

Socrata UX Benchmarking Study March 2015

Goals:

- Gain insight about **effectiveness** (success rate), **efficiency** (time on task/clicks) and **ease of use** (qualitative measure scale) for common tasks
- Understand how these measures **compare** against the old Socrata platform and CKAN
- Have a **consistent measure of success** that can be tested against **over time**

Method:

We wanted to test common tasks against a representative dataset. So to be able to have the biggest audience with the least amount of recruiting overhead, we picked a federal dataset about [bird strikes in the US](#).

Then to not be biased by the insights that Data Lens immediately gives, we only looked at the schema of the datasets while deciding on tasks. We picked tasks that seemed likely someone would ask about this particular data, such as “Which airport had the most bird strikes?”, or “How much did repairs due to bird strikes cost for a given year?”. Final task list with the six tasks we tested can be found [here](#).

We then loaded the same dataset (~100 000 rows) into [Socrata](#), [CKAN](#) and [Data Lens](#).

The study was run using a remote, unmoderated, task based test in UserZoom. There were 23-24 participants per site that were recruited with the criteria that they needed to live in the US and have at least a high school education.

Things that were measured during this test for each task were:

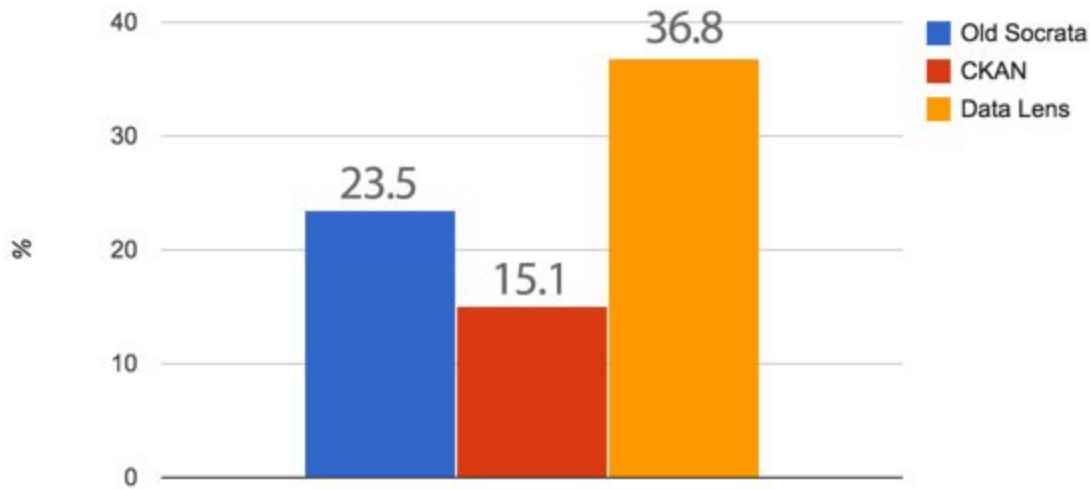
- Success rate (did they answer the question that was asked correctly)
- Time on task
- Number of clicks
- How hard the participant thought the task was (qualitative 1-5 scale)
- Why they thought it was difficult (only if they answered 2 or lower, free form text)

Things that were measured at the end of the study:

- Net promoter score (How likely are you to recommend the site to a friend?)
- What did you like about this site?
- What did you dislike about this site?

Results:

Average success rates for the 6 tasks



I also put all the results in [Data Lens](#) and in the [Rolodex prototype](#). Some screenshots and summaries is last in this report.

A few things stand out:

- Data Lens gets overall more Successful results than the other two products
- Data Lens is getting an unexpectedly high error rate (57% - 66%) for the rollup questions where you need to find a category of data and the value for that category. This should be the easiest type of question - *following up on with a qualitative test*
- Search tasks are taking more time and more clicks in Data Lens than in the other products - *following up on with a qualitative test*
- Comments indicate people are not finding immediately that clicking on things filters
Quotes: On task 1 "There was no filter to chose what you are looking for". On task 5 "I just learned something. When I clicked on the bar graph it brought up the data base to that point. [...] I am not sure why the site doesn't indicate that"
- The comments for liking/disliking the site are negative across the board, but slightly less so for Data Lens
- The Net Promoter Scores (NPS) are quite terrible overall, but Data Lens has the best one
 - **Old Socrata** NPS: -75%
 - **CKAN** NPS: -78%
 - **Data Lens** NPS: -42%

Next Steps:

Based on these results it's clear we need to figure out a few things.

