New Mexico Department of Transportation

State agency uses the Adobe® Flash® Platform to create dynamic RIA delivering real-time traffic and weather conditions on demand

Traffic and weather, on demand

Driving the highways and byways of New Mexico can be exhilarating or unnerving, depending on how well travelers plan. The same rugged beauty of the state’s terrain that provides a scenic landscape for commercial and leisure travelers alike also offers ample opportunity for tricky passage due to inclement weather, road construction, seasonal closures, or accidents. For the New Mexico Department of Transportation (NMDOT), providing travelers with reliable, instant, real-time travel information has been a goal and a technological challenge.

After terminating its participation in a federal government-sponsored program aimed at developing a nationwide traffic information network, and after cycling through other web development environments that did not provide the functionality it needed, NMDOT adopted the Adobe Flash Platform to leverage an existing technological infrastructure on which to deploy its traveler information website NMroads.com (www.nmroads.com). The highly interactive and dynamic new website provides travelers with real-time information on traffic, weather, and travel conditions.

"We wanted to create an intuitive and useful online resource for travelers to instantly get the travel information they need," says John DiRuggiero, web master and project manager for the Intelligent Transportation Systems (ITS) Bureau, the division of NMDOT that managed the NMroads.com project. "The Adobe Flash Platform was the most logical choice to help us accomplish our goal."

Paving the way for safe travel

In the 1990s, the U.S. Department of Transportation, operating as the Federal Highway Authority (FHA), convened a multi-state study to explore opportunities to unite and integrate the multitude of commercial transport and traveler information systems into a single national network.

While the concept of a national network was appealing, the application developed by the 22-state pool didn’t sufficiently meet NMDOT’s needs for providing dynamic, current conditions reports. The agency set out to adapt the concept to better meet its objectives. "What we needed was a robust and scalable web application that would be able to distribute data on any web browser so that travelers could access information at any time, from anywhere," DiRuggiero says. "Adobe software offered that option and much more."

Leveraging the Adobe Flash Platform and components of Adobe Creative Suite 4 Web Premium, NMDOT worked with IT development partner RealTimeSites to create NMroads.com, a unique and innovative rich Internet application (RIA) that provides users instant access to up-to-date traffic conditions.

The detailed and richly animated website allows users to easily navigate a map of the state using zoom and scrolling functions to view traffic conditions at various levels of detail—from a general statewide overview to time-stamped specific explanations of individual incidents or weather-related delays. Users even have the option of receiving road condition alerts via text message for added convenience when a connection to the Internet isn’t possible.

NMDOT chose to move NMroads.com onto the Adobe Flash Platform because of its versatility, stability, and functionality across computer operating environments. For website users, the benefits are considerable. Instead of having to download additional software just to view content as other website applications require, NMroads.com visitors need only the free and ubiquitous Adobe Flash Player—already installed on 98% of the world’s Internet-connected computers—to access the real-time information.
One of the main reasons we developed the application with Adobe software and technologies is that we know we can reach audiences anywhere with on-demand travel information that helps make travel across the state as smooth as possible," adds DiRuggiero.

**Streamlined, efficient development**

NMDOT developers are benefitting from the Adobe software as well. Unlike the first iteration of NMroads.com, which was developed with JavaScript and required extensive coding, the Flex environment enables easy integration with a variety of back-end web services—including data feeds from federal, state, and local organizations—to automatically stream travel information for up-to-the-minute accuracy and provide a scalable environment for rapid development and delivery of new applications.

"With the Adobe Flash Platform, we can develop and rollout new applications in a fraction of the time it used to take," says DiRuggiero. "The accelerated development helps us save both time and money, while still delivering a valuable and useful service to our citizens and visitors."

**Setting the standard for on-demand information**

NMDOT's efforts to provide updated travel conditions have been well received by travelers—commercial organizations, families traveling for leisure, and others—across the state, evidenced by the more than 30,000 daily visitors to the site. The detail-rich reporting tool provides travelers with reliable access to valuable information to make their travels through the Land of Enchantment as smooth and enjoyable as possible.

With the Adobe Flash Platform and other Adobe software, NMDOT has found a scalable, efficient, and cost-effective development environment to continuously create new applications and deliver enhanced services to its citizens and visitors. The success NMDOT has had in reducing development time by half and cutting costs, while also improving citizen services, has attracted the attention of leaders from several other states, who themselves have begun planning their own transportation web portals modeled on NMroads.com.

Meanwhile, DiRuggiero and his team have been diligently planning for future projects leveraging the Adobe Flash Platform, such as developing an NMroads.com application for mobile devices, as well as a separate website highlighting how federal funds are allocated across counties to support economic recovery and revitalization.

"We're very pleased with the external feedback we received about NMroads.com," DiRuggiero says. "It's clear that with Adobe software and technologies we have just what we need to continue to deliver innovative applications and outstanding services to help citizens and visitors enjoy all our state has to offer."