

State of Michigan MiHIN Shared Services Operational Plan



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1 Stakeholder Approvals

The MiHIN Shared Services Operational Plan was endorsed by the MiHIN Governance Workgroup by unanimous vote on April 22, 2010. Membership of the MiHIN Governance Workgroup is listed in Appendix 1 of the MiHIN Shared Services Strategic Plan. The MiHIN Shared Services Operational Plan was endorsed by the Michigan Health Information Technology Commission by unanimous vote on April 22, 2010. Membership of the Michigan Health Information Technology Commission can be found in the Governance domain section in the MiHIN Shared Services Strategic Plan.

2 Executive Summary

The Michigan Health Information Network (MiHIN) vision of fostering the development of health information exchange (HIE) *that will reduce the overall cost of care while at the same time increasing quality of care and patient safety*, will be realized by implementing this Operational Plan based on the strategies developed by stakeholders across Michigan.

This Operational Plan is grounded in the experiences and progress of HIE in Michigan's healthcare communities, and it will serve as the roadmap for the leadership of the MiHIN Shared Services by outlining the activities, timelines and financial aspects of implementing the MiHIN Strategic Plan for statewide health information exchange over the next four years.

Achieving the goals of this Plan will enable and support the ability of Michigan's providers to accomplish and demonstrate meaningful use of health information technology by leveraging advancements in the cross-community exchange of patient information enabled by the MiHIN Shared Services.

The deployment the MiHIN Operational Plan will improve the ability of sub-state HIE efforts to access appropriate and timely health information both within and across state borders by serving as the vehicle for interoperability with other states and the national health information network.

The following sections provide a summary of the subsequent sections of this operational plan and are intended to document Michigan's overall approach toward each of the domain areas. Most substantive discussions are provided in the sections dedicated to that domain area. The figure below shows a high level depiction of the projected timeline and key milestones for this project.

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2010						Governance Established ★		Vendor Selected ★		★	Phase 1 Deploy	
2011		★	★	★	Phase 2 Deploy				Phase 2 Pilots	★		★
		Business Plan Complete								Phase 1 Production		★
2012	★	Financial Sustainability Plan Begins				★	Phase 2 Production					
2013												
2014		★	State HIE Cooperative Agreement Funding Ends									

Projected Timeline of Milestones

2.1 Governance

The State of Michigan facilitated a process that involved the Michigan’s HIT and HIE stakeholder community and determined the overall approach toward governing statewide Health Information Exchange services. This approach, documented in detail in the Strategic Plan, involved the creation of a collaborative governance structure between the legislatively mandated Health Information Technology Commission (HIT Commission) and a not-for-profit organization, the Michigan Health Information Technology Network (MiHIN) Shared Services. As delineated in the Strategic Plan, the HIT Commission will be leveraged to set broad based policy decisions and the MiHIN Shared Services Governance Board will execute on the technology components of the statewide HIE.

Establishing this Governance structure is the first and most critical task to complete. It is expected that these activities will initiate upon the submission of the Strategic and Operational Plan using members of the current MIHIN Governance Workgroup including the State of Michigan staff and will be completed July 2010.

2.2 Finance

The primary consumers of the statewide shared services are the Sub-state HIEs and the payers of healthcare. Defining the primary customers guided the formation of the operational decisions related to the creation of the budget and the overall sustainability plan.

To ensure broad participation in the statewide shared services, there are no hard dollar costs to the stakeholder community until 2012. However, in order to ensure that the stakeholders were invested in the project, in kind contributions in the form of labor would be expected from those customers who connect to the MiHIN Shared Services. Therefore during the startup phase of the MiHIN Shared Services (2010 and 2011) funding for the planning, capital, operational startup and pilot project implementation costs will be covered through the State HIE Cooperative Agreement and State of Michigan matching funds.

Beginning in 2012 a fee structure consisting of access and usage fees will be collected from the primary customer base of Sub-State HIEs and Healthcare Payers that are connected to the MiHIN Shared Services.

Michigan was allocated \$14.9M through the State HIE Cooperative Agreement. The amount combined with the calculated State funded match of \$1.6M results in a budget of \$16.6M. One million dollars was allocated for planning and \$1.9M is dedicated for the Michigan Department of Community Health (MDCH) grant requirements and to fund the work of the Michigan HIT Commission resulting in a total of \$13.7M being available for the governance, technical and business operations of the MiHIN Shared Services.

2.3 Technical Infrastructure

The MiHIN Shared Service will be implemented in phases that will provide ability for the stakeholders to consume the technology components in manageable pieces.

The current project schedule sets a goal that the technology implementation will initiate in October 2010. This milestone requires the selection of vendors and the associated products prior to that date. Therefore the stakeholder community has identified the RFP process as a critical path item for the deployment of MiHIN.

The planned deployment of MiHIN Shared Services was structured to provide customer benefit through the implementation of specific use cases that map to the HIE Service areas identified in the State HIE Cooperative Agreement Funding Opportunity Announcement. This approach has an added benefit of allowing the stakeholder community to build out the foundational components in an incrementally over a period of 12 months and will ultimately lead to an extensible set of web services operating through a enterprise service bus that will facilitate comprehensive data exchange among Michigan's sub-state HIEs throughout Michigan, to other states and nationwide.

The approach that MiHIN Shared Services will use involves the deployment of core infrastructure technology beginning in 2010 that will enable the transfer of reportable lab

summaries to MDCH's Disease Surveillance System (MDSS) and the transfer of Immunization records to MDCH's Immunization Record (MCIR) System. In order to accomplish these use cases a Master Patient Index, an initial set of Security Services and a Provider Index will be deployed.

Phase 2 will consist of continuing with the same approach of incrementally adding functionality by deploying more of the core infrastructure including: the completion of the Security Services, standing up an XDS Registry/Record Locator Service and the component required to implement the shared services bus. This will result in the sub-state HIEs being able to retrieve Immunization histories from MCIR and the transfer of Continuity of Care Documents (CCD) to physician offices and emergency departments.

2.4 Business and Technical Operations

The MiHIN Shared Services Governance Board is scheduled to begin operations in July 2010. The primary activity within the first quarter of operation will be to utilize the technical documentation produced during the planning activities to create a Request for Proposal which will result in the selection of a vendor for the technology that will be deployed.

Once the technology implementation kicks off the focus of the MiHIN Shared Services Governance Board will turn to finalizing the financial sustainability strategy and the creation of the business plan which is due to the ONC by February 2011.

2.5 Legal and Policy

The Governance section of this document provides an overview of the steps required to implement the legal entity and to obtain the State Designated Entity status. This section focuses on the implementation of the privacy and security aspects of Michigan's Strategic Plan.

The stakeholder community has been working with the State of Michigan and other organizations to develop a comprehensive security and privacy policy for the MiHIN Shared Services. In order to implement these policies the MiHIN Shared Services Governance Board will appoint both a Privacy Officer and Security Officer that will ensure compliance with the application federal, state and international laws as well as providing state-wide leadership and guidance for the broad stakeholder community.

As a starting point for ensuring compliance a set of policies were developed, including: consent, access, authentication, authorization, and breach notification policies that will be provided to the MiHIN Shared Services Governance Board for implementation.

The approach toward implementing these policies will be the creation of a Participation or Subscription Agreement for the sub-state HIEs to sign in order to connect to the statewide shared services.

3 General Components

This section of the document provides an overview of the State of Michigan's general approach toward implementing the Strategic Plan. It contains a high level schedule of the activities required to stand-up the MiHIN Shared Services, executing the procurement process to select the required vendor(s) and performing the technical activities associated with standing up the Core Services and implementing the technology required for the identified use cases.

3.1 Project Schedule

The project schedule that has been created is designed to demonstrate the activities and interdependencies that exist in order for the content of the Strategic Plan to be operationalized. The early phases of this project schedule are critical to ensure that the technology components can be properly implemented in a timely manner thereby allowing the MiHIN Shared Services components to be available for use by the sub-state HIEs and Payers.

This section of the MiHIN Shared Services Operational Plan describes the project schedule, its interdependencies, and risks and mitigation measures.

3.1.1 Overall timeline

The timeline associated with this project plan has been broken down into several major sections, some of which will run in parallel. The first major activity is to standup the Governance structure in July 2010. Once that critical path item is satisfied the process for selecting the vendor and associated technology can begin with a goal of vendor selection finishing September 2010.

The selection of the technology vendor will allow the Governance Board of MiHIN Shared Services to transfer the implementation responsibilities to the technical team to implement the core technology required to satisfy the targeted use cases beginning October 2010. This will allow the Governance Board to focus on the creation of Business Plan for Financial Sustainability which is due in February 2011. The Financial sustainability will need to be implemented in January 2012 when membership and other fees are expected to sustain the MiHIN Shared Services.

3.1.1.1 Governance Timeline

The State of Michigan and the Healthcare Stakeholders involved in the Governance Workgroup activities have made significant progress on determining the framework for the MiHIN Shared Services entity and its associated governance board. In the Strategic Plan the type of entity and overall board make-up is described in detail. As of the submission of this plan the State of Michigan and the members of the Governance workgroup will begin with the activities in implementing the strategy.

The goal is to have the Governance Entity operating and an Executive Director selected by July 2010. This means that the initial members of the Governance board will need to be selected in June 2010.

To complete the coordinated governance structure, as described in the Strategic Plan, the State of Michigan must seek a legislative change for the HIT Commission to add a member of the MiHIN Shared Services Governance Board. Further, Governor Jennifer M. Granholm must designate the MiHIN Shared Services Governance Board as the State Designated Entity. These changes are targeted to begin in May 2010.

3.1.1.2 Vendor Selection

Throughout the workgroup process a group of technical stakeholders have been involved with the vendor community to understand the vendor capabilities that exist in the marketplace today to realistically implement the capabilities of MiHIN within a defined budget. These activities did not include a formal RFP process yet resulted in the creation of a Systems Requirements Document and detailed specifications for the interfaces that would be required for the pilot implementations. These documents were created in such a fashion as to ensure that they could easily be inserted into a RFP template with the associated terms and conditions and evaluation criteria.

As a result it is the plan of the MiHIN Shared Services entity to use this work and quickly release a request for proposal to select a vendor technology. The planning activities that preceded this operational plan included the creation of a Technical Architecture Plan, System Requirements document and targeted technical specifications. Also during the preparation activities a Vendor Technical Collaboration Team was formed that informed a project team on the status of various vendor products. The combination of these activities will allow for the creation of a Request for Proposal on an aggressive schedule. It is expected that the RFP will be released as a next step once the MiHIN Shared Services Entity is formed in July 2010. The goal is to finalize the vendor selection and contract negotiation in September 2010.

3.1.1.3 Technology Deployment

The MiHIN Shared Services technology components will be implemented incrementally with each phase deploying a use case that relates to the Meaningful Use requirements and simultaneously building out the core infrastructure. This implementation method balances user adoption, business planning and infrastructure development in such a way to create sustainability, extensibility and scalability.

The MiHIN Shared Services implementation will occur in two phases of approximately six months each. The goal is for the first phase to begin in October 2010.

3.1.1.4 Business Planning and Sustainability Timeline

The new MiHIN Shared Services 501(c)(3) organization, once it has been created in July 2010, will undertake the development of a business plan that supports their adopted financial sustainability strategy and approach. In this effort the estimated operational and capital budgets developed during the Strategic and Operational Planning phase will be replaced with actual budgets that result from completing a formal RFP process and from the implementation and ongoing support of the planned HIE pilot projects.

The initial and ongoing results of business and financial modeling will enable MiHIN Shared Services to finalize its revenue targets and establish the appropriate fee structures that will be incorporated into the stakeholder trust agreements thereby establishing the formal basis for financial support. Additionally, this modeling activity will allow MiHIN Shared Services to finalize its Business Plan and submit this plan to the ONC by the February 10, 2011 deadline.

3.2 Interdependencies

A project of this magnitude has many interdependencies that are on the critical path to success. This section of the plan describes the macro-level dependencies while the detailed project plan that will be created during the project will provide a complete picture of all the dependencies.

3.2.1 Governance Entity Functioning and Funding

Michigan's structure for the deployment of the MiHIN Shared Services requires the creation of a not-for-profit corporation that will operate as the statewide organization responsible for the implementation of the technology that will facilitate Michigan's providers with ability to exchange data on a statewide basis. When the MiHIN Shared Services Governance Board is created and functioning the substantial decisions and critical activities can begin in earnest.

Therefore it is imperative that MiHIN Shared Services be operating in July 2010 and the associated federal funding be available.

