

Why your web map sucks and
you don't even know it.

Will Cadell

> sparkgeo.com

A topographic map of a mountainous region, likely in the Pacific Northwest, showing terrain contours, rivers, and lakes. A semi-transparent white box with a thin grey border is positioned at the top of the map, containing the title text. The map features labels for various locations including Summit Lake, Salmon Valley, Willow River, Hutton, Prince George, Woodpecker, Hixon, Strathnaver, Bowron Lake Provincial Park, and McBride. The terrain is depicted with green and brown hues, indicating elevation and vegetation.

MANDATORY CORPORATE OVERLORD SLIDE

A white speech bubble with a thick orange border is centered on the map. It contains the text 'At sparkgeo we put your ideas on the map'. The bubble has a tail pointing towards the bottom-left corner of the map.

At **sparkgeo** we put
your ideas on the map

Single purpose *apps* 1

Focused

Fit for purpose

User-centric

Independent

Single purpose *apps* 2

Service driven
(organizationally & technologically)

Distributed responsibility

Distributed return on investment

Let's Rewind to 1995...

Do you remember the

`<blink> tag </blink>?`

It was cool, flashy even.

Woah, dude!

*I'm gonna make my button FLASH,
no one will miss signing my guest
book now!*

This is it, bro. We've made it.

But since then we have learned:

Just because we *can* do something on the web, does not mean that we *should*.

We learned this from data, analytics and experimentation.



Geospatial has become an insanely BIG
business.

Maps are a key piece of that geospatial
puzzle.

We all tell our clients & peers that
maps can really *turn the dial with better
visualization.*

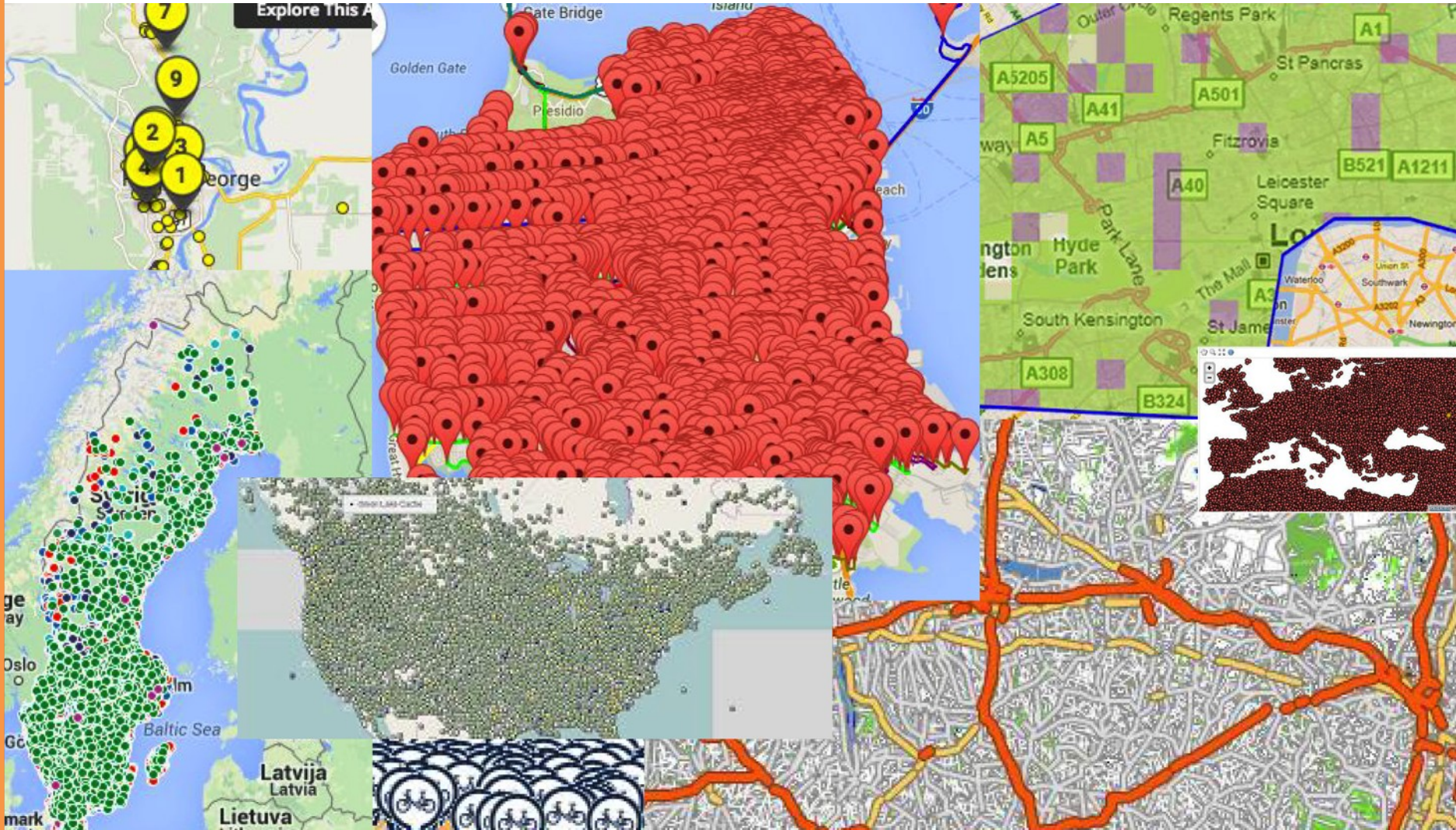
Traditionally, we would make a map
then endure a couple of design
revisions.


