

# SO YOU WANT TO MAKE A MAP?

**William Hurley, Manager of Programming**

**October 21, 2012**

# What is Mapping?

Get directions

My places



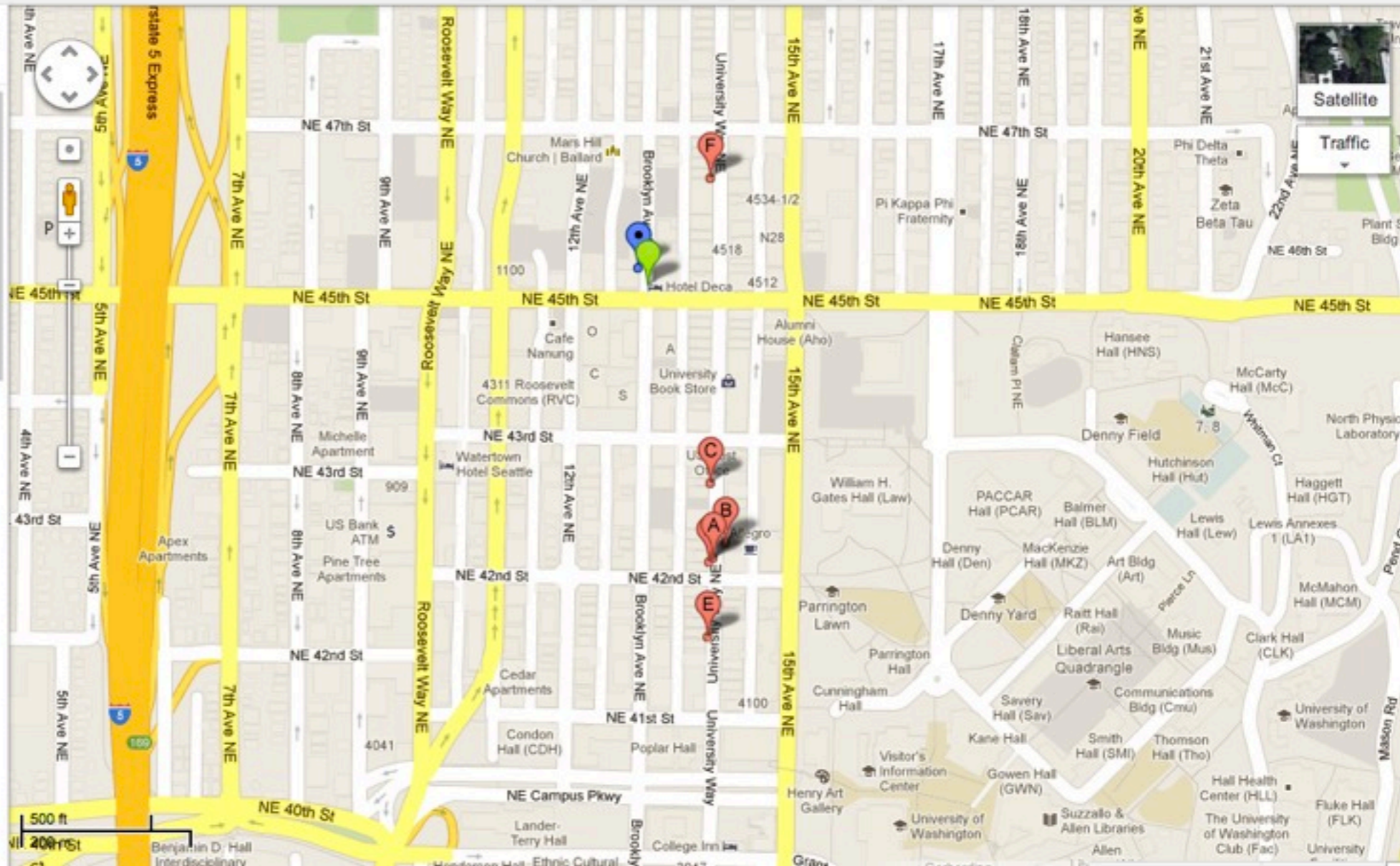
pho

**A** **Pho Than Brothers** ▾  
 4207 University Way Northeast, Seattle, WA  
 (206) 632-7272 · thanbrothers.com  
**22** ZAGAT · 65 reviews \$\$  
 cream puff · free cream · the ave · the veggie · noodle soup  
 \*Superhumanly efficient at bringing out hot bowls of pho, with decent rice ...\* -

**B** **Thanh Vi** ▾  
 4226 University Way Northeast, Seattle, WA  
 (206) 633-7867 · thanhvi.net  
**19** ZAGAT · 53 reviews \$\$  
 vietnamese sandwiches · authentic vietnamese · noodle soup · crepe · banh mi  
 \*There was an awful lot of pickled carrots, but next to nothing else ...\* -

**C** **Pho Viet nam** ▾  
 4235 University Way Northeast, Seattle, WA  
 (206) 547-1709 · phovietnams.com  
 4 reviews \$\$  
 \*First of all I love love love Pho, so that might be influencing me a bit. ...\* -

**D** **Pho Tran Restaurant** ▾  
 4213 University Way Northeast, Seattle, WA  
 (206) 547-5882  
 8 reviews  
 \*Great pho! Beats pho than brothers by a mile!\* -