3.2.2 Vendor Selected and Contracts signed

The second major dependency is the selection of the vendor(s) that will provide the technology for the operation of the MiHIN Shared Services. The selection of this vendor requires that MiHIN Shared Services entity purchase the technology that satisfies its requirements at a competitive price. MiHIN Shared Services will use a RFP process to ensure that selects the correct vendor technology. This project has been structured to minimize the match funding that the State of Michigan will need to provide through the State HIE Cooperative Agreement, as a result it is a goal for the contract to be signed with the vendor in October 2010.

3.2.3 Sub-State HIE Capabilities

The technical architecture of the MiHIN Shared Services leverages the work of Michigan’s existing and operational sub-state HIEs. Though the sub-state HIEs have made tremendous progress within their respective areas of services, the sub-state HIEs within Michigan require funding to become fully capable of participating in the MiHIN Shared Services. Therefore, the MiHIN Shared Services Budget provides funding for multiple sub-state HIEs to make the necessary additions and changes to their technology and organization. It is critical that the MiHIN Shared Services Governance Board holds the sub-state HIEs accountable toward making the changes required within their organizations to enable participation with the MiHIN Shared Services.

3.2.4 Technology Dependencies

The technology that is required to be implemented to support the use cases will be deployed in such a way that will maximize use case functionality without causing rework in later phases. The Master Patient Index (MPI) is scheduled to be deployed first along with portions of the security services. This approach will provide a high value component deployed in a secure manner that will provide the basis for the build out of use case functionality. The provider directory is dependent on the deployment of the MPI.

3.3 Project Risks

Given that statewide HIE Shared Services is a relatively nascent area of healthcare, a certain level of risk can be expected as the project is implemented. The following risks have been identified according the State HIE Cooperative Agreement five domains. Each risk is accompanied by an assessment of the impact of the risk along with a strategy and approach to mitigate that particular risk. As the project is implemented, the proactive nature of the mitigation strategies are expected to eliminate or substantially reduce the risks, however they will also be refined and changed if necessary in response to the evolving nature of these risks and other risks that are identified.

Risk Event	Likelihood of Occurrence	Risk Impact Assessment	Mitigation
Governance: Stakeholder support	Moderate	As the MiHIN Shared Services begins implementation the support for statewide shared services by sub-state HIEs will be critical to successfully implementing the Operational Plan. The challenges and priorities for implementing their own respective HIEs could result in reduced focus and	Maintain the momentum created from the Governance Workgroup process and immediately shift into establishing the MiHIN Shared Services Governance Board. Ensure strong participation in Governance by sub-state HIEs and ensure they are active participants in implementation decisions and the attainment of milestones.

Risk Event	Likelihood of Occurrence	Risk Impact Assessment	Mitigation
Governance: Timing to get MiHIN Shared Services Established	Moderate	The plan calls for the creation of a State Designated Entity to procure and operate the technology associated with MiHIN Shared Services. Without this entity there is no procuring agent.	Begin the creation process using experienced personnel and stakeholders immediately after the submission of the Strategic and Operational Plan. Enlist stakeholder support throughout the process to ensure timely acceptance of bylaws.
Governance: Ability to get contract executed with Vendor by 1 October 2010	Moderate	The timeline for implementing MiHIN Shared Services requires that a contract be executed and project planning begins on the date specified. Delaying the start date has multiple impacts on the project including the amount of match funding necessary.	The creation of the System Requirements Document and Pilot Specifications documents in the planning phase will greatly shorten the time required to create an RFP.
Technical: Architecture Model	Low	The choice of an architectural model has risks as well as benefits. There are some risks in designing the MiHIN Shared Services Bus as a gateway between Sub-state HIEs and modeling the SSB as a NHIN compatible architecture. The primary risks are the immaturity of the shared services bus technology and the potential costs and time to build it.	Build the MiHIN Shared Services incrementally ensuring that each part works and is valuable before adding new capabilities. Vendor selection will be very important to controlling costs and timeline for implementation. These risks can partially be offset by contract terms.
Technical: Leveraging Existing Technology	Low to Moderate	Leveraging existing technology is both an opportunity and a risk. The goal in leveraging existing technology is to save money. But the key risk in trying to leverage technology is the complexity of integration.	Initially, attempt only to leverage value-added networks that are already in place as opposed to trying to leverage core components of the technology. Attempt to leverage core components in the future to function as redundant services once the core components are working.
Business Operations: Failure to accomplish implementations	Low	Implementations can fail for (1) technical, (2) organizational and (3) process reasons.	To minimize the risk of failure for these reasons, and the MiHIN Shared Services Governance Board will continue to, (1) thoroughly review the technologies to be

Risk Event	Likelihood of Occurrence	Risk Impact Assessment	Mitigation
			implemented; (2) thoroughly vet the organizations that will participate in deployment phases, assessing for capability to implement; and (3) provide methods-based project management along with technical and process support to implementing organizations.
Privacy and Security: Consumer Perception	Moderate	The Privacy and Security Work Group identified a risk related to managing the consent process. While the work group recognized that the portability of individually identifiable health information is critical to the success of HIE, the risk of consumer perception and fear was also readily acknowledged.	Refined and easily understandable educational and outreach materials for both providers and consumers; privacy and security officers for the MiHIN Shared Services Governance Board; issuance of consistent and guidance materials for Sub-state HIEs; willingness and flexibility to adjust consent options as technology evolves.
Privacy and Security: Confusion Among Sub-state HIEs Regarding Compliance with State and Federal Law	Low	The Privacy and Security Work Group also identified a risk related to the management of compliance with multiple federal and state laws and regulations. Newly forming and newly evolving sub-state HIEs will not only have to ensure that their participant activities are legal and in compliance with any existing laws, the sub-state HIEs will also have to ensure that they are in compliance with the policies and procedures of the MiHIN Core Services Network. In order to build the fabric of trust between diverse participants, regardless of what sub-state HIE they participate in, overall direction and guidance will need to come from the MiHIN Privacy and Security Officers.	Involving sub-state HIEs in the future development of HIE policies to ensure that concerns are addressed, appointing a Privacy Officer and a Security Officer to lead efforts, reviewing and updating the Comparative Analysis Matrix, engaging a health law attorney to issue opinions that can be trusted by all sub-state HIEs, requiring all sub-state HIEs will have a contractual agreement with the MiHIN Core Services Network.
Finance:	Low	The possibility that the	MiHIN will develop a Request for Proposal

Risk Event	Likelihood of Occurrence	Risk Impact Assessment	Mitigation
Acquisition and Implementation Costs too high		preferred vendor costs for hardware and software acquisition and implementation services could exceed the available Federal and State grant funding.	that will appeal to the largest possible number of software and hardware vendors by encouraging vendors to submit joint responses that package all hardware, software, and implementation support into a single proposal, additionally, it will seek component pricing breakdowns to allow for more effective pricing analysis and comparison, and more informed selection of components and services.
Finance: Sub-state Health Information Exchanges don't evolve in a timely manner	Moderate to High	The possibility exists that several of the sub-state Health Information Exchanges that are currently in the planning or early implementation stages will not be able to complete their efforts within the next 18 to 24 months which will significantly reduce the number of primary customers across which MiHIN can spread its operating costs.	The MiHIN Shared Services will take several steps to mitigate this potential risk. First, the state of Michigan will coordinate the outreach, marketing and educational activities with the State of Michigan's Regional Extension Center (REC) and the Medicaid EHR Incentive program to promote sub-state HIEs and provide relevant information to target audiences that may utilize the services of a sub-state HIE. Second, the State of Michigan will utilize multiple policy levers to promote transactions and reporting to come from providers through the sub-state HIEs to the State of Michigan. Lastly, the MiHIN Shared Services deployment plan prioritizes the core technologies and use cases that are most valuable to sub-state HIEs today and create immediate value for the customers of sub-state HIEs. This MiHIN Shared Services Operational budget includes funding for the initial sub-state HIEs to develop the necessary organizational and technical infrastructure to connect to the MiHIN Shared Services.

MiHIN Project Risks, Impacts, and Mitigation Strategies

3.4 Coordinate with ARRA Programs

Michigan has experienced a high level of planning efforts between the HIT ARRA programs in Michigan and the HIT Coordination Work Group has established milestones and timelines to carry-out the coordination activities. The State HIT Coordinator will continue to convene monthly HIT Coordination work group meetings with the staff of the Michigan Center for

Effective IT Adoption (M-CEITA), the State's Regional HIT Extension and the Medicaid EHR Incentive Program Staff.

The goal of the HIT Coordination work group is to develop a united message to accelerate health IT adoption, awareness and acceptance amongst health care professionals and the citizens of Michigan. To accomplish this goal several milestones have been set. The development of a one stop website containing all of the necessary information on the HIT activities and projects in the State of Michigan is one of the milestones established. Planning for the one stop website began in January 2010 and the estimated time to move the website into production is June 2010.

A shared health IT adoption database is another milestone of the HIT Coordination work group. MiHIN, M-CEITA and the Medicaid EHR Incentive Program all have or plan to conduct surveys to gain a baseline on the status of HIT/HIE in Michigan. The efforts of survey development have been coordinated to ensure the healthcare professionals are not inundated with duplicative surveys. Future plans are to collect the results of the surveys into a database that is shared with the ARRA programs. The database will be a tool allowing for uniform reporting on Michigan's health IT environment to the ONC and CMS. Planning for the shared database began in March 2010 and completion is expected by October 2010.

Michigan also plans on leveraging the Medicaid EHR Incentive Program and M-CEITA outreach plans to promote HIT and HIE. Current plans have the projects not only collaborating on outreach but also on educational activities, and as part of these activities, regional information and listening sessions will be held throughout the state to solicit information and input from healthcare professionals. The regional listening sessions will begin in the spring 2010 and continue through the summer of 2010. Providers that use M-CEITA services and/or enroll in the EHR Medicaid Incentive Program will be given assistance in joining an HIE connected to MiHIN Shared Services and will be provided with information to providers on how to realize the benefits of HIE in their practices, sustaining the transformative power of HIT.

Additional coordination between the MiHIN and the Medicaid EHR Incentive Program to leverage existing technologies and share directories and services will also take place and planning efforts are well underway. MDCH plans to leverage the Medicaid data warehouse integration capabilities to extract pertinent administrative and clinical information making it available in a CCD format to Medicaid providers through the MiHIN. The data warehouse's repository capacity and analytical capabilities will also be used to support quality reporting requirements. The data warehouse and Michigan's Medicaid Management Information System will utilize the MiHIN's shared services.

A major milestone of this project is to establish a team of subject matter experts to carry-out the planning and implementation of this integration project. In March of 2010, a project manager was hired to lead the team in the development of a project plan and schedule. The project plan will be complete in June 2010. The integration plan and project schedule will be synchronized with both the MiHIN and the Medicaid HIT Plans.

3.5 Coordinate with Other States

To ensure intrastate coordination and interoperability with other states the MiHIN Shared Services Governance Board will utilize guidance already created by existing HIEs within Michigan, HIEs in other states, nationally recognized organizations, and the ONC. Some of the opportunities to coordinate with other states will initially begin with the following initiatives:

- PHIN Public Health Information Network
- Great Lakes Border Health Initiative- multi-state efforts that ensure that geopolitical and jurisdictional boundaries do not impede infectious disease control and surveillance efforts.
- NGA National Governor's Association State Alliance for e-Health State-level HIE
- ONC- Office of the National Coordinator, including HISPC work

The MiHIN Shared Services coordinated governance structure will also have to monitor and participate in national conversations regarding Privacy and Security, including developments on NHIN and with the DURSA (Data Use and Reciprocal Support Agreement), as well as developments with projects like NHIN Direct. Through implementation of Privacy and Security policies and procedures and the Privacy and Security Committees, MiHIN Shared Services will work to harmonize intrastate efforts with an eye towards interstate exchange.

4 Domain Specific Components

The following sections define Michigan's approach toward operationalizing the domain components detailed in the strategic plan. It is organized by domain and addresses the requirements of the ONC Toolkit.

4.1 Governance

The development of the MiHIN governance functions is a key to developing the statewide shared services infrastructure and supporting widespread interoperability. The MiHIN will be governed by a coordinated governance structure that builds on unique strengths that exist in Michigan.

In July 2010 a new 501(c)(3) not for-profit entity will be established and designated by Governor Jennifer M. Granholm as the State Designated Entity (SDE). The governance board of MiHIN Shared Services will assume the following responsibilities: the business and technical operations of MiHIN Shared Services technology; implementing this Operational Plan; authority over the MiHIN Shared Services; and implementing the financing structures.

