PROJECT NARRATIVE

The University of Massachusetts Medical School (UMMS) is pleased to submit this application for the Commonwealth of Massachusetts in response to the Cooperative Agreement to Support Innovative Exchange Information Technology Systems (CFDA: 93.525; FON: IE-HBE-11-00) in collaboration with its partner entities and the New England states.

The overall goal of the *New England States Collaborative Insurance Exchange Systems* (NESCIES) project is to create Health Insurance Exchange (HIX) Information Technology components that are consumer-focused, cost-effective, reusable, and sustainable that can be leveraged by the New England states to operate Health Insurance Exchanges (HIX). The NESCIES project approach will be to create a flexible HIX Information Technology framework in Massachusetts designed to connect consumers, small businesses, and health plans that can be tailored to the needs of the New England states and beyond. Achieving this goal will require the creation of solutions that are component-based, adaptable, and based on national standards.

As described in the narrative and related appendices that follow, Massachusetts and the New England states have made substantial progress in assessing and analyzing information technology (IT) gaps for establishing HIX solutions, have demonstrated an advanced state of readiness, and possess the technical expertise to deliver standards based, system components on an accelerated development cycle in cooperation with the Office of Consumer Information and Insurance Oversight (OCIIO). NESCIES is collectively prepared to share all IT solutions developed under this cooperative agreement amongst the New England states as well as with other states nationally, and is committed to building systems that are "cost effective, consumer oriented, and account for the interests of employers, especially small businesses".

A. Commitment

Statutory Authority: All of the New England states – Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont – have indicated their support and commitment to the process of exploring, designing, and implementing information technology system components that can be used as part of the overall envisioned HIX Information Technology infrastructure. The participation of all New England states serves to demonstrate our region's commitment to the HIX IT system initiative and to the implementation of the Affordable Care Act (ACA).

The New England states have all passed or are planning for the passage of relevant state statutory and/or regulatory changes required to implement health care reform. In Massachusetts, the role of the Health Connector (the Massachusetts Exchange) and the operation of its programs are already well defined within current state statute and regulations promulgated upon the implementation of Chapter 58 in 2006[1]. Massachusetts has the regulations and an operating insurance exchange in place. This will allow rapid implementation of the IT enhancements developed under this project. For participating states that have yet to pass legislation, the project will take into account federal law and regulations as available and make mid-course adjustments as state authority progresses. Letters from the sitting governors and state Medicaid Directors of all New England states are included in this submission as further testament to our regional commitment. (See *Appendix 1: Letters of Commitment from Massachusetts Governor, Medicaid Program Director, and Massachusetts Health Connector Insurance Exchange Executive*

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[1] Massachusetts health care insurance reform law was enacted as Chapter 58 of the Acts of 2006 of the Massachusetts General Court.

Director and *Appendix 7: Letters of Commitment from other New England Governors and State Medicaid Directors.*)

Stakeholders: The stakeholders responsible for implementation of HIX in Massachusetts include the Massachusetts Health Connector and Massachusetts Medicaid Agency (MassHealth), in collaboration with UMMS. Massachusetts has an established track record of collaboration between the state Medicaid program (MassHealth) and the Massachusetts Health Connector in program design, development, and implementation since the enactment of the Massachusetts health care reforms in 2006. These include the use of the Medicaid eligibility system (MA-21) to determine eligibility for health reform programs and the use of a common Medicaid and Commonwealth Care (subsidized health insurance) application for enrollment. Planning efforts are underway to ensure compliance with the ACA. ***Massachusetts will use funds received under this initiative specifically to develop innovative and reusable system IT components that can be adopted and used by other states as part of their technology solutions for the implementation of their HIX.*** Additional stakeholders in Massachusetts will include: the Massachusetts Health Connector Board; members of the public from a variety of political, cultural, and socioeconomic perspectives; individuals covered by both public and private health insurance programs; state legislators; small and large employers; nonprofit organizations; insurance companies, including those already on the Massachusetts Exchange; community-based organizations; health care providers; and stakeholders involved in public health.

In addition to working directly with Massachusetts to develop the IT system components under this initiative, UMMS will work closely with the New England States Consortium Systems Organization (NESCSO), a non-profit corporation organized by the six New England Health and Human Services agencies, to foster communication and collaboration among states. Under NESCSO, the New England states already have a history of working collaboratively which will allow for open communication and rapid knowledge and technology transfer amongst states. Overall project priorities and shared development activities will be informed by an Interstate Steering Committee convened by NESCSO and made up of representatives of the collaborating states.

UMMS, NESCSO, and the participating states – Massachusetts, Connecticut, Maine, New Hampshire, Rhode Island, and Vermont – affirm our commitment to establishing statewide Insurance Exchange capabilities that meet the diverse needs of our consumers, including individuals and small businesses. New England participants in this project – including those staff members in state Medicaid agencies, Information Technology, Departments of Insurance, Administration, Finance, Operations, and other agencies involved in HIX planning – recognize the importance of this opportunity to coordinate and leverage available federal funds to meet the forthcoming federal standards associated with the ACA while meeting the needs of New England citizens, consumers, and small businesses.

Although each New England state may be at a different point along the readiness spectrum, each is poised to utilize funding through OCIIO planning and establishment grants[2] to ascertain how best to meet those standards and needs, and to develop those innovations that will propel its efforts forward. ***The goal of this collaboration is to coordinate efforts and learn from the***

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[2] Massachusetts, Connecticut, Maine, New Hampshire, Rhode Island and Vermont all applied for and received State Planning and Establishment Grants for the Affordable Care Act's Exchanges from the Office of Consumer Information and Insurance Oversight (Funding Opportunity Number: IE-HBE-10-001).

Massachusetts HIX implementation, gaining efficiencies, and accelerating HIX development for each of the states. Participation in this effort will allow each state to leverage common components developed in Massachusetts, while focusing its planning grants on state-specific requirements (e.g., HIX governance, legislation and other concerns). Each state's HIX efforts will be linked with its state Medicaid agencies in the design, development, and implementation of its HIX systems.

It should be emphasized that this project ***is not proposing to create one regional Insurance Exchange solution***. Rather, it is proposing to align Massachusetts's HIX efforts to plan, design, develop and implement core components with the collaborative needs of the other New England states and beyond. Thus as Massachusetts develops innovative HIX components to be compliant with requirements for 2014 and beyond, this collaborative will identify opportunities for working together on specific components that can best be shared and implemented more broadly. This could include future joint procurement or the sharing of currently developed HIX components. At a minimum, cost savings and reduction of development/ implementation timelines will be achieved through a shared design approach, a reduced learning curve, and economies of scale. Participating states will have the opportunity to learn, share, or procure jointly developed HIX components. Most importantly, each state reserves the right to choose and implement the technologies that fit its own specific state needs and will tailor its future implementation grant submissions as appropriate.

As documented in the letters of support, the stakeholders for NESCIES vary by state, and consist of representatives from Health and Human Services agencies, Medicaid/MMIS, Departments of Insurance, Health Policy and Finance, Health Insurance Commissioners, Governors and Lieutenant Governors offices, legislative bodies, and any existing Exchange (or Exchange-like) authorities. Through NESCSO, each participating state has already identified and appointed key technical and non-technical leads for staffing the NESCIES Interstate Steering Committee. (See *Appendix 2* for a listing of the *NESCIES State Business and Technical Leads*.)

B. Opportunities to Share, Leverage, and Re-use Exchange IT Systems Components

Massachusetts will serve as the lead state for the NESCIES project. Connecticut, Maine, New Hampshire, Rhode Island, and Vermont will be active project participants and serve on the Interstate Steering Committee and technical work groups. UMMS will manage the cooperative agreement on behalf of Massachusetts and will work closely with NESCSO, a non-profit corporation organized by the six New England Health and Human services agencies, to foster communication and collaboration. This structure will create an environment conducive to sharing, leveraging, and adopting HIX system components.

Letters have been provided (see *Appendices 1* and *7*) from the following states expressing both commitment to participate in NESCIES and interest in using HIX components that are jointly developed:

- **Connecticut** – Governor M. Jodi Rell; Medical Care Administration Director Mark Schaefer, Ph.D.
- **Maine** – Governor John E. Baldacci; Medicaid Director Anthony Marple
- **Massachusetts** – Governor Deval Patrick; Medicaid Director Terry Dougherty; Executive Director Massachusetts Health Connector Glen Shor
- **New Hampshire** – Governor John H. Lynch; Medicaid Director Kathleen Dunn
- **Rhode Island** – Governor Donald L. Carcieri; Medicaid Director Elena Nicolella

- **Vermont** – Governor Jim Douglas; Vermont Health Access Commissioner Susan Besio

In addition to providing support for this application, all of the New England states have committed to coordinating their state efforts for developing state-based exchanges with IT solutions that will be developed through the NESCIES project. All of the states have identified Business and Technical Architecture leads who will participate in the NESCIES Interstate Steering Committee and technical component work groups, as well as participate in the learning collaborative to facilitate and accelerate interstate technical assistance. It is our intent that the technology components developed in Massachusetts under this proposed cooperative agreement will be broadly applicable, reusable, and sustainable for states within and outside of the region. As described in Sections C and D below, all HIX system components will be developed in accordance with federal guidelines and will adhere to recognized SDLC frameworks, creating both reusable Web Services Architecture and Service Oriented Architecture components and ensuring Office of the National Coordinator (ONC) and National Institute of Standards and Technology (NIST) compliance. It is anticipated that the majority of core functions will be reusable and meet the needs of most states' stakeholders.

Through the learning collaborative convened by NESCSO, a forum will be provided to share information, best practices, and progress related to the development of the HIX components. Technology component work groups will inform the Interstate Steering Committee and OCIIO on progress and make the underlying architecture and developed HIX components in Massachusetts readily available to participating states. Through OCIIO, information will be shared with other states nationally as they prepare to implement their own Exchanges.

It is expected that joint planning efforts, use of proven methodologies, collective technology development or procurement, and shared lessons learned will result in time savings, lowered risk, and increased sharing and reuse.

