

## 2010 Innovations Awards Application

Deadline: March 1, 2010

ID # (assigned by CSG): **10-E-21PA**

**Please provide the following information, adding space as necessary:**

State:                     Pennsylvania                    

Assign Program Category (applicant): Government Operations and Technology  
(Use list at end of application)

1. Program Name

The Commonwealth of Pennsylvania's Statewide Emergency Notification System

2. Administering Agency

The Governor's Office of Administration

3. Contact Person (Name and Title)

Mary D Johnston, Homeland Security Project Manager

4. Address

Commonwealth of Pennsylvania  
Governor's Office of Administration  
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Harrisburg, Pennsylvania 17110

5. Telephone Number

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8. Web site Address

<http://www.oa.state.pa.us>

9. Please provide a two-sentence description of the program.

The commonwealth's statewide emergency notification system helps to provide Pennsylvanians with timely information during urgent situations. The system provides our citizens, business partners, and employees with real-time public safety, health, and work-related notifications by page, text message, e-mail, and phone.

10. How long has this program been operational (month and year)? Note: the program must be between 9 months and 5 years old on March 1, 2010 to be considered.

The notification system has been operational since January 2009.

11. Why was the program created? What problem[s] or issue[s] was it designed to address?

Prior to the implementation of the statewide emergency notification system, the commonwealth had no way to directly communicate critical information to the public in real time. Such information was sent to the media and other third parties, who in turn relayed it to the public—a situation that caused time lag and accuracy problems.

In addition, citizens do not think of their state government in terms of "departments" or "agencies." Most think of it as a unified entity and, in Pennsylvania, there was no way for citizens to ask the state for specific information in any meaningful, ongoing way.

When individual state agencies pushed specific information to the public, they used multiple, disparate systems and inconsistent contact lists. There was no place for a citizen who was interested in both pandemic flu and happenings at a specific correctional institution near their home, for example, to request consistent, timely information from the state.

The commonwealth began looking for a way to connect with our citizens with important public safety information—a search that ended with the commonwealth's statewide emergency notification system which allows citizens to choose what information they want and how they want to receive it, including text messages, e-mail and phone.

12. Describe the specific activities and operations of the program in chronological order.

The evolution of this initiative for PA involved the following:

- Concept behind the notification project was developed
- Concept was approved by the Governor's Office of Administration/Office of Information Technology (OA/OIT)
- Multiple state agencies worked together to define requirements for the notification system
- State agencies were surveyed to gather their specific notification needs
- Commonwealth-wide policy for alerting and notifications was developed which dictates the technology solution state agencies are to use for notifications
- PA's standard selection process was used to evaluate options for the technology solution
- Technology solution was procured
- Technology solution was implemented
- State agencies were introduced to and trained on the new notification system

The implementation of the project was completed in three phases: (1) pilot, (2) priority internal notifications plus additional public notifications, (3) remaining internal notifications with continued public notifications.

13. Why is the program a new and creative approach or method?

Communicating directly with citizens has been a challenge for Pennsylvania, as it is for many state governments. Faced with that challenge we have traditionally relied on the media and other external organizations to distribute critical information—such as disaster warnings—to the public. Some of the problems that relying on external organizations can lead to are lag time in the distribution of critical information to citizens, as well as the filtering or distortion of our message. We are able to more directly reach our constituents through our Web sites, but then only if the constituent is actively seeking information from us.

Advances in mobile devices like cell phones and PDAs—as well as the expanded use of those devices—have changed the way people get their information and increased the demand for direct and timely notifications. The majority of Americans have e-mail addresses, and many people get e-mails delivered to them wherever they are on their mobile devices. Our constituents want to hear from us directly, and they want to hear from us *now*.

Past efforts within the commonwealth to push information directly to our constituents were stove-piped. Citizens had to sort through the many commonwealth Web sites to find places to register, the registration processes were each different and the distribution methods often varied. PA's statewide emergency notification system allows our constituents to register in one place. They can supply the mobile devices and e-mail accounts where they want to receive notifications. They receive critical information directly from the commonwealth as soon as we send it.

Our state agencies get to take advantage of a shared license to send notifications to their particular audiences and the platform is already established and ready for them to use. OA/OIT helped PA's agencies think through new ways this technology could be strategically deployed, and new notifications continue to be rolled out.

PA's statewide emergency notification system is using technology to enhance how citizens, employees, and business partners get critical information from the commonwealth and about our state government services.

14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.)

The PA statewide emergency notification system cost was \$1 million. A governance team was developed to support the implementation with procedures in place to escalate issues to a steering committee. The governance team was made up of up to 35 individuals representing 11 different agencies with differing missions. That team was responsible for defining requirements for the system and ensuring that those requirements were subsequently implemented.

15. What are the program's annual operational costs?

The program's annual operational cost is \$160,000 for technology maintenance. Savings were realized to our state agencies as a result of an Enterprise purchase with a \$0 cost license structure. Additionally, maximum benefit occurred allowing the state agencies to exercise sending notifications to as many constituents with as much timely information desired about our state government services.

16. How is the program funded?

The program was funded using Homeland Security grants.

17. Did this program require the passage of legislation, executive order, or regulations? If YES, please indicate the citation number.

This program did not require the passage of legislation; however, it did require the creation of an information technology bulletin (ITB).

