Business Plan 2.0

November 2014
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EXECUTIVE SUMMARY

[To be drafted by end of Q4 2014, due to completion of Request for Quote (RFQ) process. Executive Summary will include communicate key content from Business Plan 2.0 to the reader.]

1.0 DOCUMENT PURPOSE

The purpose of the HealthShare Exchange (HSX) Business Plan is to communicate the tactical plan for operationalizing the Schelling Point Alignment Cycle that HSX conducted with its Board of Trustees during 2013-2014. The HSX management team used the Schelling Point Alignment Cycle as a guide to develop the plan, which outlines activities that will take place during the next 18 months.

The source and reasoning behind each activity can be explained; if necessary, HSX is able to trace activities back to the original opinion(s) expressed by Alignment Cycle Participants. For specific details related to the Alignment Cycle Roadmap and Methods, please see Appendices 12.6 and 12.7.

This document describes various areas HSX will focus on in order to:

1. Attain the objectives defined through the Alignment Cycle
2. Support key assumptions made during the Alignment Cycle
3. Mitigate validated constraints identified through the Alignment Cycle

In addition, Business Plan 2.0 takes into consideration changes that occurred in the marketplace and during HSX’s technological implementation of Direct services. HSX will revisit the business plan periodically and continue to refine its content as Health Information Exchange (HIE) strategy and operations evolve.
2.0 BACKGROUND

HSX represents a significant opportunity for the Commonwealth of Pennsylvania to utilize health information exchange (HIE) to provide meaningful benefits for the healthcare system.

2.1 SIGNIFICANT REGIONAL IMPACT

The five-county region of Southeastern Pennsylvania (SEPA) represents a healthcare market that has the potential to benefit significantly from HIE. The five counties include: Bucks, Chester, Delaware, Montgomery and Philadelphia.

It is the largest and most densely populated healthcare market in the Commonwealth, accounting for 32% of the state’s population. The region accounts for the following within Pennsylvania:

- 34% of all hospital discharges in the State
- 39% of all Pennsylvania’s births occur in the five county region
- 42% of all Medicaid admissions in the State

2.2 A NEED FOR HEALTH INFORMATION EXCHANGE

Due to the complexity and diversity of the healthcare provider network in the region, Southeastern Pennsylvania is ripe for HIE. Currently, there are 40 licensed acute care facilities with 40 emergency rooms (ED) in this region. (Figure 1)

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1 US Census
2 Pennsylvania Department of Health, Hospital Reports, Report 1-A. FY2012-2013
3 Pennsylvania Department of Health, Hospital Reports, Report 4. FY2012-2013 includes Children’s Hospitals
Care coordination challenges continue to exist due to the number of facilities throughout the region that provide acute care. Some facilities are located in close proximity to one another, enabling consumers to receive services from multiple providers who are affiliated with different hospitals and health systems. Additionally, increased competition and segmentation further complicates the market; as of 2012, the largest hospital entity accounted for only 16% of the discharges.

Figure 1.1 illustrates the segmentation of the hospital market, indicating the distribution of patient admissions in Southeastern Pennsylvania.

Source: DVHC of HAP

Figure 1.1: No Dominant Health System: Southeastern Pennsylvania’s 580,000 Inpatient Admissions by Health system FY2011-2012
2.3 Landscape

In the last decade, other large states and metropolitan areas have established formal Health Information Organizations (HIO). While the Philadelphia region lagged in mobilizing stakeholders to address HIE, the establishment of HSX in 2012 has enabled effective collaboration between hospitals, health systems and health plans.

The Philadelphia healthcare market, however, possesses characteristics that make HIE implementation more challenging. Some of these characteristics are:

- Among the eleven most populous U.S. counties, Philadelphia has the second-highest poverty rating at 26%, which is about twice the national average. Additionally, Philadelphia also exhibits the highest prevalence of hypertension, tobacco use, and obesity (both adult and child related).\(^4\) Available public funding has typically been directed to critical short-term public health needs rather than long-term investments.
- Many working Philadelphians are uninsured; 16% of city residents have no public or private health insurance\(^5\). Across the five county region of Southeastern Pennsylvania, 18% of residents are covered by Medicaid\(^6\), which accounts for the highest penetration in the state of Pennsylvania. As a result, financial margins of hospitals and providers are relatively low, resulting in limited funding for HIE investment.
- The region maintains a diverse and complex array of provider entities, which include 12 large multi-hospital health systems. There is no dominant health system in the market.

In spite of these obstacles, HSX remains committed to becoming a robust HIE in Southeastern PA and has been successful, to date, in facilitating the collaboration needed between hospitals, health systems and health plans.

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2.4 HSX FOCUSES ON CURRENT ISSUES IN HEALTHCARE

HSX monitors market needs and changes, as they relate to care delivery, cost containment transitions in care and population health.

2.4.1 Hospital 30-Day Readmissions

In 2014, 18% of Medicare patients were readmitted within 30 days, costing Medicare $26 billion; an estimated $17 billion of which were potentially avoidable readmissions. The Centers for Medicare and Medicaid Services (CMS) launched the Hospital Readmissions Reduction Program (HRRP), which penalizes hospitals for excessive readmissions (25 cases or more for any of the monitored conditions) within 30 days of discharge. For fiscal year (FY) 2015, the maximum penalty for excessive readmissions is a 3% reduction in Medicare reimbursement rates.

The FY 2015 Inpatient Prospective Payment System (IPPS) Final Rule, published by the CMS, reported that 2,610 hospitals were penalized for excessive readmissions under the HRRP; 39% of which will incur the largest penalty of 3% reduction in reimbursement rates from October 1st 2014 to September 30th 2015. In Pennsylvania, 72% of hospitals incurred penalties with an average penalty of 0.63%.

Of the 28 HSX Participants assessed in the program, 93% incurred penalties of less than 2%; which means that these Participants will be reimbursed approximately 98% of the amount that Medicare usually pays, per patient, under IPPS. While the exact amount of dollars lost is unknown, hospitals can predict their estimated losses based on the previous years’ Medicare payments. CMS also provides information about the methodology used to calculate reimbursement amounts on their website under the Readmissions Reduction Program.

As the numbers demonstrate, readmission continues to be a challenge for hospitals in Southeastern Pennsylvania. HSX Participants assessed in the program accounted for 22% of all penalized hospitals in Pennsylvania. As a result, HSX intends to maintain focus on this issue and develop use cases and services that streamline transitions of care and increase collaboration and coordination within the healthcare community.

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2.4.2 Accountable Care Organizations

Furthermore, the Affordable Care Act has intensified the need for HIE through the introduction of Accountable Care Organizations (ACOs), which are a network of providers who work together to manage and coordinate the care of a patient population in alignment with a set of quality performance standards. The underlying premise is that better coordinated, quality care should yield better health outcomes, while reducing treatment costs.

ACOs, such as the Noble Health Alliance, Delaware Valley ACO and others within the region, were initially established to treat and monitor the care of employees and Medicare patients, but HSX anticipates they will continue to evolve into care management centers for the larger community. Noble Health Alliance is comprised of Crozer-Keystone Health System, Abington Health, Aria Health and Einstein Healthcare Network. Main Line Health, Jefferson Health System, Holy Redeemer Health System, Magee Rehab and Doylestown Hospital recently joined together to form the Delaware Valley ACO. Additionally, the Quality Health Alliance ACO plans to become operational in January 2015 and will be comprised of St. Mary Medical Center and a group of 250 affiliated physicians in Bucks County.

With a vision of delivering better care to consumers via health information services, HSX is uniquely positioned as the centralized exchange for supporting ACOs by enabling the sharing of health information and access to patient data. This ultimately improves care coordination, reduces costs for unnecessary and duplicative services, and reduces the need for acute, tertiary care.

As the formation of ACOs persists among HSX members, HSX anticipates being a significant partner in the provision of data and supporting ACOs to meet government standards and requirements.

HSX is actively working with the ACOs in the region to ensure alignment with their goals and operations.

3.0 Governance

HSX governance was established in 2012. The governance approach, which includes the organizational structure required to provide the policies, oversight, and guidance, ensures the HIE will consistently deliver value to its members.

A Board of Trustees manages the affairs and activities of the HIO, addresses the needs of Southeastern Pennsylvania healthcare stakeholders and maintains alignment and coordination with the PA eHealth Collaborative and the Federal Office of the National Coordinators (ONC). The Board of Trustees is comprised of a cross-section of regional healthcare stakeholders from the payer and provider communities and includes clinical, consumer advocacy and community government representation.
3.1 Governance Structure
HSX governance is focused on promoting effective decision-making, appropriate oversight, and alignment in establishing and coordinating overall direction of an effective HIO.

The following diagram depicts the HSX committee structure, as well as its relationship with the Board of Trustees, Pennsylvania Patient and Provider Network (P3N) and Office of National Coordinator and other independent entities. Details about HSX appointed committees can be found in Appendix 12.1.

