



Executive Summary

Indiana HIX IT Assessment Project

January 2011

Introduction: The Exchange IT Assessment Project

On March 23, 2010, President Obama signed into law the Patient Protection and Affordable Care Act (PPACA) and associated Health Care and Education Reconciliation Act which lays out a comprehensive program to expand health insurance coverage and implement broad insurance industry and delivery system reforms. A key provision of the legislation requires State governments to create and implement a State Health Insurance Exchange (HIX), incorporating an American Health Benefits Exchange (AHBE) and a Small Business Health Options Program (SHOP) Exchange.

The State of Indiana engaged Deloitte Consulting LLP (“Deloitte Consulting”) to conduct an assessment of the technology functions required to support a State HIX (both AHBE and SHOP) and the current Indiana technology assets in place today. The project was completed over a nine week period from October to December 2010 and included the following activities:

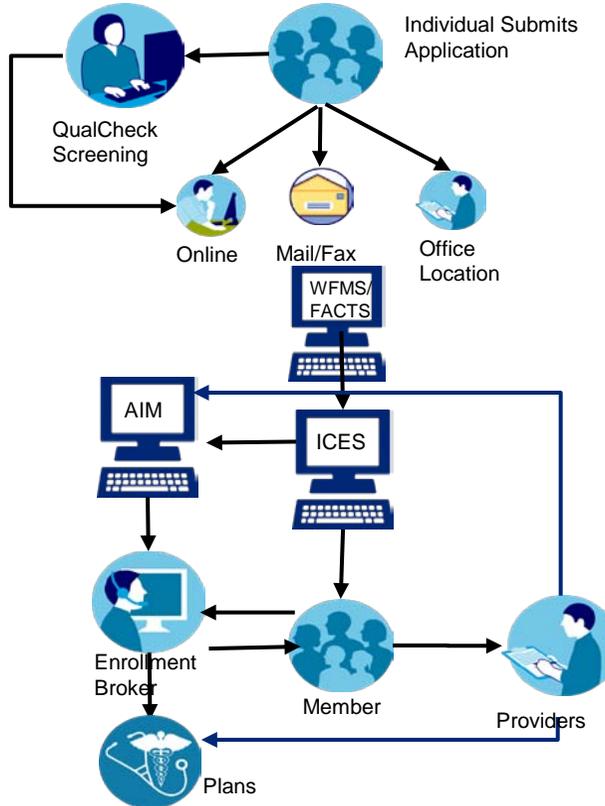
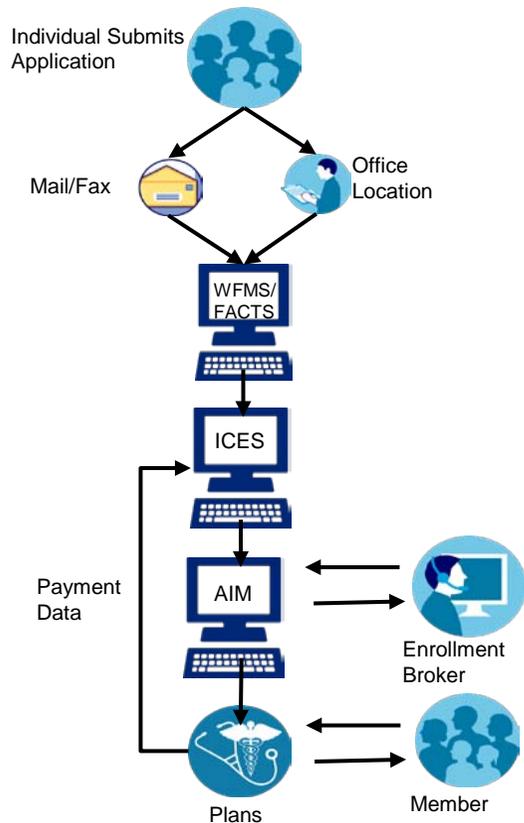
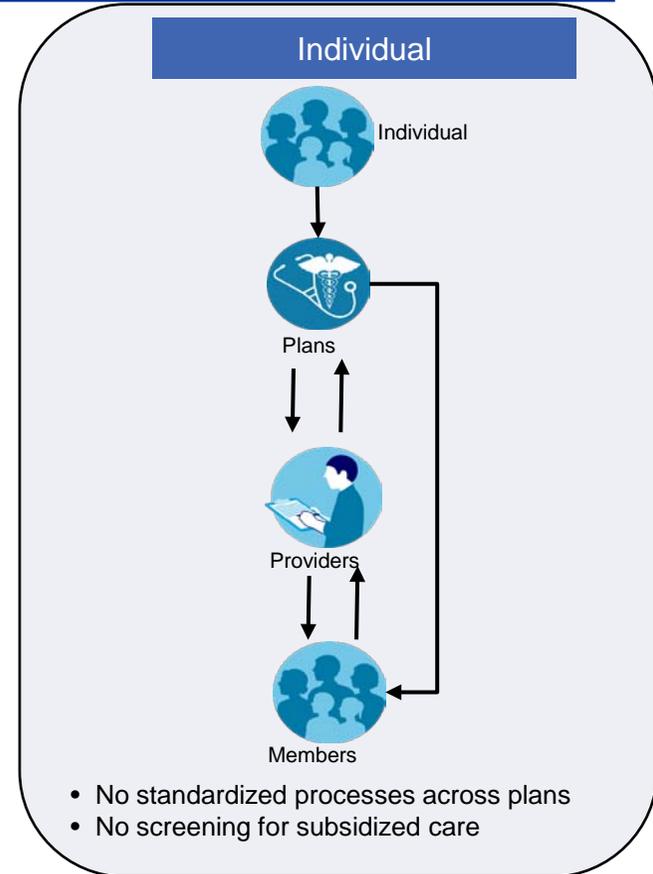
- Phase 1: Assess Legislative Impact & Identify Leading Practices
 - Conduct a structured analysis of the health reform legislation to identify and develop a functional and technical HIX operating model framework.
 - *Deliverable 1: PPACA High-level Technology Operating Model for Health Insurance Exchange*
- Phase 2A: Assess Indiana Existing Assets
 - Conduct a high-level assessment of existing FSSA technology assets and develop asset profiles documenting key functionality and technical capabilities. The assets reviewed include: ICES, AIM, In.gov, SERFF, SIRCON, WFMS/FACTS, QualCheck, and HIE.
 - *Deliverable 2A: Technology Asset Assessment*
- Phase 2B: Conduct Gap Assessment
 - Develop the high-level gap analysis between the requirements of the health reform legislation as developed in Phase 1 and the capabilities of existing assets developed in Phase 2A.
 - *Deliverable 3: Health Insurance Exchange Technology Gap Analysis*

