

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

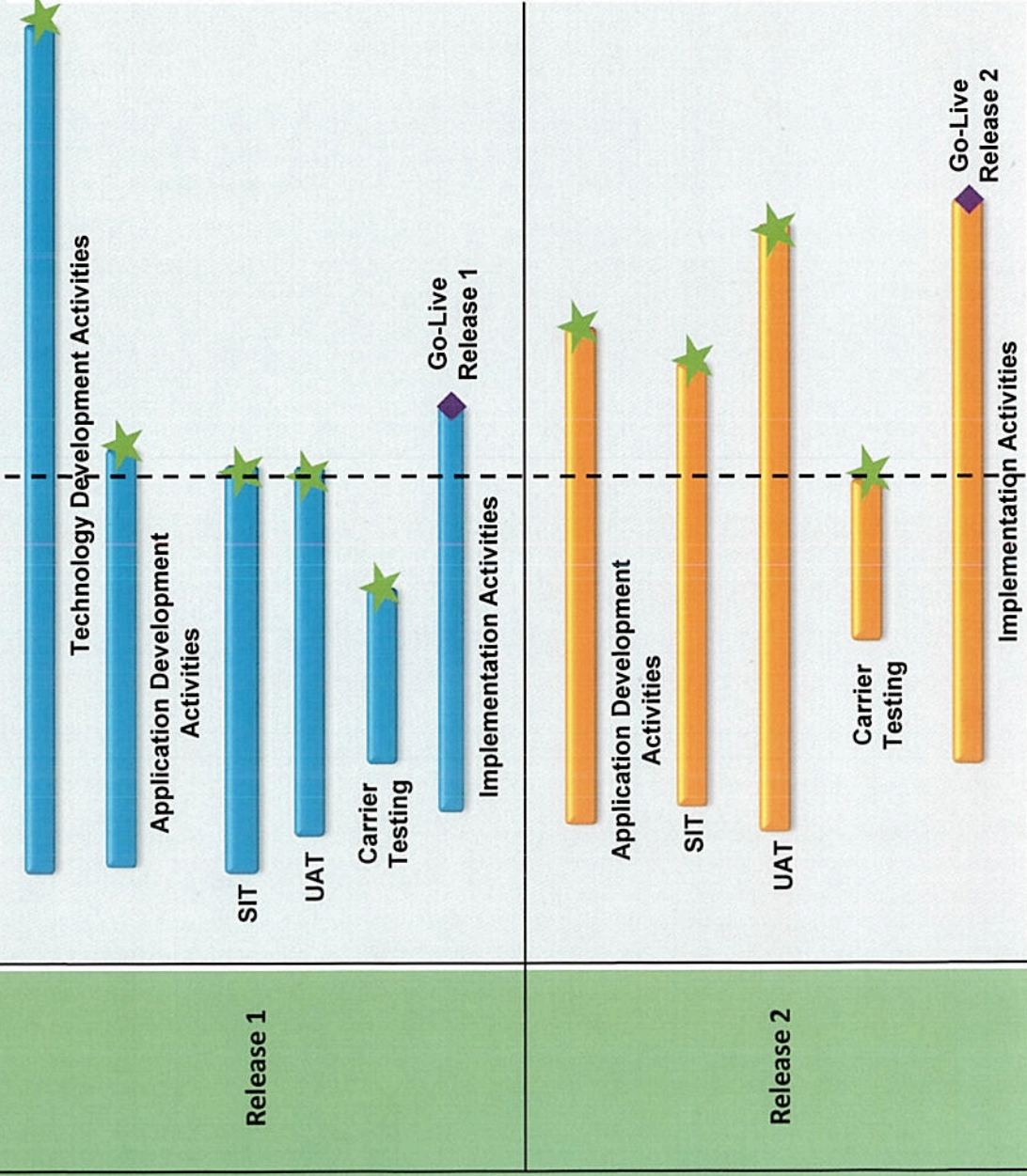


- Continue to meet twice weekly with CMS and CCIO, informal daily discussions occur as needed
- Daily calls with the Carriers
- Completed our Operational Readiness Review (ORR) with CMS on 9/12
- Command Center operations and incident management planning continues; expected to finalize mid-September
- 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