Overall the Board of Trustees and HSX Committees are very engaged in HSX’s strategic and tactical activities. HSX boasts a unique collaboration between hospitals/health systems and health plans in how the HIE functions.
4.0 ORGANIZATION

During the past two years, HSX has evolved from relying heavily on consulting services to employing more full-time staff in some of the functional areas listed below. Additional details about the organizational functions can be found in Appendix 12.2.

4.1 HSX VISION & MISSION

Through a series of stakeholder sessions, HSX’s proposed vision and mission were developed. While not yet approved by the Board, the proposed vision and mission illustrates the role HSX desires to play in the healthcare marketplace. HSX plans to further vet and finalize the vision and mission below with the Board of Trustees in 2015.

Vision

HealthShare Exchange of Southeastern Pennsylvania envisions a trusted community of healthcare stakeholders collaborating to deliver better care to consumers in the greater Philadelphia region.

Mission

HealthShare Exchange of Southeastern Pennsylvania will provide secure access to health information to enable preventive and cost-effective care; improve quality of patient care; and facilitate care transitions.

4.2 HSX POLICY OVERVIEW

HSX staff developed policies and procedures, with guidance received from its legal counsel and the various HSX committees. In addition, HSX established financial policies as a result of feedback received during a financial audit.

The HSX management team is responsible for reviewing policies as they are drafted and on an annual basis. HSX will vet new policies with the appropriate committees.
Ultimately, HSX submits all final policies to the HSX Board of Trustees. Policies that govern the operations of the HIE are shared with HSX participants. HSX operations also align with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) policies.

As of November 2014, HSX has instituted the following policies:

- Access Controls
- Audit Controls
- Change Management Policy
- Conflict of Interest
- Contracting and Signatory Authority
- Direct Secure Messaging Operations
- Direct Secure Messaging Data Exchange
- Discharge Information Use Case
- Encounter Notification Summary Use Case
- Privacy & Security Role
- Security Breach Notification and Mitigation of Improper Disclosures
- Security Gap and Risk Assessment
- Social Media
- Transmission Security and Encryption
- Whistleblower

5.0 Membership & Growth

5.1 Membership Overview

In 2012, HSX secured Letters of Commitment from thirty-seven acute care hospitals, representing more than 90% of the emergency department visits and three health plans covering 62% of the consumers in the five-county region. The Letters of Commitment, executed by the members, supported a four-year business plan for the establishment and implementation of a regional HIE. In addition to Letters of Commitment, as part of the technological onboarding process, HSX establishes Business Associate Agreements (BAA) with HSX members and participants.

In 2014, HSX established a pilot with a local Federally Qualified Health Center (FQHC) to expand participation to safety net providers. In addition, in the summer of 2014, the HSX Board approved a pilot for freestanding behavioral health facilities.

On an annual basis, HSX invoices its members for their yearly membership subscription fees. At the end of 2014, HSX will include a reaffirmation request for continued membership with the invoice that is sent to hospital members as required by the Letters of Commitment. The reaffirmation will highlight the 2015 HSX deliverables and are described in more detail [to insert 2015 goals and deliverables once they are vetted/finalized.]
In 2015, HSX will establish Participation Agreements with members. These agreements will include financial terms for participation in the HIE that will supersede the Letters of Commitment and provide for HSX’s future sustainability. The agreements will define the limitations for data use by participants. The agreements will require participants to comply with HSX policies and procedures. They will state the compliance standards for data accuracy and quality. HSX will work with its legal counsel and legal representation of its current membership to negotiate the terms of the participation agreements.

Additionally, as HSX begins to offer expanded services, a tiered approach to membership, related to service selection, may be employed.

5.2 New Member Campaign

In 2014 HSX initiated a new member campaign that is rooted in the initial Business Plan and financial sustainability model but aims to broaden the scope of new members. The campaign is focused on the recruitment of the remaining acute care hospitals and health systems in the five-county region as well as the remaining health plans with covered lives in the region.

Additional categories for new members, within the five-county region and beyond, include: specialty hospitals; behavioral health and rehabilitation hospitals; long-term acute care facilities; long-term care facilities; home health agencies; birthing centers; FQHCs and other health clinics; retail pharmacies and minute clinics; ACOs; HIEs outside the region; unaffiliated physician groups and large physician practices.

The strategies used for attracting new members include leveraging the relationships that HSX member health plans have with pharmacies, long-term care, and other providers along the continuum of care. Likewise, HSX will leverage the relationships members have with health plans.

Finally, as part of a long-term strategy, HSX will consider partnerships with organizations focused on self-insured employers as well as exploring participation by laboratory services, pharmaceutical and life science companies.

Framework for Recruitment of New Members:
As HSX recruits various providers and others for participation in our HIE, decisions need to be made about the following:

1. The mechanism for participation;
2. The financial contributions, if any, that will be required;
3. The projected timeline for onboarding to HSX. Timeline for onboarding will be based on several factors, including, but not limited to, technology readiness, organizational readiness and HSX capacity.
In all instances, HSX must consider the patient population that would benefit from participation and the overall value proposition for current HSX members. Thereafter, the legal agreement to be provided, contribution required, and timeline for onboarding will be based upon factors including the size, complexity and type of new participant.

The HSX subscription fee model was designed based on the value proposition of Direct secure messaging. To be consistent with this approach, and until other use cases and technology (which might include the query model) are deployed, the financial framework for new participants will be based on the same considerations. Each Letter of Commitment or Participation Agreement will clarify that the contribution model will be subject to change based upon additional services.

The following are recommended as the guiding principles for establishing financial contracts with new participants:

- Enhances HSX’s ability to achieve its overall mission;
- Fits with the value proposition of Direct services;
- Adds to the continuum of care;
- Supports the long-term financial sustainability of HSX;
- Leverages HSX technologies; and
- Aligns with HSX Business Plan 2.0.

For additional information about new member entities and related agreements, financial contribution, please reference Appendix 12.3.

5.2.1 Connecting Independent Providers
HSX plans to connect the region’s estimated 15,000 providers to the HIE by 2016. While many of the regions’ providers will be associated with a contributing member, many will not. With the desire to create the “network effect”, where the value of HSX increases as the number of providers using HSX to share patient health information increases, HSX will offer independent providers and non-affiliated physicians free access to its Direct services. This offer applies to those providers and physician groups within the greater Philadelphia region who are not employees of an HSX member hospital or health system or in a practice owned or operated by an HSX member hospital or health system.

Connectivity to HSX may be established via a Direct connection to a provider’s electronic health record system (EHR) or via an Internet-based, secure messaging platform.

In addition to providing access to HSX’s Direct messaging services, HSX intends to offer independent providers access to Encounter Notification Services and Query Based
Exchange, as these services become available. There may be a participation fee associated with these new services offered by HSX.

As the market for HIE services matures, and HSX’s service portfolio evolves, HSX will assess this approach periodically and determine whether or not to charge independent providers annual subscription fees.

5.2.2 Engaging Federally Qualified Health Centers & City Clinics
HSX is interested in engaging with FQHCs and City Clinics, since many Medicaid patients discharged from its member hospitals are referred to PCPs in FQHCs for follow-up care. HSX is a Medicaid grant recipient and FQHCs in Philadelphia cover 65% of all Medicaid patients in the five-county region.

HSX, in collaboration with the Health Federation of PA (HFP), plans to connect all 11 FQHCs (with multiple sites) in the Philadelphia region. This partnership would support the HFP with implementing Meaningful Use – Stage 2 (MU2) certified version of EHR across regional FQHCs and assist them with workflow re-design to drive HIE utilization. HSX is currently working to pilot its technology with The Family Practice & Counseling Network (FPCN). After this pilot is complete, HSX and the FQHCs will work together to develop a plan to enable the rest of the centers.

Similarly, the City of Philadelphia operates eight City Clinics that serve many Medicaid patients and the uninsured. HSX has begun to work with City Clinic leadership to determine how to best implement HIE with these entities. HSX hopes to begin onboarding the City Clinics starting in Q2 2015.

5.2.3 Multi-State Exchange
Presently, patient flow patterns from Delaware, New Jersey and Maryland account for more than 25% of patients being treated by the larger health systems in the SE PA region. Because of the significant out-of-state patient volume, the HSX membership has requested a near term approach to be developed to electronically exchange health information to enable improved care for these patients. This information exchange would include both incoming data to a SE PA based provider, as well as outbound information being exchanged with a patients out of PA based primary care physician and care team.

To address this need, HSX will initially seek to leverage existing Direct secure messaging technology and will employ “enhanced” use cases where appropriate. There will be also be a convening of neighboring state HIE officials to further assess and identify additional clinical use cases that would best support these patients as they enter into SE PA for care and return home to a neighboring state.

To further develop this plan and define appropriate use cases for multi-state exchange,
HSX will facilitate a series of meetings between multi-state stakeholders. These sessions would include state health information technology (HIT) offices, Authorities as well as neighboring state regional HIEs to further identify clinical need and how sharing information will yield significant patient outcome improvements.

These meetings began in Fall 2014; HSX hopes to connect to another HIO in a neighboring state by Q2 2015.