C. Readiness to Establish an Exchange IT System Based on Readiness Assessment

Overall, Massachusetts and the collaborating states are at an advanced state of readiness to start the early phases of systems development. It is understood that this will be a cooperative process with OCIIO and we propose budgets that are appropriate and cost effective in support of planned deliverables. Technology components and solutions produced through this cooperative agreement will adhere to all federal requirements, including standards currently outlined by ONC as well as state data interoperability standards and insurance regulations.

Technology leadership is already in place in Massachusetts to assure that the HIX components developed through this project will move quickly. Manu Tandon, CIO, Massachusetts Executive Office of Health and Human Services; Erin Ferrari, Director, Eligibility System; Steve Gross, Director, MMIS Integration; and Scott Devonshire, CIO, Health Connector, are on board and are currently planning a coordinated update and expansion of the state's Exchange Information Technology. In addition, the larger New England group of stakeholders have already met and completed their own initial Exchange readiness assessments. The NESCIES Interstate Steering Committee will meet in January to discuss how to coordinate the development of IT components under this project with their state planning efforts to accelerate implementation in each state.

C.1. Technical Architecture

Current Legacy Systems ("as is")

Massachusetts has numerous software and hardware systems that support present HIX activities.

(See *Appendix 3: Massachusetts Legacy Hardware and Software Systems.*) Systems most relevant to HIX in Massachusetts include the following:

- The Massachusetts Executive Office of Health and Human Services (EOHHS) uses the **Virtual Gateway**, a central, Web-based platform for all online systems used by Massachusetts EOHHS departments, community providers, and service recipients. Rather than invest in separate, redundant infrastructure across departments, EOHHS built a single technology and security platform with central quality assurance, release management, and customer service/business support teams which support all applications. Since 2005, the number of accounts for Virtual Gateway services has increased to nearly 450,000. There are more than 30 separate systems (including Medicaid and Eligibility) hosted on the Virtual Gateway today. Backing the Virtual Gateway, the EOHHS Access and Identity Management Service (AIMS) provides an end-to-end access and identity management solution that facilitates workforce, member, provider, and public user access to EOHHS services, agency applications, and confidential data, while ensuring that user access is consistent with policy and regulatory requirements. The Virtual Gateway exemplifies the "no wrong door" philosophy that is prominent in Exchange design requirements.

- EOHHS's **XML Gateway** is a gateway for SOAP/XML-based Web service communication. It is used for communication between EOHHS applications and also for business partners to exchange data with individual EOHHS agencies. The Gateway is responsible for standard XML operations like Schema Validation, Message Transformation, and WS-Security. It is also integrated with the AIMS security system for real-time Web Service authentication and authorization.

- The EOHHS **Enterprise Reporting System** (aka Data Warehouse) is a centralized system for analytics and reporting. The system supports standard pre-formatted reports, ad-hoc reports, and OLAP reports. The system supports portal-based access through single sign-on on the Virtual Gateway to privileged users. It also provides a Web service for the applications to generate viewable reports online.

- The EOHHS **Enterprise Document Management (EDM)** system has capabilities to transform paper, fax, and electronic forms and documents into indexed electronic renderings. These electronic documents can be stored, retrieved, and routed to recipients. The contents and state of the documents can be sent to other systems or provided to other systems on request.

- The **HIPAA Gateway** is hosted on Enterprise and HHS XML Gateway servers and is used for external providers to submit HIPAA X12 transactions. The backend for this service is a 'C'-based SOAP engine; it uses Sybase EDI product for translation and compliance check.

- Massachusetts has a new state-of-the-art **MMIS system** that offers a large portfolio of real-time services and handles millions of transactions rendered in sub second performance. Built on service-oriented architecture, the system recently went live and has workflow, imaging, translation, Web services, loosely coupled interfacing, and analytics support.

- Massachusetts EOHHS has a **My Account Page (MAP) service** launched on the EOHHS

Virtual Gateway that provides MassHealth (Massachusetts Medicaid) workers, call center staff, and healthcare providers with a single online consolidated view of a member's current MassHealth and Commonwealth Care eligibility information. The implementation on MAP addressed an opportunity to expand access to member information while reducing the volume of phone calls received by MassHealth and the Customer Support team. In subsequent releases, additional modules were added to allow for online eligibility renewals and automated changing of account information. These enhancements were essential to enabling MassHealth to support the large increases in workload resulting from Massachusetts' Healthcare Reform implementation. In December 2008, a new customer-centric service channel was implemented by integrating MAP with MassHealth's telephone interactive voice response (IVR) system, enabling customer access to benefit information via the telephone. In early 2010, access to these online tools was made available directly to MassHealth and Commonwealth Care members. MAP has approximately 7,000 registered provider users and 19,000 registered member users who submit over 300,000 requests for data on average per month and over 2,200 account information changes per month.

- The Massachusetts EOHHS **All Payer Claims Database (APCD)** contains medical, pharmacy, and dental claims, along with carrier membership, service providers, and products for the state's residents. The database covers private, self-insured, and public payer information from 2007 to present. The APCD is used to meet the needs of agencies, researchers, and interested parties. Since 2008, the system has been collecting private payer information from 30 carriers, and will expand to over 75 carriers by 2011.

- The **MA-21** system is used for eligibility determination for Medicaid programs. MA-21 is the primary eligibility system for MassHealth, Commonwealth Care, and the Health SafetyNet. This MA-21 application is hosted on the mainframe at Massachusetts Information Technology Center managed by the Information Technology Division (ITD). The application was written and continues to be maintained with Natural, ADABAS code. There are many system interfaces with MA-21. Examples of this are the NewMMIS, Virtual Gateway, and the Social Security Administration.

  MA-21 is the eligibility system used to capture MassHealth member data as received on the MassHealth Benefit application form, requests for updated information forms, and eligibility related data from unstructured sources such as pay stubs, birth records, and other documents supplied by applicants and members. There are portions of eligibility determination taking place outside of MA-21 and being "passed through" MA-21 to MMIS. This is known as "referred eligibility" which could be defined as the portion of the MassHealth member caseload that originates from sister state agencies. These cases are created, managed, and owned by the respective agencies and are imported into MA-21.

- **Massachusetts Health Connector Authority System:** (www.mahealthconnector.org/)

  o The **Commonwealth Care Online Shopping Application** (subsidized insurance) enables adults that have income below 300% of the Federal Poverty Level (FPL) and meet certain eligibility requirements to shop amongst five different managed care organization (MCO) health plans. Commonwealth Care eligibility is determined by MA-21.

  o The **Commonwealth Choice Online Shopping Application** (unsubsidized

insurance) helps individuals and families and young adults to shop for non-group based health plans. The application, built using J2EE standards, and supported by an enterprise-wide portal platform, corresponds with health plans for rate requests and allows users to perform side-by-side comparison of health plans before users can purchase health insurance. The enrollment part of application enables a user to enroll in a chosen health plan. The application exposes an iFrame interface to the user, thereby establishing a direct window with the backend service center at the Small Business Service Bureau.

- o **Interfaces**: In Massachusetts, the Health Connector uses SOA to implement messaging with its trading partners. The Web service communication uses standard XML/SOAP messaging. The XML messages conform to standard w3c protocol, while the metadata is customized to suit the needs of Health Connector applications.

- o The **Commonwealth Care Enrollment Application** supports member selection and enrollment in to a subsidized managed care health plan.

- o The **Commonwealth Choice Enrollment Application** supports member selection and enrollment in to a Health Connector-based health plan.

Other participating New England states will be asked to inventory their software and hardware systems for participation in the NESCIES efforts and in line with their receipt of planning grants from OCIIO. An opportunity to share technology and experiences across New England is at the core of the NESCIES project.

Expectation for the Exchange Environment

An initial priority of this project will be to leverage the "as is" capabilities of the Massachusetts Health Connector, and (by following the requirements of the Key Principles of Exchange IT Capabilities) engage other members of NESCIES in completing a Readiness Assessment for the projected "to be" version of the business and technology infrastructure solutions. The "to be" vision of the technology infrastructure will include a common set of components, processes, and capabilities that support the services of the Exchange. Each state in the Collaborative will then be able to utilize this model and create, adapt, or modify individual components as appropriate.

To minimize risk, lower cost, and improve "speed to value", the high degree of readiness demonstrated in the Massachusetts Health Connector and the Massachusetts Virtual Gateway (an Exchange-like one-stop Web portal business service for a wide variety of Health and Human Services, including MassHealth, the Massachusetts' Medicaid product), along with the proven capabilities, experience, knowledge, and core capabilities to create HIX Information Technology components will be leveraged by the other New England states.

The initial assessment has identified components of the existing Commonwealth of Massachusetts EOHHS and Massachusetts Health Connector Information Technology System that might be utilized for the new environment; components that will need to be enhanced, and components which must be redesigned or built from the ground up (design through implementation) in order to meet or exceed the functionality expected of state-based Insurance Exchanges in 2014. Components developed for the Massachusetts Health Connector will be designed in a way that maximizes interoperability, extensibility, and expandability in each state (or shared as appropriate between states) by leveraging industry standards and input from

technical experts in each of the New England states.

NESCIES conducted a review of the core technology and business capabilities to meet 2014 expectations for state-based Insurance Exchanges. As part of the process, the team worked closely with the Massachusetts Health Connector and EOHHS technology leaders to identify the core delivery services and existing technologies, as well as identify new technologies, including delivery and messaging services required to meet the goals of the ACA.

The expanded list of HIX Information Technology components (*as shown in Appendix 4: NESCIES State Readiness Levels by Exchange Service Component*) was distributed and reviewed by each participating New England state. Each state responded with its level of development ("readiness") for each model and its ability to "reuse" or adapt the defined core services, structures, and technologies. The result of this process is a view of how the Exchange IT system is expected to vary from the "as-is" environment.

Specifically, the review of interstate readiness included the following steps:

1) Reviewed existing ("as is") core components from the existing Massachusetts Health Connector and Massachusetts EOHHS.

2) Expanded the ("as is") Massachusetts Health Connector components to address the requirements of the ACA. Additional capabilities, services, and technologies were identified and added to the existing Health Connector to form the new NESCIES Exchange Services Components (see *Figure 1*).

