



June 16, 2015

The Honorable Edward J. Kasemeyer
Chair
Senate Budget and Taxation Committee
3 West Miller Senate Building
Annapolis, MD 21401-1991

The Honorable Maggie McIntosh
Chair
House Appropriations Committee
121 House Office Building
Annapolis, MD 21401-1991

Re: 2014 JCR Pg. 27 – Maryland Health Benefit Exchange

Dear Chairman Kasemeyer and Chairwoman McIntosh:

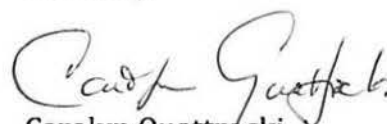
Pursuant to page 27 of the 2014 Joint Chairmen's Report, the Maryland Health Benefit Exchange (MHBE) respectfully submits these PowerPoint presentations as documentation regarding the plan and progress on remediating/replacing the MHBE Eligibility System.

Additionally, the MHBE worked with the Department of Legislative Services (DLS) throughout this fiscal year to provide budget information including projections, expenditure of prior year encumbrances, and year-to-date expenditures.

Please be advised that \$1,000,000 is being withheld pending the satisfactory response to this JCR item. The MHBE respectfully requests that this restricted appropriation be released.

Should you have any questions or need more information, please do not hesitate to contact Carolyn Ellison, Chief Financial Officer at (410) 547-1816 or carolyn.ellison1@maryland.gov.

Sincerely,



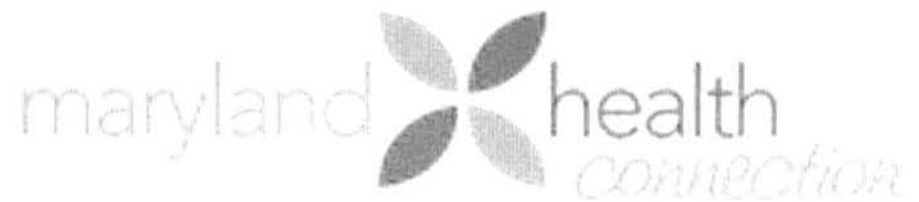
Carolyn Quattrocki
Executive Director

Enclosure

cc: Carolyn Ellison, Maryland Health Benefit Exchange
Jennifer Ellick, Department of Legislative Services
Ashley Shen, Office of Budget Analysis, DBM

Status Update

July 15, 2014



A service of Maryland Health Benefit Exchange

Key Activities



- Contract was awarded to Deloitte on April 2, 2014 to transfer the Connecticut code base to upgrade the Maryland Health Connection
- A MOU was signed with CT, and the code base and project artifacts were brought to Maryland. The code and the artifacts were provided to Maryland at no cost. Project costs are related to labor, hardware, software and hosting.
- To succeed by November, Maryland will accept the system “as-is” with only minor retrofitting for branding, notices, interfaces and Maryland specific rules
- The implementation project was structured into two distinct phases.
 - Phase 1 – gap analysis to review entire system including architecture, interfaces, and business rules to have a complete inventory of all changes that were required by November 2014, and ensure timeline could be met based on the level of effort
 - Phase 2 – implementation in two releases
 - Release 1 – Plan Management
 - Release 2 – Eligibility and enrollment

Key Activities

- Gap analysis ran for approximately four weeks and analysis was completed by May 15th
- Team reviewed all 563 business requirements, every screen, every processes, each interface, every notice, and current business processes
- Completed a two day session with CT to review technology, business process, and operations
- Approximately 83% of the solution requirements and design are being deployed **unchanged** from Connecticut's specifications. Only 17% of the system is being modified
- Minimal retrofitting includes branding, interfaces, notices and 13 technical and functional changes. No showstoppers were identified
- Retained underlying software and hardware configurations
- MHBE is leveraging existing software, hardware, and infrastructure services in the MD HBX implementation to the degree possible
- The MHBE code branch for the MD HBX is a separately owned and maintained set of software as of 5/30

Fit Gap Findings – Updated



Number	Category	Gap Description	Approach	Release
1	Plan Management/ Eligibility and Enrollment	MD rates plan quality on a 5-star rating scale, whereas CT HIX rates plans on the 4-star NCQA rating scale	The 5-star rating scale (including half stars) will be adopted. The system will be updated to support this change	Release 1
2	Plan Management	The CT HIX solution uses an outdated SERFF template for Plan Management, which must be updated to the 5/1/2014 version for MD consumption	The SERFF template will be update for Release 1	Release 1
3	Eligibility and Enrollment	MD Medicaid coverage codes do not directly align to CT HIX coverage codes, as MD requires a larger set of coverage codes for their Medicaid programs	The Medicaid coverage codes for Maryland will be adopted. The system will be updated to determine the Medicaid coverage codes for Maryland	Release 2
4	Eligibility and Enrollment	MD's definition of child is an individual 21 years old or younger for certain programs whereas CT is 19	The system will be updated for Maryland to use the correct age when coverage is determined	Release 2
5	Eligibility and Enrollment	If elections are made prior to the 18th of the month, coverage and APTC amounts are effective from the 1st of the next month. CT uses 15th of the month.	The system will be updated for Maryland to use the 18th of the month	Release 2
6	Eligibility and Enrollment	8001/MMIS - Outbound interface to Interim database	Outbound call to interim database will be developed to pass the appropriate values. Matching will happen at the interim database	Release 2
7	Eligibility and Enrollment	Maryland carrier specific configuration changes (834)	The 834 will be implemented as is. Minor carrier specific configuration changes will be performed	Release 2