Effective immediately, the existing HIT Commission, a representative body of Michigan's HIT and HIE stakeholders, will assume the following responsibilities: monitoring the progress of HIT and HIE statewide; facilitating public discussion of HIT and HIE principles; recommending public policies for HIT and HIE adoption and use; and providing a voice of the public to the MiHIN Board and establish the statewide vision for HIE.

Together, these two entities will share responsibility for specific roles in providing leadership and facilitating consensus to continuously expand Michigan's HIT and HIE capacity.

4.1.1 Milestones, Interdependencies and Timelines

Work is currently underway to formally and legally establish the MiHIN Governance Board in July 2010. Key decisions that are required for the development of articles of incorporation and bylaws, as noted in the Strategic Plan, have been made by the Governance Workgroup. The appropriate actions are currently being taken to complete and file all legal documents required to establish the new entity.

In the timeline depicted below the critical steps that must be performed prior to July 2010 include: finalizing bylaws, designation as the State Designated Entity by the Governor, the establishment of MiHIN Shared Service as legal entity, the election of a board of directors and the hiring of an Executive Director and Administrative Assistant.

The July 2010 date is a critical path item to the MiHIN and has been identified as a risk in the risk section of this document.

The board will be seated in various methods: State government will appoint its members; the HIT Commission will vote on their representative. Healthcare payer and sub-state HIE organizations will be invited by MDCH to identify themselves. A letter from the Director of MDCH will be sent to potential sub-state HIE and payer organizations within Michigan. The intent of these letters is to identify interested parties that are committed to serving as a member of the MiHIN Shared Services Governance Board. The MiHIN Shared Services Governance Board seating process will be defined with the input of multiple stakeholders throughout May 2010 with the initial board seated in June 2010.

Successful implementation of Michigan's Strategic and Operational Plans will require close collaboration between the coordinated governance structure and the MiHIN Shared Services staff. The management structure and staff to operate the MiHIN Shared Services on a day to day basis will be phased in over the four year project term. Positions, including the Executive Director, will be added during 2010 and 2011. Additional staff will be added with the organization fully staffed by 2014. The MiHIN Shared Services Governance Board will evaluate the staffing plans on a quarterly basis to determine the most efficient and effective strategy for staffing.

4.1.2 Achieving Status as a National Health Information Organization

The technical infrastructure, interoperability standards and privacy and security policies in Michigan's Strategic and Operational Plans were designed to accommodate national standards and enable connection to the National Health Information Network (NHIN). The MiHIN Shared Services will be well positioned for connectivity to federal systems due to the design of the architecture.

It is the role of the Michigan HIT Commission to assure continued alignment of the statewide and national vision for health information exchange. It will be the role of the MiHIN Shared Services Governance Board to assure the statewide infrastructure is implemented in accordance with the Strategic and Operational Plans. The Michigan HIT Coordinator will serve as the liaison with NHIN to ensure regular communication regarding the MiHIN Shared Services' evolution toward achieving operational status as an NHIO. The Michigan HIT Coordinator will be charged with keeping the coordinated governance structure fully informed of NHIN developments.

4.2 Finance

The MiHIN Shared Services Strategic Plan establishes the guiding principles, the overriding strategy, and the underlying approach to the financial sustainability of the Michigan statewide shared services network. This foundation not only guided the decisions and efforts that were required to develop the Strategic and Operational Plans. This section provides details related to the financial processes and efforts required to implement the Strategic Plan, and it provides the

specifics of the MiHIN Shared Services startup and operational budget as well as the MDCH Planning and HIT Commission operational budget components.

4.2.1 MiHIN Shared Services Operating Budget

The budget and staffing plan required for the implementation of the Strategic Plan and to operate the MiHIN Shared Services network was developed based upon the selected governance and legal structure, the identified ongoing activities, the architectural infrastructure design, and the stakeholder prioritized services. These factors were used as the foundation for gathering of cost information from several sources including other state and community based Health Information Exchanges and from a select group of the leading HIE vendors. The following are the processes utilized to develop the budget and staffing plan.

- An informal RFI process was undertaken to obtain information regarding software, hardware, implementation and hosting services costs; this included direct discussions with interested vendors
- Detailed discussions were held with several leaders and staff members from the State of Michigan, the Michigan Department of Information Technology and the Michigan Department of Community Health to understand their requirements
- The operational budgets and staffing structures of several other state and community Health Information Exchanges were reviewed to provide insight into the MiHIN budget and staffing, and to validate budget and staffing assumptions
- The ongoing governance, legal/policy, technical, business, and financial activities were identified to assist in defining budgetary requirements

The funding and staffing detailed in the following MiHIN Shared Services budget will allow Michigan to:

- Establish the MiHIN shared services infrastructure to support the deployment of a Master Patient Index, a Master Provider Index, an XDS Repository (Record Locator Service), and security services that make up the enterprise Shared Services Bus.
- Deploy the shared services technology at the MiHIN and sub-state HIE level to undertake use cases that correlate to the first Meaningful Use requirements
- Establish, govern and operate the MiHIN organization, and manage the startup and implementation processes

MiHIN Operational Plan Budget

Item Description	Factors	2010	2011	2012	2013	2014	2015	Totals
Personnel								
Executive Director	100,000	50,000	103,000	106,090	109,273	112,551	115,928	
Administrative Assistant	30,000	15,000	30,900	31,827	32,782	33,765	34,778	
Project Manager	80,000	20,000	82,400	84,872	87,418	90,041	92,742	
Business Analyst	75,000	18,750	77,250	77,250	79,568	81,955	84,414	
Customer Support Specialist	40,000	10,000	41,200	42,436	43,709	45,020	46,371	
Customer Support Specialist	40,000	10,000	41,200	42,436	43,709	45,020	46,371	
Technical Analyst	80,000	-	-	82,400	84,872	87,418	90,041	
Lead Technical Architect	82,000	-	-	84,460	86,994	84,460	86,994	
Lead Security Architect	83,000	-	-	-	-	85,490	88,055	
Lead Privacy Analyst	83,000	-	-	-	-	85,490	88,055	
Total Personnel		123,750	375,950	551,771	568,325	751,210	773,749	
Total Positions		6	6	8	8	10	10	
Fringe Benefits @ 28.5%		35,269	107,146	157,255	161,973	214,095	220,518	
Total Personnel & Benefits		159,019	483,096	709,026	730,298	965,305	994,267	4,041,011
Travel								
Executive Director		8,520	8,520	8,520	8,520	8,520	8,520	
Project Manager		1,749	6,995	6,995	6,995	6,995	6,995	
Travel - Staff Positions								
Business Analyst		413	1,650	1,650	1,650	1,650	1,650	
Technical Analyst		413	1,650	1,650	1,650	1,650	1,650	
Lead Technical Architect		-	-	1,650	1,650	1,650	1,650	
Lead Security Architect		-	-	-	-	1,650	1,650	
Lead Privacy Analyst		-	-	-	-	1,650	1,650	
Total Travel		11,094	18,815	20,465	20,465	23,765	23,765	118,369
Equipment								
Phase 1 - Lab Results & Immunizations								
Shared Services Bus - Core								
MPI Servers		54,000	-	-	-			
Messaging Gateway Servers		60,000	-	-	-			
Provider Index Server		20,000	-	-	-			
Database Server		40,000	-	-	-			
System Software Server		15,000	-	-	-			
SAN or NAS Storage (Gb)		40,000	-	-	-			
Network Equipment		9,000	-	-	-			
Shared Services Bus - Security								
Certificate Server		20,000	-	-	-			
System Software Server		3,000	-	-	-			
Total Shared Services Bus		261,000	-	-	-			
Public Health Reporting								
Messaging Servers		40,000	-	-	-			
Upgrade State Systems (MDSS, MCIR, & StarLIMS)		60,000	-	-	-			
Network Equipment		6,000	-	-	-			
Total Public Health Reporting		106,000	-	-	-			
Sub-state HIE								
None		-	-	-	-			
Total Sub-state HIE		-	-	-	-			
Total Phase 1 - Equipment		367,000	-	-	-			367,000
Phase 2 - CCD, Lab & Immunizations Inquiry								

MiHIN Operational Plan Budget

Item Description	Factors	2010	2011	2012	2013	2014	2015	Totals
Shared Services Bus - Core								
Backbone Servers		-	90,000	-	-			
Web (XDS Repository) Servers		-	20,000	-	-			
System Software Server		-	19,500	-	-			
Shared Services Bus - Security								
None		-	-	-	-			
Total Shared Services Bus		-	129,500	-	-			
Public Health Reporting								
Web (XDS Repository) Servers		-	60,000					
HIE Production Servers		-	72,000					
HIE QA Servers		-	36,000					
Total Public Health Reporting		-	168,000	-	-			
Sub-state HIE - SSB Integration								
Edge Gateways/XDS Servers		80,000	-					
Total Sub-state HIE		80,000	-	-	-			
Total Phase 2 - Equipment		80,000	297,500	-	-			377,500
Equipment Contingency		43,784	29,140	-	-			72,924
Projected Negotiated Vendor Discount		(22,350)	(14,875)	-	-			(37,225)
Total Equipment		468,434	311,765	-	-			780,199
Supplies								
Office Supplies		1,500	2,500	2,575	2,652	2,732	2,814	
Office Equipment Rental		2,500	2,575	2,652	2,732	2,814	2,898	
Staff Equipment		9,000	-	3,000	-	3,000	-	
Postage & Shipping		500	515	530	546	562	579	
Printing		1,650	825	825	825	825	825	
Total Supplies		15,150	6,415	9,582	6,755	9,933	7,116	54,951
Contractual								
MiHIN Implementation Team								
Lead Project Manager		19,125	76,500	76,500	76,500	57,375		
Lead System Architect		51,900	207,600	128,400	102,000	76,500		
Lead Business Architect		15,938	63,750	63,750	63,750	47,813		
Total Implementation Team		86,963	347,850	268,650	242,250	181,688		1,127,400
Phase 1 - Lab Results & Immunizations								
Shared Services Bus - Core								
MPI Software		1,000,000	-	-	-			
Messaging Gateway Software		160,000	-	-	-			
Provider/User Directory Software		275,000	-	-	-			
Vendor Implementation Staff		318,500	318,500	-	-			
Implementation & Interface Services		372,500	372,500	-	-			
Shared Services Bus - Security								
Certificate Server Software		50,000	-	-	-			
Vendor Implementation Staff		105,625	105,625	-	-			
Implementation & Interface Services		26,000	26,000	-	-			
Total Shared Services Bus		2,307,625	822,625	-	-			
Public Health Reporting								
Software - StarLIMS Interfaces		20,000	-	-	-			
SOM Implementation Staff		174,800	174,800	-	-			
Implementation & Interface Services		441,050	441,050	-	-			
Total Public Health Reporting		635,850	615,850	-	-			

MiHIN Operational Plan Budget

Item Description	Factors	2010	2011	2012	2013	2014	2015	Totals
Sub-state HIE - Internal Funds								
Software - Lab Interface		400,000	-	-	-			
HIE Implementation Staff		-	-	-	-			
Implementation & Interface Services		-	-	-	-			
Sub-state HIE SSB Integration								
Software - None		-	-	-	-			
HIE Implementation Staff		81,250	-	-	-			
Implementation & Interface Services		282,000	-	-	-			
Total Sub-state HIE		763,250	-	-	-			
Total Phase 1 - Contractual		3,706,725	1,438,475	-	-			5,145,200
Phase 2 - CCD, Lab & Immunizations Inquiry								
Shared Services Bus - Core								
Software - Services Bus		350,000	-	-	-			
Software - XDS Registry (RLS)		150,000	-	-	-			
Vendor Implementation Staff		-	451,750	-	-			
Implementation & Interface Services		-	250,000	-	-			
Shared Services Bus - Security								
Software - None		-	-	-	-			
Vendor Implementation Staff		-	104,750	-	-			
Implementation & Interface Services		-	52,000	-	-			
Total Shared Services Bus		500,000	858,500	-	-			
Public Health Reporting								
Software - None		-	-	-	-			
SOM Implementation Staff		-	194,400	-	-			
Implementation & Interface Services		-	280,000	-	-			
Total Public Health Reporting		-	474,400	-	-			
Sub-state HIE - Internal Funds								
Software - Immunization Interface		180,000	-	-	-			
Software - CCD Interfaces		500,000	-	-	-			
HIE Implementation Staff		455,000	-	-	-			
Implementation & Interface Services		800,000	-	-	-			
Sub-state HIE SSB Integration								
Software - None		-	-	-	-			
HIE Implementation Staff		363,800	-	-	-			
Implementation & Interface Services		900,000	-	-	-			
Total Sub-state HIE		3,198,800	-	-	-			
Total Phase 2 - Contractual		3,698,800	1,332,900	-	-			5,031,700
Implementation Contingency/excludes MIHIN Implementation Team costs								
Phase 1		190,952	71,460	-	-			262,412
Phase 2		95,578	37,091	-	-			
		95,374	34,369	-	-			
Projected Negotiated Vendor Discount		(370,276)	(138,569)	-	-			(508,845)
Total Contractual		7,313,164	3,052,116	268,650	242,250	181,688	-	11,057,867
Other								
Office Space Rental w/utilities		26,400	52,800	52,800	52,800	52,800	52,800	
Communication Services		3,700	9,000	9,000	9,000	9,000	9,000	
Insurance		10,000	10,300	10,609	10,927	11,255	11,593	
Legal Services		80,000	50,000	30,000	30,000	30,000	30,000	
Web Development		8,100	-	-	-	-	-	
Vendor Hosting Fees		75,000	300,000	300,000	300,000	300,000	300,000	

