



# GIS: STATES' NEW SOCIAL MEDIA

GIS evolves from mapping tool to analytic and social engagement platform.

**WHEN NEW YORK STATE** wanted to determine which of its communities had adequate high-speed Internet access and which needed help building out broadband connectivity, geographic information system (GIS) technology played a central role in that task. But the technology not only produced broadband coverage maps; it also became a platform for fostering understanding and participation among government, citizens, and affected industries.

After building a broadband coverage map using a predictive model, the state reached out to local governments, encouraging them to validate data used to create the maps. New York also involved telecommunications and cable companies—that are sometimes wary of broadband initiatives for competitive reasons—and asked them to verify the information the state was collecting.

“We decided to extend this one step further and let the public see and help us validate the maps,” said Dr. Melodie Mayberry-Stewart, New York State CIO and director of the Office for Technology. Citizens now can view online coverage maps and help correct the maps based on the broadband connectivity in their

communities. Their personal experiences with broadband coverage are used to ensure the state’s maps are accurate.

“We have citizens engaged in updating our map,” said Dr. Mayberry-Stewart. “So now we have an even better picture because we’re getting information right at the source—the consumer or potential consumer.”

Not only does stakeholder participation create a more accurate view of broadband coverage throughout New York State, it also helps defuse the divisiveness that can surround public policy decisions by providing full transparency, she added.

“I can clearly show on a map a community that has no broadband capability or is severely





financial data, employment information, and other factors, make it ideal for tracking how governments are spending federal stimulus dollars and what impact those expenditures are having.

“We certainly use GIS technologies in stimulus tracking,” said Sean McSpaden, deputy state CIO of Oregon. “We have been working with our governor’s office for six months or more, making sure we can communicate to the public where both Oregon and federal stimulus dollars are being spent, and we are able to provide more and more information about the jobs that are maintained or created over time.”

Through a transparency Web site known as Go Oregon, the state lets citizens track the impact of \$175 million in state stimulus funds allocated by the legislature for construction and deferred maintenance projects. GIS-enabled viewers let citizens see where funds are spent and where jobs have been created. A similar transparency Web site is in place to track the impact of American Recovery and Reinvestment Act (ARRA) federal stimulus funds.

Behind the scenes, GIS also helps state officials direct stimulus dollars to areas that need them the most.

“On the back end, we have been progressively trying to ensure that we can have one view of stimulus information—both for reporting to the federal government, and for planning and analysis,” McSpaden said. “We’re able to plot on a map the projects that

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Maryland uses ArcGIS® software to explain where and how the state is investing stimulus money.

about where projects are placed, where money flows, and what’s happening in the communities across the state,” McSpaden said. “It’s certainly going to help our policy makers make better choices and better decisions.”

### The Ultimate Transparency

Because most stimulus money is being distributed through normal program funding channels, the reporting and analysis structures built to manage these dollars have value far beyond their initial focus. Indeed, GIS-powered tracking and analysis tools could ultimately provide better management insight and citizen transparency for the bulk of government spending.

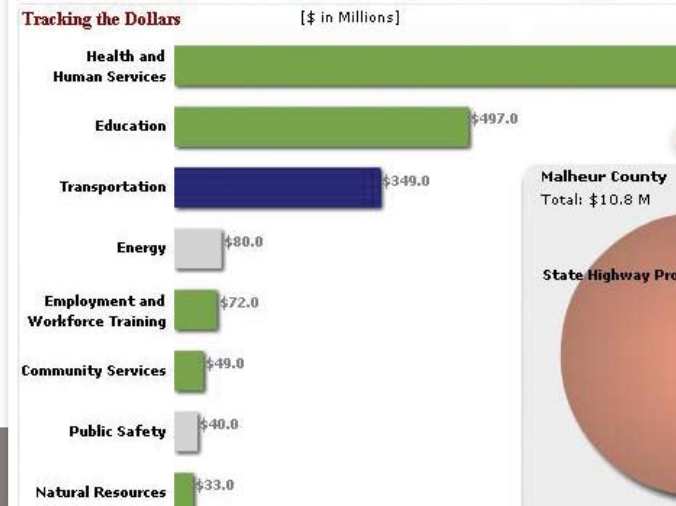
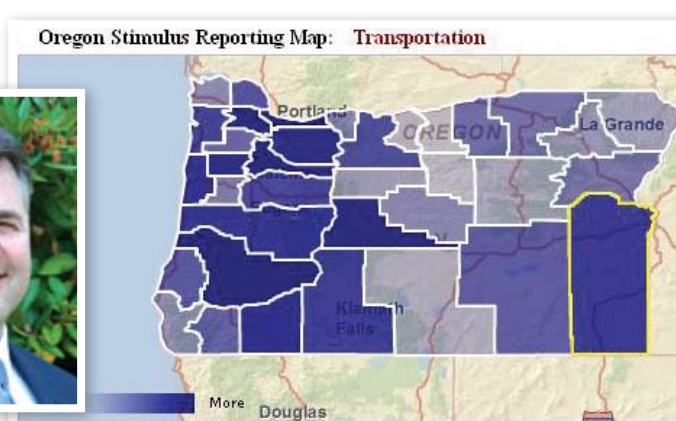
“Once you start to visualize where stimulus money went, you have the capability to create an awareness of where the overall dollars will be going or where they have gone in the past,” said former Wyoming Gov. Jim Geringer, who now serves as director of public policy for ESRI.

