



LEAN CIVIC TECH

@abhinemani | CAPP 30130 | University of Chicago



AGENDA

- Case study: healthcare.gov
- Waterfall v Agile (Lean)
- Key takeaways from *The Lean Startup*
- Lean (civic tech) metrics
- Case study: LA's Dashboard
 - Tools and resources to quickly launch a civic app

CIVIC TECH: KEYS TO SUCCESS

Empathy

- ▶ Build with, not for
- ▶ Talk to users
- ▶ Understand behavior
- ▶ Learn what's out there

Lean

- ▶ It's more than just a technical process
- ▶ Expect failure
- ▶ Only build what's necessary
- ▶ Test, test, test

Data

- ▶ Data "lives" everywhere
- ▶ Be ready to scrape
- ▶ Open data is your friend
- ▶ ETLs are your best friend

Users

- ▶ ~~If you build it they will come~~
- ▶ Listen and learn
- ▶ Define metrics
- ▶ Find partners

Sustainability

- ▶ Consider your options: startup, open source, non-profit, academic, etc
- ▶ Tech -> Policy
- ▶ Expect to train everyone
- ▶ Document everything

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MARCH 10, 2014

Ukraine's Future / Minimum-Wage Wars / Wes Anderson

TIME

CODE RED_

Inside the nightmare launch of HealthCare.gov
and the team that figured out how to fix it

BY STEVEN BRILL



time.com

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The preferred method for implementing large technology projects in Washington is to write the plans up front, break them into increasingly detailed specifications, then build what the specifications call for. It's often called the waterfall method, because on a timeline the project cascades from planning, at the top left of the chart, down to implementation, on the bottom right.

