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

Will Cadell

> sparkgeo.com

MANDITORY CORPORATE OVERLORD SLIDE
At sparkgeo we put your ideas on the map
Summit Lake
Salmon Valley
Willow River
Kakwa Provincial Park
Hutton
ince George
Woodpecker
Hixon
Strathnaver
McBride
Bowron Lake Provincial Park

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.

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?

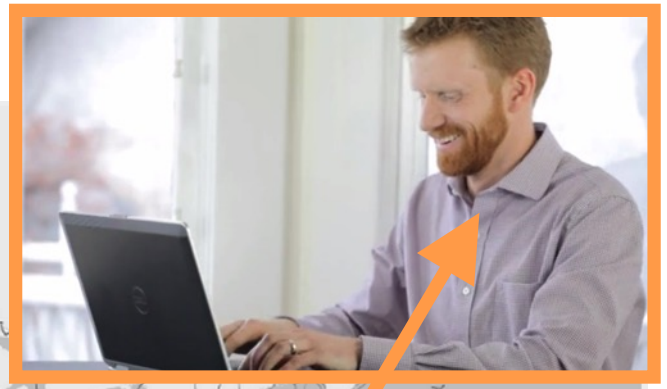
What if data could help us build better maps?

That sounds awesome, but what should we track?

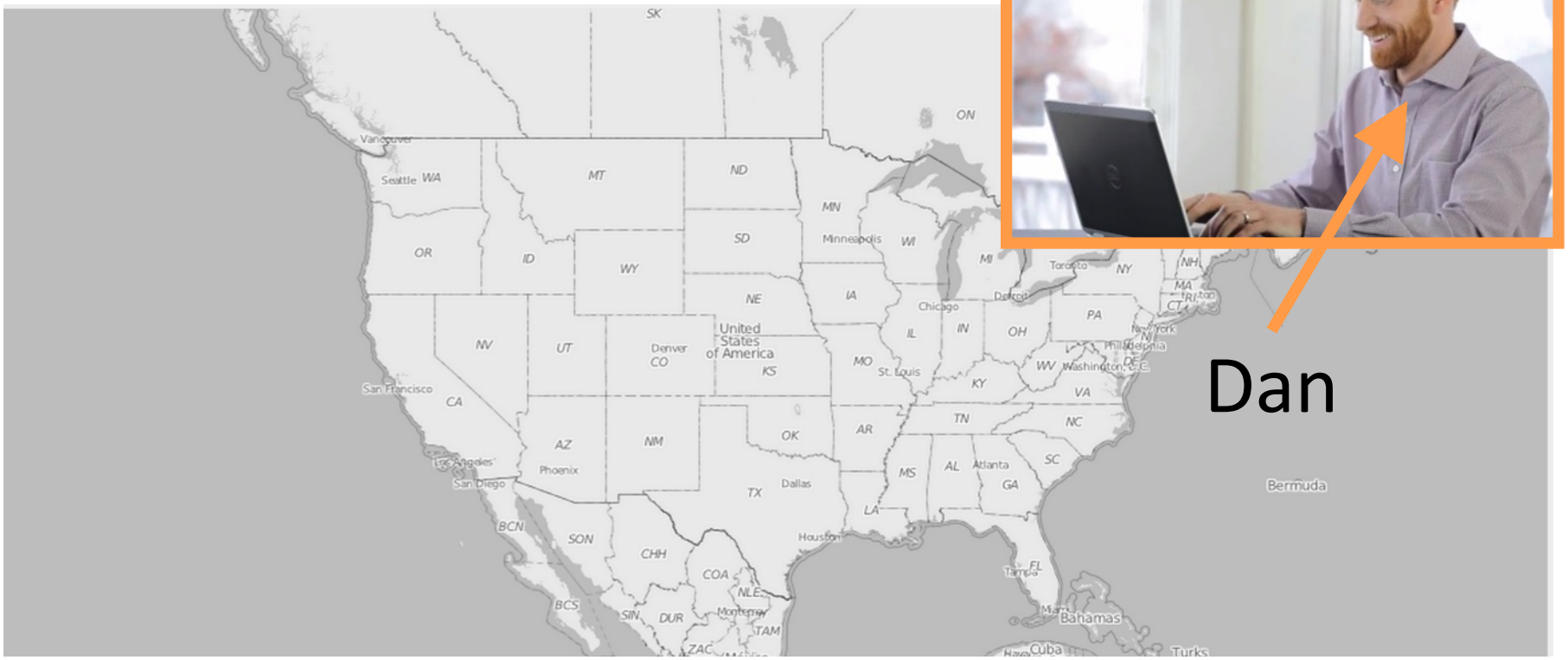
Bounce Rate

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

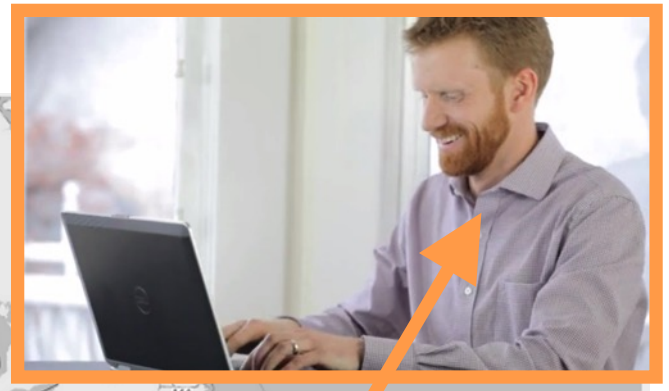
Map Activities



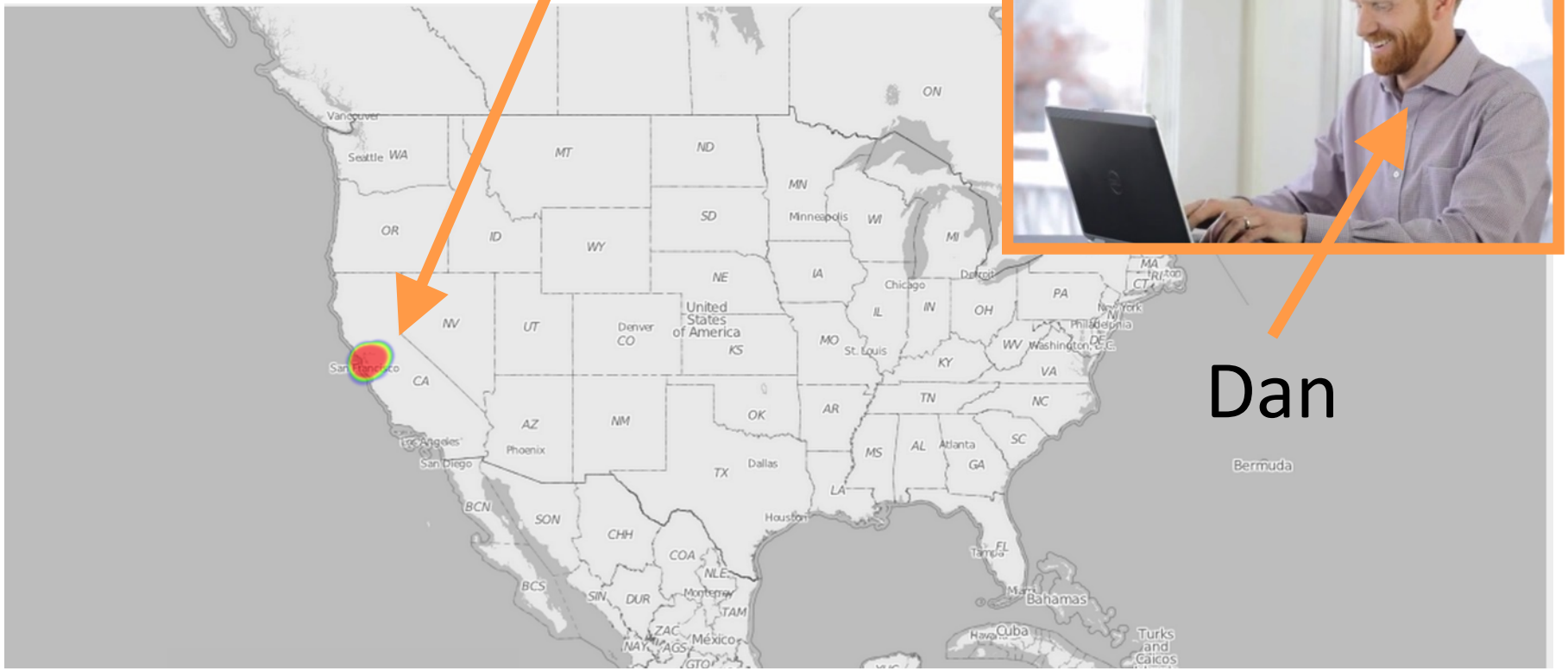
Dan



Dan's Map Activities



