

National Coordinator for Health Information Technology.

(2) Shall have complied with all the requirements under this section.

(3) In the case of a private entity, shall be incorporated in and maintain a primary place of business in the United States, and in the case of an individual, whether participating singly or in a group, shall be a citizen or permanent resident of the United States.

(4) May not be a Federal entity or Federal employee acting within the scope of their employment.

(5) Shall not be an HHS employee working on their applications or submissions during assigned duty hours.

(6) Shall not be an employee of Office of the National Coordinator for Health IT.

(7) Federal grantees may not use Federal funds to develop COMPETES Act challenge applications unless consistent with the purpose of their grant award.

(8) Federal contractors may not use Federal funds from a contract to develop COMPETES Act challenge applications or to fund efforts in support of a COMPETES Act challenge submission.

An individual or entity shall not be deemed ineligible because the individual or entity used Federal facilities or consulted with Federal employees during a competition if the facilities and employees are made available to all individuals and entities participating in the competition on an equitable basis.

Entrants must agree to assume any and all risks and waive claims against the Federal Government and its related entities, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from my participation in this prize contest, whether the injury, death, damage, or loss arises through negligence or otherwise.

Entrants must also agree to indemnify the Federal Government against third party claims for damages arising from or related to competition activities.

#### Registration Process for Participants

To register for this challenge participants should either:

- Access the [www.challenge.gov](http://www.challenge.gov) Web site and search for the “Health Data Platform Metadata Challenge”.
- Access the ONC Investing in Innovation (i2) Challenge Web site at:
  - <http://www.health2con.com/devchallenge/challenges/onc-i2-challenges/>.

○ A registration link for the challenge can be found on the landing page under the challenge description.

#### Amount of the Prize

- *First Prize:* \$20,000.
- *Second Prize:* \$10,000.
- *Third Prize:* \$5,000.

Awards may be subject to Federal income taxes and HHS will comply with IRS withholding and reporting requirements, where applicable.

#### Payment of the Prize

Prize will be paid by contractor.

#### Basis Upon Which Winner Will Be Selected

The ONC review panel will make selections based upon the following criteria:

- *Metadata:* The number of cross domain and domain specific voluntary consensus and defacto standard schemas, vocabularies or ontologies that are (re)used or designed and applied to HHS data on [healthdata.gov](http://healthdata.gov).

- *Data:* The number of datasets that the standards based cross domain metadata and schema designed domain specific data is applied to.

- *Linked Data:* The solution should use best practices for the expression of metadata definitions and instance data identification, leveraging the relevant open standards, including but not limited to foundational standards (RDF, RDFS, SPARQL, OWL), and other defacto vocabularies and ontologies such as those listed here as required, with the expectation that existing standards will be reused to the fullest extent possible.

- *Components:* Leveraging software components that are already a part of the HDP is preferable, but other open source solutions may be used.

- *Tools:* Use of automation and round trip engineering that enable multiple concrete syntax realization from abstract syntax of cross domain and/or domain specific metadata is desirable, with no expectation that the tools must be open source or otherwise contributed to HDP as part of this challenge submission. Only newly designed domain specific RDF Schemas, their composition cross domain standards based RDF Schemas, and their application to various datasets are expected to be submitted for this challenge. Tool functionality may be highlighted to explain implementations as desired.

- *Best practices:* Where any new schemas and software code is created, they should exemplify design best practices and known software patterns, or otherwise establish them.

- *Documentation:* Articulation of design using well known architecture artifacts.

- *Engagement:* Willingness to participate in the community as a maintainer/commmitter after award.

#### Additional Information

The virtual machines and codebase outputs from innovations demonstrated by challenge participants will be made publically available through HHS Github repositories (see <https://github.com/hhs/>) as release candidates for further community refinement as necessary, including open source licensing and contributor attribution as appropriate.

**Authority:** 15 U.S.C. 3719.

Dated: May 31, 2012.

**Farzad Mostashari,**

*National Coordinator for Health Information Technology.*

[FR Doc. 2012-13826 Filed 6-6-12; 8:45 am]

**BILLING CODE 4150-45-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Announcement of Requirements and Registration for “Health Data Platform Simple Sign-On Challenge”

**AGENCY:** Office of the National Coordinator for Health Information Technology, HHS.

**ACTION:** Notice.

*Award Approving Official:* Farzad Mostashari, National Coordinator for Health Information Technology.

**SUMMARY:** As part of the HHS Open Government Plan, the HealthData.gov Platform (HDP) is a flagship initiative and focal point helping to establish learning communities that collaboratively evolve and mature the utility and usability of a broad range of health and human service data. HDP will deliver greater potential for new data driven insights into complex interactions of health and health care services. To augment the HDP effort, seven complementary challenges will encourage innovation around initial platform- and domain-specific priority areas, fostering opportunities to tap the creativity of entrepreneurs and productivity of developers.

The “Health Data Platform Simple Sign-On Challenge” will improve community engagement by providing simplified sign on (SSO) for external users interacting across multiple HDP technology components, making it easier for community collaborators to contribute, leveraging new approaches to decentralized authentication.