3) Collectively discussed, developed, and distributed the readiness assessment to each state participating in this project. Each state has reviewed and rated (from low to high) its "as is" capacity for each component (see *Appendix 4*). A rank of high indicates a component is already in production and may need only modest enhancement for use in the Exchange IT system. A rank of medium indicates a state has parts of the components in production but perhaps in a different context, or it may need reconciliation, integration, and/or enhancement for use in the Exchange IT system. A rank of low indicates a state component is not yet beyond the initial design stage and will likely be a new component of the Exchange IT system.

4) Assessed the interest of each NESCIES state member to "reuse" the defined components and services. Each state ranked its interest in reuse of the core components (from low to high) based on individual state policy, laws, and technological capabilities (see *HIX Components for Collaboration,* described below). High priority components provide a good opportunity for collaboration with minimal state-specific requirements, while those components rated low require state-specific implementations and/or modifications.

The result of this initial assessment provides a view of how the Exchange IT system will differ from the current environment. This assessment identified potential reusable components in each New England state and components that must be built or leveraged from other states. More detailed state analyses are underway as part of the individual State Exchange Research and Planning grants, which will be the basis for making decisions and for foci for the interstate technology work groups under the NESCIES project. To this base, each state can leverage the components that are developed in Massachusetts under this agreement as it moves towards implementation of its statewide HIX to meet state-specific needs and be tailored to improve its unique consumer experience.

Figure 1, below, illustrates the working vision and "core" services and components of the Exchange Information System. It is anticipated that each state will be able to leverage core components and capabilities from the NESCIES HIX framework, while accommodating its individual state needs. Services to support the HIX infrastructure of the future would include:

- **Exchange (Service Delivery):** The Exchange Service Delivery components are the main functions supported by the HIX framework. The services will be delivered through SOA-based components within a centralized Web page, supporting flexible, user-friendly capabilities and real-time interfaces with commercial and public systems, and offering a customer-mediated workflow to render a retail "shopping" experience. The Web portal will be accessible by all stakeholders, including HIX administrators, consumers, small businesses and Qualified Health Plans. Specific components include: user interfacing portal for "One Stop Shopping"; customer service; oversight functions; consumer mediated workflow support services; premium billing systems; banking services; and business-driven rule engine services.

- **Core Technologies:** The core components and capabilities of the HIX infrastructure to support Exchange Services will be contained in this layer. This includes: XML Gateway service; data center/connectivity/ security infrastructure services; reporting and analytics services; development methodology standardization and Web services architecture; identity, security and audit software plug-ins; HIPAA Gateway and translation service; loosely coupled interface architecture service; and software reference models and reusability support services.

- **Enhanced Technologies**: Enhanced technologies are those technology components that will be used to advance the existing Massachusetts Health Connector product to support the goals and requirements of the ACA. This includes: An HL7 Gateway and translation services; mobile-enhanced user interface support services; record locator service; directory and routing services; electronic document management services; and data repository and dictionary services.

- **State Systems**: One of the key challenges for this project will be the building of a flexible framework that can support the need for state-by-state customization for specific modules, rules, and business services. The initial assessment process will include the ability to create the understanding of state level maturity, capabilities, and readiness across the Collaborative. Developing a flexible framework with a robust messaging service level that supports this spectrum of needs will be one of the keys to success for the HIX framework. Potential state systems to be interfaced include: eligibility, enrollment, premium tax credits administration, and cost-sharing assistance administration.

- **Federal Systems:** The federal government will establish a set of interfaces that support states' Exchange and eligibility determination. These interfaces will be invoked by states or consortia of states in real-time financial evaluations and eligibility determinations. These systems potentially include: vital events, income verification, tax verification, public assistance, postal address verification, etc.

- **Commercial Insurance Systems:** Exchanges will need to link with commercial insurers in their state. The Massachusetts Health Connector exchanges real-time data with its business partner and at least one insurance carrier for the generation of rates.

Figure 1:

New England States Collaborative Insurance Exchange Systems (NESCIES)
Component Framework
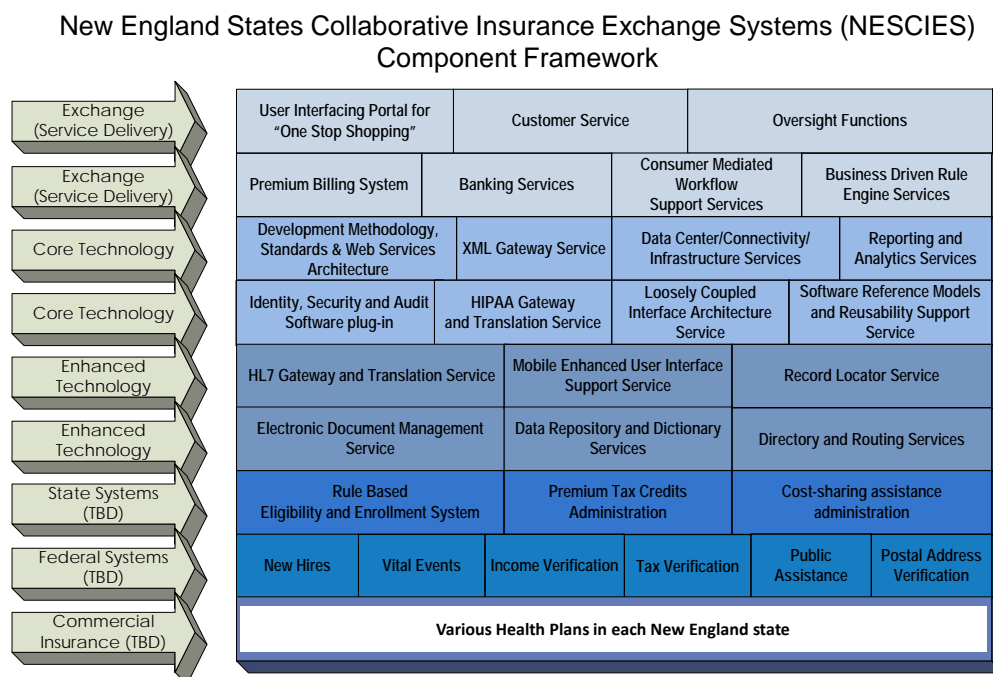
The expectation of the Massachusetts Health Connector is to integrate and leverage business and IT requirements across Medicaid and other Health Insurance Exchanges as appropriate. Identifying key common elements among initiatives and appropriately allocating federal funding for each is expected to result in cost savings and improved efficiency.

The Health Connector will employ IT system architectures which support the Health Insurance Exchanges and Medicaid and CHIP provisions contained in the ACA. Systems developed or enhanced to support functions of the Exchange will adhere to the following architectural principles when possible:

- Employ Web Services Architecture/Service-Oriented Architecture methodologies for system design and development to ensure standards-based interfaces to link partners and information at both federal and state levels.
- Employ common authoritative data sources and data exchange services, such as federal and state agencies or other commercial entities.
- Employ open architecture standards (non-proprietary) for ease of information exchanges.
- Use Service-Oriented Architecture concepts for developing the architecture.
- Use NIEM, NIST, HL7 and other standards for information modeling and exchange wherever possible.
- Use standards-based business rules and a technology-neutral business rules repository.
- Enable the business rules to be accessible and adaptable by other states.
- Use a standard technology-neutral Business Rule Management System (BRMS) for managing the business rules.
- Build in Performance Measurement and Reporting to collect system performance measures on a regular basis to ensure quality, integrity, accuracy, and usefulness of functionality and information.
- Provide the capability to easily add measures to the collection process.

- Provide reporting of measures in both real-time and as reports (event and time-driven).
- Ensure systems are highly available and respond in a timely manner to customer requests.
- Offer configurable system performance parameters, including:
  - Use of performance measurement to adjust system parameters (i.e., priorities).
  - Redundant capabilities (e.g., portal, phone lines, hardware).
  - Load Balancing.

HIX Components for Collaboration

Based on the initial self-assessment performed by the New England states, these components have high likeliness for sharing across New England, including the following:

Extremely likely (All states agree)

- HIPAA Gateway and Translation Service – Used to enhance HIPAA transactions for eligibility, enrollment, and status 270/271/834 interoperability between various public and private sources and platforms.

- Federal Systems – The federal government will be establishing a set of interfaces that support states' Exchange and eligibility determination. These interfaces will be invoked by states or consortia of states in real-time financial evaluations and eligibility determinations.

Highly likely (Five out of six states agree)

- Consumer Mediated Workflow Support Services – This is a support component to the Exchange portal. It supports a consumer-driven and mediated approach that allows the consumer to review and confirm auto-pulls from verification systems. For example, a real-time interface with the tax system could present the consumer with pre-populated data that the consumer would have the ability to confirm, thereby furthering the workflow.

- Development Methodology Standardization and Web Services Architecture – This is in support of the development of the vision and functional components; it is imperative that a standardized, methodology-based software development life cycle (SDLC) is used, including iterative and incremental development methodologies.

- Loosely Coupled Interface Architecture Service – While this is mostly a design principle, it is called out here as a key vision component to ease enablement of integration of otherwise heterogeneous systems, including the Exchange, state systems, federal systems, and commercial providers. This promotes generic interfaces definition with parameterized controls to avoid "hard wiring" of custom interfaces between systems.

- Directory and Routing Services – These are configurable locater services ranging from centralized 'yellow pages' to federated white pages of persons, departments, and machines to undiscoverable local directories.

- Data Repository and Dictionary Services – A software reference implementation that tracks what data is stored and where. Who is the system of record for what data? What are the retention rules? What are the data reuse policies? How is the same data element labeled in different systems? These services will include cross reference of

system-specific data elements to federal standards such as NIEM (National Information Exchange Model).

Likely (Four out of six states agree)

- Oversight Function – (Guidance for Exchange and Medicaid Information Technology (IT) Systems published in support of Affordable Care Act Section 1311.) Section 1311(c) requires the Secretary to develop regulatory standards in five areas that insurers must meet in order to be certified as qualified health plans by an Exchange: marketing, network adequacy, accreditation for performance measures, quality improvement and reporting, and uniform enrollment procedures.

