



State of Texas Open Data Portal

data.texas.gov

Texas Department of Information Resources & Texas.gov

Category:

Open Government and Data, Information and Knowledge Management

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Executive Summary

The State of Texas is committed to transparency as evidenced by its Sunlight Foundation 2013 “A” rating. The state’s *2014 -2018 State Strategic Plan for Information Resources Management* also lists as one of its top ten technology priorities the goal of “implementing sound data management principles to support good business practices, meet regulatory requirements, and reduce costs.” With the continued support of state leadership, state agencies, strategic partners, and the public, the one-year-old State of Texas Open Data Portal (<https://data.texas.gov>) converts that prestigious ranking and that complex goal into actionable information for the public good, all while implementing sound data management principles to support good business practices, meeting regulatory requirements, and reducing costs.

From ideation to implementation, piloting to strategic innovation, the journey to developing the Texas Open Data Portal is a tribute to the commitment of state agencies, elected officials, and strategic partnerships collaborating to make Texas the best it can be.

In 2011, the Texas Legislature passed a law requiring each state agency to post a high-value dataset on the web. Then in 2013, the legislature asked agencies to post descriptions of their high-value datasets, along with links to them, on the state’s official website, Texas.gov. These legislative initiatives brought the issue of publicizing data to the attention of state agencies and state leadership. That attention piqued the interest of the Texas.gov Customer Advisory Council (representatives of large, medium, and small state and local government entities) and prompted them to nominate the Texas Open Data Portal as their top strategic recommendation for Texas.gov in 2013.

Leveraging an existing master agreement with its vendor partner, Texas NICUSA (NIC), the Texas Department of Information Resources (DIR) was able to fund and develop the Texas Open Data Portal. NASCIO’s 2014 publication, *States and Open Data: From Museum to Market Place — What’s Next?*, noted that the Texas Open Data Portal “...provides Texas agencies with a self-service capability to easily and quickly post data online and allows the public as well as government the opportunity to extract value from the portal through a full-featured set of tools that allow searching, sorting, filtering, visualizations and mapping.”

The Texas Open Data Portal has

- Nearly 130 datasets, including those for transportation, health, housing, and permits
- Five mobile applications — two of them commercial — developed on its data
- An average of 1,500 page views each day

Section 3: Business Problem and Solution Description

Problem

The push for greater transparency comes from citizens who are more informed and empowered than ever, and from strategic federal initiatives. Vendors, journalists, and researchers impact limited state agency resources with increased and often repetitive public information requests. President Obama, in his first executive order in 2009, the Memorandum on Transparency and Open Government, called for more transparent, participatory, and collaborative government.

In Texas, two bills passed in 2011 and 2013 required online publication of state agency high-value datasets, and raising awareness and interest in open data. No resource or infrastructure funding was provided.

To meet the immediate statutory requirement for accessible open data, a page was added to the state's official website, Texas.gov (www.texas.gov), which accepted requests from agencies to add links to their open datasets. This was a multistep process that relied on input from several parties:

1. Agencies submitted links to their high-value datasets via the open data link on Texas.gov;
2. The Texas Department of Information Resources (DIR), which manages Texas.gov, verified the links, reviewed the data, and approved the agency additions to the site; and
3. Texas.gov added the content to the page.

Linked agency datasets were indeed high-value, but the datasets were not necessarily machine readable or searchable. Establishing and maintaining the "link farm" was resource intensive for all involved and the solution had its limitations.

DIR envisioned a more functional platform that allowed data consumers to do more than link to various sources and external websites; they wanted agencies to publish and update open data directly from the source, including spreadsheets, file systems, and transactional databases. This would give consumers a more usable experience with the ability to search, filter, sort, and manipulate data in a way that best suited their needs.

Fortunately, Texas.gov has a responsive Customer Advisory Council (CAC) made up of representatives from small, medium, and large state and local government entities. To address the growing impact of statutory and public requirements for data on agency resources, the Texas.gov CAC, in their strategic guidance capacity, recommended a business case to assess the viability and impact of an open data portal.

Solution

The Texas.gov CAC, DIR, and Texas NICUSA (NIC) established the following requirements for the new Texas Open Data Portal (<https://data.texas.gov>):

- A **self-serve platform** for agencies to upload their data and metadata
- Data is **open** to the public
- Data is **searchable** across all datasets
- Data is **filterable** within a single data set
- **Geo-location** (i.e., zip code, longitude/latitude) datasets are map-able within the platform
- **Responsively designed** so that data is accessible on mobile devices
- **Scalable** to handle large datasets from all Texas state agencies
- **Free for agencies** to upload **and for consumers** accessing the data

Texas.gov is a public/private partnership operated by a private vendor, NIC, which has an existing alliance partnership with the software company, Socrata. After DIR evaluated several commercial and open source tools available for the open data initiative, they elected to leverage the Socrata-NIC partnership and utilize Socrata's Open Data Portal Platform solution. This software-as-a-solution (SaaS) platform was developed specifically for government and is recognized by Gartner, a leading information technology research firm, as a predominant open data platform.

To develop expertise, iron out contract and procedural issues, and implement flexible but secure governance, DIR and NIC decided to pilot the Texas Open Data Portal.