The web map is a more flexible medium
though.

Really, we can do anything with
geospatial data these days.

But...

Just because we *can* do something on a map, does not mean that we *should*.





For a long time web maps were really
hard.

But as our technology has advanced our
need to consider the user has not kept
pace.

At >sparkgeo we make a lot of web maps.

In the last few years we have started to ask ourselves some questions.

A solid orange vertical bar is positioned on the left side of the slide, extending from the top to the bottom.

What if the mapping community could see how people used their web maps?

If we want to turn that dial...

shouldn't we actually know what
numbers are on that dial?




If our mapping technology is so
good...


Isn't it time that we started to ask
our web maps to convert?

We talk a lot about visualizing
analytics...

But, why don't we use analytics
to measure our maps?



What if data could help us build
better maps?

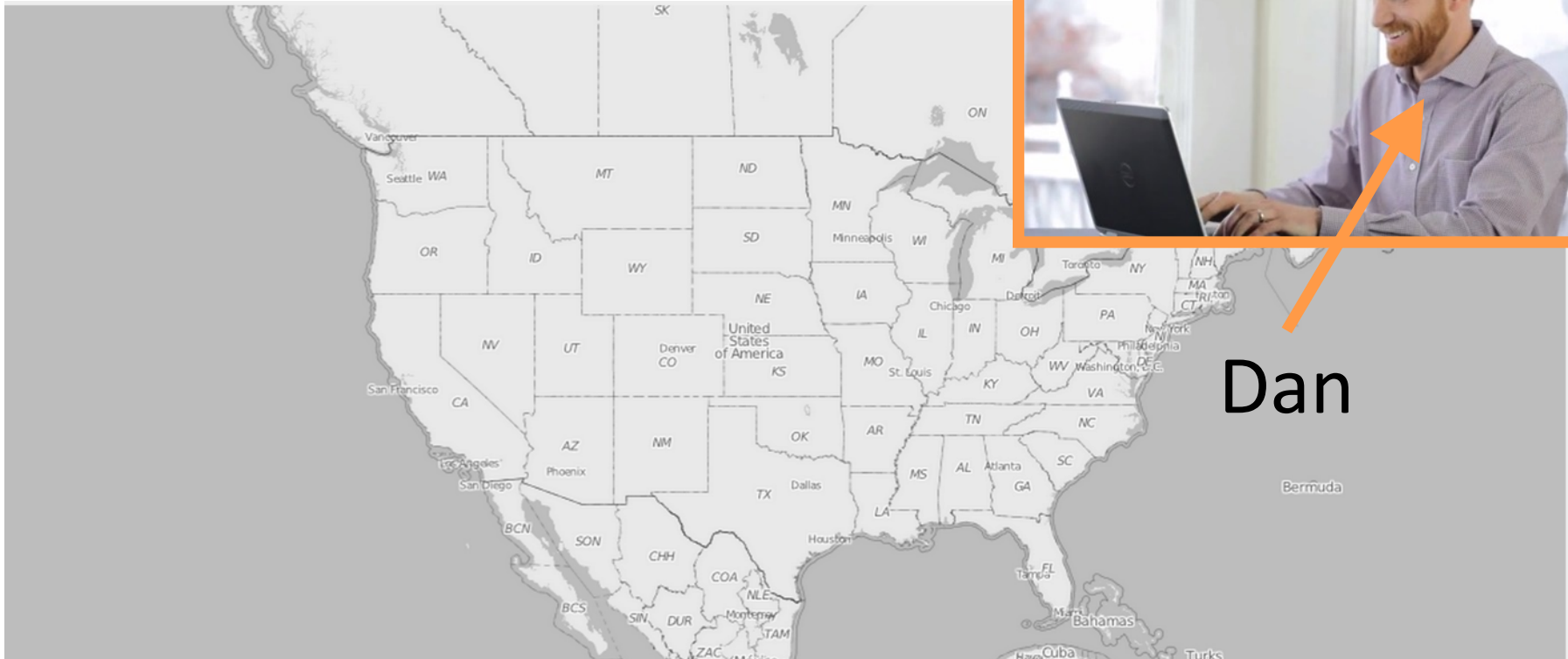


That sounds awesome, but what
should we track?