- Premium Billing System – This is a support component to the Exchange portal. Support system for managing financial transaction with subscribers for commercial programs that uses standard-based, real-time interfaces with insurers and supports robust reporting. Component includes e-pay functionality and report writing. The PBS could be custom-coded or supplied by a third-party system.

- Reporting and Analytics Services – Performance measurement support by robust reporting and data analytics support.

- HL7 Gateway and Translation Service –To enhance HL7 interoperability between various sources and platforms.

- Record Locator Service – A software plug-in service that will input either an Identifier (like SSN) or use demographic information-based probabilistic matching routines to search for current enrollment/eligibility status of citizens.

Based on further meetings and recommendations from the Interstate Steering Committee, Massachusetts will identify and prioritize an initial set of HIX components to share across states. These agreed-upon HIX components will receive specific attention so the components developed in Massachusetts will be replicable or adaptable quickly and efficiently by other New England states. Any vendor hired to work on agreed-upon components for the Massachusetts Health Connector will be required to work with the appropriate NESCIES technical work group and to develop interoperable and shareable technology that could meet the needs of all participating states. The states will carefully assess each component developed through this collaboration to determine whether it makes sense to leverage the innovations designed by the collaborative, or to fund them separately through their state-specific Exchange implementation grants.

C.2. *Applicable Standards*

All system development projects supported through NESCIES funding for the Exchanges will comply to the fullest extent possible with standards in wide use within the U.S. health care system and with standards endorsed or adopted by the Secretary of Health and Human Services.

In implementing an Exchange, standards that will be considered and addressed include, but are not limited to, the following:

- 1561 Recommendations
- Health Insurance Portability and Accountability Act (HIPAA) transaction standards
- Standards for Accessibility
- Security and Privacy Standards

- Federal Information Processing Standards (FIPS)
- Transaction Standards from the Affordable Care Act (ACA)
- Council for Affordable Quality Healthcare Standards and Initiatives

1561 Recommendations

NESCIES is committed to working within Section 1561 recommendations to develop interoperable and secure standards and protocols that facilitate electronic enrollment of individuals into state and federal health and human services programs, including the allowance for use of common data between multiple users to facilitate the many aspects of enrollment. There are a variety of functions already performed by both MassHealth and the Massachusetts Health Connector that leverage existing IT standards to enable secure and highly available services. For example, the Health Connector utilizes standards-based XML messaging with trading partners to transmit real-time premium rating information to customers as they interact with the shopping portal.

The NESCIES project commits to using the National Information Exchange Model (NIEM) guidelines to support the exchange of data for IT systems developed under this project. It is understood that effective interoperability and electronic exchange of data requires a standard definition of core data elements. The project team has reviewed the proposed Enrollment Data Standards (Table 4, Appendix B, Patient Protection and Affordable Care Act, Section 1561 Recommendations) and finds that the proposed data standard offers a promising start. NESCIES will monitor future developments on the standard and, when appropriate, submit recommendations to HHS.

NESCIES component development will incorporate NIEM into all new data exchange processes, including exchange of data between the Exchange and Medicaid State Agency, between the Exchange and federal government agencies, and between the Exchange and insurance issuers. NIEM-standard data will be used for the eligibility and enrollment process, in addition to verification of eligibility data. The NESCIES project team will ensure that all data collection and storage will be designed to be compatible with NIEM-based standards.

The Exchange IT system(s) developed under this project will use HIPAA 270/7271 transactions to query applicants' coverage in private and public programs, including programs designated as 'minimum essential coverage' under the ACA, Medicare, Medicaid, CHIP, TRICARE, and the veteran's health care program. Also, the Exchange IT system will use HIPAA 834 transactions to enroll/disenroll persons from Exchange-qualified health plans, and when applicable, Medicaid.

Massachusetts has already implemented a Virtual Gateway system that will be expanded to support these new features. By re-use of existing web service components, the system will allow integration with public and private insurance options and will also allow integration with existing Medicaid (MMIS), SNAP, and TANF services. All service integration will be provided via secure sockets leveraging the existing XML Gateway and will utilize WS-Security as currently implemented in other HIPAA transactions.

HIPAA Transaction Standards

To improve the efficiency and effectiveness of the health care system, HIPAA included administrative simplification provisions that required HHS to adopt national standards for electronic health care transactions and code sets, unique employee and provider identifiers, and protection of security and privacy. MassHealth currently utilizes a HIPAA translator that enables

secure transmissions of HIPAA-protected data between MassHealth and various providers. Any efforts undertaken by NESCIES in support of the ACA will comply with all relevant HIPAA standards, including protection of personal health information.

Currently, the Massachusetts MMIS system provides a SOAP service based Health Transaction Service (HTS) web service for providers to submit standard HIPAA EDI transactions directly or via a clearinghouse. The Health Transaction Services are built upon Service-Oriented Architecture using web services and a centralized security system for Access and Identity Management Services (AIMS). Both synchronous (real-time) and asynchronous (batch) transactions are supported for X12-compliant Eligibility Verification (270/271), Enrollment (834), Claims Status (276/277), and Claims Submission (835/837). We will expand upon the current HIPAA HTS implementation to allow translation between X12 and XML formats.

Standards for Accessibility

Enrollment and eligibility systems will be designed to meet the diverse needs of individuals by removing barriers without diminishing function or quality. The systems will include usability features or functions that accommodate the needs of persons with disabilities, including those who use assistive technology. All participating states are aware that enrollment and eligibility systems are subject to the program accessibility provisions of Section 504 of the Rehabilitation Act, which include an obligation to provide individuals with disabilities an equal and effective opportunity to benefit from or participate in a program, including those offered through electronic and information technology.

NESCIES is committed to ensuring all Web sites, interactive kiosks, and other information systems addressed by Section 508 standards are in compliance with Section 504 if such technologies meet those standards. All participating states will follow either the 508 guidelines or guidelines that provide greater accessibility to individuals with disabilities. The NESCIES states will also take reasonable steps to provide meaningful access by persons with limited English language proficiency.

For this initiative we will develop a User Interface (UI) Style Guide based on existing federal regulations for accessibility (Section 504 and 508), current industry standards (W3C Web Content Accessibility Guidelines), and state-specific accessibility and usability standards.

Massachusetts EOHHS currently has a User Interface (UI) Style Guide which covers Application Architecture Standards (UI), Accessibility Requirements (Section 508), User Interface Standards, Look and Feel Standards, Data Validation, and Online Help. MMIS online applications adhere to these standards and guidelines. Massachusetts has an accessibility lab and experience is quality assurance related to ADA. The recently upgraded Medicaid NewMMIS system meets and exceeds all accessibility requirements. We will build upon this experience for HIX component development.

Security and Privacy

NESCIES information systems containing individually identifiable information and/or protected health information (PHI) will implement adequate security to ensure the protection of sensitive data. The HIPAA Privacy and Security Rules specify privacy and security requirements that HIPAA-covered entities must follow. NESCIES participating states will also follow any state laws that impose additional restrictions on the sharing of sensitive health information.

The National Institute of Standards and Technology (NIST) has published guidance to Chief

Information Security Officers (CISO). While the NIST special publications on security are compulsory only at the federal level, they will serve NESCIES as useful guidelines to non-federal agency CISOs in the implementation of a security program aimed at the protection of both individually identifiable information and PHI. NESCIES participating state information systems containing tax return information will comply with the taxpayer privacy and safeguards requirements of Section 6103 of the Internal Revenue Code.

Collection Limitation: NESCIES recognizes the tradeoff between the collection of the minimum data required for eligibility determination and the desire to re-use the information for multiple eligibility determinations. There is the desire that eligibility for all health subsidy programs (Exchange-based subsidies, CHIP, and Medicaid) be streamlined. In some cases, the data necessary to determine eligibility for the full health subsidy system will be greater than the minimum required for any one program. NESCIES will work with stakeholders to determine the optimum balance for the tradeoff. NESCIES will develop a solution that ensures applicants are determined eligible for the most favorable coverage while ensuring program integrity.

Data Integrity and Quality: Accurate determination of eligibility and benefit amounts requires quality, accurate data. NESCIES will establish minimum thresholds for data matches to ensure integrity. Depending on circumstances, matching will be done using rules-based deterministic methods or, when possible, probabilistic methods.

Openness & Transparency: The Massachusetts Exchange IT system will provide the Privacy Notice to all applicants. The Privacy Notice will include the Exchange policy on access and use of data.

Federal Information Processing Standards

Under the Information Technology Management Reform Act (Public Law 104-106), there are standards and guidelines for federal computer systems that extend beyond security and privacy. They are issued by the National Institute of Standards and Technology as Federal Information Processing Standards (FIPS) for use government-wide and will be followed for this project.

NESCIES is committed to meeting the requirements of Recommendation 5.3 in Section 1561. All components developed as part of the IT system that include 'data-in-motion' will use valid encryption processes which comply, as appropriate, with the standards described in Recommendation 5.3 in Section 1561, including NITS SP 800-52, 800-77, or 800-113 or others as FIPS 140-2 validated.

All Exchange IT Eligibility systems will store date, time, user ID, client ID, and transaction type for all data collection transactions, including create, change, delete, and print commands. An audit log feature will be included in the eligibility system.

Massachusetts has experience in encryption technology implementation and audit components. Such functionality is in place currently with the Massachusetts hosted enterprise EOHHS applications and shall be leveraged for this effort.

Transaction Standards in the Affordable Care Act (ACA)

Section 1104 of the ACA requires HHS to adopt a single set of operating rules for each HIPAA transaction. Section 1561 of the ACA calls upon the Secretary (in consultation with the HIT Policy Committee and the HIT Standards Committee) to develop interoperable, secure standards and protocols for enrollment. Any additional standards, protocols, or approaches adopted by the

Secretary pursuant to these two sections of the ACA will be considered and integrated into the IT development life cycle undertaken by participating NESCIES states.

Council for Affordable Quality Healthcare (CAQH)

Through two initiatives – the Committee on Operating Rules for Information Exchange (CORE) and Universal Provider Datasource (UPD) – CAQH aims to reduce administrative burden for providers and health plans. These solutions are intended to promote quality interactions between plans, providers, and other stakeholders; reduce costs associated with health care administration; facilitate administrative health care information exchange; and encourage administrative and clinical data integration. CORE has created and promulgated a set of voluntary business rules focused on improving physician and hospital access to electronic patient insurance information at or before the time of care. NESCIES's states will also take reasonable steps to follow CAQH guidelines to simplify healthcare administration through this industry initiative.

