



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

Year:

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Status:

Laureate

Organization Name:

Colorado Governor's Office of Information Technology

Organization URL:

www.colorado.gov/oit

Project Name:

Colorado Information Marketplace

Please select the category in which you are submitting your entry.

Collaboration

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

Government agencies waste excessive time and money gathering the same data to provide intelligence for decision-making and for determining services for residents. The Colorado Information Marketplace (CIM) aims to stop these redundant efforts by providing a secure, standard and reusable platform for data sharing. Additionally, in a time when public trust & confidence is at its lowest, CIM provides a platform where government & public entities can engage, collaborate, share & innovate within their communities to solve problems like they've never done in the past. There are three major architectural components of CIM: Governance: All the necessary agreements & processes to ensure data is shared among government agencies & external entities. The Governor's Data Advisory

Board provides a forum for active participation in CIM with members from the public & private sectors and the community. Publishing: CIM includes a public-facing website permitting all governmental entities in Colorado to publish data sets. It allows developers the flexibility to create mashups of data & the ability to crowdsource the data in ways never available before. Linkage: Linkage refers to the ability to determine that two or more data representations are in fact one individual and includes the lists of keys that can be used to find all the related records for an individual. CIM is transformative in applying customer integration techniques developed in the private industry to the overlapping databases maintained by the State, in effect treating these disparate departmental systems as if they were a single system. Challenges implementing CIM are not with the technology, but changing the way state agencies collaborate & share. This is the first time Colorado has attempted to integrate data from its many agencies. Currently, data sharing initiatives are created for one-time projects. It is hoped that CIM will ultimately increase the number of all-encompassing agreements between agencies.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

The public-facing component of CIM, which is found at data.colorado.gov, went online on May 31, 2012 and is continually being updated with new data sets. Currently we have 151 data sets with 92,000 views. As part of Colorado's efforts to increase government transparency, the 2013-2013 state agency strategic plans were recently posted on the website's home page. The LINK component, which provides a way for state agencies to securely share information, was last updated on September 30, 2012. LINK is a project funded by a SLDS/RISE federal grant. The Statewide Longitudinal Data Systems (SLDS) Grant Program is designed to aid state education agencies in developing and implementing longitudinal data systems. These systems are intended to enhance the ability of states to efficiently and accurately manage, analyze and use education data, including individual student records. The data systems developed with funds from these grants should help states, districts, schools and teachers make data-driven decisions to improve student learning as well as facilitate research to increase student achievement and close achievement gaps.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

Two of the three components, Governance and Publishing, are complete. Phase 1 of Linkage integrated student data from three agencies: the Department of Education, Department of Higher Education and the Department of Human

Services. It went live on September 30, 2012. We are currently in Phase 2, which expands the scope of data integration to an additional three agencies: the Department of Labor & Employment, Department of Public Safety and Department of Corrections.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

The Department of Education is the initial beneficiary of CIM. It has allowed them to expand their traditional view of students from kindergarten through twelfth grade to the larger view of preschool through post-secondary education. The next step will present the Department of Labor & Employment with new avenues for outreach to help unemployed Coloradans find jobs by coordinating their services with those of the Department of Human Services. Finally, the Department of Health Care Policy & Financing will benefit by integrating with the Department of Regulatory Agencies to reduce fraud by ensuring that Medicaid payments go only to licensed caregivers. From a long-term perspective, CIM will reduce operational costs within Colorado state government by creating a reusable framework around information standards and services, reduce capture of data that already exists and reduce training of analysis around information interpretation.

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

CIM is a notable advancement because it provides new tools to analyze and harness big data assets. Currently state agencies are unable to realize that business benefit. By making data publicly available, CIM allows entities outside of government to use big data analytics in their decision-making efforts. Data sharing within the state allows these same big data tools to be used to better inform lawmakers. CIM also provides out-of-the-box web-enabled APIs to facilitate developing mobile applications for the benefit of both the public and private sectors. Data and web services are provided seamlessly by CIM, decoupled from the original form in which the data was originally provided. By providing a "one stop shop for Colorado data," CIM unifies the data offerings of many different agencies. CIM provides a blueprint for other states to increase cooperation among their agencies, thereby reducing costs and simultaneously offering more efficient and effective services to residents. It is the perfect set of techniques to deploy in times of constrained budgets where government is assisting a growing number of people in need of government services.



If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

The Colorado Information Marketplace is a framework for data sharing across the state that encompasses data and information governance, the publishing of the information and the identity resolution of the information across any contributing entity. It supports data transparency and good government for all Coloradans based on the Governor's Colorado Blueprint while building a foundation for better decision-making across the state. CIM promotes innovation and viral development of applications using meaningful data that can be helpful for citizens. By building out an open data platform, CIM allows developers the flexibility to create mashups of data and gives researchers the ability to coalesce data in ways never available before. It promotes reuse of data sets and removes point-to-point data sharing, which in turn reduces costs and redundancy. Before CIM, data sharing in the State was disparate and misaligned. Lessons learned from past data sharing efforts were rarely available and that lack of knowledge management drives the costs associated with each initiative as well as the opportunity to misinterpret the data. Furthermore, several external entities such as universities, healthcare providers and other public service based organizations lacked access to necessary data that could help them improve services to citizens. CIM takes an enterprise governance strategy around privacy rules such as the Health Insurance Portability & Accountability Act and the Family Educational Rights & Privacy Act by incorporating those laws into state data agreements. It provides a publishing & cataloging platform that is revolutionizing the way information exchange takes place within the State of Colorado. Once an agency or entity has published their information and the governance required to use it, it becomes a transparent vehicle for citizens to view available data, for other entities to understand the requirements for an exchange & a platform for developers to create new tools for government.