# Points of Interest

## Google Maps

A hotel deca  
B Mary Gates Hall (MGH), Seattle, WA

Add Destination - Show options

GET DIRECTIONS

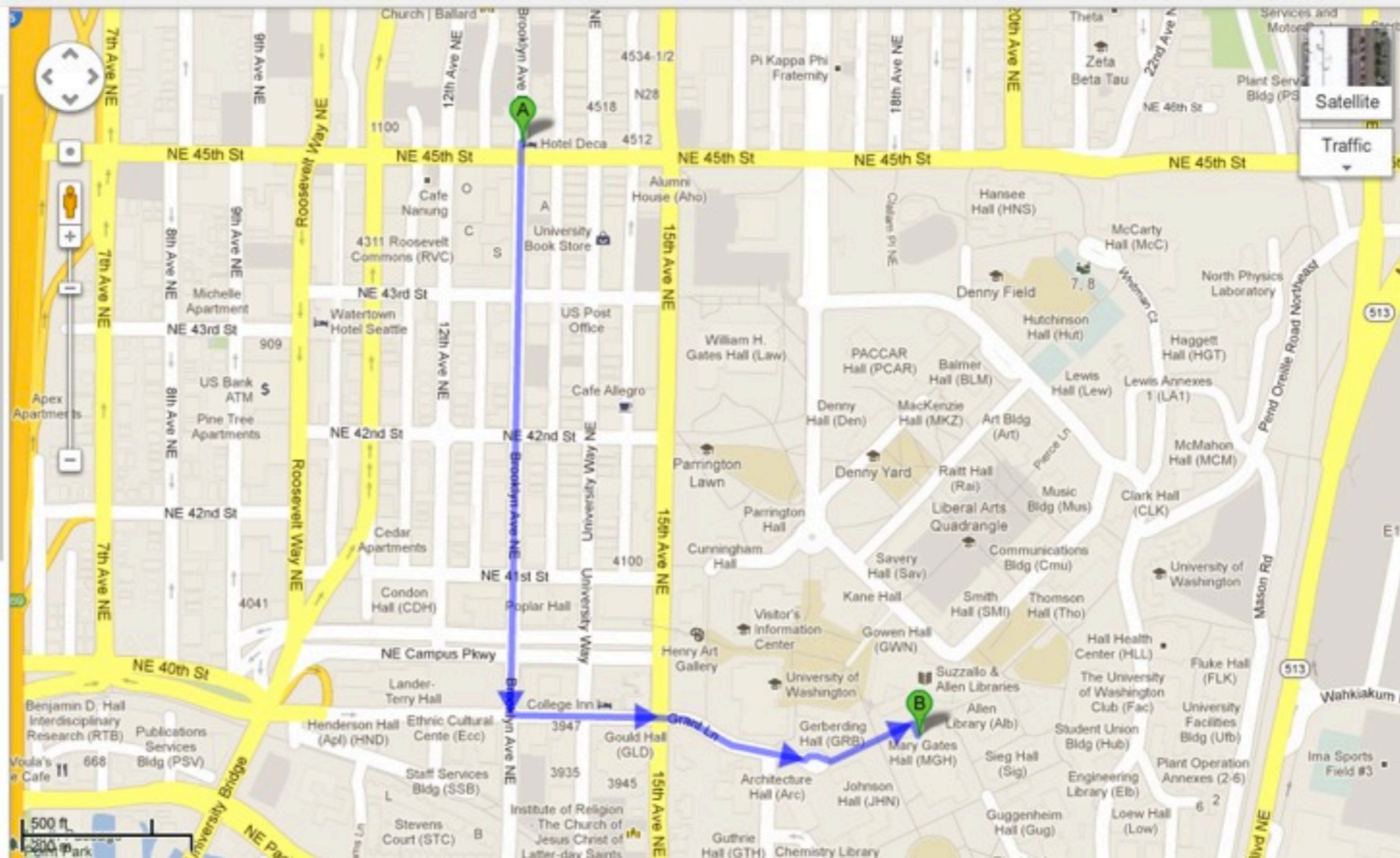
Suggested routes

- Brooklyn Ave NE and Grant Ln** 0.7 mi, 14 mins
- Brooklyn Ave NE, NE 41st St and Grant Ln 0.7 mi, 14 mins
- 15th Ave NE and Grant Ln 0.7 mi, 14 mins
- Or take **Public Transit (Bus)** 12 mins

