



Clinical Data Migration: Functional & Technical Considerations
A SSM Integrated Health Technologies Case Study

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The screenshot shows the Cisco WebEx Event Center interface. The main presentation slide features the Galen Healthcare Solutions logo and the text "MUCH MORE THAN I.T. POSSIBILITY" and "Welcome to Today's Webcast". The slide also states "The webcast will begin shortly...".

Annotations with red arrows and boxes highlight the following elements:

- Click for Full Screen Mode:** Points to the full screen icon in the top toolbar.
- Click to open Q&A Panel:** Points to the Q&A icon in the top toolbar.
- Q&A Panel:** A red box highlights the Q&A panel at the bottom right, which includes a dropdown menu set to "All Panelists", a text input field with the instruction "Select a panelist in the Ask menu first and then type your question here. There is a 256-character limit.", and a "Send" button.

Today's Agenda



Roles & Organizations



SSM Case Study Overview



Migration Decisions



Functional Considerations



Technical Considerations



Considerations Relating to SSM



Panelist Questions



Clinical Data Migration: Functional & Technical Considerations

A SSM Integrated Health Technologies Case Study



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Moderators:



Justin Campbell

*VP, Strategy
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Julie Champagne

*Strategist
Galen Healthcare
Solutions*



2005 → Year founded

3 → # KLAS rankings

4 → # Years voted Modern Healthcare's Best Places to Work (2013-2016)

#1 for HIT Implementation Support and Staffing 2015/2016

#1 for Technical Services in 2015/2016

#2 in Technical Services 2014/2015



**Modern
Healthcare**

280 # OF CUSTOMERS

46 # OF STATES WITH CUSTOMERS

Offices in:



CHICAGO, BOSTON,
& BURLINGTON, VT



PROFESSIONAL
SERVICES



TECHNICAL &
INTEGRATION
SERVICES



PRODUCT
TECHNOLOGY
SOLUTIONS

Galen's Vendor Expertise



CONVERSIONS



EMR OPTIMIZATIONS



DATA ARCHIVAL



INTEGRATION



CLINICAL TRANSFORMATION



OPERATIONS SUPPORT

Our panelists will share:



An overview of the role they played in SSM's data migration



What challenges they faced as it related to the SSM EHR data migration



Lessons learned from the EHR data migration





PROJECT OVERVIEW

- GE Centricity and MEDITECH to Epic EHR Migration
 - Legacy Systems
 - MEDITECH 6.0 Inpatient EHR 6.07
 - MEDITECH/LSS Ambulatory EHR 6.08
 - GE Centricity Ambulatory EMR 9.8
 - Target System: Epic 2014
 - CCD Extract & Import
 - Active Allergies
 - Active Medications
 - Active Problems & Problem History

Galen Roles:

- Legacy System Data Extract and Evaluation
- Clinical Data Mapping
- Configuration
- Testing and Validation
- Data Import and Issue Resolution

Key Metrics

270K Immunizations

360K Allergies

650K Medications

600K Problems

139K Patients

Migrated

200+ Providers

Migrated

SSM Case Study: Sandy's Role



Facilitated
collaboration



Coordinated IT
technical plans



Completed
data mappings



Coordinate
Data Load



Validation &
Reconciliation

SSM Migration: Kavon's Role



Facilitated discussions with clinical, EHR SMEs, and technical stakeholders throughout the migration



Guided validation and tracked issues



Provided demos for physician champions and SSM stakeholders



Developed documentation for migration-specific workflows and best practices



Technical Lead for SSM Migration



Responsible for extraction, transformation, and delivery of all data migration files for loading into client's target EMR



Provide mentoring to other technical team members



GalenETL certified resource on utilizing the powerful GalenETL Data Migration engine



Migration vs Abstraction

Considerations:



Access to source clinical data



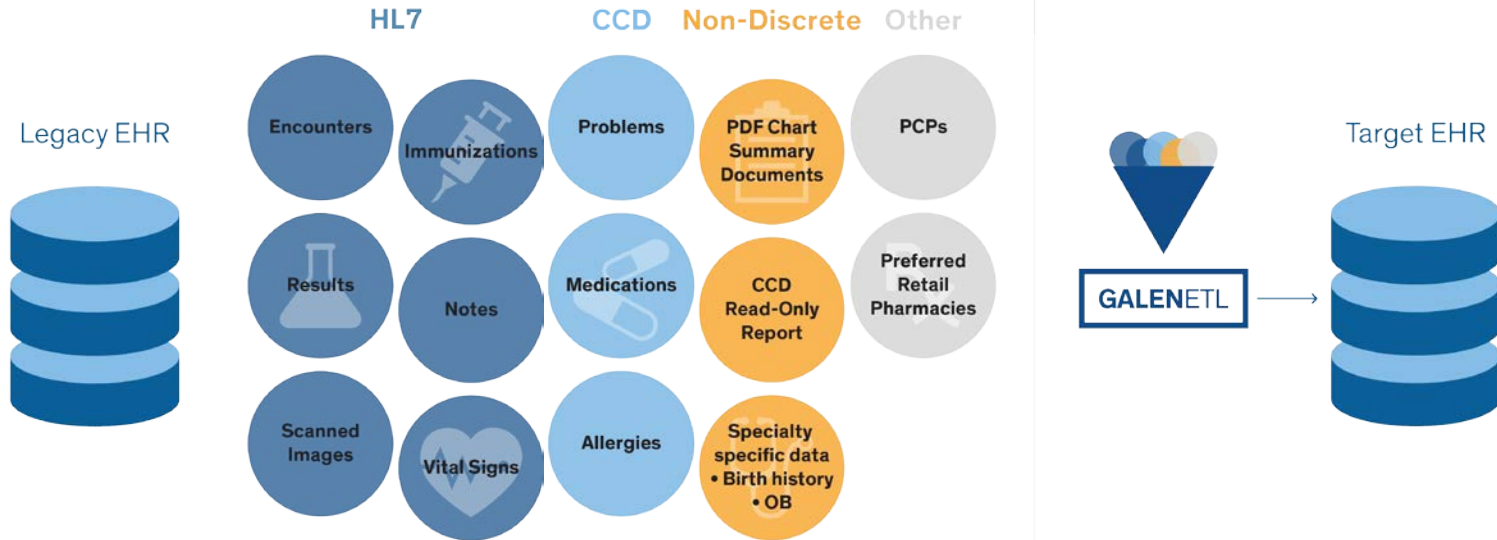
Accuracy, validity, and cleanliness of clinical data