Dan



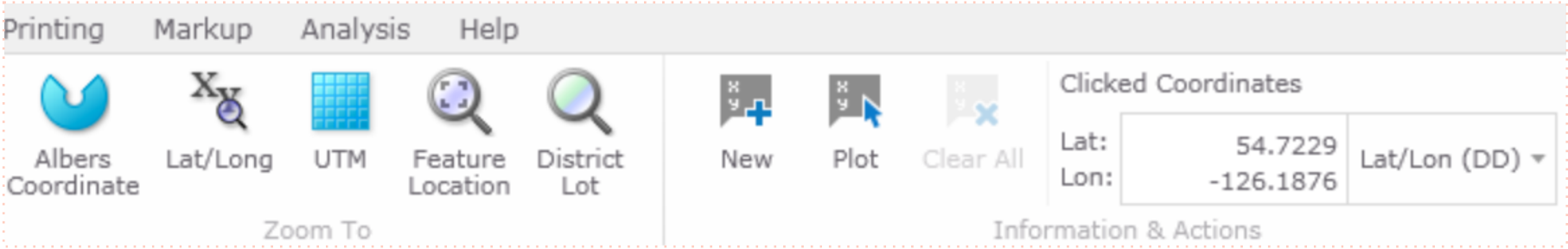
Layer Activities

Monitor layer analytics for new maps

Layer load times

Monitor map health

Sophisticated Toolbar



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>
```

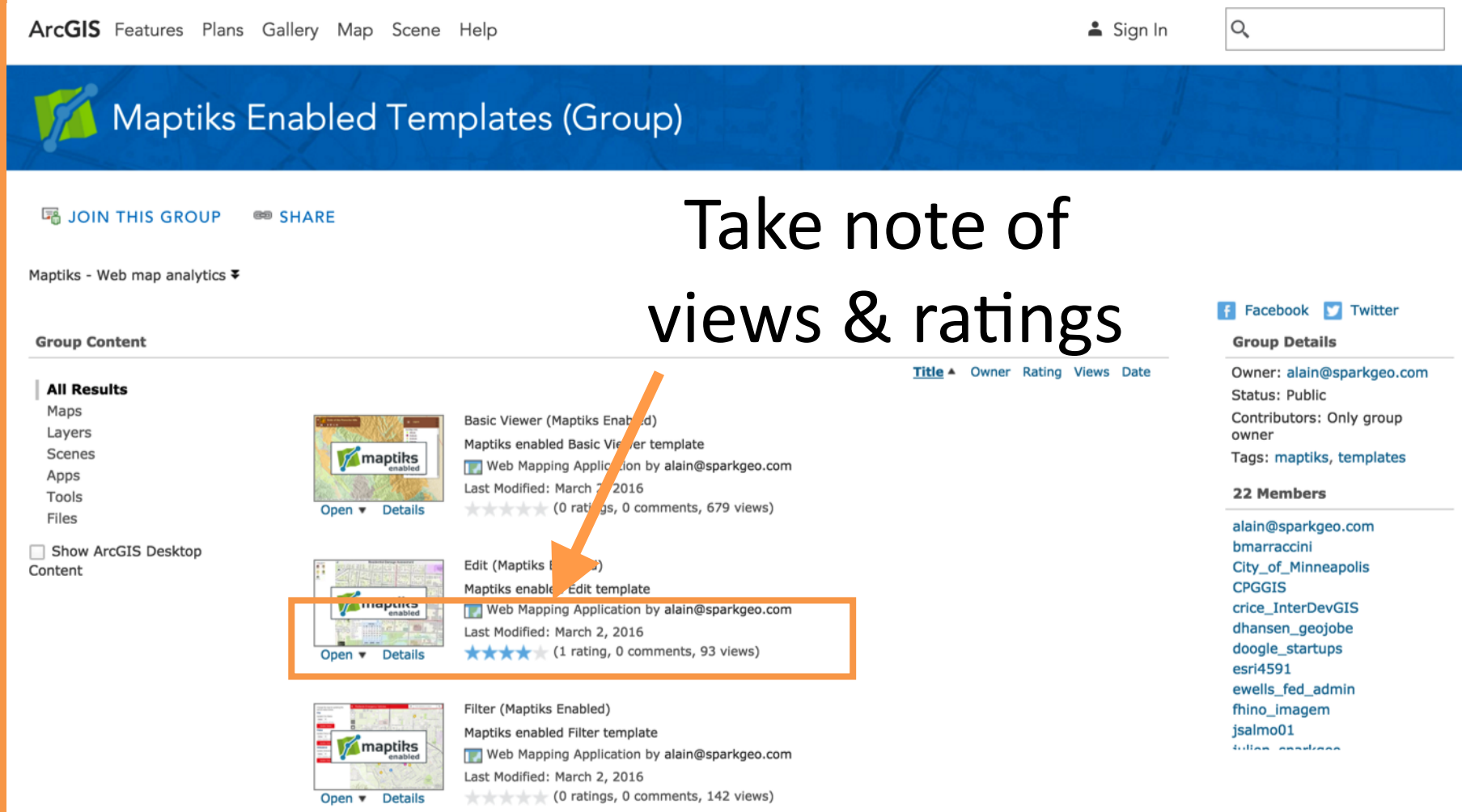
```
<script type="text/javascript">
    var map = L.map("map_canvas", {
        center: [38,-96.55],
        zoom: 4
    });