Walking directions to Mary Gates Hall (MGH), Seattle, WA 98195

**Hotel Deca**  
4507 Brooklyn Avenue Northeast  
Seattle, WA 98105

1. Head south on Brooklyn Ave NE toward NE 45th St



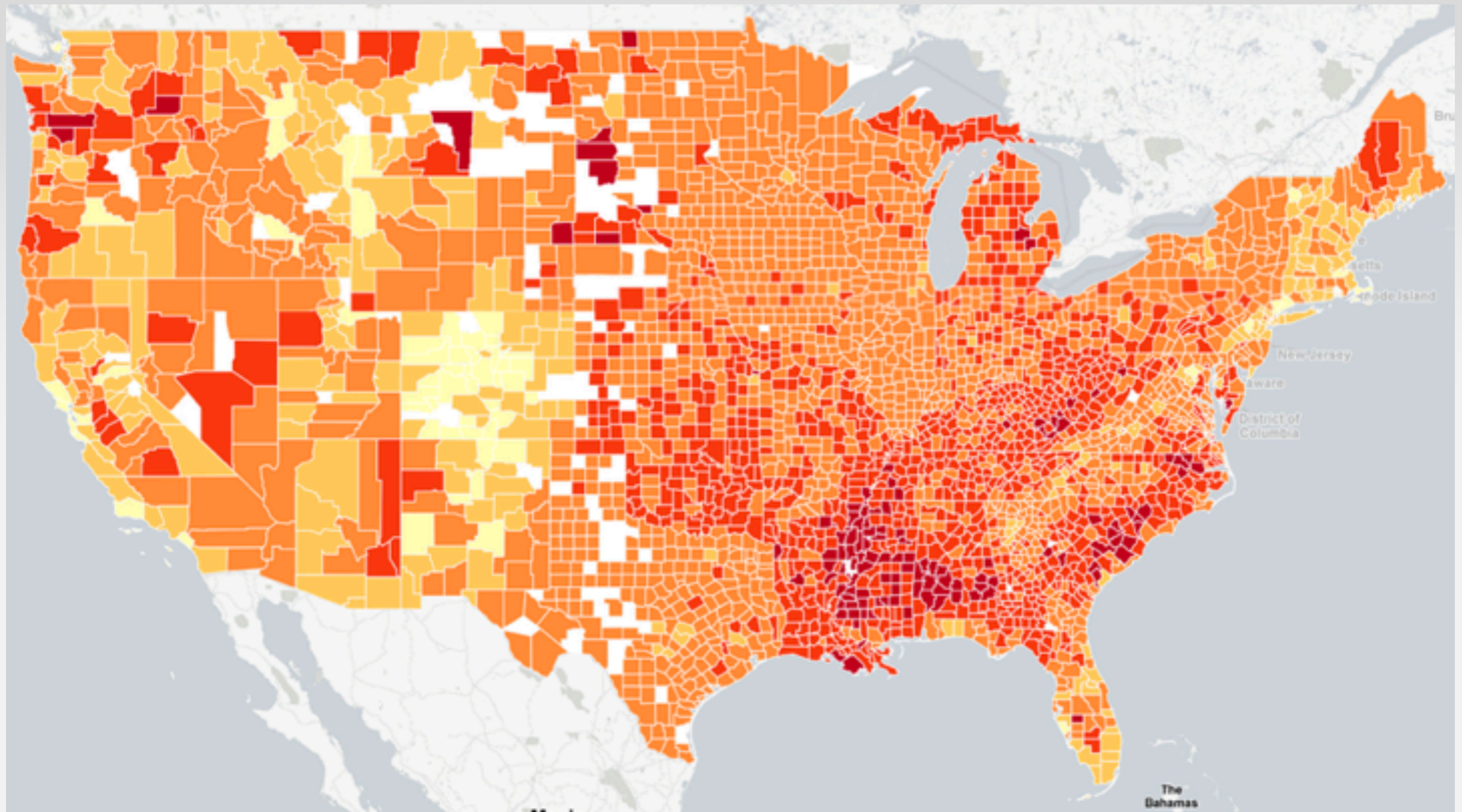
# Directions

## Google Maps

# What Else?

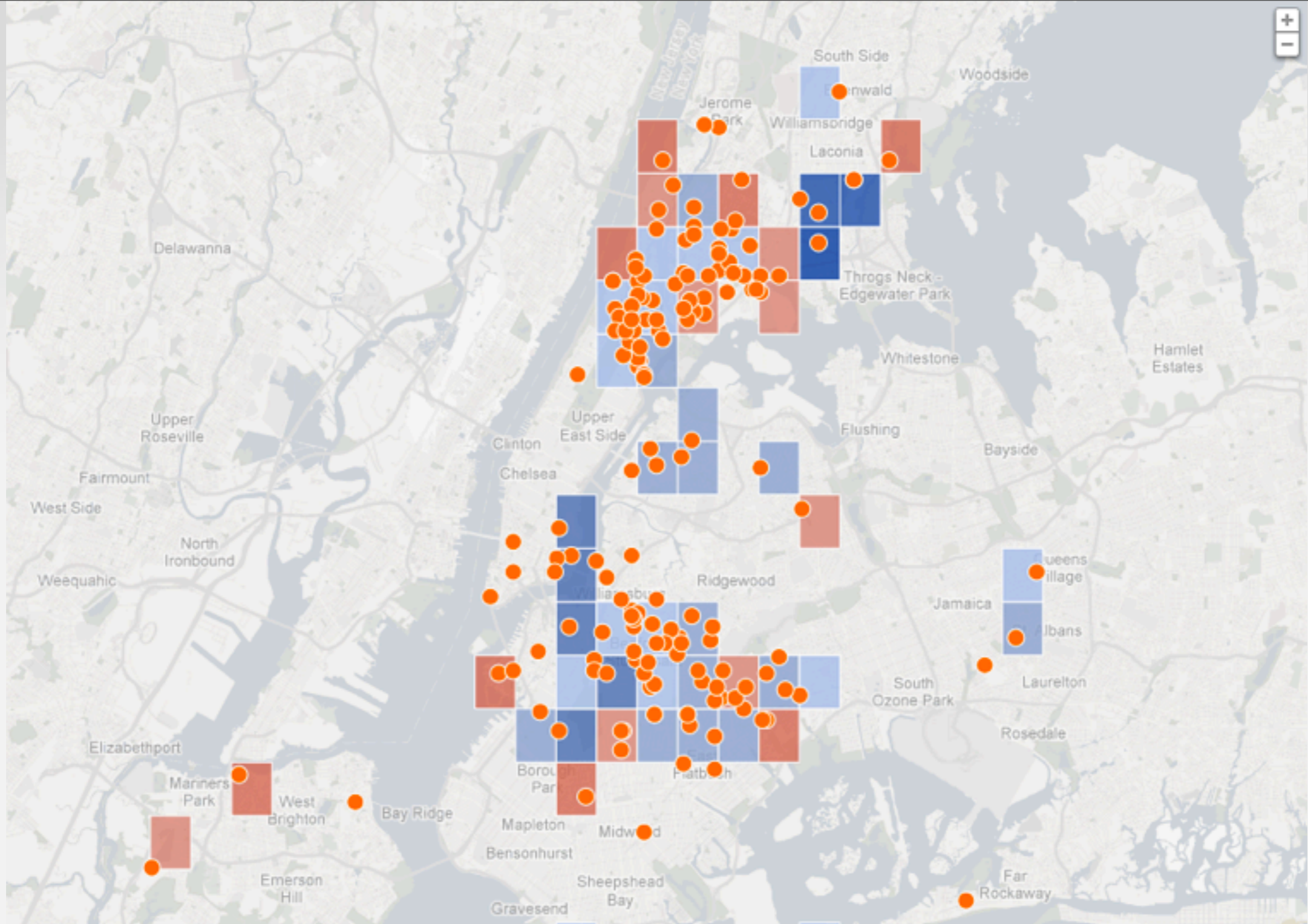
# Choropleth

**A map in which areas are shaded or patterned in proportion to the measurement of the statistical variable being displayed on the map.**



# Obesity Levels in the US

[CountyHealthRankings.org](http://CountyHealthRankings.org)



# English Passing Rates in NYC Charter Schools





# Maps Are Hard

<http://theamazingios6maps.tumblr.com/post/32042128251/taken-on-my-ipad>

# What's the Easy Way?

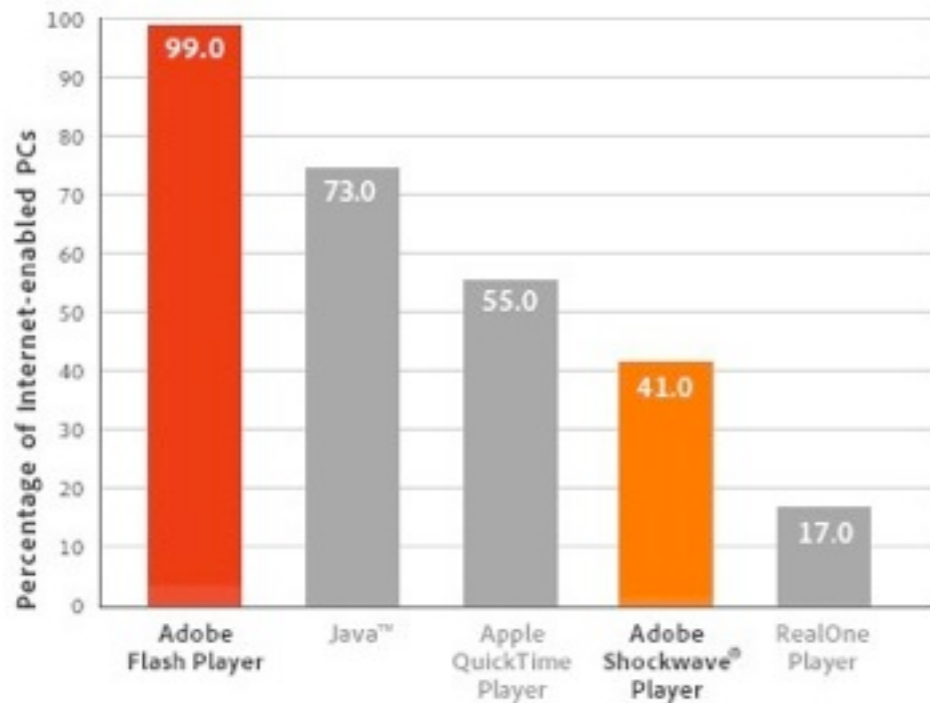
Mapping on the Client



FORUM ONE  
COMMUNICATIONS

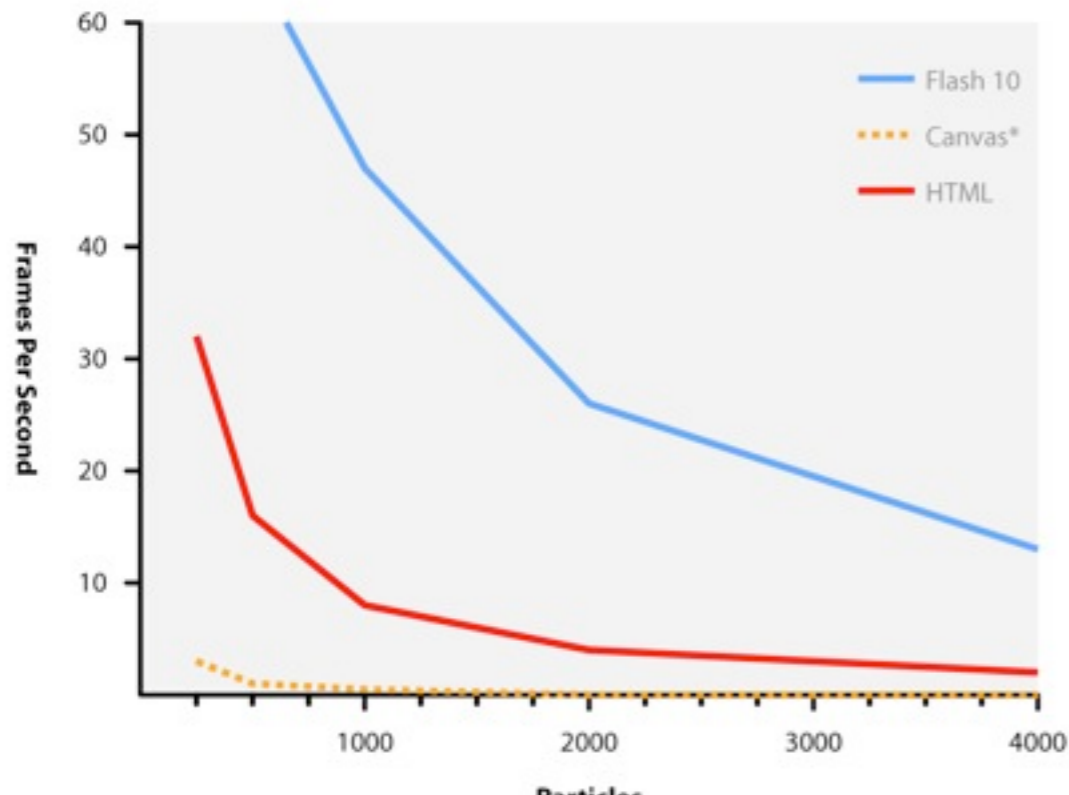
# Flash

# Why Flash?



- Large install-base
- Lots of libraries
- Compiled code -- faster in many browsers

Particle Animation Benchmark (Internet Explorer 8, Windows XP)



# Why Don't We All Use It?

- Low support for mobile devices
- Questionable future
- Black box

# Javascript

## Refine Results

Filter by CSD



Filter by Borough



- Bronx (47)
- Brooklyn (71)
- Manhattan (49)
- Queens (13)
- Staten Island (3)

Filter by Neighborhood



Filter by Grade Level(s)



- Elementary (114)
- Middle (71)
- High (42)

### Browse all Charter Schools in New York City

You can refine your search by changing the filters next to the map.



