• Background
  • Challenges and Opportunities (recap)
  • Way Forward (recap)

• Status Report (Summary and Highlights)*
  • Reliable and Cost Effective IT Infrastructure
  • Effective IT Operations & Project Management (with IT Governance)
  • Clinician Training & Optimization (Clinical Informatics)
  • Right Solutions Aligned to Business Strategy
  • Interoperability Across All Systems (PHINX and Unified EHR)

• Moving Forward
  • Barriers and Challenges

• Conclusion and Questions

*Detailed dashboard of tactical objectives and progress attached for reference
According to Sierra Study & Internal IT Assessment 2012/2013

• IT Can’t Meet Business Strategy
  • Integrated Delivery System
  • Public Health Accreditation
  • Financial and Operational Efficiency

• Internal Factors
  • Fragmented IT Organizational Structure
  • Insufficient Investment in IT
  • Missing or Inadequate Fundamental IT Capabilities
  • Poor Alignment to Business Strategy

• External Factors Motivating Change
  • Meaningful Use & Affordable Care Act
  • Fast Changing Technology
  • Competition
Way Forward (recap)

Focusing on Operational Support, Building Foundations & Capabilities

- Equity in Access
- Financial Long-term Viability
- Excellence in Healthcare
- Population Wellness Management

- Innovation
- Seamless Collaboration
- Integrated Care Across Continuum of Care

- Interoperability across all systems
- TeleHealth, Communication, Business Analytics
  - Unified Electronic Health Records System
  - Population Health Information System (new)

- Right Solutions
- Value “Add” Processes (LEAN and IT Service Delivery Model)
- Workflow and Requirements Assessment

- Reliable, Secure (new) and Cost Effective IT Infrastructure
  (Network, Servers, End User Devices)

Agenda >> Background >> Status Report >> Moving Forward >> Conclusion and Questions
Summary and Highlights*

Status Report

- Reliable and Cost Effective IT Infrastructure
- Effective IT Operations & Project Management
- Clinician Training & Optimization (Clinical Informatics)
- Right Solutions Aligned to Business Strategy
- Interoperability Across All Systems (PHINX and Unified EHR)

*Detailed dashboard of tactical objectives and progress attached for reference
18 Tactical Objectives across DPH

- 5 Complete, including Primary Site to Site Communication links, DPH new Medical Grade Network and Data Center at SFGH (DPH reference model)
- 10 On Track, including communication infrastructure within each site
- 3 Delayed due to city fiber installation schedule and DPH IT resource shortage
  - Clinics and remote offices site to site communication links
  - Scheduled to be completed in Dec 2015
- 2 objectives combined to one objective
  - Remote Sites fiber Optics Ready
  - No Fiber Optic Sites

*Details regarding security are not included in this document. However it should be noted that security is foundational to our infrastructure as it is one of our primary objectives.
Reliable, Secure and Cost Effective IT Infrastructure

Highlights

• DPH Medical Grade Network Complete at SFGH
  • Reference model that will be rollout across DPH
  • 50% of Network core shutdown test performed, 100% of Network remain functional

• Highly Redundant Data Center build started at Laguna Honda
  • SFGH and LHH data centers will be mirrored to ensure complete loss of one data center will not impact end users
  • Either site will failover to sister site to continue function, and all remote sites will connect to both data centers

• More stable remote user experience coming in December 2015
  • Apple devices users will no longer receive JAVA error when connecting to DPH

• Use of Virtual Environment Benefits (PHD and CBHS)
  • System maintenance without downtime-70% decrease in downtime reported for CBHS
  • Reports and claim process 30% faster
• 10 Tactical Objectives across DPH (6 New Objectives)
  • 3 Complete, including DPH Wide Industry Standard IT Service Delivery Framework adoption, and DPH IT Re-Organization to align with DPH strategy, and customer satisfaction metrics
  • 7 On Track
  • 0 Delayed
Effective IT Operations, Project Management (& IT Governance)

Highlight

• Customer Satisfaction Metric (4.23 to 4.33 out of 5)
  • Tracking customer satisfaction for all requests and incidents tickets
  • All low rating (1 and 2 out of 5) responses are followed up with customers
  • Metrics used to identify performance improvement opportunities

