



# Sharp HealthCare

## Information Technology Strategy

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April 18, 2018

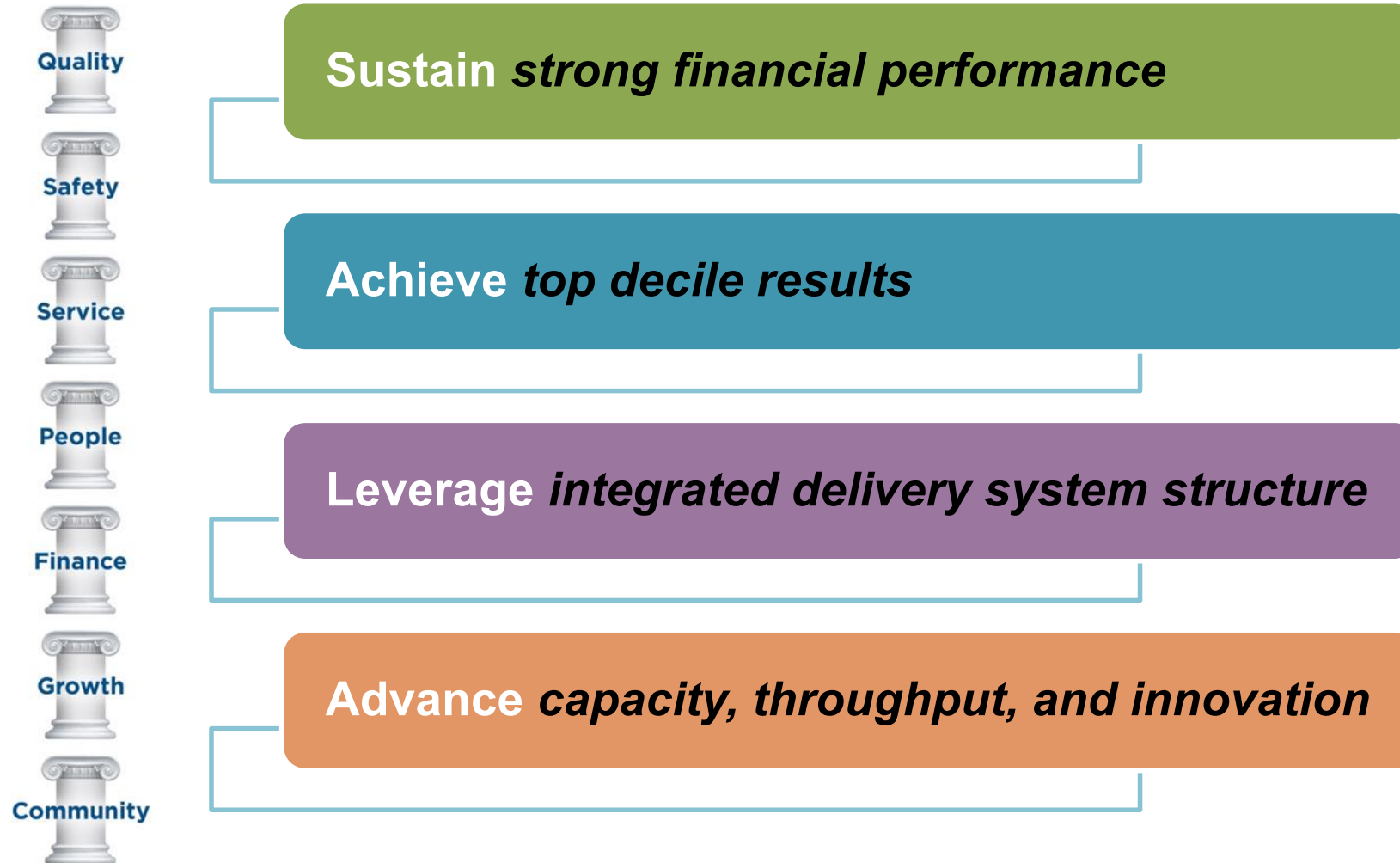


# Sharp HealthCare



- Not-for-profit serving 3.2 million residents of San Diego County
- Grew from one hospital in 1955 to an integrated health care delivery system
  - 7 Hospitals, 2 Medical Groups, Health Plan
  - Centralized system support services
  - Largest health care system in San Diego with highest market share
  - Significant commitment to managing risk
- Largest private employer in San Diego
  - 18,000 employees, 2,600 affiliated physicians, 3,000 volunteers

