

**2008 Innovations Awards Program  
APPLICATION**

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ID # (assigned by CSG): 08- E-18NY

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

State: New York State

Assign Program Category (applicant): Emergency Management \_\_\_\_ (Use list at end of application)

1. Program Name **NY-ALERT**
2. Administering Agency **New York State Emergency Management Office**
3. Contact Person (Name and Title) **John R. Gibb, Director**
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8. Web site Address **[www.semo.state.ny.us](http://www.semo.state.ny.us)**
9. **Please provide a two-sentence description of the program.**

NY-ALERT is New York State's All-Hazards Alert and Notification System. This web-based portal offers one-stop access through which State, county and local agencies and governments, emergency service agencies, and institutions of higher learning can provide emergency information to a defined audience through various gateways such as cell and landline phones, text messages, email, faxes and postings to the web.

10. **How long has this program been operational (month and year)?**

NY-ALERT went operational June 1, 2007. *Note: the program must be between 9 months and 5 years old on March 1, 2008 to be considered.*

11. **Why was the program created?**

There is a need to provide emergency notifications using all technologies but crafting the message only once to expedite dissemination of this life safety information.

**What problem[s] or issue[s] was it designed to address?**

Previously the message had to be crafted individually for each communications gateway (email, web posting, Emergency Alert System), thus slowing down the time the vital information in the message reached the audience.

Historically, it has been technically and economically prohibitive for New York State's county emergency managers to have access to various systems to ensure that emergency alerting messages reached the broadest possible audience in an expeditious manner. Citizens are increasingly relying upon modern communications technologies as their information sources (e.g. cell phones, PDAs, internet, etc.), whereas most legacy alerting systems (e.g. EAS) provide alerting merely via television and broadcast radio systems. Additionally, there is a major shift away from traditional 'home' telephones, with many citizens choosing to use their cellular telephones for all phone communications. This has resulted in a dramatic reduction in the efficacy of reverse dialing systems currently available as they are predominately reliant upon existing 911 databases for their citizens' contact information. NY-ALERT overcomes these challenges by integrating disparate systems, thus providing rural and urban emergency responders with a sole-source, web-based application free of charge.

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

### **a. Project Initiation**

During this phase SEMO identified the project team and project plan. This team was started in December 2005, and was comprised of both SEMO employees and multiple vendors that were going to be utilized for dissemination of information to the public. Critical milestones and timelines were established to meet the data modeling and application development timelines.

### **b. Conceptual Modeling**

Conceptual data models were developed based on the main application concept, business case and the interrelationships. These conceptual data models form the basic foundation with which development is based upon. All conceptual data was reviewed, highly detailed, with story boards. These story boards were finalized over the course of 90 days.

### **c. Logical Data Modeling**

During this phase, data requirements are gathered. All data elements are identified with function and importance forming the comprehensive documentation and data dictionary for this project. This enforced a single definition for all data elements within NY-Alert. This was completed roughly in-sync with the conceptual modeling in March 2006.

### **d. Physical Data Modeling**

During this phase, the logical data model is mapped to the database. All tables are created, with associated query and security strings. Online view of the database is created, along with associated primary index key. Database with all associated tables are based line to ensure any issues associated with link tables or queries are efficient and do not lock the database. Database modeling took SEMO roughly 60 days to complete and was finished in May 2006.

### **e. Application Development**

During this phase, front-end applications and presentation tiers are created that require access to the physical data model. All application development was based on signed-off story boards created in the Project Initiation. During Application Development all aspects of the user and notifiers experience are coded, along with compliance with State guidelines including ADA (Americans with Disabilities Act) compliance. Application development took 9 months and was completed in January 2007.

### **f. System and Acceptance Testing**

During this phase, base systems were built and benchmarked. This included all applications associated with the deployment of the application. Base servers were tested and certified by third

parties. System acceptance includes also base and security benchmarks to ensure any application performance loss would be associated to code and not server software. System builds were done during the Application Development phase and were certified throughout a 9-month process. This included site to site fail over testing, certification, and load testing. The application was ported to Systems in January 2007. Recertification of the application with associated testing on the new System were completed and signed off in March 2007.

g. Deployment

Deployment to the public began in June 2007 after exhaustive internal sign-off from the Executive Team of SEMO. This included training documentation, brochure and advertising associated with the release of NY-ALERT. In September 2007, we released the user portal, allowing the public to also sign up to receive emergency notifications.

h. Follow-up

With any project follow-up tasks were in place 60 days after launch. With feedback from the notifiers using the system to notify the public and civilian subscribers, we began to collect their issues or comments into an online database. After 90 days after launch we analyzed the information and began working on enhancement patches to allow the notifiers and users easier navigation, and designed new features for NY-ALERT.

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

NY-ALERT harnessed all existing communications gateways and brought together more than 100 private sector vendors to work collegially and cooperatively with State government to develop a robust system that never before has been attempted. The “best of the best” technologies and systems were selected.

