New York Health Benefit Exchange

Detailed Design Review Summary for
9.3.1 Description of front end system engineering work, including IT and Quality Assurance processes and IV&V services
October 9 & 10, 2012

Item Number	Topic
9.3.1	Description of front end system engineering work, including IT and Quality Assurance processes and IV&V services

Review Element: Description of the front-end system engineering work, including IT and QA processes and IV&V services to validate requirement, business processes and development of the exchange.

CSC Response:

CSC's NY-HX proposal (response to the Procurement Opportunity for the New York State Health Benefit Exchange) describes the planned project management, engineering, and validation activities reflecting the business, technical, and policy requirements included in the FAS and documents referenced therein.

Upon contract award, CSC initiated systems engineering processes based upon its Catalyst methodology framework tailored for the application of Agile Scrum methodology and the requirements of the NY-HX Project.

The CSC proposal planned for a requirements validation and gap analysis phase at the beginning of the project to align the functional baseline with the outcomes of the JAD sessions the State had conducted prior to the contract award that occurred on 4 June 2012. CSC completed this gap analysis and is currently in the process of working with the State to complete the disposition of the identified changes to the NY-HX functional baseline and to assess any impact to the scope, schedule, and budget for the project in accordance with the *NY-HX Scope Management and Change Control Management Plan*.

Concurrent with the gap analysis, CSC began the engineering and development activities planned to deliver the NY-HX Health Exchange solution following an Agile Scrum methodology with centralized solution and technical architectural oversight and direction.

Capability tracks, releases, and sprints, based upon the functional areas listed below were established in order to facilitate Agile Scrum Sprint team organization of business analysts, policy analysts, architects, design and development, and testing disciplines. The segregation of functional capabilities into releases is detailed in the *NY-HX Release Plan*.

- Eligibility Determination & Enrollment.
- Plan Management.
- Financial Management.
- Small Business Health Options (SHOP).
- Customer Service.
- Communications.
- Oversight.

The teams working in these functional areas are comprised of State and CSC staff working collaboratively during 11 two-week Sprints to design, develop, and test the functional capabilities

allocated to a specific release. The *Agile Process/SDLC Document* describes the process of how these teams work.

At the conclusion of the last Sprint of a release, NY-HX engineering artifacts (e.g., *Requirements Document, Requirements Traceability Matrix, Test Plan, System Design Document, Technical Architecture Diagrams, Database Design Document, Interface Control Documents*) are updated for the needed release-specific content changes and provided to the State for review and approval. At this point, capability implemented during the release is migrated to a parallel, independent integration and test track for validation testing. Product migration and baseline control, test execution, and defect remediation are performed as described in the *NY-HX Configuration Management Plan* and the *NY-HX Test Plan*.

Agile Scrum-based projects assume that requirements will change as solution capabilities are designed, built, and tested, and, that projects will most effectively meet business needs through constant communication between developers and business process owners. The processes that oversee these changes are meant to ensure that these changes are visible and that any associated impacts are identified and analyzed (i.e., impacts to functional capability, project schedule, or project cost across all State and CSC stakeholders). Upon completion of this assessment, approved system changes are implemented in accordance with the agreed upon strategy. The State has identified a block of supplemental effort hours to be used for funding approved system change requests that result.

CSC's architecture approach for the NY-HX Project includes the overall enterprise architecture to include specifics for the business, technical, application, data, and security architecture perspectives. More detailed architect responsibilities are listed in the *NY-HX Project Management Plan*.

The major principles that drive the architectural focus areas are:

- COTS product utilization is to be maximized in order to mitigate development schedule risk, wherever compliance with NY-HX requirements exists.
- The IBM Rational toolset (e.g., Rational Team Concert, Rational Requirements Composer, and Rational Quality Manager) are to be used while performing the activities within the SDLC. These tools, and others planned for use, are listed in the *NY-HX Project Management Plan*.
- Prioritization of capabilities for implementation is to be driven in accordance with those needed to meet CMS certification requirements for the 1 January 2014 system go-live milestone.

The *NY-HX Quality Methodology and Management Plan and Methodology* describes the activities of the independent CSC quality management function. Activities performed during design and development such as peer reviews, unit/string/integration testing, automated regression test sets, architectural oversight support quality objectives. CSC also provided support to the NY-HX IV&V contractor and to customer acceptance testing.