-Clay Shirky

Software Development Methodologies



Agile

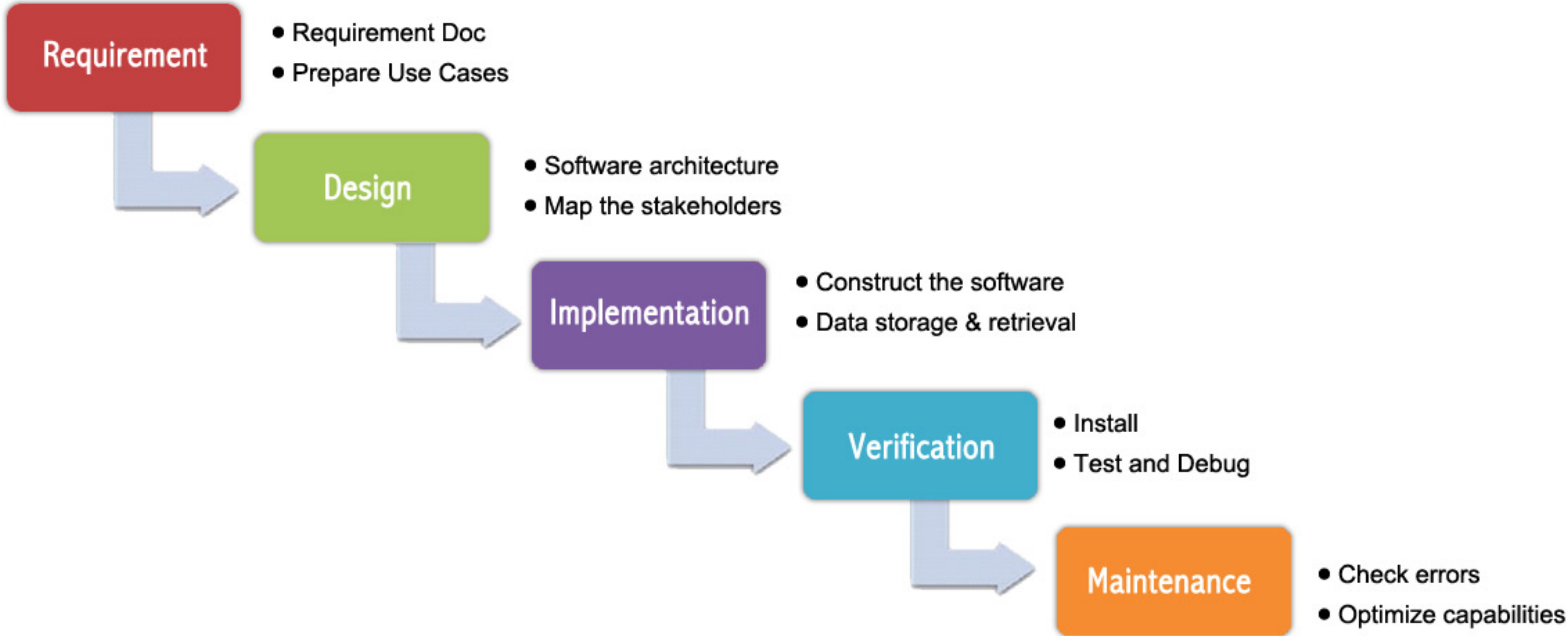
VS



Waterfall

Image Credit: Asahi Technologies

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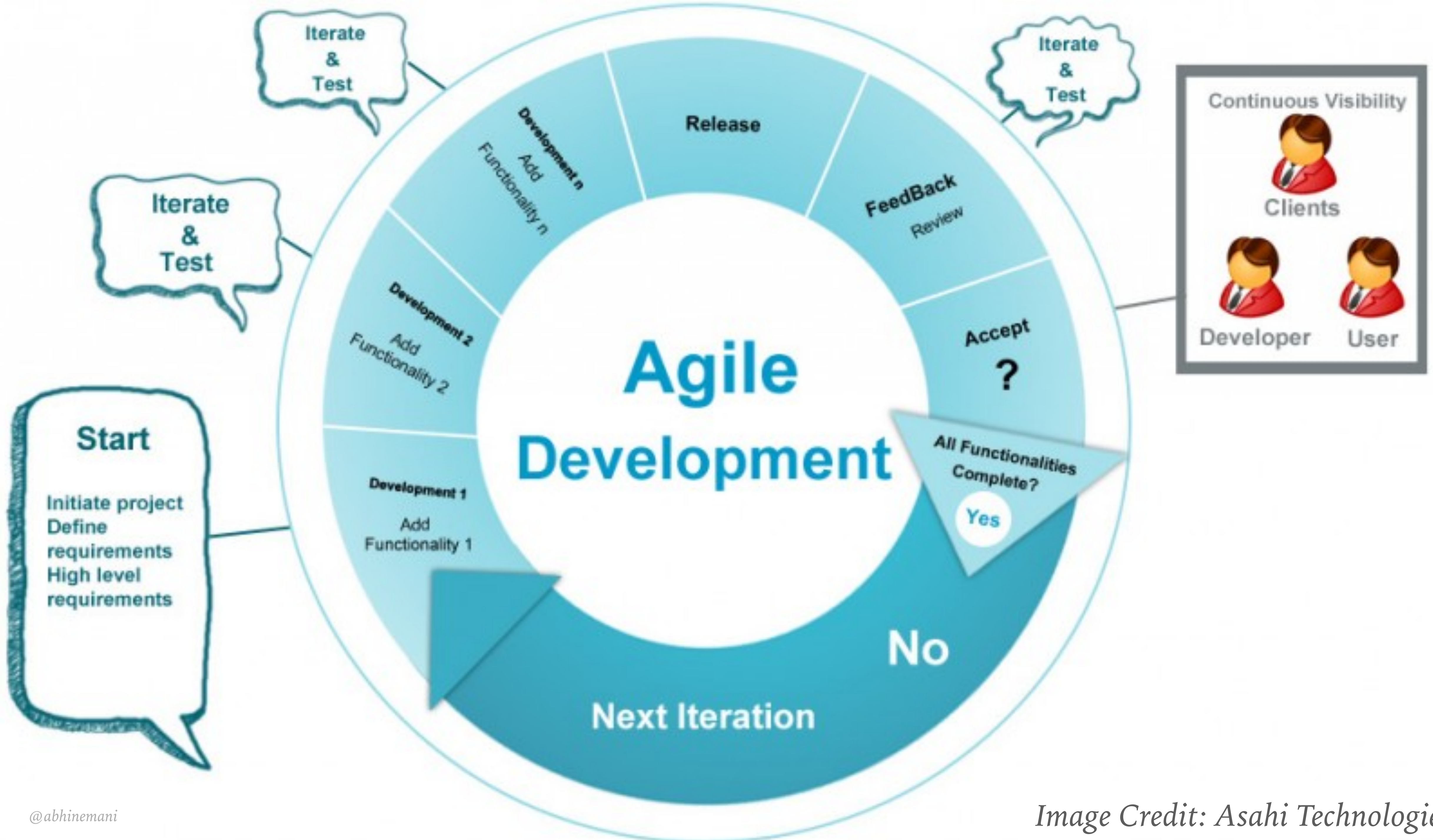


Image credit: VentureBeat



“A startup is a human institution designed to create a new product or service under conditions of extreme uncertainty.” - Eric Ries, The Lean Startup

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**GOVERNMENT OPERATES UNDER
CONDITIONS OF EXTREME UNCERTAINTY.
SO GOVERNMENT, LIKE A STARTUP,
SHOULD BE LEAN.**

There's much more...



KEYS TO LEAN (CIVIC) TECH

- Concierge “technology”
 - Technology is expensive, especially in government
 - Fake it, until you make it
- MVP & Iterate
 - Start with the minimally viable product (MVP)
 - Always be learning
 - Build. Measure. Learn.
- Pivots
 - Expect to fail (and make sure everyone knows it)
- Avoid “vanity metrics”
 - Measure what matters
 - Good metrics assess impact (which is hard)



DENVER'S PEAK ACADEMY

- Trains and collaborates with government employees to improve the customer and employee experience
- Housed in the budget office
 - Puts a focus on impact: savings
- Nearly every agency has participated
 - Mayor participated, giving an entire week to be trained, setting an example
- How they evaluate the program: savings, people trained, and agencies involved



LEAN METRICS FOR PIRATES

And how to use them in civic tech

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AARRR – DAVE MCLURE

- Acquisition
 - User comes
- Activation
 - User doesn't leave
- Retention
 - User comes back
- Referral
 - User tells people
- Revenue
 - User gives you “money”