IT Ops C-Sat

<table>
<thead>
<tr>
<th></th>
<th>Customer Satisfaction</th>
<th>Survey Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul-15</td>
<td>4.23</td>
<td>377</td>
</tr>
<tr>
<td>Aug-15</td>
<td>4.38</td>
<td>351</td>
</tr>
<tr>
<td>Sep-15</td>
<td>4.33</td>
<td>323</td>
</tr>
</tbody>
</table>
Effective IT Operations, Project Management (& IT Governance)

Highlight

- Single Source of Truth to assist the business
- Prioritizing project requests
- Transparencies on all project status and tasks
Effective IT Operations, Project Management (& IT Governance)

Highlight

- IT Pre 2013 functional organizational structure
  - Rigid Silos structure based on physical location
  - No sharing of resources
  - Not present or missing in one or more physical location
    - PMO
    - Security
    - Budget
    - Purchasing
    - Reporting
    - Integration
    - Helpdesk
    - Enterprise IT Architect
    - EMR
    - HR

Agenda >> Background >> Status Report >> Moving Forward >> Conclusion and Questions
Effective IT Operations, Project Management (& IT Governance)

Highlight

- IT Re-Organization
  - Breaking Silos and uniting IT to improve coordination and resource allocation
  - Creating capabilities with exiting and new staffs, creating jobs, roles, and skills

SF Health Network

Population Health Division

Director of Public Health

Chief Information Officer
  Strategy and True North

Associate CIO- Business and Clinical Transformation & Data Warehouse; PHINX; EHR

Chief Applications Officer- Applications; Reporting; Integration; Development

Chief Technology Officer- Enterprise IT Architecture and Solutions; Network Architecture; Systems Architecture; Security Architecture; Application and Data Architecture; End User Devices Architecture

Program Management Director- Program Management; Project Management; Budget Planning

Chief Operations Officer- Clinical and Business Operations for Infrastructure (Network, Systems, Security); Field Services; Helpdesk; Purchasing HR

Agenda >> Background >> Status Report >> Moving Forward >> Conclusion and Questions
Clinician Training & Optimization (Clinical Informatics*)

Status Report

• 3 Tactical Objectives across DPH
  • 3 On Track, including Clinical Informatics Program across DPH, Clinician Training Program to ensure effective use of systems, Clinical System Optimization Program to continually improve systems and workflows
  • 0 Delayed

*Population Health Division Informatics is located in “Interoperability across all systems” section
Clinician Training & Optimization (Clinical Informatics)

Highlights

• Informatics Program started
  • Clinical Informatics Program Director hired
    • Eric Shaffer, formerly SFGH ICU Nurse and Clinical Document Specialist
  • Active discussion key DPH leadership to unify current informatics teams
  • Informatics internship program with USF established
    • 1 hired at SFGH as RN to train in clinical workflow

• Optimization plan to utilize Lean performance improvement methodology
  • To align with DPH methodology for Performance Improvement
  • Clinical Nursing Informaticist to be Lean Process Management fellow candidate
Right Solutions Enabling Business Success

Status Report

- 7 Tactical Objectives across DPH (6 new objectives)
  - 1 Complete, Patient portal
  - 6 On Track
  - 0 delayed

- Right Solutions Aligned to Business Strategy (revised)
  - Value “Add” Processes (LEAN and IT Service Delivery Model)
  - Workflow and Requirements Assessment
ICD10 was successful on all DPH IT systems
  • 100% of systems ready by Sep 30, 2015

eCW roll out completed
  • All Primary and Specialty clinics & Laguna Honda Hospital
  • ICD 10 Code assist for coding for the providers
  • Easier medication prescription via ePrescribing
  • Progress note are online, documentation matches our billing
  • Improved Readiness for Unified EHR implementation and adoption
  • Patient Portal has lab and visit summaries, other functionality coming soon

Provider documentation live at SFGH for progress notes and discharge summary (SALAR)
  • LCR system does not equivalent function
  • ICD10 intelligence to assist providers to document with specificity needed

Patient Portal roll out completed
  • Patient Portal has lab and visit summaries
  • Other functionality coming soon
Interoperability Across All Systems