### Add schools to your My School List

You can create a list of schools you are interested in learning more about or applying to. You can view the schools you selected here ([My School List](#)).

# Location Content in Drupal

## NYCCharterSchools.org, Openlayers & Search API

REGIONS ▾

ISSUES ▾

[Reports](#)

[Programs](#)

[Initiatives](#)

[News](#)

[Experts](#)

[Events](#)

[Donate](#)



## Americas

**36** countries & territories

**937** million people

**71% free**  
PRESS: **39% free**

**ISSUES**  
Civil Society  
Human Rights Defense  
Rule of Law

You can help us move freedom forward around the globe.

[DONATE NOW](#)

Percent computed by population.

# Geographic Content in Drupal

[FreedomHouse.org](#), [jsMap](#)





# Or Something More Complicated

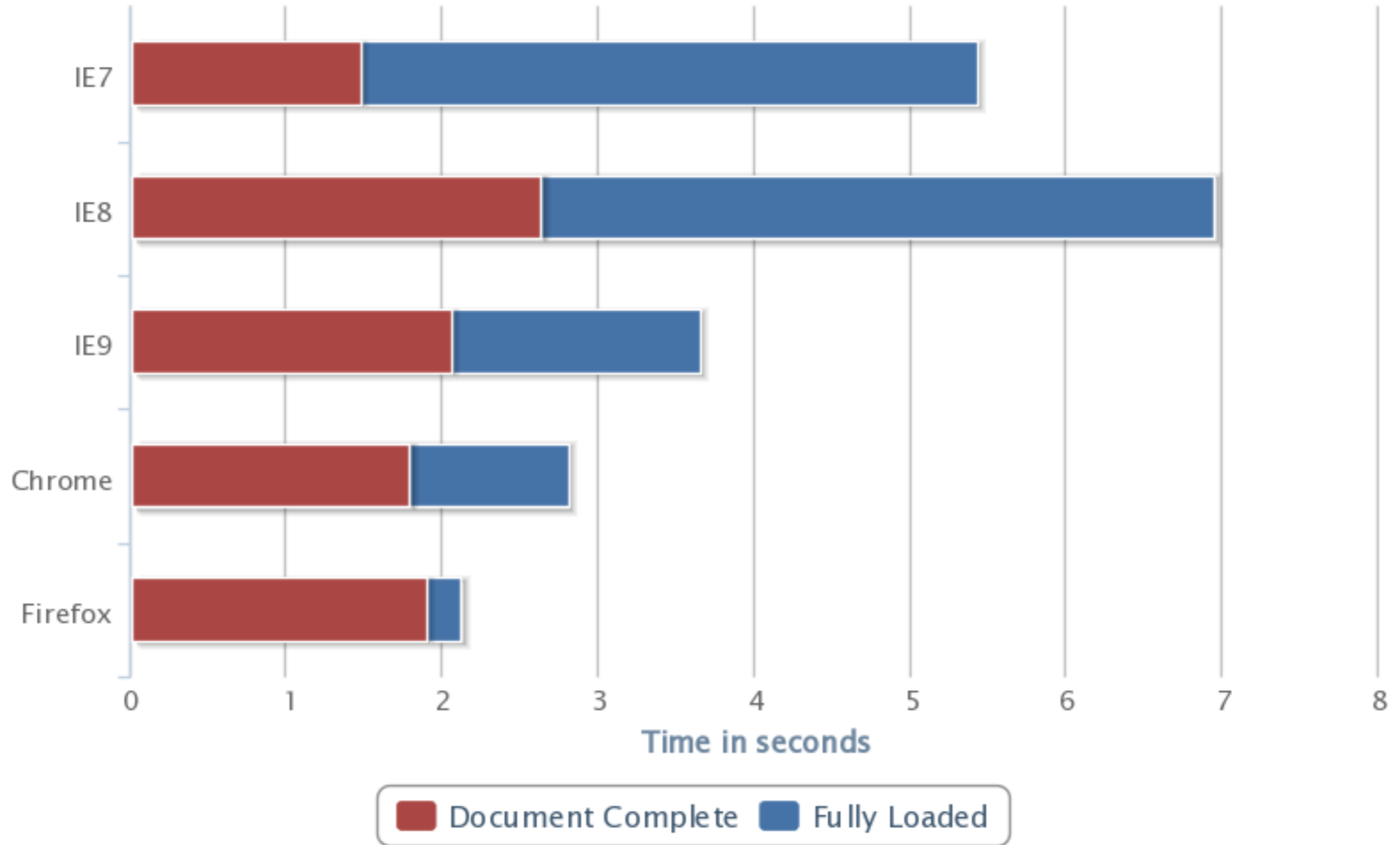
[drupal.org/project/timelinemap](http://drupal.org/project/timelinemap)

# Other Options

- Map clients
  - Leaflet -- [leaflet.cloudmade.com](http://leaflet.cloudmade.com)
  - Google Maps -- [developers.google.com/maps](http://developers.google.com/maps)
- Visualization clients
  - D3 -- [d3js.org](http://d3js.org)
  - jQuery Vector Maps -- [jqvmap.com](http://jqvmap.com)