MiHIN Operational Plan Budget

Item Description	Factors	2010	2011	2012	2013	2014	2015	Totals
Hardware Maintenance Fees		30,000	-	-	-	-	30,000	
Hardware Replacement/Depreciation Reserve		19,525	78,100	78,100	78,100	78,100	78,100	
Software Maintenance Fees								
Services Bus (Prod/Test/Dev)		35,000	70,000	70,000	70,000	70,000	70,000	
MPI License		100,000	200,000	200,000	200,000	200,000	200,000	
XDS Registry or RLS		15,000	30,000	30,000	30,000	30,000	30,000	
Messaging Gateway License		16,000	32,000	32,000	32,000	32,000	32,000	
Provider/User Directory		27,500	55,000	55,000	55,000	55,000	55,000	
Certificate Server License		5,000	5,000	5,000	5,000	5,000	5,000	
NHIN Gateway		-	-	-	-	-	-	
Staff Training & Registration Fees		1,725	4,200	5,600	5,600	7,000	7,000	
Total Other		452,950	896,400	878,109	878,427	880,155	910,493	4,896,534
Total Direct Costs		8,419,810	4,768,607	1,885,832	1,878,195	2,060,846	1,935,641	20,948,931
Indirect Charges	None	-	-	-	-	-	-	-
Total Implementation & Operating Costs		8,419,810	4,768,607	1,885,832	1,878,195	2,060,846	1,935,641	20,948,931
Funding Summary								
Federal HITECH Grant								
MiHIN Deployment & Pilots		7,003,438	3,027,493	230,271	161,500	121,131	-	10,543,833
MiHIN Startup Operating Costs		603,713	1,351,926	-	-	-	-	1,955,639
Total Federal HITECH Grant		7,607,151	4,379,419	230,271	161,500	121,131	-	12,499,472
State of Michigan Match								
MiHIN Deployment & Pilots		778,160	336,388	38,379	80,750	60,556	-	1,294,233
MiHIN Startup Operating Costs (Web Development)		8,100	-	-	-	-	-	
Total SOM Match		786,260	336,388	38,379	80,750	60,556	-	1,302,333
Stakeholder In-kind Match		26,400	52,800	52,800	52,800	52,800	52,800	290,400
Sub-State HIE/Payer Membership Fees		NONE	NONE	1,564,382	1,583,145	1,826,358	1,882,841	6,856,726
Total Funding		8,419,811	4,768,607	1,885,832	1,878,195	2,060,845	1,935,641	20,948,931
Cost Summary								
Capital Costs		8,419,811	4,768,607	268,650	242,250	181,687	-	13,881,005
Operational Costs		-	-	1,617,182	1,635,945	1,879,158	1,935,641	7,067,926
Total Costs		8,419,811	4,768,607	1,885,832	1,878,195	2,060,845	1,935,641	20,948,931

4.2.2 MiHIN Shared Services Staffing Plan

The section below details the overall staffing plan associated with implementation the MiHIN Shared Services Entity. Key functional roles and their associated descriptions are described in this section. The Business and Technical Operations section of this document provides more detail on how contractor and vendor staff will be used to augment these resources during the implementation of the MiHIN Shared Services technology.

The Staffing Plan consists of the following positions phased in over a five year period. In 2010 and 2011, during the deployment, implementation, and startup stage, the Executive Director, Administrative Assistant, Project Manager, Business Analyst, and the two Customer Support

Specialists positions will be filled. These positions will provide the direction, leadership, and coordination for the MiHIN Shared Services governance and business operations startup activities, customer support activities, as well as, the technical activities related to the design, acquisition, and deployment of the statewide shared services network infrastructure.

Additionally, these positions will provide the project management and technical leadership for the implementation of the planned HIE pilot projects. During this phase the MiHIN Shared Services staff will be assisted by a contracted Implementation Team that will provide lead positions in the areas of business and system architecture including privacy and security. The following provides a general description of the responsibilities of these first MiHIN Shared Services positions.

- **Executive Director:** Provides strategic and operational direction and oversight for the organization; ensures that the MiHIN outreach program is coordinated with sub-state HIEs and Michigan's REC; is the executive representative for MiHIN Shared Services and is the primary point of contact for the stakeholders and others seeking to conduct business with MiHIN Shared Services.
- **Administrative Assistant:** Provides clerical and administrative support; assists the Executive Director in collecting, tracking, and reporting of the financial activities, and assists with the maintenance of the MiHIN Shared Services website content.
- **Project Manager:** Coordinates all service development and service implementation projects with vendor, contracted, sub-state HIE, and the State of Michigan project managers and staff; ensures that industry recognized standards and methods are utilized to manage all projects.
- **Business Analyst:** Coordinates activities related to the identification, evaluation, and selection of services and capabilities that will be offered by MiHIN Shared Services; monitors and reports stakeholder utilization of existing services and capabilities; assists in the maintenance of the MiHIN Shared Services website content.
- **Customer Services Specialist:** Coordinates activities related to the operational support of the MiHIN Shared Services stakeholders including access to services and capabilities, and coordinating the resolution of MPI identity match issues with the sub-state HIEs.

In 2012, with the beginning of the first year of full production operations the Technical Analyst and the Lead Technical Architect positions will be filled. These positions will provide additional capacity to support new stakeholders and new services, and will assume more responsibility for the control and direction of the MiHIN Shared Services technical infrastructure. During this period the MiHIN Shared Services staff will continued to be supported by the contracted Implementation Team, however, this support will not require as much time during this stage of operations as was required during the startup and implementation stage. This contracted support will be phased out at the end of State HIE Cooperative Agreement funding. The

following provides a general description of the responsibilities of these additional MiHIN Shared Services positions.

- **Technical Analyst:** Coordinates activities related to the operational status of technical and functional services and capabilities, stakeholder access to these services and capabilities, and assists in the resolution of data, software, and hardware issues including providing the second level of support for the resolution of MPI identity match issues.
- **Lead Technical Architect:** Coordinates activities related to the acquisition, installation, maintenance, and operation of the various infrastructure components; serves as the primary contact for all vendor and service provider contracts, and serves as the primary system architect for the MiHIN Shared Services organization.

In 2014, the organization will have implemented its Business Plan and will be fully sustainable without dependence upon grants or State subsidy for its operations. Beginning this year the MiHIN Shared Services operations will be supported entirely by entity employed staff. At this point the remaining open positions will be filled; this includes the Lead Security Architect, and the Lead Privacy Analyst. These positions will replace the contracted Implementation Team staffing that will be phased out at the beginning of this year. The following provides a general description of the responsibilities of these additional MiHIN Shared Services positions.

- **Lead Security Architect:** Coordinates activities related to the establishment of security and access standards, policies, methods, and procedures; monitors, reports, tracks, and resolves security and access violations; this position is a contracted position during the grant period, and it will then become a permanent staff position.
- **Lead Privacy Analyst:** Coordinates activities related to the establishment of privacy and confidentiality standards, policies, methods, and procedures; monitors, reports, tracks, and resolves privacy and confidentiality breaches; this position is a contracted position during the grant period, and it will then become a permanent staff position.

4.2.3 MDCH Planning & HIT Commission Budget

The following details the operational components of the Michigan HIT Commission budget that directly support the governance and operations of MiHIN Shared Services, as well as, those components required to support activities related to the monitoring the progress of HIT and HIE adoption statewide, facilitating public discussion of HIT and HIE principles, and recommending public policies for HIT and HIE adoption and use.

MDCH Planning & HIT Commission Operating Budget

This is a calendar year based budget representing the 4 fiscal years of the ONC Grant								
Item Description	Factors	2010	2011	2012	2013	2014	2015	Totals
Personnel								
HIT Coordinator	77,709	19,427	77,904	78,683	79,469	80,263	81,065	
Department Manager	67,600	16,900	67,769	68,447	69,131	69,822	70,520	
Outreach Coordinator	65,000	16,250	65,163	65,815	66,473	67,138	67,808	
Total Personnel		52,577	210,836	212,945	215,073	217,223	219,393	1,128,047
Total Positions		3	3	3	3	3	3	
Personnel & Benefits								
HIT Coordinator		10,292	41,274	41,686	42,103	42,523	42,948	
Department Manager		8,954	35,904	36,263	36,626	36,992	37,362	
Outreach Coordinator		8,609	34,523	34,869	35,217	35,570	35,925	
Fringe Benefits @ 52.98%		27,855	111,701	112,818	113,946	115,085	116,234	597,639
Total Personnel & Benefits		80,432	322,537	325,763	329,019	332,308	335,627	1,725,686
Travel								
Travel - Out of State		1,600	6,440	6,602	6,770	6,942	7,115	
Travel - In State		500	2,013	2,063	2,115	2,168	2,222	
Total Travel		2,100	8,453	8,665	8,885	9,110	9,337	46,550
Equipment								
None		-	-	-	-	-	-	
Total Equipment		-	-	-	-	-	-	-
Supplies								
Office Supplies		3,000	12,000	12,000	12,000	12,000	12,000	
Other		-	-	-	-	-	-	
Total Supplies		3,000	12,000	12,000	12,000	12,000	12,000	63,000
Contractual (Planning)								
Consultants		849,791	-	-	-	-	-	
Other (HIT Commission 2010 Staff)		141,071	-	-	-	-	-	
Other (HIT Commission 2010 Staff Travel)		4,062	-	-	-	-	-	
Other (HIT Commission 2010 Staff Supplies)		5,077	-	-	-	-	-	
Total Contractual		1,000,000	-	-	-	-	-	1,000,000
Other								
SOM Random Moment Sampling/Audit		25,063	100,250	100,250	100,250	75,188	-	
Web Site Maintenance		1,800	7,200	7,200	7,200	7,200	7,200	
Other		-	-	-	-	-	-	
Total Other		26,863	107,450	107,450	107,450	82,388	7,200	438,800
Total Direct Costs		1,112,395	450,440	453,878	457,354	435,806	364,164	3,274,036
Indirect Charges (Federal Share of Salaries)								
	9.4%	4,448	17,837	17,157	13,478	10,184	-	63,104
Total Implementation & Operating Costs		1,116,843	468,277	471,035	470,832	445,990	364,164	3,337,140

MDCH Planning & HIT Commission Operating Budget

This is a calendar year based budget representing the 4 fiscal years of the ONC Grant								
Item Description	Factors	2010	2011	2012	2013	2014	2015	Totals
Funding Summary								
Funding Source		2010	2011	2012	2013	2014	2015	
Federal HITECH Grant		1,105,603	423,233	406,195	318,381	240,174	-	2,493,586
State of Michigan Match		11,239	45,044	64,840	152,451	114,995	-	388,570
Total Funding		1,116,843	468,277	471,035	470,832	355,170	-	2,882,156
State of Michigan Budget						90,820	364,164	454,984
Cost Recap								
Capital Costs		1,004,448	17,837	17,157	13,478	10,184	-	1,063,104
Operational Costs		112,395	450,440	453,878	457,354	435,806	364,164	2,274,036
Total Costs		1,116,843	468,277	471,035	470,832	445,990	364,164	3,337,140

4.2.4 HIT Commission Staffing Plan

This Staffing Plan includes the current positions of HIT Coordinator and the Department Manager which have led the development of the MiHIN Shared Services Strategic and Operational Plans, and the position of Outreach Coordinator that will be recruited by October 2010. These positions will provide the direction, leadership, and coordination of HIT Commission activities with the MiHIN Shared Services staff and governance body in the areas of business operations, operational startup, statewide shared services priorities, network infrastructure design, and stakeholder outreach and education activities.