C.3. Stakeholder Engagement

As outlined in each state's planning grant, each state has committed to engaging its unique stakeholders to gain valuable input on the design and implementation of its Exchanges:

- In **Massachusetts**, MassHealth (Medicaid State Agency) and the Massachusetts Health Connector have strong working relationships with consumer advocates, health plans, providers, sister agencies, employers, and other stakeholders interested in health care policy in Massachusetts. For example, MassHealth holds a monthly meeting with a robust and active group of consumer advocates where changes in MassHealth and Commonwealth Care policy and operations are discussed. The Health Connector also holds well publicized, open, and well-attended monthly board meetings. The state's collaboration with stakeholders has been critical to the success of Massachusetts' health care reform to date. EOHHS leads and the Health Connector actively participates in inter-agency meetings and work groups, intended to begin identifying issues that will arise due to the intersection of state law and the ACA, vet those issues with the appropriate stakeholders and coordinate implementation efforts. The Health Connector and MassHealth will continue to consult with a broad array of relevant stakeholders on Exchange-related issues. The outreach model employed to solicit input and disseminate information in 2006 and 2007, following implementation of the state's health reform law (described in Section C.7), provides Massachusetts a strong foundation on which to build.

- In **Connecticut**, Governor Rell issued an Executive Order that created a multi-stakeholder "Health Care Reform Advisory Board" charged with examining federal legislation and making recommendations that are relevant to the citizens of Connecticut. The Advisory Board was comprised of 13 members, representing medical professionals, health insurance, business, and the hospital industry, as well as the Comptroller's Office, the Office of Policy and Management, and the State Departments of Public Health, Social Services, and Insurance. During the planning phase, Connecticut will hold open dialogue meetings with key stakeholders including the insurance industry, physicians, hospitals, business, advocates, and consumers.

- In **Maine**, stakeholder engagement will be used to develop policy and processes that will be sustained through the governor transition to ensure that the new administration can revise policy and processes as warranted and implement the Exchange in a timely

fashion. The state is using its Health Reform Steering Committee, an Executive Branch group, and its Advisory Council on Health System Development (ACHSD), a legislatively established group that includes legislators and external stakeholders, to implement health care reform in a thoughtful and transparent manner. Maine will hold forums and focus groups with individuals, small employers, and brokers to solicit specific stakeholder input as the state begins to shape its Exchange.

- In **New Hampshire**, the commissioners of the New Hampshire Insurance Department and Department of Health and Human Services will coordinate on activities related to HIX. They will identify key stakeholders, including providers (e.g. Safety Net providers), carriers, consumers, employers/business associations, advocates, organized labor, insurance producers, policymakers/legislators, charitable organizations, and community-based organizations. The state will conduct public meetings and presentations; staff will travel throughout the state with a developed education and outreach program.

- In **Rhode Island**, the state will use a process whereby the new administration, health advocates, business leaders, key policy-makers, health care providers, consumers, and the legislature will decide together on the direction Rhode Island takes regarding implementation of an Exchange. To date, the Lieutenant Governor convened the Healthy Rhode Island National Health Reform Implementation Task Force in May 2010 to undertake an open and inclusive process for assessing state options under ACA. More than 150 people have participated in the task force. Members serve on one of seven issue-focused work groups to identify ACA-based opportunities and prepare proposals for statewide implementation, one of which has focused on Rhode Island's Health Insurance Exchange.

- In **Vermont**, the state is in the process of organizing a series of stakeholder meetings to gather information pertaining to different interest groups' goals for, and concerns about, an Exchange. These stakeholders include key legislators, health insurers, independent agents and brokers, "exempt" associations, the Health Care Ombudsman, health care provider trade organizations, large and small employers, the Public Oversight Commission, current Vermont Health Access Program (VHAP) and Catamount Health premium subsidy beneficiaries, current privately insured, and consumer advocacy organizations. In addition, Vermont is also interested in formally obtaining stakeholder input across perspectives through the use of a contractor and a defined analytical process for evaluating stakeholder feedback.

In addition, any consumer-facing products developed by NESCIES will obtain appropriate stakeholder input. A Consumer Advisory Committee will be created as an additional measure to ensure consumer and advocate involvement in the development and testing of consumer-facing technologies.

C.4. Governance

Each state will develop its own governance structure for its state level Exchange. Massachusetts is the only state currently with a fully operational Exchange.

The Massachusetts Health Connector is an independent state agency that helps Massachusetts residents find health insurance coverage and avoid tax penalties. It offers two types of insurance, Commonwealth Choice – an array of many name-brand health insurance options, all of which

carry the Connector's Seal of Approval – and Commonwealth Care, low or no-cost health insurance for people who qualify. The Health Connector Board approves all major policy, regulatory and programmatic decisions, and generally meets on a monthly basis in a public forum. As part of its current planning efforts, the Health Connector will evaluate Exchange governance requirements under ACA and identify ways in which the existing governance structure may need to be modified to comply with federal standards. Other New England states will be using their state planning grants to determine the best model of governance for their specific HIX needs.

C.5. *Planning and Resource Capabilities*

Massachusetts and our partner organizations have deep technology and project management experience needed to build and implement the HIX technology components for the NESCIES project. (For organization chart and key biographies, see *Appendix 5: NESCIES Key Personnel & Organizational Charts*.)

The University of Massachusetts Medical School (UMMS) is the designated applicant for the Commonwealth of Massachusetts in response to the Cooperative Agreement to Support Innovative Exchange Information Technology Systems opportunity and will have overall fiduciary, reporting, and project oversight responsibilities. **Jay Himmelstein MD, MPH**, will serve as the principal investigator and will be responsible for providing overall strategic direction and leadership for this cooperative agreement, working to ensure that all goals are achieved. Dr. Himmelstein will chair the NESCIES Executive Team and work closely with the Massachusetts EOHHS, the Massachusetts Connector Authority, and the Interstate Steering Committee. **Michael Tutty, MHA**, will serve as Project Director and will have broad oversight for day-to-day operations of the grant activities, including coordination of activities related to the implementation of the work plan and overseeing subcontracts and consultants. Mr. Tutty will be the primary point of contact for OCIIO for operational components of the cooperative agreement and will oversee reporting and review activities. He will be responsible for ensuring deliverables are met for major subcontracts.

Manu Tandon, MBA, MPA, Secretariat Chief Information Officer for Massachusetts Executive Office of Health and Human Services, will serve as Principal Technology Leader for NESCIES and be responsible for providing overall technical strategic direction and leadership for this project, working to ensure that all technology goals associated with it are achieved. Mr. Tandon will be the Massachusetts lead on technology-related workgroups and participate as a member of the Senior Management Team for NESCIES, working closely with UMMS and the Massachusetts Health Connector, as well as the Interstate Steering Committee. **Bob Nevins,** Chief Operating Officer for the Massachusetts Health Connector, will serve as Principal Functional Leader for NESCIES and will be responsible for providing overall functional strategic direction and leadership for this project, working to ensure that all functional goals are achieved. Mr. Nevins will be the Massachusetts lead on business-related workgroups and participate as a member of the Senior Management Team for NESCIES, in close collaboration with UMMS, EOHHS, and the Interstate Steering Committee. Both will work with executive sponsors Terry Dougherty, Massachusetts Medicaid Director, Glen Shor, Executive Director of the Massachusetts Health Connector, and Jay Himmelstein, Principal Investigator for NESCIES.

For the NESCIES project, governance will come from both an Interstate Steering Committee convened by NESCSO and comprised of representatives from the collaborating states and a day-

to-day Massachusetts project management team. The Interstate Steering Committee, with input from appropriate technical work groups, will provide guidance and recommendations to the Massachusetts development team on specific business needs of participating states and how best to ensure reusability and adaptability. The committee will track progress on these agreed-upon components for compatibility in their respective states. This information will be available to OCIIO to track the progress of the project.

Project Plan

The NESCIES project plan (see *Appendix 6: NESCIES High Level Draft Work Plan*) will follow the Systems Development Life Cycle (SDLC) framework and will track the milestones agreed upon with OCIIO. Our high level draft work plan also shows that Massachusetts management team will convene in January 2011 to initiate development of the RFP for a systems integrator. The Interstate Steering Committee will also meet in January to review and align the states' current planning grant activities with this initiative, to confirm states' interest in common components to leverage through this CA, and to establish initial priorities for technical work groups.

Upon notification of the grant award, the management team will be prepared to move quickly to procure the system integrator and coordinate deliverables and work plans with OCIIO staff. UMMS project managers will be assigned to support the Interstate Steering Committee and work groups. The IT Project Managers will establish a system and process for weekly dashboard reporting with the system integrator and all vendors in Massachusetts with defined scopes of work and deliverables. The SDLC framework will be used for product development with key milestones as developed in cooperation with OCIIO. At the end of the two year period, once all technical deliverables have been delivered to OCIIO, we will conduct a formal "project close out" and, if desired by the members, an ongoing work group will be established under NESCSO to continue to build on the collaboration in New England. Finally, a program evaluation will be conducted and final report generated for OCIIO.

Resource Plan

This project brings together a diverse skill set and resources from UMMS, NESCSO, Massachusetts EOHHS, the Massachusetts Health Connector Authority, and expertise from the participating New England states. The budget justification/narrative details the predicted annual budget for this effort and the associated full time equivalents (FTEs). This budget is based on the experience in Exchange development in Massachusetts and is believed to be reasonable and cost effective for the implementation of an Exchange in Massachusetts and sharing Exchange components with our New England state partners. For more information, please see the budget justification/narrative. With strict state procurement and project oversight, NESCIES is committed to reasonableness and cost effectiveness of the proposed project based on the complexity of the activities and the anticipated results.

The NESCIES project team is aware of the potential risks that could be incurred during the integration. This is particularly poignant for Massachusetts, which must operate its current Exchange, while it builds the components to comply with national health care reform in 2014.