Bounce Rate

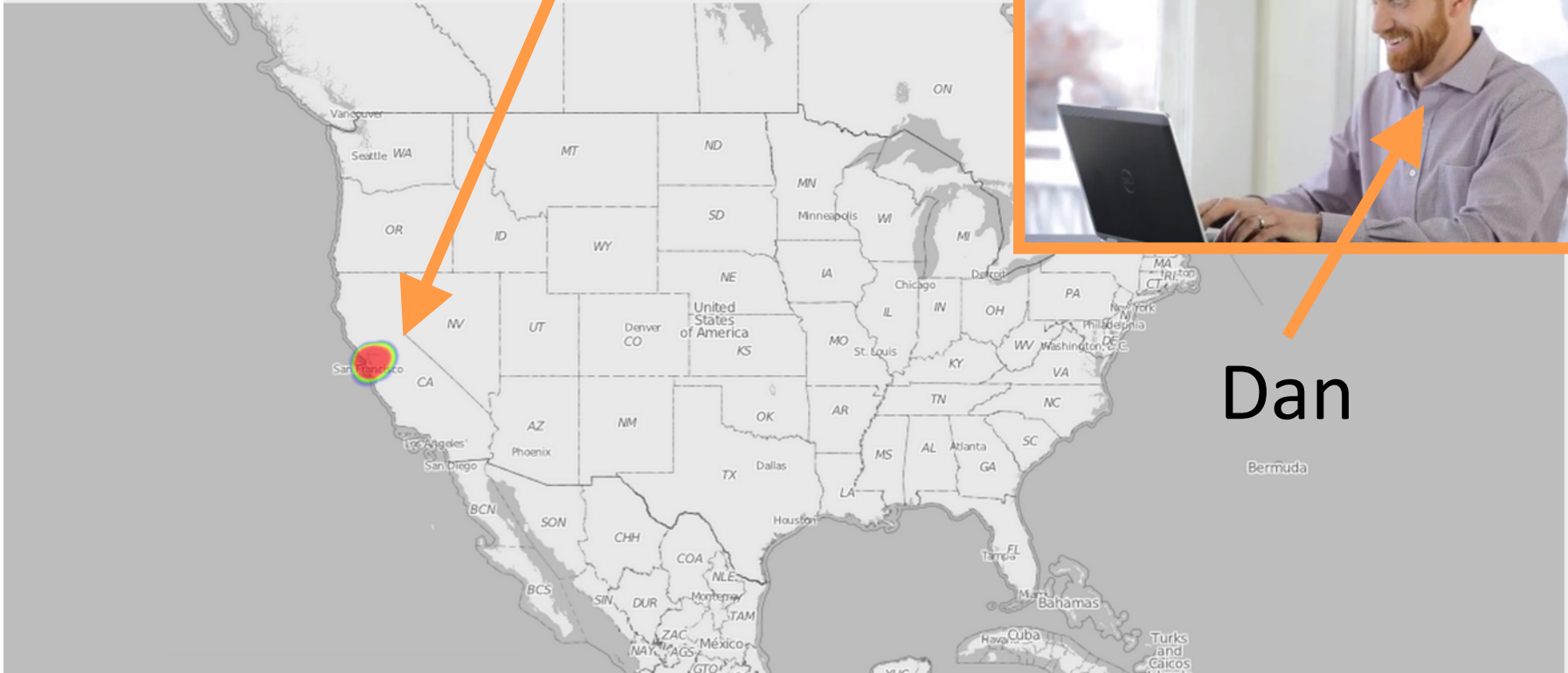
How many users visit your map
but don't actually click on it?

Map Activities



Dan

Dan's Map Activities



Dan

Layer Activities

Monitor layer analytics for new maps

Layer load times

Monitor map health

Sophisticated Toolbar

The toolbar is organized into several sections:

- Printing**: Albers Coordinate
- Markup**: Lat/Long
- Analysis**: UTM, Feature Location, District Lot
- Help**: Zoom To
- Information & Actions**: New, Plot, Clear All
- Clicked Coordinates**: Lat: 54.7229, Lon: -126.1876, Lat/Lon (DD) ▾



Or Simple Tool?

OK, but how on Earth can we do
this 'analytics'?

