of configurable computing resources (e.g., Cloud Computing).

Gap Analysis Summary

The degree of functional and technical capability of each system is summarized in the bubble chart below. Systems in the top right quadrant (high functional and technical capability) are candidates for reuse. Systems in the bottom left quadrant (low functional and technical alignment) are not candidates for reuse by the HIX.
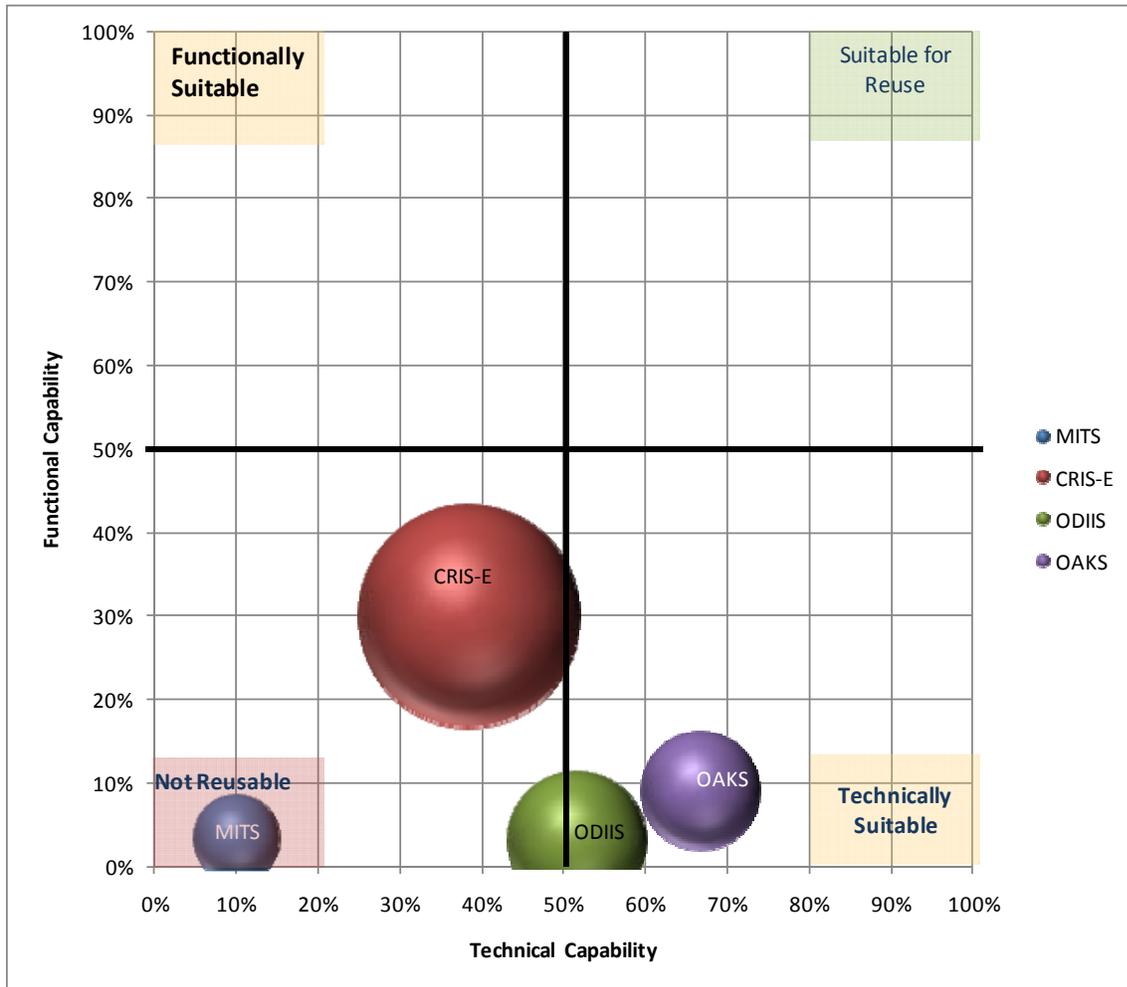
Figure 9 Functional and Technical Capabilities Summary

There are no systems in the top right quadrant, which would indicate strong functional and technical capabilities. There are also no systems in the top left quadrant, which would indicate strong functional but poor technical capability.

All of the systems appear in the bottom left or bottom right quadrants. Those in the bottom right are "Technically Suitable" as systems that can be reused as technical components in the Ohio insurance Exchange, but a low probability of being reused as functional components. Their lack of functional alignment means that significant configuration or other modification would be required to enable Exchange system functionally. Those in the bottom left are classified as "Non-Reusable", and have a low probability of being reused as technical or functional components.

Finding:
CRIS-E and MITS are not reusable, while OAKS & ODIIS have potential reuse as technical components.

The summary view shows that the OAKS and ODIIS systems may be considered for reuse from a technical standpoint while CRIS-E and MITS are not reusable for the Exchange solution.

Recommendation:
Consider interfacing CRIS-E with the State or Federal Exchange for Medicaid eligibility processes.

Despite its appearance in the lower left quadrant, and therefore its classification as "Not Reusable", CRIS-E is unlikely to be retired in the near term. The Exchange solution should interface with CRIS-E to support Medicaid eligibility assessment processes.

Recommendation:
Consider ODIIS for reuse as a technical component.

OAKS and ODIIS had high technical alignment scores. Since ODIIS is the platform for ODI enterprise systems, its technical components should be considered for reuse in building Exchange solutions, particularly with the Federal Exchange. OAKS is a State level system which is still being scaled up to meet the state's internal needs. Given the aggressive timeline for implementation, the work required to create Exchange functional alignment using OAKS would significantly increase the risk to the project.

4 Ohio Exchange Business Model Options

Introduction

This phase was used to define what the Exchange business model options were, as this would inform both the Gap Analysis and Implementation Estimate phases. To accomplish this KPMG used the following approach.

Approach

Step 1	Step 2	Step 3	Step 4
Identify Exchange Options	Identify and Validate Assumptions	Review Reference Model Exch. Operations	Validate Business Process Needs
	* By Exchange option		* By Exchange option
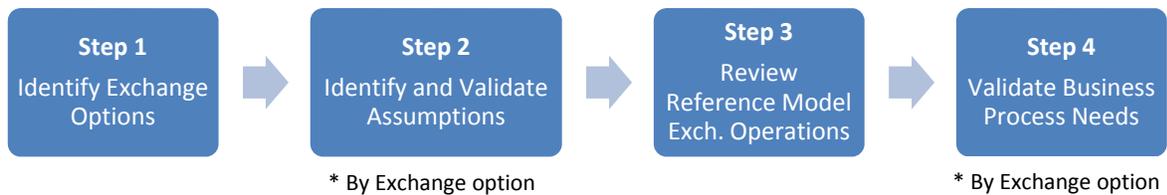
Step	Objective
Step 1 – Identify Exchange Options	• Define the viable health insurance Exchange options
Step 2 – Identify and Validate Assumptions for each Exchange Option	• Identify and validate assumptions made for each of the health Exchange options
Step 3 – Review Reference Model Exchange Operations	• Familiarize the working group on the reference model in order to facilitate a discussion on high-level functional needs
Step 4 – Validate Business Process Needs for each Exchange Option	• Determine and validate that high-level business process needs for each of the Exchange options

Figure 10: Business Model Options Approach

Step 1 – Identify Exchange Options

Based on discussions held with the management team, KPMG learned that Ohio is considering two possible options for the implementation of their Health Insurance Exchange:

Option 1 – Development of a State Exchange

> The first option considered by Ohio is the implementation of an Ohio Health Insurance Exchange. This business model would require significant development effort on the state's part, and would not use any of the functionality developed by CMS for their Federal Exchange.

Option 2 – Utilization of a Federal Exchange

The second option maintains the viability of the basic functions the state provides today, interfacing with the federal Health Insurance Exchange. This option would require less development effort on behalf of the state, and would utilize the central Health Insurance Exchange system developed by CMS. It might require significant Ohio investment to interface with the federal system, with the state retaining control of business functions such as managing insurance carriers, rating plans, determining Medicaid eligibility, and more.

The two options considered by Ohio are at either ends of the spectrum in terms of possible solutions. In between these two options are numerous hybrid solutions which were not evaluated. Considering these two options will identify the minimum and maximum costs for implementing a health insurance Exchange. The cost of a hybrid solution would fall somewhere in the middle.

Step 2 – Identify and Validate Assumptions for each Exchange Option

Using the options identified in the previous step, KPMG made assumptions that would assist in defining the needs for Ohio's health insurance Exchange. The assumptions focused on the type of high-level functionality that would be required in each of the options (e.g.: need for back office systems, need for interfaces, etc.). These assumptions were reviewed and validated with the working group. A comparative summary of assumptions between options is shown below.

High-Level Functional Need	Option 1 – Development of a State Exchange		Option 2 – Utilization of a Federal Exchange	
Back Office Systems (e.g.: Finance, HR, etc.)	✓	Required, as all Exchange Reference Architecture functions including back office systems will need to be implemented. Some reuse of OAKS general ledger functionality is anticipated	✗	Not required, as these would be provided by existing systems at ODI and the State.
Interfaces to State Systems (e.g.: Vital Statistics data)	✓	Required for sharing / accessing State systems information.	✓	Required for sharing / accessing State systems information.

High-Level Functional Need	Option 1 – Development of a State Exchange		Option 2 – Utilization of a Federal Exchange	
Eligibility assessment functionality for Medicare, Medicaid, SNAP, TANF, etc.	✅	Required, as the State Exchange would need to implement eligibility assessments for Medicaid, SNAP, and TANF, in addition to premium tax credits, cost sharing subsidies and SHOP. The exchange could refer recipients to Federal systems for Medicare eligibility determiniation.	❌	Not Required, as the Federal Exchange would be expected to perform such assessments[2].
Enrollment interfaces / services for Medicare, Medicaid, SNAP, TANF, etc.	✅	Required, as the State Exchange would need to implement enrollment service for Medicare, SNAP, and TANF, in addition to premium tax credits, cost sharing subsidies and SHOP. The exchange could refer recipients to Federal systems for Medicare enrollment.	❌	Not Required, however State would need to ensure that enrollment requests from the Federal Exchange are processed by State-run Medicaid systems
Plan Management Functionality	✅	Required in order to qualify and rate Ohio carriers and plans that would trade on the State Exchange.	✅	Required to qualify and rate Ohio carriers and plans that would trade on the Federal Exchange

Table 8: Exchange Options High-Level Functional Needs

Step 3 – Review Reference Model Exchange Operations

The validated assumptions from the previous step provided a high-level summary of the type of information technology functionality that would be expected to support each of the options. In order to elaborate the details of this functionality it was necessary to apply these assumptions to the Health Insurance Exchange reference models. In this step, KPMG familiarized the working group with the KPMG Business Operating Model to ensure that everyone had a common understanding prior to the

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[2] Although the Federal Exchange will implement this functionality, the State will likely wish to collaborate with the developers of the Federal Exchange to ensure that Ohio specific business rules are configured on the Exchange.

elaboration of the functional needs done in the next step. Apart from the next steps, it was imperative that the group understood this model, as it would be used in other phases of the project.

The KPMG Business Operating Model is described below, along with its alignment with the Centers for Medicare & Medicaid Services Exchange Reference Architecture.

Centers for Medicare & Medicaid Services (CMS) Exchange Reference Architecture

The Centers for Medicare & Medicaid Services (CMS) has been developing Exchange reference architecture (ERA). The CMS ERA identifies six business areas that constitute a Health Insurance Exchanges and, to-date, have fully defined two of these areas – Eligibility & Enrollment, and Plan Management.

In the absence of a complete ERA, the KPMG project team constructed an ERA for a fully-functional HIX that extends and is aligned with the CMS ERA, and meets the requirements of an Exchange for use in the gap analysis. This KPMG HIX Reference Architecture extends the CMS ERA by defining, for planning purposes, the four other business areas identified by CMS: Oversight, Customer Service, Financial Management, and Communications. It also includes a transformation of the CMS-level architecture into a number of different views / modes. Some of these models are used throughout the report; others are referenced in the Appendix.

1. HIX Business Context Model – see Appendix A: Ohio HIX Business Context Model;
2. HIX Business Operating Model – see Section 3: Ohio Exchange Business Model Options;
3. HIX Information Model – see Appendix D: HIX Information Model;
4. HIX Logical Application & Data Architecture – see Appendix E: HIX Logical Application & Data Architecture;
5. HIX Logical Component Model – see Section 4: Gap Analysis;
6. HIX Deployment Model – see Section 5: Ohio HIX IT Architecture: Design Options;

The above models are aligned to ensure referential integrity is maintained from the business level down to the physical implementation.

In this step, only the HIX Business Operating Model was used to highlight the high-level functional needs of a Health Insurance Exchange. The other models are discussed in later sections and in the appendices.

CMS ERA and KPMG HIX Business Operating Model Alignment

The HIX Business Operating Model structure is fully aligned with the CMS ERA. The CMS ERA defines six Exchange Business Areas in their ERA Foundation Guidance Report. These six Exchange Business Areas are shown in the diagram below taken from their report.

Figure 11: CMS ERA Exchange Business Areas

The KPMG HIX Business Operating Model recognizes these 6 business areas and has incorporated them into the model. Within each business area, a number of processes are used to produce outputs within that specific business area. The CMS ERA refers to these groups as process groups, and has defined these groups for the Eligibility and Enrollment business area, but has not done so for the other 5 business areas. As a result, the KPMG Exchange Reference Model is only aligned with the process groups that have been identified in the CMS Eligibility & Enrollment Supplementary ERA document. KPMG has created similar process groups for the other five business areas based on our knowledge.

The business areas and process groups can be seen in the HIX Business Operating Model on the next page. The business operating model shows the relationship between the health insurance Exchange and its stakeholders. It illustrates how each of the management, core, and core delivery processes manage and deliver the services of an Exchange.
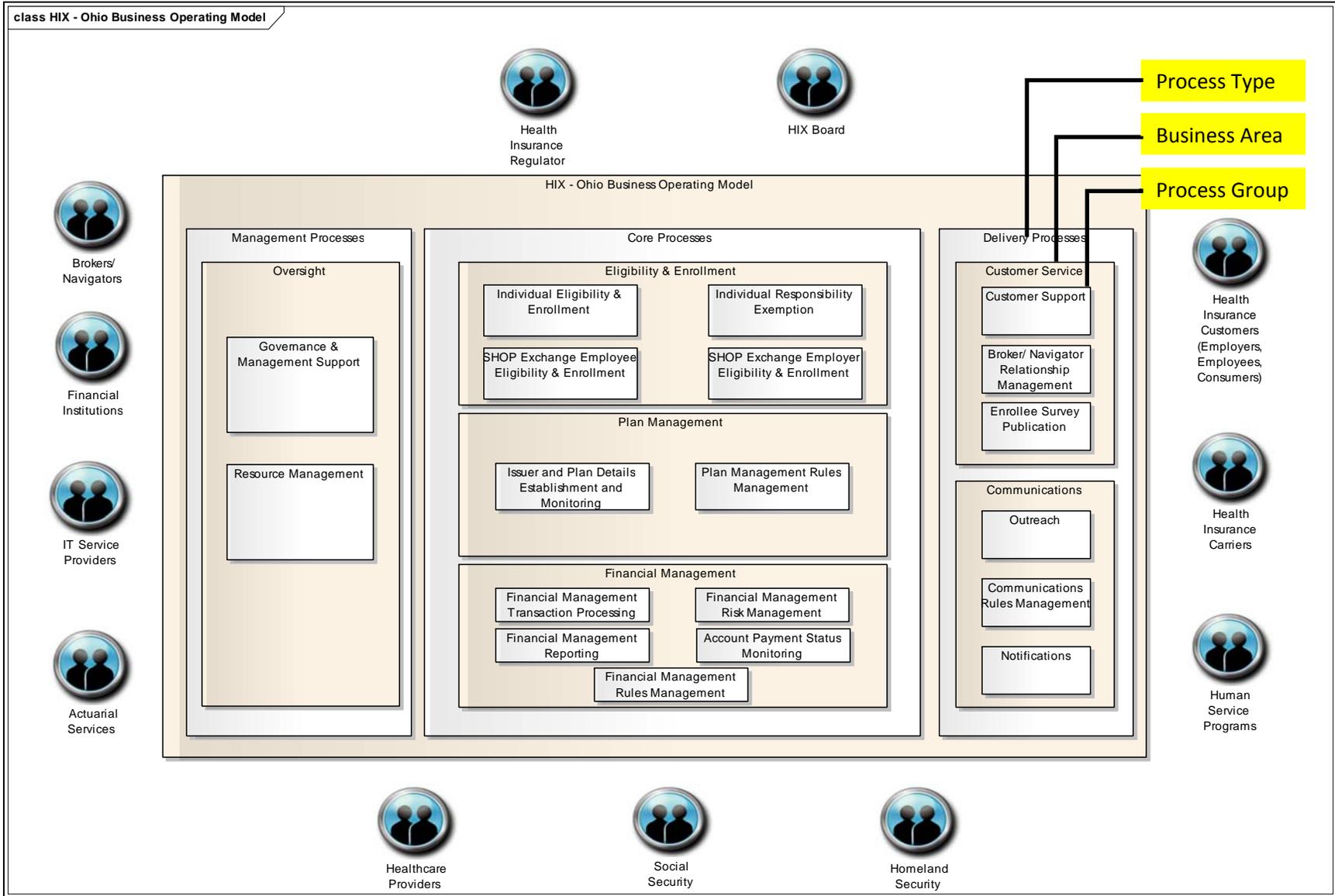
Figure 12: KPMG HIX Business Operating Model

Step 4 – Validate Business Process Needs for each Exchange Option

The KPMG HIX Business Operating Model allowed KPMG to develop a workbook that outlined each of the business areas, the process groups within those business areas, the business processes that comprise a process group, and the Exchange services that are used to automate portions of the business process. This workbook was utilized by KPMG in this step to elaborate which processes would be used by each of the Exchange options. This level of information was required as input into later phases of the project, as the team would need to understand the high-level function needs of each of the Exchange options in order to assess the gaps and provide estimates for each.