C.6.   Collecting Data and Information

Massachusetts has experience in designing, developing, implementing, and operating several data collection (data warehouse) and information disseminating (analytics) systems. A few are

mentioned below. The HIX initiative shall leverage the experience and components Massachusetts has developed to implement improved HIX data and information collection reporting tools.

The Health Connector currently gathers data from a variety of sources and manipulates the data using SAS programming to produce reports for both the subsidized (Commonwealth Care) and unsubsidized (Commonwealth Choice) product lines. This limits the level of reporting that can be achieved. A better model would be to design and develop a data warehouse supported by robust business intelligence (BI) tools that could be used to more easily design, manipulate, and generate internal and external reports.

Currently, the Health Connector relies on online feedback from customers to assess quality levels. The Health Connector also coordinates and executes focus groups of existing and prospective customers to determine the quality of their shopping experience and to provide directional advice on how to improve. The Health Connector captures rating information on such items as Web site "ease of use" and "plan options and coverage". Complaints are captured both online through an automated Web response tool and through call center representatives. The Health Connector has a Public Information Unit that receives both online and phone feedback and shares the information with the senior management team.

The Massachusetts EOHHS All Payer Claims Database (APCD) is a database that contains all medical, pharmacy and dental claims, along with carrier membership, service providers and products for the state's residents. The database covers private, self-insured, and public payer information from 2007 to present. The APCD is used to meet the needs of agencies, researchers, and interested parties. Since 2008, the system has been collecting private payer information from 30 carriers, and will expand to over 75 carriers by January 2011.

The EOHHS Enterprise Reporting System (aka Data Warehouse) is a centralized system for analytics and reporting. The system supports standard pre-formatted reports, ad-hoc reports, and OLAP reports. The system supports portal-based access through single sign-on on the Virtual Gateway to privileged users. It also provides a Web Service for the applications to generate and view the reports online.

NESCIES will work with participating states as appropriate to identify data and information systems needed for each state's HIX effort. In addition, standard project reporting and dashboards will be used to track implementation progress in Massachusetts and reusability in other states.

C.7. Meeting Consumer Needs

Massachusetts has experience meeting consumer needs not only with its currently operational Exchange Web portal and call center at the Massachusetts Connector, but with a strong outreach campaign. The Health Connector helps Massachusetts residents and employers learn about their options under health care reform. The Massachusetts statewide, multi-lingual campaign has included TV, radio, and online ads. Display ads have appeared on public transit, and print ads have reached key regional and demographic audiences. Efforts have been boosted by generously donated space or airtime from key partners, including the Boston Red Sox (NESN), Comcast, Univision, and the MBTA. Business associations and insurance brokers helped conduct numerous workshops. In addition, many organizations, agencies and businesses have volunteered to help promote the program. The Health Connector offer tools and materials to help educate people about their options. These resources are available on the Commonwealth Care and

Commonwealth Choice pages of its Website.

The Massachusetts EOHHS manages grants made to community-based organizations that conduct outreach, enrollment, and retention work with Massachusetts consumers for all health insurance programs available through healthcare reform. EOHHS works closely with the Health Connector and other state health care programs on joint objectives and goals. More than 50 organizations have been awarded grant funding to develop and put forth creative and innovative outreach strategies specific to their target populations. Reaching individuals where they are in the community, conducting services in a way that meets the consumer's needs and submitting applications in real time by utilizing the Virtual Gateway have proven to be extremely effective strategies to increase health insurance enrollment.

EOHHS, in partnership with the Office of Community Programs at UMMS, sponsors the Massachusetts Health Care Training Forum program (MTF), which was created in order to assist provider groups and community based organizations by providing continuing education on emerging topics that help participants stay current amid fast-changing health care policies and regulations that affect consumers. The MTF program, a series of five regional meetings held quarterly, provides an opportunity for MassHealth, the Health Connector, and other state health program agencies to have a community presence and has served as a mechanism to establish strong partnerships with providers, community-based organizations, and advocacy groups.

In addition, EOHHS meets monthly with a group of advocates from a variety of organizations. These meetings serve as a forum to discuss matters of policy impacting consumers; they are also an opportunity for EOHHS policy makers to receive direct feedback about the ways Massachusetts policies are actually working and to consider and discuss areas for improvement.

NESCIES plans to utilize Massachusetts experience with consumer engagement to make certain that consumer interfacing technologies are logical and useful for the public. To that end, a specific Consumer Advisory Committee will be created to ensure consumer and advocates involvement in the development and testing of consumer-facing products.

Through the state planning grant and this funding, Massachusetts plans to continue to provide access to consumer information and share and learn from the other New England states.

D. Program Requirements

Governance and Technical Competence in Addressing Key Principles and Core Functions

Massachusetts and the participating New England states have developed robust policies for system design, development, and deployment of technical systems. Massachusetts builds on a history of collaboration, as the Medicaid and Massachusetts Health Connector already share eligibility and enrollment systems, and both have experience with premium billing and subsidies. EOHHS has a fully staffed and long established Chief Technology Office and Project Management Office using SDLC standards and project management methodology.

Massachusetts commits to the Key Principles and Core Exchange Functions supported by IT found in the program requirements, including a Web Services registry, following the standards of Section 1561 of the Affordable Care Act, and taking into account security standards and controls per National Institute of Standards and Technology (NIST) publications. NESCIES will also ensure that requirement specifications, analysis, design, code, and testing can be easily shared with other authorized stakeholders with input from the Interstate Steering Committee and technical work groups. NESCIES will provide all participating states with a design approach,

technical specifications, joint procurement, and technology sharing options for their HIX solutions.

Other states also demonstrate governance and technical competence in addressing the Key Principles and Core Exchange Functions supported by IT. Maine, for example, has developed eligibility and enrollment systems whose core technologies and designs could be reused in Exchanges. Specifically, the Dirigo Health Agency administers programs that support both premium tax credit administration through the Federal Health Coverage Tax Credit program and cost-sharing assistance through its DirigoChoice subsidy program.

In Vermont, the design of an Exchange will take advantage of a Web Services Architecture and Service Oriented Architecture approach. Vermont is completing the negotiation for core components related to these architectures for future developments within the Agency of Human Services to support procurement and implementation of new MMIS and Eligibility and Enrollment systems.

Understanding of the importance of using IT standards

Massachusetts and the NESCIES project have a thorough understanding of the importance of using IT standards and are committed to their use in the Exchange. As this project is a collaborative with components being leveraged by up to six states in New England (and more nationally), it will be essential to use appropriate IT standards as discussed in *Section C.2 Applicable Standards*. NESCIES will follow the new ONC ACA-1561 standards and its ten recommendations. The standards allow for use of common data between multiple users and facilitate enrollment. NESCIES and the participating states recognize the cost and functionality advantages of well-defined standards.

The recommendations outlined in the ACA Section 1561 are critical for healthcare reform to achieve the goal of near-universal health insurance coverage. For healthcare reform to be successful, consumers must be informed and have access to an easy-to-use application process. The information and application process must be accessible to all, regardless of language and capability. NESCIES understands that standards are crucial in an Exchange IT system that supports consumer information and an easy-to-use application process.

With the changes enacted by the ACA, near-universal coverage will be achieved through a combination of public and private coverage. Importantly, coverage for low and moderate income persons will be provided through a system of subsidized coverage, including CHIP, Medicaid and Exchange qualified plans (including tax credits and cost-sharing). It is critical that application and enrollment in the health subsidy system be streamlined and seamless. An applicant in need of health insurance should not be burdened by the complexity of the underlying programs. Rather, the application should have access to an easy-to-use application that results in eligibility and enrollment in the most favorable program.

NESCIES will only be able to achieve a streamlined and seamless application process though the use of standards. A seamless application process will require exchange of data between the Exchange and its partners, including the Medicaid State Agency, Federal Agencies (HHS, IRS, SSA), and insurance issuers. Use of the NIEM standard will ensure a consistent, efficient, and transparent exchange of data. The application process will be streamlined by standardized verification interfaces, including New Hires, the Electronic Verification of Vital Events Records, the State Income and Eligibility Verification Systems, Public Assistance Reporting Information System, and U.S. Postal Service Address Standardization API. The eligibility determination will

only be seamless if the business rules are expressed in a technology-neutral standard format. This will allow the sharing of eligibility rules across agencies and platforms.

The NESCIES Exchange IT System will include private information, such as identities, social security numbers, addresses, and income. Program integrity is dependent on the privacy and security of this information. NESCIES is fully committed to fair information practices when handling personal data. NESCIES is also committed to implementing strong security safeguards to ensure that data is protected. The use of standards will guide our fair information practices and security safeguards.

Plan for compliance with HHS issued guidance

The layered administrative and management oversight of this project with the NESCIES Interstate Steering Committee, senior leadership from the Massachusetts Health Connector and EOHHS, and UMMS project management, provide a cohesive and responsive organizational approach to compliance. Massachusetts and the participating states have demonstrated experience of compliance with any IT guidance related to the Exchange or Medicaid issued by HHS. NESCIES will follow any guidance by OCIIO/CMS on Exchanges.

For all participating NESCIES states, it is a given that Exchange systems must be interoperable and integrated with State Medicaid/Children's Health Insurance Program (CHIP) programs and be able to interface with Federal agencies and data sources for data verification and acquisition.

Submitted Advance Planning Documents

Massachusetts has the following Planning Advance Planning Documents (P-APD) and Implementation Advance Planning Documents (I-APD), some of which can be used and leveraged for HIX, open and active as of January 2007 or is in the process of being drafted and which has submission dates in the near future:

- MITA Component Two (Open and active, I-APD) - Full State Self-Assessment of the Departments of Developmental Services, Mental Health, and Public Health plus creation of a Consolidated Requirements Document that will serve as the source for the procurement of the next generation system(s) supporting those agencies.
- POPS III (Open and active, I-APD) - Third-generation Pharmacy Online Processing System (POPS). New contract for the outsourced Pharmacy Program for MassHealth; this project included preserving all functionality from the POPS II system plus added D.0, online TPL and other functionality.
- AIMS 2.0 (Open and active, I-APD) - Expansion of the security protocols for the NewMMIS.
- PDSI (Open and active, I-APD) - Participant Directed Support Initiative is the new model for service delivery for DDS. Under these waivers, members may self-direct where their Medicaid support dollars may be spent. This project supported new functionality to enroll non-traditional providers, allot the annual funds, track spending, and report on both spending and outcomes.
- SMHP (Open and active, P-APD) - Procurement of a Vendor to create the SMHP in support of the Provider Incentive Payment Program, the federal program to reimburse providers for their adoption of an Electronic Health Record (EHR) and the ongoing meaningful use thereof.
- 5010 Planning (Completed, P-APD) - Planning effort for both 5010 and ICD-10

implementation. Performed with in-house staff augmented by the NewMMIS vendor, HP.