- **Why we're getting a high error rate for the rollup questions**

Hypothesis: People are struggling with the word "Rows" and have trouble understanding that a row represents a strike.

Proposed solution: Replace Rows with Strikes via the API and see how big the difference is.

- **Why the search tasks are taking more time and more clicks in Data Lens than the other products**

Hypothesis: Search in a card is hard to find/distinguish among the other cards. It's not in a conventional spot for where search is usually located (Top right, top left, big in the middle).

- **Need to make people more aware immediately that clicking things causes a filter**

Hypothesis: Nothing is telling them that it works, and even though the standard affordances are there (pointy hand, color change) it's probably too subtle for most people/ some people don't experiment.

Proposed solution: Add a simple first use/help experience, we can iterate on a full blown help later. Be careful so it's not too annoying for frequent users. Try adding a "fake" one of these during the qualitative tests to try it out, just a static page would do.

- **Many negative comments/Low NPS**

Hypothesis: Not sure if this is partly due to our broad recruiting, people that don't care and would ever visit the site in the first place takes this test. It might also be due to the not so engaging look and feel?

Proposed solution: Try recruiting via a site intercept. Try recruiting people from Chicago with Chicago data etc. I also wonder if improving the look and feel will yield more positive comments.

The steps to figuring this out are:

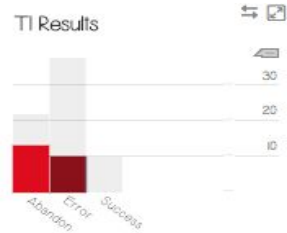
1. Launch a **smaller scale qualitative study** with the same tasks to figure out some of the Why's around what people struggle with. Doing this iteratively while adding small changes (first use page, changing "rows" to "strikes" etc) would help us test some hypotheses around what the biggest issues are.
2. **Repeatedly run the benchmarking study** again after making changes to Data Lens. Rinse and repeat. Track the numbers over time. Optimize.
3. Keep listening to customers
4. Run variations of this study with different types of data

All these things will help us prioritize the most important improvements we can make to make this experience not only better than our old one (which is already true), but as good as we want it to be.

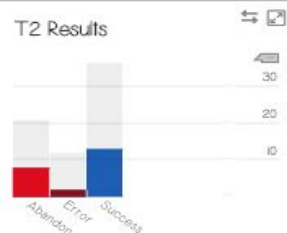
Abandon/Error/Success -rates

Old Socrata

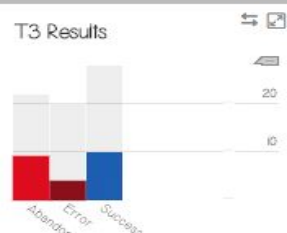
1. Rollup (category) - Which airport had the most strikes?



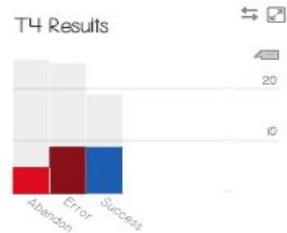
2. Search - You were on flight 3967, was there any damage to the plane?



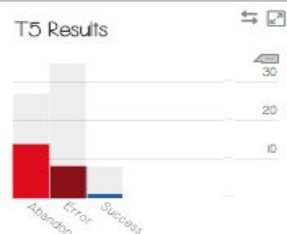
3. Filter - Your friend flew United Airlines from Orlando in April 2013, what bird did they hit?



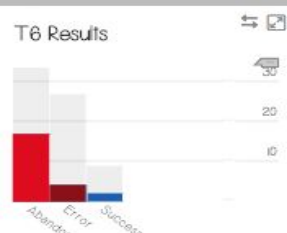
4. Sort - What was the flight with the most injuries?