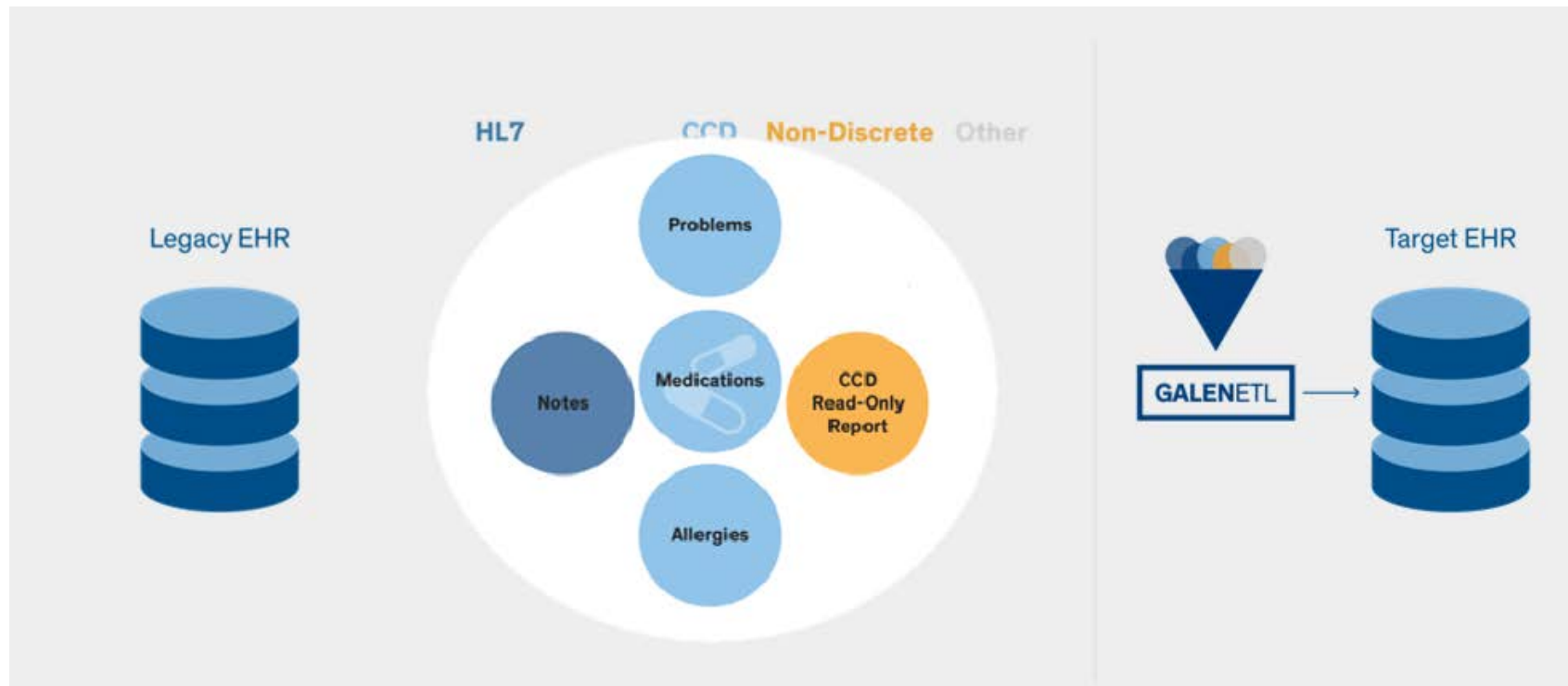
Cost effectiveness of approach (business vs. clinical decision)



Scope of Data Migration



Scope of Conversion



Overview of Challenges



Identify the 'source of truth'
Acute vs. Ambulatory datasets



Identify potential issues extracting data

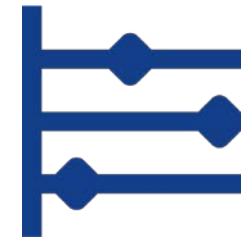


Access to the data



Getting Access to the Data

- Critical to project timeline
 - Prioritize source data and application
- Successful Approaches to Access
 - Onsite kickoff
 - Security/access team part of project
 - Focus on access ASAP
 - Communicate the needs for access



SSM Case Study: Migration Stats

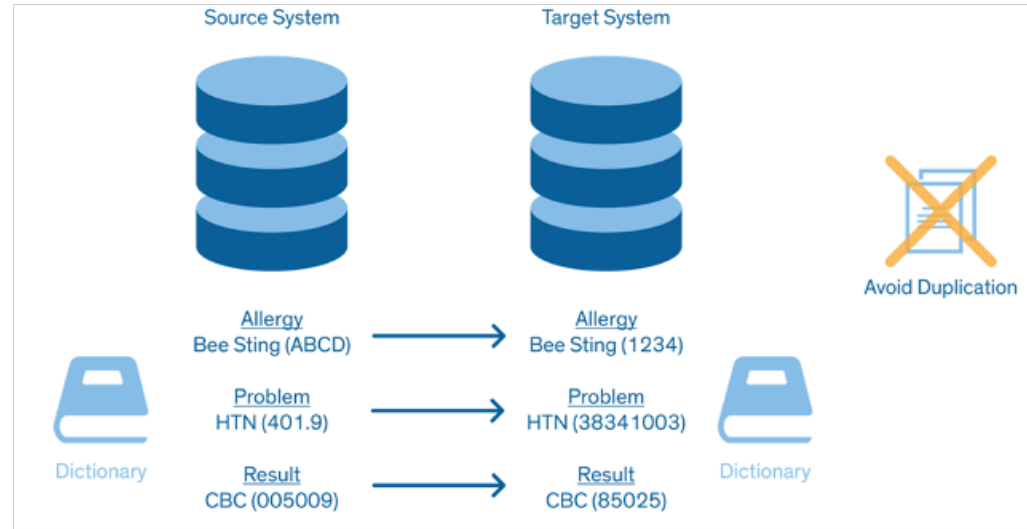
MEDITECH			
CCD Clinical Element	Total Counts	Codified Counts	Codified (%)
Allergies	279,367	99,793	35.7%
Problems	164,355	151,287	92.0%
Medications	355,212	343,316	96.7%
Immunizations	31,519	N/A	N/A
Total CCDs		72,140	