An excerpt from the workbook that was used is shown below, along with descriptions of the fields.

Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
				39	330
				12%	100%
Oversight				0	22
Oversight	Resource Management			0	20
Oversight	Resource Management	Asset Management		0	4
Oversight	Resource Management	Asset Management	Manage Deployment	0	1
Oversight	Resource Management	Asset Management	Manage System Sp... ...ons	0	1
Oversight	Resource Management	Asset Management	Monitor Assets	0	1
Oversight	Resource Management	Asset Management	Manage Vendor Contracts	0	1
Oversight	Resource Management	Human Resource Management		0	9
Oversight	Resource Management	Human Resource Management	Manage Recruitment	0	1
Oversight	Resource Management	Human Resource Management	Manage Compensation	0	1
Oversight	Resource Management	Human Resource Management	Manage Job Evaluations	0	1
Oversight	Resource Management	Human Resource Management	Manage Performance	0	1
Oversight	Resource Management	Human Resource Management	Manage Time and Attendance	0	1

Figure 13: Exchange Options Needs Evaluation Workbook

Definitions

Table 9: Exchange Options Needs Evaluation Workbook Column Descriptions

	Column Name	Description
1	Business Area	Groups of process groups that make up the larger business function. E.g. Oversight (business area) includes Resource Management, and Governance & Management Support (both process groups)
2	Process Group	Groups of business processes that provide similar business functionality. E.g.: Resource Management (process group) includes the

		management of assets and human resources (both business processes).
3	Business Process Name	A high-level process that is used for producing one or more outputs.
		E.g.: Asset management (a business process) includes the work that is done to track, monitor, provision and de-provision assets.
4	Exchange Business Service Name	A service that is used to automate parts of a particular process.
5	Exchange Options	Illustrates the options that are being considered, and which need to be analyzed for functional needs. That is, each option will have different automation requirements, depending on its scope.
6	Business Area Subtotal	Total number of Exchange business services that are used by the specific option for a given business area.
7	Process Group Subtotal	Total number of Exchange business services that are used by the specific option for a given process group.
8	Business Process Subtotal	Total number of Exchange business services that are used by the specific option for a given business process.
9	Option Need Indicator	Indicates whether or not the business service is required for the option being considered.

The high-level summary (by Business Area) from this exercise can be seen below. The detailed results are shown in .

Process Type	Business Area	Federal	State	
		50	346	← Business Service Count
		14%	100%	← Business Service Count Utilization %
Management Processes		9	32	
Back Office	Oversight	9	32	
Core Processes		32	245	
Middle Office	Eligibility & Enrollment	0	191	
Middle Office	Plan Management	24	26	
Middle Office	Financial Management	8	28	
Delivery Processes		9	69	
Front Office	Customer Service	7	55	
Front Office	Communications	2	14	

Table 10: Business Process Needs Summary

Finding:
Development of a State Exchange would require implementation of 100% of all business services. Development of a Federal Exchange would only require 14%.

The Business Service Count number shows the number of business services that are needed to support the design option. As expected, the development of a State Exchange would result in the need for more business services to be supported (i.e.:

it would need to have much more IT functionality developed versus the Federal Exchange option). The second indicators, the Business Service Count Utilization percentage shows the need for business services under each option as a percent. Again, under the Federal Exchange Option, Ohio would only need to develop / implement 14% of the total business services, whereas the State Exchange would require implementing 100% of the business services.

Option 1: Development of a State Exchange

In this design option, the state does not rely on any business services from other providers (state or federal). Therefore Ohio is required to implement 100% of all business services across all business areas.

Option 2: Utilization of the Federal Exchange

Under this option, Ohio is:

- Required to implement 28% of Oversight business services
- Not required to develop any Eligibility & Enrollment business services
- Required to implement 92% of Plan Management business services
- Required to implement only 29% of Financial Management business services
- Required to implement only 13% of the Customer Service business services; and
- Required to implement only 14% of the Communications business services

The graphical representation of the functionality that needs to be implemented by Ohio for both options is shown on the new two pages.

33

class HIX - Reference Business Operating Model V02

Health Insurance Regulator

HIX Board

Reference Health Insurance Exchange Business Operating Model

Brokers/ Navigators

Financial Institutions

IT Service Providers

Actuarial Services

Management Processes

Oversight

Governance & Management Support

Resource Management

Core Processes

Eligibility & Enrollment

Individual Eligibility & Enrollment

Individual Responsibility Exemption

SHOP Exchange Employee Eligibility & Enrollment

SHOP Exchange Employer Eligibility & Enrollment

Plan Management

Issuer and Plan Details Establishment and Monitoring

Plan Management Rules Management

Financial Management

Financial Management Transaction Processing

Financial Management Risk Management

Financial Management Reporting

Account Payment Status Monitoring

Financial Management Rules Management

Delivery Processes

Customer Service

Customer Support

Broker/ Navigator Relationship Management

Enrollee Survey Publication

Communications

Outreach

Communications Rules Management

Notifications

Health Insurance Customers (Employers, Employees, Consumers)

Health Insurance Carriers

Human Service Programs

Healthcare Providers

Social Security

Homeland Security

Figure 14: (Option 1) State Exchange Business Operating Model

35
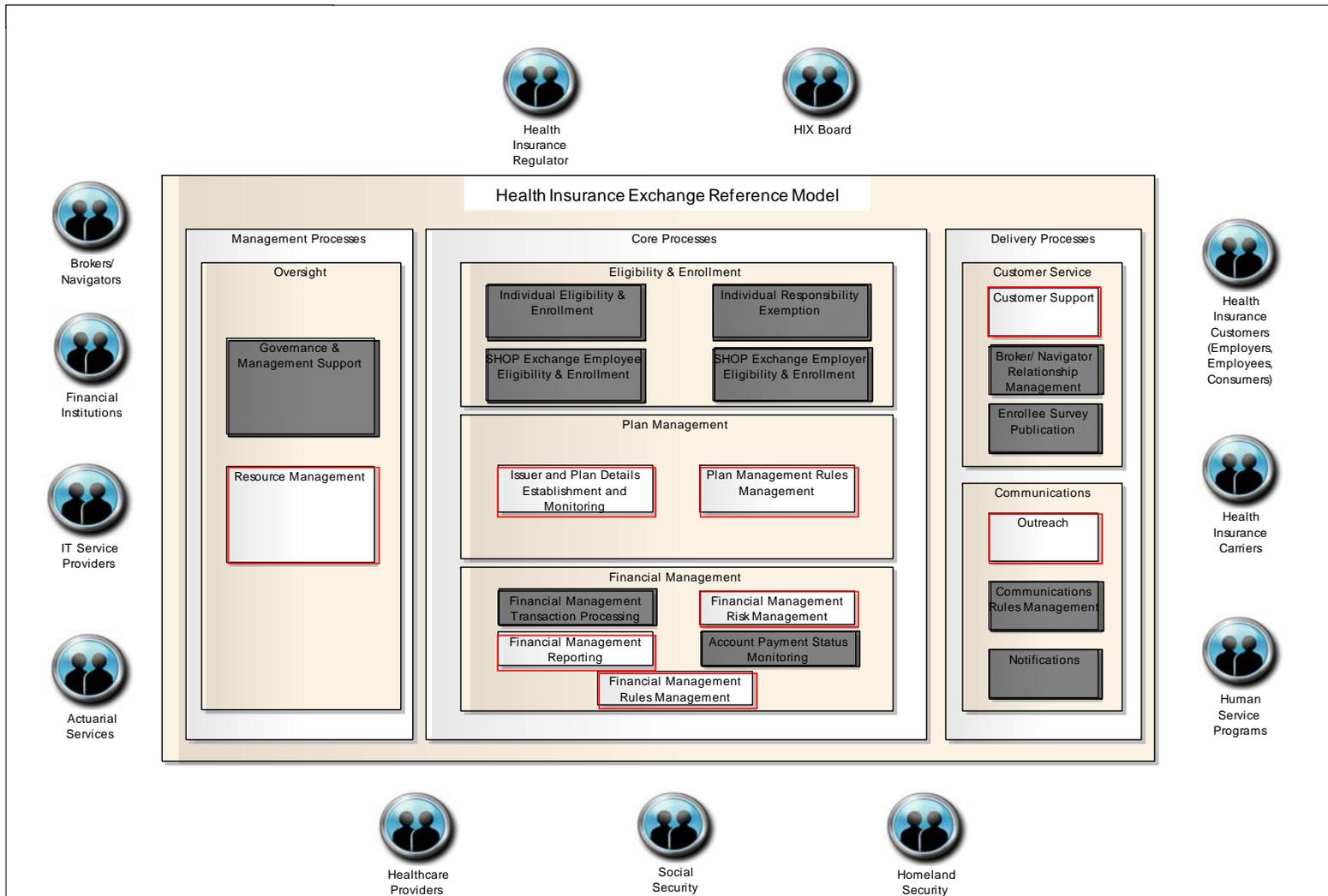
Figure 15: (Option 2) Federal Exchange Business Operating Model

5 Ohio HIX IT Architecture: Design Options

Introduction

As determined in Phase 1, Ohio has elected to review two potential design options for the Ohio HIX:

- **Option 1: Development of a State Exchange;** and
- **Option 2: Utilization of the Federal Exchange**

In this phase we highlight the different design options using artifacts from the KPMG Health Insurance Exchange Reference Architecture. This exercise will:

(1) Illustrate the logical components that are to be implemented under each scenario;
(2) Illustrate the nodes that are needed for deploying the components at the physical level; and
(3) Illustrate the interfaces that are needed to integrate different federal and state systems.

Approach

Step 1	Step 2	Step 3	Step 4
Review Business Process Needs Worksheet	Construct Logical Component Models	Construct Deployment Models	Construct Integration Models
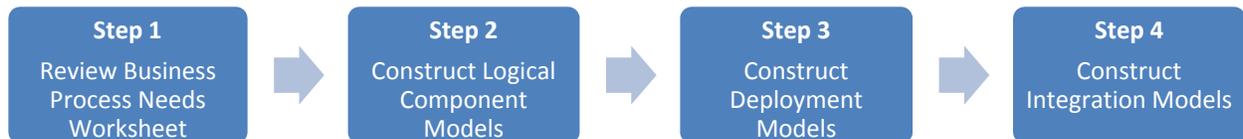
Step	Objective
Step 1 – Review Business Process Needs Worksheet	• Review the requirements defined in the worksheet from Phase 1, Step 4.
Step 2 – Construct Option 1 Logical Component Model	• Using the needs defined in the first phase, develop a customized view of the KPMG Logical Component Reference Model for both options.
Step 3 – Construct Deployment Models	• Using the logical component model, develop customized views of the KPMG Deployment Reference Model for both options.
Step 4 – Review Integration Model	• Develop customized views of the KPMG Integration Reference Model for both options.

Figure 16: Ohio HIX IT Architecture Design Options Approach

Step 1 – Review Business Process Needs Worksheet

An excerpt from the Business Process Needs worksheet from Phase 1, Step 4 is shown below.

Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
				39	330
				12%	100%
Oversight				0	22
Oversight	Resource Management			0	20
Oversight	Resource Management	Asset Management		0	4
Oversight	Resource Management	Asset Management	Manage Deployment	0	1
Oversight	Resource Management	Asset Management	Manage System Specifications	0	1
Oversight	Resource Management	Asset Management	Monitor Assets	0	1
Oversight	Resource Management	Asset Management	Manage Vendor Contracts	0	1
Oversight	Resource Management	Human Resource Management		0	9
Oversight	Resource Management	Human Resource Management	Manage Recruitment	0	1
Oversight	Resource Management	Human Resource Management	Manage Compensation	0	1
Oversight	Resource Management	Human Resource Management	Manage Job Evaluations	0	1
Oversight	Resource Management	Human Resource Management	Manage Performance	0	1
Oversight	Resource Management	Human Resource Management	Manage Time and Attendance	0	1

Figure 17: Business Process Needs Worksheet from Phase 1, Step 4

This worksheet defined the Exchange business services that have to be implemented under each of the options. At the process group level this worksheet provides the information that is necessary for constructing the Logical Component model for each of the scenarios.

Step 2 – Construct Logical Component Models

The Logical Component Model for both the Development of a State Exchange option, and the Utilization of the Federal Exchange option, are shown on the next pages. These logical component models were derived from the KPMG Logical Component Reference Model.

Components in green are foundational components that need to be implemented regardless of the option.

Components in red are components that are required based on the option being considered. Like the components in green, these components would also need to be implemented.

Components that are grayed out are components that are required, but are components that will be implemented by another service provider. This is only relevant in the utilization of the Federal Exchange option, where the Federal Exchange will provide the functionality for these components.

38

class Ohio HIX - Reference Logical Functional Overview

Exchange Components

Business Management Components

Financial Management & Reporting
Budgeting
Accounting
Performance Reporting

Information Technology
Data Centre Operations
Configuration Management
Service Level Management
Project Management

Asset Management

Human Resource Management

Procurement Management
Contract Management

Core Business & Service Delivery Components

Plan Certification & Risk Management
Certification, Recertification & Decertification of QHPs
Rate Quality of Plans
Estimate Coverage Costs
Benefits and Actuarial
Plan Management
Risk Adjustment & Transitional Reinsurance

Premium & Tax Credit Processing
Premium Tax Credit & Cost Sharing
Calculate Premium Tax Credit & Cost Sharing
Premium Billing, Collections & Reconciliation

Eligibility & Enrollment Operations

Eligibility Assessment
Eligibility Determination
Individual Responsibility Determination

Comparison Shopping
Customer Shopping Experience
Provide Comparative Plan Information
Calculate and Compare Net Cost of Coverage

Enrollment Processing
Apply and Enroll in Plan or Program
Renew Enrollment
Terminate Enrollment

Appeals Management
Adjudication of Eligibility Appeals
Notice and Appeal of Employer Liability

Broker/Navigator Relationship Management
Incentive Compensation and Design Management
Training, Certification and Compliance
Assist Consumer Choice & Enrollment
Assist Employer Choice of Plans
Broker/Navigator Relationship Management

Marketing & Outreach
Outreach and Education

Customer Service & Account Management
Customer Service
Customer Inquiry & Issue Resolution
Customer Account Management
Employee Account Management
Employer Account Management
Carrier Account Management

Channel Interface Components

Unified Communications
Interactive Voice Response
E-Mail
Fax
Test Messaging

Exchange Portal
Employer View
Employee View
Consumer View
Carrier View
Broker/Navigator View
Customer Service Rep View
Administrative View

B2B Gateway
SFTP
EDI
Web Services

Common Enabling Components

Information Management
Reporting
Business Intelligence
Records & Document Management

Master Person Index
Deterministic Matching
Probabilistic Matching
Roles Management

Knowledge Management
Content Management
Metadata Management

Financial Transaction Processing
Receipt Processing
Payment Processing

Business Process Management
Alerting & Notification
Document Generation

Technical Support Components

Privacy and Security
Identify and Access Management
Audit Trail
Message Encryption
Data Security

Rules Engine
Rules Catalogue
Inference Engine
Event Processing Engine

Workflow Engine
Process Scripting
Current Status Verification
User Authority Validation
Script Execution

Data Management
Database Management
Data Warehouse
Extract-Transform-Load

Service Management
Service Registry & Repository
Service Manager
Enterprise Service Bus
Non-Repudiation
Guaranteed Delivery

Figure 18: (Option 1) State Exchange Logical Component Model

Exchange Components

Business Management Components

Financial Management & Reporting

Budgeting
Accounting
Performance Reporting

Information Technology

Data Centre Operations
Configuration Management
Service Level Management
Project Management

Asset Management

Human Resource Management

Procurement Management

Contract Management

Core Business & Service Delivery Components

Plan Certification & Risk Management

Certification, Recertification &
Decertification of QHPs
Rate Quality of Plans
Estimate Coverage Costs
Benefits and Actuarial
Plan Management
Risk Adjustment & Transitional
Reinsurance

Eligibility & Enrollment Operations

Eligibility Assessment

Eligibility Determination
Individual Responsibility Determination

Comparison Shopping

Customer Shopping Experience
Provide Comparative Plan Information
Calculate and Compare Net Cost of Coverage

Premium & Tax Credit Processing

Premium Tax Credit & Cost
Sharing
Calculate Premium Tax Credit &
Cost Sharing
Premium Billing, Collections &
Reconciliation

Enrollment Processing

Apply and Enroll in Plan or Program
Renew Enrollment
Terminate Enrollment

Appeals Management

Adjudication of Eligibility Appeals
Notice and Appeal of Employer Liability

Broker/Navigator Relationship Management

Incentive Compensation and Design
Management
Training, Certification and Compliance
Assist Consumer Choice & Enrollment
Assist Employer Choice of Plans
Broker/Navigator Relationship
Management

Marketing & Outreach

Outreach and Education

Customer Service & Account Management

Customer Service

Customer Inquiry & Issue Resolution
Customer Account Management
Employee Account Management
Employer Account Management
Carrier Account Management

Channel Interface Components

Unified Communications

Interactive Voice Response
E-Mail
Fax
Test Messaging

Exchange Portal

Employer View
Employee View
Consumer View
Carrier View
Broker/Navigator View
Customer Service Rep View
Administrative View

B2B Gateway

SFTP
EDI
Web Services

Common Enabling Components

Information Management

Reporting
Business Intelligence
Records & Document Management

Master Person Index

Deterministic Matching
Probabilistic Matching
Roles Management

Knowledge Management

Content Management
Metadata Management

Financial Transaction Processing

Receipt Processing
Payment Processing

Business Process Management

Alerting & Notification
Document Generation

Technical Support Components

Privacy and Security

Identify and Access Management
Audit Trail
Message Encryption
Data Security

Rules Engine

Rules Catalogue
Inference Engine
Event Processing Engine

Workflow Engine

Process Scripting
Current Status Verification
User Authority Validation
Script Execution

Data Management

Database Management
Data Warehouse
Extract-Transform-Load

Service Management

Service Registry & Repository
Service Manager
Enterprise Service Bus
Non-Repudiation
Guaranteed Delivery

Figure 19: (Option 2) Federal Exchange Logical Component Model

40

Step 3 – Construct Deployment Models

The Deployment Models for both options are derived from the KPMG Deployment Reference Model. The KPMG Deployment Reference Model provides a detailed view of the placement of the logical software components on nodes within different zones of the HIX network, including the external network. Logical nodes represent hardware platforms at a high level of abstraction. The HIX deployment model details network capabilities, hardware requirements and other information related to deploying the Ohio HIX solution. The profile for the logical nodes can be found in Appendix G: Deployment Model Node Profiles.