For executive leaders in government, GIS can provide crucial operational awareness that lets them respond to daily issues in ways that further long-term policy goals, Geringer said.

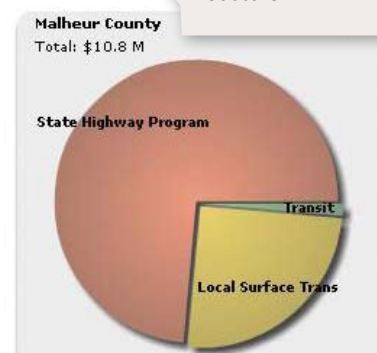
are being funded through the American Recovery and Reinvestment Act funding. In the future, through our partnership with the state employment department, we will be able to map projects against available contractors or businesses and unemployed workers. In essence, we will be able—through the quality data our employment department provides—to match potential projects with available contractors and employees. This is the next step in our use of GIS technology for this purpose.”

By monitoring changes in unemployment insurance claims data over time, Oregon also expects to gauge whether stimulus spending is having a positive impact on employment in the targeted areas.

“It’s incredibly important for people to be able to see the data—in this case, because we care



Oregon citizens can track stimulus spending by county for eight different sectors.





Montana's cadastral mapping application lets the public search state property information, and view parcels and related data on a map.



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— Dick Clark, CIO, Montana

“You can use the same kind of tool to do what-if analysis,” he added. “You could reallocate funds and see what operations would be affected. Or you could simulate what happens when stimulus dollars run out and state revenues still haven’t caught up.”

These capabilities are driving new demand for GIS that pushes far beyond conventional mapping of physical assets. McSpaden said that Oregon’s Geospatial Enterprise Office used ESRI’s ArcGIS software to create an enterprise GIS platform, and the office worked with federal, state and local agencies throughout Oregon to create a geospatial data clearinghouse and GIS standards with the goal of delivering a greater range of useful and authoritative geospatial data to end users.

“What we see now are agencies like human services or economic and community development—that traditionally had dealt in tabular data—who want to show where their funds are being distributed across our state and what impact is being produced,” he said. “We see more and more clearly that it’s our job to help people understand that they can make better decisions through the use of these kinds of tools and clearly be better stewards of the public’s money.”

### Building Civic Engagement

Just as important, GIS can promote better acceptance of public policy decisions among citizens. For all of the Internet’s benefits, it also has vastly increased the amount of misinformation around difficult policy

choices. GIS allows public agencies to provide authoritative and easy-to-understand data that promotes comprehension and even becomes a platform for greater citizen participation in governing processes.

“I see GIS as probably one of the primary ways that the state will communicate with its citizens in the future,” said Montana CIO Dick Clark. “People like information that’s visual. It’s easy to get an understanding of what your government’s going to do if you can hook that information to a location.”

Montana increasingly will rely on GIS during the formulation of policy, he said. In other words, instead of using GIS to track spending, the technology will help determine where money is spent. Montana also created a state geographic information officer position to coordinate GIS-related activities and oversee the growing use of GIS as a policy development tool.

“We’re working in the direction of utilizing GIS to support and democratize the data we have so that people at all levels can use it to work intelligently with the people around them and to work with the government,” Clark said.

Ultimately GIS may become a powerful social networking tool that’s uniquely suited to government/citizen interaction. Location-based information encourages engagement because

the data is personally relevant to users. Citizens can easily see the impact of public policy choices in their own community or neighborhood. GIS-based collaboration platforms also make it simple for citizens to feed information back to public agencies, allowing more people to participate in decisions that affect them.

“What I find most exciting is the use of GIS to have a two-way relationship with the citizenry,” said ESRI’s Young. “In other words, not just using GIS to broadcast information, but letting citizens interact with it or even use some of the applications to do their own thinking, analysis, and problem solving, then provide it back to the government. That’s where the real revolution is going to be.”

Clark said governments are only beginning to tap the power of GIS—for both developing better public policy and promoting civic engagement.

“It’s all about the awakening of what GIS can do to communicate with citizens. We’re just starting to wake that giant up. We’re starting to move forward with it.”



Visit [www.esri.com/statecio](http://www.esri.com/statecio) to learn more about what states are doing with GIS.