GE Centricity			
CCD Clinical Element	Total Counts	Codified Counts	Codified (%)
Allergies	81,465	1,322	1.6%
Problems	431,281	431,281	100%
Medications	292,427	271,258	92.7%
Immunizations	239,427	N/A	N/A
Total CCDs		72,140	



Challenges

- Clinical accuracy
- Strategy
 - Use counts to map most commonly used items
- Workflow
 - No Known Allergies
 - Unmapped reactions



SSM Case Study: Mapping

MEDITECH

CCD Clinical Element	Total Counts	Mapped Counts	Mapped (%)	SSM Validated (%)
Allergy Reactions	19,445	16,707	85.9%	93.3%
Medication Dose Units	779,778	763,958	98.0%	100.0%
Medication Route	776,080	756,845	97.5%	100.0%
Medication Frequency	752,590	629,694	83.7%	100.0%

Mapping counts for Allergy Reactions are lower in GE Centricity than for MEDITECH due to the large number of free text Allergy Reactions documented in this legacy system that do not have discrete matches in Epic

GE Centricity

CCD Clinical Element	Total Counts	Mapped Counts	Mapped (%)	SSM Validated (%)
Allergy Reactions	12,817	7,689	60.0%	64.6%
Medication Dose Units	179,047	62,371	34.8%	100.0%
Medication Route	179,047	61,811	34.5%	100.0%
Medication Frequency	179,047	150,021	83.8%	100.0%

Mapping counts for Medication Dose Units and Route appear lower due to how the data needed to be extracted from GE Centricity



THREE ROUNDS OF TESTING

- Small Scale Testing
 - 10 patients
 - Patient-Level
- Large and Full Scale Testing (Two rounds each)
 - Element-Level
 - Patient-Level (end-users)
 - Workflow (end-users)

THREE TESTING METHODS

- Element-Level
- Patient-Level
- Workflow

“Your migration is only as successful as your testing and validation efforts.”

Mary Ellen Ford, Conversion Manager Baptist Health

SSM Case Study: Validation

Clinical Elements	Small Scale		Large Scale Galen		Large Scale SSM		Full Scale R1		Total Counts		Remaining	Mapping Sign-Off?	Ready for PRD?	Go-Live Issues?
Patient-Level	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Total Actual	Total Goal	To Test	SSM		
CCDs	10	10	150	150	50	50	60	60	270	270	0	Yes	Yes	N/A
Allergy Reaction	10	10	150	150	50	50	60	60	270	270	0	Yes	Yes	N/A
Medication Route	10	10	150	150	50	50	60	60	270	270	0	Yes	Yes	N/A
Medication Frequency	10	10	150	150	50	50	60	60	270	270	0	Yes	Yes	N/A
Medication Dose/Dose Unit	10	10	150	150	50	50	60	60	270	270	0	Yes	Yes	N/A
Immunizations	10	10	150	150	50	50	60	60	270	270	0	Yes	Yes	N/A
PMH	10	10	150	150	50	50	60	60	270	270	0	N/A	No	
PSH	10	10	150	150	50	50	60	60	270	270	0	N/A	No	
Social History	10	10	150	150	50	50	60	60	270	270	0	N/A	No	
Family History	10	10	150	150	50	50	60	60	270	270	0	N/A	No	
Encounter-level	Actual	Goal	Actual	Goal	Actual	Goal	Actual	Goal	Total Actual	Total Goal		SSM		
Encounters	0	0	0	0	0	0	0	0	0	0	0	No	No	
Notes	10	10	150	150	50	50	60	60	270	270	0	Yes	Yes	N/A