The statutory authority for this challenge competition is Section 105 of the America COMPETES Reauthorization Act of 2010 (Pub. L. 111-358).

**DATES:** Effective on June 5, 2012. Challenge submission period ends October 2, 2012, 11:59 p.m. et.

**FOR FURTHER INFORMATION CONTACT:** Adam Wong, 202-720-2866; Wil Yu, 202-690-5920.

**SUPPLEMENTARY INFORMATION:**

**Subject of Challenge Competition**

Healthdata.gov is leveraging a variety of open source infrastructure components including the Drupal 7 content management system, the CKAN data portal, the Solr search engine, and the community edition of the Virtuoso (as a RDF database and SPARQL endpoint query service). Going forward, the HDP team intends to realize an architecture similar to the Linked Data Integration Framework (LDIF) and leverage tools in the LOD2 stack where possible, beginning with Ontowiki to be used as Virtuoso editor, most likely followed by SILK for cross domain correlation. HDP would like to enable service requestors to be authenticated using WebID from the W3C. Some of the current and upcoming HDP infrastructure components support aspects of WebID functionality already while others do not. A number of WebID libraries are available, written in various languages.

This challenge winner will present a replicable open source virtual machine environment demonstrating how HDP components (with an initial emphasis on Virtuoso,<sup>1</sup> Drupal 7,<sup>2</sup> CKAN,<sup>3</sup> Ontowiki,<sup>4</sup> and Solr,<sup>5</sup>) can provide and/or consume WebID's, contributing to simplified sign-on for humans and machines. The developer designs how their code might utilize each component as a WebID identity provider or relying party, presumably leveraging existing capabilities to the fullest extent possible. The end result will demonstrate seamless integration across a number of HDP components, without introducing any external service dependencies that couldn't be operated by HHS. The contributed code will be given an open source license and managed by HHS on github.com, with copyright and attribution to the developer(s) as appropriate.

<sup>1</sup> <http://virtuoso.openlinksw.com/dataspace/dav/wiki/Main/>.

<sup>2</sup> <http://www.acquia.com/Drupal-7>.

<sup>3</sup> <http://ckan.org/>.

<sup>4</sup> <http://lod2.eu/Project/Ontowiki.html>.

<sup>5</sup> <http://lucene.apache.org/solr/>.

**Eligibility Rules for Participating in the Competition**

To be eligible to win a prize under this challenge, an individual or entity—

(1) Shall have registered to participate in the competition under the rules promulgated by the Office of the National Coordinator for Health Information Technology.

(2) Shall have complied with all the requirements under this section.

(3) In the case of a private entity, shall be incorporated in and maintain a primary place of business in the United States, and in the case of an individual, whether participating singly or in a group, shall be a citizen or permanent resident of the United States.

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**Registration Process for Participants**

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- Access the *www.challenge.gov* Web site and search for the "Health Data Platform Simple Sign-On Challenge".

- Access the ONC Investing in Innovation (i2) Challenge Web site at:

- <http://www.health2con.com/devchallenge/challenges/onc-i2-challenges/>.

- A registration link for the challenge can be found on the landing page under the challenge description.

**Amount of the Prize**

- *First Prize:* \$20,000.
- *Second Prize:* \$10,000.
- *Third Prize:* \$5,000.

Awards may be subject to Federal income taxes and HHS will comply with IRS withholding and reporting requirements, where applicable.

**Payment of the Prize**

Prize will be paid by contractor.

**Basis Upon Which Winner Will Be Selected**

The ONC review panel will make selections based upon the following criteria:

- *Coverage:* The more integrated components the better, with an emphasis on leverage existing work and capabilities of each component.
- *Coupling:* The level with which any integrated components can be removed without affecting the remaining component functionality.
- *Performance:* The lowest latency and best responsiveness of the component interactions as demonstrated by test cases.
- *Elegance:* How the design deals with both human and application agents that interact with different interfaces, and how each is managed across infrastructure components.
- *Documentation:* Articulation of design using well known architecture artifacts and executable test cases.
- *Engagement:* Willingness to participate in the community as a maintainer/committer after award.

**Additional Information**

The virtual machines and codebase outputs from innovations demonstrated by challenge participants will be made publically available through HHS Github repositories (see <https://github.com/hhs/>) as release candidates for further community refinement as necessary, including open source licensing and contributor attribution as appropriate.

**Authority:** 15 U.S.C. 3719.

Dated: May 31, 2012.

**Farzad Mostashari,**

*National Coordinator for Health Information Technology.*

[FR Doc. 2012-13830 Filed 6-6-12; 8:45 am]

**BILLING CODE 4150-45-P**

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### Announcement of Requirements and Registration for “My Air, My Health Challenge”

**AGENCY:** Office of the National Coordinator for Health Information Technology, HHS. National Institute of Environmental Health Sciences, National Institutes of Health, HHS.  
*Award Approving Official:* Farzad Mostashari, National Coordinator for Health Information Technology.