# Is There a Catch?

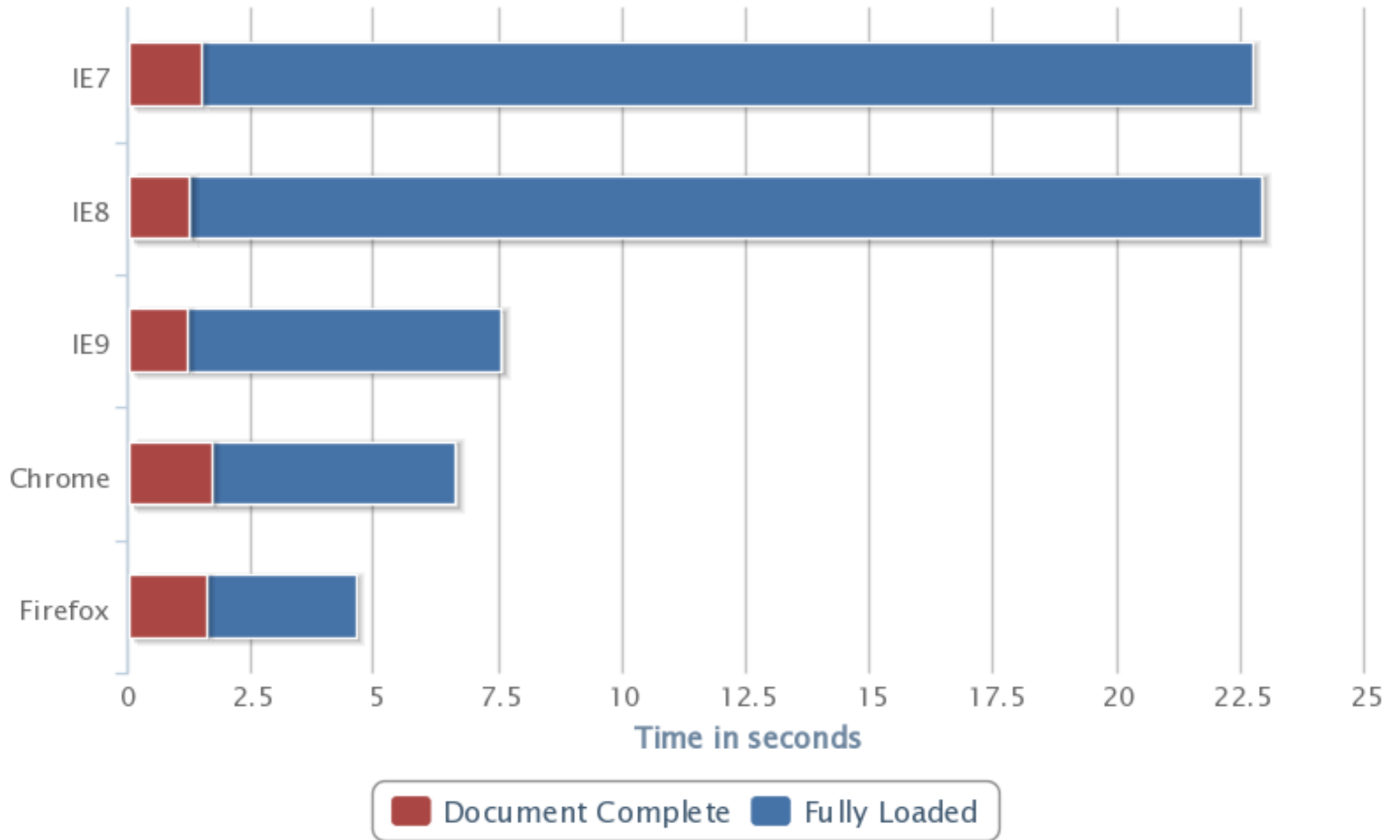
## RaphaelJS State Choropleth



# RaphaelJS State Map

[www.ravelrumba.com/code/demos/us-map-raphael/demo-animated.html](http://www.ravelrumba.com/code/demos/us-map-raphael/demo-animated.html)

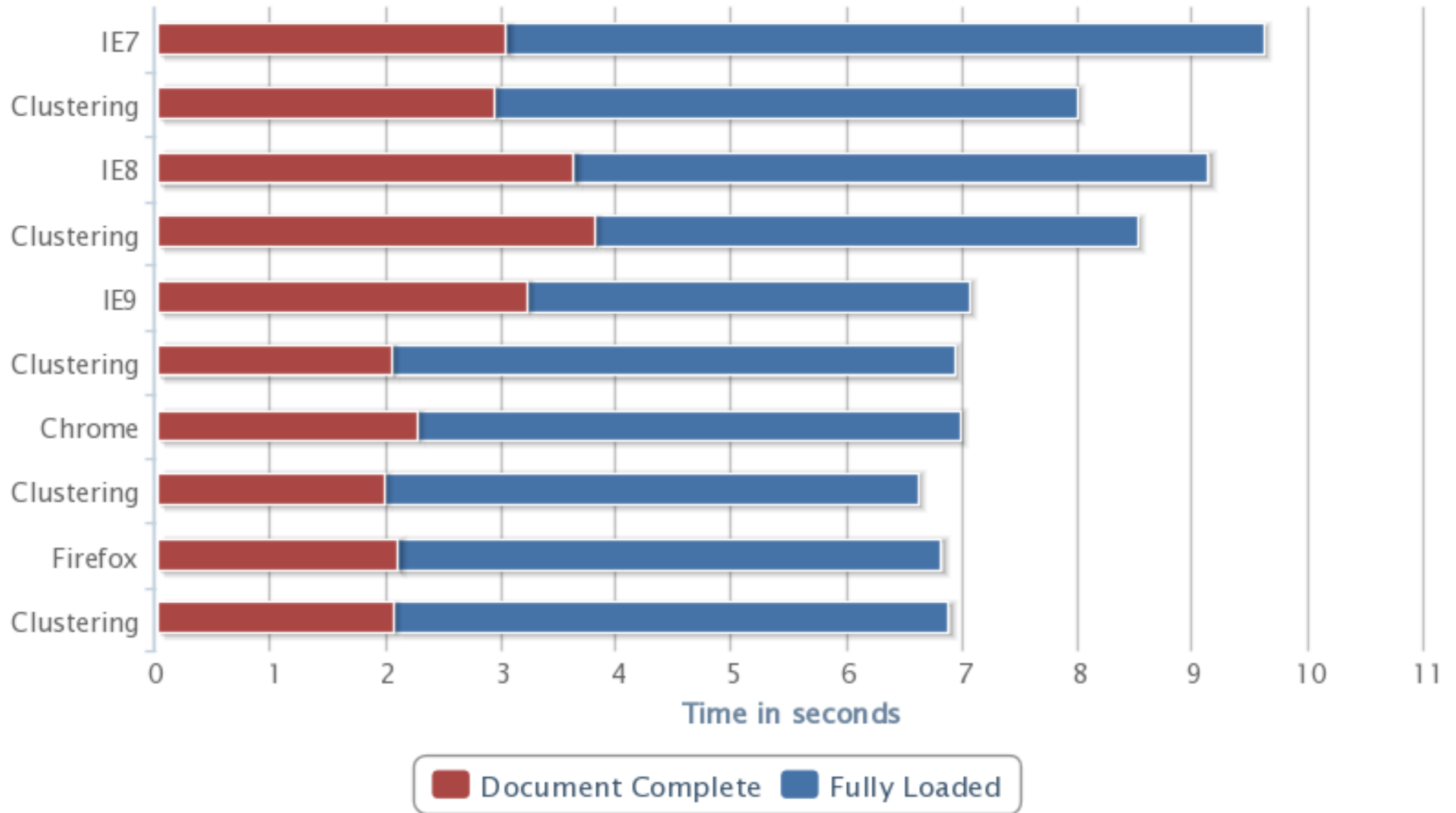
# RaphaelJS County Choropleth



# RaphaelJS County Map

[www.forbes.com/special-report/2011/migration.html](http://www.forbes.com/special-report/2011/migration.html)

