



The Computerworld Honors Program

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Final Copy of Case Study

Year:

2013

Status:

Laureate

Organization Name:

U.S. Environmental Protection Agency

Organization URL:

<http://www.epa.gov>

Project Name:

EPA GeoPlatform

Please select the category in which you are submitting your entry.

Collaboration

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.)

EPA's mission is inherently place-based and environmental protection efforts require the ability to integrate a wide variety of spatial information, from the distribution of pollutant sources, water and air quality conditions, demographics and natural resources. The technology for EPA staff to discover and use the data they need to support environmental has been complex and difficult to put in the hands of non-geospatial experts in the past. In mid-2011 EPA started the EPA GeoPlatform Initiative to develop an infrastructure that would allow EPA staff to collaborate around maps and place-based information. This tool advances human health and environmental protection by making data and information available to all EPA staff, supporting everyone's ability to conduct relevant

geospatial analysis in her or his own areas of interest using common data, tools, and methods. The EPA GeoPlatform allows easy access to agency data and provides the following: web-based tools that allow fusing of internal and external data and services, increased access to place-based decision-making tools, a standardized look and feel for map products and applications supported by a core set of national data services, and the potential for significant cost savings by eliminating redundancy in deploying and using geospatial technology. EPA's GeoPlatform efforts also serve as a model and test-bed for development of a national government-wide geospatial platform.

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.)

The project was initiated in March of 2011 and was made available to EPA staff in May of 2012. Since that time over 500 users have been registered to the GeoPlatform and pilot efforts have allowed groups of over 100 staff throughout the country to collaborate and visualize on issues like enforcement targeting. The technology utilized is commercial off-the-shelf geospatial software available under EPA's Enterprise License Agreement with ESRI Inc., and includes an internal geospatial data hosting infrastructure and cloud-based collaboration environment to support discovery of data, and creation and sharing of maps and data within internal groups and partner agencies, and publish public interactive map views. The cloud-based component is a customized implementation of EPA's organizational subscription to ESRI's Arcgis.com service. Access to EPA GeoPlatform map galleries, data search powered by EPA's Environmental Dataset Gateway, training materials, and technical support are provided through a customized intranet site for one-stop shopping all things geospatial in EPA. EPA has used mapping application capabilities of the GeoPlatform to streamline the process of producing interactive maps for EPA's public web site. In the past, simple web map views required extensive custom development, testing, security documentation and maintenance, but the geoplatform architecture can be used to rapidly deploy public information using templates without additional infrastructure costs and much less paperwork.

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 initial phase of implementation is complete, but the GeoPlatform is an ongoing project. During 2013 work will continue: evaluating EPA business processes that can be enhanced by GeoPlatform data and functions, testing usability and improving the interface and access and back-end design to make it easier for users to find critical data, moving several pilot efforts into production,



coordinating with the Department of Interior and other agencies on how to complement and utilize the evolving National Geospatial Platform, and working with ESRI to ensure that EPA user requirements are built into software updates to Arcgis.com

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.)

In the past incorporating interactive maps in EPA public pages have involved costly application development with long-term maintenance costs. The GeoPlatform architecture is designed to eliminate most of these costs, and the GeoPlatform team has prototyped use of the GeoPlatform to rapidly provide enhanced and consistent map views within EPA's public site. The publication of the 2011 and 2012 Enforcement Results map using the GeoPlatform is a prime example with over \$50,000 in annual savings from prior efforts. We are in the process of building GeoPlatform-based interactive map production into EPA web-content management workflow to more fully capitalize on these cost savings and efficiencies. The enforcement results maps are an outgrowth of one of a number of business line pilots that have benefit from this new platform. Pilot efforts to date have included enforcement targeting, environmental justice screening, community grants, Toxics Release Inventory (TRI), drinking water, and emergency response. The enforcement targeting pilot is the most mature of the efforts and currently involves over 120 enforcement staff around the country who use shared data views to make enforcement targeting decisions. The community grants pilot is complete and has led to the development of a process to define the "place of performance" or area of focus for EPA grants and will help the agency direct grant resources to areas with the most environmental need. Use of this tool is to define place of performance; using this GeoPlatform tool is now official policy within EPA.

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.)

A wide variety of federal, state and local organizations are trying to find better ways to use geospatial data and technology to support their missions. EPA's effort is comprehensive and aimed at an enterprise implementation using modern tools and putting important data and tools in the hands of users and partner organizations in a standardized, cost-effective way. EPA's experiences are both a model and test bed for other organizations.