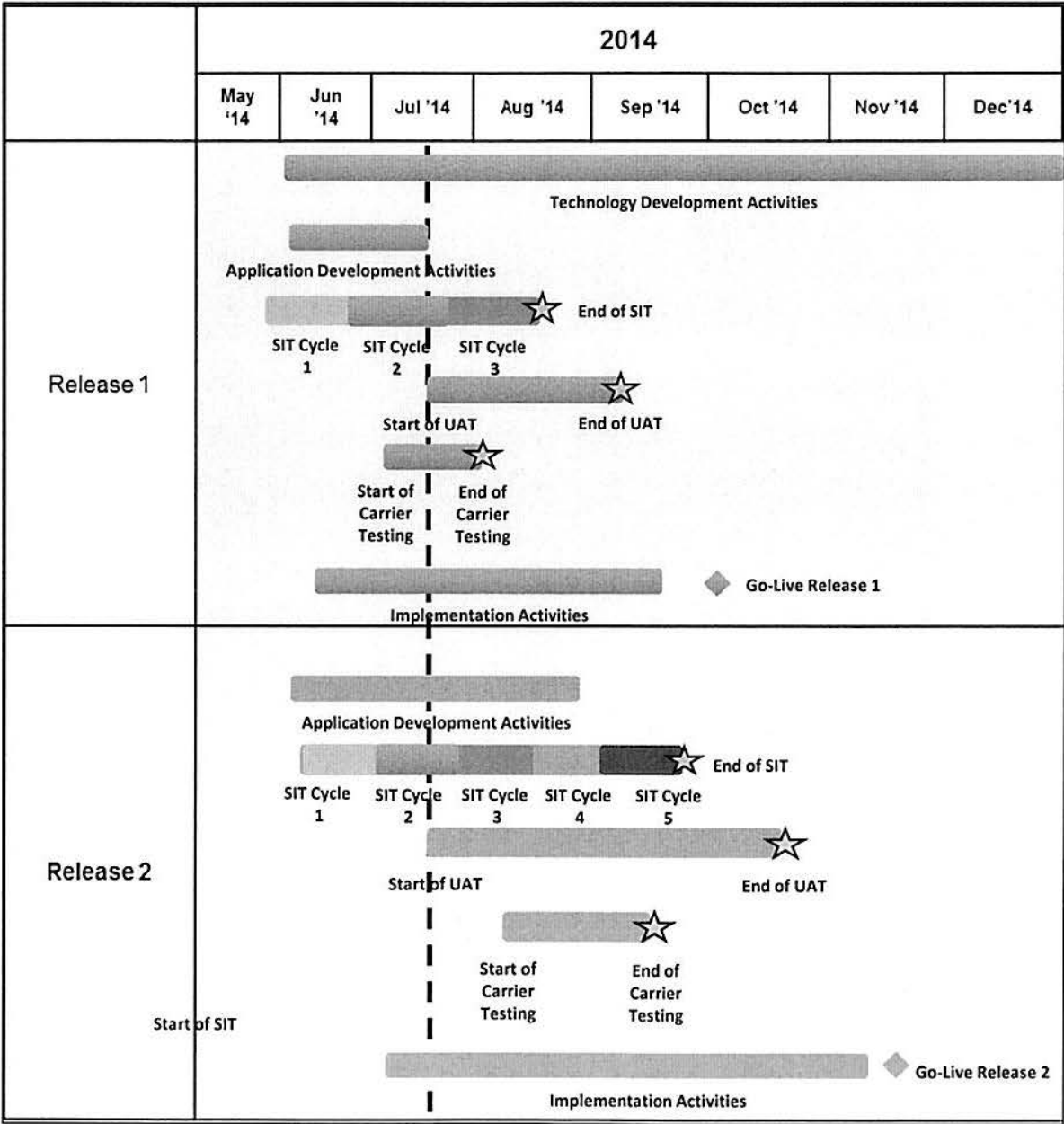
Number	Category	Gap Description	Approach	Release
8	Eligibility and Enrollment	Update the authorized representative form with Maryland form (for paper process only)	Authorized representative form will be updated with Maryland form (for paper process)	Release 2
9	Technology	Need for changes to printing of notices.	Sir Speedy, the vendor for CT will be used for MD HIX printing purposes	Release 2
10	Technology	Need new batch scheduler.	Procured the Linux version of the same tool used in CT	Release 2
11	Technology	Need to align document management solution.	The strategy for document management includes the port of the file net toolset to be used exclusively for HIX functionality. Local scanner in each MD office will be configured by the State to create scans of documents on the worker's desktop and use a file net utility to upload to file net	Release 2
12	Technology	Need new mass email tool.	Elastic email, which is the provider in CT will be used by Xerox	Release 2
13	Technology	Need to align scanning capability with Connecticut technology	Scan-Optics will be the scanning function utilized for the MD solution based off the similar setup for the CT solution	Release 2

Key Activities

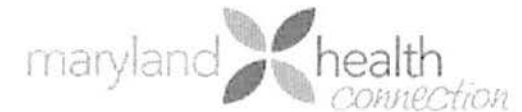


- Visual design standards were selected on 5/9 and branding is underway
- Hosting contract was awarded on June 1, 2014
- Completed a technical deep dive session with CMS on 6/17. Discussed technical platform, infrastructure and solution footprint. Meeting went well and no additional meetings or documentation required
- Completed the CMS gate review on 6/23. Successfully demonstrated integration with the Federal hub - able to verify SSN, income and identity. Had a successful system demo, and were able to demonstrate all required functionality
- Established new competitively awarded QA and PMO contracts effective 7/1
- Contracts with Scan Optics and Sir Speedy approved by the board on 6/30
- Schedule and milestones remain on schedule
- Working on options for renewals with Carriers
- Have completed 3 of 4 iterations of development
- Significant testing is factored into the process including unit, integration, user testing, and performance testing.