The project results provide the State of Indiana with an assessment of the key “gaps” it will need to address between its current technology architecture and the business functionality of the HIX required by PPACA.

Indiana Current Operating Model

HIP

Medicaid



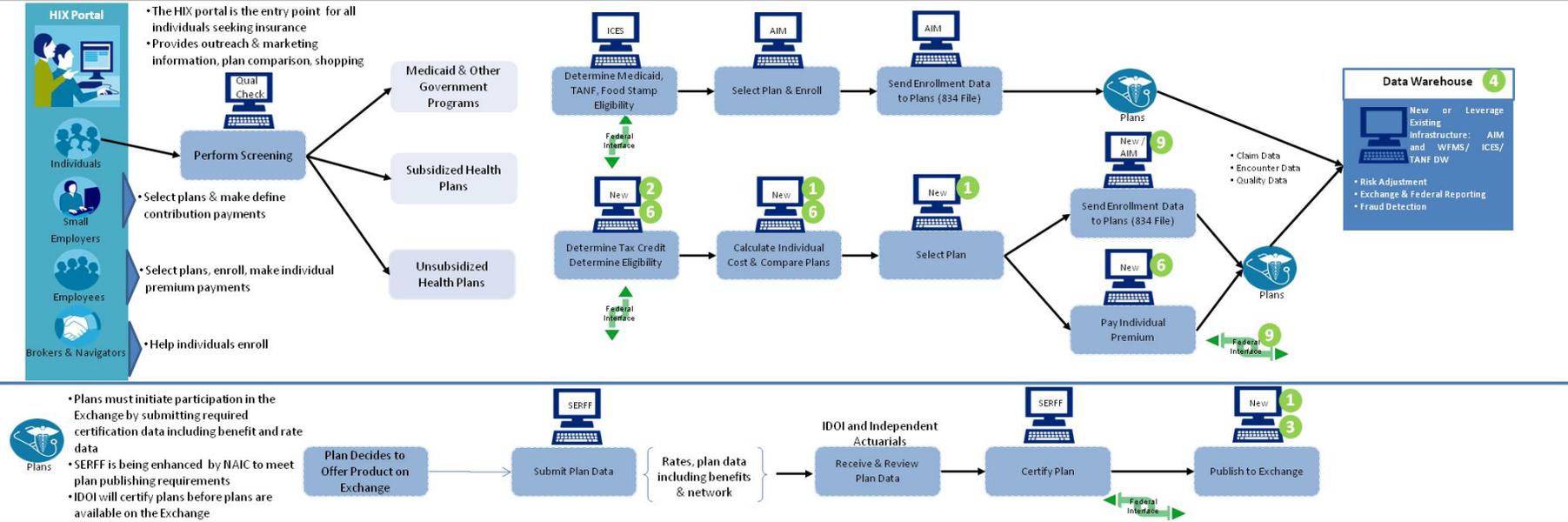
WFMS	Portal	CRM	Doc. Management	Doc. Generation	Workflow Engine
ICES	Doc. Generation	Workflow Engine	Data Exchange	Business Rules	Reporting
AIM	Doc. Generation	Doc. Management	Data Exchange	CRM	Reporting