AARRR – DAVE MCLURE

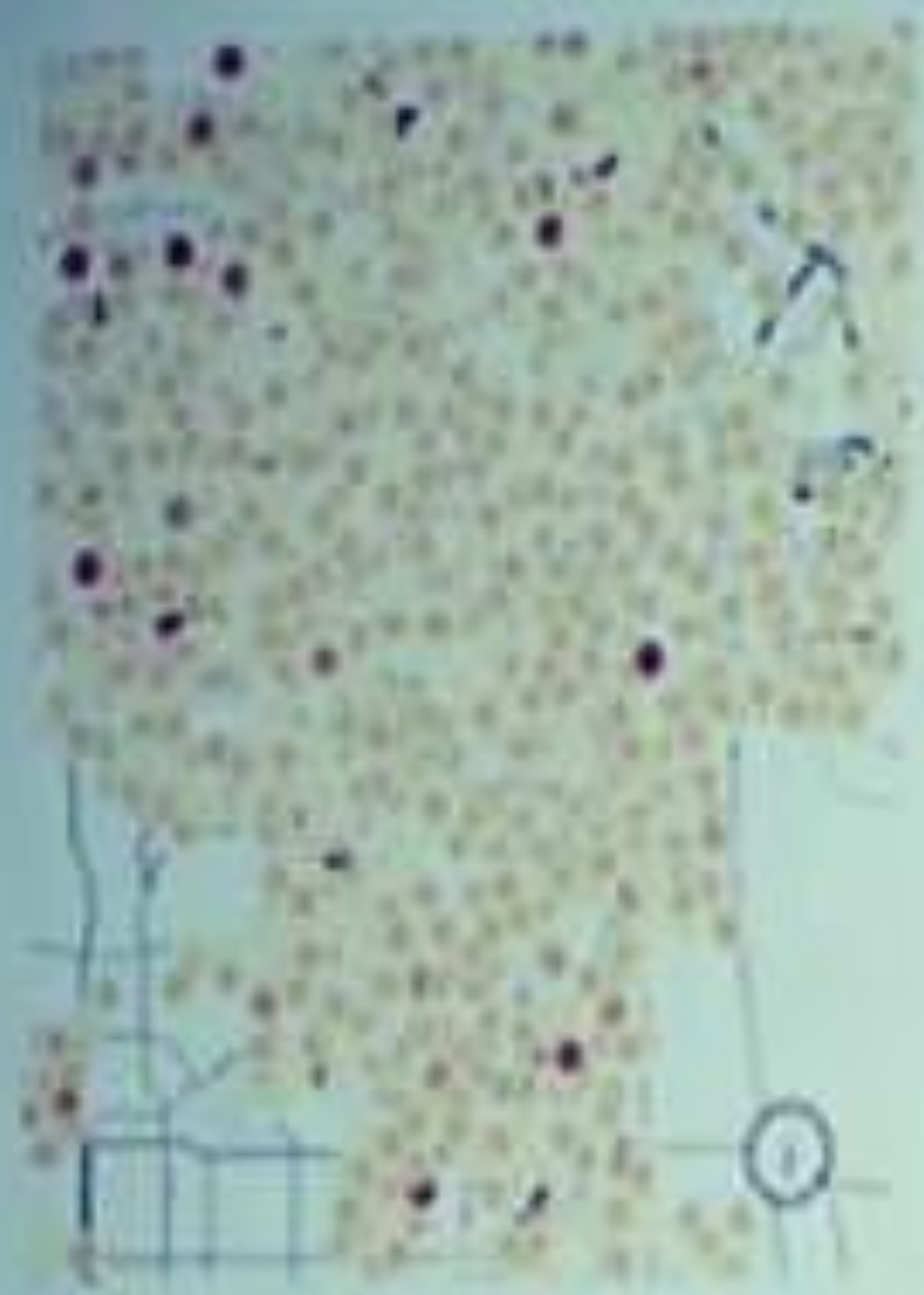
- Acquisition
 - Direct marketing
- Activation
 - Good product
- Retention
 - Email / message
- Referral
 - Viral marketing
- Revenue
 - Impact?
 - Example: Cost savings, program enrollment, time saved
 - Impact metrics should match or could inform policy



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CASE STUDY: LA DASHBOARD






DWP Call Wait...




@abhinav





Transit-Oriented New Housing
43
% of new units

Detail >

Rent-Burdened Households
61.5
%

Detail >

Average Daily VMT Per Capita
14.7
miles

Detail >

Walk, Bike, and Transit
26
% of all trips

Detail >

Shared Transportation
0.9
% of all trips

Detail >

Green Job Growth
4,727
new green jobs


Detail >

Green Investment
49.8M
dollars

Detail >

Unemployment Rate Gap
0.6
%

Detail >


Zero-Emissions Vehicles
0.6
% of vehicles

Detail >


Childhood Asthma
31.4
ER visits


Detail >

Food Access
414,384
residents

Detail >


CalEnviroScreen
190
census tracts

Detail >

LARiver Public Access
13.3
miles

Detail >

Residents within 1/2 mile of a park
54.1
%

Detail >

Urban Agriculture Sites
494
sites


Detail >

Walk Score
64
points

Detail >

MPLE

Water Use at Municipal Facilities
16,099
AFY

Detail >

Municipal GHG Emissions
772,696
mtCO2e

Detail >

LIVABLE CITY



DWP CALL CENTER AVERAGE WAIT TIME = 10 MINUTES (TARGET IS 3 MINUTES)