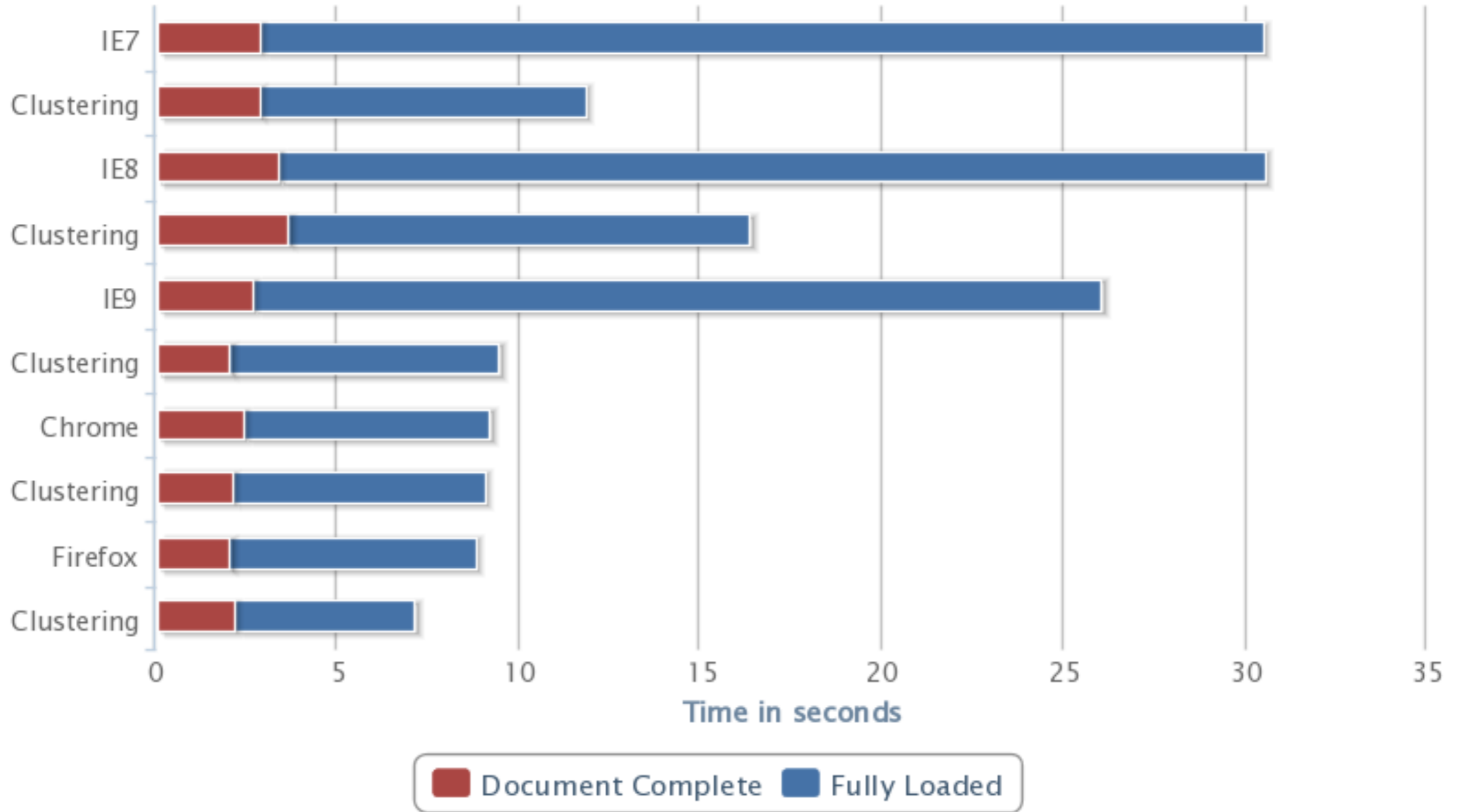
## USGS Earthquakes



# Openlayers 220 Points

## USGS Earthquake Data, Past 7 Days, M2.5+

# USGS Earthquakes



# Openlayers 900 Points

## USGS Earthquake Data, Past 7 Days, M1.0+

# So What Does This Mean?

- Browsers matter
- Scale matters
- Know your limits



# Where Do I Go From Here?

## Mapping on the Server

# Mapping Services

ZOOM 13



- + Add layer
- ! highway-label highway-label
- ! location location
- ! highway highway fill
- ! highway-outline highway line
- ! natural natural
- ! dcgis-water water

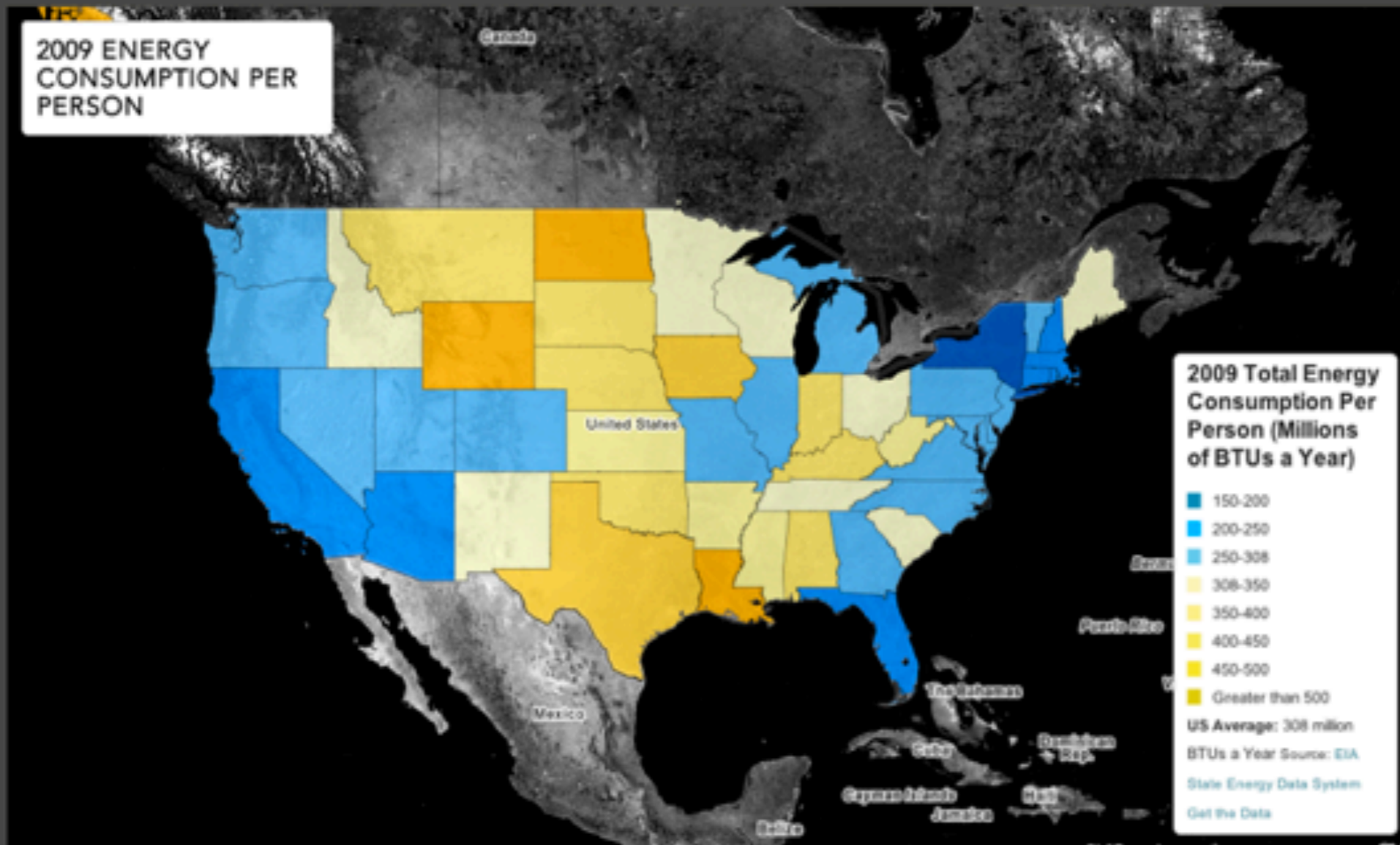
- Motorways
- Main roads
- Other roads
- Bike paths
- Foot paths
- Forest
- Water

```

style.mss highway.mss labels.mss +
1 /*****
2
3 Open Streets, DC
4 *****/
5
6 *An example of street-level map design.*
7
8 Data used by this map is © OpenStreetMap contributors,
9 CC-BY-SA. See <http://openstreetmap.org> for more info.
10
11 This map makes use of OpenStreetMap shapefile extracts
12 provided by CloudMade at <http://downloads.cloudmade.com>.
13 You can swap out the DC data with any other shapefiles
14 provided by CloudMade to get a map of your area.
15
16 To prepare a CloudMade shapefiles zip package for TileMill,
17 download it and run the following commands:
18
19 unzip your_area.shapefiles.zip
20 cd your_area.shapefiles
21 shapeindex *.shp
22 for i in *.shp; do \
23     zip `basename $i .shp` `basename $i shp`; done
24
25 *****/
26
27 /* ---- PALETTE ---- */
28
29 @water:#c8d8ff;
30 @forest:#cea;
31 @land:#fff;
32
33 Map {
34   background-color:@land;
35 }
36
37 .natural[TYPE="water"],
38 .water {
39   polygon-fill:@water;
40 }
41
42 .natural[TYPE="forest"] {
43   polygon-fill:@forest;
44 }
45
46 /* These are not used, but if customizing this style you may

```

# Tilemill



Per capita energy consumption across all sectors of the economy. Click on a state for more information.