The KPMG Deployment Reference Model can be seen on the next page. The two pages following that shows the deployment models for each of the two options. These customized models are based on the KPMG Deployment Reference Model, with color box overlays placed on it.

The color box overlays have the following meaning:

Components in green are foundational components that need to be implemented regardless of the option, and need to deployed on a logical node.

Components in red are components that are required, based on the option being considered. Like the components in green, these components would also need to be implemented and need to be deployed on a logical node as well.

Components that are grayed out are components that are required, but are components that will be implemented by another service provider. This is only relevant in the utilization of the Federal Exchange option, where the Federal Exchange will provide the functionality for these components. The components do not need to be deployed on a logical node (i.e.: the logical node is not required if there aren't any required components deployed on it).
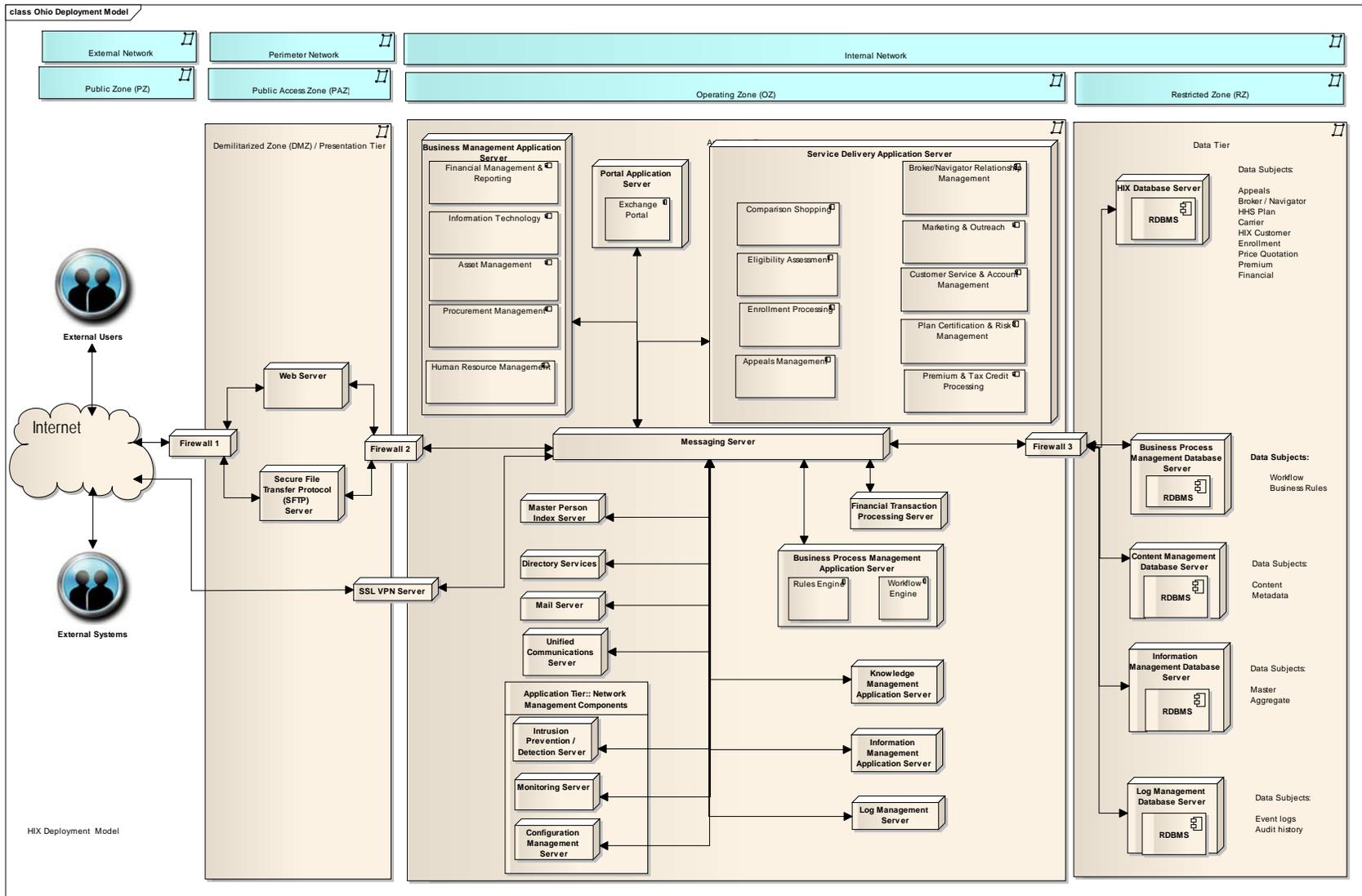
41

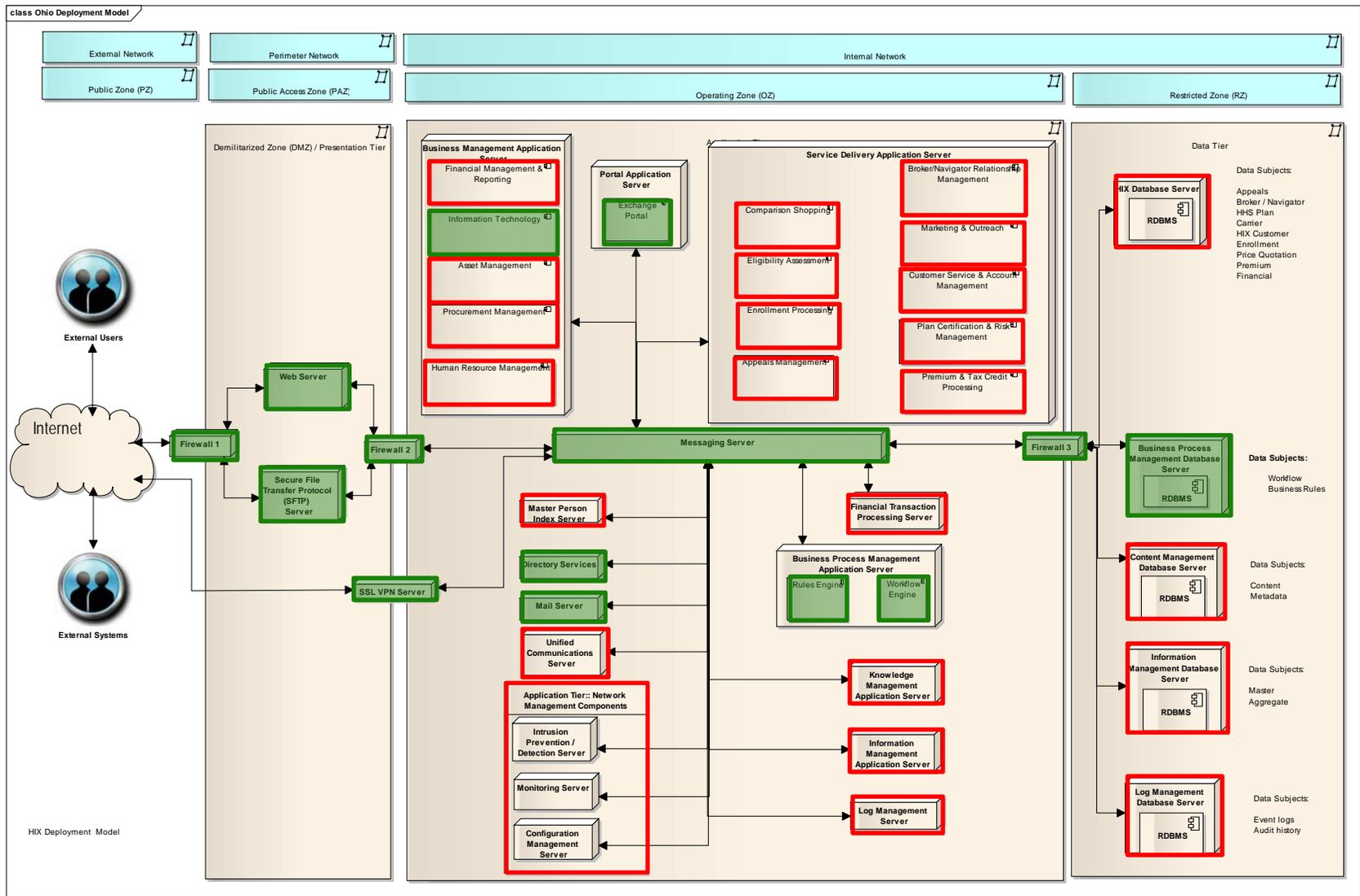**Figure 20: KPMG Deployment Reference Model**

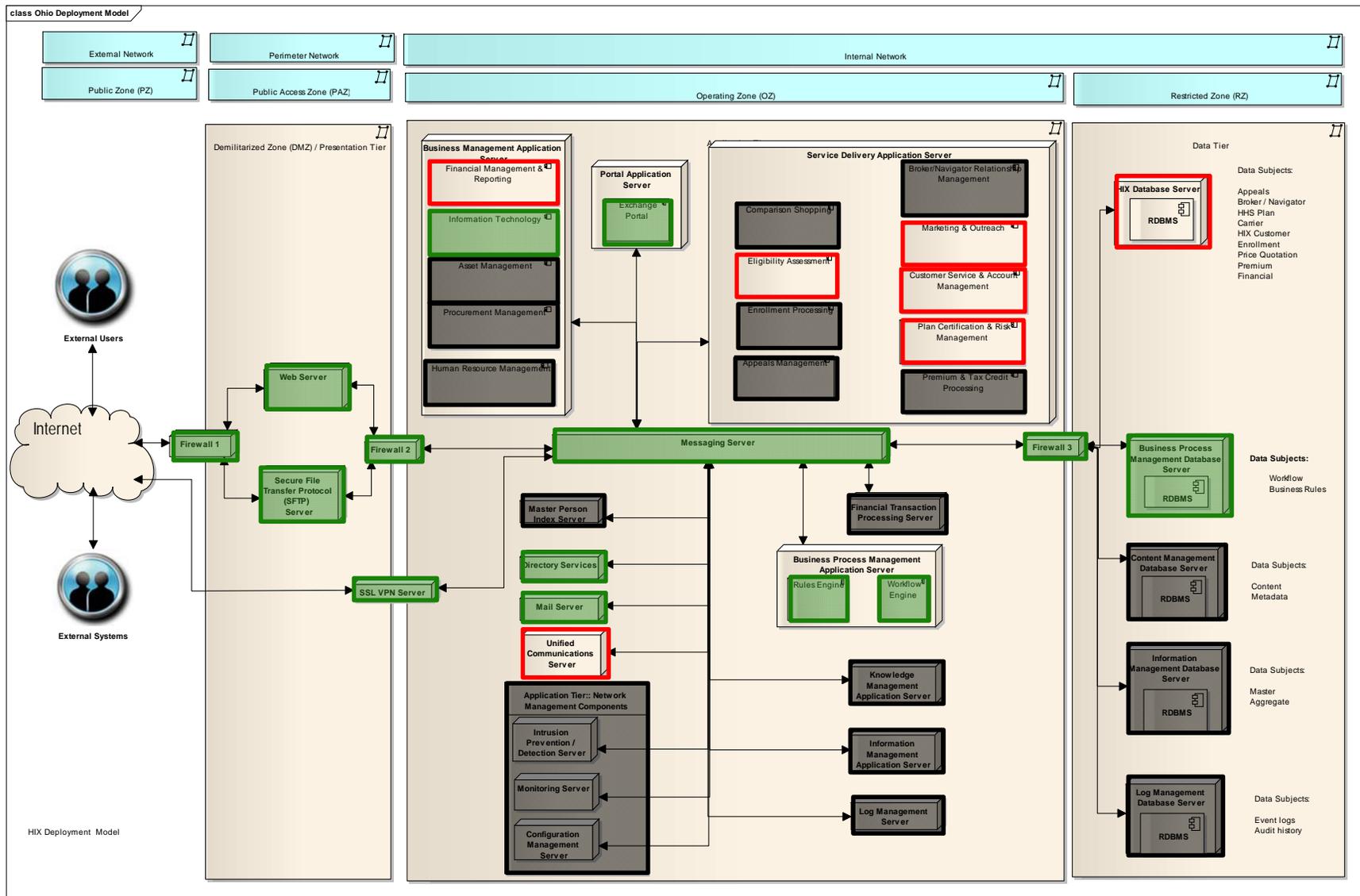**Figure 21: (Option 1) Development of State Exchange Deployment Model**

43

Figure 22: (Option 2) Utilization of a Federal Exchange Deployment Model

44

Based on the deployment diagrams, we can see that all of the nodes are needed for Option 1 (the State Exchange). In Option 2 (the Federal Exchange), some of the nodes aren't needed as these components will be provided through the Federal Health Insurance Exchange.

Step 4 – Construct Integration Models

The following diagrams show the type of integration that is required between external systems that must interact with the Ohio HIX solution. Each line between the central system in the diagrams (either the State Exchange System, or the Federal Exchange System) and the other external systems represent the integration requirements between the two systems.

Figure 23 illustrates the integration requirements for Option 1 – the State Exchange System. Figure 24 illustrates the integration requirements for Option 2 – Utilization of the Federal Exchange System.
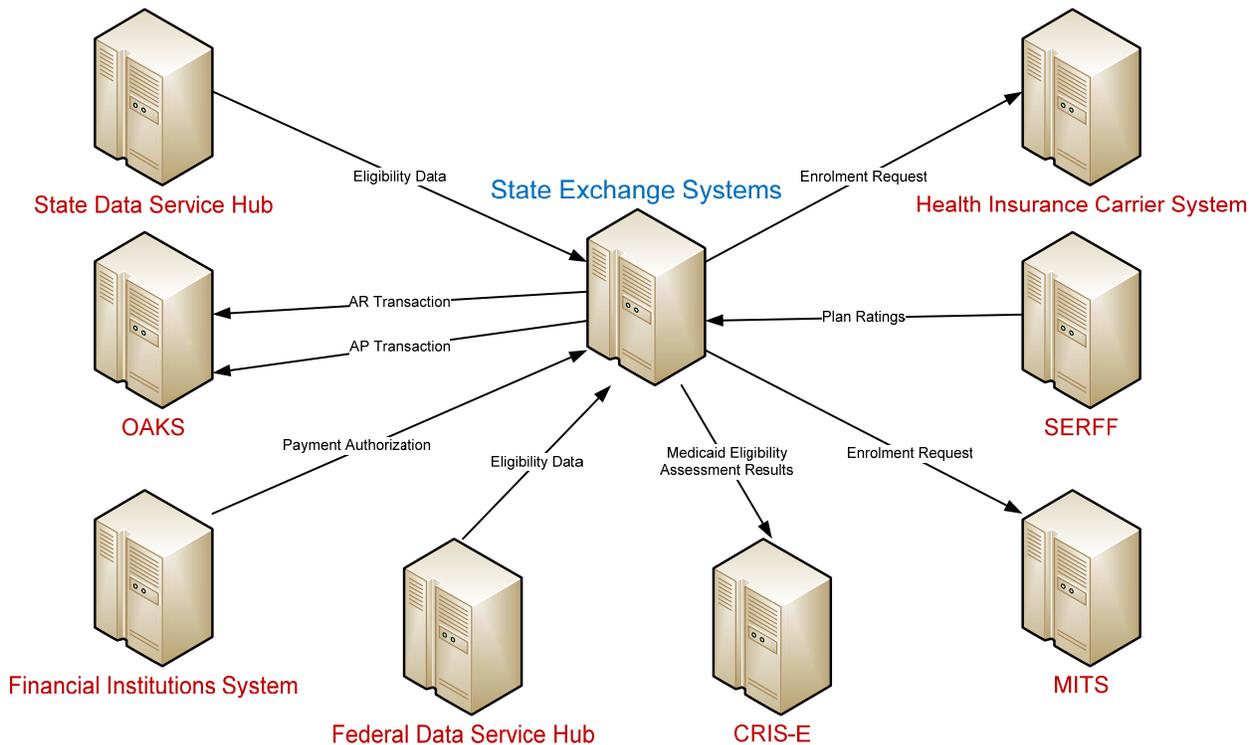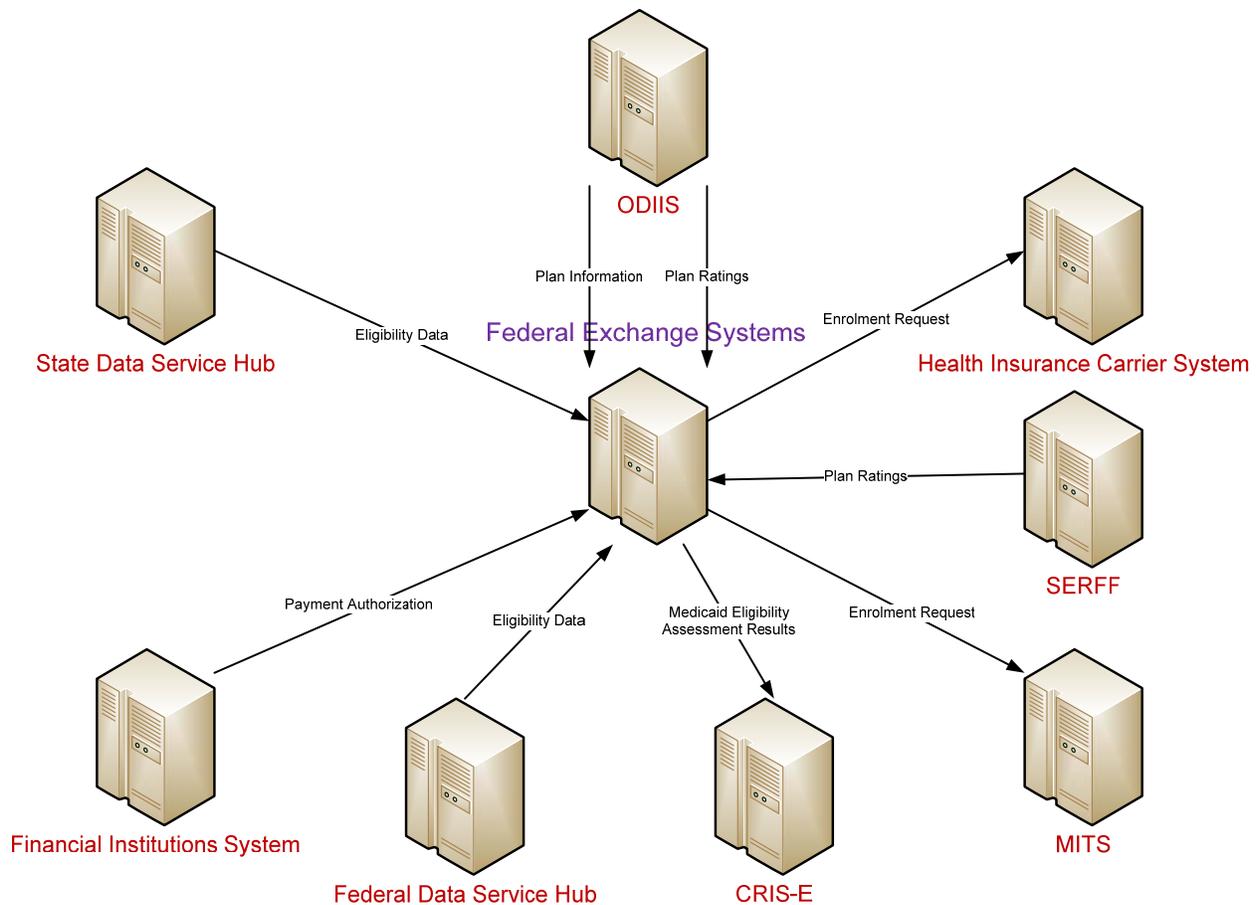

