

2006 NASCIO

Recognition Award Submission



State of California
Office of the State CIO

Information Communications Technology (ICT)
Innovations

Executive Summary

The California Department of Health Services has regulatory oversight of 36 Local Primary Agency (LPA) counties across the state of California (over 8,000 public water systems). It is imperative to provide up-to-date water safety practices and regulations quickly to these LPAs to ensure the delivery of safe drinking water to all Californians.

Due to cost constraints, the Department of Health Services no longer can afford to bring all the water program professionals in the counties across the state of California to a facility for on-site training. Our goal was to find a training method that would reach the total population of water program professionals/engineers across the state of California without having them leave their individual offices. Additionally, they wanted to establish an On-Demand Library to allow training to occur at the convenient of the learners. They needed a flexible solution that would allow access to training modules for refreshers on a particular topic or to get up-to-date information to their professionals/engineers. In other words, they needed to find a solution that would provide training information that would be accessible 24 hours a day.

After much investigation, we decided to use live web streaming. We purchased a portable multimedia broadcast and streaming media system, Mark II Producer, provided by On Scene Systems'. Mark II Producer is a self-contained, portable full-featured broadcast studio for audio-video production, streaming, closed captioning, multi-language communications and non-linear editing.

On Scene Systems offered us a mobile solution that would allow us to train our water program professionals via live web casts and the potential to reach our estimated 60,000 professional stakeholders over the Internet with either live or on-demand training. Whether it's a refresher on a particular topic or to get up-to-date information, our water safety professionals have the knowledge they need at their fingertips.

We are now able to train across the state of California without assuming the high cost of travel expenses (approximately \$141,000 yearly savings within 7 months of operation) and reach people who previously could not attend training sessions. Water program professionals can now view live training sessions over the Internet without ever leaving their desk or view the training materials at their convenience via the on-demand library.

On Scene Systems' portable multimedia broadcast and streaming media system can also be used as the communication vehicle for emergency and disaster front line providers of drinking water services throughout the State of California. The biggest challenge is providing communication to areas affected by a disaster - fire, flood, earthquake, etc. On Scene Systems' portable, multimedia broadcast and streaming media system, will be able to maintain communication with both internal and external service providers and key emergency personnel to help ensure precise and rapid response.

Additionally, because of the portability of Mark II Producer, the Department of Health Services now has the ability to easily transport this turnkey broadcast studio to any county across the state of California as needed to communicate quickly with water safety

personnel to help facilitate the management and control of the effects of an emergency or disaster.

A. Concise description of the business problem and solution, including length of time in operation

Length of Time in Operation: 7 months

Number of Times Used to Date: 9 times

Problem: Information transfer to stakeholders who exist outside of our network/firewall, which has limited our ability to use telecommunication technologies for training.

Due to cost constraints, the Department of Health Services no longer could afford to bring all the water program professionals in the 36 counties across the state of California to a facility for on-site training. The biggest challenge was finding a method to train all the water program professionals/engineers across the state in a timely manner while eliminating travel cost associated with the traditional classroom method of training. The ideal solution would be to find a training method that would reach the total population of water program professionals/engineers across the state of California without having them leave their individual offices.

Additionally, they wanted to establish an On-Demand Library to allow training to occur at the convenient of the learners. They needed a flexible solution that would allow access to training modules for refreshers on a particular topic or to get up-to-date information to their professionals/engineers. In other words, they needed to find a solution that would provide training information that would be accessible 24 hours a day.

The training method also had to be timely and consistent. The Department of Health Services needed a training method that would allow all 7, 500 water program professionals to get the training all in a given time period. The traditional method required classes to be scheduled and typically, only a few from each office could attend due to travel cost issues. There was a lot of lag time in getting the information to everyone quickly.

Communication with areas affected by a disaster - fire, flood, earthquake, terrorist attack, etc has caused us to review our communication process. We needed to revamp our communication process to be able to quickly provide information to our water program professionals during a disaster. We needed the ability to find a communication method that was portable and would allow us to set up in a disaster area and quickly get information to maintain communication with both internal and external service providers and key emergency personnel to help ensure precise and rapid response.

Solution:

On Scene Systems stepped in with a portable multimedia broadcast and streaming media system-- Mark II Producer to solve the training requirements of the Department of Health Services. Mark II Producer is a self-contained, portable full-

featured broadcast studio for audio-video production, streaming, closed captioning, multi-language communications and non-linear editing.

Mark II Producer is a turnkey solution that includes multi-camera switching for 4 IEEE 1394 Firewire inputs, 4 S-Video, 4 Component and 4 Composite, real-time digital video effects, titling, graphics and keying. It comes complete with 2 triple 5.6", full color, active-matrix, LCD monitor panels, a 19" TFT LCD PC Monitor, 12 channel audio mixer, video tape system, hyper-threading, Intel® Pentium PC with Sony® DVD burner, power conditioner, contained in a two piece Roto-molded case with locking casters.