**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 New York State Emergency Management Office primarily used in-house hardware and programming expertise for the initial development of NY-ALERT. In 2007, the State invested an additional \$1.6 million to procure hardware, software, and for development costs.

**15. What are the program’s annual operational costs?**

In 2008, we anticipate approximately \$3.8 million in recurring costs associated with additional staffing, public outreach, Phase 2 enhancements and recurring costs.

**16. How is the program funded?**

Through the New York State Executive budget.

**17. Did this program require the passage of legislation, executive order or regulations?**

NO.

**If YES, please indicate the citation number.**

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

NY-Alert currently utilizes 64 servers in two disparate data centers. These servers' base software platforms range from Windows 2003, 64 Bit systems to Linux systems. The base software utilized on the presentation tier is IIS 7.0 and Apache. With the core databases running SQL 2005 on multi-quad based processors and 8+ gigs of memory. Operation of the software is done through secure https screens with username and password, and MMC (Microsoft Management Console). Multiple IPS (Intrusion Prevention System) protects NY-ALERT from web-based attacks, along with secure agents on the servers monitoring all traffic patterns and reporting to security administration any variances from baseline performance.

**19. To the best of your knowledge, did this program originate in your state?**

YES.

**If YES, please indicate the innovator's name, present address, telephone number and e-mail address.**

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**20. Are you aware of similar programs in other states?**

NO, nothing that duplicates NY-ALERT robust capabilities in entirety.

**If YES, which ones and how does this program differ?**

**21. Has the program been fully implemented?**

NO.

**If NO, what actions remain to be taken?**

While NY-ALERT is fully operational – 24/7/365 – innovation within the system should never be finished.

Any jurisdiction in New York State can contact SEMO and request activation and eight jurisdictions are currently independently “live.” The system will continue to grow as more jurisdictions begin to incorporate the system into their day-to-day preparedness activities. Additionally, the system is scalable and easily modifiable as new gateways are being introduced in the near future.

As new technology is always being developed, NY-ALERT will be expanded to incorporate those technologies. NY-ALERT's initial phase 1 (version 1.0) was completed and was our first phase of mass notification to the public in the event of an emergency. With nearly 1.4 million subscribers and now hundreds of notifiers, it became apparent from the feedback we received from the users and notifiers that we could even do it better.

Based on this feedback, version 2.0 of NY-ALERT is about to be released in second or third quarters of this year. With this version, news gateway and new options are being released, along with new technologies across multiple vendors that will allow additional ways for the public to be notified during an event. Additional versions 3.0 and 4.0 are also under development that will enhance New York State's readiness, with new options and gateways that can be utilized during an emergency. This allows NY-ALERT to adapt to the changing needs of technology and society which is vital during incidents when notification to the public is so critical.

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

Pro:

When developing NY-ALERT, we understood that a completely self-registration system would never work when it came to notifying the public. With a combination of user data imports including 911 data and student data from schools and universities, we were able to quickly populate data used to notify the public in the event of an emergency.

Pro:

Advertising was required to "get the word out" about NY-ALERT. With only a 30-day statewide campaign using TV and local radio stations, we received nearly 300,000 people who signed up to receive alerts.

Con:

Additional funding was required to continue to campaign on TV and local radios. Without continued advertising presence, membership subscription has fallen from a few thousand a day to less than several hundred a day.

Pro:

State University of New York (SUNY) campuses that have subscribed to NY-ALERT total 55 (out of 64). These campuses are using NY-ALERT to notify their students, faculty and staff in the event of a safety issue on their respective campuses. These campuses have activated the system numerous times from safety-related issues to campus closures (for weather or other causes). They have also provided some outstanding feedback, much of which is being incorporated into version 2.0 of NY-ALERT.

Con:

Many other companies mass notify in different ways and make claims that "all you need to do is push the button." Notifiers and the public need to understand that mass notification is "not just pushing the button," but the underlying foundation of third party networks associated to contacting the public. We have been educating both the public and notifiers of these limitations and have coded queues, phone line maximum counts per area code and exchange to ensure that we do not overtake or add to the event by creating our own emergency when it comes to notifying the public.

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

We continue to enhance both the private and public sides of the portal to address operational issues. We also continue to expand the number of gateways (communication vehicles) through which the public can receive emergency information. Version 1.0 of NY-ALERT fully complies with the American Disabilities Act. Further versions, while complying with the ADA, will expand capabilities including utilization of geographic information systems (GIS).

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

The key obstacle may be funding. New York State leveraged existing system capabilities and technology to assist in the development and launch of NY-ALERT. Technical knowledge is also a factor. NY-ALERT was a concept which evolved into reality based largely in part on the innovative thought processes of its creator. He accomplished this by aggressively challenging the private sector parties to accomplish NY-ALERT's goals.