\$3BILLION = MONEY RAISED FOR MTA PROJECTS



GALLONS OF WATER PER CAPITA USED DAILY = 136 GALLONS (TARGET IS 117)



76.40% DIVERSION RATE FY 13-14 (NO CHANGE FOR LAST THREE FY'S)



~~LIBRARY WEB TRAFFIC~~ = 1,954,808 VISITORS IN AUGUST (2% DECREASE FROM JULY)



87.7 MILES OF MTA RAIL NETWORK
3,700 MILES OF MTA BUS NETWORK (BOTH METRO & METRO CONTRACTED LINES)



NUMBER OF GREAT STREETS CULTURAL / ART EVENTS = 3 IN THE MONTH OF OCT.



5.5% DECREASE IN WEEKDAY TRANSIT BOARDINGS (TARGET IS 2% INCREASE PER YEAR)



NUMBER OF COLLISIONS = 36,874 YTD (3.1% INCREASE FROM 2013)



932 LANE MILES PAVED FYTD = 38% OF FY GOAL

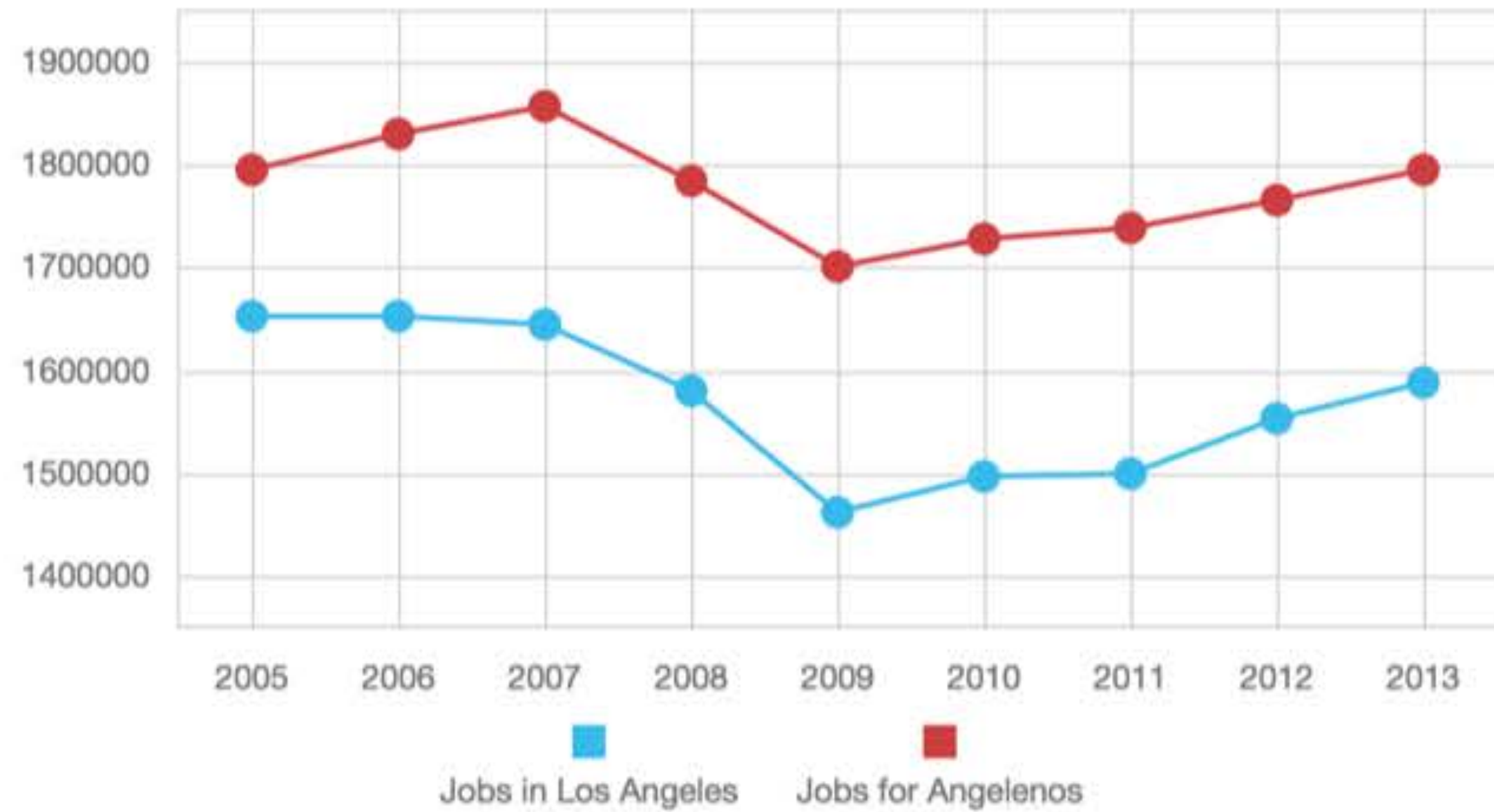


3.9 SIDEWALK MILES REPAIRED FY13-14 (NO SIDEWALK CONSTRUCTION THIS FY)

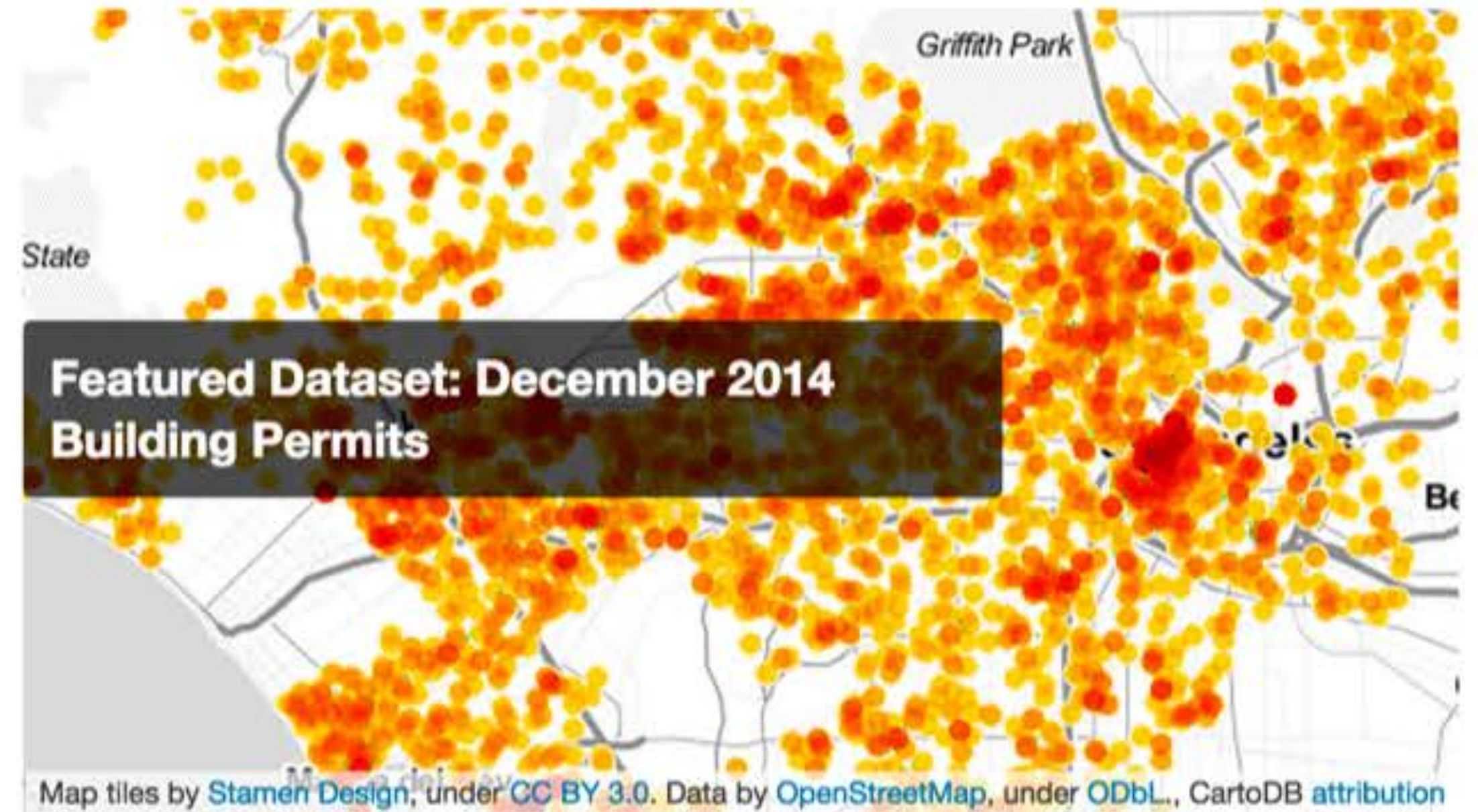


1,140 LED LIGHT REPLACEMENTS FYTD = 15% OF 7,500 LED LIGHT TARGET

Job Growth



Building Permits

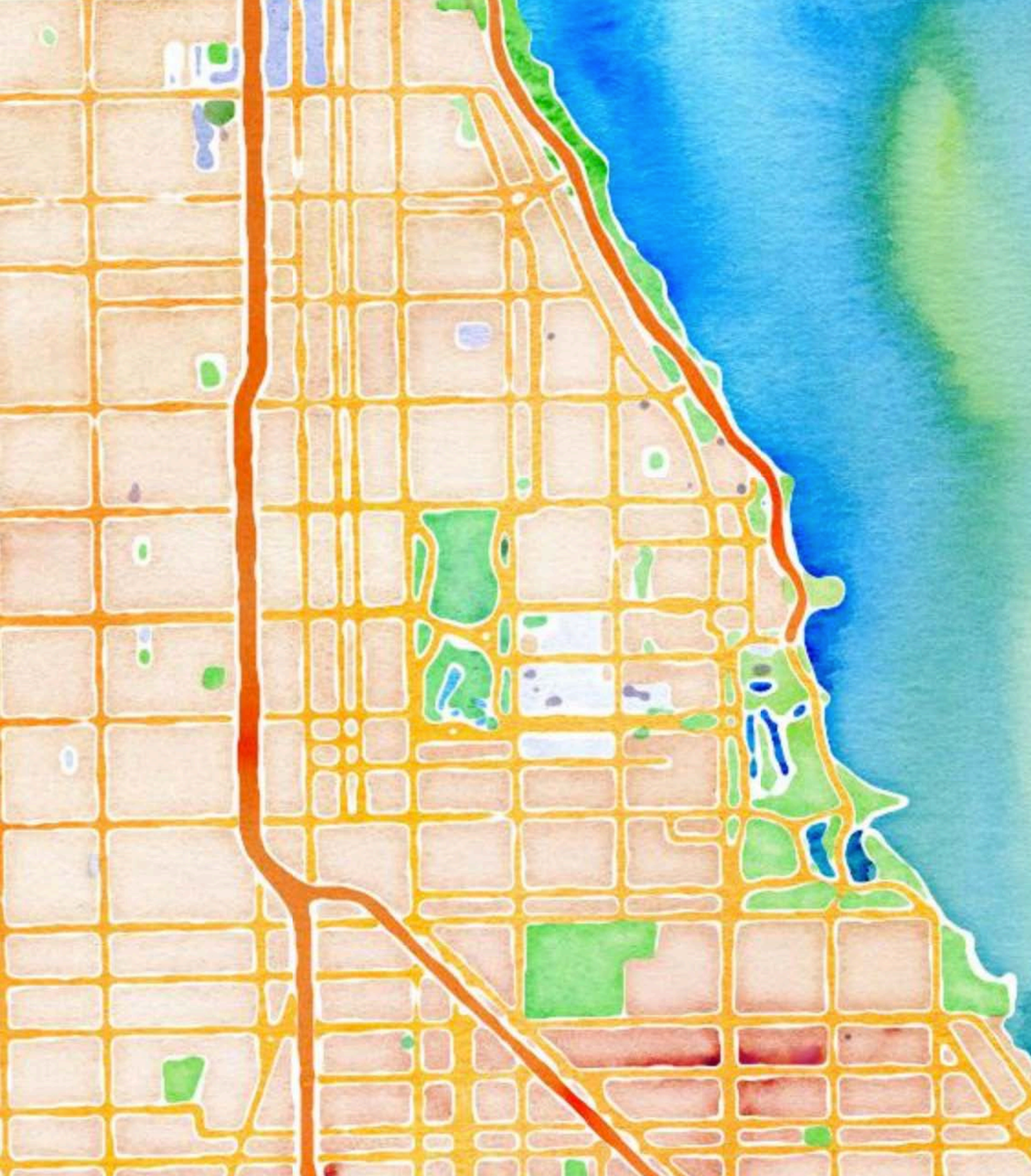


NEW PAYROLL JOBS
74,022
 DEC | SINCE: 7/1/2013
 Goal: 120,000 by FY17

JOBS IN LOS ANGELES
1,614,435
 DEC | Y.O.Y.: 1.80%
 Goal: 1,653,776

JOBS FOR ANGELENOS
1,854,581
 DEC | Y.O.Y.: 3.30%
 Goal: 1,865,901

EMPLOYMENT GROWTH Y.O.Y. COMPARED TO CA
0.70%
 DEC | Y.O.Y.: N/A
 Goal: Maintain growth above CA rate



HOW?