5.2.4 Intra-State Exchange
In the future, HSX plans to connect to other HIOs in Pennsylvania (PA). Currently, HSX understands that HIOs in PA, itself included, will need to be certified as a HIE in order to connect with other HIOs. Until PA finalizes the HIO Certification process, HSX will not be able to develop a strategy and timeline for connecting with other HIEs in PA.

5.3 Patient Consent and Addressing Super Protected Information
As HSX works to recruit and engage new members, it ensures clear communication of its understanding that Pennsylvania is currently a “HIPAA-plus” state in that Pennsylvania state law has certain requirements regarding the release of healthcare information that are more stringent than the provisions of HIPAA. Pennsylvania has confidentiality laws that restrict the release of Protected Health Information (including mental health records, HIV/AIDS records, and substance abuse records). HSX staff has conducted a review of the state and federal requirements for maintaining the confidentiality of special populations. HSX has discussed the challenges of dealing with Protected Health Information with its legal counsel, who is a nationally recognized HIPAA expert.

HSX created the Confidentiality Requirements Chart in Appendix 12.4, which summarizes the legal protections and consent standards, as well as the exceptions for the release of healthcare data.

HSX staff is working in conjunction with the PA eHealth Authority in the development of an approach to consent management for Protected Health Information. In accordance with Act 121, the Pennsylvania e-Health Information Technology Act, the Authority is establishing a mechanism for consumers to be able to Opt-out of HIE. The Authority has been using its Policy and Security Committee to work toward the establishment of policies for HIE of Super Protected Data. HSX participates in this committee and intends to leverage the Commonwealth’s Opt-out registry and to align its consent management policies with the Authority.
6.0 **Financial Sustainability**

HSX has modeled its financial sustainability plan off of other successful HIEs, which do not entirely rely on grants to make the organization solvent and use membership fees to fund organizational operations.

6.1 **Principles**

HSX will use the following principles, approved by the Finance & Audit Committee, as a guide for making the organization sustainable.

- Member Fees must cover the ongoing operating costs
- Member Fees must relate to value received and cannot increase without corresponding value creation
- Grants will be used to develop new services and functionality where possible
- Reserves target is to be 50% of the annual operating costs and should not be below $900K, which is an approximate amount of cash reserves needed to run the organization for a three-month period
- Should build reserves for the eventual technology refresh of technology every 4 years.

6.2 **Budget**

HSX will develop a budget in consultation with the Finance & Audit Committee. HSX staff will propose a budget to the Finance & Audit Committee for the upcoming fiscal year using the current Membership Fees as a starting point. The Finance & Audit Committee and the Board of Trustees must approve the budget before the invoicing of members for subscription fees.

6.3 **Membership Fees**

HealthShare Exchange will collect membership fees from health plans and hospitals/health system members to support the ongoing operations of the organization. Currently, the membership fees are based on a return on investment model with health plans contributing two thirds (2/3) and providers contributing one third (1/3) of the funds. This model may evolve as HSX offers additional services but will continue to be tied to the value that is delivered to the HSX members.

HSX Staff will propose any membership fee structure changes to the Finance & Audit Committee for further analysis and approval.

6.4 **Grants**

HSX wants to remain flexible in pursuit of private and public grant monies designed to foster the use of digital health technologies to deliver higher quality patient care with reduced costs. While the loss of non-recurring funds would not have a negative impact
on HSX’s ability to cover annual expenses, the use of grant funds to augment member subscription fees will ensure the Exchange is positioned with a surplus of funds for contingency purposes as well opportunistic pursuits as they arise.

The commonwealth offers grant programs to help promote health IT adoption through funding it receives from the Federal government. HSX knows about two current grant opportunities that may be available to help fund its operations:

- CMS State Innovation Model (SIM) Funding
  - Award Announcement October 31, 2014
- Medicaid Implementation Advanced Planning Document (IAPD) Funding
  - Annual Approval
  - Monies currently available from January 2015 to September 30, 2015 but could extend beyond this timeframe
  - Hinges on State HIE Certification

HSX will diligently track grant opportunities at the Federal and State level and will continue to maintain a grant watch-list.

6.5 Sustainability Model for HSX Enhanced Suite of Services

[To insert HSX sustainability model for offering direct, encounter notification services and query services when completed – target timeframe is Q4 2014]
7.0 CLINICAL USE CASES & SERVICES

The image below charts the path for HSX from Q2 2014 to 2017.

During 2014, HSX has worked to provide Health Information Service Provider (HISP) services, including Direct secure messaging to its members. It has tested the Direct secure messaging service with two use cases: Hospital Discharge Information and Clinical Activity History. Both of these use cases address the need for improved transitions of care in the five-county region and are in production as of Q4 2014.

In October 2014, HSX put out a RFQ (request for quotes) for Encounter Notification Services (ENS) and Query-Based portal services and plans to select a vendor(s) that best meet its needs in these service areas.

Once the RFQ is complete and HSX contracts with an ENS vendor, it will begin to approach member organizations and end user Participants to subscribe to the ENS service, whereby Primary Care Providers (PCPs) and Care Teams will provide a list of active patients for whom they are interested in receiving admission and discharge notifications from HSX. HSX will return a summary list of these encounter notifications back to the subscribing practice/organization.
By default, hospitals and emergency departments will also be able to receive previous admission information for patients they admit.

The two images below depict, as of October 2014, an integrated view of HSX’s use cases and services. In both scenarios, HSX leverages payer data to provide information to hospitals, emergency departments and primary care providers and care teams.

**Patient Admit Scenario**
As ENS is utilized more and more by HSX participants, HSX will focus its efforts on the implementation of query-based exchange. Query-based exchange will involve HSX building a clinical data repository, by persisting data that may be comprised of lab results, radiology reports, transcribed documents, Continuity of Care Documents (CCD) and Clinical Activity Histories.

Ultimately, HSX will provide an opportunity for members to query HSX and view and retrieve patients’ longitudinal health records. Additionally, HSX’s clinical data repository and query portal may be leveraged for other purposes, such as reporting infectious diseases, population health metrics and public health registries.

Similar to the model used for deploying Direct secure messaging services, query functionality will be grounded in clinical scenarios that have been defined, vetted and prioritized by HSX’s Clinical Advisory Committee. For details about HSX Use Case Governance, please refer to Appendix 12.5.

Overall, as this patient-centric data model evolves and the providers determine their preferred method of accessing and using the queried information, the HSX technical suite of services will evolve as well.


8.0 Technology

In order to deploy the clinical use cases and services, HSX needs to have a robust technology solution in place.

HSX’s technology strategy workgroup developed the following principles to which HSX now subscribes.

- HSX must control its own fate for the core technology solution, implementation, and support
- HSX must build in flexibility and speed to market with proven technology
- HSX should be incremental and achievable in our approach to technology solutions
- HSX should align with vendor’s capabilities where possible without compromising other principles

Furthermore, HSX recognizes that it is part of a larger technology ecosystem, whereby it will connect with other HIOs and HIEs on a regional and state level. The diagram below illustrates key elements of this ecosystem. HSX currently plans to leverage Integrating the Healthcare Enterprise (IHE) standards and maintain alignment with the Commonwealth to ensure interoperability between systems that exist within the ecosystem depicted below.
When the technology for ENS and query-based exchange is available, HSX will begin to focus more actively on how it will credential users according to the National Institute for Standards and Technology (NIST). For Direct secure messaging, HSX members are accountable for credentialing their providers. When HSX services include query-based exchange, HSX will take more ownership, related to issuing log-on credentials and verifying users using approved forms of identification. HSX will maintain a database of credentialed users once query-based exchange is in place.

8.1 IMPLEMENTATION

With the appropriate technology in place, HSX will be able to successfully connect its members to the HIE.

For HISP/Direct Secure Messaging Services, HSX is working diligently to connect member organizations and facilitate utilization related to the initial two use cases by the end of 2014.
Simultaneously, engagement and adoption efforts are in progress at these member organizations and research is underway to better understand how HSX’s member organizations interact with ambulatory physician practices in the community. By the end of 2014, HSX will have an ambulatory strategy in place and will have connected at least one independent physician practice. HSX will purposefully deploy its ambulatory strategy in 2015.

Finally, as member organizations are connected to HSX, HSX is building a robust provider Directory. All members will have access to the HSX master provider Directory, which will be strictly managed and updated on a weekly basis.

### 9.0 Engagement and Adoption

As implementation efforts begin with members and participants, HSX offers assistance with end-user engagement and adoption (E&A). Overall, HSX’s E&A function aims to align users with the nature and value of HIE, create a shared need for HSX’s available technology, and, ultimately, secure end-user uptake as HSX’s functionality is integrated into clinical and office workflows.

The E&A approach is outlined below:

1. **Develop a Shared Vision for HSX**
2. **Pave the Path for Adoption**
3. **Identify HSX Champions**
4. **E&A Core Team Planning**
5. **Equip End Users for Adoption**
6. **Reinforce Adoption with Data**
7. **Maintain Relationships for Ongoing Engagement**

E&A activities begin with developing a shared vision of HSX with each participant and its affiliated providers, care teams, etc. The rationale for HSX will be shared to ensure end-users are educated about the HSX value proposition.