# Sharp HealthCare Strategic Priorities



# The Healthcare Technology Curve

## *Industry Trend*

## *Sharp HealthCare*

Digital Healthcare

Mobility Strategy, Telehealth

Patient/Consumer Engagement

Patient Portal, Patient Self Service

Cloud Computing

Data Center Transformation

Focus on Data and Analytics –  
Data Driven Organization

Enterprise Analytics, Big Data and  
Data Governance

Implementation of Integrated  
information systems

Integration of Best of  
Suite/Platform Solutions

# Sharp HealthCare IT Overview

- Cerner Millennium
  - Full Acute EMR implementation across all Hospitals
  - ED, Rx, Surgery, Radiology, Lab, etc.
  - Ambulatory EMR in hospital based outpatient
  - Ambulatory EMR/PM implementation underway for 200 IPA physicians
- Allscripts Touchworks Ambulatory EMR
  - Sharp Rees Stealy Medical Group - On Premise for 600 providers
  - Sharp Community Medical Group (SCMG) IPA – Dell Hosted with 200 Providers
- Allscripts dbMotion as Private HIE across Sharp
- Allscripts Follow My Health Patient Portal with nearly 250,000 users
- GE Centricity Registration and Revenue Cycle across all Hospitals and SRS
- Connection to San Diego Health Connect as Community HIE



GE Healthcare



# IT Strategic Priorities



**Sustain *strong organizational and technology compliance and infrastructure***

- Implement IT Risk Management program
- Execute long term data center strategy
- Maintain regulatory compliance
- Implement vendor and application portfolio management
- Support infrastructure and facility modernization
- Enhance IS staff development and retention
- Enhance communications, education and support for IT processes and application

**Sustain**  
***strong organizational and technology compliance***



# Sustain Strong Organizational and Technology Compliance

## Execute data center transformation strategy

- a.) Completed migration of Cerner to remote hosted solution in Kansas City
- b.) Completed migration of non-Cerner, non-production systems to secondary data center attached to new software defined network
- c.) Built-out co-location space and infrastructure compute in Aligned Data Centers
- d.) Migrating non-Cerner production applications to Aligned Data Centers over 2018 and 2019

Resulting in a savings of \$18.4 million in capital and \$10.0 million in operating costs over next six years





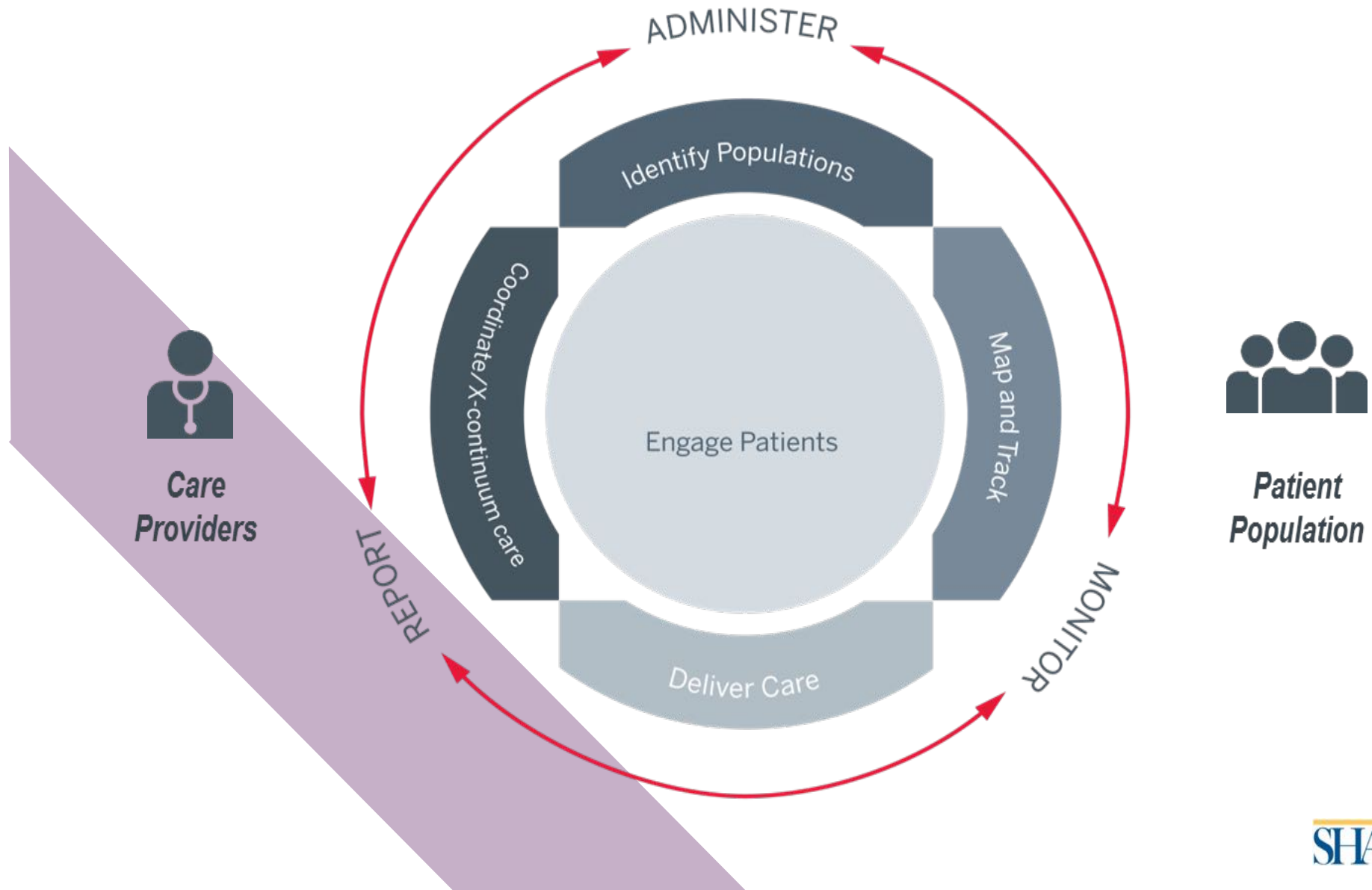
**Leverage *advanced technologies to support population health and integrated delivery system***