- 1. *Google Analytics***
- 2. *Esri, Mapbox & Carto* Page Views**
- 3. *Insights* for Geocortex users**
- 4. *MapMeter* for Boundless users**
- 5. *Maptiks.com***

Google Analytics

```
<script type="text/javascript">
  var _gaq = _gaq || [];
  _gaq.push(['_setAccount', 'UA-54437587-1']);
  _gaq.push(['_trackPageview']);

  (function() {
    var ga = document.createElement('script'); ga.type = 'text/javascript'; ga.async = true;
    ga.src = ('https:' == document.location.protocol ? 'https://ssl' : 'http://www') + '.google-analytics.com/ga.js';
    var s = document.getElementsByTagName('script')[0]; s.parentNode.insertBefore(ga, s);
  })();
</script>
```

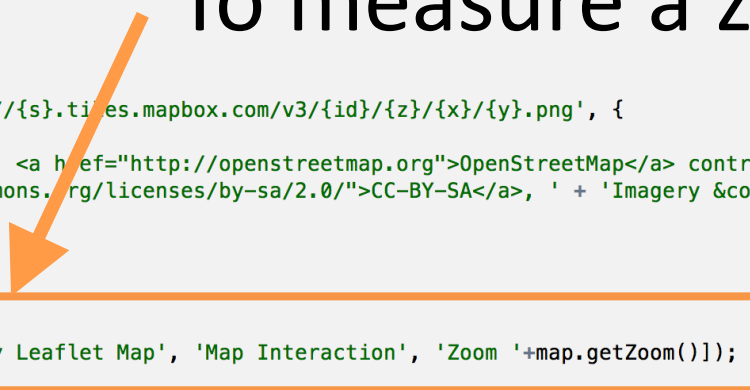
```
<script src="http://cdn.leafletjs.com/leaflet-0.7.3/leaflet.js"></script>
```

```
<script type="text/javascript">
  var map = L.map("map_canvas", {
    center: [38, -96.55],
    zoom: 4
  });

  var mapbox = L.tileLayer('https://{s}.tiles.mapbox.com/v3/{id}/{z}/{x}/{y}.png', {
    id: 'examples.map-20v6611k',
    attribution: 'Map data &copy; <a href="http://openstreetmap.org">OpenStreetMap</a> contributors, ' + '<a href="http://creativecommons.org/licenses/by-sa/2.0/">CC-BY-SA</a>, ' + 'Imagery &copy; <a href="http://mapbox.com">Mapbox</a>'
  });
  mapbox.addTo(map);

  map.on('zoomend', function () {
    _gaq.push(['_trackEvent', 'My Leaflet Map', 'Map Interaction', 'Zoom '+map.getZoom()]);
  });
</script>
```

To measure a zoom event



ArcGIS Online Page Views



Maptiks Enabled Templates (Group)

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Maptiks - Web map analytics

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Owner: alain@sparkgeo.com
Status: Public
Contributors: Only group owner
Tags: maptiks, templates

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Group Content


All Results


- Maps
- Layers
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- Apps
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- Files

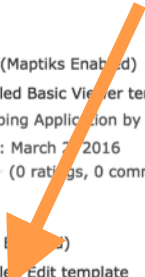
Show ArcGIS Desktop Content

Title Owner Rating Views Date

 Basic Viewer (Maptiks Enabled)
Maptiks enabled Basic Viewer template
Web Mapping Application by alain@sparkgeo.com
Last Modified: March 7, 2016
☆☆☆☆☆ (0 ratings, 0 comments, 679 views)

 Edit (Maptiks Enabled)
Maptiks enabled Edit template
Web Mapping Application by alain@sparkgeo.com
Last Modified: March 2, 2016
★★★★☆ (1 rating, 0 comments, 93 views)


 Filter (Maptiks Enabled)
Maptiks enabled Filter template
Web Mapping Application by alain@sparkgeo.com
Last Modified: March 2, 2016
☆☆☆☆☆ (0 ratings, 0 comments, 142 views)