    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



Road Rehab 2016 - City of Prince George

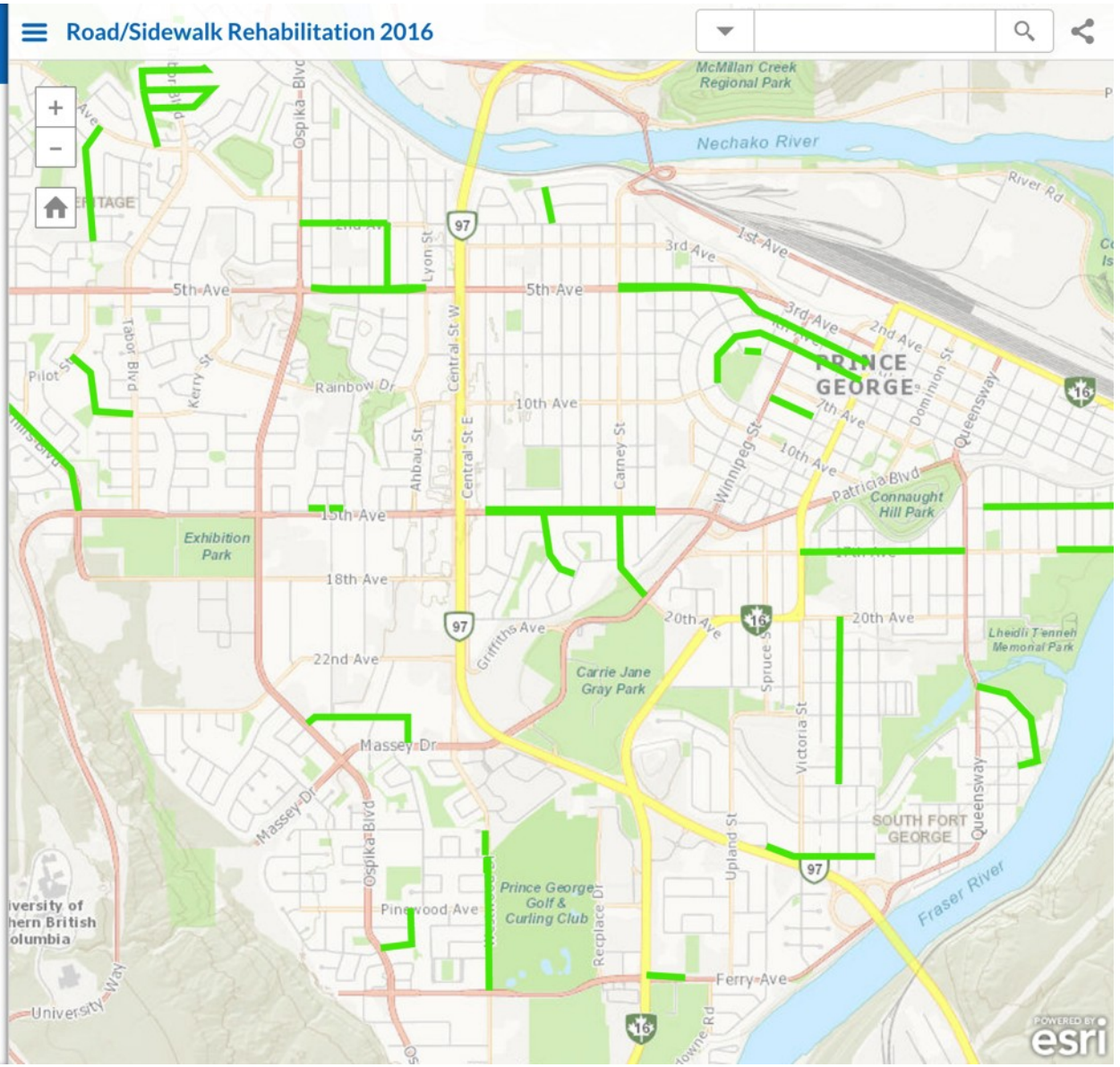
About | Layers

Road/Sidewalk Rehabilitation 2016

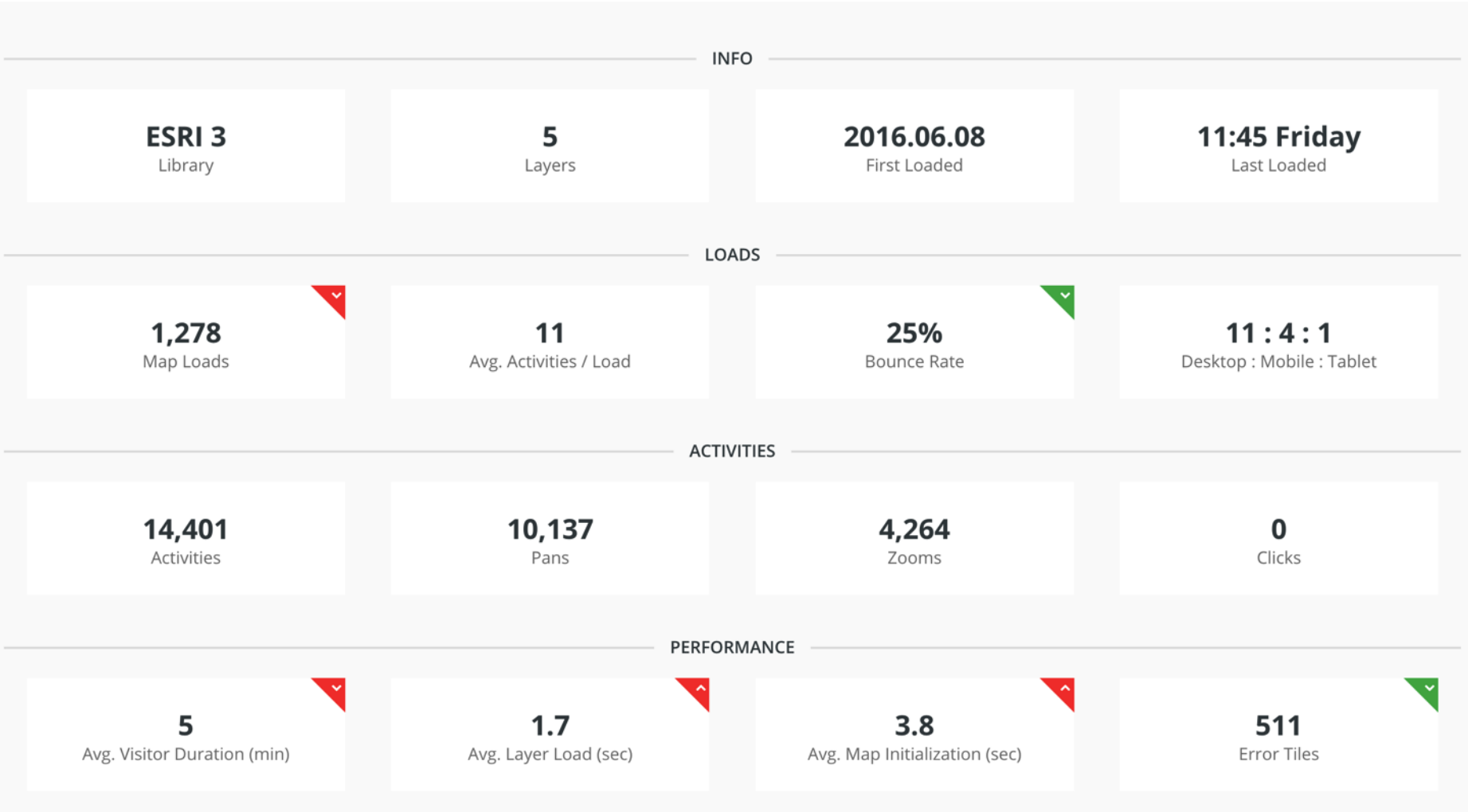
This map displays all of the City of Prince George road and sidewalk