HSX will work to understand each participant’s:

- Provider Structure and Demographics
- Readiness for Change
- HIE Strategy
- Current Knowledge/Awareness about HSX and HIEs, in general

Once the technology design is complete, HSX will have an idea about if and how clinical workflows and internal processes may need to change once the technology is deployed. HSX will consult with its Clinical Advisory Committee should input be needed on clinical workflow design and will then begin to pave the path for adoption.

Core HSX messages will be crafted around these topics:
• HIE benefits
• Easy access to information through Direct (current) and Query-Based (future) exchange
• The value of accessed information
• Integration of the HSX ‘solution’ into ‘normal’ workflows and other internal processes

Next, HSX will look to identify strong clinical and non-clinical leaders at each participant organization who will be champions of the HSX message and technology. These champions will be asked to lead adoption efforts at their respective facilities. Champions will be educated about HSX and applicable use cases to ensure they can effectively lead end users and facilitate adoption.

HSX will work with these member hospitals/health systems to form a Core E&A Team, through whom E&A initiatives can be executed for their organization.

Core E&A Team members may include, but are not limited to:

• Physician Champions
• IT Champions
• Medical Staff Representatives
• House Staff
• Physician Liaisons
• Communication Subject Matter Experts (SMEs)
• Change Management/Service Excellence SMEs
• Care Managers
• Patient Advocates & Navigators

HSX understands each participant will have different needs and preferences for reaching out to and engaging end-users. HSX is committed to forming a Core E&A Team that makes sense for each participant organization and partnering with each participant organization to design a customized E&A plan that will support their unique environments and organizational cultures.

HSX has various assets and resources each participant can utilize while operationalizing the E&A plan. These include, but are not limited to: workflow consultations, tutorials, demonstrations, brochures, fact sheets, targeted Internet ads, and videos. HSX will develop customized materials, as needed, to meet participants’ individual needs. Ultimately, end users will be communicated to about what will change, why it will change, when it will change and what the benefits of the change will be.
HSX staff will educate key stakeholders about HSX using many of the communications activities listed previously. Additionally, the following will be employed for education of the broader community:

- A HSX list-serv
- Presentations to professional health-related associations and medical societies (e.g. AMIA)
- Coordination with state-based regional extension centers (RECs)
- Consumer outreach and education

As E&A efforts are underway and more participants are enabled to share information through HSX, HSX will begin to collect data that will be reported back to end users. Outcomes-related goals are of interest to HSX and will be pursued more aggressively once more participants are actively sharing clinical information. More information about the data collection and evaluation of HSX is contained in Measuring The Value of Success.

Since various utilization measures will be available, each E&A Core Team will be able to use this data to reinforce engagement, augment adoption and identify any gaps in anticipated uptake. Where adoption seems to be slow or lacking at a particular institution or site, the Core E&A team will find out where user behavior needs to change in order for adoption to occur. Specific utilization targets are currently unknown but will be developed with each participant.

HSX will also encourage end users to provide feedback about E&A activities and will apply lessons learned to continuously tweak and improve the E&A function. End users will eventually be able to obtain user support through a hotline but, in the interim, are able to contact HSX’s E&A leads for assistance, information and to provide feedback. Overall HSX values the end user voice and is interested in knowing how they would like to be able to use HSX in new ways that will benefit patients in the greater Philadelphia area.

Finally, the HSX E&A Team will maintain close alignment with each participant and end users to ensure relationships are maintained. Since HSX will deliver new services, it will be important for HSX to create a culture of engagement to promote continued adoption in the future.

9.1 COMMUNICATION

To further its mission and educate the community, HSX communicates to its constituency in a variety of ways. Targeted audience/stakeholders are:

- Staff and other individuals associated with or benefitting from hospitals/health systems, independent physicians practices, and other healthcare entities
• Staff and other individuals associated with or benefitting from having insurance from a health plan
• General consumer population
• Media
• Policymakers

Outreach efforts focus on the five county region and existing HSX member organizations and participants.

The HSX Communications function currently places emphasis on healthcare professionals at member organizations and on more general awareness. Moving forward, HSX will expand its reach and focus more actively on communicating to consumers.

HSX communications activities target all available information/media outlets with the purpose of promoting the HSX brand and program of work, in order to increase awareness, to explain benefits of a HIE, and to prompt use/uptake of the HIE.

Communications work streams include:

**Supporting the Executive Director**
- Assist with presentation proposals and materials
- Develop other materials or content as needed
- Photography as needed

**Website**
- Maintain and build out this primary repository and resource for public-facing information about HSX
- Keep information current on mission/justification, service area, members, news & events, videos, use cases and more
- Continue updating content with web designers, using task tracking system
- Discuss needs with webmaster, Executive Director and other staff members for updates
- Monitor designer web queue
- Facilitate team needs on web
- Confer with staff and designer on design/architecture updates

**“Toolkit” materials and other collaterals**
- Creating support materials (including print, video, display content)
- Originate and oversee concept, design, and execution
- Work with design and creative resources
Social media
• Develop and support presence in social media realm
• Post regular, coordinated content
• Keep social media accounts up to date, including, LinkedIn, Twitter, Facebook, Instagram, Google+, YouTube, Vimeo, etc.
• Establish and monitor social media policy

Support Engagement & Adoption function
• Support E&A staff needs, developing content and materials as needed
• Develop E&A opportunities with staff
• Assist in supporting meetings

Develop advertising
• Manage strategy, content, costs for Google ad campaign
• Public Service Announcement placements
• Review metrics

Event- and appearance-related public presence
• Create and manage exhibit booth items
• Arrange display/tabling opportunities at community events and member sites

Representation in professional education and on related HIE-communications groups
• Communicate HSX learnings and expertise at professional meetings and conferences, and through professional publications, including publically-faced white papers developed by the staff
• Represent HSX staff at HIE outreach-related meetings, including Pa eHealth Partnership Authority communications committee

Media outreach
• Develop media contacts and work with media consultants
• Monitor media and look for placement opportunities
• Draft, review, and/or edit content for media submission
• Arrange interview HSX sources with media as needed

Communications to board, members, friends/affiliates, vendors
• Manage mail list and mailings
• Support presentations
• Create and distribute periodic newsletter
Member prospect materials
• Develop presentations for prospective new member organizations to promote and solicit participation

Canvas industry publications and circulate industry stories to staff
• Ongoing review of industry trade publications and related press
• Filter and forward to staff as FYI

Develop editorial standards
• Develop editorial guidelines and standards for HSX content

The communications program works to ensure that these forms of outreach are integrated into, and coordinated with, the vision, mission, and planning documents of HSX, and that the Executive Director, senior leaders, and other staff are apprised on communications activities. Resources for these communications activities are supported by HSX general budget outlays and by a consumer-education grant from the Pa eHealth Partnership Authority.

10.0 Value

Each HSX use case and service addresses information breakdowns in the healthcare marketplace today. By targeting diverse groups of providers and health plans, HSX hopes to improve care delivery for mainstream and vulnerable populations, such as Medicaid patients, the uninsured and patients receiving behavioral health services. Additionally, HSX understands the impact ACOs will have in the region and plans to have the analytics to support these organizations as well.

10.1 Measuring the Value of Success

In Q4 2013, HSX established a contract with the Health Care Improvement Foundation (HCIF) for evaluation services. HCIF is an independent, nonprofit corporation established in 1980 to lead healthcare initiatives aimed at improving the safety, outcomes, and care experiences of all patients, residents and consumers across the greater Philadelphia region. Through its contract with HSX, HCIF will leverage its clinical expertise to lead the development and implementation of the HSX measurement and evaluation plan. HCIF’s experience and reputation as an external, independent evaluator of healthcare quality and safety programs will support an objective assessment of HSX effectiveness in terms of meeting project milestones and customer needs, as well as success in improving health care delivery processes and outcomes.

Guidance provided by the HSX Board indicated that a key factor for success is whether or not HSX can show value to patient, provider, payer (and other new members that have joined HSX). Ultimately there needs to be return on investment experienced by
HSX members. With input from the Board of Directors, HSX management, the Clinical Advisory Committee and other key stakeholders, HCIF identified an initial set of appropriate performance metrics, including those specified by the CMS Medicaid grant, to gauge the success of HSX implementation of Direct technology.

Measurement began when early adopter organizations established their connectivity to HSX and began production of Direct messages. HCIF is able to leverage the automated real-time capture of utilization and transaction metrics available through HSX’s technology vendor. In addition, HCIF will explore the potential of including process measures that would be dependent upon regular data collection by participating providers and health plans. Ultimately HCIF will develop data requests and submission guidelines for non-automated data collection required of participants and implement them.

In collaboration with HSX, HCIF has established a timeline for evaluating the success of HSX. HCIF agreed to take time in 2014 to identify and test the feasibility of certain performance metrics with the goal of the development and implementation of a comprehensive evaluation plan for 2015 and beyond.