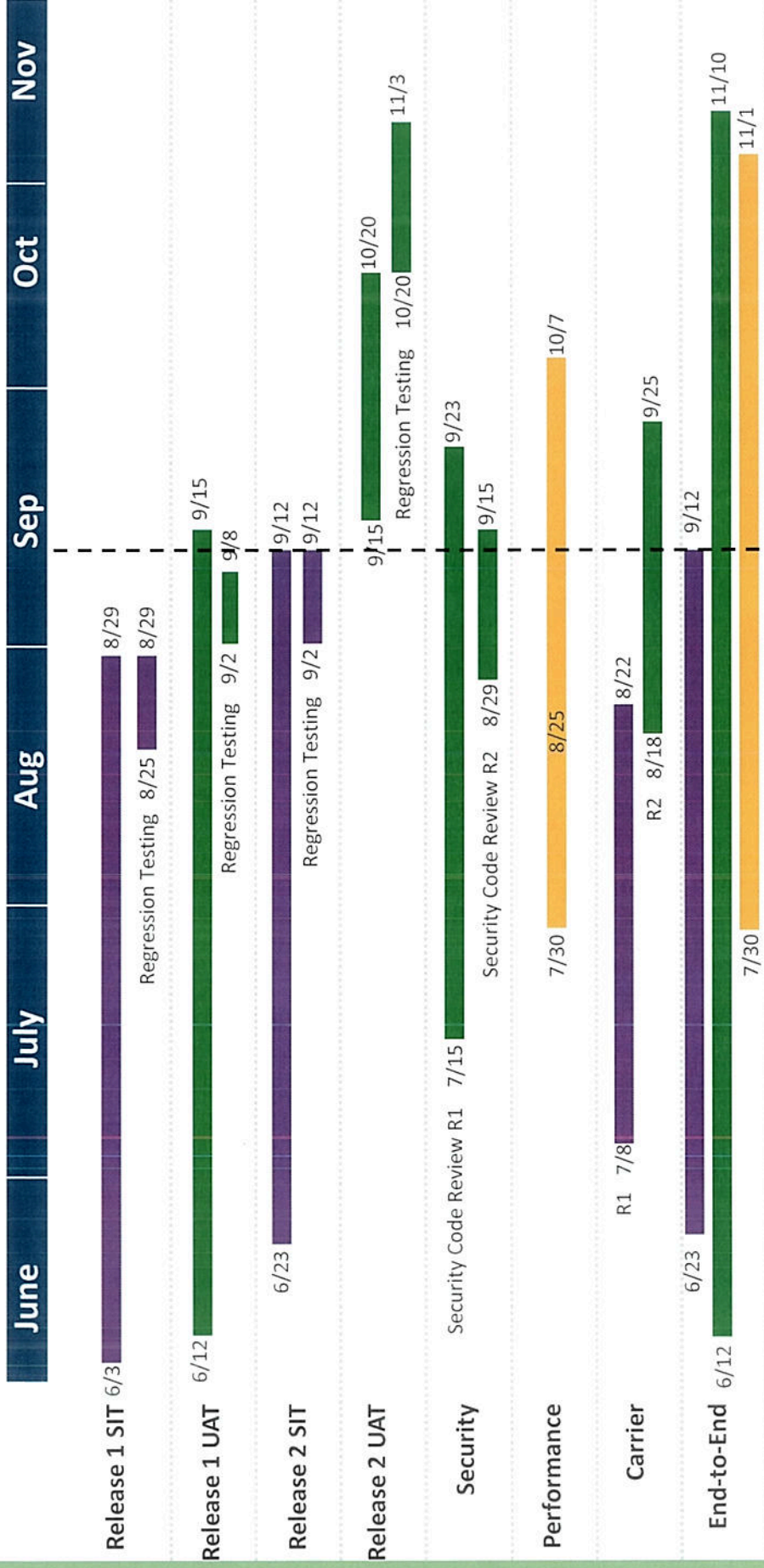
		2014						2015						
		May '14	Jun '14	Jul '14	Aug '14	Sep '14	Oct '14	Nov '14	Dec '14	Jan '15	Feb '15	Mar '15	Apr '15	May '15



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 performed in Integration environment
- Testing performed in UAT environment
- Testing performed in Staging/Production environment