Road Rehab 2016 - City of Prince George

About Layers

Road/Sidewalk Rehabilitation 2016



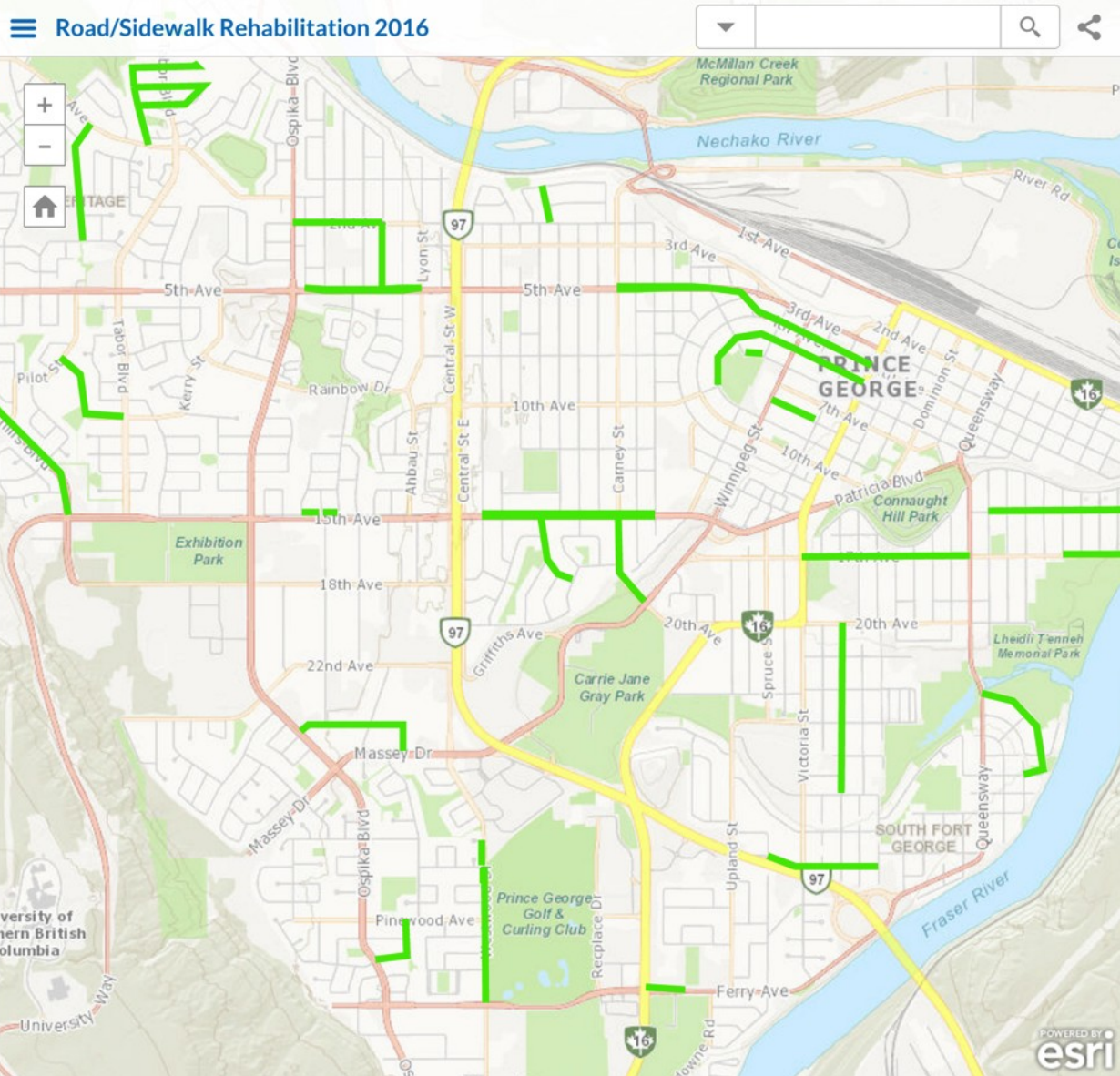
2016 ROAD REHABILITATION

This map displays all of the City of Prince George road and sidewalk rehabilitation activities that have been completed in 2016 and those that remain.

Click on the rehabilitation activities on the map to get more detailed information:

- **Completed** means the project has been concluded
- **Under Construction** means crews are actively working on the project
- **Proposed** means the work is scheduled to be completed later in 2016

Road/Sidewalk Rehabilitation 2016



The map shows various streets in Prince George, including 5th Ave, 10th Ave, 15th Ave, 18th Ave, 20th Ave, 22nd Ave, and Massey Dr. It also shows parks like Exhibition Park, Carrie Jane Gray Park, and Lheidt Teneh Memorial Park. The Nechako River and Fraser River are also visible. The map is powered by Esri.

Raw Web Map Data

INFO

ESRI 3
Library

5
Layers

2016.06.08
First Loaded

11:45 Friday
Last Loaded

LOADS

1,278
Map Loads

11
Avg. Activities / Load

25%
Bounce Rate

11 : 4 : 1
Desktop : Mobile : Tablet

ACTIVITIES

14,401
Activities

10,137
Pans

4,264
Zooms

0
Clicks

PERFORMANCE

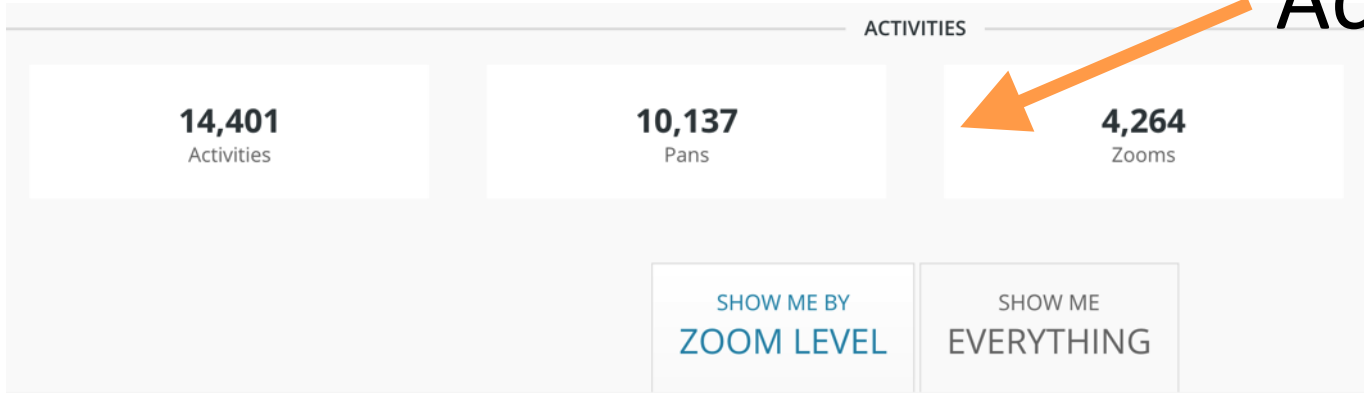
5
Avg. Visitor Duration (min)