- Implement population health solutions
- Evolve advanced analytics and big data
- Implement new technology to support Sharp Health Plan
- Implement enterprise data management and governance program

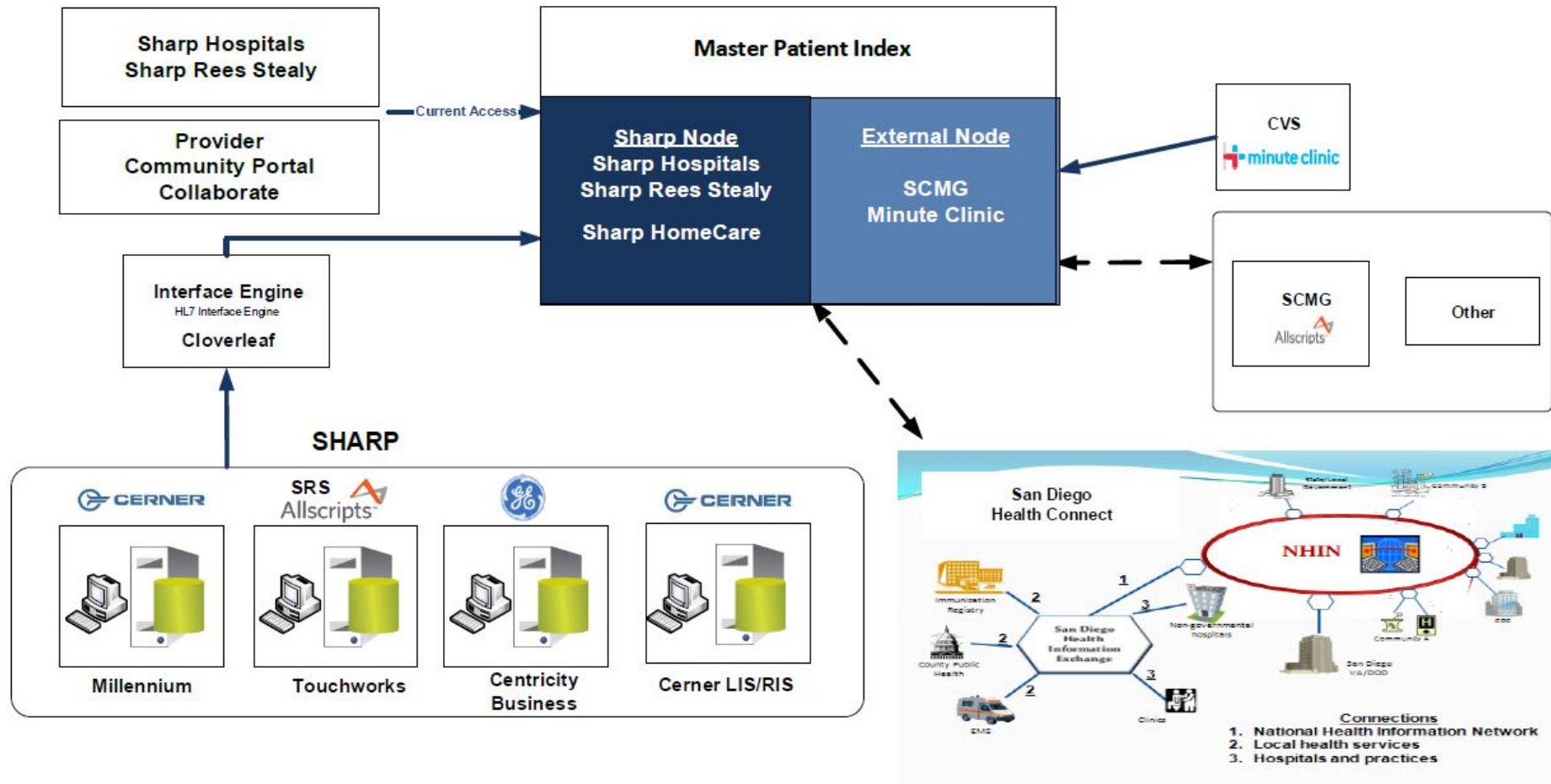
**Leverage  
*advanced technologies  
to support ...***

