The Computerworld Honors Program

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Final Copy of Case Study

Status:
Laureate

Year:
2013

Organization Name:
Federal Health Architecture

Organization URL:
http://www.healthit.gov/policy-researchers-implementers/federal-health-architecture-fha

Project Name:
CONNECT

Please select the category in which you are submitting your entry:
World Good

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

The CONNECT program is an open source solution that provides a leading-edge, flexible platform for health information exchange (HIE). By implementing the Nationwide Health Information Network (NwHIN) specifications that support Exchange and Direct transport, CONNECT offers organizations a robust, scalable platform to exchange health data on leading information exchanges, such as the eHealth Exchange. As the United States' healthcare community progresses with the move to an electronic environment for the management, storage and sharing of health data, it is crucial that public and private entities have access to technology that adheres to national technology standards and policies. CONNECT offers this technology to the healthcare community, as it supports the Nationwide Health Information Network, a set of standards, services and policies that enable secure health information exchange over the Internet. Since 2008, the Federal Health Architecture has been instrumental in bringing key federal agency leaders "to the table" to collaborate on development and implementation strategies for CONNECT into the federal healthcare environment. In 2012, FHA and its federal partners including the

Department of Defense, Office of Veteran's Affairs and the U.S. Social Security Administration have succeeded in completing the development of CONNECT and have moved on to the stage of releasing it to the open source community. The ability of healthcare organizations and physicians nationwide to use CONNECT in their IT environments will allow them to more effectively and securely exchange data with their partners, reduce costs and enhance services and access to data for patients from state to state.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

In 2012, the CONNECT program evolved as the Federal Health Architecture worked with its federal partners to incorporate multiple new features into it in order to provide the healthcare community with a more robust, flexible platform for health information exchange (HIE). The news features were added in order to propel national HIE activities and support the participation of public and private entities in numerous nationwide information exchanges, including the eHealth Exchange. These dynamic new features will allow CONNECT adopters the ability to: – Increase throughput targeting increased numbers of Patient Discovery, Query for Documents, Retrieve Documents, Administrative Distribution and Document Submission transactions. – Exchange and process large payload sizes of up to 1 GB while meeting throughput requirements. – Run CONNECT on additional application servers such as WebSphere and WebLogic to meet unique IT environment needs, and redesigning CONNECT to be deployable with other application servers. – Capture and utilize more comprehensive event logging and metric data with enhanced logging capabilities, providing more visibility into performance and exchange details. – Determine the state of a transaction across messages to better troubleshoot and analyze the operations of CONNECT and exchange partner gateways. – Minimize deployment load by supporting a lightweight gateway which allows for a smaller server footprint and use of system resources plus maximize the use of custom-built adapters. – Support direct messages to allow for flexible adoption paths, increase number of potential exchange partners and deploy part of the ONC 2014 Standards & Certification Criteria. – Meet some of the Meaningful Use 2 core objectives related to the secure electronic exchange of information through CONNECT's support of Direct Project specifications and Nationwide Health Information Network (NwHIN) transports (i.e., electronically sending and receiving patient data, registering immunization information, public health reporting and patient access to data).

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

The CONNECT program loosely follows the Department of Health & Human Services' IT Agile Enterprise Performance Lifecycle IT Project Management Framework, which consists of ten life-cycle phases. There are several opportunities for Federal Health Architecture partners to provide critical reviews of CONNECT during these phases through events including bi-weekly Sprint review sessions and planning calls, weekly partner calls and monthly board meetings. For 2008-2012, the CONNECT program was involved in the following phases: Initiation – Identified the business need, Rough Order of Magnitude (ROM) cost and schedule, and basic business and technical risks. Concept

– Identified the high-level business and functional requirements required to develop the full business case analysis and preliminary project management plan for the proposed investment. One of the outcomes of this phase included the development of a Program Charter. Planning – Completed development of the full Project Management Plan and refinement of project cost, schedule and performance baselines as necessary. Requirements Analysis – Developed detailed functional and nonfunctional requirements. Design – Developed the design document, which resulted in the creation of the CONNECT Product design and successful completion of preliminary and detailed design reviews. Development – Developed code and other deliverables required to build the Business Product and worked with the Office of the National Coordinator for Health IT to conduct an Independent Verification & Validation Assessment. Test – Conducted thorough testing and audit of CONNECT's design, coding and documentation. In 2013, CONNECT is in the Implementation phase, which involves conducting user and operator training, and determining readiness to implement and execute the implementation plan, including any phased implementation. The program is scheduled to release the latest version, CONNECT 4.0, on February 11, 2013. At that time, the program will enter the Operation and Maintenance phase.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

"The CONNECT product and the entire project team have provided a necessary component to the national health information exchange initiative and the open source community which they have built around the product has enabled MedVirginia to provide healthcare services to providers and patients in real time. MedVirginia relies on the CONNECT product in order to participate at the national level with private and public healthcare entities on the eHealth Exchange. In addition to exchanging data within the community, MedVirginia shares data with the Social Security Administration to aid patients seeking disability determinations and the Veterans Administration to assist our military community in expediting their medical care. Every day, MedVirginia's health information exchange saves our partners, providers, and patients resources because of the data we are able to share, and the CONNECT product is a key component to the infrastructure that affects the thousands of lives that are impacted by the exchange of clinical data within our community." – Steve Leighty, IT Director, MedVirginia.

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

The CONNECT program is a notable advancement in that it uses an open source platform that can be adopted by any organization for their unique IT environment. CONNECT's flexible, open source platform also allows adopters to manipulate the program's code to fit their specific IT requirements.