Success criteria for the pilot included

- Ease of use
- Sustainability
- Participating agencies find value in the portal
- Participating agencies believe the portal to be of ongoing, sustainable value

Dedicated staff from all three organizations, DIR, NIC, and Socrata, worked together to build the Texas Open Data Portal that not only meets the requirements of the statutes, but provides a technologically advanced, yet intuitive platform for agencies to be more active in the open data initiative.

Socrata's Open Data Portal SaaS platform was chosen to accomplish these goals. Key functions of the implemented software include:

- **DataSpace:** An elastic cloud-based data storage, indexing, and retrieval service that simplifies data management
- **Data Publishing Services:** Easy-to-use tools for publishing and updating data from spreadsheets, file systems, and transactional databases
- **Data Discovery and Visualization:** Consumer friendly interfaces that make it easy to discover and explore data, visualize it with charts and maps, and share it
- **Open Data API:** An open, standards-based application program interface (API) that automatically provides RESTful access and an expressive query language for every dataset
- **Open Data Federation Services:** A technology that enables two or more organizations to exchange and aggregate their data, with one click
- **Data Player:** A web widget that allows government agencies to embed live data, maps, and charts on their agency websites
- **Sitewide Analytics:** Real-time analytics on usage, distribution, and traffic patterns for each dataset
- **Mondara:** A powerful, flexible geographic information system (GIS) application that makes it easy for users to create rich online maps instantly, and use this valuable data to power location-based services
- **API Foundry:** A wizard-based application that simplifies the creation, deployment, and management of enterprise-class APIs for cloud and mobile applications

After seven months of development and refinement, DIR ultimately signed off on an open data platform that exceeded all of the identified requirements. DIR, NIC, and Socrata each played critical roles in the successful launch of the Texas Open Data Portal.

- DIR provided vision for the solution and approved the website after detailed product analysis. DIR continues to promote the tool among state agencies and grow the number of participating agencies and datasets available to the public.
- NIC funded the project and continues to champion the tool alongside DIR by presenting and demonstrating the platform at industry conferences and agency meetings. NIC also assisted with project management by ensuring deadlines were met, and design experts assisted with design criteria, including Section 508 accessibility compliance and mobile-readiness.
- Socrata provided and implemented the technology that made the solution possible.

Section 4: Significance of the Project

The public-private partnership between DIR and NIC, coupled with the existing alliance with Socrata, facilitated the development of a highly functional solution using modern technologies to achieve the state's vision. The result of the exceptional collaboration between public and private entities, the Texas Open Data Portal exceeds state and national expectations and demonstrates the state's commitment to the open data initiative.

Within the first year of the Texas Open Data Portal's existence, DIR recognized a unique opportunity for the public sector to apply innovative thinking to the resources available on the portal. Again in collaboration with their private partner NIC, DIR announced an interstate civic hackathon challenge between the states of Texas and Indiana. The hackathon was a contest for residents, software developers, and entrepreneurs from both states to build new solutions that solved challenges relevant to their neighborhoods, cities, and states using code, technology, and publicly released data from sources, including the Texas Open Data Portal.

The two states kicked off the challenge on January 31, 2015, and teams began collaborating on a public Hacker League site (www.hackerleague.org/hackathons/texas-vs-indiana-challenge) to share ideas and compete for the best application to serve citizens. After three weeks of development, there were 59 total participants across the two states and 13 project submissions.

Using data compiled from the Texas Department of Family and Protective Services (DFPS), one team created an interactive, mobile-ready map application that lists information about all of the daycare centers and in-home daycares in Texas based on search criteria. Another team created a mobile application that lists road closures and construction on Interstate 35 using data provided by Texas Department of Transportation (TxDOT). The winning project was an emergency assistance application that guides users through a checklist of potential services based on their needs — all made possible through transparent government.

The innovation that resulted from this civic hackathon event demonstrates the power of open data and how it can empower citizens to help governments solve age-old problems in their communities.

Section 5: Benefit of the Project

The Texas Open Data Portal benefits the State of Texas, the public, and DIR.

Benefits to the State of Texas

- Agencies without a platform or the technology infrastructure to publish open data can meet legislative requirements by using the Texas Open Data Portal.
- The easy-to-use Socrata toolset requires no special skills to publish data, so all agency employees are empowered to share datasets.
- Agency public information officers realize a reduction in information requests directed towards their agency when they use the Texas Open Data Portal, because constituents can easily access what they need.
- The public is now empowered more than ever to help agencies address community problems through events such as civic hackathons.

Benefits to the Public

- The public has access to high-value data as envisioned by statute. As a result, the ability for citizens to address civic issues for the good of the public is significantly enhanced.
- The public's knowledge of government agencies and their operations may increase.
- Five mobile applications — two of them commercial — have been developed from data hosted on the Texas Open Data Portal.

Benefits to DIR

- The Texas Open Data Portal was developed and implemented at no direct cost to the State of Texas. Utilizing the self-funded model offered by Texas.gov, DIR was able to realize its vision of a self-service platform solution without using appropriated funds.

Usage

During the ten-month period from July 2014 through April 2015, metrics for the Texas Open Data Portal included

- **2+ million page views**
- **127 datasets**, including multiple dataset types such as charts, maps, files, and documents
- **3.5+ million** downloads
- **77+ thousand** searches performed