- **HIT Coordinator:** Provides senior management leadership and government oversight of the State of Michigan's involvement in the creation and operation of the statewide shared services network and the exchange of health information. Provides daily coordination with the MiHIN Shared Services Executive Director in the areas of stakeholder education, collaboration, and consensus building regarding the statewide and national vision for health information exchange and HIT adoption, and public policy development.
- **Department Manager:** Provides departmental leadership in the administration of the HIT Commission's operations including areas related to outreach and educational program development, definition and development of state and national progress reporting, and coordination with the MiHIN Shared Services leadership in the development and delivery of stakeholder and public informational and educational programming.
- **Outreach Coordinator:** Provides coordination of marketing and outreach activities with MiHIN Shared Services leadership, sub-state HIEs, and the healthcare community in Michigan; promotes the adoption and use of HIT, the exchange of health information through the sub-State HIEs and MiHIN Shared Services; coordinates the development and distribution of marketing, educational, and promotional materials; coordinates the maintenance of the MiHIN Shared Services website content.

4.2.5 Achieving Operational Status

The funding and the staffing represented in the above budgets provides the resources to operationalize the MiHIN Strategy and Approach for Financial Sustainability which calls for the implementation of a series of funding mechanisms that establishes an equitable and proportional allocation of costs across all MiHIN Share Services customers. It directs the organization to utilize only those funding mechanisms that through an ongoing process of analysis and review achieve the following:

1. Recognize that all who benefit from the values realized from the exchange of health information will equitably and proportionally participate in the financing and support of the statewide shared services network, and
2. Optimize the use of the statewide shared services network by establishing a fee structure that encourages the adoption and use of HIT and the exchange of health information within and across sub-state HIEs, thus further assisting eligible providers in achieving “meaningful use”, and
3. Enable the extension and expansion of the capabilities, services, and benefits of the exchange of health information within the State of Michigan by ensuring that sustainable revenues are available to meet both current and future federal, state, and stakeholder service demands beyond the four years of the HITECH grant funding (2010 – 2014).

MiHIN Shared Services will institute an evaluation and review process that will continually measure the appropriateness and effectiveness of the various funding mechanisms to ensure the operational sustainability of the statewide shared services network beyond the HITECH grant funding period. The selected mechanisms will enable the equitable and proportional allocation of costs to the various stakeholders, and will ensure that the pricing structures reflect the relative value of each service and generate the required revenues. To ensure the most cost effective acquisition of services and assets the State of Michigan will continue to utilize its purchasing power to enable MiHIN Shared Services, as the State Designated Entity, to leverage its purchases. The following describes the funding approach that will be used in each stage of evolution of MiHIN Shared Services’ production operations.

Startup & Pilot Stage - During the startup and pilot phases of operations (2010 and 2011) MiHIN Shared Services financing will utilize funds provided through the HITECH State HIE Cooperative Agreement grant and the State of Michigan matching funds to cover planning, capital startup costs, asset acquisition, operational startup costs, and pilot project implementation costs.

Production Stage - Beginning in 2012 with the first full year of production operations MiHIN Shared Services will initiate the collection of access and usage fees from its primary customer

base which includes the sub-state Health Information Exchanges and Public and Private Healthcare Payers that are then connected to MiHIN Shared Services statewide network. These fees will begin establishing the financial sustainability of the network. It is likely that the allocation of the fees to each of the primary customers will be based upon one or more factors that reflect some relevant aspect of its service base such as total population, number of hospitals, number of hospital beds, number of admissions, number of ER visits, number of ambulatory encounters, number of physicians, market share, number of covered lives, or other such statistical indicator of potential impact and benefit. This equation will be finalized by the MiHIN Shared Services Governance Board.

Each sub-state Health Information Exchange will determine the methodology it will use to allocate their MiHIN fees across their customer base. This process will significantly simplify the MiHIN revenue administration activities, and will take advantage of the revenue processes already in place in each sub-state Health Information Exchange.

Additionally, during this initial production period MiHIN Shared Services may institute the use of additional access and usage fees such as Membership, Subscription, Sponsorship, Transaction, and Fee-for-Service fees to accommodate the addition of new customers and new statewide shared services. This evolving fee structure and the growing customer base will provide the sustaining revenue required to operate the MiHIN statewide shared services network beyond the grant period.

Sustainable Production Stage - Finally, beginning in 2014 at the end of the HITECH State HIE Cooperative Agreement grant period, MiHIN Shared Services will have established the services and the customer base to provide the sustaining revenues it requires for operations without dependence upon additional grant funding or State of Michigan subsidies. While grant funding will not longer be required for operational support, it is anticipated that additional grant funding will be sought to support the acquisition, deployment, and piloting of new statewide shared services.

4.2.6 Business Model and Financing

The new MiHIN Shared Services 501 (c)(3) entity, once it has been created, will undertake the development of a business plan that supports their adopted financial sustainability strategy and approach. In this effort the estimated operational and capital budgets developed during the Strategic and Operational Planning phase will be replaced with actual budgets that result from completing a formal Request for Proposal process and from the implementation and ongoing support of the planned HIE pilot projects.

This financial and business modeling effort will establish the ongoing process that will allow all factors including those listed below to be fully analyzed and periodically reviewed to ensure that the selected funding mechanisms remain aligned with MiHIN Shared Services financing strategy and guiding principles, and that they continue to produce the required sustaining revenue.

The following are examples of business and financial evaluation factors that will be considered:

1. The impact, appropriateness, acceptability, and timing of each of these funding mechanisms as it relates to each stakeholder group
2. The size and number of participants in each stakeholder group
3. The timing of the delivery of each of the identified service priorities
4. The extent to which the value of a given service can be determined and associated with one or more stakeholder groups
5. The extent to which a given service has a directly associated ROI that can be associated with one or more stakeholder groups

The initial and ongoing results of this business and financial modeling will enable MiHIN Shared Services to finalize its revenue targets and establish the appropriate fee structures that will be incorporated into the stakeholder trust agreements thereby establishing the formal basis for financial support. Additionally, this modeling activity will allow MiHIN Shared Services to finalize its Business Plan and submit this plan to the ONC by the February 10, 2011 deadline.

Accounting, financial and reporting structures will be established by MiHIN Shared Services to reflect the financial plan and budget presented for the State Health Information Exchange Cooperative Agreement program. The software and accounting pack is yet to be selected. That will be a primary initial function of the MiHIN Shared Services governance board once the entity has officially been created and is functional. The requirements for the accounting and time keeping applications will include Generally Accepted Accounting principles. There will also be challenges surrounding the grants management process. This will require a centralized process for grants management to assure that no money is left on the table and that an accurate understanding of administrative costs will be crucial to management of them. In addition, MiHIN will comply with OMB regulations Circular A-122 and Circular A-133 detailing the requirement to supply certified audits and reports of the MiHIN accounting activities by engaging a CPA.

4.3 Technical Infrastructure

Michigan's technical infrastructure will accommodate the implementation of a statewide shared service bus while providing a framework that sets boundaries on the dimensions of technical implementation to ensure interoperability and consistent operation.

This section defines the approach, action steps and decision points associated with the technical aspects of the deployment of the MiHIN Shared Services Bus including NHIN interoperability. It also describes plans to respond to the evolving meaningful use criteria and relevant certification processes.

4.3.1 Implementation Approach and Action Steps

The MiHIN Shared Service will be implemented in phases that will provide ability for the stakeholders to consume the technology components in manageable pieces.

The current project schedule sets a goal that technology implementation will initiate in October 2010. This milestone requires the selection of vendors and the associated products prior to that date. Therefore the stakeholder community has identified the RFP process as a critical path item for the deployment of MiHIN.

The planned deployment of MiHIN was structured to provide immediate consumer benefit through the implementation of specific Use Cases that map to the ONC HIE Service areas. This approach has an added benefit of allowing the stakeholder community to build out the foundational components in an incremental fashion that over a period of 12 months will ultimately lead to an extensible set of web services operating through an Enterprise Services Bus (ESB) that will facilitate comprehensive data exchange throughout the State of Michigan and with additional funding the NHIN.

An aggressive schedule of six weeks is planned for the vendor selection process. This schedule can only be achieved because of the significant work performed by the State of Michigan and contracted consultants and subject-matter experts from September 2009 through April 2010. During that time period a technical architecture document was created, vendors were solicited through an RFI process, a technical workgroup consisting of stakeholders through the state was convened, vendors were further screened through the Vendor Collaboration Team, a System Requirements Document was completed and targeted detailed technical specifications were complete. This work, specifically the System Requirements Document and Technical Specifications are structured to be integrated into a RFP template.

A two week period for contract negotiations has been allocated with a contract planned to be executed in September 2010. This schedule provides some contingency during September and allows for a project planning period prior to the project start in October 2010.

4.3.2 Decision Points

Throughout the project key decisions will be made regarding the deployment of technology. Those decisions will be documented during the project planning activities. This section of the document details larger scope decisions that will need to be made during the implementation of MiHIN.

4.3.2.1 Vendor Selection

One of the key decisions that will be made by the MiHIN Shared Services Governance Board in the early phases of the project will be the selection of the vendor. This decision will be made using a process that will combine immediate business need, strategic direction, capabilities and cost.

4.3.2.2 Leveraging Components

Leveraging components that stakeholders already have that are required by the MiHIN shared services bus is a key decision for the implementation team. For example messaging gateways (or interface engines), eMPIS, security tools and data warehouses are all examples of some of the technologies uncovered during an analysis of the HIT and HIE capacity in Michigan. Determining if any of them should be leveraged or extended to the Shared Services Bus will be a part of the first phase of the technology deployment.

The core components of the MiHIN are crucial to its function, performance, security and success so reusing existing components must be considered carefully. As the MiHIN matures there will be the need to have more than one shared services bus for purposes of reliability and performance.

4.3.3 Alignment with NHIN Core Services and Standards

The MiHIN architecture has an overarching goal to be compliant with the national standards for healthcare interoperability recognized by the Secretary of the Department of Health & Human Services (HHS). Specifically, HHS recognizes interoperability specifications containing harmonized standards published by the Healthcare Information Technology Standards Panel (HITSP), and as such, the MiHIN is being designed as a HITSP-compliant and HITSP-consistent (where no direct conformance criteria exist) architecture. Similarly, HHS has sponsored a large scale development effort to build a national health information exchange capability called the Nationwide Health Information Network (NHIN) that instantiates the HITSP standards into real networks and systems. The MiHIN will leverage the work of the NHIN effort in its architectural framework, as is cited later in this document.

The MiHIN Shared Services Bus will support the NHIN core functions of Security Services, Patient Discovery, Query for Documents and Retrieve Documents. NHIN Standards are mostly in *Limited Production* but there is at least one case of *Production* with the MedVirginia

connection to the Social Security Administration using Connect Open Source. To meet these functional requirements MiHIN Shared Services will follow the NHIN 2010 Final Production Specifications as follows:

- [ACCESS CONSENT POLICIES PRODUCTION SPECIFICATION - V1.0](#)
- [AUTHORIZATION FRAMEWORK PRODUCTION SPECIFICATION V2.0](#)
- [QUERY FOR DOCUMENTS PRODUCTION SPECIFICATION V2.0](#)
- [RETRIEVE DOCUMENTS PRODUCTION SPECIFICATION V2.0](#)
- [HEALTH INFORMATION EVENT MESSAGING PRODUCTION SPECIFICATION V2.0](#)
- [MESSAGING PLATFORM PRODUCTION SPECIFICATION V2.0](#)
- [PATIENT DISCOVERY PRODUCTION SPECIFICATION V1.0](#)
- [WEB SERVICES REGISTRY PRODUCTION SPECIFICATION V2.0](#)

The MiHIN Shared Services NHIN gateway implementation is scheduled to be implemented in Phase three. In order to prepare for this implementation all connectivity to the MiHIN Shared Services Bus will be standards-based.

4.3.4 Compliance to Certification Requirements

The MiHIN Shared Services Governance board recognizes that the ONC is ultimately the certifying authority for statewide HIE initiatives. MiHIN Shared Services will follow and implement any guidance published by the ONC and expects to be able to quickly attain certification when required.

4.3.5 Process for Responding to Evolving Meaningful Use Criteria

As the criteria and requirements for Meaningful Use expand and adapt over time, the MiHIN Shared Services technologies are a solid foundation to meet any emerging requirements. The shared services in security, document registry, patient and provider indexes and the shared services bus will enable any necessary functionality to be added incrementally, without requiring the replacement of current technologies to meet new needs and use cases.

At this time, the planned service capabilities are adequate to meet the needs of providers in Michigan to achieve meaningful use through the sub-state HIEs and the MiHIN Shared Services. The incremental nature of the deployment strategy allows the MiHIN to adjust service deployment to match the changing needs of Meaningful Use and developments in standards and technologies.