# Framework for IT-Enabled Population Management

## Six Essential Elements



# Sharp HealthCare Community HIE Landscape



Future Implementation  
 Current Implementation

# Cerner PowerChart

From Cerner PowerChart or Firstnet, with a patient in the banner, click the HIE button on the menu bar

The screenshot displays the Cerner PowerChart interface for a patient named RGTEST, CERNONE. The top banner shows the patient's name and ID, along with the user 'Ellis, Betsy A'. Below the banner is a menu bar with various options: Task, Edit, View, Patient, Chart, Links, Notifications, and Help. A red circle highlights the 'HIE' button in the menu bar. The patient's demographic information is displayed on the right: Age: 34 years, DOB: 12/25/1980, Sex: Male. The left sidebar shows a 'Menu - All' list with options like Patient Care Summary, ICU MPage, Inpatient Summary v4, BH Patient Care Summary, Mom Delivery Summary, OB/GYN Summary, Neonatal MPage, and Well Newborn MPage. The main content area is titled 'Patient Care Summary' and contains several sections: Anticipated Discharge Date --, Reason for Visit --, Advance Directive --, Code Status --, Allergies --, Diet Orders --, Patient Activity --, IDX Disease Alert --, Ebola Risk --, Isolation Precautions --, Fall Risk Score --, Skin Integrity Risk Score --, Primary Pain Location --, Intensity (0-10 Scale) --, Acceptable Intensity --, and Pain Score --.

RGTEST , CERNONE - 00-24-84-03 Opened by Ellis , Betsy A in PowerChart

Task Edit View Patient Chart Links Notifications Help

Patient List Print Facesheets - Patient List PAL Staff Assignment HIE FirstNet Tear Off Attach

Remind: 0

RGTEST , CE... x

SHARP RGTEST , CERNONE

Age: 34 years  
DOB: 12/25/1980  
Sex: Male

Menu - All

Patient Care Summary

ICU MPage

Inpatient Summary v4

BH Patient Care Summary

Mom Delivery Summary

OB/GYN Summary

Neonatal MPage

Well Newborn MPage

Patient Care Summary

Anticipated Discharge Date --  
Reason for Visit --  
Advance Directive --  
None: Patient declined information - 03/23/15 15:21  
Code Status --  
Allergies --  
Peanut (Active) - 11/25/13 10:14  
Diet Orders --  
Patient Activity --

IDX Disease Alert --  
Ebola Risk --  
Isolation Precautions --  
Fall Risk Score --  
Skin Integrity Risk Score --  
Primary Pain Location --  
Intensity (0-10 Scale) --  
Acceptable Intensity --  
Pain Score --