- Separate application required if applying for other health programs
- No online application or screening capabilities
- Not all channels are supported by existing processes (e.g. HIP does not have online application)

- Multiple applications: (1) Children & Pregnant Women (2) Food Stamps, TANF, Health Coverage
- Online application for screening through QualCheck for Food Stamps, TANF, Health Coverage for Modernized/Hybrid Counties

PPACA Operating Model

EXCHANGE PROCESS FLOWS



INDIANA EXCHANGE IT ASSESSMENT



11 Business Functions Support the Exchange

1 Portal: Portal Framework, Enterprise Content Management, Shopping Experience

• Portal framework, integrated content management and shopping experience

2 Business Rules Engine: Separate from eligibility system

• Industry standard rules engine with rules separate from code

3 Workflow: Managing workflow across agencies and systems

• Industry standard solution to integrate across existing and new systems as well as across organizations

9 Technology Components Make Up the Technical Framework for the Exchange

4 Reporting: Dashboard Reporting, Quality Reporting, Predictive Analytics

• Leverage COGNOS/Oracle (ICES/TANF DW) infrastructure
• Leverage Quality Health First (IHE) infrastructure

5 Customer Relationship Management: Call Center, Integration with Portal

• Leverage IES (WFMS/FACTS) infrastructure and establish new customer service operations and system

6 Financial Management & Calculator: Premium & Tax Credit Calculation, Individual account payments & Exchange financial operations

• Financial accounting software for premium & tax credit calculations
• Accounting for individual accounts and Exchange operations

7 Document Generation: Multi-channel Output (print, email, fax, text to voice, text messaging)

• Industry standard document generation solution and integration to produce multi-channel output (print, email, fax, text to voice, text messaging)

8 Document Management: Scanning & Optical Character Recognition

• Leverage Captiva (WFMS/FACTS) infrastructure

9 Data Exchange: Enterprise Service Bus (ESB)

• Leverage MQ/Biztalk (ICES) infrastructure

PPACA HIX Technology Assessment

Technology Component	Required Capabilities	Assessment Summary	
1 Portal	Portal Framework	<ul style="list-style-type: none"> IN.gov provides no account functionality, customized information and functionality by stakeholder group and does not use an industry standard portal framework tool. Indiana would need to evaluate options to buy or build an industry standard portal tool that provides the integration framework for the shopping experience and ECM capabilities. 	IN.gov Y Y WFMS R Y
	Enterprise Content Management	<ul style="list-style-type: none"> IN.gov uses a custom built content creating and publishing component. This is not an industry standard solution and does not provide content management capabilities (e.g., content creation, workflows for approval and publishing). Indiana would need to evaluate options to buy or build an industry standard ECM and integrate into the portal framework. 	QualCheck R Y
	Shopping Experience	<ul style="list-style-type: none"> IN.gov provides some transaction capabilities, for example, car registration renewal, however no shopping experience capability exists to provide a commercial insurance shopping experience and online payment for purchasing insurance. Indiana would need to evaluate options to implement this capability. 	
2 Rules Engine	Rules separate from code	<ul style="list-style-type: none"> ICES eligibility rules are embedded in code, WFMS/FACTS business rules functionality is not currently used and is proprietary, QualCheck does not use an industry standard engine. Indiana would need to evaluate options to buy or build an industry standard rules engine that would support the new eligibility requirements (MAGI, tax credit). 	ICES Y Y WFMS R Y QualCheck Y Y