Status Report

- 10 Tactical Objectives across DPH (6 new objectives)
  - 2 Complete, 1 EHR Requirement and Use Case, 1 PHD PHINX system Infrastructure
  - 5 On Track, EHR and PHD related
  - 3 Delayed, related to unified EHR due to additional due diligence and budget decision

- Interoperability across all systems
  - TeleHealth, Communication, Business Analytics
  - Unified Electronic Health Records System
  - Population Health Information System (new)
Interoperability Across All Systems
Highlights

• SF Health Network’s Unified EHR
  • Executive Steering Committee established Mar 2015, and continues to meet weekly to provide strategic level guidance
  • Operational Steering Committee in progress, and will meet regularly (ongoing) to provide tactical and operational level guidance
  • Preliminary Requirements and use case complete
  • Initial project scope, staffing model, and Estimated Total Cost of Ownership complete
  • Solution recommendation pending funding
  • Hired eHR Program Manager in Jun 2015-Albert D’host
  • Hiring staff and consultants needed

• Population Health Division’s PHINX system
  • Primary Population Health Division Information System
  • Resilient, flexible, high performance virtual servers
  • Test, development and production system
  • PHD Informatics position created
Moving Forward

Barriers and Challenges (and Mitigations)

• Staffing
  • Expand Internships and Trainee program
  • IT hiring process improvement with DHR

• Technical and Leadership skills
  • Ongoing technical and leadership courses
  • Mentorship and knowledge sharing program

• Procurement
  • Plan purchases, align with city process lead time (use lifecycle planning)
  • Engage process owners in CCSF
Barriers and Challenges (and Mitigations)

- Demand vs Resource Capacity imbalance
  - Single source of truth demand and resources for data driven decision
  - IT Governance at local and DPH wide

- Cultural barriers (long standing practices and assumptions)
  - KPI driven changes
  - Build relationships
  - Communication
  - Data Governance
  - Business Ownership of Services
  - IT Custodianship of Services
Moving Forward

Conclusion: Aligning with Business Needs

- Protect and promote the health of all San Franciscans
- Integrated Delivery System
- Financial and Operational Efficiency

- Right Technology for our Mission at any location
- Anywhere, Anytime Access to Actionable Information
- Data Analytics
- Highly efficient and customer centered IT operations
Questions
San Francisco Department of Public Health

Health Information System
“Our Way Forward”
Status Dashboard for Reference
11/03/2015
Bill Kim, CIO
Revision 1
Tactical Objectives & Status: Understanding the Dashboard

- Interim Plans and Actions prior to final objective state
- Status and dependencies related to Objective

Initiative Scope
Objective
Status or Estimated
Delivery Date

"Additional Details" Box

Color Coded “Quick Status” Box (Please note change)

Blue - Complete
Green- Completed - On Track
Yellow- Active planning, design or implementation Scope or ETA Changed
Red- No Action to Date or Delayed due to dependency - At Risk
IT Tactical Objectives for
Reliable, Secure*, High Performing
and Cost Effective IT Infrastructure

*Details regarding security is not included in this document. However it should be noted that security is foundational to our infrastructure as it is one of our primary objectives.
### Wide Area Network:
**Communication Between Sites**

<table>
<thead>
<tr>
<th>Location</th>
<th>Bandwidth</th>
<th>Year</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Sites</strong> (3 DPH Data Centers)</td>
<td>10 Gbps</td>
<td>Complete</td>
<td>No single point of failure (SFGH-LHH-1380)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Auto failover to independent AT&amp;T fiber optic connections at 250 Mbps-500 Mbps</td>
</tr>
<tr>
<td><strong>Dual Path to CCSF DT</strong></td>
<td>10 Gbps</td>
<td>Dec 2014</td>
<td>In design phase with DT, ETA pending</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complete</td>
<td>Dependency for offsite server virtualization initiative</td>
</tr>
<tr>
<td><strong>Remote Sites (TeleHealth)</strong></td>
<td>10 Gbps</td>
<td>Dec 2014-2015</td>
<td>1 Gbps redundant connections in implementation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 Gbps connections pending CCSF fiber optics rollout (Fiber 100% complete)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Currently being rolled out for Dec 2015</td>
</tr>
<tr>
<td><strong>Remote Sites (Fiber Optics Ready)</strong></td>
<td>10 Gbps</td>
<td>Dec 2014-2015</td>
<td>1 Gbps connections in implementation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10 Gbps redundant connections in due diligence phase. (Fiber 100% complete)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Currently being rolled out for Dec 2015</td>
</tr>
<tr>
<td><strong>Remote Sites (No Fiber Optics)</strong></td>
<td>100 Mbps-1 Gbps</td>
<td>Dec 2014-2015</td>
<td>Leased commercial 100Mb to 1Gbps connections in planning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>AT&amp;T order placed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Currently being rolled out for Dec 2015</td>
</tr>
</tbody>
</table>
# Local Area Network: Communication Within Each Site