**Initial Plan for Evaluation of HealthShare Exchange Success in 2014**
The initial focus of measurement for HSX is on utilization and messaging. HCIF began reporting to HSX in Q3 2014. Some of the metrics included are:

- Number of users registering and signing in to send and receive Direct messages
- Number of providers in the HSX Provider Directory
- Number of messages sent and received through Direct
- Percentage of practitioners outside of health systems using the HIE
- Number of times a clinician in one health system accesses information sourced in another health system

In September 2014, HCIF instituted a qualitative participant survey for early adopters to assess the onboarding process, utility and satisfaction with HSX’s technical implementation. The results of this survey will be reported to the Board of Trustees in November 2014 to assist with the planning for continued onboarding of members in 2015 and thereafter.

Finally, HCIF will begin planning how to assess user engagement and adoption, which will be implemented in 2015. The objective for HSX would be to ensure that front line users who conduct the use cases receive benefits from HSX.

**Additional Evaluation of HealthShare Exchange Success 2015**
For 2015, HCIF will work on the development and implementation of a comprehensive evaluation plan. HCIF will incorporate lessons learned from the first year activities and initial data collection, participant and stakeholder feedback from qualitative surveys
and other methods, and Board/management input to develop a multi-year ongoing evaluation plan for HSX. The plan will integrate process and outcomes data with financial impact to allow for assessment of stakeholder value and return on investment.

In particular for the evaluation of success in 2015, HCIF will develop specific metrics around the use of the exchange in care delivery and care management workflows. Some potential metrics would be:

- Level of integration being developed between the EMRs, such as single sign-on
- Number of hospitals that make the system accessible to their staff
- Extent to which the use of HSX exchanged patient care data is embedded in workflows of practitioners and care managers
- Extent to which participants are satisfied with the quality and accuracy of data received
- Extent to which data sent and received aligns with HSX required data elements found in its use cases and policies

In addition, during 2015, HCIF will work with participating health plans to develop a mechanism for aggregating health plan data related to HSX outcome objectives such as preventing readmissions, reducing unnecessary diagnostic testing or improving medication prescribing practices. Furthermore, HCIF will find a way to make the connection between validating HSX metrics with health plan data and STARS measures. The goal would be for HCIF to implement a scorecard that tracks outcomes.

**Long-term Evaluation of HSX Success in 2016: Patient Outcome Metrics**

Based on the work that is completed in 2014 and 2015, HCIF will develop metrics that track value and outcomes for consumers and patients. One measure could be whether or not there is patient satisfaction from the decreased burden of transporting medical records.

Also, there would be specific metrics based on the return on investment for provider and plan participants for the initial use cases and query exchange. Some metrics could include:

- A metric for reduction in duplicate testing
- A metric to evaluate the impact on admission and readmission rates in the region
- A measure of queries by acute care emergency departments.

HCIF will refine the metrics in an ongoing fashion to ensure that HSX is evaluated appropriately and that the HSX Board has data with which to make decisions about any improvements that need to be made.
10.2 SUPPORT FOR MEANINGFUL USE – STAGE 2

It is anticipated that HSX’s HISP services will support its Hospital members and participant providers with attestation for Meaningful Use – Stage 2 (MU2), specifically the core objective associated with exchanging Summaries of Care (#12 of 16 MU Core Measures for Eligible Hospitals).

11.0 HSX PLANS FOR FUTURE LEARNING OPPORTUNITIES

Recently, several opportunities for future advancements in the use of HSX’s assets have been presented to the HSX management team. These potential new Directions for health information exchange will be properly vetted with the HSX Board and membership as the organization plans for the future. HSX will continue to entertain and explore ways to leverage the HIE in accordance with its mission and vision.

In particular, HSX has presented to and had several dialogues with the Greater Philadelphia Chamber of Commerce’s CEO Council for Growth. The healthcare division of the Council for Growth has expressed interest in HSX as a means to support healthcare innovation. In addition, HSX has entertained the possibility of supporting health care learning opportunities that could enhance providers’ access to best practices in disease management as well as advances in the treatment of rare diseases.

As HSX successfully works toward scaled implementation of Direct services, encounter notification and robust query services, it will also prepare to expand its capabilities to support the future needs of the healthcare industry.
## 12.1 Governance

The table below describes HSX Appointed Committees in more detail.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>The Executive Committee shall have the power to transact business of the Corporation with respect to emergent issues, compensation and regulatory and governance matters during the interim between meetings of the Board of Trustees. The Committee shall address issues related to the Corporation’s compensation programs to ensure that compensation and benefits of all employees are reasonably related to performance and are in compliance with all applicable rules, regulations and guidance promulgated by the IRS. Additionally the Committee will advise the Corporation, or work with professionals, to advise the Corporation on legal and regulatory issues including compliance, governance and formation and policy preparation.</td>
</tr>
<tr>
<td>Finance &amp; Audit</td>
<td>The Finance and Audit Committee will be responsible for developing the Corporation’s financial policies, reviewing the management of the Corporation’s investments, assisting the Treasurer in developing annual budgets, developing the Corporation’s audit and compliance policies, make recommendations to the Board regarding selection, retention and termination of the Corporation’s independent auditors, reviewing and making recommendations to the Board as to the approval of the Corporation’s audited financial statements and annual IRS Forms 990, and other related duties as may be prescribed by the Board of Trustees from time to time.</td>
</tr>
<tr>
<td>Technical Standards</td>
<td>The Technical Standards Committee will be responsible for advising and recommending of technology and technical standards for the Corporation on matters related to the Corporation’s technology implementation, including, but not limited to, the design and specifications for the Corporation’s Health Information Exchange use cases, including future upgrades and enhancements thereto, and will assess the Corporation’s progress in accomplishment of its objectives.</td>
</tr>
<tr>
<td>Committee</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Nominating</td>
<td>The Nominating Committee shall prepare a slate of Trustees and Officers to be considered for election at the annual meeting of the Board in order that, in accordance with Article II, Section 2(a), the Board at all times is comprised of the cross-section of regional healthcare stakeholders outlined in the Corporation’s Bylaws.</td>
</tr>
<tr>
<td>Clinical Advisory</td>
<td>The Clinical Advisory Committee shall be comprised of clinical and other expertise to design, evaluate and prioritize meaningful use cases on behalf of the Corporation. Members of the Clinical Advisory Committee may include providers, clinical practices, and others with varying degrees of interest. The Committee will be a resource to the Corporation and clinicians and will be responsible for advising and recommending standards for the Corporation on clinical matters.</td>
</tr>
</tbody>
</table>
## 12.2 HealthShare Exchange Roles & Functional Area Descriptions

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Executive Director</strong></td>
<td>Responsible for development and implementation of operational plans used to deliver secure, healthcare information exchange services to stakeholders in the greater Philadelphia region.</td>
</tr>
<tr>
<td><strong>Information Technology / Security</strong></td>
<td>Responsible for the technology roadmap, strategy, and timeline for delivery of HealthShare Exchange HISP/HIE services and assuring the privacy and security of the organization and its participants.</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td>Responsible for delivery of HealthShare Exchange’s clinical use case services to participating healthcare stakeholders.</td>
</tr>
<tr>
<td><strong>Member Services</strong></td>
<td>Leads the efforts for member recruitment and retention, including managing contract services; responsible for development and implementation of user engagement and adoption strategies and related privacy policies.</td>
</tr>
<tr>
<td><strong>Engagement &amp; Adoption</strong></td>
<td>Responsible for outreach and engagement efforts with HealthShare Exchange membership and participating stakeholders to support adoption of health information exchange across the region.</td>
</tr>
<tr>
<td><strong>Office Operations</strong></td>
<td>Responsible for day-to-day operation of HealthShare Exchange in support of the Executive Director. Activities include oversight of accounting and payroll; administrative support; Human Resources; facilities management, etc.</td>
</tr>
<tr>
<td><strong>Accounting</strong></td>
<td>Will provide accounting support to HealthShare Exchange in major financial accounting areas including Accounts Payable / Receivable, General Ledger, Account Reconciliation and monthly closing.</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td>Assist Office Operations with those activities required for the smooth operation of HealthShare Exchange’s office including presentation development; document management; receiving of office visitors, etc.</td>
</tr>
</tbody>
</table>
### 12.3 MEMBERSHIP