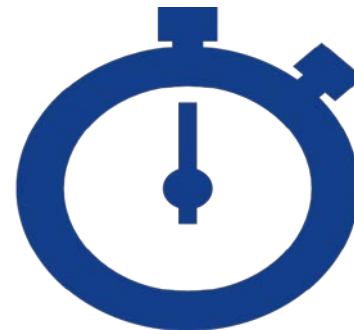
Overview of Challenges



Extraction timeline
vs.
Abstraction timeline



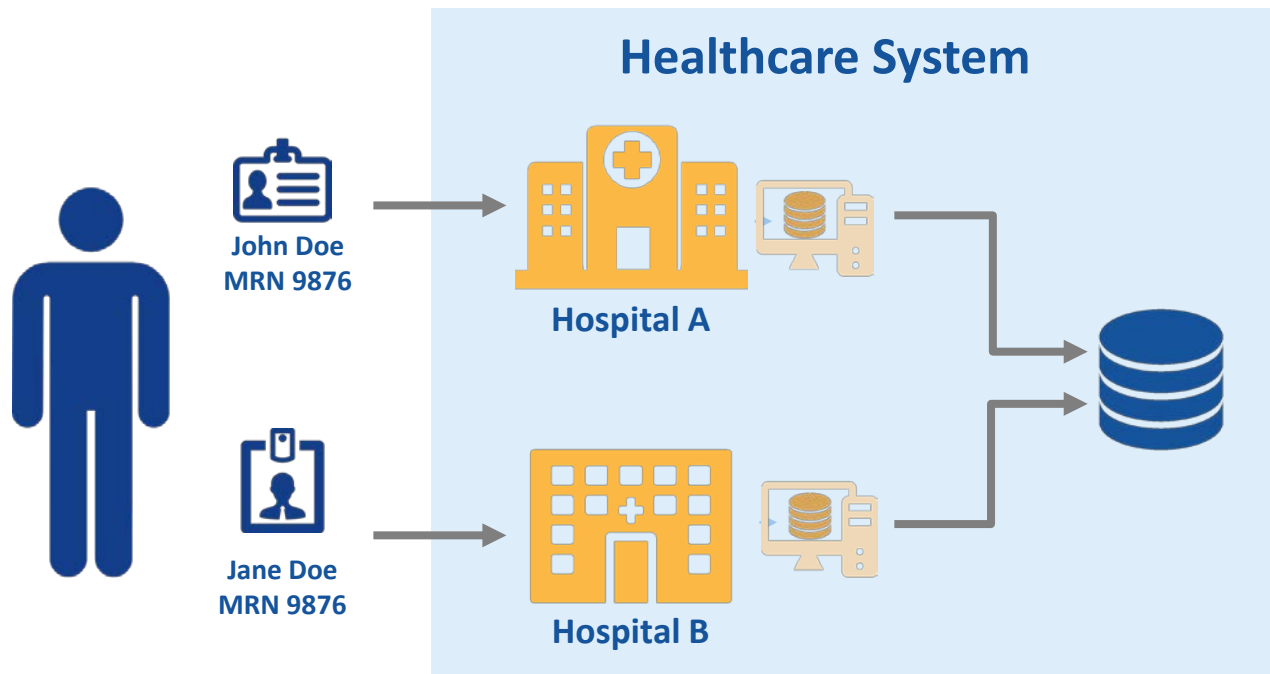
MPI load schedule
complexity



Timing

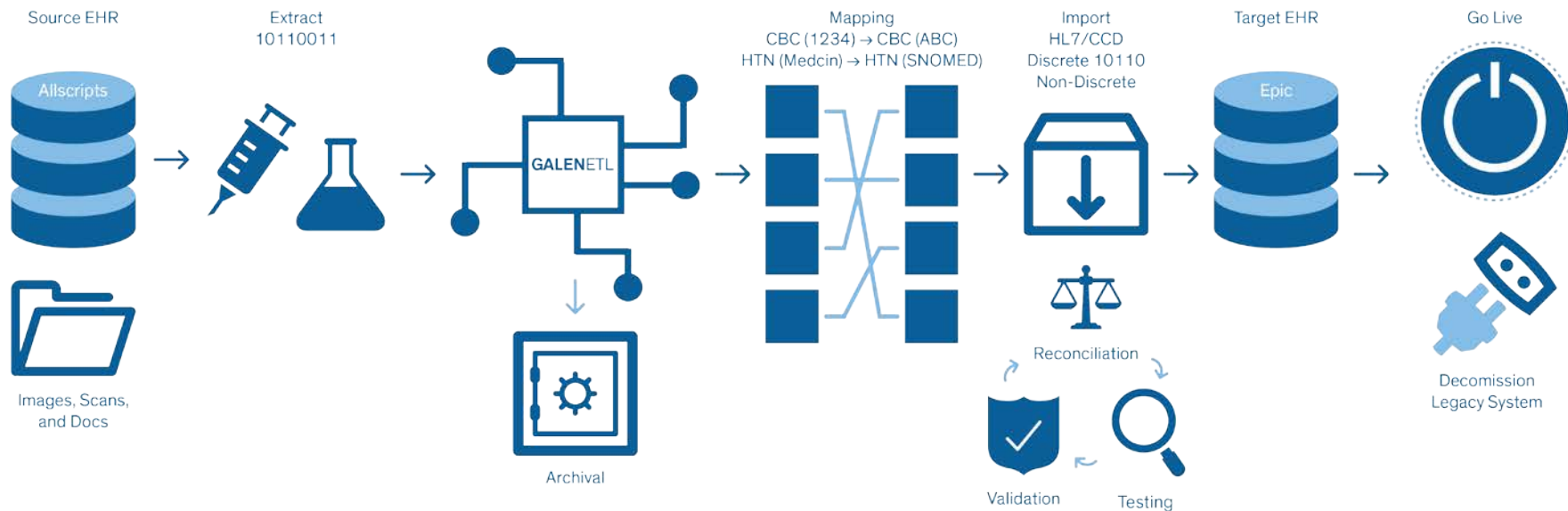


MPI Complexities

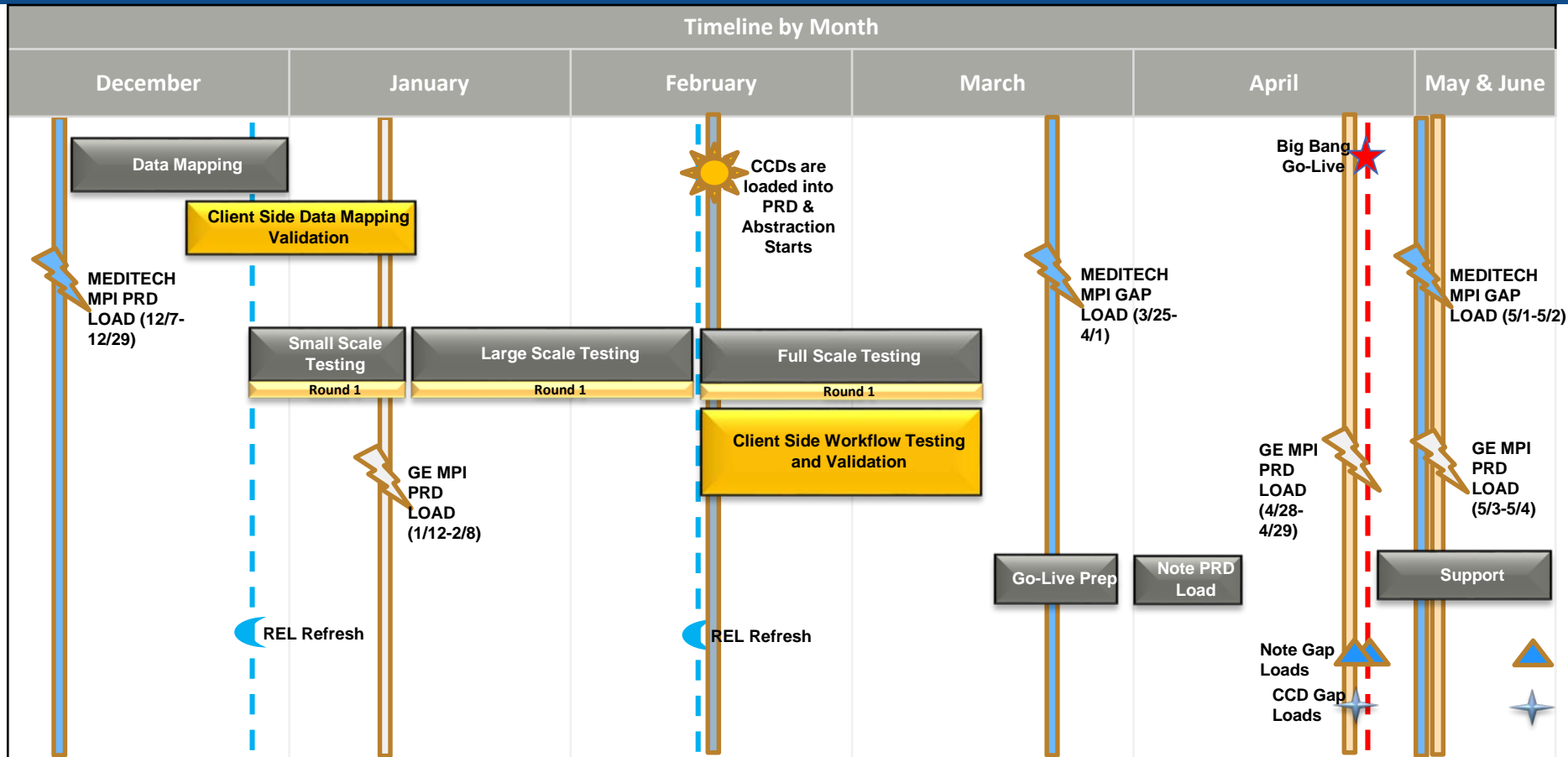


Patient Matching Issues, Client MPI Load Schedule, Multi-system Complexities

Timing



SSM Health: Legacy System to Epic Conversion Timeline



SSM Case Study: Challenges



Agreement on data elements – weighing the “cost” of the element versus the “benefit”



Gaining necessary approvals and agreement from multiple stakeholders