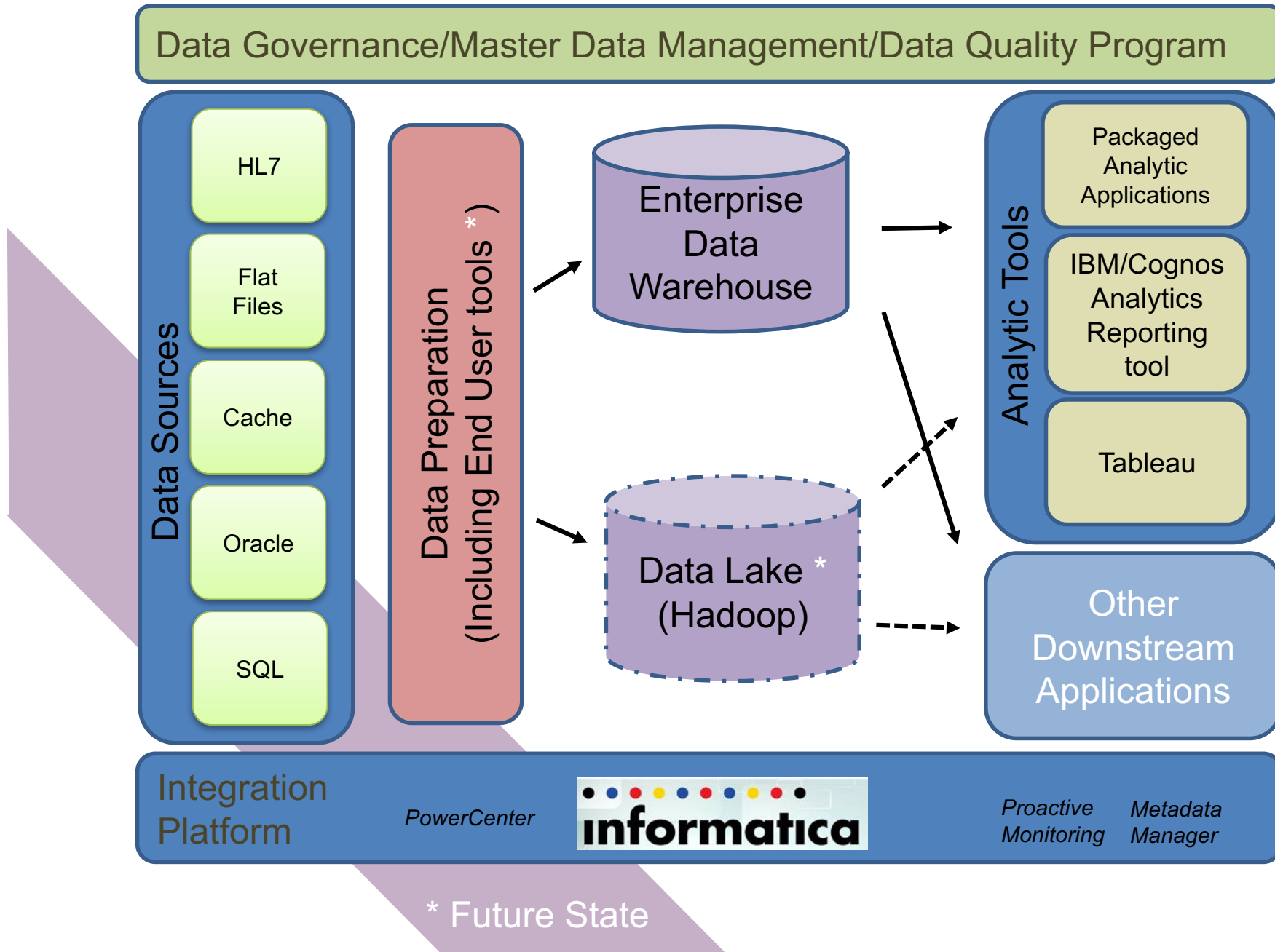
# SRS Allscripts Touchworks

From SRS Touchworks with a patient in the banner, click the HIE tab at the top



















The screenshot displays the SRS Allscripts Touchworks web application interface within a Windows Internet Explorer browser window. The top navigation bar includes tabs for Clinical Desktop, Task List, Appointments, Worklist, Note, Chart, FAQ's / Modules, **HIE** (highlighted with a red circle), OnBase, Outside Records, i-Learn, and HCN\_OMRN. Below the navigation bar, the patient banner for "RGTEST, CERNONE" is visible, showing details such as EnMRN: 4199651, Sex: M, DOB: 12/25/1980, and H Phone: (858)499-4000. The left sidebar contains a menu with options like Chart, Tasks, Patient Lists, User Options, References, Lexicon, PAT by Category, Reports, and Sites. The main content area is divided into sections for Problem, Patient Worklist, and Chart Viewer, with the Chart Viewer currently displaying "0 of 2 Chart Items (0 Invalid and 0 Audit Items)".





# Sharp's Enterprise Analytics Platform Overview



# Enterprise Analytics – Three Year Roadmap

Program Component			Active Status
 <b>Data Preparation Tools</b>	<ul style="list-style-type: none"> <li>• Trial and evaluate tools within IT</li> <li>• Trial and evaluate tools with select clients</li> </ul>		
 <b>Quality Metrics Application</b>	<ul style="list-style-type: none"> <li>• Select application to produce P4P and CMS measures</li> <li>• Implement and expand to produce all quality measures</li> </ul>		
 <b>Knowledge Development</b>	<ul style="list-style-type: none"> <li>• Determine topics for broad training program</li> <li>• Develop Training materials</li> <li>• Determine trainers and frequency of</li> </ul>		
 <b>Analytics Community of Excellence</b>	<ul style="list-style-type: none"> <li>• Utilize strategy published by Gartner to develop charter</li> <li>• Establish tools, training, organizational needs and others</li> <li>• Implement and operationalize</li> </ul>		
 <b>Report Certification</b>	<ul style="list-style-type: none"> <li>• Research best practices</li> <li>• Develop Guidelines</li> <li>• Pilot and expand throughout organization</li> </ul>		
 <b>Mastered Data</b>	<ul style="list-style-type: none"> <li>• Determine integration with MDM application</li> <li>• Select data to bring into EDW or data lake</li> <li>• Manage ongoing process to add governed data to analytics</li> </ul>		
 <b>Predictive, Prescriptive &amp; Cognitive Tools</b>	<ul style="list-style-type: none"> <li>• Determine use cases</li> <li>• Research and pilot products</li> </ul>		
 <b>Data Lake</b>	<ul style="list-style-type: none"> <li>• Determine use cases</li> <li>• Build data lake and develop pilot project</li> </ul>		
 <b>Machine Learning/Artificial Intelligence</b>	<ul style="list-style-type: none"> <li>• Determine use cases</li> <li>• Research applications and develop pilot project</li> </ul>		