Figure 23: (Option 1) State Exchange Integration Model

45

Figure 24: (Option 2) Federal Exchange Integration Model

Finding:
Integration requirements for ODIIS and OAKS differ across both options.

If Ohio uses ODIIS for plan certification and risk management with the Federal Exchange option, we assume that integration is required with the Federal Exchange.

OAKS integration would be minimal and performed primarily for summary-level financial transactions. It would be required with the State Exchange, but is not required with the Federal Exchange. In essence, the State Exchange would need to develop automated support for the Accounts Receivable subledger (premium billing and collections and an Accounts Payable subledger (Carrier premium and Broker commission remittances and Navigator payments). OAKS would provide General Ledger only. OAKS is not currently positioned for customer facing transactions that would be required for functional alignment within the Exchange. The integration with OAKS would be around the recording of Accounts Receivable and Payable entries from the subledgers to the general ledger.

For all other external systems, integration with the State or Federal Exchange System must occur regardless of the option selected.

Appendices

List of Appendix Sections

Appendix A: HIX Business Context Model

Appendix D: HIX Information Model

Appendix E: HIX Logical Application & Data Architecture

Appendix F: HIX Logical Component Profiles

Appendix G: Deployment Model Node Profiles

Appendix H: Business Process Needs (Detailed View)

Appendix I: IT Assets Assessment Worksheet (Detailed View)

Appendix J: Functional Components

Appendix K: Technical Components

Appendix A: HIX Business Context Model

The following figure provides a visual representation of the Ohio Health Insurance Exchange within the context of its four stakeholder groups: governance members and regulators, customers, collaborators and suppliers. The model sets the strategic level scope of the HIX and shows some of the information and other inputs and outputs between the HIX and its stakeholders. Because the HIX is to be highly automated, many of the inputs and outputs on the diagram, particularly between the HIX and its customers and collaborators will be supported by an IT solution which will include both user self-service (e.g.: a HIX portal) as well as automated data Exchange between the HIX and stakeholders (e.g.: a business-to-business gateway).

class Ohio HIX - Business Context Reference Model

Exchange Governors

Exchange Suppliers

Exchange Customers

Exchange Collaborators

Health Insurance Exchange
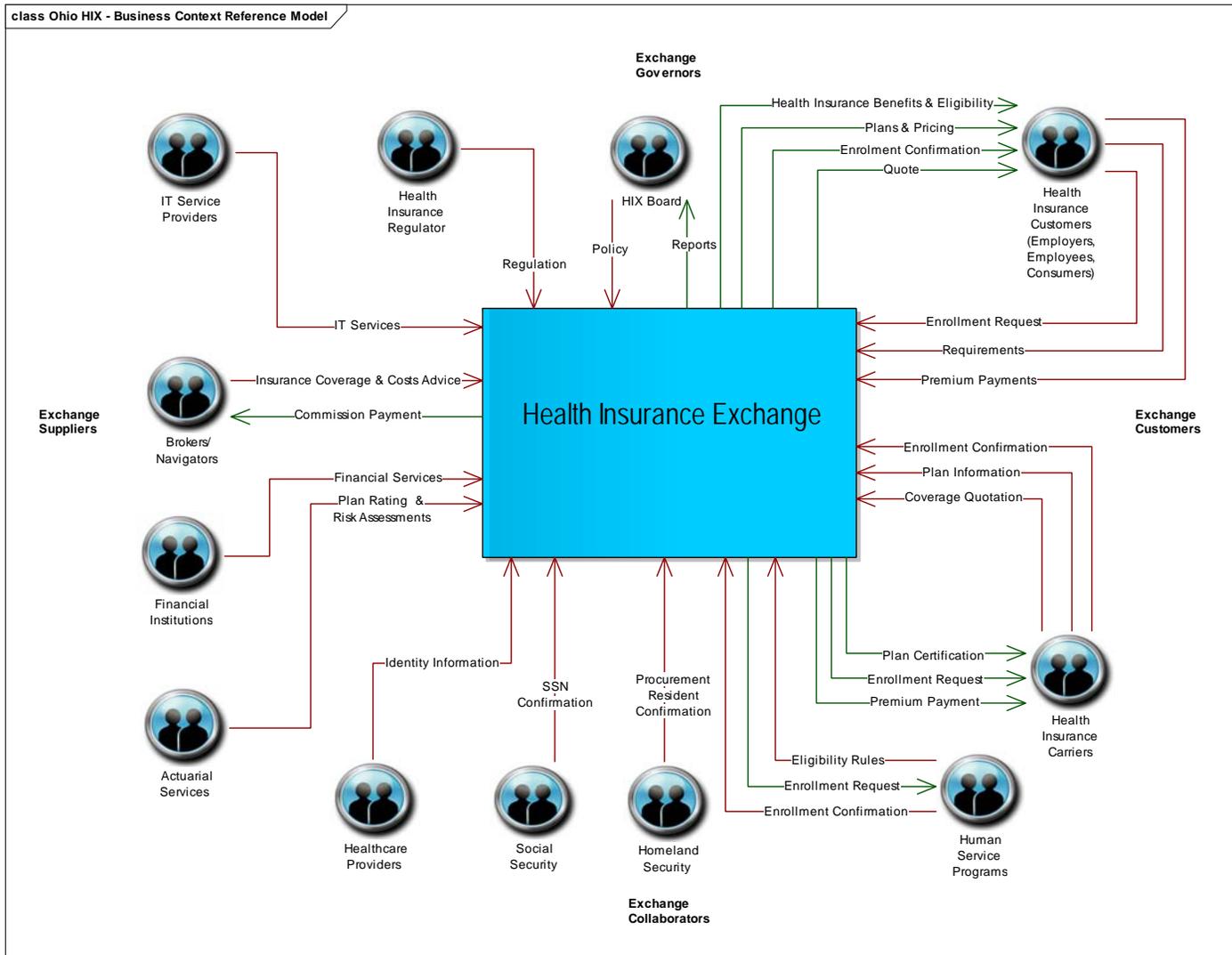
Figure 25: HIX Business Context Model

49

Appendix D: HIX Information Model

The information model shows, at a high level, the information that must be managed by the Ohio Health Insurance Exchange to support daily operations.

This model can be extended at a later date to support detailed information gap analysis and the development of information requirements for HIX databases and canonical (standardized) messaging, between the health information Exchange and its stakeholders. It must also be aligned with the emerging CMS Exchange reference architecture, as more supplementary documentation is produced.
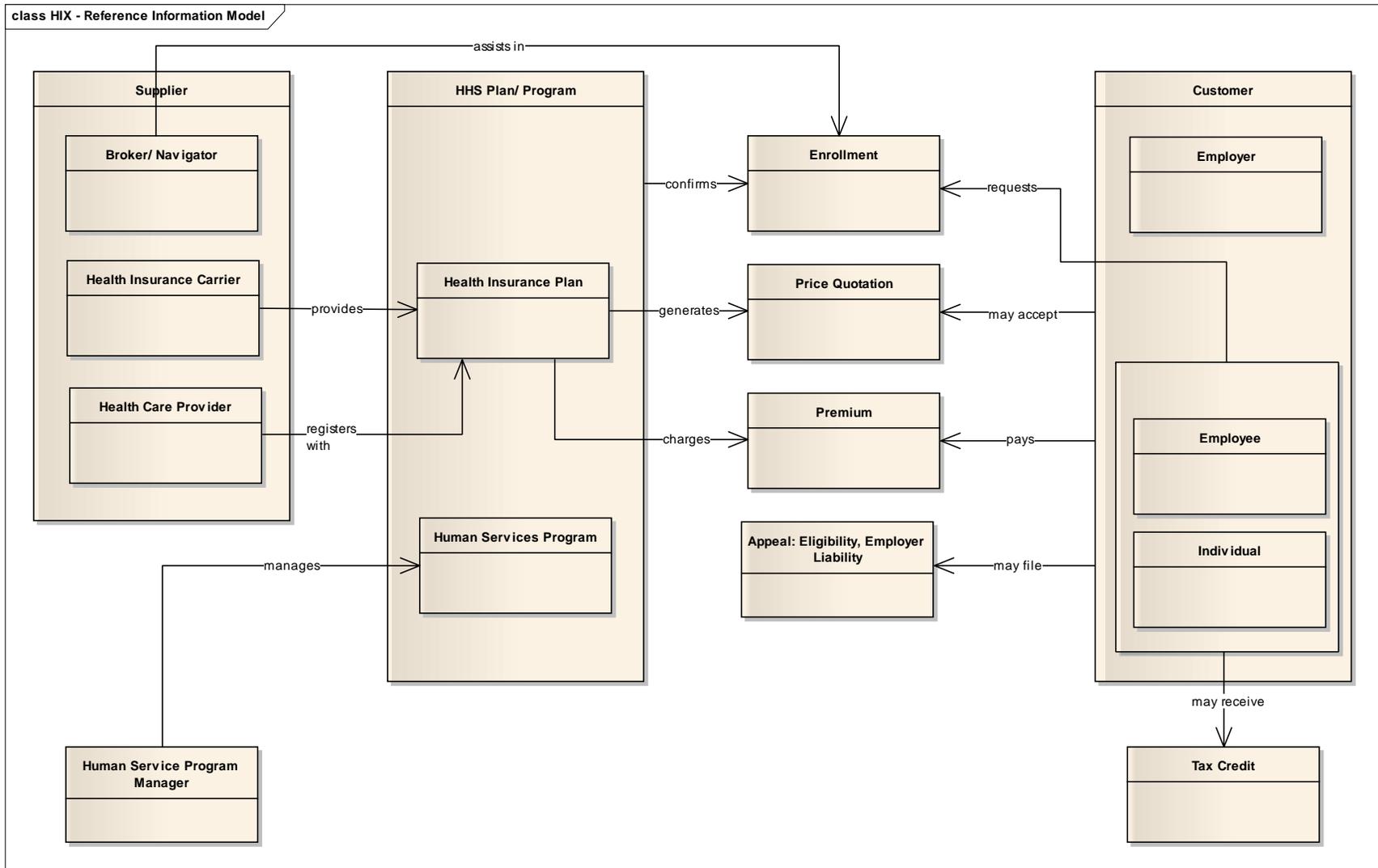
Figure 26: HIX Information Model

51

Appendix E: HIX Logical Application & Data Architecture

The Logical Application & Data Architecture diagram depicts the logical applications and data subjects required for a health information Exchange.

The data subjects shown in the figure on the next page represent high level requirements for HIX databases. The application packages represent applications required to automate HIX processes and to manage HIX information. These applications may be built or configured from software components, through reuse of existing Ohio IT assets, COTS solutions, early innovator software, or built by a systems integrator. The arrows depict the relationships between the databases and the applications.

class HIX - Reference Logical Application & Data Architecture

- Marketing & Outreach
- Broker/ Navigator Relationship Management
- Customer Service & Account Management
- Appeal
- Broker/ Navigator
- HIX Customer
- Eligibility & Enrollment Operations
- Enrollment
- HHS Plan/ Program
- Price Quotation
- Premium & Tax Credit Processing
- Plan Certification & Risk Management
- Premium
- Carrier
- Financial Management & Reporting

Figure 27: HIX Logical Application & Data Architecture

53

Appendix F: HIX Logical Component Profiles

Table 11 Asset Management Component Profile

Component: (see Logical Component Model)	Asset Management
Description:	Enables the management of the organization's assets.
Application to the HIX:	Supports management of critical HIX capital assets (primarily IT assets)
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	Manage Deployment Manage System Specifications Monitor Assets Manage Vendor Contracts
Resides on node:	None

Table 12 B2B Gateway Component Profile

Component: (see Logical Component Model)	B2B Gateway
Description:	Facilitates interoperability with systems that are external to the enterprise
Application to the HIX:	Enables interoperability between HIX systems and those of its external stakeholders including carriers, HHS programs, employers, the Federal government, etc.
sub-Components: (See Logical Component Model)	SFTP EDI Web Services
Processes:	None

(See CRUD Matrix)	
Resides on node:	None

Table 13 Broker/Navigator Relationship Management Component Profile

Component: (see Logical Component Model)	Broker/Navigator Relationship Management
Application to the HIX:	Facilitates the relationship between the HIX and accredited brokers or navigators. Enables transfer of knowledge to broker/navigator regarding plans/programs/services offered through HIX. Ensures broker/navigator are certified to sell HIX plans/programs/services
Description:	Supports management of the relationship between a health and human services program manager and a broker or navigator.
sub-Components: (See Logical Component Model)	Incentive Compensation and Design Management Training, Certification and Compliance Assist Consumer Choice & Enrollment Assist Employer Choice of Plans Broker Relationship Management
Processes: (See CRUD Matrix)	Record / Modify Training Record / Modify Certification Record / Modify Compliance Manage Broker/ Navigator Monthly Targets Manage Compensation Testing of Incentive Returns Online Training Broker/ Navigator Evaluation Produce Monthly Paper / E-Statements Self-service Broker Portal File Dispute

	Manage Dispute
	Manage Broker Inquiries
	Manage Broker Relationship Business Rules
	Manage Broker Relationship Workflow Rules
	Manage Navigator Relationship Business Rules
	Manage Navigator Relationship Workflow Rules
Resides on node:	None

Table 14 Business Management Components Component Profile

Component: (see Logical Component Model)	Business Management Components
Description:	Components that support governance, management and resource management
Application to the HIX:	Used to meet the general business requirements for governing and managing the HIX as a self sustaining entity
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 15 Business Process Management Component Profile

Component: (see Logical Component Model)	Business Process Management
Description:	Enables core business and management processes of the enterprise
Application to the	Enables core business and management processes of the HIX (e.g.,

56

HIX:	enrollment and premium payment)
sub-Components: (See Logical Component Model)	Alerting & Notification Document Generation
Processes: (See CRUD Matrix)	Create Notification Update Notification Content Delete Notification Manage Notification Rules Communicate to Issuer [including Medicaid for BHP] Regarding Enrollment in Qualified Health Plan Report Enrollment in Qualified Health Plan Communicate Individual Eligibility Determination Report on Individual Exemption Status Communicate to Employees Regarding Availability of Insurance Through SHOP Exchange Communicate Training Results Communicate Certification Results Communicate Compliance Results Send Notification Manage Business Rules Manage Workflow Rules
Resides on node:	None

Table 16 Channel Interface Components Component Profile

Component: (see Logical Component Model)	Channel Interface Components

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Description:	Components which enable access to the services provided
Application to the HIX:	Components which enable access to health information Exchange services
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	None
Resides on node: (see Deployment Model)	Channel Interface Components

Table 17 Common Business Components Component Profile

Component: (see Logical Component Model)	Common Business Components
Description:	Components which provide common business services to the business management and service delivery software components
Application to the HIX:	Components which provide common business services to the business management and service delivery software components of the HIX
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 18 Unified Communication Component Profile

Component: (see Logical Component Model)	Unified Communications
Description:	Enables communication.