Operationally, the needs and requirements for health information exchange and meaningful use will be integrated in the formal environment scan methodology used to assess HIE in Michigan. The deployment strategy calls for a 12 month rolling window with two six month phases. As the first phase nears completion, the next six month implementation phase will be planned. These methodologies allow MiHIN Shared Services to adapt and meet changing needs.

4.4 Business and Technical Operations

This section of the Operational Plan describes the details of how the governance structure and technical operations will be implemented.

4.4.1 Governance Implementation

The MiHIN long-term governance model is a coordinated governance structure that includes utilizing the statewide vision and public structure of the existing Michigan HIT Commission and the creation a new MiHIN Governance Board to allow those that pay for and directly benefit from the MiHIN to govern the business and technical operations.

The Michigan HIT Commission will immediate assume its role in the coordinated governance structure, as it has the organization capacity to incorporate this scope of work.

It is expected that the MiHIN Shared Services Governance Board parameters (operational charter, etc.) will be defined by the end of May 2010 with the proper paperwork being filed and the initial appointment process ending in July 2010. The governing entities board has been defined to consist of a maximum of 13 member, consisting of representatives from up to seven sub-state HIEs, three payer representatives, two State government members (representing MDCH and Medicaid), and one commissioner from the HIT Commission.

The board will be seated in various methods: State government will appoint its members; the HIT Commission will vote on their representative. Payer and sub-state HIE organizations will be invited by MDCH to identify themselves. The MiHIN Shared Services Governance Board seating process will be defined with the input of multiple stakeholders throughout May and June 2010. The need to accommodate additional sub-state HIEs or other classes of board membership has been identified and listed as a future action item for the MiHIN Shared Services Governance Board.

Initial MiHIN Shared Services Board membership will be staggered and while the exact duration of a term is to be determined, officers elected by the board will serve at least a 2 year term.

Legal services will be used in May to perform the functions necessary to form the MiHIN Shared Services Governance Board entity. The entity will be initially incorporated as a Michigan corporation, then apply for 501(c)(3) status. It is expected that the governing entity will be operation in July 2010. At that time, the Michigan Governor Jennifer M. Granholm will designate the MiHIN Shared Services as the Governance Board as the State Designated Entity.

Before the boards first meeting, final corporate bylaws will be developed as well as clearly delineated and designated governance roles, along with non-discrimination and conflict of

interest policies that demonstrate a commitment to open, fair, and nondiscriminatory board activities. The bylaws, roles and policies will be developed by a sub-set of members from the MiHIN governance workgroup process.

The initial MiHIN Shared Services Governance Board meeting is scheduled in July 2010. At this meeting, the final bylaws, roles and policies will be approved. The MiHIN Shared Services Governance Board will conduct regularly scheduled meetings as determined by the bylaws creating the entity. The HIT commission will continue its regularly scheduled monthly meetings. A joint meeting with the Michigan HIT Commission is targeted to take place in September 2010.

4.4.2 Technical Implementation

The kick-off for first phase of the MiHIN Shared Services is October 2010. Leading up to kick-off date, a variety of planning and preliminary technical testing will occur. Currently underway are activities to define specifications including use cases, technical specifications, and implementation guidance. These documents will define the technical characteristics of the pilot projects and will be delivered to the MiHIN Governance Board upon completion.

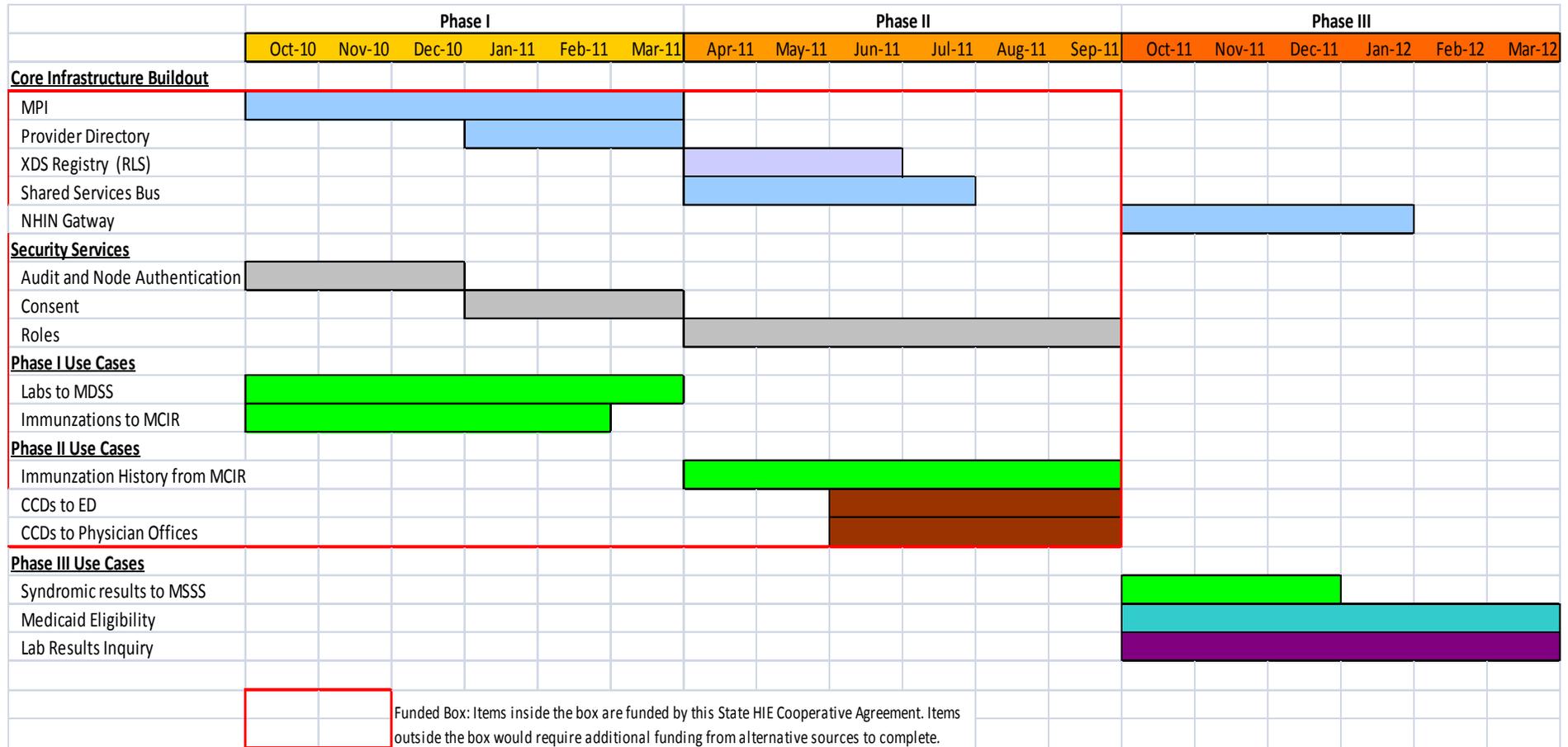
Selection of pilot organizations will be done by the MiHIN Shared Services Governance Board and will be completed in September 2010. Technical procurement requirements will be met in October 2010. At that time, the formal kick-off of the first phase of the MiHIN Shared Services will begin.

The build-out of core MiHIN capabilities is scheduled to begin in October 2010. To incrementally test the implemented core services, proof-of-concept testing will occur after initial installations. The testing will confirm abilities to transfer reportable laboratory results to the Michigan Disease Surveillance System (MDSS) and immunization records to Michigan Care Improvement Registry (MCIR).

Core MiHIN capabilities will be built in two broad categories: core infrastructure build-out and security services, core infrastructure build-out will consist of a Master Patient Index (MPI), provider directory, XDS registry (Record Locator Service), which completes the shared services bus. The MPI is scheduled to begin implementation in October 2010, completing in March 2011. The provider directory is scheduled to begin implementation in January 2011, completing in March 2011. The XDS registry will begin implementation in April 2011, completing in June 2011. The last core infrastructure build-out, the shared services bus, will begin in April 2011 and complete in July 2011.

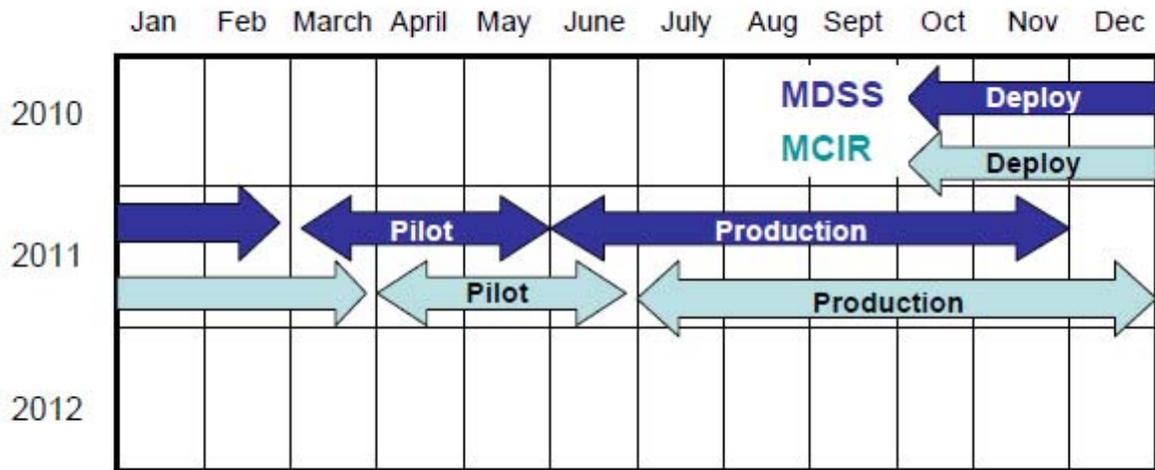
Security services will consist of audit and node authentication, consent, and roles. Audit and node authentication capabilities will begin implementation in October 2010, completing in December 2010. Capabilities to enforce consent directives will begin to be implemented in January 2011, completing in March 2011. The ability to enforce policy directives based on roles will begin implementation in April 2011, completing in September 2011.

A graphical summary of the deployment timeline can be found in the MiHIN Deployment Strategy Chart below.



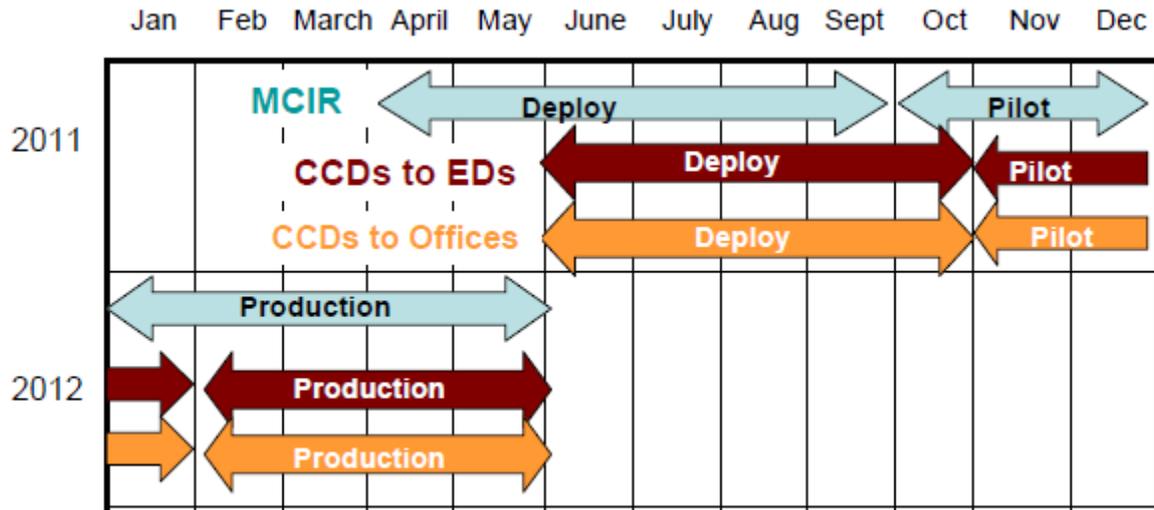
MiHIN Shared Services Deployment Strategy

The first phase (Pilot Phase I) will begin in October 2010. The projects are reportable lab results delivery to the Michigan Disease Surveillance System (MDSS) and immunization reports to the Michigan Care Improvement Registry (MCIR) and will end deployment phase in March and February 2011, respectively. In accordance with the deployment strategy, all projects will enter the three month pilot operations stage at that time, with the limited production stage to follow in July and June 2011 respectively. The phase I pilot projects are scheduled to enter production status in December and November 2011, respectively.