1.7
Avg. Layer Load (sec)

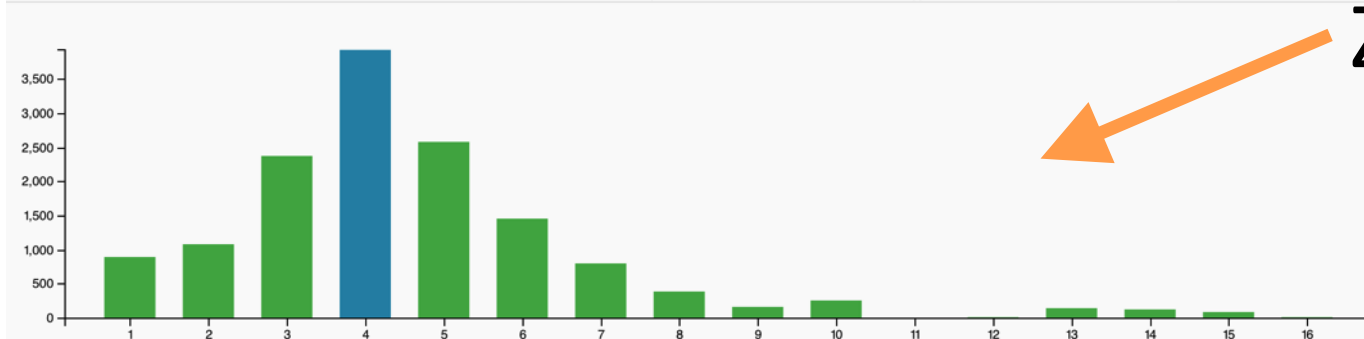
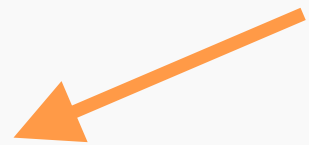
3.8
Avg. Map Initialization (sec)

511
Error Tiles

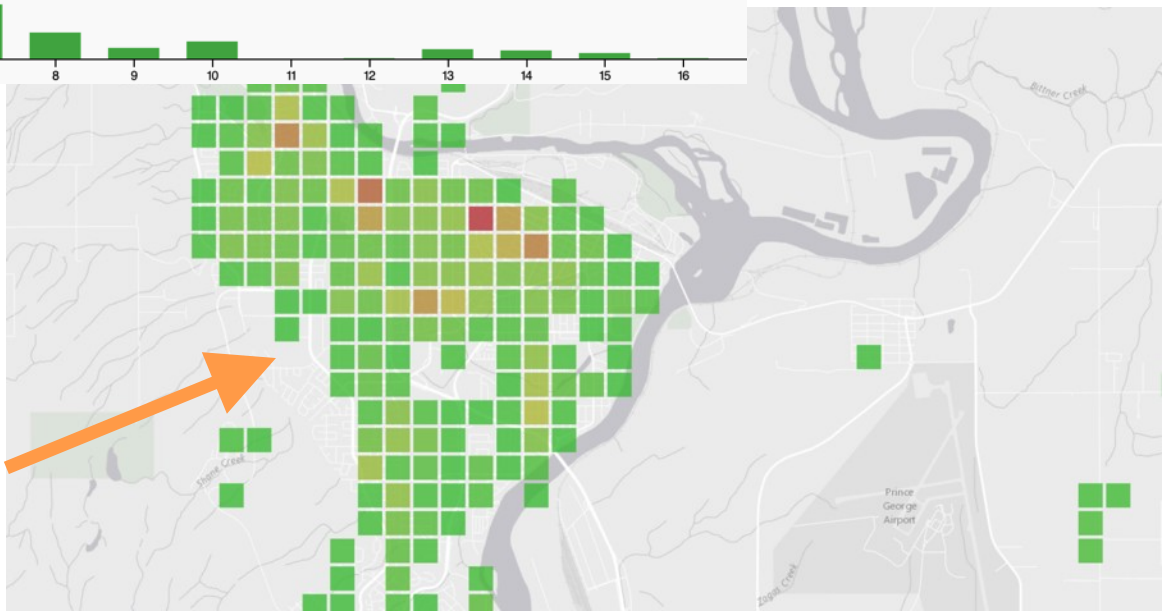
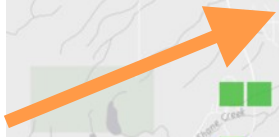
Activity Data