58

Application to the HIX:	Enables communications between HIX systems and users of the HIX – external users, systems and internal users.
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	Transmit Report / Notification Manage Communication Business Rules Manage Communication Workflow Rules
Resides on node:	None

Table 19 Comparison Shopping Component Profile

Component: (see Logical Component Model)	Comparison Shopping
Description:	Enables comparison of selected products or services.
Application to the HIX:	Enables the potential applicant to compare different plans, program and services prior to enrollment. This comparison includes, but is not limited to, eligibility, coverage, cost, carrier information, provider information.
sub-Components: (See Logical Component Model)	Customer Shopping Experience Provide Comparative Plan Information Calculate and Compare Net Cost of Coverage
Processes: (See CRUD Matrix)	Determine Plan Availability and Calculate Plan Cost Select SHOP Employee Qualified Health Plan QHP side-by-side comparison tool Provide Product Comparison Interface
Resides on node:	None

Table 20 Customer Service & Account Management Component Profile

Component: (see Logical Component Model)	Customer Service & Account Management
Description:	Supports management of the relationship between the enterprise and its clients. Facilitates call tracking with workflow processing and work queues.
Application to the HIX:	Responds to customer inquiries related to the services provided by HIX. Responds to customer inquiries related to plans, programs and services offered on the Exchange. Manages a record of customer activity.
sub-Components: (See Logical Component Model)	Customer Service Customer Inquiry & Issue Resolution Customer Account Management Employee Account Management Employer Account Management Carrier Account Management
Processes: (See CRUD Matrix)	Manage Account Record Inquiry Information Manage Call Transfer Business Rules Administer Employer Liability Manage FAQs Manage Performance Measures / Measurements Manage Customer Service & Account Management Business Rules Manage Customer Service & Account Management Workflow Rules Receive complaint Resolve complaint Close complaint
Resides on node:	None

Table 21 Data Management Component Profile

Component: (see Logical Component Model)	Data Management
Description:	Enables management of enterprise data including operational and aggregate data and the transformation of data for use by different systems
Application to the HIX:	Enables management of HIX data including operational and aggregate data and the transformation of data for use by different systems
sub-Components: (See Logical Component Model)	Database Management Data Warehouse Extract-Transform-Load
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 22 Eligibility & Enrollment Operations Component Profile

Component: (see Logical Component Model)	Eligibility & Enrollment Operations
Description:	Provides functionality required to process eligibility determinations and plan enrollment.
Application to the HIX:	Facilitates the HIX insurance customer experience by providing a means to determine eligibility and to shop for and enroll in HIX supported plans, programs and services.
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	None
Resides on node: (see Deployment Model)	Eligibility & Enrollment Operations

Table 23 Eligibility Assessment Component Profile

Component: (see Logical Component Model)	Eligibility Assessment
Description:	Enables assessment of eligibility of a party for a plan, program or service.
Application to the HIX:	Enables online assessment of eligibility of HIX applicants for health insurance coverage, human services delivery, government subsidized plans and associated tax credits.
sub-Components: (See Logical Component Model)	Eligibility Assessment Eligibility Determination Individual Responsibility Determination
Processes: (See CRUD Matrix)	Process Individual Exemption Renewal Request Process SHOP Employee Renewal Request Verify Individual Eligibility fo Public Minimum Essential Coverage Verify Individual Eligibility for Employer - Sponsored Minimum Essential Coverage Determine Eligibility Refer Potentially Eligible Individuals to Medicaid and CHIP for additional Screening Determine Eligibility for Advance Premium Tax Credit Determine Category for Cost-Sharing Reductions Qualify Individual for an Enrollment Period Verify Lawful Presence Verify Household Income Calculate Federal Poverty Level Verify Whether Individual is a Native American Verify Incarceration Status Verify Individual Residency Status

	Verify Information Required for Exemption
	Verify SHOP Employer Identity
	Verify Employee Roster
	Verify SHOP Employee Application
	Manage Eligibility Business Rules
	Manage Eligibility Workflow Rules
	Determine Insurer Eligibility
	Receive Employee List and Employer Options
	Display Eligibility Rules
Resides on node:	None

Table 24 Enrollment Processing Component Profile

Component: (see Logical Component Model)	Enrollment Processing
Description:	Enables plan or program enrollment, renewals and termination.
Application to the HIX:	Enables a client or customer to enroll in a new plan, program or service, renew their enrollment, change their enrollment in an open enrollment period or terminate their current enrollment.
sub-Components: (See Logical Component Model)	Apply and Enroll in Plan or Program Renew Enrollment Terminate Enrollment
Processes: (See CRUD Matrix)	Process Employer Participation Renewal Accept SHOP Employer Application Accept SHOP Employer Application Update Determine SHOP Employer Contribution Terminate Employer Participation

	Validate Application Submission
	Review and Adjudicate Alternative Documentation
	Accept Individual Eligibility Application
	Accept Individual Eligibility Application Update
	Accept Individual Exemption Application
	Accept Individual Exemption Application Update
	Accept SHOP Employee Application
	Accept SHOP Employee Application Update
	Select Individual Qualified Health Plan
	Enroll in Medicaid, CHIP or BHP
	Enroll in SNAP & TANF
	Process Individual Eligibility & Enrollment Renewal Request
	Assess Current Qualified Health Plan Enrollment Status
	Disenroll from Qualified Health Plan
	Store supporting document image
	Interface to Billing System
	Manage Enrollment Business Rules
	Manage Enrollment Workflow Rules
	Process Plan Enrollment Availability and Changes
	Enable Employer Product Selection
	Enable Employer Contribution Selection
	Display Employer Liability Rules (content)
Resides on node:	None

Table 25 Exchange Portal Component Profile

Component: (see Logical Component Model)	Exchange Portal
Description:	Facilitates access to services provided via the internet.
Application to the HIX:	Enables customers to access HIX services via the internet. Provides different views with different access options.
sub-Components: (See Logical Component Model)	Employer View Employee View Consumer View Carrier View Broker View Customer Service Rep View Administrative View
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 26 Financial Management & Reporting Component Profile

Component: (see Logical Component Model)	Financial Management & Reporting
Description:	Enables generation of financial reports (e.g. monthly summary reports, annual report) and publishes these reports to stakeholders. Supports accounting of all financial transactions and or all assets and liabilities.
Application to the HIX:	Beyond general budgeting, accounting and reporting needs of the Exchange, it supports accounting for premium revenue collected by the Exchange and reconciles this with payment obligations for carriers and broker/ navigator.
sub-Components: (See Logical Component Model)	Budgeting Accounting Performance Reporting
Processes: (See CRUD Matrix)	Automatic Data Collection (Data Feeds) Audit Collected Data

	Automated Data Mapping
	Forecasting
	Trend Analysis
	Manage Financial Management & Reporting Business Rules
	Manage Financial Management & Reporting Workflow Rules
Resides on node: (see Deployment Model)	Financial Management & Reporting

Table 27 Financial Transaction Processing Component Profile

Component: (see Logical Component Model)	Financial Transaction Processing
Description:	Enables electronic funds transfers for payments and receipts
Application to the HIX:	Enables HIX financial transactions such as receipt and distribution of premium payments by HIX customers
sub-Components: (See Logical Component Model)	Receipt Processing Payment Processing
Processes: (See CRUD Matrix)	Manual Settlements
	Batch Settlements
	Automate Payments Based on Invoice Data
	Electronic Funds Transfer
	Payment Reconciliation
	Manage Financial Transaction Processing Business Rules
	Manage Financial Transaction Processing Workflow Rules
Resides on node:	None

Table 28 Human Resource Management Component Profile

Component: (see Logical Component Model)	Human Resource Management
Description:	Enables the management of employees - including hiring, firing, employee disputes, etc.
Application to the HIX:	Supports management of HIX employees.
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	Manage Recruitment Manage Compensation Manage Job Evaluations Manage Performance Manage Time and Attendance Benefits, Pension, and Leave Administration Salary Administration Return to Work Administration Manage Professional Development
Resides on node:	None

Table 29 Information Technology Component Profile

Component: (see Logical Component Model)	Information Technology
Description:	Enables the management of technology operations and management. Facilitates Data Center Operations, Service Level Management, Project Management and Configuration Management.
Application to the	Supports management of the information technology required to

HIX:	support management and core processes of a highly automated, highly available self-service Exchange
sub-Components: (See Logical Component Model)	Data Center Operations Configuration Management Service Level Management Project Management
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 30 Knowledge Management Component Profile

Component: (see Logical Component Model)	Knowledge Management
Description:	Supports management of content on various electronic media and associated metadata to support content classification and retrieval
Application to the HIX:	Supports management of HIX content (e.g., HIX related videos and presentations for marketing and training purposes)
sub-Components: (See Logical Component Model)	Content Management Metadata Management
Processes: (See CRUD Matrix)	Manage Taxonomy Store Content Tag Content Retrieve Content (Search Features)
Resides on node:	None

Table 31 Master Person Index Component Profile

Component: (see Logical Component Model)	Master Person Index

68

Description:	Supports identification of a unique person, where multiple records can exist, and the roles they play. Provides deterministic and probabilistic matching.
Application to the HIX:	Supports unique identification of persons who may be HIX insurance or human service customers and health service providers (i.e., physicians within a given health insurance plan).
sub-Components: (See Logical Component Model)	Deterministic Matching Probabilistic Matching Roles Management
Processes: (See CRUD Matrix)	Determine Match Probability Manage Master Person Index Business Rules
Resides on node:	None

Table 32 Plan Certification & Risk Management Component Profile

Component: (see Logical Component Model)	Plan Certification & Risk Management
Description:	Supports assessment of the actuarial value, benefit design, and quality of plans, to facilitate certification and quality rating.
Application to the HIX:	Supports certification of HIX plans through the certification, recertification and decertification lifecycle. Identifies potential actuarial risks. Manages the relationship between HIX and carriers.
sub-Components: (See Logical Component Model)	Certification, Recertification & Decertification of QHPs Rate Quality of Plans Estimate Coverage Costs Benefits and Actuarial Plan Management Risk Adjustment & Transitional Reinsurance
Processes: (See CRUD Matrix)	Manage Plan Submission Process Certify / Recertify / Decertify Plan Form QHP Agreement with Issuer Manage Issuer and Plan Information Report Issuer and Plan Information

	Assign Plan Quality Rating
	Process Change in Plan Enrollment Availability
	Manage Rates and Benefits
	Monitor Plan Compliance
	Administer Transitional Reinsurance
	Adminster Risk Corridors
	Administer Plan Assessments (Surcharges)
	Calculate Actuarial Risks
	Submit Transparency Information
	Manage Plan Certification Business Rules
	Manage Plan CertificationWorkflow Rules
Resides on node: (see Deployment Model)	Plan Certification & Risk Management
Resides on node: (see Deployment Model)	Plan Certification & Risk Management

Table 33 Premium & Tax Credit Processing Component Profile

Component: (see Logical Component Model)	Premium & Tax Credit Processing
Description:	Enables payment processing. Facilitates premium invoice generation, application of payments, returned checks, and refund processing, track and apply tax credits to member accounts.
Application to the HIX:	Facilitates collecting, processing and reconciliation of payment between the policy provider and broker/navigator or employer. Facilitates premium and tax credit calculation.
sub-Components: (See Logical Component Model)	Premium Tax Credit & Cost Sharing Process Free Choice Vouchers Calculate Premium Tax Credit & Cost Sharing Premium Billing, Collections & Reconciliation

Processes: (See CRUD Matrix)	Automated Invoice Generation
	Automated Invoice Printing
	Capture Payment Information
	Automated Premium Reconciliation
	Determine Eligibility for Tax Credit
	Notify Individual of Tax Credit Eligibility Results
	Manage Premium & Tax Credit Processing Business Rules
	Manage Premium & Tax Credit Workflow Rules
	Identification of Delinquent Accounts
	Termination of Delinquent Accounts
	Manage Communication Business Rules
	Manage Communication Workflow Rules
	Calculate Member/Employer Premium Contributions
	Collect Employer Premium Contributions
	Collect Member Premium Contributions
Resides on node: (see Deployment Model)	Premium & Tax Credit Processing

Table 34 Privacy and Security Component Profile

Component: (see Logical Component Model)	Privacy and Security
Description:	Supports control of access to sensitive functions and data including personal information
Application to the HIX:	Supports control of access to sensitive HIX functions and personal information of parties using the HIX
sub-Components:	Identify and Access Management

(See Logical Component Model)	Audit Trail Message Encryption Data Security
Processes: **(See CRUD Matrix)**	Manage Identity / Access Privileges Compliance management
Resides on node:	None

Table 35 Procurement Management Component Profile

Component: **(see Logical Component Model)**	Procurement Management
Application to the HIX:	Manages the contracts between HIX and suppliers such as actuarial consultants, Data Center providers, technical support providers, building leases, etc. which are required to support delivery of HIX services.
Description:	Enables the management of contracts - from drafting contracts to ensuring contracts are fulfilled.
sub-Components: **(See Logical Component Model)**	Contract Management
Processes: **(See CRUD Matrix)**	Manage Purchase Orders Manage Inventory Perform Cost Analysis
Resides on node:	None

Table 36 Rules Engine Component Profile

Component: **(see Logical Component Model)**	Rules Engine
Description:	Supports cataloguing, design and execution of business rules

Application to the HIX:	Supports cataloguing, design and execution of HIX business rules for such functions as eligibility assessment, tax credit calculation, etc
sub-Components: (See Logical Component Model)	Rules Catalogue Inference Engine Event Processing Engine
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 37 Service Delivery Components Component Profile

Component: (see Logical Component Model)	Service Delivery Components
Description:	Components which facilitate the delivery of service outputs to external customers
Application to the HIX:	Support interactions between the HIX and its external customers including employers, employees, insurance customers, and carriers
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 38 Service Management Component Profile

Component: (see Logical Component Model)	Service Management
Description:	Identifies and manages relation and use of loosely coupled software services and messaging between provider components and consumer components in a service oriented architecture.
Application to the	Identifies and manages relation and use of loosely coupled software

HIX:	services to support HIX interoperability
sub-Components: (See Logical Component Model)	Service Registry & Repository Service Manager Enterprise Service Bus Non-Repudiation Guaranteed Delivery
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 39 Technical Support Components Component Profile

Component: (see Logical Component Model)	Technical Support Components
Description:	Components which provide common technical software services to the business functional components (service, delivery, business management and common business components)
Application to the HIX:	Components which provide common technical software services to the business functional components of the HIX
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	None
Resides on node:	None

Table 40 Channel Interface Component Profile

Component: (see Logical Component Model)	Channel Interface Components
Application to the HIX:	Enables customers to access HIX services via telecommunications.
Description:	Facilitates access to services via telecommunications.

sub-Components: **(See Logical** **Component** **Model)**	Interactive Voice Response E-Mail Fax Test Messaging
Processes: **(See CRUD Matrix)**	None
Resides on node: **(see Deployment** **Model)**	Unified Communications

Table 41Workflow Engine Component Profile

Component: **(see Logical Component** **Model)**	Workflow Engine
Description:	Supports design, configuration and execution of workflows
Application to the HIX:	Supports design, configuration and execution of HIX workflows such as enrollment processing or premium payment
sub-Components: **(See Logical Component** **Model)**	Process Scripting Current Status Verification User Authority Validation Script Execution
Processes: **(See CRUD Matrix)**	None
Resides on node:	None

Table 42 Appeals Management Component Profile

Component: **(see Logical** **Component** **Model)**	Appeals Management
Description:	Enables recording of an appeal and the results of an appeal.
Application to the **HIX:**	Enables management of appeals related to plan or service eligibility and employer liability.
sub-Components: **(See Logical** **Component** **Model)**	Adjudication of Eligibility Appeals Notice and Appeal of Employer Liability

75

Processes: (See CRUD Matrix)	Conduct Eligibility Appeal Implement Adjusted Eligibility Determination Resulting from Appeal Halt Appeals Processing Conduct SHOP Eligibility Appeal Manage Appeals Business Rules Manage Appeals Workflow Rules
Resides on node:	None

Table 43 Broker/ Navigator Relationship Management Component Profile

Component: (see Logical Component Model)	Broker/ Navigator Relationship Management
Description:	Supports management of the relationship between a health and human services program manager and a broker or navigator.
Application to the HIX:	Facilitates the relationship between the HIX and accredited brokers or navigators. Enables transfer of knowledge to broker/navigator regarding plans/programs/services offered through HIX. Ensures broker/navigator are certified to sell HIX plans/programs/services and are compliant with HIX policies when doing so. Provides functionality to connect Navigators to consumers, measure Navigator performance, facilitate broker quoting of insurance plans, or provide any broker incentive compensation capability.
sub-Components: (See Logical Component Model)	
Processes: (See CRUD Matrix)	None
Resides on node:	None

Component: **(see Logical Component Model)**	Customer Service & Account Management
Description:	Supports management of the relationship between the enterprise and its clients. Facilitates call tracking with workflow processing and work queues.
Application to the HIX:	Responds to customer inquiries related to the services provided by HIX. Responds to customer inquiries related to plans, programs and services offered on the Exchange. Manages a record of customer activity.
sub-Components: **(See Logical Component Model)**	
Processes: **(See CRUD Matrix)**	None
Resides on node: **(see Deployment Model)**	Customer Service & Account Management

Component: **(see Logical Component Model)**	External Systems
Description:	External Systems
Application to the HIX:	Systems which are external to the HIX requiring access to HIX components.
sub-Components: **(See Logical Component Model)**	Social Security Homeland Security Financial Institution Carrier Broker/Navigator Human Service Program Manager

Processes: **(See CRUD Matrix)**	None
Resides on node: **(see Deployment Model)**	External Systems