# Mapbox Hosting

# Why Tilemill & Mapbox?

- Highly customizable
- Open source
- Good for static maps

	cartodb_id Number	the_geom Geometry	alternatevalue String	cihigh Number	cflow Number	countycode String	denominator String	emmargin String	highlightflag String	includeflag String	lastupdated Date
	1		NULL			000	NULL	NULL	0	NULL	2011-03-23TC
	2		NULL			000	NULL	NULL	0	NULL	2011-03-23TC
	3		NULL	37.6	26.2	001	NULL	NULL	0	NULL	2011-03-23TC
	4		NULL	29.7	23	003	NULL	NULL	0	NULL	2011-03-23TC
	5		NULL	43.8	32	005	NULL	NULL	0	NULL	2011-03-23TC
	6		NULL	38.2	27.1	007	NULL	NULL	0	NULL	2011-03-23TC
	7		NULL	38.3	26.2	009	NULL	NULL	0	NULL	2011-03-23TC
	8		NULL	45.6	31.1	011	NULL	NULL	0	NULL	2011-03-23TC
	9		NULL	43	31.1	013	NULL	NULL	0	NULL	2011-03-23TC
	10		NULL	37.6	29.4	015	NULL	NULL	0	NULL	2011-03-23TC
	11		NULL	41.7	30	017	NULL	NULL	0	NULL	2011-03-23TC
	12		NULL	38.7	25.4	019	NULL	NULL	0	NULL	2011-03-23TC
	13		NULL	41.9	28.6	021	NULL	NULL	0	NULL	2011-03-23TC
	14		NULL	41.9	31.5	023	NULL	NULL	0	NULL	2011-03-23TC
	15		NULL	42.3	30.6	025	NULL	NULL	0	NULL	2011-03-23TC
	16		NULL	39.2	26.1	027	NULL	NULL	0	NULL	2011-03-23TC
	17		NULL	35.5	22.7	029	NULL	NULL	0	N	

SQL Add row Add column

# CartoDB

## Data View

3138 rows matching your query [CLEAR VIEW](#)

advanced

This query took 0.183 seconds

Table

Map

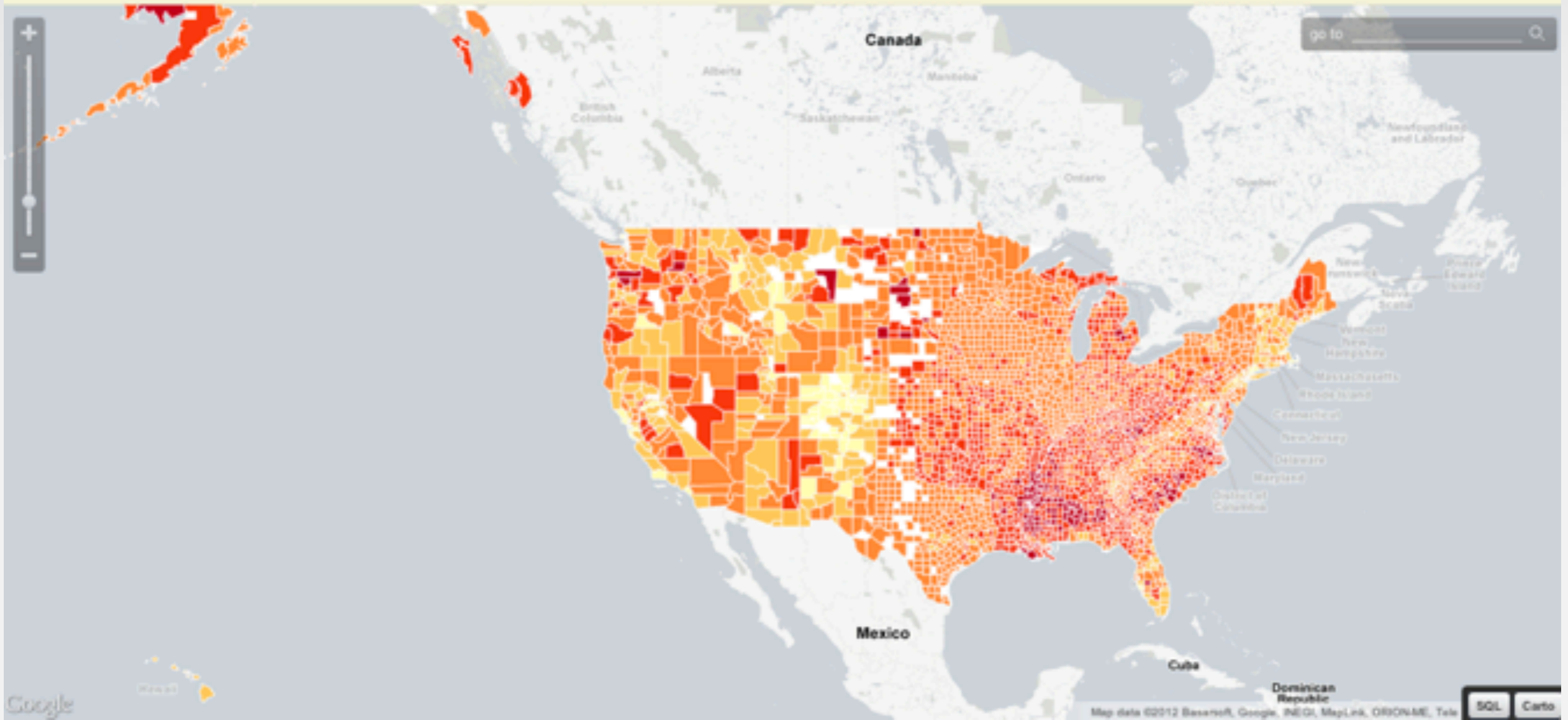
SHARE THIS MAP

Map type  
Roadmap

Visualization type  
Carto

Infowindow customization  
Custom

3138 results - Read-only. [Change your query or clear view](#)





