Zoom Data



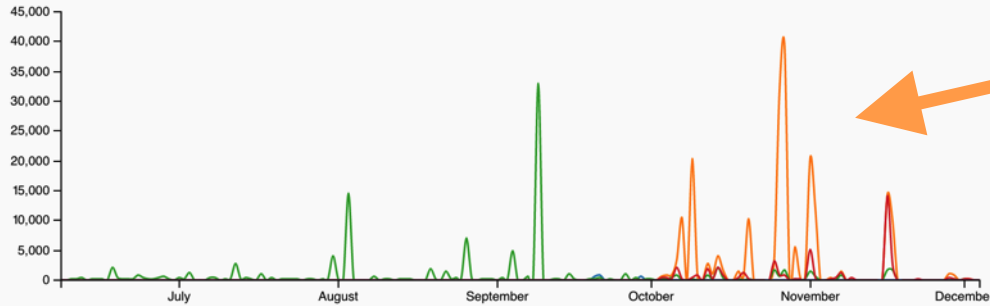
Geographic Data



SHOW ME
LAYER PERFORMANCE

SHOW ME
ERROR TILES

Layer Performance



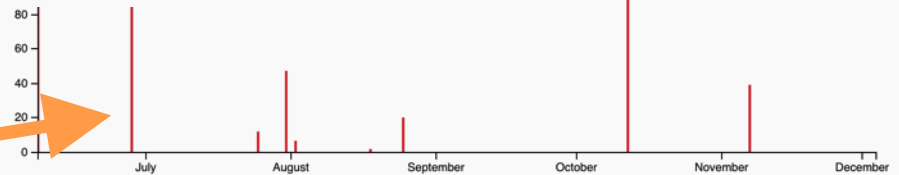
LAYER LOAD

| Layer | Avg (ms) | Count | Max (ms) |
|--------------------------------|----------|--------|-----------|
| World Street Map | 215 | 782 | 607 |
| CPGGIS_GISADMIN_Ortho2014_2653 | 661 | 46 | 840 |
| PGMap_External_Main_7822 | 1,413 | 506 | 13,167 |
| Level 21 ~250 | 1,170 | 22,041 | 8,905,726 |
| CapitalProjects_1948 | 3,186 | 461 | 39,164 |

SHOW ME
LAYER PERFORMANCE

SHOW ME
ERROR TILES

Error Tiles



ERROR COUNT

Layer

http://pgmappub.princegeorge.ca/cpgarcserver/rest/services/PGMap/PGMap_CPGGIS_CommunityBaseMap/

Reporting key engagement metrics to management

Bounce Rate - 25%

11 Activities/Load, 7 Loads /Day

Traffic Ratio - 11:4:1 *(Desktop: Mobile: Tablet)*

Reduced Call Center Traffic

A new level for demonstration &
reporting of

Return On Investment

for GIS departments & projects.