High Level Project Schedule



Project Milestones - Completed



Milestone Date	Milestone Description	% Complete
April 15, 2014	Gain interim approval from CT to use CT test environments and CT HBX software	100%
	Begin conference room pilot sessions	100%
	Secure provisional software licenses for MD HBX lower environments	100%
April 30, 2014	Finalize CT software transfer MOU	100%
	Issue Task Order 1 – Data Center, Hosting and Disaster Recovery	100%
	Establish sandbox environment with running version of CT HBX	100%
May 15, 2014	Establish development environment	100%
	Receive Federal Hub credentials and test initial Hub connectivity	100%
	Complete draft version of gap analysis	100%
	Finalize deliverable schedule and contingency plan	100%
	Update CT capacity plan to reflect MD HBX capacity needs	100%
June 1, 2014	Complete conference room pilots and gap analysis for CT transfer items	100%
June 15, 2014	Document MD MMIS data exchange design	100%
	Establish integration testing environments	100%
June 23, 2014 (to accommodate CMS schedule)	Demonstrate integration with Federal Hub services in lower environment	100%
	CMS Gateway Review: Design	100%
July 1, 2014	Finalize software procurements	100%

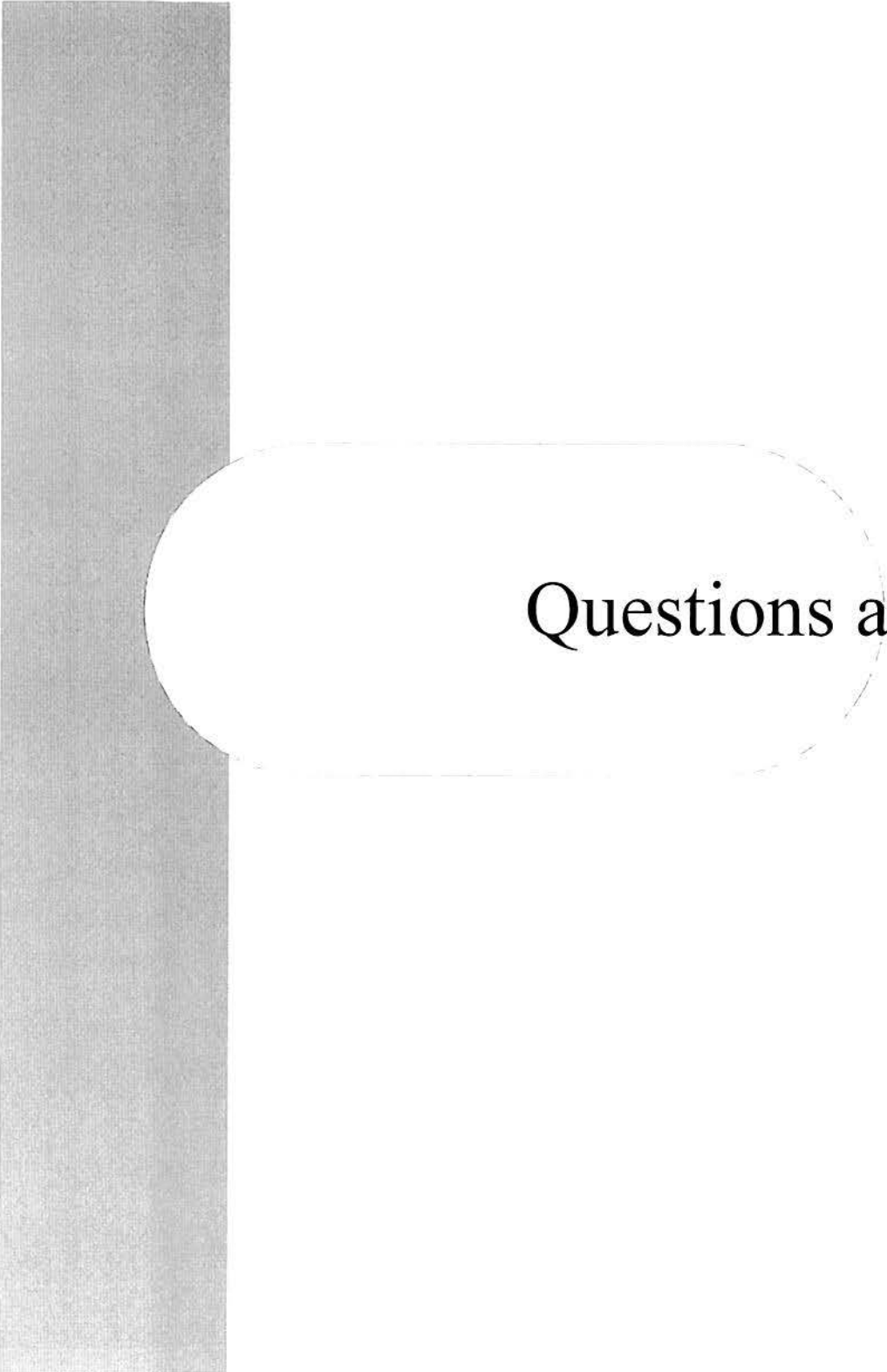
Project Milestones – Upcoming (as of 7/11)



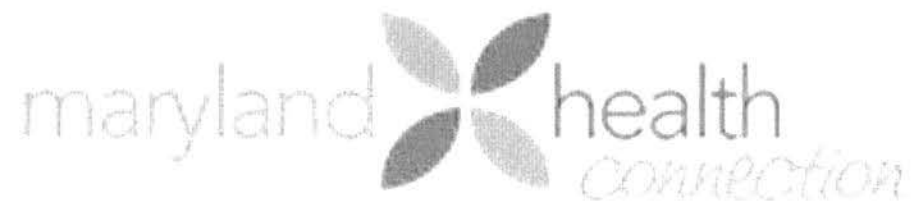
Milestone Date	Milestone Description	% Complete
July 15, 2014	UAT and Training environments	73%
July 22, 2014	Staging Environment	45%
July 31, 2014	Training Plan	50%
	OCM and BT Plan	50%
	Initial Role Mapping Lists	40%
	First Draft Change Impact Assessment	45%
August 15, 2014	Begin carrier integration testing	0%
	Begin MMIS integration testing	0%
	Draft Training Materials to CMS	0%
September 1, 2014	Establish MD HBX Production environment and connectivity	0%
	Begin UAT for Plan Management	0%
	Perform initial plan data upload	0%
	Conduct performance testing	0%
September 8, 2014	Release Web-Based Training	0%
	Begin Train – the - Trainer	0%
September 9, 2014 (subject to CMS schedule)	CMS Gateway Review: Operational Readiness	0%
September 15, 2014	Release 2 UAT	0%
September 29, 2014	Release 2 Instructor Lead Training Materials to Print	0%
October 1, 2014	Plan Management goes live	0%
October 6, 2014	Release 2 – Instructor Lead Training Start	0%
November 15, 2014	Eligibility and Enrollment goes live	0%