Phase 1 Deployment, Pilot and Production Schedule

The second phase will begin in April 2011. Three use cases will be rolled out in this phase. The projects are Immunization History from MCIR, CCDs to Emergency Departments and CCDs to Physician Offices. The first project, immunization history from MCIR, will begin deployment in April 2011, enter pilot operations in October 2011, limited production in January 2012, and production status in June 2012. The second and third pilot projects, CCDs to Emergency Departments and CCDs to Physician Offices, will both start deployment in June 2011, enter pilot operations in October 2011, production in January 2012, and production status in June 2012.



Phase 2 Deployment, Pilot and Production Schedule

4.4.3 Staffing

Staffing is expected to be minimal; our strategy relies on outsourcing all initial and future implementation and technical development activities. The new governance entity board will be responsible for hiring new staff for the MiHIN organization. It is estimated that five staff members will be needed by October 2010. By 2015, it is expected that eleven staff members will be needed.

4.4.4 MiHIN Shared Services Governance Staffing

The governing entity is expected to have an initial staff of five. Details of positions and hire dates can be found in section VI.B. All governing entity staff positions will be employees. The positions, roles, and dates of hire are summarized in the table below:

<u>Staff Member</u>	<u>Year of Hire</u>	<u>Role</u>
Executive Director	2010	Administrative
Administrative Assistant	2010	Administrative

4.4.5 Michigan HIT Commission Staffing

In its role in the coordinated governance structure, the Michigan HIT Commission will utilize staff to fulfill its roles and responsibilities. The positions, roles, and dates of hire are summarized in the table below.

<u>Staff Member</u>	<u>Year of Hire</u>	<u>Role</u>
HIT Coordinator	2010	Administrative
HIT Specialist	2010	Administrative
Outreach Specialist	2010	Technical

Detailed estimates of costs can be found in the financial domain section.

4.4.6 MiHIN Shared Services Technical Staffing

The staff for implementation will consist largely of contracted vendor services and other consultants as appropriate. As pilot projects move toward production status, the ongoing operations will be handled by governing entity technical staff and vendor staff as appropriate.

For ongoing operations, the governing entity will hire employees. The positions and dates of hire are summarized in the table below:

<u>Staff Member</u>	<u>Year of Hire</u>
Project Manager	2010
Business Analyst	2010
Customer Support Specialist (2)	2010
Technical Analyst	2012
Lead Technical Architect	2012
Lead Security Architect	2014
Lead Privacy Analyst	2014

During implementation, the deployment will be overseen by the MiHIN Shared Services Technical staff and with a contracted implementation team. The implementation team will be built up as appropriate, but initially it is anticipated that a lead project manager, a system architect and a business architect would be needed.

A variety of technical staff will be used as part of vendor solutions. These services may be contractual or bundled into the price of the solutions. Estimated requirements to implement use cases have been developed. These estimates are subject to change based on the actual vendor solution procured. Detailed estimates of labor-hours and costs can be found in the financial domain section.

4.4.7 Procurement processes and timelines

In July 2010, the governing entity will use the materials prepared in advance to rapidly evaluate and procure the hardware necessary to begin the phase I projects in the deployment plan.

The initial procurement of the phase one technology will be done by October 1, 2011. The deployment plan projects an October 1, 2010 start for phase one projects. Planning and vendor evaluation will occur throughout August and September 2010.

4.4.8 Contracting processes and timelines

Contracts for technology will be established by the MiHIN Shared Services Governance Board. The process for procuring and contracting will be determined by the new governing entity and implemented as an initial task once it is created in July 2010.

4.4.9 Standard operating procedures

Standard operating procedures will be developed during pilot deployments and limited production phases of our deployment strategy. Best practices will be reviewed and preliminary policy and procedure manuals covering the services to be deployed will be drafted. During the course of the phases, changes in implementation specifications will be monitored and their impact on the operational methodologies assessed. A production candidate set of operational policies and procedures will be validated during the deployment strategy limited production phases of service implementations. They will, in turn, be assessed and modified as required based the experiences of the limited production phases.

There are two classes of operations guidelines: one for organization-wide operations that all services are likely to require (backup, disaster recovery, etc) and technology-specific operations guides (patient-identity remediation, etc). Organization-wide policies will be reviewed for necessary changes required by the addition of unique services. Specific guides will be developed when a service is deployed.

To ensure continuous improvement of process and realize the lowest operating cost possible, operational policies will be reviewed on a rolling quarterly basis, each policy being review yearly. To realize efficiency gains, all specific policies will be analyzed yearly to discover any similarities that would enable a shared procedure and potential savings in money, time and/or labor.

Policies and procedures for business functions (such as accounting) will be established by the MiHIN Shared Services Governance Board.

4.5 Legal / Policy

This section of the operational plan provides the details associated with the approach toward creating the legal structure that will be responsible for the operation of MiHIN Shared Services and the steps required to ensure compliance with Federal and State Privacy and Security regulations.

4.5.1 Legal Steps for the Establishment of the Governance Structure

One of the key steps in the execution of this operational plan is the creation of the legal entity that is MiHIN Shared Services. Many of the decisions that are required to create the legal entity such as make-up of the Board of Directors, operational budget and staffing plan were made during the planning phase of this project. The next step is the creation of the legal entity that is MiHIN Shared Services.

The creation of this entity will be performed by a Michigan attorney skilled in the creation of not-for-profit organizations. It will be the responsibility of this attorney to use the results of the planning effort to create the bylaws and articles of incorporation that will be filed with the State of Michigan.

The creation of the legal entity provides the organizational structure that is required to apply to the Internal Revenue Service for not-for-profit status. While Health Information Exchange's have been approved for not-for-profit status there are no clear guidelines for an organization to obtain the required status. Therefore it is expected that this process will take some time to complete.

4.5.2 Federal and State HIE Privacy and Security Policy Development

The MiHIN Shared Services Governance Board will appoint both a Privacy Officer and a Security Officer who will ensure compliance with all applicable federal and state laws, as well as providing state-wide leadership and guidance for Michigan's sub-State HIEs. Additionally, due to Michigan's shared international border with Canada and in consideration of Michigan's colleges and universities the MiHIN Shared Services will also work to develop policies that address international laws as appropriate. The MiHIN Shared Services will build on the stakeholder policy recommendations to ensure that adequate Privacy and Security policies are in place.

In order to continue to foster state-wide participation and to promote consistency and communication among the sub-state HIEs, the MiHIN Shared Services coordinated governance structure will establish and manage two working committees made up of stakeholders, including representatives from specially protected health information groups and health plans. The work

groups will manage the Privacy and Security of the MiHIN Shared Services as well offering guidance and direction to the sub-state HIEs. The two committees are composed as follows:

- MiHIN Privacy Committee- made up primarily of Privacy Officers from each of the sub-state HIEs, along with other stakeholders and lead by the MiHIN Privacy Officer. The Privacy Committee, lead by the MiHIN Privacy Officer will assist in the development, drafting and implementation of all MiHIN Privacy policies for sub-State HIEs. The Committee will follow guidance from both the State and Federal government and will work with the sub-state HIEs to identify challenges and risks and develop mitigation plans to address them
- MiHIN Security Committee- made up primarily of Security Officers from each sub-state HIE, along with other stakeholders and lead by the MiHIN Security Officer. The Security Committee, lead by the MiHIN Security Officer will assist in the development, drafting and implementation of all MiHIN Security Policies for sub-state HIEs. The Committee will follow guidance from both the State and Federal government and will work with the sub-state HIEs to identify challenges and risks and develop mitigation plans to address them.

The MiHIN Privacy and Security Committees will update the Strategic and Operational plans on an annual basis to evaluate the overall MiHIN Privacy and Security implementation, update policy and guidance recommendations as needed, review and update forms and agreements, and review and update the overall MiHIN Privacy and Security direction.

Covered Entities are required by the HIPAA Privacy and Security Rules to have Privacy and Security officers in place. In addition, under the new HITECH amendments, Business Associates are also required to have a number of HIPPA Privacy and Security policies in place. These federal requirements create a structure of Privacy and Security Officers that allow both guidance and feedback to flow. Under the leadership of the MiHIN Privacy and Security Officers, and the respective Privacy and Security Committees, appropriate safeguards will be in place to assure and assist state HIE participants in complying with state and federal legal policies and requirements. Privacy and Security Officers will both report regularly to the Executive Director of the MiHIN Shared Services and to the HIT Commission.

The MiHIN governing body will work with sub-state HIEs and with the State to coordinate federal initiatives. This will include health initiatives with the Department of Military and Veterans Affairs, Indian Health Services, as well as Medicaid and Medicare initiatives. The MiHIN Governance Board will provide guidance to assist sub-state HIEs with integration and alignment of relevant federal initiatives. Sub-state HIEs will work with a number of organizations in Michigan that support federal HIE and HIT initiatives, including:

- Grand Rapids Veterans Nursing Home- located in Grand Rapids, Michigan houses two units for Alzheimer's, as well as one unit for dual diagnoses patients and operates domiciliary and nursing care.

- Dominic J. Jacobetti Veterans Facility- located in Marquette, houses one of Michigan's first nursing units for Alzheimer's disease and related disorders and operates domiciliary and nursing care.
- State Veterans Homes Board of Managers- Governance Board made up of Veterans who act in the interest of the veterans' community in both advocacy and advisory roles related to the admission and member affairs at Michigan's two veterans' homes.
- Michigan's Inter-Tribal Council- the Council's Indian Health Services Comprehensive Field Health Division works to implement programs that improve the health status of Indian families- including communications of federal, state and local initiatives.

As the MiHIN Shared Services infrastructure and sub-state HIEs begin to develop and increase capacity for health information exchange, the Privacy and Security Committees will address issues on an incremental basis. Initially, the first task will be to create a Participation Agreement or Subscription Agreement for the sub-state HIEs in order to "connect" to the MiHIN Shared Services. The next task will be to review and refine the Privacy and Security Policy Framework developed by the Privacy and Security Work Group which includes:

4.5.2.1 Policy Direction: Informed Opt Out

Informed Opt Out recognizes that the HIPAA Privacy Rule allows for the sharing of Protected Health Information for purposes of treatment, payment and operations between Covered Entities. Based on that recognition, even if an individual "opts out" of data exchange, some identifiable health information will still be transferred electronically. The exceptions are listed below and apply to Direct Transfers, "Break the Glass" and Legally Mandated Reports.

This Policy recommendation includes a draft for a model Informed Opt Out form.

This Policy recommendation includes a draft of model language for insertion in Notice of Privacy Practices.

4.5.2.2 Policy Direction: Access

Access controls govern when and how a patient's information may be accessed by authorized individuals via the MiHIN. This policy is designed to reduce unauthorized access and ensure information is used for authorized purposes.

4.5.2.3 Policy Direction: Authorization

Authorization is the process of determining whether a particular individual within a sub state HIE has the right to access Protected Health Information via the MiHIN. Authorization is subject to role-based access standards that take into account an individual's job function and the information needed to successfully carry out a role

within the entities participating in the HIE. These requirements are designed to limit exchange of information to accomplish the intended purpose of the exchange, thereby allowing patients to have confidence in the privacy of their health information.

4.5.2.4 Policy Direction: Authentication

Authentication is the process of verifying that an authorized individual is who she or he claims to be. Sub-state HIEs using the MiHIN Shared Services will implement policies and procedures to verify that an Authorized User seeking access to electronic Protected Health Information is the person or entity he/she/it claims to be.

4.5.2.5 Policy Direction: Audit

Audits are oversight tools used for recording and examining access to information within an electronic health information exchange system. This policy is necessary for verifying compliance with access controls implemented to prevent/limit inappropriate access to information.

4.5.2.6 Policy Direction: Breach

Breach Notification requires sub-state HIEs and all their participating entities to notify individuals when unencrypted personal information was, or is reasonably believed to have been, acquired by an unauthorized person or a person without authority, including when a confirmed breach in the security of the system poses a significant risk of identity theft or other harm. (42 USC §17931)

5 SUMMARY / CONCLUSION

The MiHIN Operating Plan is the culmination of work that stakeholders across Michigan undertook with the initial strategies outlined in the 2006 *Conduit to Care* and furthered through the MiHIN Strategic Plan over the last six months.

This Operating Plan builds upon the development of sub-state HIEs over the past several years and leverages existing State of Michigan information technology systems by taking an incremental approach to deploying use cases and associated shared services that have been prioritized by stakeholders across the state.

This plan identifies the domain based activities, schedules and financial requirements for implementing the MiHIN Strategic Plan as well as the approach to governing and operating the MiHIN over the next four years.

Achieving cross-community exchange of patient information by deploying statewide shared services will enable and support the ability of Michigan's providers to accomplish and demonstrate meaningful use while improving the ability of sub-state HIEs to access health information within and across State borders.