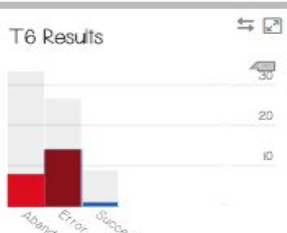
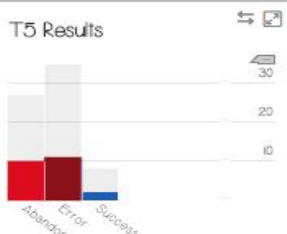
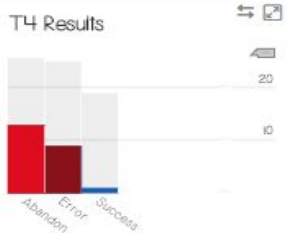
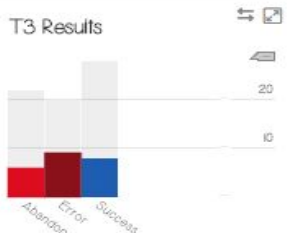
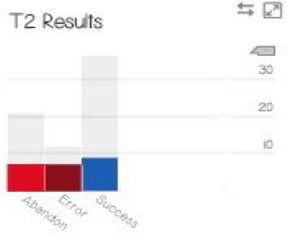
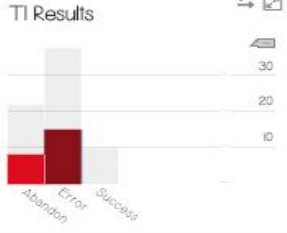
5. Rollup (time) - Which year had the most strikes?



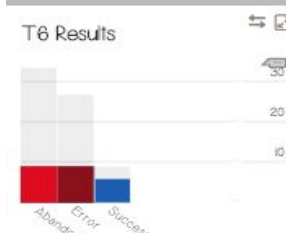
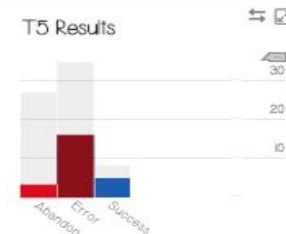
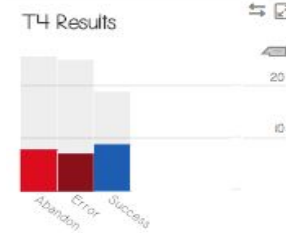
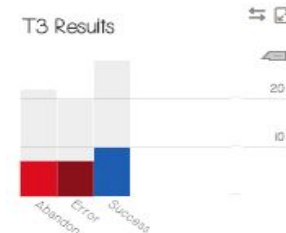
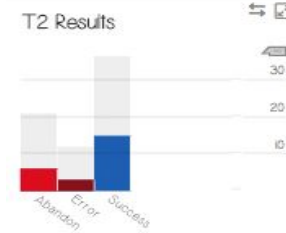
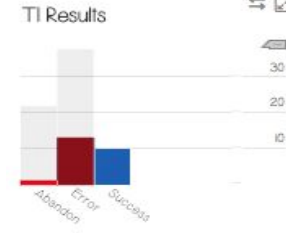
6. Aggregation+Rollup - What was the total cost of strikes in 2013?