rehabilitation activities that have been completed in 2016 and those that remain.

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



Raw Web Map Data



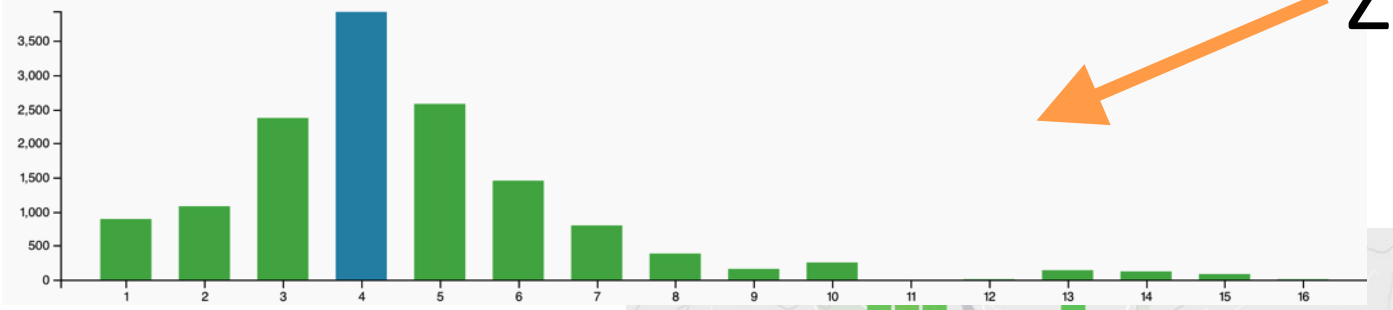
Activity Data

ACTIVITIES

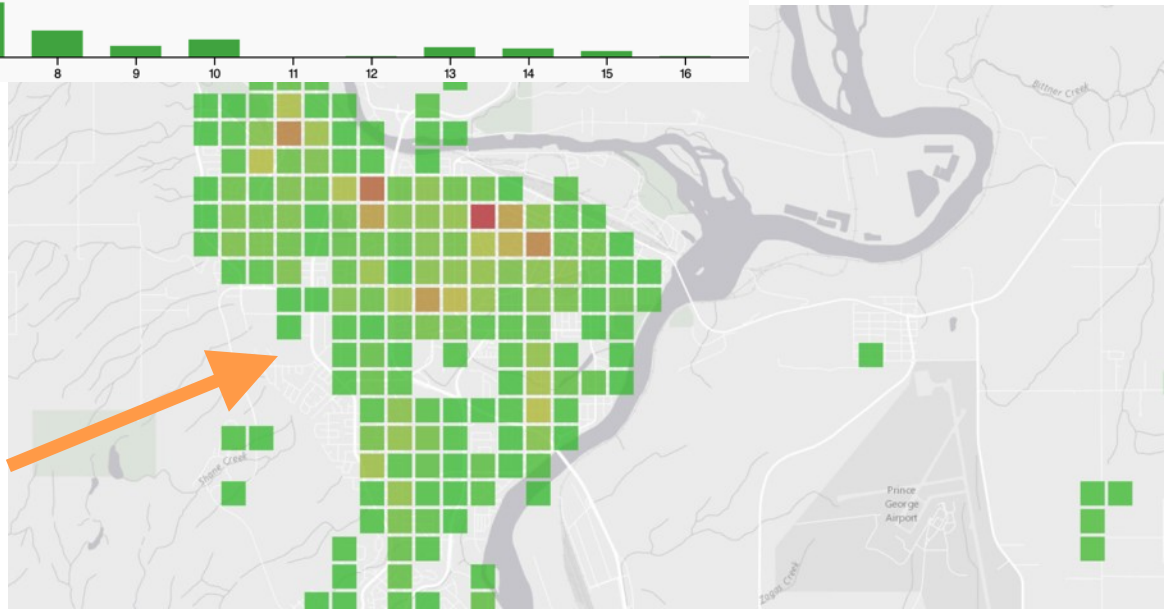
14,401	10,137	4,264
Activities	Pans	Zooms