<table>
<thead>
<tr>
<th>Type of Entity</th>
<th>Type of Agreement (All Agreements will include Springing BAAs)</th>
<th>Financial Contribution Model</th>
<th>Members in the Pipeline</th>
</tr>
</thead>
</table>
| Health Plan    | Updated LoC if before 2015; after 2014 will use the Participation Agreement | Depends on the number of enrollees in concert with the original financial sustainability model | • Aetna  
• Cigna-Healthspring  
• United Healthcare |
| Acute Care Hospital/Health System | Updated LoC if before 2015; after 2014 will use the Participation Agreement | If in SEPA, determined by original financial sustainability model with the requirement to pay for four years; If outside of SEPA, the subscription fee would be based on the patient discharges and ED visits for the year prior to participation following the same subscription fee model for original members starting upon commencement of agreement. | • North Philadelphia Health System  
• Community Health Systems |
| Specialty Hospital | Updated LoC if before 2015; after 2014 will use the Participation Agreement | Based on the number of annual discharges in the year prior to participation with a minimum annual fee of $5,000 | • Cancer Treatment Centers of America  
• Physician’s Care Surgical Hospital  
• Rothman Specialty Hospital  
• Shriner’s Hospital for Children |
| Acute Care Hospital outside Southeastern PA | Updated LoC if before 2015; after 2014 will use the Participation Agreement | The subscription fee would be based on the patient discharges and ED visits for the year prior to participation following the same subscription fee model for original members with a minimum charge of $5,000 starting upon commencement of agreement. | • Reading Hospital  
• A.I. duPont Hospital for Children |
<p>| Rehabilitation Hospital (non-affiliated) | Updated LoC if before 2015; after 2014 will use the Participation Agreement | Based on the number of annual discharges in the year prior to participation with a minimum fee of $5,000 starting upon commencement of agreement. | • Magee Rehabilitation |
| Long-term acute care facility | Updated LoC if before 2015; after 2014 will use the Participation Agreement | Based on the number of annual discharges in the year prior to participation with a minimum fee of $5,000 starting on commencement of the agreement. | • Kindred |</p>
<table>
<thead>
<tr>
<th>Type of Entity</th>
<th>Type of Agreement</th>
<th>Financial Contribution Model</th>
<th>Members in the Pipeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term care facility</td>
<td>TBD</td>
<td>TBD</td>
<td>Genesis</td>
</tr>
<tr>
<td>ACO (non-Affiliate)</td>
<td>TBD</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Behavioral Health Inpatient Facility</td>
<td>Updated LoC if before 2015; after 2014 will use the Participation Agreement</td>
<td>Based on the number of annual discharges in the year prior to participation with a minimum fee of $5,000 starting upon commencement of agreement.</td>
<td>Kensington Hospital, Montgomery County Emergency Services (MCES), Universal Health Services</td>
</tr>
<tr>
<td>Behavioral Health Residential Treatment Facility</td>
<td>Revised version of an LoC for data recipient</td>
<td>Based on the number of annual discharges in the year prior to participation with a minimum fee of $5,000 starting upon commencement of agreement.</td>
<td>Malvern Institute, Renfrew Centers</td>
</tr>
<tr>
<td>FQHCs and look-alikes</td>
<td>Direct Discovery Document</td>
<td>No subscription fee subject to eligibility and remaining grant funding</td>
<td></td>
</tr>
<tr>
<td>Home Health Agency</td>
<td>TBD</td>
<td>TBD</td>
<td>Walgreens, CVS</td>
</tr>
<tr>
<td>Retail Pharmacy</td>
<td>TBD</td>
<td>TBD</td>
<td>CVS - Minute Clinic, CareStat</td>
</tr>
<tr>
<td>Urgent Care Center</td>
<td>TBD</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Ambulatory Surgical Center</td>
<td>TBD</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Large Private Practice</td>
<td>Direct Discovery Document</td>
<td>No subscription fee</td>
<td></td>
</tr>
<tr>
<td>Unaffiliated Physician Practice</td>
<td>Direct Discovery Document</td>
<td>No subscription fee</td>
<td></td>
</tr>
<tr>
<td>HIE</td>
<td>TBD</td>
<td>TBD</td>
<td>Camden Coalition, NJ Shine</td>
</tr>
<tr>
<td>P3N Connectivity</td>
<td>TBD</td>
<td>Will require HSX to pay fees</td>
<td>PA eHealth Partnership Authority</td>
</tr>
</tbody>
</table>
### 12.4 Confidentiality Requirements

<table>
<thead>
<tr>
<th>Protected Health Information Type</th>
<th>Confidentiality Requirements for Release of Information and Protections from Redisclosure</th>
<th>Exceptions/Non-Consensual Release is Acceptable</th>
</tr>
</thead>
</table>
| Mental Health maintained by mental health FACILITIES subject to the PA Mental Health Procedures Act. | Written Consent legally required.  
The following statement must accompany the release of mental health information with or without consent:  
“This information has been disclosed to you from records whose confidentiality is protected by State statute. State regulations limit your right to make any further disclosure of this information without prior written consent of the person to whom it pertains.” | 1. To those actively engaged in treating the individual;  
2. To provide for continuity of proper care and treatment;  
3. To third-party payers for claims payment purposes and utilization reviews;  
4. In response to an emergency medical situation;  
5. To facilitate the transfer of an admitted or committed patient to another facility. |
| Mental Health Information (other than maintained by Mental Health Facility) | Written Consent RECOMMENDED. | 1. To those actively engaged in treating the individual;  
2. To provide for continuity of proper care and treatment;  
3. To third-party payers for claims payment purposes and utilization reviews;  
4. In response to an emergency medical situation;  
5. To facilitate the transfer of an admitted or committed patient to another facility. |
| Drug and Alcohol Records maintained by Part 2 Facilities | Written Consent Required with specific items included.  
 When information is disclosed electronically an accompanying notice explaining the prohibition on redisclosure must also be electronically sent. The statement must read:  
“This information has been disclosed to you from records protected by federal confidentiality rules (42 CFR Part 2). The federal rules prohibit you from making any further disclosure of this information unless further disclosure is expressly permitted by the written consent of the person to whom it pertains or as otherwise permitted by 42 CFR Part 2. A general authorization for the release of medical or other information is NOT sufficient for this purpose. The federal rules restrict any use of the information to criminally investigate or prosecute any alcohol or drug abuse patient.” | There are only a few exceptions, such as medical emergencies, audits and evaluations and for state reporting. |
<table>
<thead>
<tr>
<th>Protected Health Information Type</th>
<th>Confidentiality Requirements for Release of Information and Protections from Redisclosure</th>
<th>Exceptions/Non-Consensual Release is Acceptable</th>
</tr>
</thead>
</table>
| HIV AIDS                         | Written Consent required. Disclosure must be accompanied by a specific statutory notice, which states: "This information has been disclosed to you from records protected by Pennsylvania law. Pennsylvania law prohibits you from making any further disclosure of this information unless further disclosure is expressly permitted by the written consent of the person to whom it pertains or is authorized by the Confidentiality of HIV-Related Information Act. A general authorization for the release of medical or other information is not sufficient for this purpose." | 1. The Confidentiality of HIV-related Information Act allows that information may be shared without consent of the patient in the pursuit of good health care/treatment purposes.  
2. There is an exception for payment purposes.  
3. Additional exceptions include emergency; public health reporting; risk of significant exposure; reimbursement; to comply with vital statistics requirements. |
| HIPAA                            | Written Consent and Authorization required for release of protected health information, unless an exception applies. Authorization must be detailed and limited. | 1. A covered entity may, without the individual’s authorization use or disclose protected health information treatment of patient, its own payment, and its own health care operations activities, or health care operations of other covered entity provided that certain criteria are met.  
Additional exceptions for disclosure include the following:  
2. If the provider attempts to get consent but is unable due to substantial communication barriers and consent is inferred in the circumstances;  
3. Specified public health and abuse reporting, judicial, administrative, or law enforcement proceedings;  
To avoid serious threat to health or safety. |
12.5 **Use Case Governance**

HSX has put the following use case governance process in place to ensure new ways to utilize the HIE are brought forth in an orderly, structured way.

Use cases will be evaluated using the criteria and process principles below.

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Board of Trustees</th>
<th>Clinical</th>
<th>Finance</th>
<th>Technology</th>
<th>HSX Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value to Members and Consumers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Use Case Alignment with HSX Charter</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Healthcare IT Related</td>
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<tr>
<td>Enhances Patient Care</td>
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<tr>
<td>Quality Improvement Initiative</td>
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<tr>
<td>Integrates into Workflow and Processes</td>
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<tr>
<td>Leverages Current Technology</td>
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<tr>
<td>Technically Feasible</td>
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<tr>
<td>Financial Model and ROI</td>
<td>✓</td>
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</table>
**Process Principles**

- The progression of use case ideas requires approval from ALL appropriate stakeholder audiences.
- New use cases will be reviewed in the context of the HSX business plan to ensure alignment.
- Calculation of Return on Investment (ROI) for new service offerings should be performed or as deemed appropriate by the Finance Committee.
- Approval by Board of Trustees *only required* for:
  - New use case services where costs for implementing exceed budgetary allowances.
  - New use case services that would appear to fall outside of HSX’s charter.
- Approved and implemented use case services will be monitored and evaluated for effectiveness and quality measurement by the Healthcare Improvement Foundation (HCIF).
- HSX will keep a record of all proposed use cases whether they are approved or not.
- Unapproved use case services may be implemented by exchange participants where process, infrastructure and or financial investment by HSX are NOT required.

**12.6 Alignment Cycle Background & Roadmap**

HSX initiated the Alignment Cycle initiative in Q4 2013 with its Board, committee members and key stakeholders, who discussed the goals, objectives, intended outcomes and barriers related to the success of HSX for the next 36 months.

Twenty-nine Board members, staff and stakeholders of HSX participated in this process to align their views and the activities needed to further the HSX mission.

Alignment Cycle Participants determined that the following topic areas would further the HSX mission. Each column indicates the start of various activities. Many activities are ongoing.