- CSS
- Github Pages
- Sheetsee
- Jekyll

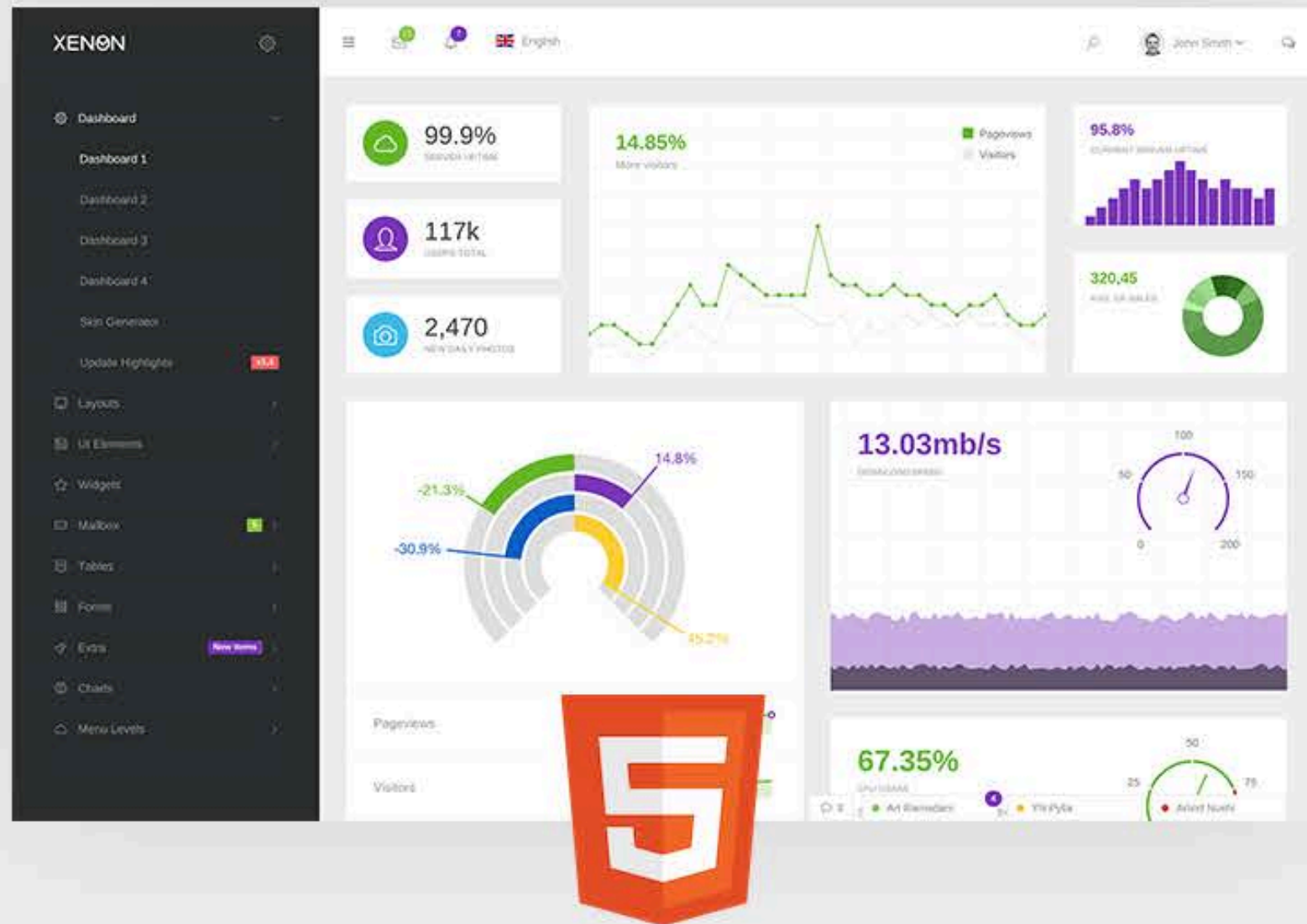


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CSS / HTML TEMPLATES

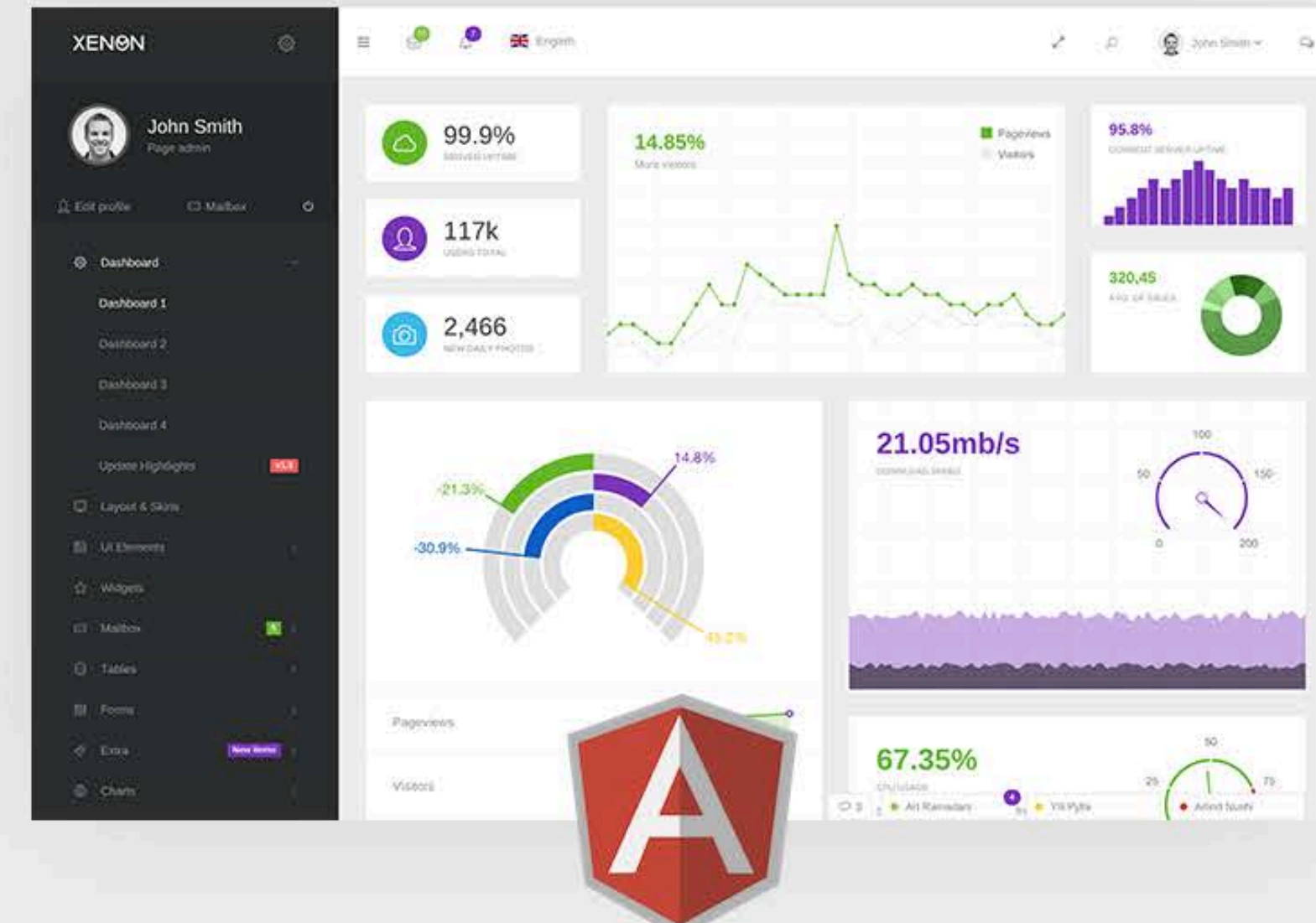