SHOW ME BY ZOOM LEVEL | SHOW ME EVERYTHING

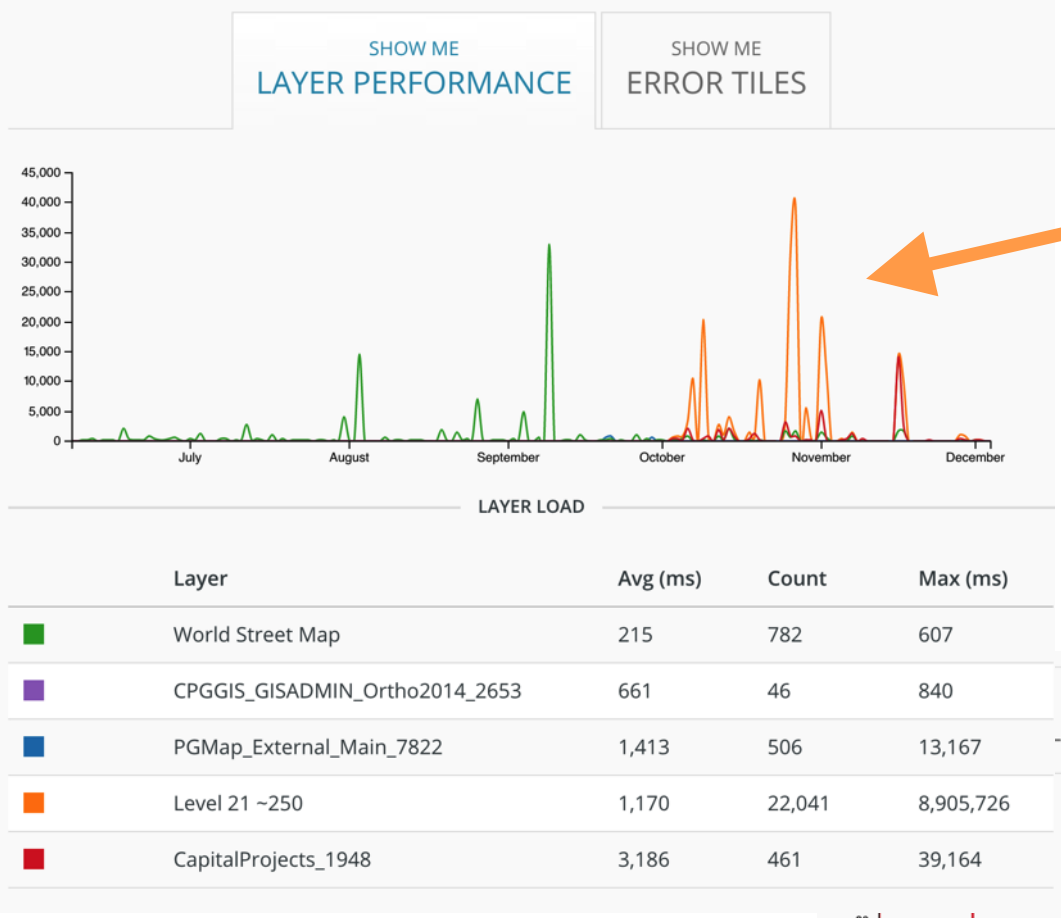
Zoom Data



Geographic Data

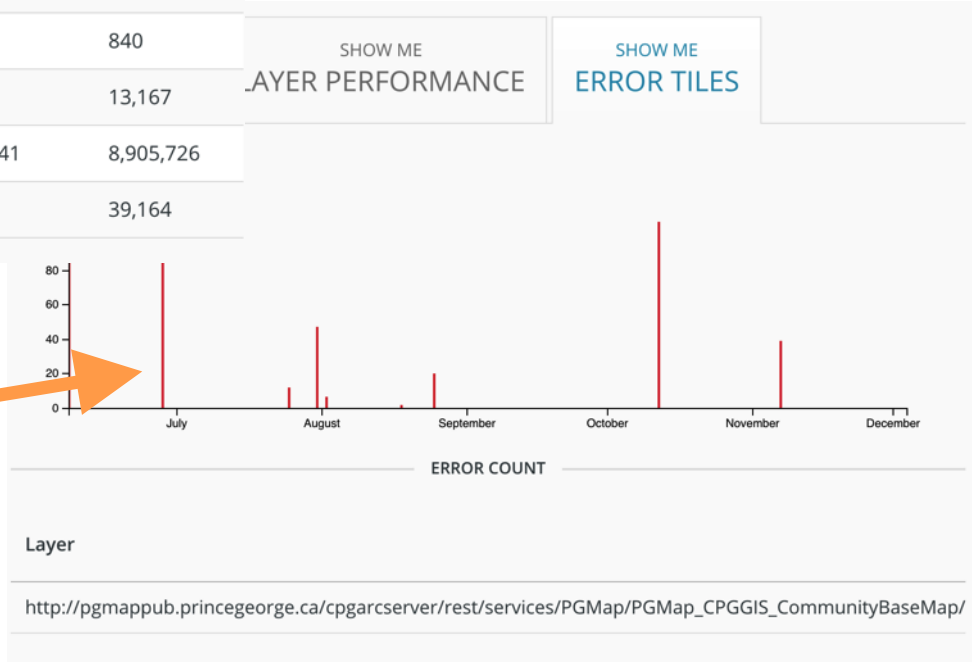


Layer Performance