PPACA HIX Technology Assessment

	Technology Component	Required Capabilities	Assessment Summary	
3	Workflow Engine	Managing workflow across agencies and systems	<ul style="list-style-type: none"> Both WFMS/FACTS and ICES workflow engines are embedded within core application and no industry standard workflow management tools are used. Indiana would need to evaluate options to buy or build an industry standard workflow engine and integrate across Portal, CRM, and document generation and management. 	WFMS Y Y AIM R R
4	Reporting	Dashboard Reporting	<ul style="list-style-type: none"> The existing infrastructure in ICES/TANF data warehouse uses industry standard Cognos and Oracle solutions and could be leveraged for Exchange operations and financial reporting. 	ICES R Y
		Quality Reporting	<ul style="list-style-type: none"> No comprehensive plan reporting is collected but IHIE Quality Health First software provides selected plan quality data. Indiana would need to mandate plans to participate and make reports available through the Portal. 	AIM Y Y HIE Y Y
		Predicative Analytics	<ul style="list-style-type: none"> No asset reviewed included predicative analytics capabilities. Indiana would need to evaluate options to buy or build analytical capabilities to integrate with the COGNOS data warehouse for automated fraud detection and risk adjustment of premium. 	
5	Customer Relationship Management (CRM)	Call center	<ul style="list-style-type: none"> The customer service system used by WFMS, I3, could be leveraged to fulfill this requirement. 	WFMS Y G
		Integration with Portal	<ul style="list-style-type: none"> The customer service system used by WFMS, I3, could be leveraged to fulfill this requirement. I3 has “push to talk”, “chat” and “screen pop-up” capabilities. 	AIM Y Y

PPACA HIX Technology Assessment

Technology Component	Required Capabilities	Assessment Summary	
6 Calculator and Financial Management	Premium & Tax Credit Calculation	<ul style="list-style-type: none"> No asset reviewed provided premium and tax credit calculator capabilities. Indiana would need to evaluate options to buy or build this capability and integrate with the business rules engine. 	ICES Y R
	Accounting (Individual Accounts)	<ul style="list-style-type: none"> No existing functionality for premium accounting. Indiana should consider purchasing industry standard solution for financial accounting. Indiana would need to evaluate options to buy or build, or use capabilities with other agencies (such as State Auditor which is responsible for the state accounting system) to manage accounting functions for Individuals. 	
	Accounting (Exchange Operations)	<ul style="list-style-type: none"> No existing functionality for financial accounting to support operations. Indiana should consider purchasing industry standard solution for financial accounting. Indiana would need to evaluate options to buy or build, or use capabilities with other agencies (such as State Auditor which is responsible for the state accounting system) for transparent reporting of Exchange operations. 	
7 Document Generation	Multi-channel Output (print, email, fax, text to voice, text messaging)	<ul style="list-style-type: none"> WFMS/FACTS, ICES, AIM have document generation capabilities embedded within program code and no system evaluated provided multi-channel capabilities and allow for customization of documents. Indiana would need to evaluate options to buy or build industry standard document generation capabilities. 	WFMS Y Y AIM Y R ICES Y R
8 Document Management	Scanning and Optical Character Recognition	<ul style="list-style-type: none"> AIM uses document management for claims only and WFMS/FACTS uses industry standard Captiva that could be leveraged to meet document management capabilities. 	WFMS Y G AIM Y Y
9 Data Exchange	Enterprise Service Bus (ESB)	<ul style="list-style-type: none"> ICES currently uses Websphere MQ which is an industry standard. Since ICES is the system of record, this ESB could be leveraged for data exchange. 	ICES Y G AIM Y R

Implications for Current Systems

The assessment indicated that some current systems have functionality to meet HIX requirements however to varying degrees. The tables below identify by Indiana asset a summary of the assets capabilities to support the HIX.