Risks

Risk	Mitigation
Gap is identified during business process design.	Ongoing dialog on business process (OCM) activities and development team on business processes that are not addressed by the system.
Staffing and skillset of team	MHBE continues to monitor Deloitte staffing and available resources. Additional changes have taken place to reinforce the Deloitte PMO and OCM areas. Additional leader brought on with deep technical and MD specific HIX experience.
Risk	Mitigation
One carrier is behind on the coding changes needed to complete the 834 interface. Integration testing with the largest Carrier is at risk.	Twice weekly working sessions with the carrier have been scheduled and are underway. Deloitte to dedicate EDI business rule SME
Risk	Mitigation
Training and UAT environments must be accessible via the internet to support the OCM, training and testing activities based on the current plan and schedule	Deloitte is working on options for making the training and UAT environments internet accessible. Environments are not yet established. Fallback would be VPN. Currently MHBE does not have a suitable VPN solution and training and testing would be severely impacted



Questions and Answers

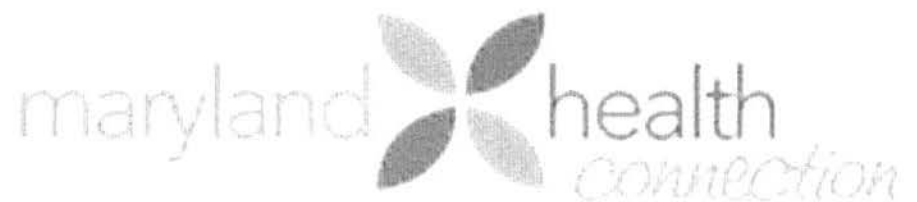


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Joint Oversight Committee IT Update

September 16, 2014



A service of Maryland Health Benefit Exchange

Project Milestones - Completed



Milestone Date	Milestone Description	% Complete
April 15, 2014	Gain interim approval from CT to use CT test environments and CT HBX software	100%
	Begin conference room pilot sessions	100%
	Secure provisional software licenses for MD HBX lower environments	100%
April 30, 2014	Finalize CT software transfer MOU	100%
	Issue Task Order 1 – Data Center, Hosting and Disaster Recovery	100%
	Establish sandbox environment with running version of CT HBX	100%
May 15, 2014	Establish development environment	100%
	Receive Federal Hub credentials and test initial Hub connectivity	100%
	Complete draft version of gap analysis	100%
	Finalize deliverable schedule and contingency plan	100%
June 1, 2014	Update CT capacity plan to reflect MD HBX capacity needs	100%
	Complete conference room pilots and gap analysis for CT transfer items	100%
June 15, 2014	Document MD MMIS data exchange design	100%
	Establish integration testing environments	100%
June 23, 2014 (to accommodate CMS schedule)	Demonstrate integration with Federal Hub services in lower environment	100%
	CMS Gateway Review: Design	100%
July 1, 2014	Finalize software procurements	100%
July 15, 2014	UAT and Training environments	100%
July 22, 2014	Staging Environment** Xerox piece - Deloitte software install due 8/2	100%
July 31, 2014	Training Plan	100%
	OCM and BT Plan	100%
	Initial Role Mapping Lists	100%
	First Draft Change Impact Assessment	100%
August 15, 2014	Begin carrier integration testing	100%
	Begin MMIS integration testing	100%
	Final Training Plan	100%
	Final OCM and BT Plan	100%
	Final Role Mapping	100%
	Draft Training Materials to CMS	100%