CKAN

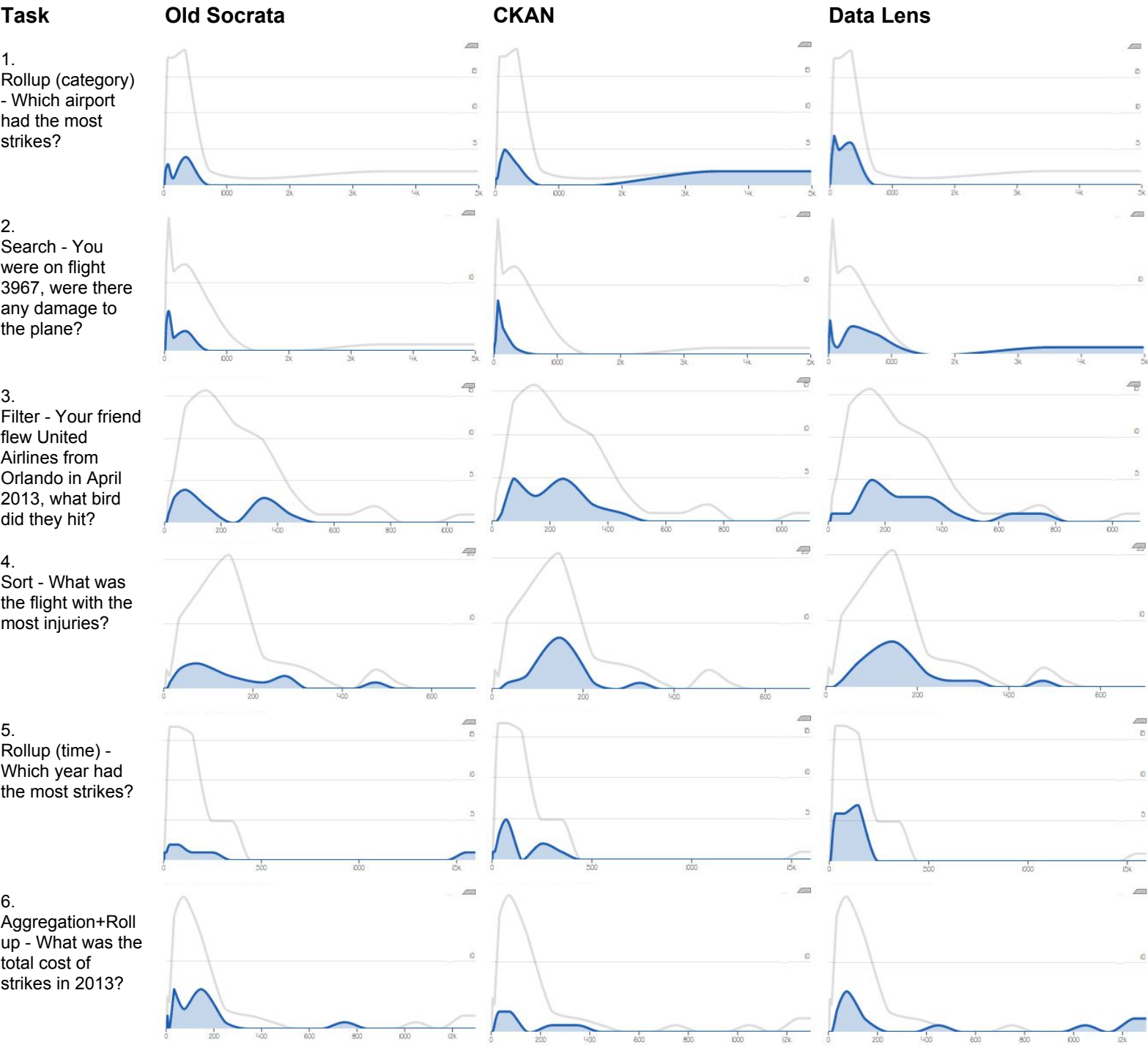


Data Lens



Time on Task

Includes Success and Error but not Abandon



Number of clicks

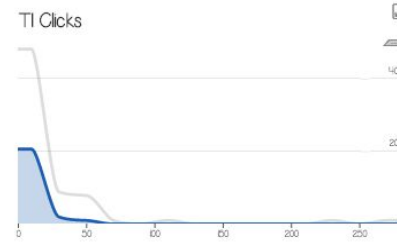
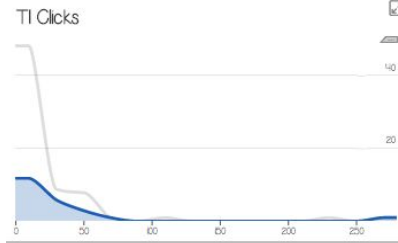
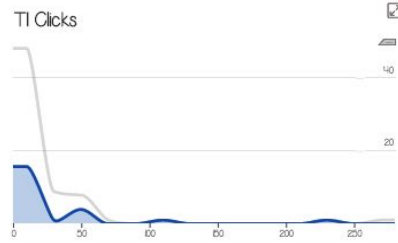
Includes Success, Error and Abandon

Old Socrata

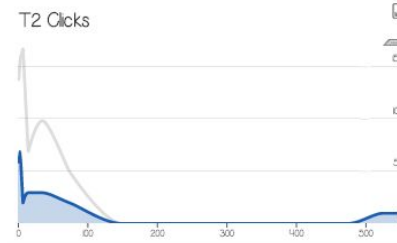
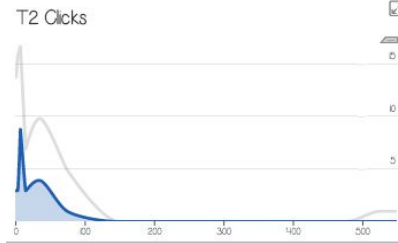
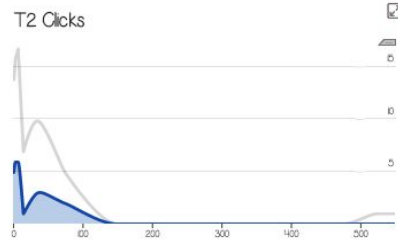
CKAN