Table 46 External Users Component Profile

Component: **(see Logical Component Model)**	External Users
Description:	External Users
Application to the HIX:	Users that are external to the HIX requiring access to HIX components.
sub-Components: **(See Logical Component Model)**	Employer Employee Consumer Broker/Navigator Carrier Human Service Program Manager
Processes: **(See CRUD Matrix)**	None
Resides on node: **(see Deployment Model)**	External Users

Table 47 Information Management Component Profile

Component: **(see Logical Component Model)**	Information Management
Description:	Facilitates the collection and analysis of enterprise data and the generation of reports and graphs
Application to the HIX:	Facilitates the collection of data pertaining to HIX performance and usage patterns and creates reports to improve HIX performance and service offerings
sub-Components: **(See Logical Component**	Reporting Business Intelligence Records & Document Management

Model)	
Processes: **(See CRUD Matrix)**	Manage Reports
	Manage Report Templates
	Review Reports (includes report estimate)
	Manage Report Schedule
	Manage Report Delivery Mechanism
	Manage Analytic Templates
	Perform Analytics
	Portal Integration of Analytics
	Ad-Hoc Reporting
	Manage Data Sources
	Manage Information Management Business Rules
	Manage Information Management Workflow Rules
	Manage Surveys
	Manage Survey Templates
	Review Survey (includes report estimate)
	Manage Survey Schedule
	Manage Survey Delivery Mechanism
	Publish Survey
Resides on node:	None

Table 48 Marketing & Outreach Component Profile

Component: **(see Logical** **Component** **Model)**	Marketing & Outreach

Description:	Facilitates public awareness of available plans, programs or services.
Application to the HIX:	Ensures that HIX external stakeholders, including employers, employees, clients, carriers and broker/navigators are aware of and use HIX services.
sub-Components: (See Logical Component Model)	Outreach and Education
Processes: (See CRUD Matrix)	Produce Sales / Marketing Materials Manage Sales Leads Manage Marketing and Outreach Business Rules Manage Marketing and Outreach Workflow Rules
Resides on node: (see Deployment Model)	Marketing & Outreach

Appendix G: Deployment Model Node Profiles

Table 49 Directory Services Node

Description:	Device that contains the components which provides control and management of all network resources.
Application to the HIX:	Supports components that are used for authenticating HIX users and providing access to only the applications / information they are privy to.
Hosted Components:	Does not directly support HIX components

Table 50 HIX Database Server Node

Description:	Device that contains components which manages the data that is used by the Health Information Exchange software components.
Application to the HIX:	Supports the database component that allows HIX information to be stored and retrieved by applications in the OZ.
Hosted Components:	Directly Supports: RDBMS

Table 51 Mail Server Node

Description:	Device that contains the components which are responsible for routing electronic mail messages across domains.
Application to the HIX:	Supports the HIX email delivery and receipt
Hosted Components:	Does not directly support HIX components

Table 52 Messaging Server Node

Description:	Device that contains the components which facilitate interoperability between disparate systems (both internal and external).
Application to the HIX:	Supports messaging with HIX external users and systems and among HIX servers.
Hosted Components:	Does not directly support HIX components

Table 53 Secure File Transfer Protocol (SFTP) Server Node

Description:	Device that allows users to securely store and retrieve files.

Application to the HIX:	Provides a secure mechanism to transfer files the HIX and its external stakeholders
Hosted Components:	Does not directly support HIX components

Table 54 Service Delivery Application Server Node

Description:	Application server that contains the software components which facilitate the delivery of service outputs to external customers.
Application to the HIX:	Supports components that facilitate interactions between the HIX and external customers.

Hosted Components:	Directly Supports:
	    Customer Service & Account Management
	    Broker/Navigator Relationship Management
	    Appeals Management
	    Financial Management & Reporting
	    Marketing & Outreach
	    Exchange Portal
	    Plan Certification & Risk Management
	    Premium & Tax Credit Processing
	    Human Resource Management
	    Procurement Management
	    Asset Management
	    Information Technology
	    Eligibility Assessment
	    Comparison Shopping
	    Enrollment Processing

Table 55 SSL VPN Server Node

Description:	Device that allows a secure connection to be created by an external user / system and the OZ.
Application to the HIX:	Allows secure access to servers in the OZ. This allows network traffic on the firewalls to be reduced, and provides a secure tunnel (using encryption) for external users.
Hosted Components:	Does not directly support HIX components

Table 56 Web Server Node

Description:	Device that delivers content using the internet.
Application to the HIX:	Provides the interface that will allow external users and systems to access the HIX application.
Hosted Components:	Does not directly support HIX components

Table 57 Common Business and Technical Support Components Node

Description:	Supports the delivery of HIX services to external customers.
Application to the HIX:	Device that contains the components which facilitate the delivery of services. The components are enabling technologies.
Hosted Components:	Directly Supports: Rules Engine Workflow Engine Knowledge Management Information Management Financial Transaction Processing Unified Communications

Table 58 Configuration Management Server Node

Description:	Allows HIX network administrators and staff to centrally management software and hardware deployments.
Application to the HIX:	Device that contains the components that allow central software and hardware management.
Hosted Components:	Does not directly support HIX components

Table 59 Firewall 1 Node

Description:	Network device used to prevent unauthorized access between the PZ and PAZ.
Application to the HIX:	Limits access to the HIX servers in the DMZ by allowing only valid traffic through.
Hosted Components:	Does not directly support HIX components

Table 60 Firewall 2 Node

Description:	Network device used to prevent unauthorized access between the PAZ and the OZ.
Application to the HIX:	Limits access to the HIX servers in the OZ by allowing only valid traffic (i.e.: traffic originating from the PAZ).
Hosted Components:	Does not directly support HIX components

Table 61 Firewall 3 Node

Description:	Network device used to prevent unauthorized access between the OZ and

	the RZ.
Application to the HIX:	Limits access to the HIX servers in the RZ by allowing only valid traffic (i.e.: traffic originating from the OZ).
Hosted Components:	Does not directly support HIX components

Appendix H: Business Process Needs (Detailed View)

Below is a detailed view of the workbook that was used in Phase 1 to elaborate the business process needs for each of the Exchange options.

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Business Service Count					50	346
Business Services Utilization					14%	100%
Management Processes					9	32
Back Office	Oversight				9	32
Back Office	Oversight	Resource Management			9	32
Back Office	Oversight	Resource Management	Asset Management		0	4
Back Office	Oversight	Resource Management	Asset Management	Manage Deployment	0	1
Back Office	Oversight	Resource Management	Asset Management	Manage System Specifications	0	1
Back Office	Oversight	Resource Management	Asset Management	Monitor Assets	0	1
Back Office	Oversight	Resource Management	Asset Management	Manage Vendor Contracts	0	1
Back Office	Oversight	Resource Management	Human Resource Management		0	9
Back Office	Oversight	Resource Management	Human Resource Management	Manage Recruitment	0	1
Back Office	Oversight	Resource Management	Human Resource Management	Manage Compensation	0	1
Back Office	Oversight	Resource Management	Human Resource Management	Manage Job Evaluations	0	1
Back Office	Oversight	Resource Management	Human Resource	Manage Performance	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
			Management			
Back Office	Oversight	Resource Management	Human Resource Management	Manage Time and Attendance	0	1
Back Office	Oversight	Resource Management	Human Resource Management	Benefits, Pension, and Leave Administration	0	1
Back Office	Oversight	Resource Management	Human Resource Management	Salary Administration	0	1
Back Office	Oversight	Resource Management	Human Resource Management	Return to Work Administration	0	1
Back Office	Oversight	Resource Management	Human Resource Management	Manage Professional Development	0	1
Back Office	Oversight	Resource Management	Procurement Management		0	3
Back Office	Oversight	Resource Management	Procurement Management	Manage Purchase Orders	0	1
Back Office	Oversight	Resource Management	Procurement Management	Manage Inventory	0	1
Back Office	Oversight	Resource Management	Procurement Management	Perform Cost Analysis	0	1
Back Office	Oversight	Resource Management	Information Management		9	10
Back Office	Oversight	Resource Management	Information Management	Manage Reports	1	1
Back Office	Oversight	Resource Management	Information Management	Manage Report Templates	1	1
Back Office	Oversight	Resource Management	Information	Review Reports (includes report	1	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
			Management	estimate)		
Back Office	Oversight	Resource Management	Information Management	Manage Report Schedule	1	1
Back Office	Oversight	Resource Management	Information Management	Manage Report Delivery Mechanism	1	1
Back Office	Oversight	Resource Management	Information Management	Manage Analytic Templates	1	1
Back Office	Oversight	Resource Management	Information Management	Perform Analytics	1	1
Back Office	Oversight	Resource Management	Information Management	Portal Integration of Analytics	0	1
Back Office	Oversight	Resource Management	Information Management	Ad-Hoc Reporting	1	1
Back Office	Oversight	Resource Management	Information Management	Manage Data Sources	1	1
Back Office	Oversight	Resource Management	Knowledge Management		0	4
Back Office	Oversight	Resource Management	Knowledge Management	Manage Taxonomy	0	1
Back Office	Oversight	Resource Management	Knowledge Management	Store Content	0	1
Back Office	Oversight	Resource Management	Knowledge Management	Tag Content	0	1
Back Office	Oversight	Resource Management	Knowledge Management	Retrieve Content (Search Features)	0	1
Back Office	Oversight	Governance and			0	2

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
		Management Support				
Back Office	Oversight	Governance and Management Support	Privacy and Security		0	2
Back Office	Oversight	Governance and Management Support	Privacy and Security	Manage Identity / Access Privileges	0	1
Back Office	Oversight	Governance and Management Support	Privacy and Security	Compliance management	0	1
Core Processes					32	245
Middle Office	Eligibility & Enrollment				0	191
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment			0	72
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Prepare / Update Individual Eligibility Application		0	6
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Prepare / Update Individual Eligibility Application	Display Eligibility Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Prepare / Update Individual Eligibility Application	Validate Application Submission	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Prepare / Update Individual Eligibility Application	Manage Account	0	1
Middle	Eligibility &	Individual Eligibility &	Prepare / Update	Accept Individual Eligibility	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Enrollment	Individual Eligibility Application	Application		
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Prepare / Update Individual Eligibility Application	Store supporting document image	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Prepare / Update Individual Eligibility Application	Accept Individual Eligibility Application Update	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information		0	9
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Verify Lawful Presence	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Verify Individual Eligibility of Public Minimum Essential Coverage	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Verify Household Income	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Verify Individual Eligibility for Employer - Sponsored Minimum Essential Coverage	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Verify Whether Individual is a Native American	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Verify Incarceration Status	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Verify Individual Application Information	Verify Individual Residency Status	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Determine Individual Eligibility		0	8
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Determine Individual Eligibility	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Determine Individual Eligibility	Calculate Federal Poverty Level	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Determine Individual Eligibility	Determine Eligibility	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Determine Individual Eligibility	Refer Potentially Eligible Individuals to Medicaid and CHIP for additional Screening	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Determine Individual Eligibility	Determine Eligibility for Advance Premium Tax Credit	0	1
Middle	Eligibility &	Individual Eligibility &	Determine Individual	Determine Category for Cost-	0	1

90

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Enrollment	Eligibility	Sharing Reductions		
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Determine Individual Eligibility	Qualify Individual for an Enrollment Period	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Determine Individual Eligibility	Communicate Individual Eligibility Determination	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan		0	8
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan	Provide Product Comparison Interface	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan	Determine Plan Availability and Calculate Plan Cost	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan	Select Individual Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan	Assess Current Qualified Health Plan Enrollment Status	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan	Communicate to Issuer [including Medicaid for BHP] Regarding Enrollment in Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan	Report Enrollment in Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Enroll Individual in Qualified Health Plan	Enroll in Medicaid, CHIP or BHP	0	1
Middle	Eligibility &	Individual Eligibility &	Disenroll Individual		0	2

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Enrollment	from Qualified Health Plan			
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Disenroll Individual from Qualified Health Plan	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Disenroll Individual from Qualified Health Plan	Disenroll from Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment		0	27
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Manage Report Templates	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Validate Application Submission	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Process Individual Eligibility & Enrollment Renewal Request	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Verify Lawful Presence	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Verify Individual Eligibility of Public Minimum Essential Coverage	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Verify Household Income	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Calculate Federal Poverty Level	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Verify Individual Eligibility for Employer - Sponsored Minimum Essential Coverage	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Determine Eligibility	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Refer Potentially Eligible Individuals to Medicaid and CHIP for additional Screening	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Determine Eligibility for Advance Premium Tax Credit	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and	Determine Category for Cost-Sharing Reductions	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
			Enrollment			
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Qualify Individual for an Enrollment Period	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Determine Plan Availability and Calculate Plan Cost	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Select Individual Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Assess Current Qualified Health Plan Enrollment Status	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Communicate to Issuer [including Medicaid for BHP] Regarding Enrollment in Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Report Enrollment in Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Disenroll from Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Accept Individual Eligibility Application Update	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Verify Whether Individual is a Native American	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Verify Incarceration Status	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Enroll in Medicaid, CHIP or BHP	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Verify Individual Residency Status	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Renew Individual Eligibility and Enrollment	Communicate Individual Eligibility Determination	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Appeal [Individual] Exchange Eligibility Decision		0	5
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Appeal [Individual] Exchange Eligibility Decision	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Appeal [Individual] Exchange Eligibility Decision	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Appeal [Individual] Exchange Eligibility	Conduct Eligibility Appeal	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
			Decision			
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Appeal [Individual] Exchange Eligibility Decision	Implement Adjusted Eligibility Determination Resulting from Appeal	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Appeal [Individual] Exchange Eligibility Decision	Halt Appeals Processing	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage Master Person Index for Individuals		0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage Master Person Index for Individuals	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage Eligibility Rules		0	2
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage Eligibility Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage Eligibility Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage Enrollment Rules		0	2
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage Enrollment Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage Enrollment Rules	Manage Workflow Rules	0	1
Middle	Eligibility &	Individual Eligibility &	Manage [Eligibility]		0	2

96

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Enrollment	Appeals Rules			
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage [Eligibility] Appeals Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Eligibility & Enrollment	Manage [Eligibility] Appeals Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption			0	28
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Prepare/ Update Individual Exemption Application		0	4
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Prepare/ Update Individual Exemption Application	Validate Application Submission	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Prepare/ Update Individual Exemption Application	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Prepare/ Update Individual Exemption Application	Accept Individual Exemption Application	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Prepare/ Update Individual Exemption Application	Accept Individual Exemption Application Update	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Verify Individual Exemption Application Information		0	3
Middle	Eligibility &	Individual Responsibility	Verify Individual	Manage Account	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Exemption	Exemption Application Information			
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Verify Individual Exemption Application Information	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Verify Individual Exemption Application Information	Verify Information Required for Exemption	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Determine Individual Exemption Eligibility		0	3
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Determine Individual Exemption Eligibility	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Determine Individual Exemption Eligibility	Determine Eligibility	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Determine Individual Exemption Eligibility	Report on Individual Exemption Status	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility		0	8
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility	Validate Application Submission	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility	Determine Eligibility	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility	Verify Information Required for Exemption	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility	Accept Individual Exemption Application Update	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility	Report on Individual Exemption Status	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Renew Individual Exemption Eligibility	Process Individual Exemption Renewal Request	0	1
	Eligibility & Enrollment	Individual Responsibility Exemption	Appeal Exchange Eligibility Decision		0	5
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Appeal Exchange Eligibility Decision	Manage Account	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Appeal Exchange Eligibility Decision	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Appeal Exchange Eligibility Decision	Conduct Eligibility Appeal	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Appeal Exchange Eligibility Decision	Implement Adjusted Eligibility Determination Resulting from Appeal	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Appeal Exchange Eligibility Decision	Halt Appeals Processing	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Manage Master Person Index		0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Manage Master Person Index	Manage Business Rules	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Manage Exemption Eligibility Rules		0	2
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Manage Exemption Eligibility Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Manage Exemption Eligibility Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Manage Exemption Appeals Rules		0	2
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Manage Exemption Appeals Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	Individual Responsibility Exemption	Manage Exemption Appeals Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment			0	44
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Prepare/ Update Employer Eligibility Application and Update		0	10
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Prepare/ Update Employer Eligibility Application and Update	Manage Report Templates	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Prepare/ Update Employer Eligibility Application and	Validate Application Submission	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
			Update			
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Prepare/ Update Employer Eligibility Application and Update	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Provide Product Comparison Interface	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Display Employer Liability Rules (content)	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Enable Employer Product Selection	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Enable Employer Contribution Selection	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Receive Employee List and Employer Options	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Prepare/ Update Employer Eligibility Application and Update	Accept SHOP Employer Application	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility &	Prepare/ Update Employer Eligibility	Accept SHOP Employer Application Update	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
		Enrollment	Application and Update			
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information		0	4
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Verify SHOP Employer Identity	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Verify Employer Eligibility Application Information	Verify Employee Roster	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Determine Employer Eligibility for Participation		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Determine Employer Eligibility for Participation	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Determine Employer Eligibility for Participation	Determine Eligibility	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Determine Employer Contribution		0	3
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Determine Employer Contribution	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Determine Employer Contribution	Determine SHOP Employer Contribution	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Determine Employer Contribution	Communicate to Employees Regarding Availability of Insurance Through SHOP Exchange	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Terminate Employer Participation		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Terminate Employer Participation	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Terminate Employer Participation	Terminate Employer Participation	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation		0	11
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility &	Renew Employer Participation	Validate Application Submission	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
			Enrollment			
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Determine Eligibility	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Verify SHOP Employer Identity	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Determine SHOP Employer Contribution	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Terminate Employer Participation	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Process Employer Participation Renewal	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Verify Employee Roster	0	1
Middle	Eligibility &	SHOP Exchange	Renew Employer	Communicate to Employees	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Employer Eligibility & Enrollment	Participation	Regarding Availability of Insurance Through SHOP Exchange		
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Renew Employer Participation	Accept SHOP Employer Application Update	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Appeal SHOP Eligibility Decision		0	3
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Appeal SHOP Eligibility Decision	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Appeal SHOP Eligibility Decision	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Appeal SHOP Eligibility Decision	Conduct SHOP Eligibility Appeal	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Appeal Employer Liability Decision		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Appeal Employer Liability Decision	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Appeal Employer Liability Decision	Conduct Employer Liability Appeal	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Master Person Index for Employees		0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Master Person Index for Employees	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Employer Eligibility Rules		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Employer Eligibility Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Employer Eligibility Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Employer Enrollment Rules		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Employer Enrollment Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Employer Enrollment Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility &	Manage Employer Eligibility Appeals		0	2