Project Milestones – Upcoming



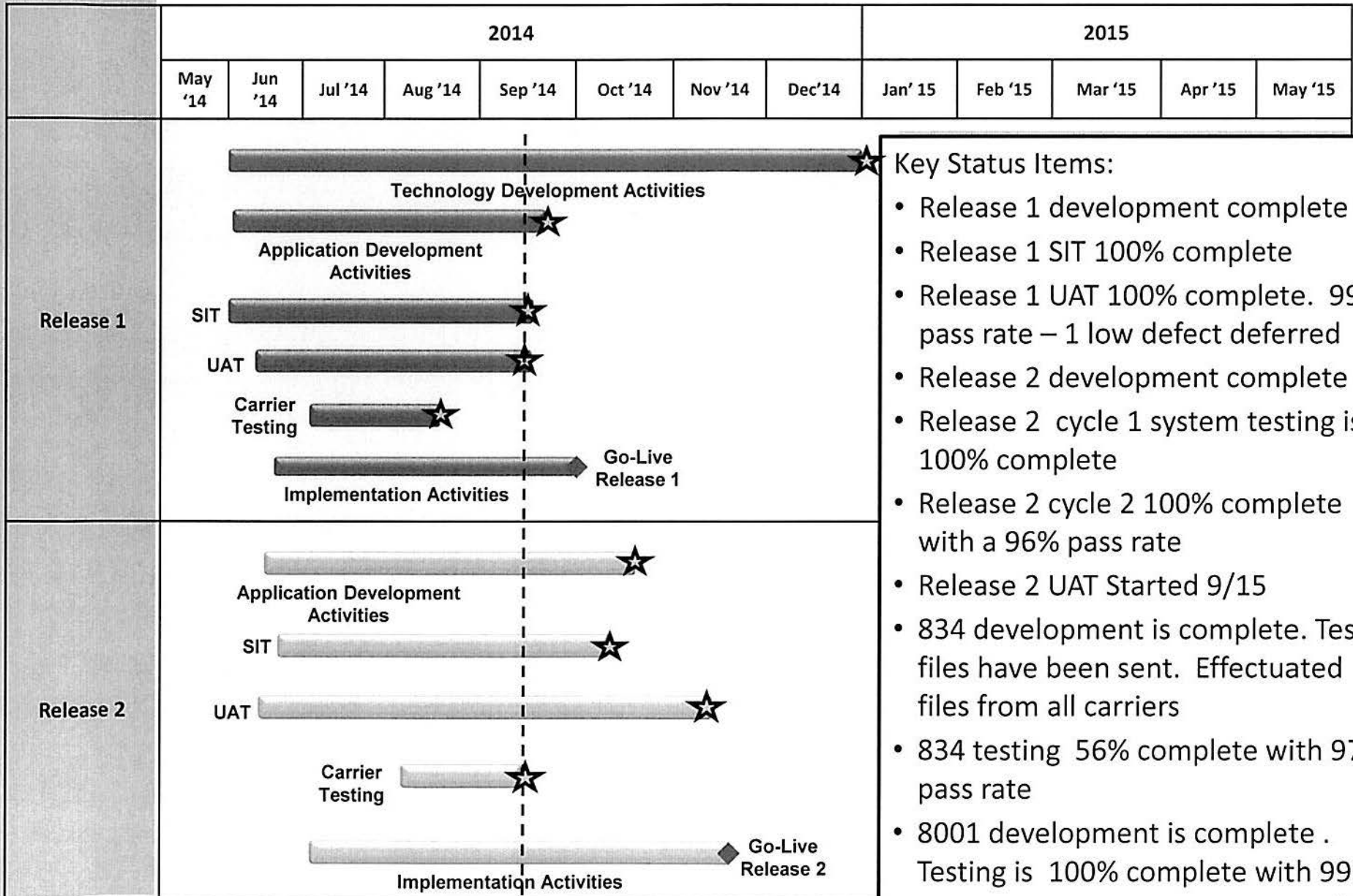
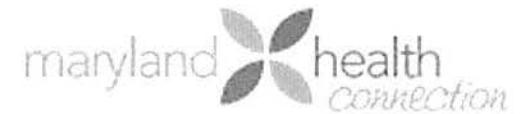
Milestone Date	Milestone Description	% Complete
September 1, 2014	Establish MD HBX Production environment and connectivity	100%
	Begin UAT for Plan Management - - UAT Complete	100%
	Perform initial plan data upload	100%
	Conduct performance testing – started 7/30 will run through 10/1	100%
September 8, 2014	Release Web-Based Training	100%
	Begin Train – the - Trainer	100%
September 12, 2014	CMS Gateway Review: Operational Readiness – changed from 9/9	100%
September 15, 2014	Release 2 UAT – Started on schedule	100%
September 29, 2014	Release 2 Instructor Lead Training Materials to Print	0%
October 1, 2014	Plan Management goes live	0%
October 6, 2014	Release 2 – Instructor Lead Training Start	0%
November 15, 2014	Eligibility and Enrollment goes live	0%

Key Activities - Project



- Continue to meet twice weekly with CMS and CCIIO, informal daily discussions occur as needed
- Daily calls with the Carriers
- Completed our Operational Readiness Review (ORR) with CMS on 9/12
- Command Center operations and incident management planning continues; expected to finalize mid-September
- Public Website redesign underway for launch in early November
- User acceptance testing started on 9/15
- Train-the-trainer started 9/8 – Classroom training starts 10/6
- The computer based training module launched 9/10