# CartoDB

## Map View

# Why CartoDB?

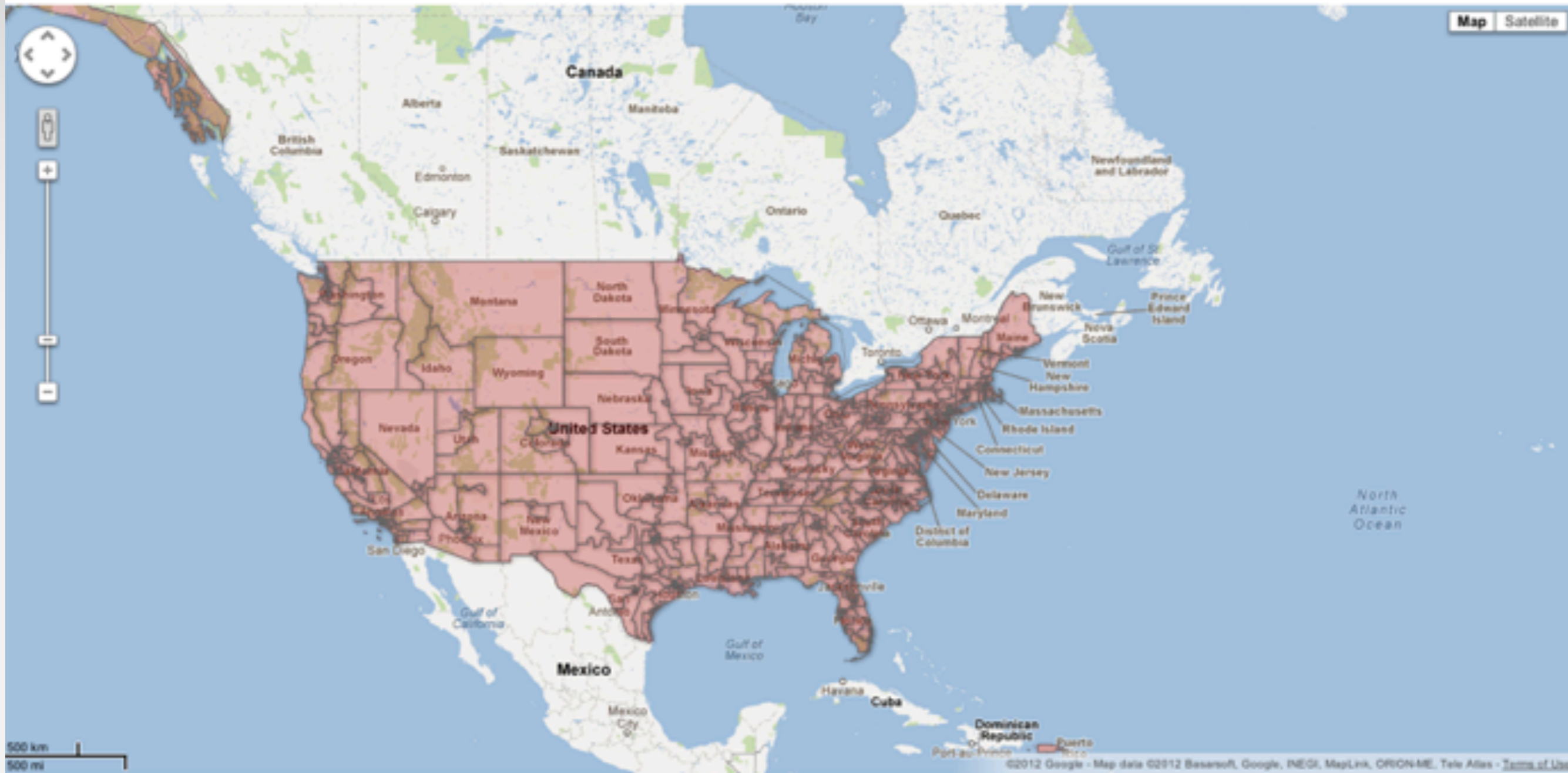
- Highly customizable
- Open source
- Dynamic queries from hosted data



id	state	name	shape	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	
AK-00	AK	00	kml...	

# Google Fusion Tables

## Data View



# Google Fusion Tables

## Map View

# Why Google Fusion Tables?

- Highly scalable
- Free -- sort of
- Built-in geocoding

# Roll Your Own

Rankings

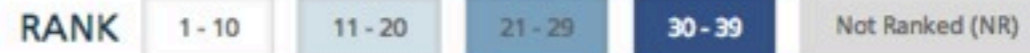
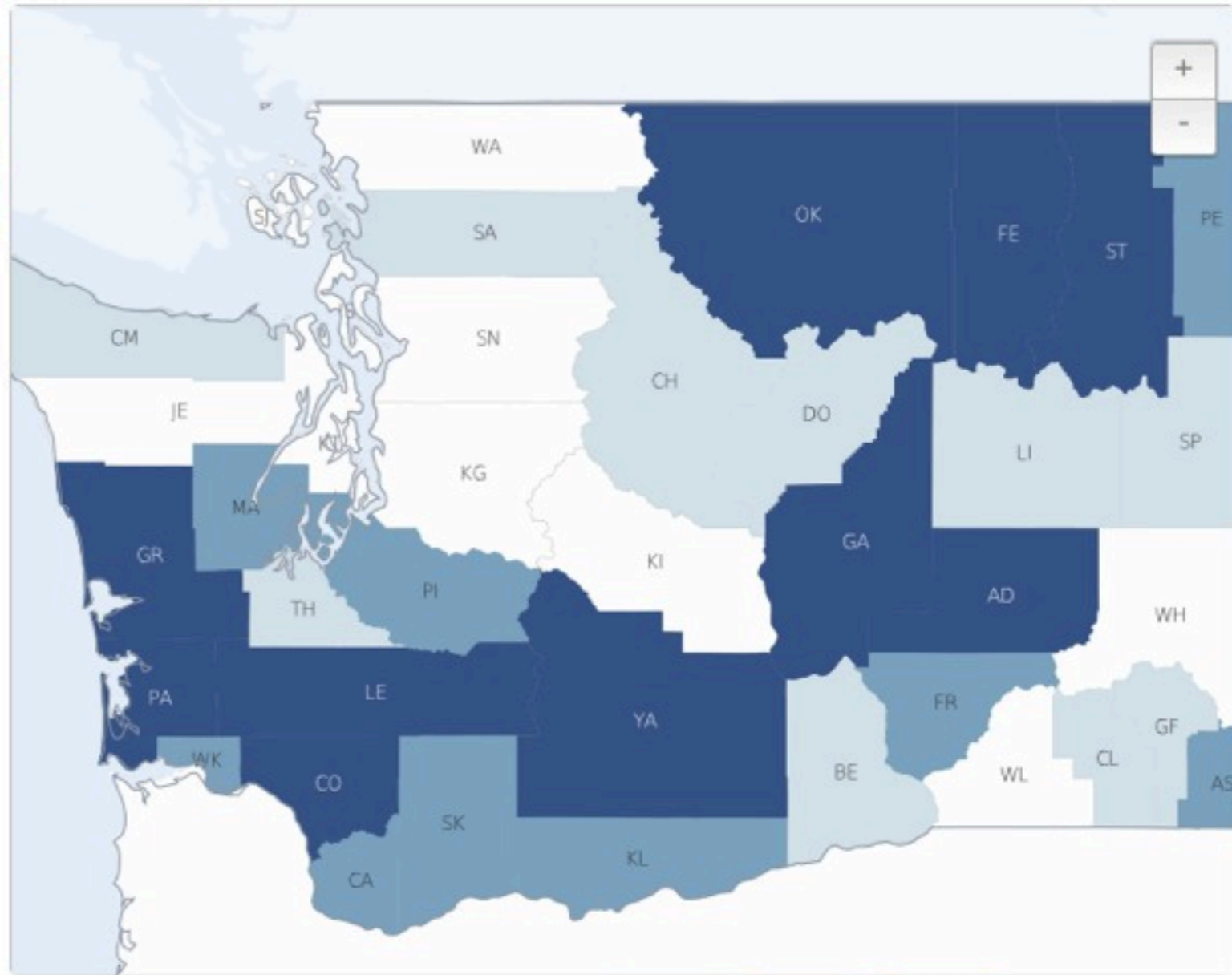
Measures

Health Outcomes

Health Factors

Overall Rank

Rank	County
1	San Juan (SJ)
2	Whitman (WH)
3	King (KG)
4	Island (IS)
5	Whatcom (WA)
6	Walla Walla (WL)
7	Jefferson (JE)
8	Kittitas (KI)
9	Snohomish (SN)



# Lots of Variables

CountyHealthRankings.org



# BCLC

## Business for Good Map

SHARE SOLUTIONS. FIND PARTNERS.

Home

About

Login

Company

Category

Education	664	Food & Nutrition	79
Philanthropy	432	Women & Girls	73
Technology & Telecom	296	Disasters	67
Youth	271	Water	59
Environment	254	Housing	38
Volunteerism	251	Arts & Culture	30
Health & Wellness	218	Transportation	23
Job Creation	129	Veterans	18
Energy	121		
Diversity & Inclusion	112		

# Integration With Other Data Sources

[csr.bclcmaps.com](http://csr.bclcmaps.com)

# What Do I Need?

- **Client library**

*Openlayers, Leaflet, Modest Maps, Google Maps*

- **Map server**

*Mapnik*

- **Tile server**

*Windshaft, Tilelive, Tilestache*

- **Geographic data source**

*PostgreSQL with PostGIS, Elastic Search, Apache Solr*

# THANK YOU!

**Any questions?**

**[whurley@forumone.com](mailto:whurley@forumone.com)**