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
		Enrollment	Rules			
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Employer Eligibility Appeals Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employer Eligibility & Enrollment	Manage Employer Eligibility Appeals Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment			0	47
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Prepare/ Update Employee Eligibility Application		0	6
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Prepare/ Update Employee Eligibility Application	Display Eligibility Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Prepare/ Update Employee Eligibility Application	Store supporting document image	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Prepare/ Update Employee Eligibility Application	Validate Application Submission	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Prepare/ Update Employee Eligibility Application	Manage Account	0	1
Middle	Eligibility &	SHOP Exchange	Prepare/ Update	Accept SHOP Employee	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Employee Eligibility & Enrollment	Employee Eligibility Application	Application		
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Prepare/ Update Employee Eligibility Application	Accept SHOP Employee Application Update	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Verify Employee Eligibility Application Information		0	3
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Verify Employee Eligibility Application Information	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Verify Employee Eligibility Application Information	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Verify Employee Eligibility Application Information	Verify SHOP Employee Application	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Determine Employee Eligibility		0	3
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Determine Employee Eligibility	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Determine Employee Eligibility	Determine Eligibility	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Determine Employee Eligibility	Determine Match Probability	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan		0	9
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan	Communicate to Issuer [including Medicaid for BHP] Regarding Enrollment in Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan	Report Enrollment in Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan	Select SHOP Employee Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan	Store supporting document image	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan	Calculate Member/Employer Premium Contributions	0	1
Middle	Eligibility &	SHOP Exchange	Enroll Employee in	Collect Member Premium	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Employee Eligibility & Enrollment	Qualified Health Plan	Contributions		
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan	Collect Employer Premium Contributions	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Enroll Employee in Qualified Health Plan	Interface to Billing System	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Disenroll Employee from Qualified Health Plan		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Disenroll Employee from Qualified Health Plan	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Disenroll Employee from Qualified Health Plan	Disenroll from Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment		0	14
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Validate Application Submission	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Manage Account	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Determine Eligibility	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Communicate to Issuer [including Medicaid for BHP] Regarding Enrollment in Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Report Enrollment in Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Disenroll from Qualified Health Plan	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Store supporting document image	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Accept SHOP Employee Application Update	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Verify SHOP Employee Application	0	1
Middle	Eligibility &	SHOP Exchange	Renew Employee	Select SHOP Employee Qualified	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Enrollment	Employee Eligibility & Enrollment	Eligibility & Enrollment	Health Plan		
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	QHP side-by-side comparison tool	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Process SHOP Employee Renewal Request	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Renew Employee Eligibility & Enrollment	Interface to Billing System	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Appeal Employee SHOP Eligibility Decision		0	3
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Appeal Employee SHOP Eligibility Decision	Manage Account	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Appeal Employee SHOP Eligibility Decision	Review and Adjudicate Alternative Documentation	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Appeal Employee SHOP Eligibility Decision	Conduct SHOP Eligibility Appeal	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Master Person Index		0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Master Person Index	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Employee Eligibility Rules		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Employee Eligibility Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Employee Eligibility Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Employee Enrollment Rules		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Employee Enrollment Rules	Manage Business Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Employee Enrollment Rules	Manage Workflow Rules	0	1
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Employee Appeals Rules		0	2
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility &	Manage Employee Appeals Rules	Manage Business Rules	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
		Enrollment				
Middle Office	Eligibility & Enrollment	SHOP Exchange Employee Eligibility & Enrollment	Manage Employee Appeals Rules	Manage Workflow Rules	0	1
Middle Office	Plan Management				24	26
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring			22	24
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Initial Certification and Agreement Business Services		7	7
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Initial Certification and Agreement Business Services	Determine Insurer Eligibility	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Initial Certification and Agreement Business Services	Manage Plan Submission Process	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Initial Certification and	Certify / Recertify / Decertify Plan	1	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
			Agreement Business Services			
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Initial Certification and Agreement Business Services	Form QHP Agreement with Issuer	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Initial Certification and Agreement Business Services	Manage Issuer and Plan Information	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Initial Certification and Agreement Business Services	Report Issuer and Plan Information	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Initial Certification and Agreement Business Services	Assign Plan Quality Rating	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Monitor Issuer and Plan Certification Compliance Business Services		5	5

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Monitor Issuer and Plan Certification Compliance Business Services	Monitor Plan Compliance	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Monitor Issuer and Plan Certification Compliance Business Services	Manage Issuer and Plan Information	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Monitor Issuer and Plan Certification Compliance Business Services	Report Issuer and Plan Information	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Monitor Issuer and Plan Certification Compliance Business Services	Process Plan Enrollment Availability and Changes	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Monitor Issuer and Plan Certification Compliance Business Services	Assign Plan Quality Rating	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Renewal and Recertification		5	5
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Renewal and Recertification	Manage Plan Submission Process	1	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Renewal and Recertification	Certify / Recertify / Decertify Plan	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Renewal and Recertification	Form QHP Agreement with Issuer	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Renewal and Recertification	Manage Issuer and Plan Information	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Establish Issuer and Plan Renewal and Recertification	Report Issuer and Plan Information	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Maintain Operational Data		2	2
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Maintain Operational Data	Manage Issuer and Plan Information	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Maintain Operational Data	Report Issuer and Plan Information	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Process Change in Plan Enrollment Availability		1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and	Process Change in Plan Enrollment	Process Change in Plan Enrollment Availability	1	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
		Monitoring	Availability			
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Review Increase Justifications		1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Review Increase Justifications	Manage Rates and Benefits	1	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Manage Plan Financials		1	3
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Manage Plan Financials	Administer Transitional Reinsurance	0	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Manage Plan Financials	Administer Risk Corridors	0	1
Middle Office	Plan Management	Issuer and Plan Details Establishment and Monitoring	Manage Plan Financials	Administer Plan Assessments (Surcharges)	1	1
Middle Office	Plan Management	Plan Management Rules Management			2	2
Middle Office	Plan Management	Plan Management Rules Management	Manage Rules		2	2
Middle Office	Plan Management	Plan Management Rules Management	Manage Rules	Manage Business Rules	1	1

118

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Plan Management	Plan Management Rules Management	Manage Rules	Manage Workflow Rules	1	1
Middle Office	Financial Management				8	28
Middle Office	Financial Management	Financial Management Risk Management			1	2
Middle Office	Financial Management	Financial Management Risk Management	Risk Management		1	2
Middle Office	Financial Management	Financial Management Risk Management	Risk Management	Calculate Actuarial Risks	0	1
Middle Office	Financial Management	Financial Management Risk Management	Risk Management	Submit Transparency Information	1	1
Middle Office	Financial Management	Financial Management Transaction Processing			0	13
Middle Office	Financial Management	Financial Management Transaction Processing	Premium & Tax Credit Processing		0	8
Middle Office	Financial Management	Financial Management Transaction Processing	Enroll Individual in Qualified Health Plan	Calculate Member/Employer Premium Contributions	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Premium & Tax Credit Processing	Automated Invoice Generation	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Premium & Tax Credit Processing	Determine Eligibility for Tax Credit	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Premium & Tax Credit Processing	Notify Individual of Tax Credit Eligibility Results	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Enroll Individual in Qualified Health Plan	Collect Member Premium Contributions	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Financial Management	Financial Management Transaction Processing	Premium & Tax Credit Processing	Automated Invoice Printing	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Premium & Tax Credit Processing	Capture Payment Information	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Premium & Tax Credit Processing	Automated Premium Reconciliation	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Financial Transaction Processing		0	5
Middle Office	Financial Management	Financial Management Transaction Processing	Financial Transaction Processing	Manual Settlements	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Financial Transaction Processing	Batch Settlements	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Financial Transaction Processing	Automate Payments Based on Invoice Data	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Financial Transaction Processing	Electronic Funds Transfer	0	1
Middle Office	Financial Management	Financial Management Transaction Processing	Financial Transaction Processing	Payment Reconciliation	0	1
Middle Office	Financial Management	Account Payment Status Monitoring			0	2
Middle Office	Financial Management	Account Payment Status Monitoring	Management of Delinquent Accounts		0	2
Middle Office	Financial Management	Account Payment Status Monitoring	Management of Delinquent Accounts	Identification of Delinquent Accounts	0	1
Middle Office	Financial Management	Account Payment Status Monitoring	Management of Delinquent Accounts	Termination of Delinquent Accounts	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Middle Office	Financial Management	Financial Management Reporting			5	5
Middle Office	Financial Management	Financial Management Reporting	Financial Management Reporting		5	5
Middle Office	Financial Management	Financial Management Reporting	Financial Management Reporting	Automatic Data Collection (Data Feeds)	1	1
Middle Office	Financial Management	Financial Management Reporting	Financial Management Reporting	Audit Collected Data	1	1
Middle Office	Financial Management	Financial Management Reporting	Financial Management Reporting	Automated Data Mapping	1	1
Middle Office	Financial Management	Financial Management Reporting	Financial Management Reporting	Forecasting	1	1
Middle Office	Financial Management	Financial Management Reporting	Financial Management Reporting	Trend Analysis	1	1
Middle Office	Financial Management	Financial Management Rules Management			2	6
Middle Office	Financial Management	Financial Management Rules Management	Financial Transaction Processing Rules Management		0	2
Middle	Financial	Financial Management	Financial Transaction	Manage Business Rules	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Office	Management	Rules Management	Processing Rules Management			
Middle Office	Financial Management	Financial Management Rules Management	Financial Transaction Processing Rules Management	Manage Workflow Rules	0	1
Middle Office	Financial Management	Financial Management Rules Management	Premium & Tax Credit Processing Rules		0	2
Middle Office	Financial Management	Financial Management Rules Management	Premium & Tax Credit Processing Rules	Manage Business Rules	0	1
Middle Office	Financial Management	Financial Management Rules Management	Premium & Tax Credit Processing Rules	Manage Workflow Rules	0	1
Middle Office	Financial Management	Financial Management Rules Management	Financial Management Reporting Rules		2	2
Middle Office	Financial Management	Financial Management Rules Management	Financial Management Reporting Rules	Manage Business Rules	1	1
Middle Office	Financial Management	Financial Management Rules Management	Financial Management Reporting Rules	Manage Workflow Rules	1	1
Delivery Processes					9	69
Front Office	Customer Service				7	55
Front Office	Customer Service	Customer Support			7	13

122

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Front Office	Customer Service	Customer Support	Provide Call Center Support		4	4
Front Office	Customer Service	Customer Support	Provide Call Center Support	Manage Account	1	1
Front Office	Customer Service	Customer Support	Provide Call Center Support	Record Inquiry Information	1	1
Front Office	Customer Service	Customer Support	Provide Call Center Support	Manage Business Rules	1	1
Front Office	Customer Service	Customer Support	Provide Call Center Support	Manage FAQs	1	1
Front Office	Customer Service	Customer Support	Provide Mail Support		3	3
Front Office	Customer Service	Customer Support	Provide Mail Support	Manage Account	1	1
Front Office	Customer Service	Customer Support	Provide Mail Support	Record Inquiry Information	1	1
Front Office	Customer Service	Customer Support	Provide Mail Support	Manage FAQs	1	1
Front Office	Customer Service	Customer Support	Provide In-Person Support		0	0
Front Office	Customer Service	Customer Support	Provide In-Person Support	Manage Account	0	0
Front Office	Customer Service	Customer Support	Provide In-Person Support	Record Inquiry Information	0	0
Front Office	Customer Service	Customer Support	Provide In-Person Support	Manage FAQs	0	0

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Front Office	Customer Service	Customer Support	Provide Website Support		0	3
Front Office	Customer Service	Customer Support	Provide Website Support	Manage Account	0	1
Front Office	Customer Service	Customer Support	Provide Website Support	Record Inquiry Information	0	1
Front Office	Customer Service	Customer Support	Provide Website Support	Manage FAQs	0	1
Front Office	Customer Service	Customer Support	Handle Complaint		0	3
Front Office	Customer Service	Customer Support	Handle Complaint	Receive complaint	0	1
Front Office	Customer Service	Customer Support	Handle Complaint	Resolve complaint	0	1
Front Office	Customer Service	Customer Support	Handle Complaint	Close complaint	0	1
Front Office	Customer Service	Enrollee Survey Publication			0	6
Front Office	Customer Service	Enrollee Survey Publication	Publish Enrollee Survey		0	6
Front Office	Customer Service	Enrollee Survey Publication	Publish Enrollee Survey	Manage Surveys	0	1
Front Office	Customer Service	Enrollee Survey Publication	Publish Enrollee Survey	Manage Survey Templates	0	1
Front Office	Customer Service	Enrollee Survey Publication	Publish Enrollee Survey	Review Survey (includes survey estimate)	0	1

124

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Front Office	Customer Service	Enrollee Survey Publication	Publish Enrollee Survey	Manage Survey Schedule	0	1
Front Office	Customer Service	Enrollee Survey Publication	Publish Enrollee Survey	Manage Survey Delivery Mechanism	0	1
Front Office	Customer Service	Enrollee Survey Publication	Publish Enrollee Survey	Publish Survey	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management			0	30
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Training		0	5
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Training	Record / Modify Training	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Training	Record / Modify Certification	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Training	Online Training	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Training	Communicate Training Results	0	1
Front Office	Customer Service	Broker/Navigator Relationship	Broker Training	Communicate Certification Results	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
		Management				
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management		0	10
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	Manage Broker/ Navigator Monthly Targets	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	Manage Performance Measures / Measurements	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	Manage Compensation	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	Testing of Incentive Returns	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	Broker/ Navigator Evaluation	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	Produce Monthly Paper / E-Statements	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	Record / Modify Compliance	0	1
Front Office	Customer	Broker/Navigator	Broker Performance	Communicate Compliance Results	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
	Service	Relationship Management	Management			
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	File Dispute	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Broker Performance Management	Manage Dispute	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Training		0	5
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Training	Record / Modify Training	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Training	Record / Modify Certification	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Training	Online Training	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Training	Communicate Training Results	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Training	Communicate Certification Results	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management		0	10
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	Manage Broker/ Navigator Monthly Targets	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	Manage Performance Measures / Measurements	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	Manage Compensation	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	Testing of Incentive Returns	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	Broker/ Navigator Evaluation	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	Produce Monthly Paper / E-Statements	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	Record / Modify Compliance	0	1
Front Office	Customer Service	Broker/Navigator Relationship	Navigator Performance	Communicate Compliance Results	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
		Management	Management			
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	File Dispute	0	1
Front Office	Customer Service	Broker/Navigator Relationship Management	Navigator Performance Management	Manage Dispute	0	1
Front Office	Customer Service	Rules Management			0	6
Front Office	Customer Service	Rules Management	Customer Service Rules Management		0	2
Front Office	Customer Service	Rules Management	Customer Service Rules Management	Manage Business Rules	0	1
Front Office	Customer Service	Rules Management	Customer Service Rules Management	Manage Workflow Rules	0	1
Front Office	Customer Service	Rules Management	Broker Rules Management		0	2
Front Office	Customer Service	Rules Management	Broker Rules Management	Manage Business Rules	0	1
Front Office	Customer Service	Rules Management	Broker Rules Management	Manage Workflow Rules	0	1
Front Office	Customer Service	Rules Management	Navigator Rules Management		0	2
Front Office	Customer Service	Rules Management	Navigator Rules Management	Manage Business Rules	0	1
Front Office	Customer	Rules Management	Navigator Rules	Manage Workflow Rules	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
	Service		Management			
Front Office	Communications				2	14
Front Office	Communications	Outreach			2	5
Front Office	Communications	Outreach	Perform Outreach		2	5
Front Office	Communications	Outreach	Perform Outreach	Produce Sales / Marketing Materials	1	1
Front Office	Communications	Outreach	Perform Outreach	Manage Sales Leads	0	1
Front Office	Customer Service	Outreach	Perform Outreach	Self-service Broker Portal	0	1
Front Office	Customer Service	Outreach	Perform Outreach	Manage Broker Inquiries	0	1
Front Office	Communications	Outreach	Perform Outreach	Transmit Report / Notification	1	1
Front Office	Communications	Communications Rules Management			0	4
Front Office	Communications	Communications Rules Management	Manage Outreach Rules		0	2
Front Office	Communications	Communications Rules Management	Manage Outreach Rules	Manage Business Rules	0	1
Front Office	Communications	Communications Rules Management	Manage Outreach Rules	Manage Workflow Rules	0	1
Front Office	Communications	Communications Rules Management	Manage Communication Rules		0	2
Front Office	Communications	Communications Rules Management	Manage Communication Rules	Manage Business Rules	0	1
Front Office	Communications	Communications Rules Management	Manage Communication Rules	Manage Workflow Rules	0	1

Process Type	Business Area	Process Group	Business Process Name	Exchange Business Service Name	Federal	State
Front Office	Communications	Notifications			0	5
Front Office	Communications	Notifications	Issue Notification		0	5
Front Office	Communications	Notifications	Issue Notification	Create Notification	0	1
Front Office	Communications	Notifications	Issue Notification	Update Notification Content	0	1
Front Office	Communications	Notifications	Issue Notification	Delete Notification	0	1
Front Office	Communications	Notifications	Issue Notification	Manage Business Rules	0	1
Front Office	Communications	Notifications	Issue Notification	Send Notification	0	1

Appendix I: IT Assets Assessment Worksheet (Detailed View)

The assessment for MITS & CRIS-E are shown first, the second set of tables correspond to ODDIIS and OAKS.

