enabling low friction sharing, discovery and analysis of heterogeneous civic data

dee dhillon | cto @ socrata | @zang0
we want a society so great everyone’s dancing in the streets!

- better schools
- lower crime
- improved health care
- cleaner water
- decreased poverty
- trust in government
public sector is resource constrained
overflow of data

and lots of folks willing to roll up their sleeves
data as a utility

public sector data

.dcsv | .xlsx
databases

apps and analysis

ports and dashboards

devs, analysts and syndication

911 | 311 systems
External Data Consumers

Laura – Local Resident
“How safe is my neighborhood?”

Aaron – Community Advocate
“I want to see trends in social housing.”

Dave – App Developer
“I need real-time API access to 911 data.”

Government Data Publishers

Dora – The Chief Data Officer
“How do we connect our data to the web?”

Pam – Mayor’s Office
“How do we share data to make better decisions?”

Sammy – Department Head
“I need to shift to self-service digital channels.”

who uses socrata? constituents, publishers, analysts, developers
normalizing data structure and values
model construction feedback loop
data lens - minimal context: flat table > column visualizations
data lens - minimal context: constraints applied
Showing the number of rows where issue date is 2015 January 01 to 2015 June 01 and zip codes is 98117

Number of rows by Zip Codes

Number of rows by Status
The current status in the application/review/inspection lifecycle. Indicates the last process step that was fully completed.

Number of rows by Action Type

Location
Mapping coordinates for the permit address.
financial app - moderate constraints: schema constrained, dictionary not
financial app - moderate constraints: hierarchical structure understood
These are all the invoices sent to **LATERAL SEWER REPAIRS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Vendor</th>
<th>Invoice Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>INV 01-1401/2727 E LOCUST ST</td>
<td>HAGERTY EARTHWORKS LLC</td>
<td>11/29/2013</td>
<td>$15,692.88</td>
</tr>
<tr>
<td>INV 65574/1437 W 12TH ST</td>
<td>HOMETOWN PLUMBING &amp; HEATING CO Inc</td>
<td>08/29/2014</td>
<td>$14,759.90</td>
</tr>
<tr>
<td>SLR/INVOICE 117446D/969 IROQUO</td>
<td>PETERSSEN PLUMBING &amp; HEATING CO Inc</td>
<td>03/25/2014</td>
<td>$14,158.64</td>
</tr>
<tr>
<td>SLR - 510 S LINCOLN ST</td>
<td>B D T INC</td>
<td>10/09/2013</td>
<td>$13,679.74</td>
</tr>
<tr>
<td>INV 6427/SLRP 2039 PERSHING A</td>
<td>HOMETOWN PLUMBING &amp; HEATING CO Inc</td>
<td>10/16/2013</td>
<td>$12,959.42</td>
</tr>
<tr>
<td>SLP - 2224 N DIVISION/INV 1207</td>
<td>PETERSSEN PLUMBING &amp; HEATING CO Inc</td>
<td>07/07/2014</td>
<td>$11,904.90</td>
</tr>
<tr>
<td>SEWER LATERAL - 2902 MIDDLE RD</td>
<td>B D T INC</td>
<td>08/18/2013</td>
<td>$11,860.00</td>
</tr>
<tr>
<td>INV 6427/SLRP 2720 WESTY</td>
<td>PETERSSEN PLUMBING &amp; HEATING CO Inc</td>
<td>09/02/2014</td>
<td>$10,954.00</td>
</tr>
</tbody>
</table>

**$131,338** | **$837,691**

- **Spent so far FY2015**
- **Spent total FY2014**

**Show Timeline**

**Download Raw Data**

---

financial app - moderate constraints: raw data in context
rats, rats everywhere
computing against living datasets

- continuously updated
- host any algorithm
- api accessible

algorithmia.com/demo/timeseries
socrata load balancer

request dispatcher
request dispatcher

request dispatcher

data coordinator
truth service
annotation service

spatial
tabular
document/ autosuggest
temporal

dataset additions/updates
questions?
we’re hiring! careers.socrata.com
appendix
1. Applications, both internal and external, leverage easy to install and configure visual components.

2. Whenever high level componentry is not available or suitable, Socrata developed and external applications communicate directly with the Socrata API using either direct REST calls or a wrapper library. Application developers may replace their direct API access w/ higher level componentry as it becomes available.

3. Visual components, such as cards developed for the dataset UX form a visual api layer. These components may be developed by Socrata engineers, Socrata Customer Success developers, or external developers. All visual components use the REST API either directly or via a wrapper library. Wrapper libraries may lag REST API release and are maintained by the community at large including select input from Socrata engineers.

4. API requests are routed to appropriate back end services. Service team developers are able to easily add new API calls at their own pace, usually leading component and application developers.

5. Service team developers own their API subset of responsibility through to the REST API layer. This includes thorough and regular test coverage as well as publicly facing documentation, and demonstration UIs.