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%

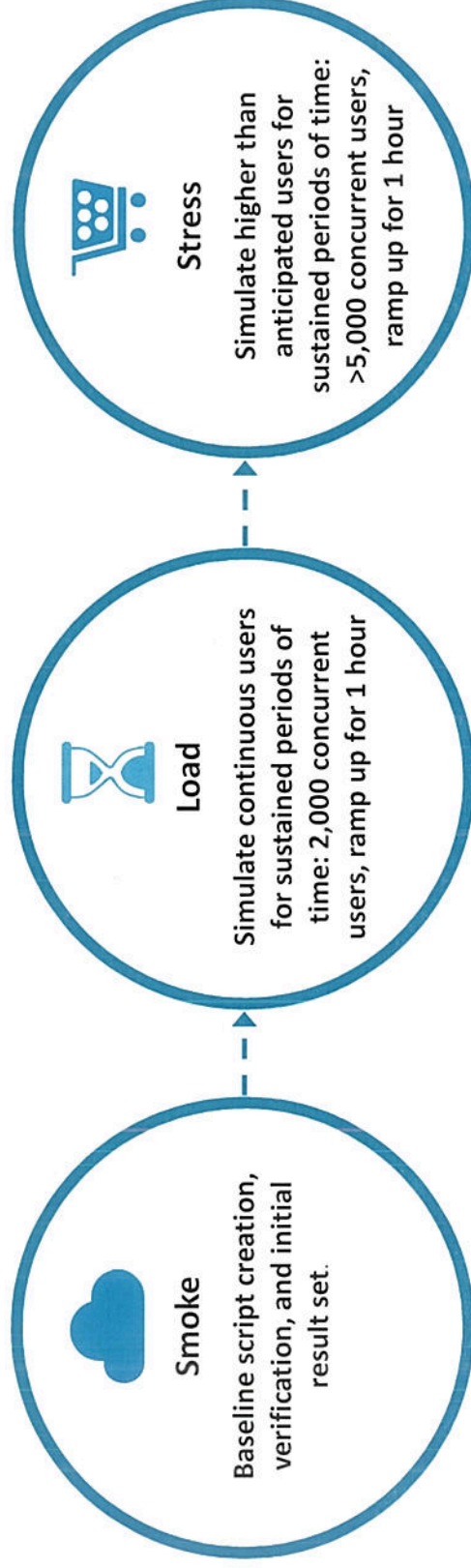
Performance Testing

Performance testing 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.

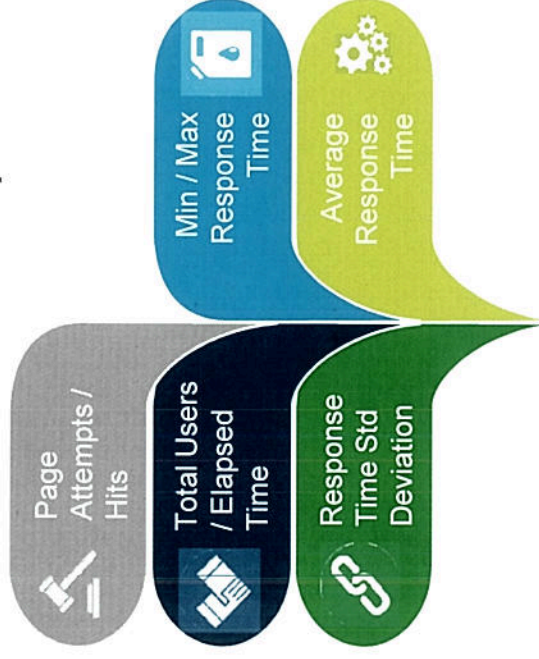
Performance Testing – Result Reporting



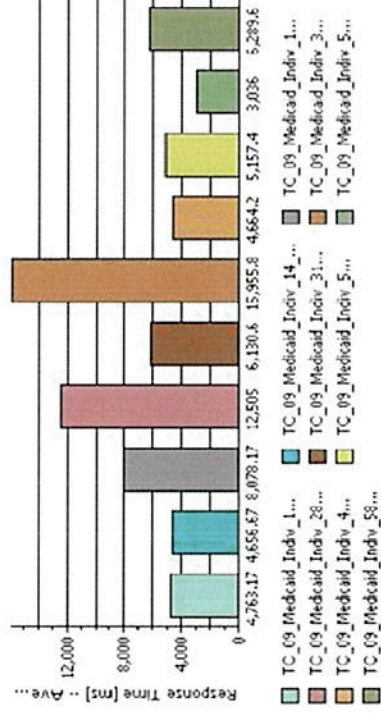
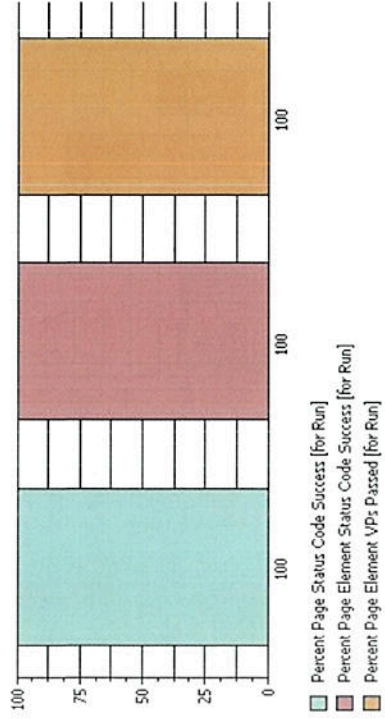
Outcomes of the performance tests are tracked on a daily basis, after each run, with a performance test report.