Timing of data migration versus abstraction activities versus actual “Go Live” date



SSM Case Study: Lessons Learned

- 1. Migrating data can lead to reduced abstraction time**
- 2. Ensure MPI and visit loads are complete, up-to-date & clean**
- 3. Begin the data migration process early!**
- 4. Find agreement on elements to migrate vs abstract & approach for migration**
- 5. Your physicians are your data champions**
- 6. Have experts in all subject matter available**
- 7. Ensure your migration & abstraction strategies work hand in hand**



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- Q1 – Sandy:** How did you decide on the # of years of data to migrate?
- Q2 – Sandy:** Knowing what you know now, would you have chose to migrate?
- Q3 – Sandy:** What was one of the unexpected benefits of data migration? Any downsides?



Message to audience:

Assess data needs before you actually jump into the project



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EGO FREE

CLIENT PARTNERSHIP

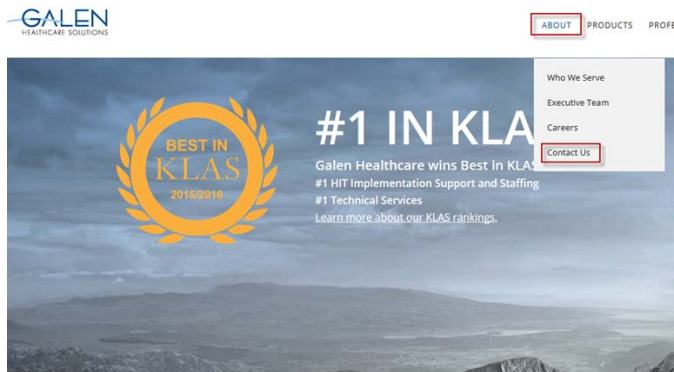
ONE STOP SHOP

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PREPARING FOR TOMORROW.**

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