<table>
<thead>
<tr>
<th>Site</th>
<th>Status</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>New SFGH Medical Grade Network</td>
<td>June 2015-Complete</td>
<td>• Part of “SFGH Rebuild” effort</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Currently onboarding devices on the network</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reference model for rest of DPH</td>
</tr>
<tr>
<td>Laguna Honda Hospital</td>
<td>Medical Grade Network Late 2016</td>
<td>• Network simplification in due diligence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Schedule pending resource and budget</td>
</tr>
<tr>
<td>1380 Howard Street*</td>
<td>Medical Grade Network Late 2016</td>
<td>• Network core risk mitigation and redundancy complete</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• *Medical Grade Network, targeting late 2016-Pending final occupancy plan</td>
</tr>
<tr>
<td>Remote Sites (TeleHealth)</td>
<td>Medical Grade Network Late 2016</td>
<td>• Site Surveys complete October 2015</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Schedule pending resource and budget</td>
</tr>
<tr>
<td>Remote Sites (Fiber Optics Ready and No Fiber Optic Sites)</td>
<td>Medical Grade Network Late 2016</td>
<td>• Site Surveys complete October 2015</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Schedule pending resource and budget</td>
</tr>
</tbody>
</table>
**Servers (Data Centers):**

**Applications, Databases, Files and Print Services**

<table>
<thead>
<tr>
<th>Project</th>
<th>Status</th>
</tr>
</thead>
</table>
| New SFGH Medical Grade Data Center (Mirrored) Complete | • Installation complete  
• Part of “SFGH Rebuild” effort  
• Reference model for LHH (future mirror site)  
• Disaster Survival required systems location |
| Leverage CCSF Dept of Technology Virtual Server Farms Nov 2014 (Start Migration) | • Active migration  
• Non Disaster Survival systems location  
• Behavior Health, Web Services complete  
• Other systems being evaluated. |
| Laguna Honda Hospital Medical Grade Data Center (Mirrored) Late 2016 | • Design complete, procurement complete, install started – 15%  
• Planned mirror site to SFGH for full redundancy |
| 1380 Howard Street Decommissioned Mid 2017 | • Data center to be decommissioned  
• System to migrate to SFGH, LHH and CCSF |
### End User Devices:

**Collaboration through Uncomplicated, and Ubiquitous Communication**

<table>
<thead>
<tr>
<th>Device Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| **DHP Wide Virtual Desktops** | April 2015 - Complete*  
  Replace stand alone desktop computers  
  *Single Sign-on with Session* that follow clinicians  
  Application variety prevents single solution  
  *SFGH complete, LHH initial refresh complete, rollout will continue as part the endpoint refresh cycle* |
| **DHP Wide Wireless Phones** | 2015 (Start Implementation)  
  Voice over IP wireless phones  
  Call Manager Upgrade live Nov 2015  
  On target for Rebuild rollout May 2016, pilot this fall  
  Medical Grade Network dependent for full function |
| **DHP Wide Video Conferencing** | 2015 (Start Implementation)  
  Anywhere video conferencing  
  In Pilot with IT  
  Medical Grade Network dependent for full function |
| **DHP Wide Telemedicine** | Complete (Phase 1)  
  Store and Forward Telederm, Diabetic Retinopathy, Tele-spirometry LIVE (Phase 1 17 locations)  
  Video medical interpreting (VMI) expansion to follow WAN and Call Manager upgrade Dec 2015  
  Phase 2 pending business plan |
IT Tactical Objectives for
Effective IT Operations & Project Management
(with IT Governance)
People and Capabilities:
IT Operations

