

# State tech staff cuts the cord using enterprise-grade, open-source Plone



## About the Colorado Department of Transportation

The Colorado Department of Transportation (CDOT) is the state agency that maintains and oversees the construction and maintenance of the roads and bridges of Colorado's state highway system. The department also provides assistance and grants to local airports, develops and provides support for local transit development and works with local law enforcement agencies to improve highway safety. Headquartered in Denver, CDOT has 3300 employees in 250 locations and a budget of approximately \$1 billion.

### 'What do you want me to do about it?'

The CDOT "Website" was in fact more like 100 individual sites, each one a directory of flat-file pages created by a different individual, with its own look, feel and navigation structure. The department's information technology staff, finding it increasingly difficult to manage these directories and enforce design standards for site usability, began researching web content management systems.

Web Coordinator Erik Kulvinskas says his team initially focused on complex proprietary systems. When the first vendor presented cost estimates above and beyond the web team's typical budget, "I said I'd like to do open source." Despite Erik's recommendation, the initial solution was to stick with proprietary software.

The department first contracted with a proprietary system vendor to create a new CDOT intranet. Kulvinskas says when the department needed the system to evolve, the Web team found itself too dependent on the vendor. "They're in a very old model of doing business. They wanted us to be on the hook with them from day one," Kulvinskas says. "I just don't have that kind of budget." As the project slowly progressed, the Web team soon discovered that this solution was not meeting requirements and requested some changes. When Kulvinskas received a poor response of 'What do you want me to do about it?', he knew it was time to change course.

So when the time came to build the new public website and Kulvinskas once again suggested an open-source system, his team was ready to reconsider as long as his team was willing and able to support it. Kulvinskas began investigating open-source Web content management systems, and with security at the top of his list of needs, he settled on Plone. Then, thinking, "Being that my enterprise is in a Windows world, I need a firm that has a lot of Windows experience" - he found Enfold Systems.

### Windows environment, enterprise-grade Plone

In the first phase of the project, Enfold helped CDOT launch a Plone-managed Web site running on Windows servers, integrating with CDOT's Active Directory database to manage user accounts and Internet Information Services (IIS) to handle caching and load-balancing. For security, availability and performance, Enfold set up a staging environment for content management inside CDOT's firewall, with content then published to a production

#### For more information

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*"It's a pretty bulletproof platform."*

Erik Kulvinskas, Web Coordinator  
Colorado Department of Transportation

environment outside the firewall. Enfold also trained CDOT staff to handle basic Plone site development tasks, such as creating new workflows, content types and page templates, and to maintain and back up the content database.

A second phase enhanced security, availability and performance, eliminating single points of failure by moving the staging environment to a Microsoft Cluster Service cluster and configuring Plone to store content in MySQL using dual-master database replication in both staging and production environments. Enfold also audited system performance and made improvements while working with CDOT to empower IT staff members with a deeper understanding of the system.

### Peace of mind, freedom to evolve

Kulvinskas says the clustering and database replication work has given his team peace of mind with "a pretty bulletproof platform." And, after training more than 80 content editors, contributors and reviewers on the new system, he and his colleagues quickly noticed a change. "We looked at each other and said, 'We're not getting all the phone calls we used to get to manage content,'" he recalls. "After all, they're the content experts. Why in the world would you want an IT person managing that? This has really cut the umbilical cord."

The IT staff is now able to focus resources on managing and improving the system. Without having to ask a vendor for help, the CDOT team is adding search features with Google Search Appliances and is planning a site redesign. And visitor metrics such as page views, unique users and average time on site already are way up.

Kulvinskas says working with Enfold has been a completely different experience from working with the proprietary enterprise system vendors. "My team wants to be more flexible," he says. "We'll take care of the every-day workings of our environment and we'll call you for the big stuff."