Asset	Current Functionality	Capability to Support HIX
ICES	ICES performs eligibility determination for Medicaid, TANF, and Food Stamp programs. The system is developed using COBOL and IMS and runs on Z/OS operating system. ICES eligibility rules are embedded in the code. ICES is a system of record with interfaces with State and Federal agencies to receive and verify client demographic, income, and asset information.	<p>ICES is a robust system but the technology platform is aging and IN is in the process of assessing its options for modernizing or replacing the system. As eligibility determination functionality is core to the HIX, IN must now review its options for the future of ICES in light of the additional functionality required to support the HIX.</p> <p>ICES provides most functional alignment for Medicaid rules and could continue to be used in this manner for existing rules. However, new business and eligibility rules defined by PPACA should be captured in a separate rules engine as required by OCIO. Ultimately, IN will need to simplify the eligibility process across Medicaid and other related programs and develop new rules for tax credits, requiring “redesign” and “modernization” of the system. There is an opportunity for enhanced federal funding to support this effort which IN should explore.</p> <p>ICES currently provides both functional and technical alignment for data exchange with Federal and other State agencies in real-time and in batch, and meets the technology requirements for data security and data privacy which may be utilized in developing the HIX. The system also provides the technology capabilities required for HIX reporting, using Cognos and Oracle.</p>
WFMS	WFMS is built on Java Enterprise Edition utilizing a vendor (Curam) framework and performs the workflow management and online application for Medicaid, TANF, and Food Stamp programs. It also provides document imaging and call center functionality to hybrid and modernized counties.	WFMS uses industry standard solutions for CRM (I3) and Document Management (Captiva) that could be used to support HIX operations. The system uses new technology, though the somewhat proprietary nature of the rules engine and workflow components require specialized training.

Implications for Current Systems

Asset	Current Functionality	Capability to Support HIX
QualCheck	QualCheck is built on Java Enterprise Edition technology and uses a custom rules engine to anonymously perform screening.	QualCheck could be scaled to provide the functionality required for Exchange eligibility determination but the proprietary rules engine may make changes more complex.
AIM	The core AIM system is built on legacy client server (PowerBuilder) technology. The current system serves as the claims processing system for Medicaid and other state health care programs.	Indiana could continue using AIM, and any successor system, for Medicaid managed care plan enrollment and build additional functionality to integrate with plans for the commercial (subsidized, unsubsidized, and employer provided) side of the Exchange.
IN.gov	IN.gov is built using html and java servlets and runs on a web server. It also has a custom enterprise content management solution that allows different agencies to update their static information.	IN.gov lacks the portal framework, standard enterprise content management software, commercial shopping experience, and plan enrollment and premium payment functionality. In addition, the Exchange portal needs to be integrated with other functions such as CRM to provide an integrated customer experience to the Exchange users.
HIE	IHIE, one of the five Indiana Health Information Organizations has built extensive report data using both clinical and claims data. Quality Health First solution provides plan quality reporting functionality.	IN could utilize the information provided by IHIE by either purchasing the data and integrating with its reporting solution using data integration or by providing standard reports that can be made available using the Exchange portal.
SERFF	Built on new technology (Java Enterprise Edition and Oracle database) and hosted by NAIC. The system is managed by DOI in a contract with NAIC and its vendor.	SERFF can continue to be used for plan management functionality to manage plan applications and rate changes but needs to integrate with the Exchange portal to publish plan information.
SIRCON	SIRCON is built on new technology (Java Enterprise Edition and Oracle database) and hosted by NAIC. The system is managed by DOI in a contract with NAIC and its vendor.	SIRCON may continue to be used as a mechanism for consumer complaints against insurance carriers and brokers. It could be integrated with an enterprise data warehouse and reporting solution.

Conclusions & Next Steps

This Exchange IT Assessment report presents an assessment of the technology functions required to support a State health insurance Exchange (both AHBE and SHOP) and the current Indiana technology assets in place. It provides the State of Indiana with an assessment of the key “gaps” it will need to address between its current technology architecture and the business functionality of the Exchanges required by PPACA.

Several of the technology assets reviewed during our assessment have the potential to support an Exchange to a certain degree. However in order to implement the 9 core technology components Indiana will need to extend/leverage existing infrastructure or perform an options analysis to determine whether to buy an industry standard software, custom build the capabilities, use Software as a Service (SaaS) or outsource the business process.

ICES and AIM have some of the required functionality to support the Exchange, however, these systems are built with aging technology. These legacy applications, ICES and AIM, will require modernization or replacement to support State health programs through open business rules and architecture. These planning, design, and implementation efforts present an opportunity to modernize or replace these systems and develop the new functionality required by the HIX while supported by enhanced Federal funding. This project brought together State leadership from many different parts of the organization to develop a common understanding of the requirements for an HIX and developing an appreciation of the capabilities of the technology assets in place in the State today and their ability to support the requirements of the Exchange in the future.

Moving forward, Indiana will need to develop a high-level design for its HIX business operating model to define how the requirements of PPACA will be implemented. It is important that these design decisions are coordinated with Indiana Office of Technology for standards and maintenance consideration. This will include making a number of policy and design decisions that will shape the detailed requirements of the technology capabilities and architecture necessary to support the Exchange.