- **DPH Wide Industry Standard IT Service Delivery Framework**
  - Training & certification of all IT Staff started, existing staff completed Dec 2014
  - On-going effort (for new employees)
  - Adopted best practices, such as Incident Response, Process improvement manager,

- **DPH Wide IT Organizational Structure***
  - Security and Compliance Services complete
  - IT Business Support Services (HR, Finance, Contracting, Procurement) completed
  - PMO completed
  - *Leadership and Structure in place, but need to hire staff

- **DPH Wide Technical and Leadership Capabilities**
  - Centralize education program complete
  - Certification or proficiency assessment test required for all training

- **DPH Wide IT Talent Management**
  - IT Business Support team actively working with HR to fill vacancies
  - Paid IT internship program in started July 2015
  - “1010” Trainee program planned for Feb 2016
  - Establish IT Talent management plan by Feb 2016
People and Capabilities:

Effective Project Management (with IT Governance)

DPH Wide PMO Organization & Staffing (New Objective)
Jun 2016
- Program Management Office (PMO) Director hire completed Nov 2014
- Internal resource re-assignments completed Jun 2015
- Fill vacant PM and BA positions

DPH Wide IT Project Governance (New Objective)
Mar 2016
- New project intake process
- IT governance framework across DPH
- Project Request Prioritization process with IT Steering Committees
- Single source of truth project request and status dashboard across DPH

DPH Wide Effective Project Planning & Execution (New Objective)
Jun 2016
- Standardized project management framework completed Sep 2015
- Train PMO staff on framework and tools completed Sep 2015
- Performance standards completed Dec 2015
- Project Portfolio Management (PPM) system across
People and Capabilities:
Effective Project Management (and IT Governance)

DPH Wide Resource and Capacity Management (New Objective)
June 2016

• PPM demand forecasting tool to help balance demand and capacity for IT resources Dec 2015
• Implement resource management processes for IT projects Jun 2016

DPH Wide Stakeholder Communications Plan (New Objective)
Dec 2015

• Project portal and dashboards for stakeholders Dec 2015
• Executive and stakeholder status reports Dec 2015

DPH Wide Customer Satisfaction Metrics (New Objective)
Sep 2015

• Customer satisfaction measurement process completed September 2015
IT Tactical Objectives for
Clinician Training & Optimization
(Clinical Informatics)
**People and Capabilities:**

**Clinician Training & Optimization (Clinical Informatics)**

| DPH Wide Clinical Informatics (CI) Team | • Clinical Informatics Program Director hired  
• CI Organizational structure to be proposed in December 2015  
• Established graduate intern program with USF  
• Clinical Nurse Informaticist to become Lean Process Management fellow |
| ETA Pending, June 2016 |

| DPH Wide Clinician Training Program | • Training on standard key performance indicators  
• Standardize clinician training program Dec 2016 |

| DPH Wide Clinical System Optimization Program | • Utilize Lean process improvement (3P) and new hospital training to capture and improve workflows through mid 2016  
• Utilize 3P process across DPH Clinical Services to improve workflow and IT alignment  
• *Pending training of IT staff |
| ETA Pending* |

*ETA = Estimated Time Available*
IT Tactical Objectives for Right Solutions
<table>
<thead>
<tr>
<th>Objective and Initiative</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Regulatory Compliance and Financial Stewardship** (New Objective) Ongoing | • ICD10 readiness on all IT systems, testing completed Sep 2015  
• Standard workflow and reporting for all regulatory reporting started ongoing  
• Provide dashboards for OMC (Office of Managed Care) metrics to manage out of network costs started ongoing |
| **Information and Data Governance Plan** (New Objective) June 2016 | • Created plan for self service reporting functions to speed data validation and acceptance complete Jun 2015  
• Developing strategies to meet continuing data governance demands. Expect plan Jun 2016 |
| **Self Service & Ease of Use** (New Objective) Ongoing | • Business Department Content Management (self service) complete  
• Google Analytics for ease search complete  
• Password Management (self service) complete  
• Other functions TBD |
| Patient Portal Phase 1 (basic functions) | • Patients with services from SFGH and the clinics currently have lab and visit summaries available in a patient portal.  
• Primary care is developing plans to utilize the messaging with patients inside the portal.  
• Efforts are underway to engage patients in a meaningful way to increase utilization. |
| --- | --- |
| Health Information Exchange Plan | • Connecting with a state or local HIE is needed for safety and continuity with other networks.  
• Discovery and due diligence |
| June 2017 |  |
| Application Development focus on short-term, not-yet-to-market needs | • Completed DPH wide medication, allergy and problem list that can be seen in all primary eHRs completed 2015  
• Evaluating in-house developed applications for replacement  
• Replace eReferral system with market system Dec 2016 |
| (New Objective) |  
| Dec 2016 |  |
Right Solutions
Enabling Business Success