B. Significance to the improvement of the operation of government

Quick Dissemination of Information / Training to the 36 Local Primary Agency Counties Across the State of California via Live Web Streaming

On Scene Systems' solution provides the Department of Health Services with the ability to easily provide up-to-date information to its estimated 60,000 professional stakeholders over the Internet, providing the knowledge they need at their fingertips. This eliminates the need for government employees to travel to a training location, saves on travel costs, provides consistent training to all government employees and provides the ability to quickly disseminate important information. We have seen a tremendous benefit in our ability to communicate across the state easily and cost effectively.

Streamlines and Extends Reach of Training Audience

We can now also reach a vast audience of first line providers that we could not reach before in a timely and efficient manner. In a classroom style training, only a few people from each LPA could attend the training class due to cost constraints. Now, everyone, no matter where they are located, can attend the live web streaming training class.

Establishment of On-Demand Library Provides Flexible Training

The On Scene Systems solution also provides the ability to take a training class on-demand--when it is convenient, at your own pace and at your PC. If you want to take a refresher on a particular topic, you need only to check the On-Demand Library for up-to-date information. This is a great benefit to our employees whose work schedule can some time be hectic.

Enhances Communication During Emergencies and Disasters

The chaos at the epicenter of a disaster calls for immediate and accurate communications between first responders and emergency management organizations. With On Scene Systems' portable multimedia broadcast and streaming media system, we can now easily and quickly respond to emergency and disaster front line providers of drinking water services throughout the State of California. The biggest challenge we faced was providing communication to areas affected by a disaster--fire, flood, earthquake, terrorist's attacks, etc. We are now able to maintain communication with both internal and external service providers and key emergency personnel to help ensure precise and rapid response.

Additionally, because of the portability of Mark II Producer, the Department of Health Services has the ability to easily transport this turnkey broadcast studio to any county across the state of California as needed to communicate quickly with water safety personnel to help facilitate the management and control of the effects of an emergency or disaster. The ability to communicate quickly with emergency and law enforcement personnel is vital in managing and controlling the effects of a national disaster.

C. Benefits realized by service recipients, taxpayers, agency or state

Cost Savings to California Department of Health Services

In limited period of time (approximately 7 months), the Division has accrued cost savings and cost deferrals of over \$141,800. We expect even higher savings of around \$500,000/year within 2 years as we better integrate the technology into our information transfer and training processes throughout the Division. This will give us the opportunity to reach new audiences that we could not even have tried to do reach before since the costs would have been beyond our budget.

State Employees Reap Benefit of Timely Training

Information or up-to-date training materials are quickly disseminated to the 36 Local Primary Agency counties across California via live web streaming. At any given time, the Department of Health Services can easily provide up-to-date information to its estimated 60,000 professional stakeholders over the Internet, providing the knowledge they need at their fingertips.

Broadens Training Reach and Establishes Ability to Refresh Skills

Offering the ability to take a live training class at your desk has increased the Department of Health Services' training outreach and at the same time has provided the flexibility to provide on-demand learning. The On Scene Systems solution provides the ability to take a training class on-demand--when it is convenient, at your own pace and at your PC. If you want to take a refresher on a particular topic, you need only to check the On-Demand Library for up-to-date information. Department of Health Services employees can remain current with water safety program processes and procedures by using the On-demand Library.

Taxpayers Benefit Through Quick Responsiveness to Disasters that Could Affect the Water Quality of the Drinking Water for the State of California

We are now able to maintain communication with both internal and external service providers and key emergency personnel to help ensure precise and rapid response to any emergency or disaster that would affect the quality of our drinking water. This helps us manage and control the effects of a national disaster, causing less money to be spend on the effects of a national disaster.

Portable Communication System

Because of the portability of Mark II Producer, the Department of Health Services has the ability to easily transport this turnkey broadcast studio to any county across the state of California as needed to communicate quickly with water safety personnel to help facilitate the management and control of the effects of an emergency or disaster. The Department of Health Services saves money as well by not having to purchase a system for each LPA.

D. Realized return on investment, short term/long term payback (include summary calculations)

Investment Costs

One-time \$40,000

Ongoing

Personnel \$40,000

Expenses \$10,000

TOTAL \$90,000

Cost Savings/Cost Deferral

On average, costs avoided for training are calculated at \$100.00 per day per person + \$100.00 transportation per person per event.

Training events encompassed 9 Events involving 976 person days and 442 person events

$$\text{Costs saved/deferred} = (976 \times 100) + (442 \times 100) = 97,600 + 44,200$$

TOTAL = \$141,800

The goal is to save or defer costs in the area of \$500,000 per year within 2 years

Note:

We have not yet maximized our savings potential, as we have not yet reached a large portion of our target audience. We expect to grow into that over the next couple of years and plan to do much more in this area.