Ok, no excuses folks,

let's make some awesome maps

will@sparkgeo.com

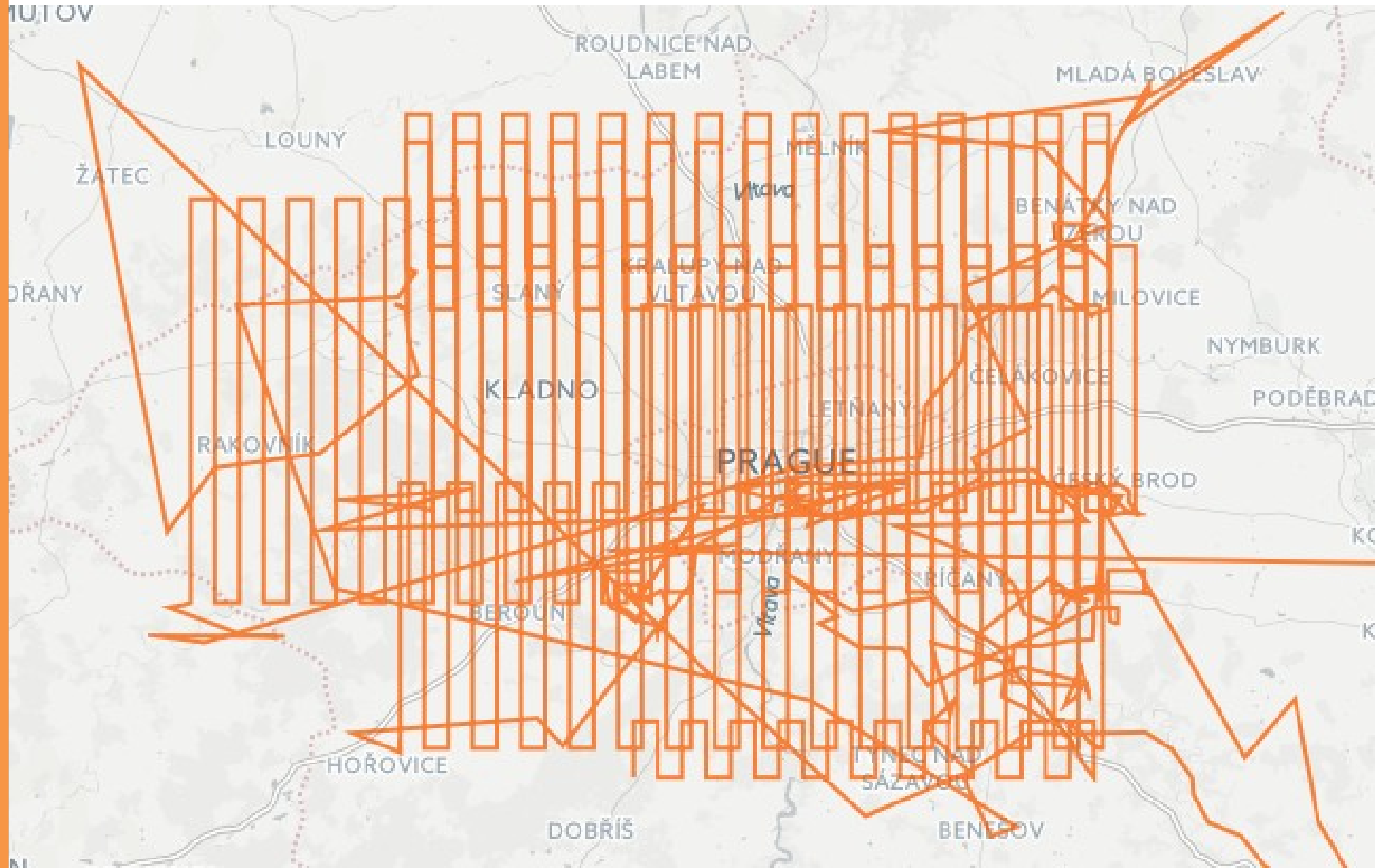
Appendices

(only if asked for!)

What is your user's journey through your map?



Is your user a human or a bot?



No servers, no management, no problem

```
<script> dojoConfig={paths:{maptiks:'https://cdn.maptiks.com/esri3'}};</script>
```

```
<script src="//js.arcgis.com/3.16/"></script>
```

```
<script>  
  require(['maptiks/map', 'dojo/domReady!'], function(Map) {  
    var map = new Map('map', {  
      center: [0, 0],  
      zoom: 2,  
      basemap: 'streets',  
      maptiks_trackcode:'8b9ce22e-ac91-4e95-8e2b-dc5ce440b287',  
      maptiks_id: 'Esri 3 Map'  
    });  
  });  
</script>
```


Don't like code?

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Status: Public
Contributors: Only group owner
Tags: maptiks, templates

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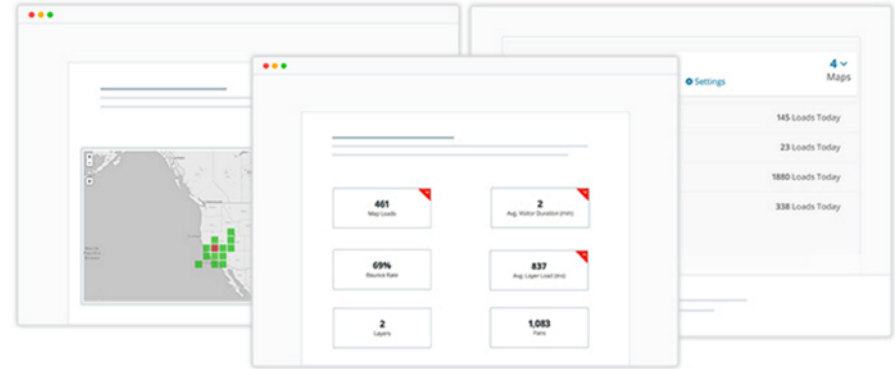
Get Help

Will ▾



Web map analytics

Map views
Bounce rates
Tracks pans, zooms & clicks
Layer load times
Activity heatmaps



Maptiks ★★★★★ (4)

by Sparkgeo

BUY

FREE TRIAL

EDIT

UNPUBLISH

UNLIST

Pricing: \$199/Organization

Overview

Reviews (1)

Provider

Maptiks™ is a simple tool that allows you to track user interactions with ArcGIS Online Web Map Apps. By adding a trackcode to your map, **Maptiks™** tracks visitors and where they click, pan, zoom and move around on your web map.

Track Web Map Visitors:

- User pans
- User zooms
- User clicks