Legend	
	- Not started
	- Pilot(s) Underway



**Advance *growth and capacity*  
through *innovative technology***

- Support Oncology service line with IT plan including precision medicine
- Implement systems to enhance physician alignment
- Implement CRM strategy and technology
- Develop and implement digital strategy to engage consumers through enhanced services
- Expand technology solutions to improve access to Sharp services
- Promote a culture of innovation

**Advance  
*growth and capacity***

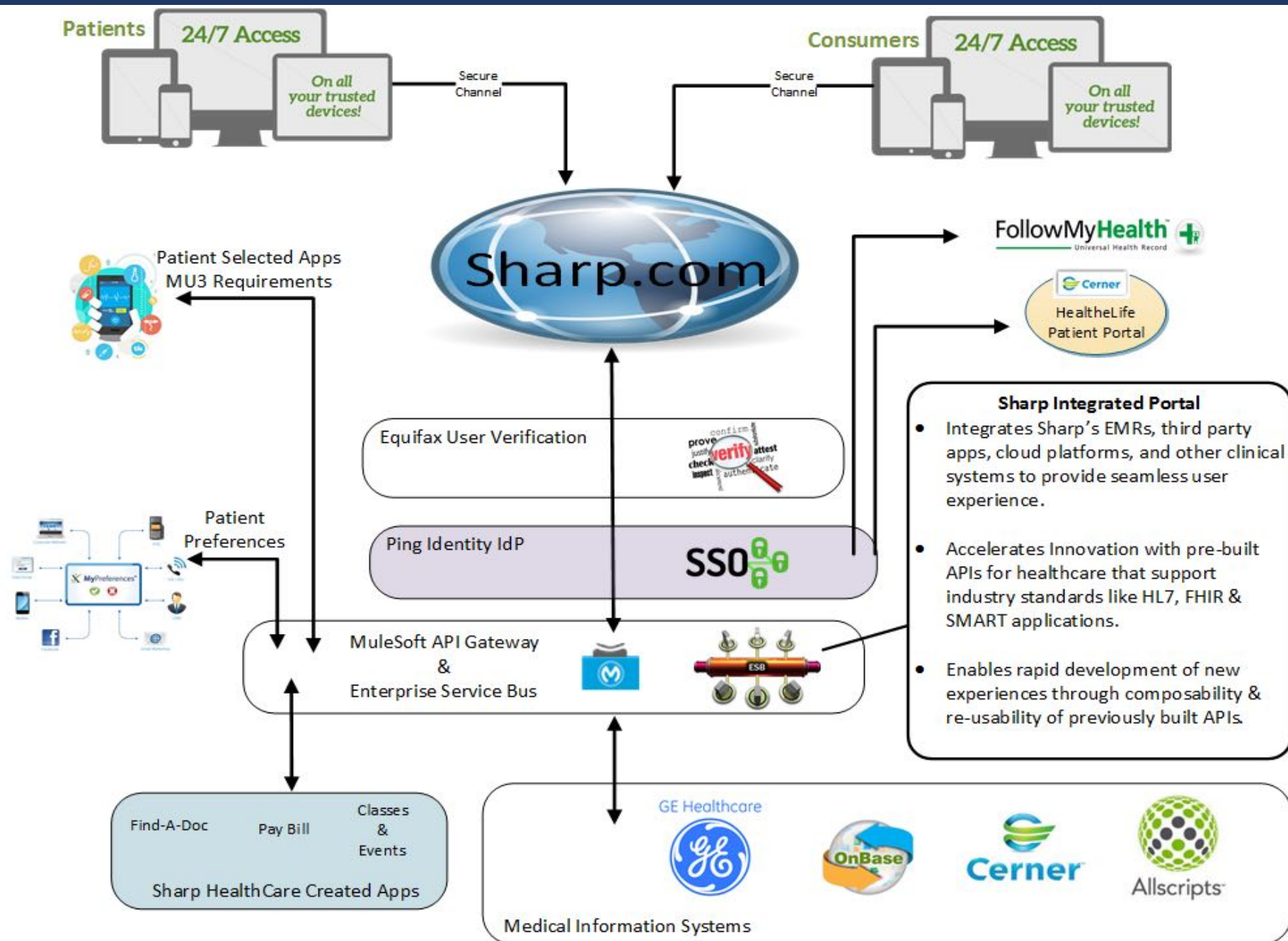
# Advance Growth and Capacity

## Develop and implement digital strategy to engage consumers through enhanced services

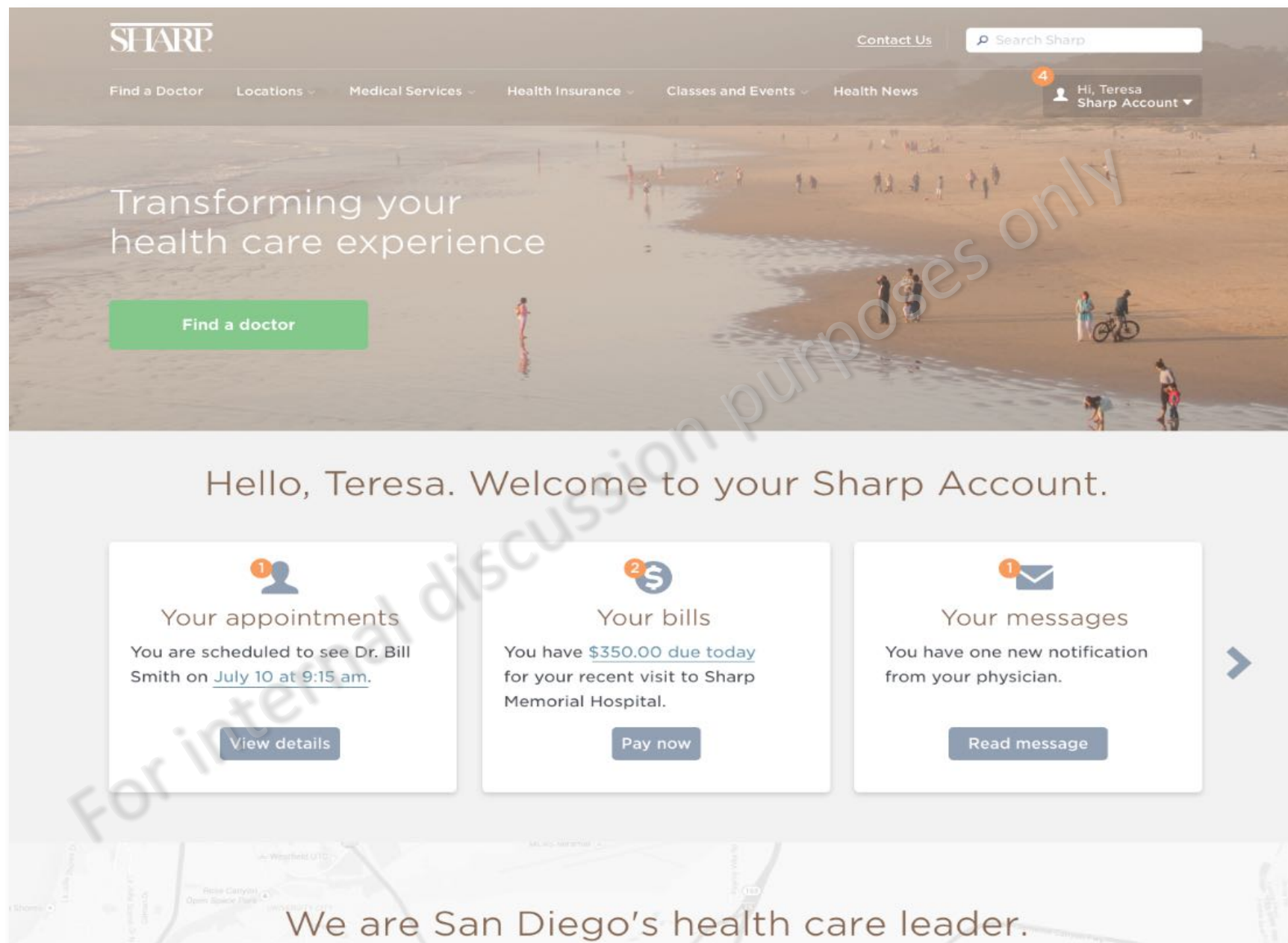
- a.) Develop and implement a self-scheduling system for patients and physicians on Sharp.com
- b.) Continue mobile enhancements and Web development supporting initiatives to improve the digital experience for Patients, Consumers, Employees and Physicians
- c.) Develop *Sharp.com Integrated Portal* functionality so Sharp *patients and consumers* have easy access to multiple tools and apps via single sign-on
- d.) Implementation of more online services for consumers



# Sharp.com Integrated Portal – Future State



# Sharp.com Integrated Portal – Vision





# Sharp.com Integrated Portal – Vision

User  
Experiences

User  
Verification

User  
Authentication

Integrated  
Portal



- Find a Doctor
- Maps/locations
- Access to Patient Portal
- Schedule classes
- My statements
- My Documents
- Medication Refill Request
- Etc.

## Patient Information

Additional information is needed to connect to your patient record. By providing the following information, you are agreeing to associate your patient record with your Sharp Account. This will allow your Sharp Account to be used to access information from your medical record. It is your responsibility to protect the privacy of your account. Sharp is not liable for other people accessing your account who have access to your user name and password.

Date of birth:

Social security number

This will be encrypted and not stored as part of your Sharp Account.