The ONC approval of this Plan will support the ability of stakeholders across the State of Michigan to participate in statewide HIE, the National Health Information Network (NHIN) and achieve the MiHIN vision of *fostering the development of HIE that will reduce the overall cost of care while at the same time increasing quality of care and patient safety.*

6 Appendices

Appendix 1 – Glossary of Terms and Acronyms

AHIC – American Health Information Community

ARRA – American Recovery and Reinvestment Act

CAM – Comparative Analysis Matrix

CDC, CDCP – Center for Disease Control and Prevention

CCD – Continuity of Care Document

CHAMPS – Community Health Automated Medicaid Processing System

COBIT - Control Objectives for Information and related Technology, a set of best practices (framework) for information technology management created by the Information Systems Audit and Control Association (ISACA), and the IT Governance Institute (ITGI) in 1996.

Conduit to Care – the product of a “180 day” partnership of a diverse set of Michigan’s health care and business stakeholders, aka Michigan’s eHealth Initiative

Connect Open Source - The Federal Government's open source implementation of a national health information network gateway (Source MiHIN Architecture Design document V 1.2.4

DICOM – Digital Imaging and Communications in Medicine

DURSA – (Data Use and Reciprocal Support Agreement) a comprehensive agreement that governs the exchange of health data across a diverse set of public and private entities.

EHR - Electronic Health Records

EMPI - Enterprise Master Patient Index (In this context, we are talking about an MPI for the state of Michigan.)

ER – emergency room

ESB - Enterprise Service Bus

FCC Rural Health Care Pilot – Project to connect rural health care providers in the state with high speed Internet

FQHC – Federally Qualified Health Centers

HHS - Department of Health and Human Services (Executive Department of US Federal Government)

HIT – Health Information Technology

HITECH - Health Information Technology for Economic and Clinical Health

HIE - Health Information Exchange

HIMSS – Healthcare Information Management Systems Society

HIPAA – **Health Information Portability and Accountability Act**

HISPC – Health Information Security and Privacy Collaboration

HITSP - Healthcare Information Technology Standards Panel

HL7 - Health Level Seven, an all-volunteer, non-profit organization involved in development of international healthcare; this term is also used to refer to some of the specific standards created by the organization (e.g., HL7 v2.x, v3.0, HL7)

IHE - Integrating the Healthcare Environment

IT – Information Technology

ITIL - Information Technology Infrastructure Library, a set of concepts and practices for managing information technology services, development and operations

JVHL - Joint Venture Hospital Laboratories

MCIR – Michigan Care Improvement Registry

MDIT – Michigan Department of Technology

MDSS – Michigan Disease Surveillance System

M-CEITA – Michigan Center for Effective IT Adoption

MiHIN - Michigan Health Information Network

MiHIN SSB - MiHIN Shared Services Bus

MPHI - Michigan Public Health Institute (Michigan non-profit organization focused on public health)

MPI - Master Patient Index

MSSS – Michigan Syndromic Surveillance System

MU – Meaningful Use

NHIN - Nationwide Health Information Network (An HHS Sponsored development effort to build a national health information exchange capability)

NHIN Direct - new initiative from the ONC trying to simplify the way a physician can meet meaningful use requirements with their electronic health record

NPP – Notice of Privacy Practice

OMB – Office of Management and Budget

ONC - Office of the National Coordinator for Health Information Technology

PCO – Program Control Office

PHI – Protected Health Information

PIX - Patient Identity Exchange (a transaction type)

PIX -PDQ - Patient Identification Exchange - Patient Data Query

REC – Regional Extension Center

RHIO – Regional Health Information Organization

RHITEC – Regional Health Information Technology Extension Center

RLS – Record Locator Service

SAML - Security Access Markup Language

SCP – New York eHealth Collaboratives Statewide Collaboration Process

SDE – State Designated Entity

SHIN-NY –State Health Information Network of New York

SOA - Service-Oriented Architecture

SOM – State of Michigan

Appendix 2 – Privacy and Security Policies

Access Policy

Access controls govern when and how a patient's information may be accessed by authorized individuals via the MiHIN. These access policies are designed to reduce unauthorized access and ensure information is used for authorized purposes.

Policy: Access

- Authorized Users will access information via the MiHIN in accordance with all applicable policies, and state and federal laws and regulations.
- Sub-state HIEs will establish policies and procedures to ensure that access meets current security standards.
- Only Authorized Users shall access information via the MIHIN.
- Authorized Users shall be authenticated in accordance with the provisions of the Authentication Policy.
- Sub-state HIEs and their participating entities will have processes and capabilities in place to ensure accountability and enable identity of each user who has accessed patient information.
- All participating entities shall implement and enforce an accountability policy that meets state and federal legal and regulatory requirements.
- Authorized Users shall be prohibited from sharing their user names and/or passwords with others and from using the user names and/or passwords of others. The use of another's credentials to access the system is prohibited.
- Users are responsible for all activities related to their unique credentials.
- All breaches of credentials must be reported in a timely manner.
- Authorized Users who have access to electronic PHI via the MiHIN will be required to receive training on the access and authentication process and mechanisms required for their job function.
- Sub-state HIEs will meet security requirements under state and federal laws and regulations, and policies and procedures as determined by the MiHIN governing body.
- The MiHIN Governance entity will create and maintain a security workgroup that will recommend best practices and policies/procedures to the MiHIN.

- Sub-state HIEs and participating entities must manage their user accounts in accordance with MiHIN standards.

Authentication Policy

Authentication is the process of verifying that an authorized individual is who she or he claims to be. Sub-state HIEs using the MiHIN Shared Services will implement policies and procedures to verify that an Authorized User seeking access to electronic Protected Health Information is the person or entity he/she/it claims to be.

Policy: Authentication

- All participating entities shall implement and enforce a user authentication mechanism that meets state and federal law and regulatory requirements.
- Sub-state HIEs must authenticate, or must require their participating entities to authenticate, each Authorized User's identity prior to providing any Authorized User with access to Protected Health Information (PHI) via the MiHIN.
- Authorized Users shall be prohibited from sharing their user names and/or passwords with others and from using the user names and/or passwords of others. The use of another's credentials to access the system is prohibited.
- Authorized Users who have access to electronic PHI via the MiHIN will be required to receive training on the access and authentication process and mechanisms required for their job function.

Informed Opt Out Policy

The MiHIN will develop and implement minimum policies for sub-state HIEs and their participating entities to adopt in order to connect to the MiHIN shared services.

Policy: Informed Opt Out

This policy recognizes that the HIPAA Privacy Rule allows for the sharing of Protected Health Information for purposes of treatment, payment and operations between Covered Entities. Based on that recognition, even if an individual "opts out" of data exchange, some identifiable health information will still be transferred electronically. The exceptions are listed below and apply to Direct Transfers, "Break the Glass" and Legally Mandated Reports (the "Exception" situations).

- With respect to the other transfers of data, an individual will be given two choices:
 - Allow individually identifiable health information to be accessed by authorized users through the MiHIN, but only when that access is legally permissible.

- Not allow access to individually identifiable health information, other than Direct Transfers, Break the Glass, and Legally Mandated Reports (the "Exception" situations).
- Standard language will be added to any NPP to inform the patient that individually identifiable health information will be accessed through the MiHIN unless they opt out (see attached).
- Regardless of the individual's choice, individually identifiable health information may be stored by the sub-state HIE.
- Individually identifiable health information that is subject to additional, legally imposed special restrictions will only be used and/or disclosed in accordance with applicable laws.
- Individuals can change their minds and terminate their prior opt out decision.
- Consumer education materials will be provided to explain the benefits of access and what the decision to opt out of data exchange means with sufficient information to allow a consumer to make an informed choice. After an individual opts out, the individual may reverse that decision.
- The sub-state HIE and MiHIN levels will keep an electronic record of the decision.
- Contractual agreements will be required at the sub-state HIE and MiHIN level and will include provisions to protect patient privacy.
- To Opt Out, or to terminate a prior opt out decision, the individual will have to complete the Request to Opt Out Form (draft attached).
- EXCEPTIONS
 - **Break the Glass** –This refers to individually identifiable health information being accessed (break the glass) in emergency medical situations by authorized providers.
 - **Direct Transfers**– This refers to individually identifiable health information being sent and received via the MiHIN by authorized providers with a treatment relationship to an individual, without the use of the RLS. Direct transfers only occur between authorized providers or between providers and Business Associates.
 - **Legally Mandated Reports**- This refers to authorized providers sending individually identifiable health information via the MiHIN to a government agency for the purposes of complying with mandatory public health reporting requirements (if the authorized provider may make the disclosure without express consent of the patient).

Audit Policy

Audits are oversight tools used for recording and examining access to information within an electronic health information exchange system. They are necessary for verifying compliance with access controls implemented to prevent/limit inappropriate access to information.

Policy: Audit

- Sub-state HIEs and participating entities must ensure that the following information be recorded and maintained at the point of access for audit purposes:
 - The identity and time frame of each entity/individual that accesses or transmits information through the MiHIN.
 - The patient identification and the type of data accessed.
- Each sub-state HIE and participating entity must validate the integrity of the audit process. Audits must be conducted on a regular basis at least once a year at a minimum.
- Sub-state HIES and participating entities will implement a system wherein, upon request, patients have a means of seeing who has accessed information about them via the MiHIN and when such information was accessed.
- All sub-state HIEs and participating entities must cooperate with the MiHIN and/or other sub-state HIEs with respect to any audits.
- All sub-state HIEs and participating entities must retain audit information for the time frame required by law.
- MiHIN and all sub-state HIEs will generate audit records for all security relevant events.

Authorization Policy

Authorization is the process of determining whether a particular individual within a sub-state HIE has the right to access Protected Health Information via the MiHIN. Authorization is subject to role-based access standards that take into account an individual's job function and the information needed to successfully carry out a role within the entities participating in the HIE. These requirements are designed to limit exchange of information to accomplish the intended purpose of the exchange, thereby allowing patients to have confidence in the privacy of their health information.

Policy: Authorization

- Sub-state HIEs shall establish and implement policies, standards and procedures that:
 - Establish role definitions and rules for Authorized Users.

- Define the purposes for which Authorized Users in those roles may access Protected Health Information (PHI) via the MIHIN.
- Define the types of PHI that Authorized Users within such roles may access (e.g., demographic data only, clinical data).
- The purposes for which an Authorized User may access information via the MIHIN and the types of information an Authorized User may access shall be based, at a minimum, on the Authorized User's:
 - Job function
 - Relationship to the patient
- Sub-state HIEs shall require their participating entities to assign roles to the individuals within their organizations who will be authorized to access information via the MIHIN. Sub-state HIEs and their participating entities may have additional roles, but they must map those roles to one of the eight roles listed below:
 1. Practitioner with access to all information and Break the Glass authority
 2. Practitioner with access to all information but no Break the Glass authority
 3. Non-Practitioner with access to all information
 4. Non-Practitioner with access to only non-clinical information
 5. Sub-state HIE administrator with access to only non-clinical information
 6. Sub-state HIE administrator with access to all information for the purpose of public health reporting
 7. System administration support and technical support access
 8. Sub-state HIE read only audit account
- Users with multiple roles will access data using the role that applies to the job function they are performing at the time.

Breach Notification Policy

Breach Notification requires sub-state HIEs and all their participating entities to notify individuals when unencrypted personal information was, or is reasonably believed to have been, acquired by an unauthorized person or a person without authority, including when a confirmed breach in the security of the system poses a significant risk of identity theft or other harm. (42 USC §17931)

Policy: Breach Notification

- The sub-state HIE and all their participating entities will abide by all applicable federal, state and local laws, rules and regulations pertaining to any security breach related to MiHIN.
- If a sub-state HIE or participating entity experiences a reportable security breach related to MiHIN they must immediately notify the MiHIN governance entity.

Note: These laws also apply:

- Michigan Identity Theft Protection Act 452 of 2004
[http://www.legislature.mi.gov/\(S\(iew3ramk5gntt345pcpopm55\)\)/documents/mcl/pdf/mcl-Act-452-of-2004.pdf](http://www.legislature.mi.gov/(S(iew3ramk5gntt345pcpopm55))/documents/mcl/pdf/mcl-Act-452-of-2004.pdf)
- Michigan Social Security Privacy Act
http://www.michigan.gov/documents/Social_Security_Number_Privacy_Act_118553_7.pdf
- Federal "Red Flags" Rule, 16 C.F.R. § 681.2
<http://www.ftc.gov/bcp/edu/microsites/redflagsrule/more-about-red-flags.shtm>