New Technology for better patient care
(New Objective)
May 2016

- Implemented provider documentation (SALAR) at SFGH completing roll out December 2015
- Real-time vital sign capture from the monitor to the eHR May 2016
- Improved communication with patients and providers via wireless phones. May 2016
- Phase II plan clinical alarm management. (December 2016 start)
- Completed eCW roll out in September 2015.

Enterprise Data Warehouse and integration to EHR and PHINX TBD

- Pending EHR selection and due diligence
IT Tactical Objectives for
Interoperability Across All Systems
# Interoperability Across All Systems: Unified EHR

| DPH Wide Current State Workflow | • In progress  
• Revenue Cycle Management documentation completed in summer 2015, will continue to update and expand  
• *Significant risk, especially due to SFGH staff availability & new SFGH opening |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2015 – Dec 2016</td>
<td></td>
</tr>
</tbody>
</table>
| DPH Wide eHR Requirements and use cases | • Preliminary discovery complete  
• Initial project scope, staffing model, and Total Cost of Ownership complete  
• Needed for Solution Selection |
| June 2015 – Complete | |
| DPH Wide New EHR RFP & Sole Source Recommendation | • Pending funding decision  
• Contracting process expected to take at least 12 months  
• *Significant risk, especially due to SFGH staff availability & new SFGH opening |
| Dec 2015 – Nov 2015 | |
| DPH Wide New EHR Implementation | • *Changed from mid 2016 to June 2017 to align with funding timing and contracting completion |
| Mid 2016 – June 2017* | |
### Interoperability Across All Systems: Unified EHR

<table>
<thead>
<tr>
<th>Objective</th>
<th>Details</th>
</tr>
</thead>
</table>
|**DPH EHR Governance (New Objective) June 2016**| - EHR Executive Steering Committee established Mar 2015 and continues to meet weekly  
- Operational Steering Committee in progress  
- Engaging an experienced consultant for governance structure guidance|
|**DPH EHR Readiness (New Objective) Dec 2016**| - Hired EHR Program Manager in Jun 2015  
- Engaging a consultant to assist with validation of gap analysis  
- Hiring staff and consultants needed for preparation|
|**Identify third party gaps under new EHR (New Objective) Dec 2016**| - Big EHRs do not solve all integration and continuity of care issues. Numerous applications will need be needed. Examples include:  
  - Enterprise Data Warehouse Integration  
  - Identify Management  
  - eReferral  
  - Customer Relation Management (Patient Engagement)
Interoperability Across All Systems:
Population Health System

<table>
<thead>
<tr>
<th>PHINX Infrastructure</th>
<th>High performance virtualized server environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(New Objective)</td>
<td>Test, Dev, Production environment</td>
</tr>
<tr>
<td>Complete</td>
<td>DT Data Center hosted</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHINX</th>
<th>Pending business workflow optimization and decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(New Objective)</td>
<td>Pending contracting for Interface</td>
</tr>
<tr>
<td>Workflow and Integration to Existing PHD Systems</td>
<td>Hire PHD Informaticist</td>
</tr>
<tr>
<td>TBD</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHINX</th>
<th>Pending enterprise data warehouse due diligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>to Enterprise Data Warehouse Integration (New Objective)</td>
<td></td>
</tr>
<tr>
<td>TBD</td>
<td></td>
</tr>
</tbody>
</table>