The Office of Administration/Office of Information Technology (OA/OIT) sets enterprise IT standards for all agencies, bureaus, and commissions under the jurisdiction of the Governor of Pennsylvania. As part of this mission, a commonwealth-wide standard was set for Alerting and Notification: ITB-APP010.

18. What equipment, technology, and software are used to operate and administer this program?

The commonwealth's statewide emergency notification system relies on a Web-based hosted solution. The system is hosted in a hardened data center with full redundancy, which allows for the commonwealth alert system and data to reside in separate geographical regions. Our alert system is partitioned into two separate instances within the same data center to support both the public alert system for citizens (AlertPA) and an internal system for commonwealth employees (StaffAlert). Further, monitoring solutions are installed on the servers for key service availability logging system level and application level reporting.

Authorized senders originate notifications from Web pages, e-mail or mobile devices. Delivery is performed by handing off message information to a variety of networks and providers through the Roam Secure Alert Network. The Roam Secure Alert Network uses V3 technology, which is a multi-thread configurable sending algorithm, which allows our alerting platform to launch multiple threads simultaneously to e-mail, cell phones, etc. The success of the message handoff has been improved by white-listing with Internet Service Providers and wireless carriers, delivery through multiple methods and protocols, as well as, the vendor partnerships involving the prioritization of traffic through public safety gateways for alerting and notification.

Our solution transmits information securely using 128B secured socket-layer encryption to external devices through an HTTPS URL. Passwords are encrypted when stored in the Roam Secure database. Digital IDs are used to verify the sending domain of the system, and there is a security architecture in place to prevent spoofing or denial of service attacks. The system prohibits the sending of malicious messages. In order to cut down on the number of bad accounts due to mistake or spam, our solution implements Captcha and enforces the commonwealth's password length policy during the registration process. Additionally, employee registration is managed by the commonwealth utilizing batch programs that have loaded users from the Commonwealth of Pennsylvania (CWOPA) Active Directory and synchronizes daily. Today, the only user information from the CWOPA Active Directory that moves between the commonwealth and the Roam Secure Alert Network is the user's first name, last name, and e-mail address. Business partners

that are not a member of the CWOPA Active Directory can be automated in a bulk load of the system.

19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number, and e-mail address.

Yes. This statewide emergency notification system originated in the Commonwealth of Pennsylvania.

20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?

Yes. The Commonwealth of Virginia has a similar program; however, their program is segmented among agencies and not centrally coordinated. PA has procured this system for agencies under the Governor's jurisdiction to use under a shared license. Today, there are seven state agency programs using the statewide emergency notification system with approximately eight more programs coming on board within the next year.

21. Has the program been fully implemented? If NO, what actions remain to be taken?

Yes.

22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.

AlertPA was implemented for public notifications. Its use has solved mission-critical problems and improved government efficiency. We are beginning to provide the "one-stop shopping" for notification services that our public demands.

Examples:

- The Pennsylvania State Police use AlertPA to make the public aware of Amber Alerts.
- The Department of Corrections uses AlertPA to notify the public during prison emergencies.
- The Pennsylvania Emergency Management Agency uses AlertPA to extend Emergency Alerting System (EAS) warnings, so that citizens receive EAS messages not only through TV and radio broadcasts, but also via e-mail or text message on a county-by-county basis.
- The Governor's Office of Administration uses AlertPA to notify citizens and employees of state office closures and operating delays.

Today, AlertPA offers the following notifications to the citizens of PA:

- Weather
- Prison emergencies
- Amber Alerts
- PA-specific airport delays
- National notifications to include Consumer Protection Services, World Health Organization, Center for Disease Control and Pandemic Flu.gov.

23. How has the program grown and/or changed since its inception?

After the initial pilot phase, AlertPA had approximately 2300 users. Today the program supports almost 12,000 PA citizens and continues to grow as new notifications are offered. To date, there have been 24,710 alerts sent to the PA citizens from various programs. Most recently, AlertPA was used by the Pennsylvania Emergency Management Agency to send alerts to our constituents during a treacherous February snowstorm. Constituents were advised during real time blizzard conditions that multiple PA Interstates were closed.

24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?

- Interception of another message from another information technology network
- Identifying the appropriate employees to approve and send notifications
- Streamlining the user's registration process
- Balancing multiple business models within the same platform
- Soliciting buy-in from disparate state agencies who may already be using their own notification systems

CSG reserves the right to use or publish in other CSG products the information provided in this application. If your agency objects to this policy, please advise us in a separate attachment. 2

**2010 Innovations Awards Application**  
**Program Categories and Subcategories**

Use these as guidelines to determine the appropriate *Program Category* for your state's submission and list that program category on page one of this application. Choose only one.

*Infrastructure and Economic Development*

Business/Commerce

Economic Development

Transportation

*Government Operations and Technology*

Administration

Elections

Information Systems

Public Information

Revenue

Telecommunications

*Health & Human Services*

Aging

Children & Families

Health Services

Housing

Human Services

*Human Resources/Education*

Education

Labor

Management

Personnel

Training and Development

Workforce Development

*Natural Resources*

Agriculture

Energy

Environment

Environmental Protection

Natural Resources

Parks & Recreation

Water Resources

*Public Safety/Corrections*

Corrections

Courts

Criminal Justice  
Drugs  
Emergency Management  
Public Safety

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