Each topic area and associated activity are explained in more detail throughout Business Plan 2.0.
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<tr>
<td><strong>Organization</strong></td>
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<td>Support for Standards</td>
<td>Re-evaluate Governance</td>
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<td>Outreach Hire</td>
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<td>Payment Model Research</td>
<td>Financial Model Alternatives</td>
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<td>Evaluate and Pursue Grants</td>
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<td>Expand Payer Participation</td>
<td>Model Direct &amp; Query</td>
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<td>Query Pilot</td>
<td>Mobile Use Cases</td>
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<td>Data Views / Access</td>
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<td>Access to Information</td>
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<td>City Health Clinics / FQCSs/ Medicaid</td>
<td>Usage Metrics</td>
<td>Outcome Scorecard</td>
<td>Evaluate ROI (Original Use Cases)</td>
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<td>ACO Relationship</td>
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<td>Events and Shared Services</td>
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<tr>
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<td>NIST Credentialing</td>
<td>Non-Direct Use Case Requirements</td>
<td>Data Access Rules</td>
<td>Tech Exchange Solutions</td>
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<td>Evaluate technology vendor</td>
<td>Data Policies</td>
<td>EHR Integration</td>
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<td>Inter-operability Standards</td>
<td>Data Quality Standards</td>
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<td>Long term multi-state Exchange</td>
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<td>Near-term multi-state exchange</td>
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<td>State Connectivity</td>
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<td>Patient EHR Access</td>
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<td>Public Health Registries</td>
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</tbody>
</table>
### 12.7 Alignment Cycle Methods

The following are the steps in the process, the inputs, outputs, and the role of the participants.

#### 12.7.1 Participants

SchellingPoint, the leader in Alignment Optimization, facilitated the group in a virtual dialogue. The participants in the process were:

<table>
<thead>
<tr>
<th>Allen, Russ</th>
<th>Principal</th>
<th>The Writers Studio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnowsky, Greg</td>
<td>Chief Architect</td>
<td>Independence Blue Cross</td>
</tr>
<tr>
<td>Buffone, Natalie</td>
<td>Project Coordinator</td>
<td>HSX of SEPA, Inc.</td>
</tr>
<tr>
<td>Clarke, Pam</td>
<td>Senior Director</td>
<td>HSX of SEPA, Inc.</td>
</tr>
<tr>
<td>Cohen, Hedy</td>
<td>Consultant</td>
<td>Institute for Safe Medication Practices</td>
</tr>
<tr>
<td>Cohen, Suzanne</td>
<td>Director, Member Services and Public Affairs</td>
<td>The Health Federation of Philadelphia</td>
</tr>
<tr>
<td>Farella, Andy</td>
<td>Health System Director</td>
<td>The Children's Hospital of Philadelphia</td>
</tr>
<tr>
<td>Flynn, Kate</td>
<td>President</td>
<td>Health Care Improvement Foundation</td>
</tr>
<tr>
<td>Gelzer, MD, Andrea</td>
<td>SVP / CCMO</td>
<td>AmeriHealth Caritas</td>
</tr>
<tr>
<td>Jackson, Carolyn</td>
<td>President &amp; CEO</td>
<td>St. Christopher's Hospital for Children</td>
</tr>
<tr>
<td>Kindya, James</td>
<td>Program Manager</td>
<td>HSX of SEPA, Inc.</td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
<td>Organization</td>
</tr>
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<tr>
<td>Lubarsky, Neil (Tent)</td>
<td>CFO</td>
<td>Thomas Jefferson University Hospital</td>
</tr>
<tr>
<td>Markezin, Elaine</td>
<td>Senior Vice President</td>
<td>Health Partners Plans</td>
</tr>
<tr>
<td>McNeal, D.O., A. Scott</td>
<td>VP/CMO</td>
<td>Delaware Valley Community Health</td>
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<tr>
<td>Merlis, Larry</td>
<td>President &amp; CEO</td>
<td>Abington Memorial Hospital</td>
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<tr>
<td>Miller, Joe</td>
<td>Director of E-Business</td>
<td>AmeriHealth Caritas</td>
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<tr>
<td>Nagpal, Sumit</td>
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<td>Alere ACS</td>
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<tr>
<td>Ojserkis, Esq., Jill</td>
<td>Partner</td>
<td>Cooper Levenson</td>
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<td>Poole, Angela</td>
<td>Director</td>
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<tr>
<td>Reed, Don</td>
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<td>Crozer-Keystone Health System</td>
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<tr>
<td>Restuccia, Michael</td>
<td>VP/CIO</td>
<td>Penn Medicine</td>
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<td>Schroder, Curt</td>
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<td>Snyder, MD, Richard L.</td>
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<tr>
<td>Thomas, Karen</td>
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</tr>
<tr>
<td>Wilt, Daniel</td>
<td>VP-Operations</td>
<td>HSX of SEPA, Inc.</td>
</tr>
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12.7.2 Alignment Cycle Goals

The following statements are aligned goals resulting from HSX’s Alignment Cycle initiative. Some of the goals are related to desired results and benefits of strategic planning. Others are objectives associated with mitigating constraints, specifically avoiding potential unintended consequences and overcoming barriers to success. The goals are organized around the principles from The Balanced Scorecard, a proven model for effective management of an organization’s goals.

### Goals related to Financial and Non-Financial Outcomes

<table>
<thead>
<tr>
<th>Financial Sustainability</th>
<th>HSX should maintain financial sustainability via a flexible fee model that evolves as HSX’s services and participating organizations evolves.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Ensure HSX financial sustainability model are reviewed/updated annually and will be a part of business plan v2 development.</td>
</tr>
<tr>
<td></td>
<td>• Ensure that value and fee structures (with new members in the mix) should be determined based on Direct and include updated financial sustainability plans related to query based exchange model (Bus Plan v2).</td>
</tr>
<tr>
<td></td>
<td>• Grants should be a source of funding.</td>
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<tr>
<td></td>
<td>• Health System fees should cover affiliated provider costs for connecting to HSX.</td>
</tr>
<tr>
<td></td>
<td>• HSX should pursue grants while recognizing that major grant dollars will no longer exist beyond 2015.</td>
</tr>
<tr>
<td></td>
<td>• Laboratory services should support HSX financially.</td>
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<tr>
<td></td>
<td>• Philanthropy should be a source of funding.</td>
</tr>
<tr>
<td></td>
<td>• We should learn lessons and best practices for financial sustainability from other HIEs.</td>
</tr>
<tr>
<td><strong>Metrics</strong></td>
<td>HSX’s measurements for success should support better patient care outcomes in the region and the downstream realization of the ROI associated with its clinical use cases.</td>
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<tr>
<td>• A measure of HSX success should be queries by acute care emergency departments.</td>
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<tr>
<td>• A measure of HSX success should be the level of integration being developed between the EMR's, such as single sign-on.</td>
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<tr>
<td>• A measure of HSX success should be the number of times a clinician in one health system accesses information sourced in another health system.</td>
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<tr>
<td>• A measure of HSX success should be the number of hospitals who make the system accessible to their staff.</td>
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<tr>
<td>• A measure of HSX success should be the number of users registering and signing in.</td>
<td></td>
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<tr>
<td>• A measure of success will be when the use of HSX exchanged patient care data is embedded in workflows of practitioners and care managers.</td>
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<tr>
<td>• HSX should contribute data for quality metrics that the plans and hospitals have in common.</td>
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<tr>
<td>• HSX should develop metrics for tracking clinical outcomes and use this research to determine next iteration of use cases.</td>
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<tr>
<td>• HSX should request outcome data from the plans and hospitals to determine correlation between HSX usage and outcomes.</td>
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<tr>
<td>• In Business Plan v2, ROI needs to be completed in 2014 that shows value to patient, provider, payer (and other new members that have joined HSX)</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Goals related to Customer Value and Stakeholder Participation</strong></th>
<th><strong>Value to Consumers / Patient</strong></th>
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<tbody>
<tr>
<td>HSX should ensure that its services enable improved patient safety, quality outcomes and population health.</td>
<td></td>
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<tr>
<td>• Although HSX could consider establishing a means for the patient to have access to their EHR information, it should be more of a long-term strategy.</td>
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<tr>
<td>• HSX should find a way to identify when duplicate testing occurs.</td>
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<tr>
<td>• The claims history use case (including medication history) ROI was developed per business plan v1 and will yield significant reduction in adverse drug effects in later 2014 and 2015.</td>
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<tr>
<td>• The sharing of medical records or lab studies through HSX should lessen the patient burden of record transfer.</td>
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<tr>
<td>• With better information flow through HSX, there should be the potential for improvement in the management of chronic conditions.</td>
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<tr>
<td><strong>Value to Health Systems</strong></td>
<td>HSX should ensure that its services enable improved patient safety, quality outcomes and population health.</td>
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<td></td>
<td>• Ensure front line users who conduct the use cases receive benefits from HSX.</td>
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<td></td>
<td>• Ensure value for HSX exceeds the loss of revenue of duplicate testing.</td>
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<td>• Providers should value a query-based exchange because it will improve the quality of care for patients.</td>
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<td></td>
<td>• The Board should have a clear position on the HSX relationship with ACOs. (Although HSX is not an Accountable Care Organization (ACO), an ACO’s effectiveness could be enhanced by participation in HSX.)</td>
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<td></td>
<td>• We should see hospitals have a decrease in financial penalties for preventable readmissions.</td>
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<table>
<thead>
<tr>
<th><strong>Value to Payers</strong></th>
<th>HSX should ensure that its services enable improved patient safety, quality outcomes and population health.</th>
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<tbody>
<tr>
<td></td>
<td>• For payers, HSX needs to impact admission and readmission rates (which leads to ROI).</td>
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<td></td>
<td>• We should see the payers' star measures increase as a result of the HSX.</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Stakeholder Participation</strong></th>
<th>HSX should seek to incorporate consumer medical records from all healthcare entities that contribute to patient care in SE PA to maximize patient safety, quality outcomes and population health.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• As part of a long-term strategy for HSX, participation by pharmaceutical and life science companies should be explored.</td>
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<tr>
<td></td>
<td>• As part of its business strategy P2, HSX should consider the addition of major retail pharmacies as members.</td>
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<td></td>
<td>• HSX should continue to try to engage payers at a regional level even if they are participating in other HIEs.</td>
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<tr>
<td></td>
<td>• HSX should explore ways to obtain input from the physician community to ensure that the physician voice is sufficiently included in HSX.</td>
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<tr>
<td></td>
<td>• HSX should have all of the major payers involved.</td>
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<td></td>
<td>• HSX should partner with organizations focused on self-insured employers as a potential way to manage down the costs.</td>
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<td></td>
<td>• The priority for enrolling new HSX members should be based on their level of contribution to health care in the region including a high volume of encounters.</td>
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<td></td>
<td>• To ensure success with physician adoption, it is critical that the access to information is easy and that the information accessed is valuable.</td>
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<tr>
<td></td>
<td>• We should engage the one health system in the region that has declined participation in HSX due to participation in a national corporate strategy for HIE.</td>
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</table>
### Goals Related to Services, Processes and Technology