Data Lens

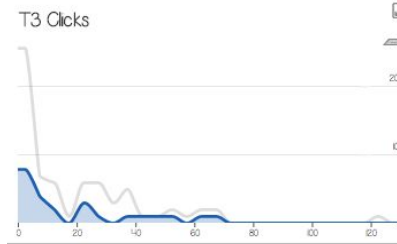
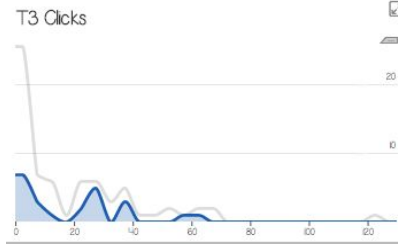
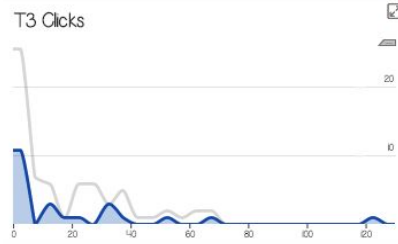
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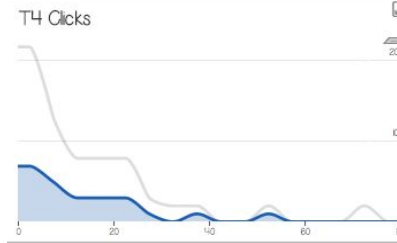
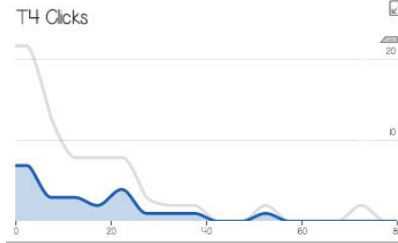
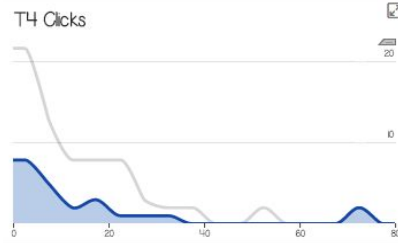
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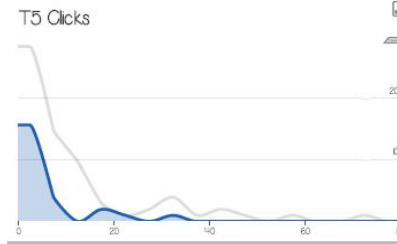
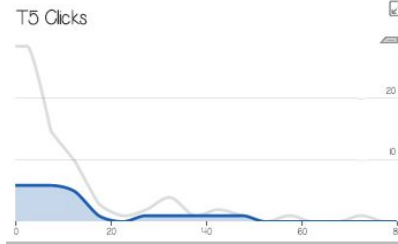
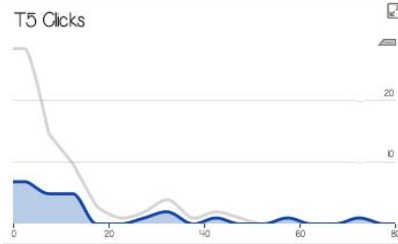
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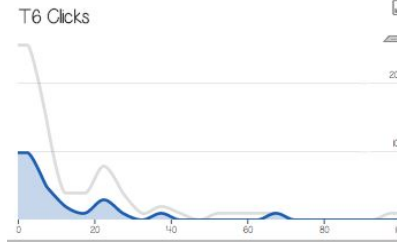
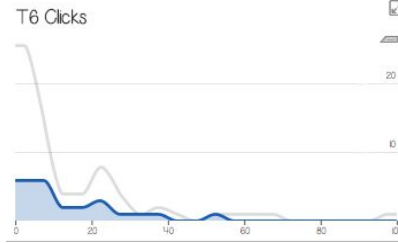
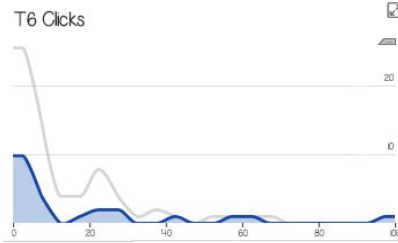
4. Sort - What was the flight with the most injuries?



5. Rollup (time) - Which year had the most strikes?



6. Aggregation+Rollup - What was the total cost of strikes in 2013?



Net promoter score

How likely is it that you would recommend this website to a friend or colleague?