Technical Component	MITS			CRIS-E		
	Performs Function?	Function Impleme-ntation	Comments	Performs Function?	Function Implem-ntation	Comments
Information Management	Yes	Low	Filenet, captiva	Yes	Med	Self service portal
Master Person Index	No	N/A	Maintained outside MITS	Yes	Hi	Feeds MITS
Knowledge Management	Yes	Low	Through iTrace (HP proprietary product)	No	N/A	
Financial Transaction Processing	Yes	Low	claims only, no capacity to handle insurance transactions, contractually complex	No	N/A	
Business Process Management	No	N/A		Yes	Med	Some eligibility BP capacity
Privacy and Security	Yes	Low		No	N/A	
Rules Engine	Yes	Low	nRules	No	N/A	
Workflow Engine	No	N/A	nRules + proprietary workflow engine used for benefits management	No	N/A	
Data Management	Yes	Low	Managed by vendor (HP) in HP's Florida data center	Yes	Low	Informatica ETL, but IMS back end
Service Management	No	N/A		Yes	Low	TIBCO
Unified Communications	No	N/A		No	N/A	
Exchange Portal	No	N/A		Yes	Low	Self service portal
B2B Gateway	No	N/A		No	N/A	

Technical Component	ODIIS			OAKS		
	Performs Function?	Function Impleme-ntation	Comments	Performs Function?	Function Impleme-ntation	Comments
Information Management	Yes	Med	Intelliview for Document Management, but not integrated. MS Reporting Services and DocGen for reporting. No Business Intelligence capabilities.	Yes	Med	SQR and Crystal Reports for reporting
Master Person Index	No	N/A		No	N/A	
Knowledge Management	No	N/A		No	N/A	
Financial Transaction Processing	Yes	Med	ACH (VitalChek) and credit card processing (SkipJack) through interface with State Treasurer's Office	No	N/A	
Business Process Management	Yes	Med	PDF document generation through IBM DocGen	No	N/A	
Privacy and Security	Yes	Med	Active Directory (internal) and ADAM (external) used for LDAP. Data encrypted at-rest and in motion via HTTPS and SFTP.	No	N/A	
Rules Engine	No	N/A		No	N/A	

Workflow Engine	Yes	Low	Limited implementation of MS Windows Workflow Foundation in Licensing component	Yes	Med	PeopleSoft Automated Workflow Engine for CRM components
Data Management	Yes	Hi	Custom ETL processes. No message transformation. No data warehouse capabilities. Unknown database management tools.	Yes	Hi	
Service Management	No	N/A		No	N/A	
Unified Communications	No	N/A		No	N/A	
Exchange Portal	No	N/A		No	N/A	
B2B Gateway	No	N/A		No	N/A	

Appendix J: Functional Components

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Plan Certification & Risk Management		Plan Certification
Plan Certification & Risk Management		Manage Plan Submission Process
Plan Certification & Risk Management		Certify / Recertify / Decertify Plan
Plan Certification & Risk Management		Form QHP Agreement with Issuer
Plan Certification & Risk Management		Manage Issuer and Plan Information
Plan Certification & Risk Management		Report Issuer and Plan Information
Plan Certification & Risk Management		Assign Plan Quality Rating
Plan Certification & Risk Management		Process Change in Plan Enrollment Availability
Plan Certification & Risk Management		Manage Rates and Benefits
Plan Certification & Risk Management		Monitor Plan Compliance
Plan Certification & Risk Management		Administer Transitional Reinsurance
Plan Certification & Risk Management		Administer Risk Corridors
Plan Certification & Risk Management		Administer Plan Assessments (Surcharges)
Plan Certification & Risk Management		Risk Management
Plan Certification & Risk Management		Calculate Actuarial Risks
Plan Certification & Risk Management		Submit Transparency Information
Plan Certification & Risk Management		Manage Plan Certification Business Rules
Plan Certification & Risk Management		Manage Plan Certification Workflow Rules
Plan Certification & Risk Management		spare

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Plan Certification & Risk Management		spare
Plan Certification & Risk Management		spare
Premium & Tax Credit Processing		Automated Invoice Generation
Premium & Tax Credit Processing		Automated Invoice Printing
Premium & Tax Credit Processing		Capture Payment Information
Premium & Tax Credit Processing		Automated Premium Reconciliation
Premium & Tax Credit Processing		Determine Eligibility for Tax Credit
Premium & Tax Credit Processing		Notify Individual of Tax Credit Eligibility Results
Premium & Tax Credit Processing		Manage Premium & Tax Credit Processing Business Rules
Premium & Tax Credit Processing		Manage Premium & Tax Credit Workflow Rules
Premium & Tax Credit Processing		Identification of Delinquent Accounts
Premium & Tax Credit Processing		Termination of Delinquent Accounts
Premium & Tax Credit Processing		Manage Communication Business Rules
Premium & Tax Credit Processing		Manage Communication Workflow Rules
Premium & Tax Credit Processing		Calculate Member/Employer Premium Contributions
Premium & Tax Credit Processing		Collect Employer Premium Contributions
Premium & Tax Credit Processing		Collect Member Premium Contributions
Premium & Tax Credit Processing		spare
Premium & Tax Credit Processing		spare
Eligibility Assessment	Enables assessment of eligibility of a party for a plan, program or service.	
Eligibility Assessment		Process Individual Exemption Renewal Request
Eligibility Assessment		Process SHOP Employee Renewal Request
Eligibility Assessment		Verify Individual Eligibility of Public Minimum Essential Coverage
Eligibility Assessment		Verify Individual Eligibility for Employer - Sponsored Minimum Essential Coverage

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Eligibility Assessment		Determine Eligibility
Eligibility Assessment		Refer Potentially Eligible Individuals to Medicaid and CHIP for additional Screening
Eligibility Assessment		Determine Eligibility for Advance Premium Tax Credit
Eligibility Assessment		Determine Category for Cost-Sharing Reductions
Eligibility Assessment		Qualify Individual for an Enrollment Period
Eligibility Assessment		Verify Lawful Presence
Eligibility Assessment		Verify Household Income
Eligibility Assessment		Calculate Federal Poverty Level
Eligibility Assessment		Verify Whether Individual is an Indian
Eligibility Assessment		Verify Incarceration Status
Eligibility Assessment		Verify Individual Residency Status
Eligibility Assessment		Verify Information Required for Exemption
Eligibility Assessment		Verify SHOP Employer Identity
Eligibility Assessment		Verify Employee Roster
Eligibility Assessment		Verify SHOP Employee Application
Eligibility Assessment		Manage Eligibility Business Rules
Eligibility Assessment		Manage Eligibility Workflow Rules
Eligibility Assessment		Determine Insurer Eligibility
Eligibility Assessment		Receive Employee List and Employer Options
Eligibility Assessment		Display Eligibility Rules
Eligibility Assessment		spare
Eligibility Assessment		spare
Comparison Shopping	Enables comparison of selected products or services.	
Comparison Shopping		Determine Plan Availability and Calculate Plan Cost

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Comparison Shopping		Select SHOP Employee Qualified Health Plan
Comparison Shopping		QHP side-by-side comparison tool
Comparison Shopping		Provide Product Comparison Interface
Comparison Shopping		spare
Comparison Shopping		spare
Enrollment Processing	Enables plan or program enrollment, renewals and termination.	
Enrollment Processing		Process Employer Participation Renewal
Enrollment Processing		Accept SHOP Employer Application
Enrollment Processing		Accept SHOP Employer Application Update
Enrollment Processing		Determine SHOP Employer Contribution
Enrollment Processing		Terminate Employer Participation
Enrollment Processing		Validate Application Submission
Enrollment Processing		Review and Adjudicate Alternative Documentation
Enrollment Processing		Accept Individual Eligibility Application
Enrollment Processing		Accept Individual Eligibility Application Update
Enrollment Processing		Accept Individual Exemption Application
Enrollment Processing		Accept Individual Exemption Application Update
Enrollment Processing		Accept SHOP Employee Application
Enrollment Processing		Accept SHOP Employee Application Update
Enrollment Processing		Select Individual Qualified Health Plan
Enrollment Processing		Enroll in Medicaid, CHIP or BHP
Enrollment Processing		Enroll in SNAP & TANF
Enrollment Processing		Process Individual Eligibility & Enrollment Renewal Request
Enrollment Processing		Assess Current Qualified Health Plan Enrollment Status
Enrollment Processing		Disenroll from Qualified Health Plan

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Enrollment Processing		Store supporting document image
Enrollment Processing		Interface to Billing System
Enrollment Processing		Manage Enrollment Business Rules
Enrollment Processing		Manage Enrollment Workflow Rules
Enrollment Processing		Process Plan Enrollment Availability and Changes
Enrollment Processing		Enable Employer Product Selection
Enrollment Processing		Enable Employer Contribution Selection
Enrollment Processing		Display Employer Liability Rules (content)
Enrollment Processing		spare
Enrollment Processing		spare
Enrollment Processing		spare
Appeals Management	Enables recording of an appeal and the results of an appeal.	
Appeals Management		Implement Adjusted Eligibility Determination Resulting from Appeal
Appeals Management		Conduct Eligibility Appeal
Appeals Management		Conduct SHOP Eligibility Appeal
Appeals Management		Conduct Employer liability appeal
Appeals Management		Halt Appeals Processing
Appeals Management		Manage Appeals Business Rules
Appeals Management		Manage Appeals Workflow Rules
Appeals Management		spare
Appeals Management		spare
Broker/ Navigator Relationship Management	Supports management of the relationship between a health and human services program manager and a broker or navigator.	
Broker/ Navigator Relationship Management		Record / Modify Training

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Broker/ Navigator Relationship Management		Record / Modify Certification
Broker/ Navigator Relationship Management		Record / Modify Compliance
Broker/ Navigator Relationship Management		Manage Broker/ Navigator Monthly Targets
Broker/ Navigator Relationship Management		Manage Broker Sales Objectives
Broker/ Navigator Relationship Management		Manage Compensation
Broker/ Navigator Relationship Management		Testing of Incentive Returns
Broker/ Navigator Relationship Management		Online Training
Broker/ Navigator Relationship Management		Broker/ Navigator Evaluation
Broker/ Navigator Relationship Management		Produce Monthly Paper / E-Statements
Broker/ Navigator Relationship Management		Self-service Broker Portal
Broker/ Navigator Relationship Management		File Dispute
Broker/ Navigator Relationship Management		Manage Dispute
Broker/ Navigator Relationship Management		Manage Broker Inquiries

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Broker/ Navigator Relationship Management		Manage Broker Relationship Business Rules
Broker/ Navigator Relationship Management		Manage Broker Relationship Workflow Rules
Broker/ Navigator Relationship Management		Manage Navigator Relationship Business Rules
Broker/ Navigator Relationship Management		Manage Navigator Relationship Workflow Rules
Broker/ Navigator Relationship Management		spare
Broker/ Navigator Relationship Management		spare
Marketing & Outreach	Facilitates public awareness of available plans, programs or services.	
Marketing & Outreach		Produce Sales / Marketing Materials
Marketing & Outreach		Manage Sales Leads
Marketing & Outreach		Manage Marketing and Outreach Business Rules
Marketing & Outreach		Manage Marketing and Outreach Workflow Rules
Marketing & Outreach		spare
Marketing & Outreach		spare
Customer Service & Account Management	Supports management of the relationship between the enterprise and its clients. Facilitates call tracking with workflow processing and work queues.	
Customer Service & Account Management		Manage Account
Customer Service & Account Management		Record Inquiry Information

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Customer Service & Account Management		Manage Call Transfer Business Rules
Customer Service & Account Management		Administer Employer Liability
Customer Service & Account Management		Manage FAQs
Customer Service & Account Management		Manage Performance Measures / Measurements
Customer Service & Account Management		Manage Customer Service & Account Management Business Rules
Customer Service & Account Management		Manage Customer Service & Account Management Workflow Rules
Customer Service & Account Management		Receive complaint
Customer Service & Account Management		Resolve complaint
Customer Service & Account Management		Close complaint
Customer Service & Account Management		spare
Financial Management & Reporting	Enables generation of financial reports (e.g. monthly summary reports, annual report) and publishes these reports to stakeholders. Supports accounting of all financial transactions and or all assets and liabilities.	
Financial Management & Reporting		Automatic Data Collection (Data Feeds)
Financial Management & Reporting		Audit Collected Data
Financial Management & Reporting		Automated Data Mapping

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
Financial Management & Reporting		Forecasting
Financial Management & Reporting		Trend Analysis
Financial Management & Reporting		Manage Financial Management & Reporting Business Rules
Financial Management & Reporting		Manage Financial Management & Reporting Workflow Rules
Financial Management & Reporting		spare
Financial Management & Reporting		spare
Information Technology	Enables the management of technology operations and management. Facilitates Data Center Operations, Service Level Management, Project Management and Configuration Management.	
Information Technology		spare
Information Technology		spare
Information Technology		spare
Information Technology		spare
Asset Management	Enables the management of the organization's assets.	
Asset Management		Manage Deployment
Asset Management		Manage System Specifications
Asset Management		Monitor Assets
Asset Management		Manage Vendor Contracts
Asset Management		spare
Asset Management		spare
HR Management	Enables the management of employees - including hiring, firing, employee disputes, etc.	
HR Management		Manage Recruitment
HR Management		Manage Compensation
HR Management		Manage Job Evaluations
HR Management		Manage Performance

Functional Component	Functional Component Description	Service Performed (from CRUD matrix)
HR Management		Manage Time and Attendance
HR Management		Benefits, Pension, and Leave Administration
HR Management		Salary Administration
HR Management		Return to Work Administration
HR Management		Manage Professional Development
HR Management		spare
HR Management		spare
Procurement Management	Enables the management of contracts - from drafting contracts to ensuring contracts are fulfilled.	
Procurement Management		Manage Purchase Orders
Procurement Management		Manage Inventory
Procurement Management		Perform Cost Analysis
Procurement Management		spare
Procurement Management		spare

Appendix K: Technical Components

Technical Component	Technical Component Description	Service Performed (from CRUD matrix)
Information Management	Facilitates the collection and analysis of enterprise data and the generation of reports and graphs	
Information Management		Manage Reports
Information Management		Manage Report Templates
Information Management		Review Reports (includes report estimate)
Information Management		Manage Report Schedule
Information Management		Manage Report Delivery Mechanism
Information Management		Manage Analytic Templates
Information Management		Perform Analytics
Information Management		Portal Integration of Analytics
Information Management		Ad-Hoc Reporting
Information Management		Manage Data Sources
Information Management		Manage Information Management Business Rules
Information Management		Manage Information Management Workflow Rules
Information Management		Manage Surveys
Information Management		Manage Survey Templates
Information Management		Review Survey (includes survey estimate)
Information Management		Manage Survey Schedule
Information Management		Manage Survey Delivery Mechanism
Information Management		Publish Survey
Master Person Index	Supports identification of a unique person, where multiple records can exist, and the roles they play. Provides deterministic and probabilistic matching.	
Master Person Index		Determine Match Probability

Technical Component	Technical Component Description	Service Performed (from CRUD matrix)
Master Person Index		Manage Master Person Index Business Rules
Knowledge Management	Supports management of content on various electronic media and associated metadata to support content classification and retrieval	
Knowledge Management		Manage Taxonomy
Knowledge Management		Store Content
Knowledge Management		Tag Content
Knowledge Management		Retrieve Content (Search Features)
Financial Transaction Processing	Enables electronic funds transfers for payments and receipts	
Financial Transaction Processing		Manual Settlements
Financial Transaction Processing		Batch Settlements
Financial Transaction Processing		Automate Payments Based on Invoice Data
Financial Transaction Processing		Electronic Funds Transfer
Financial Transaction Processing		Payment Reconciliation
Financial Transaction Processing		Manage Financial Transaction Processing Business Rules
Financial Transaction Processing		Manage Financial Transaction Processing Workflow Rules
Business Process Management	Enables core business and management processes of the enterprise	
Business Process Management		Create Notification
Business Process Management		Update Notification Content
Business Process Management		Delete Notification
Business Process Management		Manage Notification Rules
Business Process Management		Communicate to Issuer [including Medicaid for BHP] Regarding Enrollment in Qualified Health Plan
Business Process Management		Report Enrollment in Qualified Health Plan
Business Process Management		Communicate Individual Eligibility Determination
Business Process Management		Report on Individual Exemption Status

Technical Component	Technical Component Description	Service Performed (from CRUD matrix)
Business Process Management		Communicate to Employees Regarding Availability of Insurance Through SHOP Exchange
Business Process Management		Communicate Training Results
Business Process Management		Communicate Certification Results
Business Process Management		Communicate Compliance Results
Business Process Management		Send Notification
Business Process Management		Manage Business Rules
Business Process Management		Manage Workflow Rules
Privacy and Security	Supports control of access to sensitive functions and data including personal information	
Privacy and Security		Manage Identity / Access Privileges
Privacy and Security		Compliance management
Rules Engine	Supports cataloguing, design and execution of business rules	
Workflow Engine	Supports design, configuration and execution of workflows	
Data Management	Enables management of enterprise data including operational and aggregate data and the transformation of data for use by different systems	
Service Management	Identifies and manages creation and use of loosely coupled software services and messaging between provider components and consumer components in a service oriented architecture.	
Unified Communications	Facilitates access to services via telecommunications.	
Unified Communications		Transmit Report / Notification
Unified Communications		Manage Communication Business Rules
Unified Communications		Manage Communication Workflow Rules
Exchange Portal	Facilitates access to services provided via the internet.	
B2B Gateway	Facilitates interoperability with systems that are external to the enterprise	