#### Core Services / Use Cases

HSX should seek to deliver services that provide regional clinicians / public agencies with relevant patient care detail in a timely manner for effective treatment and within the clinician's workflow.

- An additional use case should be sharing image results, e.g. radiology services, cat scans, ultrasounds.
- Data exchanged should be available for use by state and local Public Health departments.
- Hospitals should get their physicians involved in determining what use cases are important.
- In the long-term future of HSX, we should see improved prenatal care through the ability to look at HSX population data.
- The HSX should have processes for training, updating, and versioning the use cases and HSX features.
- The users should be part of the product development process so they don't sabotage parts of the HSX they don't like.
- There should be enhancements to the two existing use cases to provide richer data in the payload.
- We should have a consistent and transparent process for identifying, vetting and defining future use cases.
- We should target use cases that address the gaps in care when someone transitions from hospital to long term care.

#### Services

HSX should seek to provide Members and participating organizations with access to appropriate patient care interactions / detail to facilitate population health management.

- Ensure members are receiving optimal value from HSX.
- HSX should ensure members can conduct data analytics on the HSX data in the repository.
- HSX should have an early adopter’s list-serv.
- The front line users should be able to get answers quickly through a hotline.
### Technology Architecture

HSX's technology architecture should support use by practitioners in their clinical workflow and facilitate population health analytics.

- A query based exchange model should include a data repository of some type (federated or central) to support improved clinical outcomes, research, population health management and reporting.
- A Query should be a Direct interface with a record locator service.
- HSX should adhere to all recognized interoperability standards to ensure easy integration and delivery of information to a variety of future devices, platforms and mediums.
- HSX should pursue and attain appropriate certification as needed.
- In the query based exchange model, HSX will ensure the information is easily available and viewable within a physician’s EHR.
- Technology and data architecture decisions should be driven by the use requirements we define.
- The Query model should have a shadow capability where information is stored to be accessed when needed.

### Security and Privacy

HSX should ensure that the exchange of clinical records is executed in accordance with the appropriate federal and state privacy and security requirements.

- Credentialing of HSX providers will be in accordance with NIST Level 3 standards.
- Ensure all information being exchanged is accurate, secure and private.
- HSX will need to align to the consent policies developed by the PA eHealth Partnership Authority and follow all Commonwealth of PA consent laws and regulations.
- HSX should ensure the ability and technology solution of its technology vendor supports and align to the needs of the HSX members.
### Engagement & Adoption

HSX should actively support exchange participants with driving adoption of use case services with their owned and affiliated practitioners.

- Ensure there is behavioral change by healthcare providers to generate the HSX use case benefits.
- HSX should partner with the Medical Society to bring vocal support to the provider community.
- HSX should find out where user behavior must change for the use cases to be adopted.
- The HSX procedures should be designed to integrate into the users' workflow and internal processes.
- The relationships that payers have with pharmacies, long term care, and other potential members should be leveraged to increase membership.
- To ensure healthcare providers conduct the activities expected in the use cases it needs to be part of their normal workflow.
- To ensure success with physician adoption, it is critical that the access to information is easy and that the information accessed is valuable.

### Communications

HSX should have a communications function that informs the market of HSX's value proposition and promotes HSX services as a natural part of a clinician's workflow.

- Ensure front line users are educated about the benefits of the HSX use cases, so they could experience the benefits.
- Ensure there is consumer outreach and education of benefits for the HIE system.
- HSX may leverage its participants and RECs to assist with its communications and outreach function.
- HSX should have a communications operation that informs the market what is coming, what it will do for them, and keep in front of the clinician so they are using it.
- We should get some front line users to be champions of the HSX use cases.

### Operations

HSX should focus on the delivery of clinically relevant services that facilitate better patient care outcomes in a financially sustainable manner.

- HSX should focus on the delivery of clinically relevant services that facilitate better patient care outcomes in a financially sustainable manner. HSX should facilitate efficient common access to hospital and provider data for pay for performance with consistent HSX ground rules for appropriate data use and access.
- The exchange should be responsible for the accuracy, timeliness and completeness of the exchanged transaction.
- HSX should be patient-centric, seamlessly integrating EHRs.
### Data Quality

HSX should collaborate with participating organizations to ensure HSX transactions yield clinically relevant data in a timely manner.

- Data integrity should be a shared responsibility between HSX and participating organizations.
- HSX should govern the participants' adherence to the payload's quality standards.
- HSX should have processes to mitigate the potential for errors as it connects with EHR vendors.

### Implementation

HSX should seek to strike a balance between implementation of its Business Plan and the introduction of new initiatives as the HIE landscape evolves.

- HSX members need to lead adoption in their organizations.
- HSX should complete Direct Implementation by 2015.
- HSX should strike a balance between staying on course with implementation of its business plan and remaining flexible in order to accommodate other initiatives.
- We should begin Query Based exchange in 2015.
- We should have a small beta test as part of a small rollout to have the fewest glitches possible when we scale out.

### Goals related to Organization and Governance

#### Organization

HSX should have sufficient resources to deliver the appropriate use case services and adoption expected of participating organizations.

- HSX should have sufficient resources to conduct the important functions of communications and outreach.
- Initially there should be an HSX staff person dedicated to signing new users up.
- Key HSX roles will be added to staff to accelerate and improve implementation timing considering budget constraints.
- Outreach people explaining HSX should know the front line of a medical practice.
- Outreach people should know the HSX product inside and out so they can answer the user's questions.
- The HSX resource model should transition away from consultants to HSX staff for day-to-day operations.
- The HSX staff should include a product management type of role that is asking what should be shared, what use cases we should offer, and how they should operate.
- The staffing plan should include a user support call center.
| **Governance** | HSX's governance model should represent the voice of its diverse stakeholders (consumers, providers, insurers) via a common mission and alignment process for implementation of its objectives. |
| | • Although there may be competitive tensions for HSX members, the HSX board should continue to focus on a common mission and use the alignment process will foster the implementation of common goals.  
• Ensure payer involvement is not suppressed due to HSX governance decisions.  
• Representation on HSX will also be achieved through continued committee involvement.  
• The board should have a finance committee and a technology committee.  
• The Board should transition day-to-day operations to the HSX staff and focus on Direction setting.  
• The Governance model will ensure HSX member representation, while remaining small and agile for effective governance going forward. |
| **Collaboration with Other HIEs** | HSX should seek to connect with relevant private and public HIEs to ensure regional healthcare providers have access to consumer medical records for effective patient care. |
| | • HSX should connect to private exchanges in the region.  
• HSX should connect to the national HIE network.  
• HSX should implement an interim solution before full state-to-state exchange as 25% of our patients are coming from NJ and DE.  
• The exchange should be hooked up to the state network to access patient records for referrals from outside our region. |

### 12.7.3 Traceability Matrix

The source and reasoning behind each activity in Business Plan can be traced back to the Alignment Cycle. [A traceability matrix that correlates Business Plan 2.0 content to Alignment Cycle activities will appear in this appendix once all Business Plan 2.0 content is available to be included in the document.]