	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

Error Tiles



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

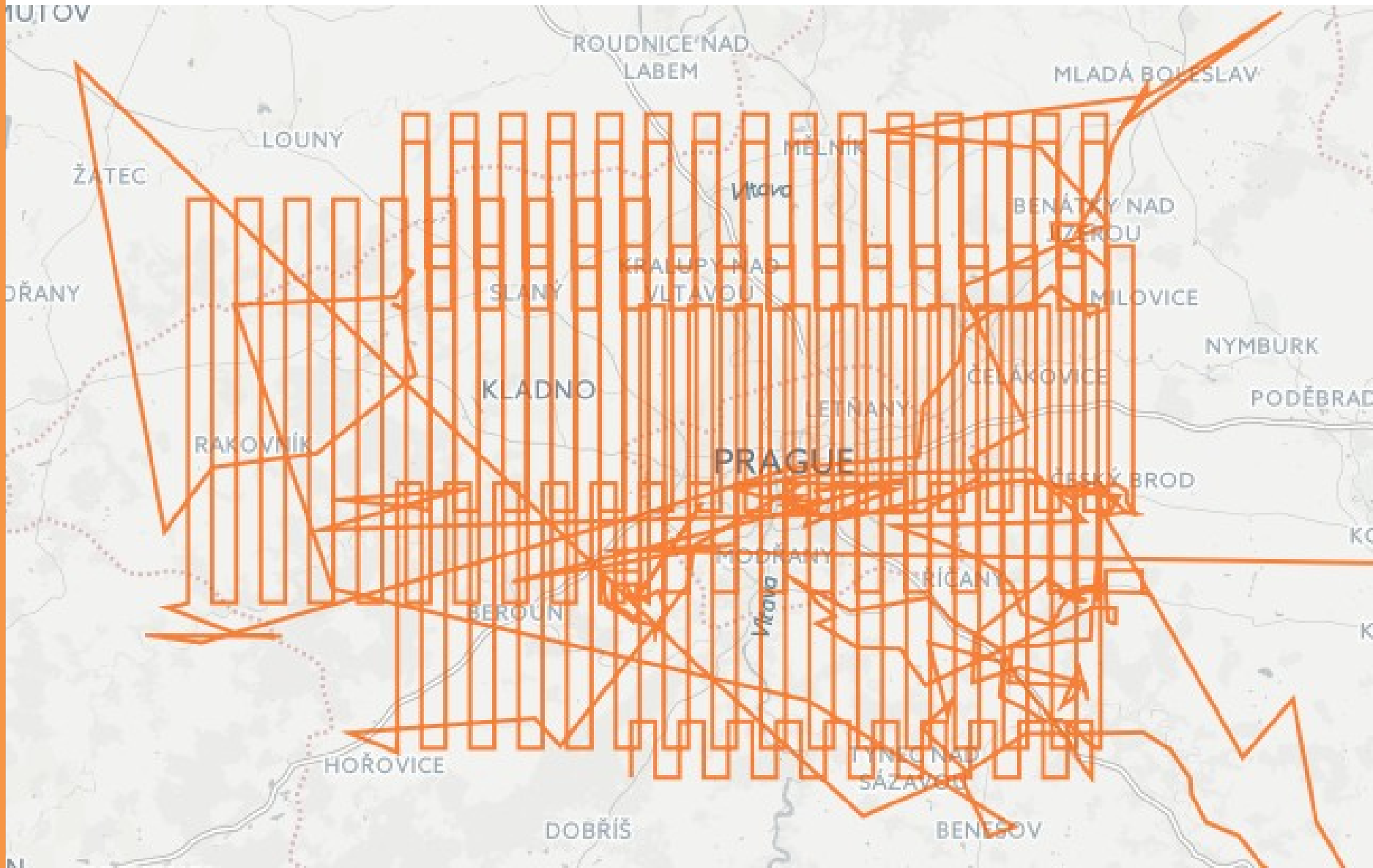
will@sparkgeo.com

Appendices

(only if asked for!)