✦ 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	<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.

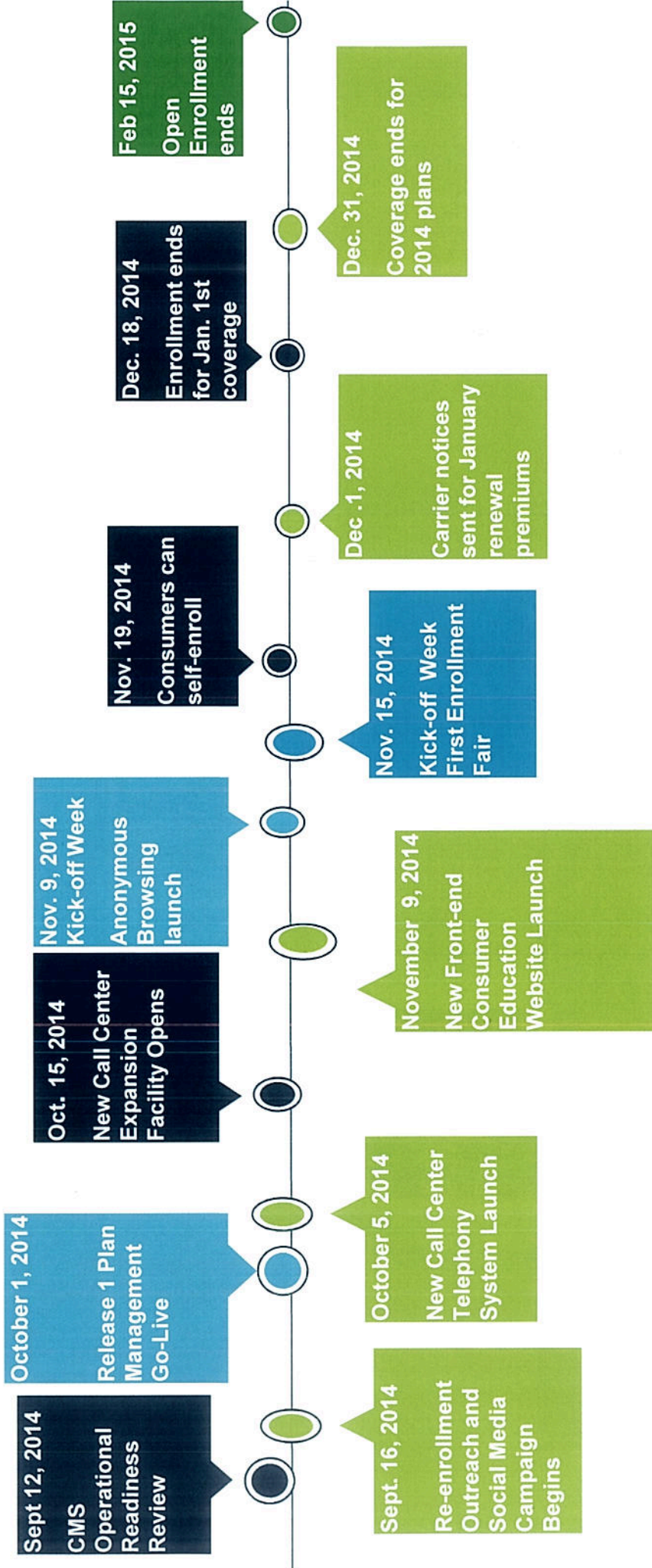
Performance Testing Next Steps



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.