**It is your responsibility to protect the privacy of your account.**

Your username and Social Security Number is used to match your Sharp Account to your unique patient record. You are only asked to provide this one time.

Next step: Identity check

We're going to ask a few questions based on publicly available data, such as past addresses, to verify that you are who you say you are before we give you access to protected patient information. It will only take a minute and will help us keep your information secure.

[Skip identity check](#)

## Identity Check

We are using a third-party identity provider to ask you a few questions based on publicly available data, such as past addresses, to verify that you are who you say you are before we give you access to protected patient information. It will only take a minute and will help us keep your information secure. You can verify your identity over the phone instead by calling the Sharp Technical Assistance Center at 800-807-6200.

Question 1

Your credit file indicates you may have a mortgage loan, opened in or around February 2002. Who is the credit provider for this account?

- ☐ CIBC ONE MORTGAGE
- ☐ GOLD COAST FINANCIAL
- ☐ JPMORGAN CHASE & CO. \*
- ☐ SUNBELT NATIONAL MORTGAGE
- ☐ ONE OF THE ABOVE

Question 2

What is your total scheduled monthly payment for the above-referenced mortgage?

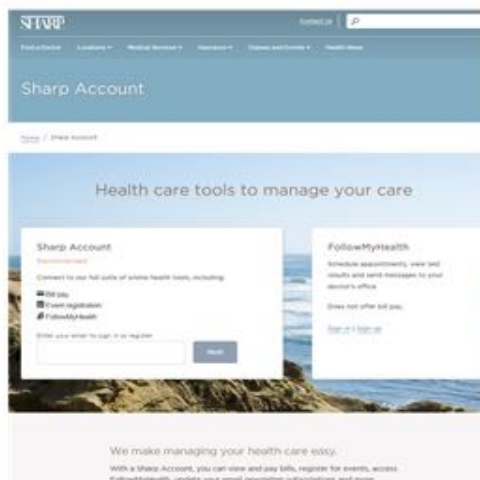
- ☐ \$275 - \$474
- ☐ \$475 - \$574
- ☐ \$575 - \$674 \*
- ☐ \$675 - \$774
- ☐ ONE OF THE ABOVE

Question 3

Your credit file indicates you may have a student loan, opened in or around January 2002. Who is the credit provider for this account?

- ☐ BENCHMARK CREDIT SERVICES
- ☐ CHOUVENOT FINANCE CORP
- ☐ SELECT FINANCIAL SOLUTIONS INC
- ☐ ONE OF THE ABOVE

- Multi-factor identification
- Verify user provenance
- Confirm persons identity



- User ID lookup
- Registered user login
- Verify access level

## Hello, Mandy

Welcome to your Sharp Account — Every health care tool you need, all in one place.

### Billing

[Current bills and charges](#)  
[Make a payment](#)  
[Download past statements](#)

Current balance  
**\$424.16**  
[Pay now](#)

### Classes and Events

[Upcoming events](#)  
[Past event registration](#)  
[Contact us](#)

Next event  
**Baby Care Basics on October 1**  
[View all](#)

### Documents and Forms

[Patient registration documents](#)

### Account Settings

[Personal information](#)  
[Email preferences](#)  
[Sharp Health News updates](#)

## Make a Payment

Pay just a portion of your bills or the total amount due. Past due bills must be paid in full. To pay a bill for a friend or loved one, please use the [one-time payment](#) form.

☐ Pay balance in full **\$1032.30**  
This is the total amount you currently owe for all your outstanding bills.

### Pay by visit

Select how much you would like to pay per visit.

<input checked="" type="checkbox"/> Sharp Memorial Hospital EMERGENCY-IP on Jun 7, 2016	<b>\$835.46</b> <a href="#">Change amount</a>
<input checked="" type="checkbox"/> Sharp Rees-Stealy Downtown Laboratory on Mar 18, 2017	<b>\$5.00</b> <a href="#">Change amount</a>
<input checked="" type="checkbox"/> Sharp Rees-Stealy La Mesa REGULAR APPOINTMENT on May 26, 2017	<b>\$44.57</b> <a href="#">Change amount</a>
<input checked="" type="checkbox"/> Sharp Rees-Stealy La Mesa REGULAR APPOINTMENT on May 26, 2017	<b>\$51.03</b> <a href="#">Change amount</a>

- Pay your bill
- Register for a class
- View your documents
- Refill a prescription
- Manage your preferences

# Advance Growth and Capacity

## Expand technology solutions to improve access to Sharp services

- a.) Implement advanced telehealth technology across the enterprise
- b.) Continue to implement remote monitoring solutions for patients with chronic diseases
- c.) Provide innovative online tools that enable patients to be actively involved in their care
- d.) Support expansion of partnerships with other providers through HIE or system integration
- e.) Continued support of Sharp ACO initiatives



# Questions

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