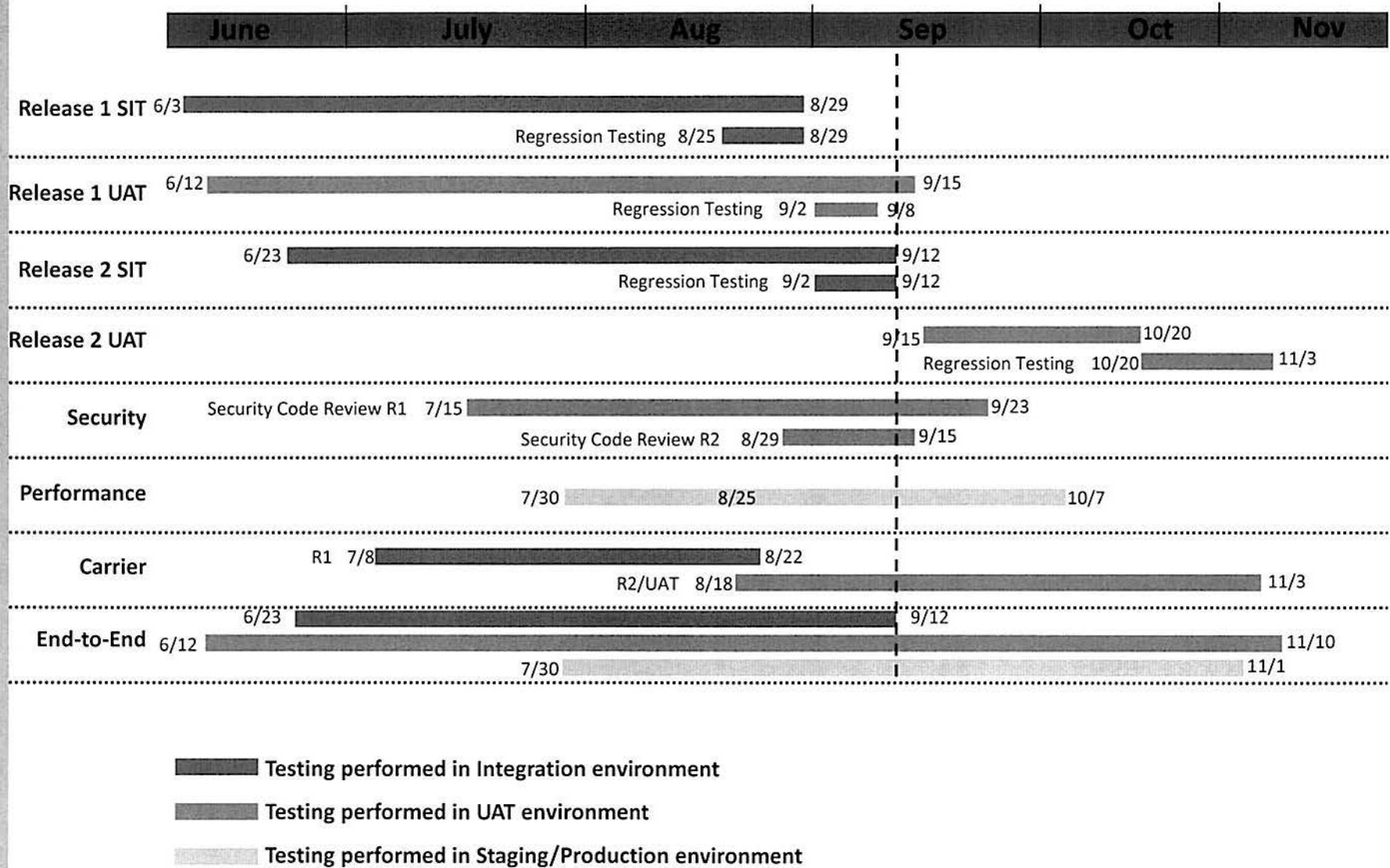
Project Timeline



Key Status Items:

- Release 1 development complete
- Release 1 SIT 100% complete
- Release 1 UAT 100% complete. 99% pass rate – 1 low defect deferred
- Release 2 development complete
- Release 2 cycle 1 system testing is 100% complete
- Release 2 cycle 2 100% complete with a 96% pass rate
- Release 2 UAT Started 9/15
- 834 development is complete. Test files have been sent. Effectuated files from all carriers
- 834 testing 56% complete with 97% pass rate
- 8001 development is complete . Testing is 100% complete with 99% pass rate

Overall Testing Schedule



Testing Status



SIT Release 2 Cycle 1 (Complete)

SIT Release 2 – Cycle 1 Status	
Executed	2,158
Passed	2081
Failed	77
% Executed	100%
% Passed	96%

Defects by Severity	Open	Total
1-Critical	0	6
2-Major	0	134
3-Minor	0	123
4-Low	0	55
Grand Total	0	318

SIT Release 2 Cycle 2 (Complete) – Retest of cycle 1 defects and regression testing

SIT Release 2 – Cycle 2 Status	
Executed	1075
Passed	1030
Failed	45
% Executed	100%
% Passed	96%

Defects by Severity	Open	Total
1-Critical	0	6
2-Major	8	169
3-Minor	18	172
4-Low	5	70
Grand Total	31	417

Cumulative defect status as of 9/14/14

- Total Open (Analysis, In-Progress, Re-test): 31
- Total Resolved: 376
- Total targeted for future release: 11
- Remaining defects will be closed when released to UAT on 9/18/14

Interface Testing



- 834 Carrier testing will continue in SIT through 9/29/14
- 8001 SIT ended 9/12. UAT started on 9/15

Status	834	8001
Planned	110	121
Executed	62	121
Passed	61	120
Failed	1	1
In Progress	48	0
% Executed	56%	100%
% Passed	98%	99%

Performance Testing

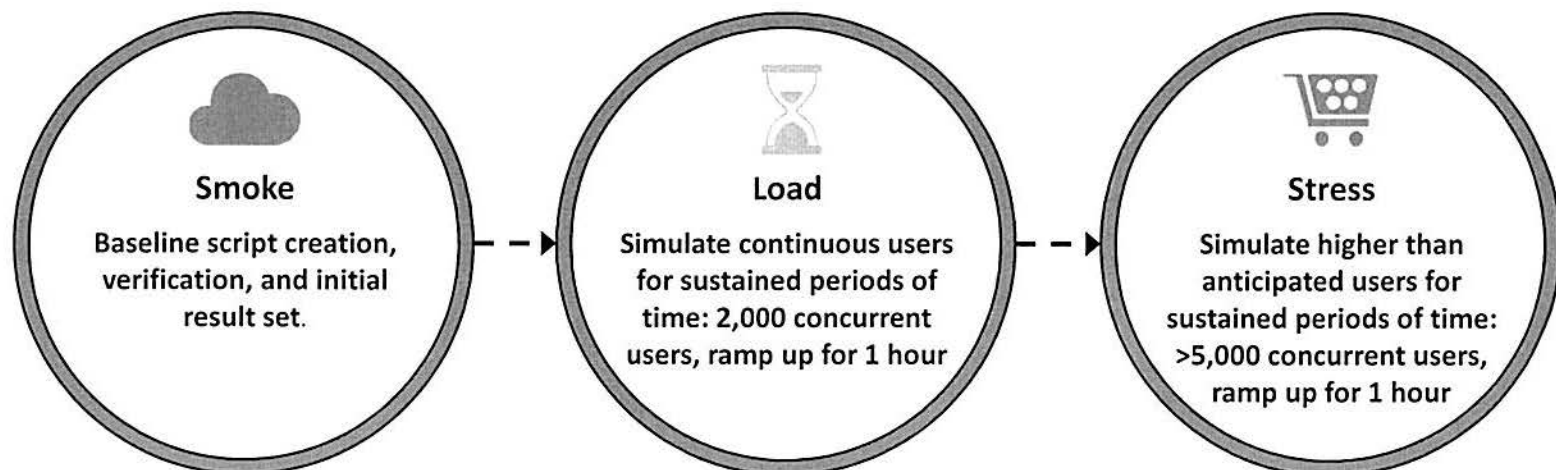
Performance Testing

Performance testing for MD HBX incorporates multiple factors for a robust verification of application sustainability.

✦ Approach:

The MD HBX utilizes three cycles of testing to simulate sustained and high volume scenarios on the application.

Rational Performance Tester Version 8.5.1 is the scripting tool used to perform these cycles of testing.



Performance Testing – Specifications

In support of this approach, the following testing specifications are employed in performance testing.

✦ **Number and Duration of Tests:**

The MD HBX runs a series of simultaneous tests for a sustained duration as a part of each cycle in the overall approach.



Number

There are eighteen (18) scripts generated that are run concurrently for load and stress testing.