**ACTION:** Notice.

**SUMMARY:** Environmental and public health are closely related and complementary fields—and their future depends on a closer understanding of those connections. New portable sensors have the potential to transform the way we measure and interpret the influence of pollution on health. These technologies can provide a picture that is more detailed and more personal, with dramatic implications for health care, air quality oversight, and individuals’ control over their own environments and health.

The U.S. Environmental Protection Agency (EPA) and U.S. Department of Health and Human Service (HHS) [National Institute of Environmental Health Sciences (NIEHS) and Office of the National Coordinator for Health Information Technology (ONC)] envision a future in which powerful, affordable, and portable sensors provide a rich awareness of environmental quality, moment-to-moment physiological changes, and long-term health outcomes. Health care will be connected to the whole environment, improving diagnosis, treatment, and prevention at all levels.

Many of the first steps toward this future have already been taken. Prototype projects have developed portable air quality and physiologic sensors, and experimental analysis tools for handling data that is higher quantity, but often lower quality, than more traditional monitoring techniques. The “My Air, My Health Challenge” aims to build on this foundation. We are seeking solutions that integrate data from portable physiological and air quality monitors, producing a combined picture that is meaningful and usable. The

statutory authority for this challenge competition is Section 105 of the America COMPETES Reauthorization Act of 2010 (Pub. L. 111–358) and section 103 of the Clean Air Act, 42 U.S.C. 7403. This challenge addresses the mission of the NIEHS to conduct and support programs with respect to factors in the environment that affect human health, directly or indirectly. 42 U.S.C. 285.

**DATES:** *Phase 1:* Effective on June 6, 2012. Submission period ends October 5, 2012, 11:59 p.m. et. *Phase 2:* Effective on November 19, 2012. Submission period ends May 19, 2013, 11:59 p.m. et.

**FOR FURTHER INFORMATION CONTACT:** Denice Shaw, EPA, 202–564–1108; Adam Wong, ONC, 202–720–2866.

#### **SUPPLEMENTARY INFORMATION:**

##### **Subject of Challenge Competition**

The “My Air, My Health Challenge” is a multidisciplinary call to innovators and software developers (“Solvers”) to enable near-real-time, location-specific monitoring and reporting of air pollutants and potentially related physiological parameters, using a personal/portable integrated system to assess connections between the two (“sensor systems”). The system must link air-pollutant concentrations with physiological data, provide geocoded and time-stamped files in an easy-to-use format, and transmit this data via existing networks to a central data repository provided by EPA and HHS.

The challenge is structured in 2 phases:

**Phase 1—Project Plan** (no more than 15 pages, not including appendices that may consist of diagrams/schematics, bibliography, and other supplementary materials).

1. Propose a plausible link between health outcomes and airborne pollutants (chemical species and/or particulates), and provide evidence to support a plausible and physiologically meaningful relationship between airborne pollutants and physiological metrics in a defined population.

2. Propose a prototype design and development plan for an integrated multi-sensor and data management system that may be easily worn or carried by individuals within the defined target community/population.

3. Conceptualize data generation, management (may include processing & on-board storage), and transmission functionality of the device.

4. Propose a small-scale proof-of-concept study to validate the proposed prototype.

5. Study design process must include input from the target community/population.

**Phase 2—Proof-of-Concept Pilot Project.**

6. Finalists attend an event for feedback, questions, and business/entrepreneurial resources prepared by Challenge sponsors (EPA, HHS ONC, NIEHS).

7. Solvers develop the proposed prototype and execute experimental validation of the system to bring together data from personal air quality and physiological monitors, showing how these types of data and sensors can be integrated for practical use by health and environmental agencies, and by individual citizens. Proof-of-concept data must illustrate the accuracy and precision of the raw data and of any processed data produced by the system.

*Level of Focus for Health/Pollution connections:* Systems must track airborne pollutants and physiological parameters for a known or plausible health-pollution link. Solvers must be able to justify their chosen combination with research citations and to optimize the air sampling parameters (volume, frequency, etc.) and physiological measurement parameters to provide resolution appropriate to the specific pollutant, or combination of pollutants, and related health implications. Challenge Sponsors will provide examples of such links for illustrative purposes (appended to the challenge announcement), but will not limit Solvers to these particular cases.

*Sensor development:* Solvers are not expected to develop novel sensors for this challenge, but are not restricted to commercially available sensors. They may use sensors that are currently in the development or piloting stage, but must show that the sensor will be ready to use in functional tests—at least at a small scale—in time for the Phase 2 proof-of-concept demonstration. Instruments must be well characterized in terms of precision, accuracy and sensitivity. Integrated sensor systems must be able to transmit data to the central repository (in real time, or store and forward) using existing data networks (e.g. 3G, LTE, or WiFi), or able to connect with personal devices (e.g., smart phones) that have such capability. Solvers must enable appropriate calibration and error checking capabilities, although these need not be onboard the portable monitoring components.

*Data Requirements and Constraints:* Data transmitted by the integrated devices to a centralized data repository must enable the following to be understood from transmitted data:

1. Indicators of device functionality, including any results of automated