Old Socrata



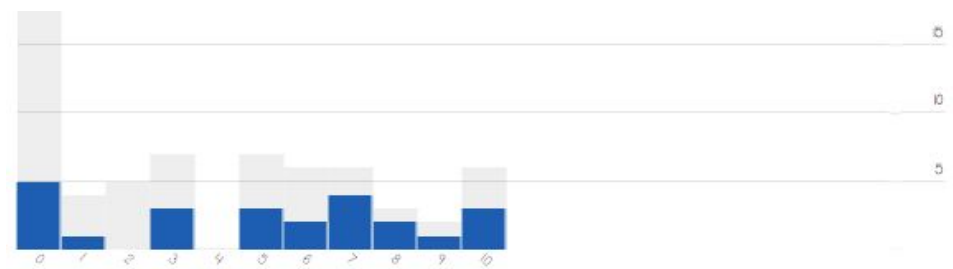
NPS: -75%

CKAN



NPS: -78%

Data Lens



NPS: -42%

Likes and dislikes

Old Socrata

What did you *dislike* about this site?

Popular Words (Text Cloud) [click to highlight](#)

all, complicated, **could**, difficult, enough, everything, excel, find, friendly,
hard, have, having, info, **information**, intuitive, **much**,
navigate, **not**, out, scroll, user, without

What did you *like* about this site?

Popular Words (Text Cloud) [click to highlight](#)

able, can't, could, data, have, learn, lots, navigate, **not**, **nothing**,
quickly

Those who wrote 'not' also wrote...

can't, navigate, **nothing**, quickly

CKAN

What did you *dislike* about this site?

Popular Words (Text Cloud) [click to highlight](#)

answers, **data**, easily, **everything**, friendly, **hard**, have,
information, like, **much**, **not**, questions, search, seemed, site, slow

Those who wrote 'not' also wrote...

data, easily, friendly, have,
questions

What did you *like* about this site?

Popular Words (Text Cloud) [click to highlight](#)

absolutely, **data**, find, hard, info, information, **much**, **not**,
nothing

Those who wrote 'nothing' also wrote...

absolutely

Data Lens

What did you *dislike* about this site?

Popular Words (Text Cloud) *click to highlight*

all, answer, confusing, **data**, **everything**, **find**, **had**, **hard**, info, **nothing**, out, question, right, search, site, sort, **specific**, time

#	Answer
1	nothing, this is good research
2	Hard sometimes to segregate the data needed, ie, hold the cursor down the "right" amount of time.
3	Its to hard to find anything specific.
4	very very confusing
5	everything
6	had to be very specific to get answer to question
7	There was too much data to filter through.
8	how long it takes to figure the site out
9	it was really hard to find certain info.
10	There were times when I had to do things manually that took lots of time...e.g. question 6
11	There were too many factors that they gave you to use on looking up specific information. I felt, the site could've been a little more explanatory.
12	not sure what data meant
13	ok
14	the lists at the bottom would be easier to find info if it had a search at the different topics rather than searching through all the data
15	I had to stumble on figuring it out
16	It was hard to sort through
17	nothing
18	very hard to read and get the right info
19	The colors sort of hid several features. I think I am a pretty attentive person and several of those questions I truly wanted to find the answer to, but was unable to see all of the search features until the end.
20	the font color and no way to add everything up automatically.
21	It wasn't easy to navigate, there were no directions, and the labeling was bad.
22	somewhat confusing
23	nothing
24	everything

What did you *like* about this site?

Popular Words (Text Cloud) *click to highlight*

able, can, **data**, easy, information, informative, interesting, like, **liked**, look, lot, much,
navigate, not, **nothing**, site, ways

#	Answer
1	Statistics are one of my strong points, have analysis skills and can categorize data
2	Liked the graphs. Well labelled.
3	I hated it, you should be able to type in what ever you are looking for.
4	nothing - very confusing no information about how to sort
5	nothing
6	Ability to search for info
7	Not much.
8	the in depth information
9	nothing
10	It was reasonably well designed
11	Actually, I really did like this site. It opened my eyes about the 'airlines industry.'
12	interesting subject
13	ok
14	it is interesting and has a lot of data
15	it was informative and easy to navigate once you knew what to look for
16	I liked the bars on the bar graph
17	nothing
18	nothing
19	I am not sure I really liked the site at all, but given a bit more time I may be able to navigate it better.
20	Most data was easy to find.
21	I like that it presented information in a multitude of ways.
22	There is a lot of data and I love that you can look at it in so many different ways..
23	informative
24	Not much, it was difficult to navigate until you learned the tabs.