Duration

Each of the eighteen (18) scripts are run concurrently for a period of one (1) hour.



✦ **Composition of Tests:**

1

Anonymous Browsing

Provides a robust view of common browsing activities most commonly seen in the beginning of the enrollment period and during the holiday season.

2

Consumer Portal

Represents the most complex consumer functions of enrollment and the most complex application transaction types.

3

Worker Portal

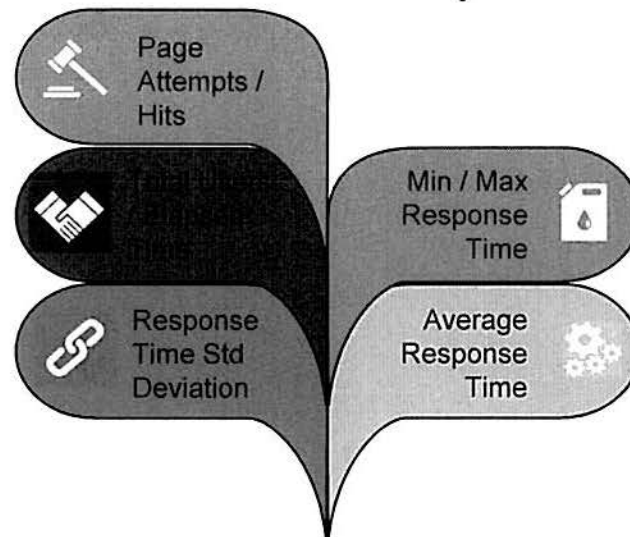
Emulates the most complex worker functions of enrollment and the most complex application transaction types.

Performance Testing – Result Reporting

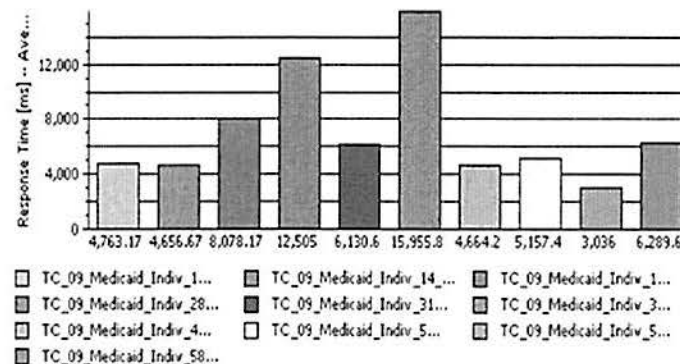
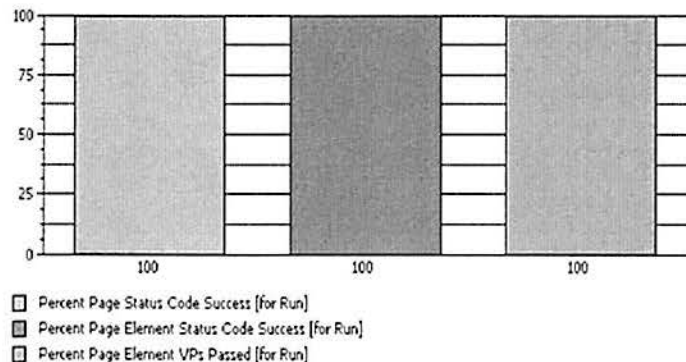
Outcomes of the performance tests are tracked on a daily basis, after each run, with a performance test report.

✦ Metrics of Test Cases:

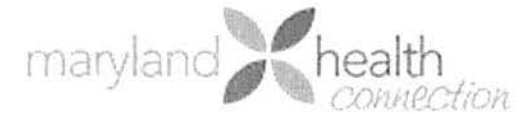
The performance testing results return a series of standard performance metrics for each cycle and test case.



✦ Distribution of Test Cases:



Performance Testing Calendar



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug
	Smoke Test 1 with 2 scripts	Smoke Test 1 with 4 scripts	Smoke Test 1 with 4 scripts	Smoke Test 1 with 4 scripts	Smoke Test 1 with 4 scripts	
31-Aug	1-Sep	2-Sep	3-Sep	4-Sep	5-Sep	6-Sep
	Smoke Test 2 with 5 scripts	Smoke Test 2 with 9 scripts	Smoke Test 2 with 12 scripts	Smoke Test 2 with 15 scripts	Smoke Test 2 with 18 scripts	Smoke Test 2 with 18 scripts
	Re-scripting of 1 scenario	Re-scripting of 4 scenarios	Re-scripting of 3 scenarios	Re-scripting of 3 scenarios	Re-scripting of 3 scenarios	
7-Sep	8-Sep	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep
Smoke Test 2 with 18 scripts	Load Test 1 with 18 scripts	Load Test 1 with 18 scripts	Load Test 1 with 18 scripts	Load Test 1 with 18 scripts	Load Test 2 with 18 scripts	Load Test 2 with 18 scripts
	2000 Vusers	2000 Vusers	2000 Vusers	2000 Vusers	2000 Vusers	2000 Vusers
14-Sep	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep
Load Test 2 with 18 scripts	Load Test 2 with 18 scripts	Stress Test 1 with 18 scripts	Stress Test 1 with 18 scripts	Stress Test 1 with 18 scripts	Stress Test 1 with 18 scripts	Stress Test 2 with 18 scripts
2000 Vusers	2000 Vusers	5000 Vusers	5000 Vusers	5000 Vusers	5000 Vusers	5000 Vusers
21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep
Stress Test 2 with 18 scripts	Stress Test 2 with 18 scripts	Stress Test 2 with 18 scripts	Gather Results	Generate Results Deck	Publish Results Deck	
<5000 Vusers	< 5000 Vusers	<5000 Vusers		Review Results Deck		

Performance Testing Preliminary Results



Performance testing on the MD HBX system supports assessment and tuning based on the application's response to high user volumes.