What is your user's journey though your map?

Is your user a human or a bot?



No servers, no management, no problem

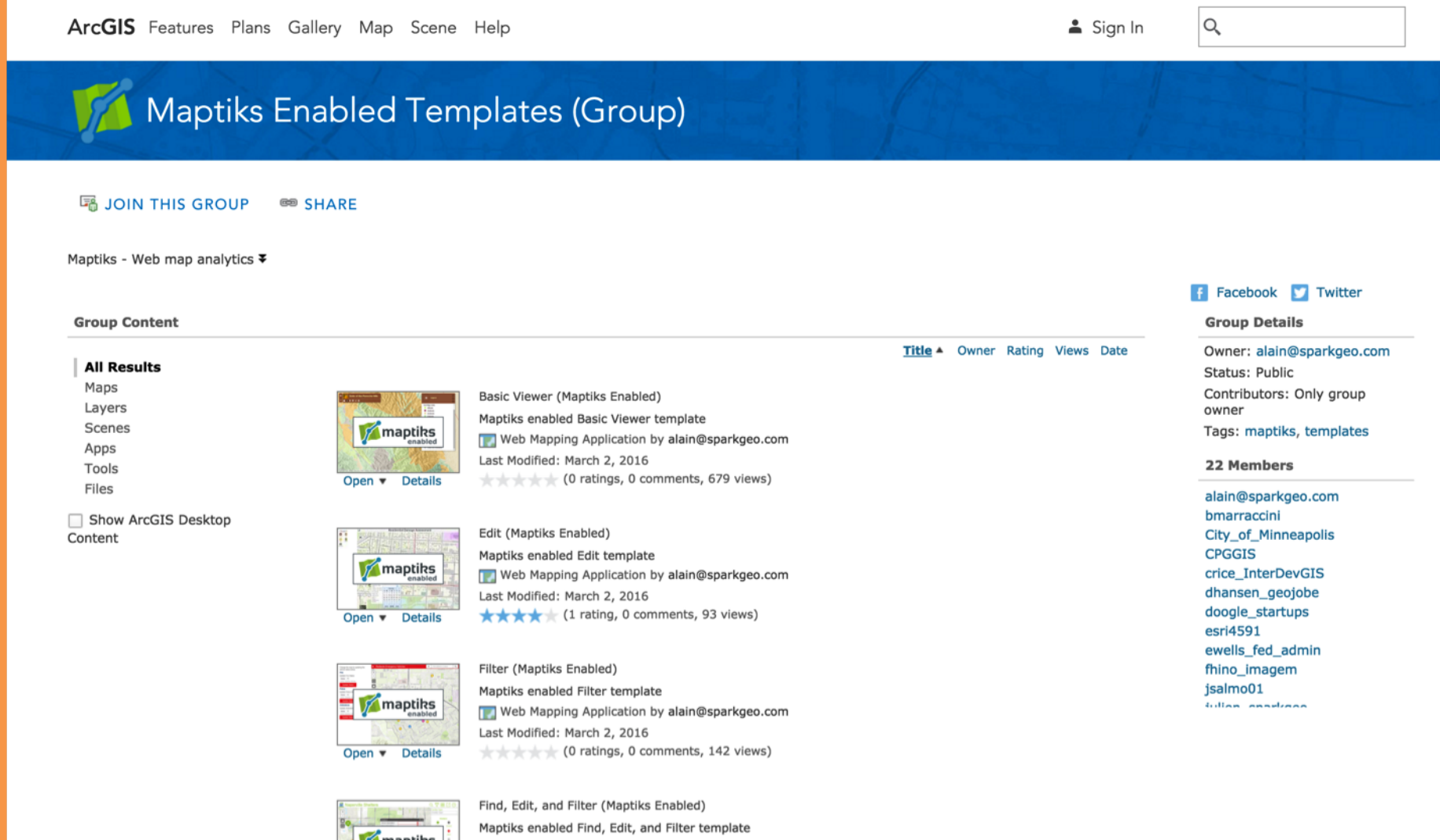
```
<script> dojoConfig={paths:{maptiks:'https://cdn.maptiks.com/esri3'}};</script>

<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?

Use our ArcGIS Online templates



ArcGIS Marketplace

ArcGIS Marketplace ▾ | Search for apps and data | Get Help | Will ▾ | esri

maptiks

Web map analytics

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

Maptiks ★★★★☆ (4)

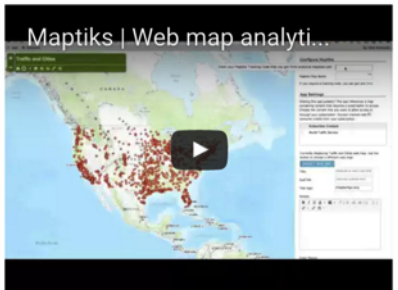
by Sparkgeo

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