- 5010 Implementation (Submitted, I-APD) - Implementation of the 5010 HIPAA standards based on the plan.
- MITA Component One (Completed, I-APD) - MITA SSA for MassHealth only. Due to the ongoing development of the NewMMIS, project was only the "as is" effort.
- Membership Card Issuance (Completed, I-APD) - Associated with the NewMMIS, this effort was to issue new ID cards to all members. Cards went from case-based to individual-based issuance.
- MCO Pharmacy Business Migration into POPS (Completed, I-APD) - State budget mandated that the MCO pharmacy data be integrated with POPS data for Drug Rebate claiming.
- OPT-HL7 (12/10, I-APD) - Opioid Treatment Program will be implementing a new system using HL7 messaging. One of the goals of the project is to standardize future implementations of HL7 messaging ahead of the SMHP/HIE/HIX build next year.
- MAPIR Installation (1/11, I-APD) - Massachusetts is one of 14 states working with Pennsylvania to develop a single HP-solution that will support the Provider Incentive Payment Program. This effort is to implement the PA-built solution into the NewMMIS.
- Reprocured Dental TPA (12/10, I-APD) - Third Party Administration (TPA) of the outsourced dental program was court-mandate of 2005. This project is the reprocurement of a solution plus Administrator for the Dental Program.
- All Payer Claims Database (1/11, I-APD) - Enhance the evolving solution to obtain all claims history from all payers in the Commonwealth and make the APCD the source of information on whether any provider applying for the Provider Incentive Payment Program dollars for implementing and using an EHR is meeting the Meaningful Use criteria.

Other New England states have submitted a number of Advance Planning Documents (APDs) to CMS. **Connecticut** has submitted APDs related to the Modernization of Client Service Delivery, Data Warehouse II, HIPAA 5010, and Health Information Technology (HIT). **Maine** submitted a Planning Advance Planning Document (P-APD) for Medicaid HIT planning and will also be submitting an Implementation Advance Planning Document (I-APD) to implement the solution. **Rhode Island** has submitted two P-APDs to CMS, an EHR Incentives Distribution Program and a Global Waiver and MITA IT Planning project. **New Hampshire** has submitted three APDs over the past three years, an I-APD for MMIS Replacement, an I-APD for Pharmacy Benefits Management System (PBMS) enhancement, and a P-APD for HIT planning. **Vermont** has submitted a number of APD's to CMS, including VIEWS (Vermont Integrated Eligibility Workflow System), MMIS (soon to be Medicaid Enterprise System), SOA (Service Oriented Architecture) infrastructure core components, HIT planning, and member card replacement. (Due to space constraints, additional detail on state APDs is available upon request).

E. Resources and Capabilities

The University of Massachusetts Medical School, as lead applicant for the state of Massachusetts, has demonstrated its capacity to lead and manage a collaborative project of this complexity. UMMS is confident of its ability to implement the project as described in this application, in collaboration with our New England state partners. As described here and in detail in Appendix 5, NESCIES has developed an organizational structure for this project that will provide appropriate oversight and promote collaboration among the key stakeholders. This section also describes the key program personnel and their qualifications for implementing the NESCIES project. It also summarizes the key organizations and demonstrates our readiness as a

collaborative to successfully develop and implement the technology components developed under this cooperative agreement.

The **University of Massachusetts Medical School,** the lead applicant for the State of Massachusetts, has a well-established partnership with the Massachusetts EOHHS in policy development and implementing innovations in health care systems involving those served by the public sector. UMMS has been a thought leader in the area of public sector health information technology policy and has extensive experience in partnering with state agencies and providing multi-state technical assistance on complex CMS-funded projects. UMMS has a long history of demonstrated experience in working closely with EOHHS and the Office of Medicaid in the implementation of large and complex federally funded initiatives. As one example, Jay Himmelstein, MD, MPH who is the dedicated principal investigator (PI) for this initiative, has also served as the PI for the $30+ million Medicaid and Comprehensive Employment Grant (MICEO) since 2001. The MICEO grant has included the development and support for the New England Partnership for Health Systems Development (NEP) to support the New England states in the development and management of Medicaid "Buy-in" programs for working people with severe disabilities.

The **Massachusetts Health Connector** has been in existence and operating as an Exchange since 2006. It offers Commonwealth Care, a subsidized program for adults who are not offered employer-sponsored insurance, who do not qualify for Medicare, Medicaid, or certain other special insurance programs, and who earn up to 300% FPL. It also offers Commonwealth Choice, an unsubsidized offering of seven private health plans, selected by competitive bidding, and available through the Health Connector's Exchange Web site to individuals, families, and certain employers in the state. In 2007, the Health Connector demonstrated its ability to move quickly and effectively, by launching the first "Exchange" website in just four months.

The **Massachusetts Executive Office of Health and Human Services** (EOHHS) has a fully staffed and long established Chief Technology Office (architecture services), Project Management Office (SDLC standards and project management methodology), Quality Assurance Office (all facets of testing methodology including performance testing lab and resources), a state-of-the-art Data Center operated by Massachusetts ITD (Information Technology Division), and an ADA Compliance Office (ADA lab, ADA testing, and ADA resources). The Virtual Gateway, the Massachusetts NewMMIS implementation recognized for its successful and seamless implementation, and Massachusetts' in house data center, and SOA architecture service experience including an operational XML Gateway and HIPAA/HL7 translator are testimony to EOHHS's ability to manage a project of this size and scope.

The **New England States Consortium Systems Organization (NESCSO)** is a non-profit corporation organized by the six New England Health and Human services agencies and UMMS. NESCSO's Board is comprised of the six New England States' Health and Human Services Commissioners and/or their delegates. NESCSO's goal is to support the health and human services policy and system needs of the New England states by providing a framework for knowledge exchange in order to maximize policy, program, and cost effectiveness.

NESCSO offers a proven, neutral forum for multistate cooperation and innovation and can ensure the required collaboration among critical players. As one of its earliest regional collaborative projects, NESCSO facilitated the procurement of a regional HIPAA translator for the States of Connecticut, New Hampshire, Rhode Island, and Vermont. The translator was

purchased and located in Connecticut. NESCSO recently convened a regional meeting attended by stakeholders from all six of the New England states to discuss collaborative opportunities in planning for health insurance exchanges and the opportunities available through the OCIIO FOA for early innovators. NESCSO has established and convened the NESCSO HIE Collaborative since 2009 which includes members from New England and New York. Participating states have signed a Memorandum of Understanding (MOU) which identifies a collaborative structure for regional planning for health information technology and health information exchange.

As an early innovator state in health care reform with an established statewide health insurance Exchange, Massachusetts is well positioned to lead and collaborate with other New England states in developing and implementing HIX technology components and systems consistent with the goals of national healthcare reform that may be used by other states to build their own Exchanges.

Project Management

UMMS will provide day-to-day project management, with emphasis on budgets, contracts, documentation, evaluation, and reporting to OCIIO. The Massachusetts technical implementation will be led by the Chief Operating Officer of the Massachusetts Health Connector and the Chief Information Officer for the Massachusetts EOHHS. An Interstate Steering Committee convened by NESCSO and made up of representatives of the collaborating states will provide general oversight and facilitate peer collaboration to improve implementation schedules, increased quality, and reduced risks through reuse, and leveraging "lessons learned" across New England. (See *Key Program Personal* below and *Appendix 5* for more information.)

Interstate Steering Committee

NESCIES will have an Interstate Steering Committee made up of a technical lead and business lead from each state. The Interstate Steering Committee will be convened by the NESCSO with support from the University of Massachusetts Medical School. The Interstate Steering Committee, with the input from appropriate technical work groups, will be responsible for informing and assessing the Massachusetts development team on the ability for agreed upon HIX components to be built as easily adaptable and usable in other states. The five other New England states expect to have meaningful design and implementation input for the component capabilities to be implemented by Massachusetts. The goal of the NESCIES Interstate Steering Committee is to provide guidance and feedback to the Massachusetts team to assure that HIX components developed for Massachusetts will be consumer-friendly, cost-effective IT systems that can be used and adopted by other New England states (and nationally) and help each New England state save money as they work to develop their own Exchanges. The Interstate Steering Committee will work to share or leverage the Massachusetts implementation to reuse the appropriate residuals and knowledge base or lower acquisition costs through regional group purchasing agreements.

Developing Interstate Technical Work groups

The NESCIES project will create and support interstate technical work groups to inform, design, and share HIX components that could be leveraged by participating states. These work groups will be staffed by the appropriate technical staff from each state and chaired by a technical lead from the participating states. The interstate technical work groups will provide a forum for discussion, as well as the mechanism for the participating states to inform the Massachusetts development team so that components will be built to be easily adapted and utilized in other

states. Participating states may opt in to the various work groups based upon their individual needs and planning timelines. Additionally, the interstate technical work groups will inform the Interstate Steering Committee on progress; this information will also be available to OCIIO to track the progress of the project. NESCSO will facilitate communication between the interstate technical work groups and the Interstate Steering Committee which will meet on a regular basis to provide a consistent advisory structure.