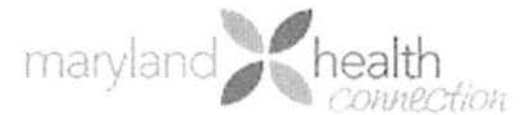
✘ **Preliminary Results:**

- On average, there is a sub-second response time per web page
- In the majority of tests, a user click has less than a two second response

✘ **User Experience:**

- **Expect:** Fast plan browsing, filtering, and comparison in a matter of seconds. Immediate entry of additional household members and real-time verification of Federal information.
- **Area of Strength:** Streamlined application process that reduces the time to complete an enrollment. Simple and intuitive interface that reduces the time to enter information and return an eligibility determination. Ability to run multiple tests at one time and gradually increase the load on the system.
- **Area of Improvement:** Reduce the time to create an account and login to the system. Decrease the time to return eligibility results for faster determination.

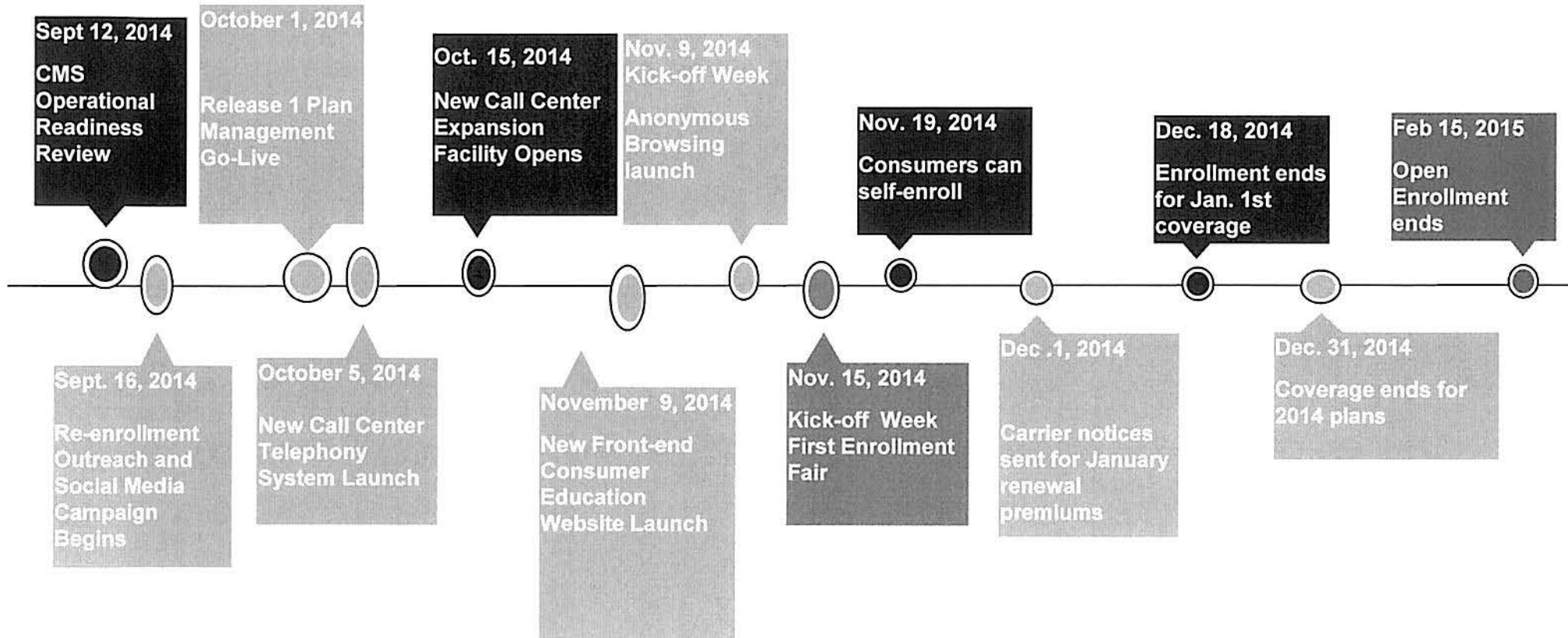
Performance Testing Next Steps



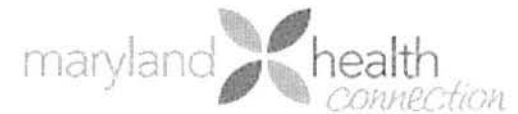
With preliminary results, the MD HBX team is performing the following activities.

- ✘ Place a large, prolonged load on the system to see how it responds
- ✘ Stress the system past the expected number of users and identify the 'break point'
- ✘ Use the most complex enrollment scenarios as a performance baseline
- ✘ Gather results and tune the application and infrastructure accordingly
- ✘ Identify areas of greatest impact and monitor them closely

MD HBX Timeline



Key Activities- Kick-Off Week



Launch Timeline:

- November 9, 2014 – Anonymous browsing launches early
- November 15, 2014 – First Enrollment Fair – worker and consumer portal open to attendees
- November 16, 2014 – Consumer Support Center opens for enrollment assistance
- November 17, 2014 – Brokers and Producers access the consumer portal
- November 18, 2014 – Consumers can enroll with help from any consumer-assistance worker
- November 19, 2014 – Consumers can self-enroll

Areas of Risk

- **Training/OCM** – MHBE had difficulty hiring qualified trainers. The first requisition did not produce qualified candidates. Additional resumes received and as of 9/15 all trainers are onboard. Train the trainer started 9/8 and there are about 5,400 people to be trained in a 6 week period.
- **Infrastructure** – Configurations not yet final. Changes are being made to tune application performance. VPN for remote users is being rolled out and connectivity has external constraints. Additionally, the installation of monitoring software is behind due to license transfer delays that have been resolved.
- **Post launch incident management** – Working to fully define how multiple players interact across the spectrum of incident management.
- **Carriers** – Dependent on the pace and resource constraints of the carriers, and compliance with meeting the published dates. Currently 834 testing is expected to conclude on 9/29. We have daily calls and monitor progress.
- **8001 Testing** – Current absence of a MMIS test region with future dates and consolidated test data limits ability to test scenarios. Evaluation underway by DHMH.