Key Program Personnel

At UMMS, **Jay Himmelstein, MD, MPH** will serve as principal investigator for this project and **Michael Tutty, MHA** will serve as Project Director. Dr. Himmelstein will be responsible for providing overall strategic direction and leadership to the grant, working to ensure that all grant goals are achieved. Dr. Himmelstein will chair the Grant Executive Team and work closely with the Massachusetts EOHHS, the Massachusetts Health Connector Authority, and the Interstate Steering Committee. Dr. Himmelstein is a Full Professor of Family Medicine and Quantitative Health Sciences at UMMS, directs the Public Sector Health Information Technology Policy Group at UMMS, and is a Senior Fellow at NORC at the University of Chicago where he focuses on HIT policy and health reform.

Michael Tutty is currently the Director of the Office of Community Programs at UMMS, is a member of the Public Sector Health technology policy group, and has extensive experience with complex program management and multi-stakeholder engagements. Mr. Tutty will have broad oversight for day-to-day operations of the grant activities including coordination of activities related to the implementation of the work plan and overseeing subcontracts, and consultants. He will be responsible for overall program evaluation and for staff performance; and will also be the responsible authority for ensuring necessary reports and documentation are submitted to OCIIO.

At the Massachusetts Health Connector, an experienced team is currently in place for accelerated and timely implementation. **Glen Shor**, Executive Director of the Health Connector, is committed to the NESCIES effort (see attached letter of support). Mr. Shor oversees all major initiatives, including ongoing operational direction, and future strategic planning of the Massachusetts Health Connector. **Bob Nevins**, Chief Operating Officer, manages day-to-day operations and assists in all strategic planning efforts, including implementation of an exchange that meets national health care reform requirements. Prior to his recent appointment as COO, Mr. Nevins was hired as the Health Connector's first Chief Information Officer in December 2006. Mr. Nevins was instrumental in defining and implementing the IT vision and Web site strategy for the nation's first online state health Exchange. Mr. Nevins will be part of the NESCIES Governance and Oversight Team.

At Massachusetts Medicaid there is a team fully engaged in Exchange development for compliance with 2014 health reform requirements. **Terry Dougherty**, Medicaid Director, is supportive and committed to this effort (see attached letter of support). **Manu Tandon**, the Secretariat CIO for EOHHS, will provide management to NESCIES for Medicaid and will be part of the Governance and Oversight Team. Mr. Tandon is responsible for the state's largest IT portfolio covering 16 agencies, 26,000 employees and a large number of IT applications including systems for Medicaid, Eligibility, Human Services, Disability Services, and Public Health. As the Co-Chair for the Massachusetts' Health Information Exchange (HIE) Work group, Mr. Tandon is also closely involved in rolling out the HIT program supporting Massachusetts' position as a national leader in Healthcare initiatives.

At the New England States Consortium Systems Organization (NESCSO), the new Executive Director, **Brenda Harvey,** will facilitate the Interstate Steering Committee. Ms. Harvey will work with the New England Health and Human Service leadership to identify and to enhance the regional collaborative efforts. Prior to her appointment at NESCSO, Ms. Harvey served as the Commissioner of the Department of Health and Human Services for Maine. **Nancy Peterson** Deputy Director NESCSO, will direct the overall convening function of the NESCIES learning collaborative efforts and the Interstate Steering Committee. She will be responsible for the organization and execution of collaborative learning sessions, webinars, Interstate Steering Committee Meetings, and all regular communication for the multistate collaborative effort.

Each state will also be staffing a business and technical lead for the project. For more information, see *Appendix 2: NESCIES State Business and Technical Leads* and *Appendix 5: Key Personnel & Organizational Charts*. In addition to the staff highlighted here, each organization will be providing additional expertise and support staff. A number of additional new hires will complete the NESCIES team.

Demonstration of Readiness

The NESCIES project has demonstrated readiness to initiate the grant activities without delay and to complete them in a timely fashion. Massachusetts currently has an operational Exchange and can proceed with HIX implementation without delay of needed legislative or regulatory changes. Manu Tandon, the Secretariat CIO for the Executive Office of Health and Human Services, and Bob Nevins, Chief Operating Officer, will lead the HIX implementation activities for Massachusetts and have assembled a broad team of experienced professionals. As described in section C above, the initial assessment performed by the New England states has identified components of the existing Commonwealth of Massachusetts EOHHS and Massachusetts Health Connector Information Technology components that might be leveraged for the 2014 environment across all states.

Through NESCSO, the New England states have experience collaborating on technology projects. The NESCIES Steering Committee has held its first planning meeting in December 2010 and will meet again in January to continue discussions about collaboration and so that the development of HIX components will be available to all states.

F. Evaluative Measures

The NESCIES project will have a three-pronged evaluation plan:

1. Evaluation of development and implementation of Massachusetts HIX components, tracking progress against Systems Development Life Cycle (SDLC) and prescribed OCIIO deliverable timelines;
2. Development and Implementation of a Software Quality Assurance Plan for HIX Components; and
3. Ability for HIX components chosen by the Interstate Steering Committee to be leveraged or utilized and adopted by other New England states.

Evaluation of development and implementation of Massachusetts HIX components

System development schedules will be tracked according to our implementation timeline, including OCIIO Exchange IT SDLC Reviews. By utilizing an SDLC approach, the project will be able to track project activity and provide a consistent way to ensure the project is meeting development timeline milestones (See *Appendix 6: NESCIES High Level Draft Work Plan*).

Listed below are the requisite lifecycle reviews that NESCIES will be tracking in Massachusetts aligned with the OCIIO timeline. Appropriate products that will accompany each stage:

- Project Startup Review (PSR)
- Architecture Review (AR)
- Project Baseline Review (PBR)
- Preliminary Design Review (PDR)
- Detailed Design Review (DDR)
- Final Detailed Design Review (FDDR)
- Pre-Operational Readiness Review (PORR)
- Operational Readiness Review (ORR)

NESCIES technical project management will monitor objectives and timelines during each SDLC phase in Massachusetts while executing the development of each HIX component. The HIX project management team in Massachusetts will monitor vendor compliance of established technical requirements and timelines, including not only for the Massachusetts implementation, but for usability of the components more broadly. Products coming out of the SDLC process will be available to the New England states participating in NESCIES, as well as to other states nationally. Clear objectives and timelines will provide the desired result to meet the needs of NESCIES and OCIOO.

In addition, UMMS will collect the overall project management data to report to OCIIO to track NESCIES progress against the Early Innovator Exchange IT SDLC Review Timeline and document lessons learned for sharing with OCIOO and other states nationally. An overall project dashboard will monitor operational goals for HIX implementation managers.

Development and Implementation of a Software Quality Assurance Plan (SQAP) for HIX Components

NESCIES will develop the SQAP during the first phase of the SQAP for each of the HIX components. The SQAP will define the Software Quality Assurance (SQA) process for evaluating the quality of the work products (or deliverables) produced during the project by both external vendors and internal staff. The SQA process will ensure that each deliverable is of high quality and meets the requirements for each HIX component. By ensuring that each HIX component meets the deliverable requirements for functionality for Massachusetts and reusability with other states needs, the project team will ensure that the final Exchange IT system is of high quality and meets project goals.

Each deliverable will be evaluated through a formal review process. Examples of deliverables include: project management plans, requirements specifications, design documents, test plans, deployment plans, reusability plans, and acceptance plans. The review team will consist of a Subject Matter Expert who has expertise in the subject of the deliverable, a Technical Expert who has technical expertise of the deliverable, and independent Quality Assurance Reviewer. These may include input from the Interstate Technical Work groups. The review team will determine if the deliverable content is accurate and meets the deliverable requirements for both Massachusetts and other states. If the content is not accurate or the deliverable does not meet the requirements, the deficiencies will be recorded by the review team and corrective actions initiated to resolve the deficiencies.

The criteria used to review the deliverables will vary depending on the subject of the HIX component. The SQAP will describe the project deliverables and the review criteria. The SQAP will include the following: (a) The objective of the plan, (b) the roles and responsibilities of the SQA team, (c) the SQA process, (d) the problem reporting and corrective action process including the escalation procedure to bring high-risk problems to the attention of the HIX technical leadership implementation team, and (e) SQA tools, techniques and methods.

HIX components chosen by Interstate Steering Committee to be utilized and adopted by other New England states

The NESCIES Interstate Steering Committee, with input from the technical work groups, will be monitoring the reusability of the components developed in Massachusetts to be implemented in the participating New England states (and nationally). A scorecard will be created to rate the reusability of each developed HIX component in Massachusetts. A project dashboard will provide timely updates to monitor the progress of each component in a way that can be easily tracked by participating and non-participating states on the steering committee. For example, a standard quarterly dashboard will offer: 1) the components that are to be developed under this grant; 2) the states participating in this specific component; 3) the status of this particular component (along the lifecycle elements in track 1); and 4) the anticipated date to be available for other states to reuse or procure. Technical leads from each state will assess their reuse for their specific state needs. The goal is for as many of the key HIX components developed in Massachusetts to be leveraged in other states as is feasible. The Massachusetts implementation will receive input from the Interstate Steering Committee to maximize this effort. Designing Massachusetts HIX components with specific reusability goals for New England (and beyond), meets the goal of the competitive "Early Innovators" grants.

Corrective Actions Plans

If it is determined that the project schedule is not being met or if the SQA process identifies high-risk problems (e.g. delay in HIX component development or a HIX component lacks reusability in other states), the project team will use corrective action plans to address the problems. The corrective action plans will be the direct responsibility of the HIX technical leadership implementation team. The corrective action plan will include the following: (a) a description of the problem, (b) a description of the root cause of the problem, (c) a description of the risks to problem if not resolved, (d) the person(s) or vendor(s) responsible for correcting the problem, (e) the corrective action planned to resolve the problem, (f) the schedule for the corrective actions, (g) the steps that will be taken to monitor the performance of the corrective actions, (h) the criteria for determining problem resolution, and (i) contingency options to mitigate the risks.

<u>Appendices</u>

1. Letters of Commitment from Massachusetts Governor, Medicaid Program Director, and Massachusetts Health Connector Insurance Exchange Executive Director
2. NESCIES State Business and Technical Leads
3. Massachusetts Legacy Hardware and Software Systems
4. NESCIES State Readiness Levels by Exchange Service Component
5. NESCIES Key Personnel & Organizational Charts
6. NESCIES High Level Draft Work Plan
7. Letters of Commitment from other New England Governors and State Medicaid Directors