Build v Buy





Plain HTML

Basic HTML implementation
All pages are provided in static context

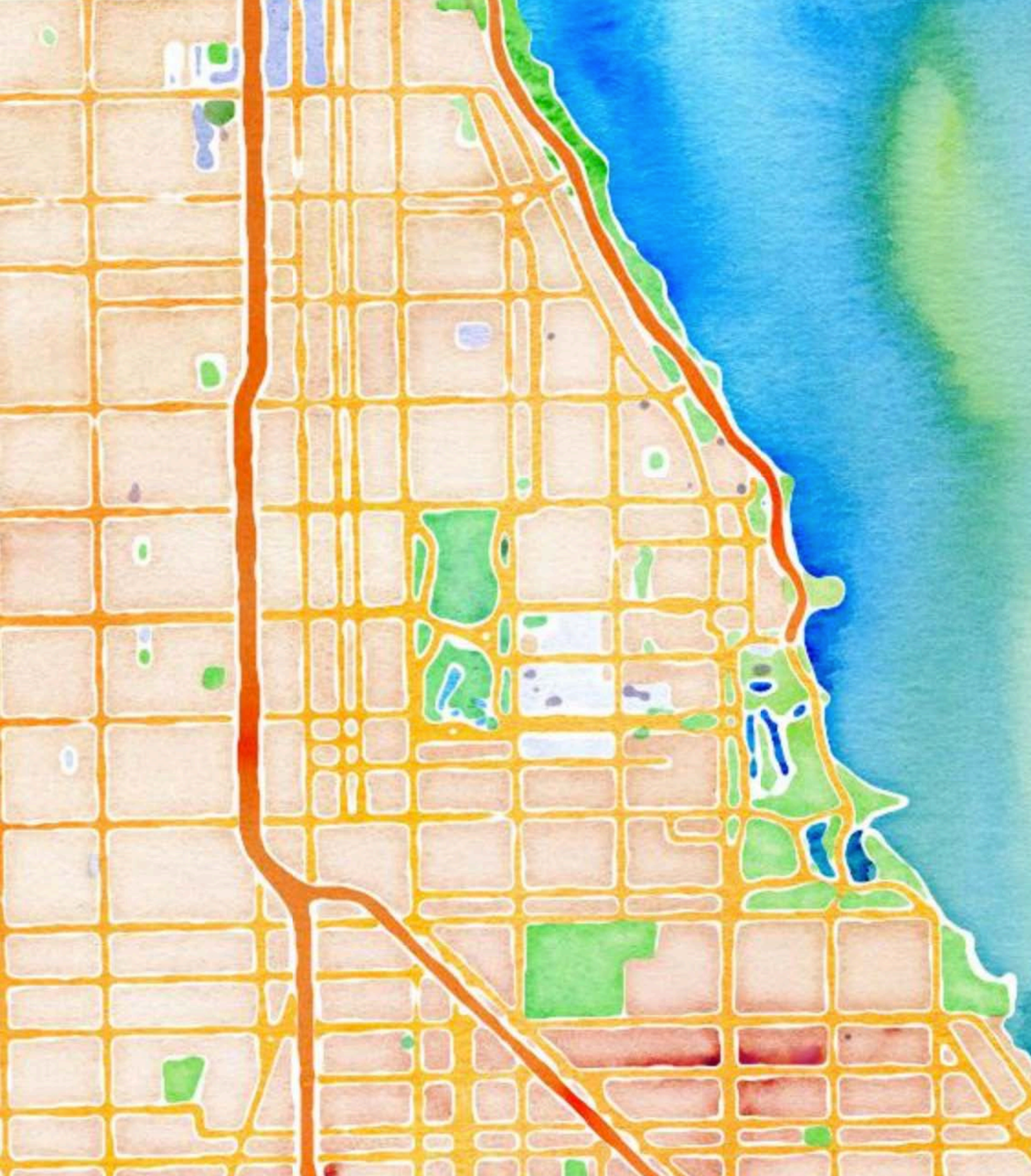


AngularJS

Integrated inside JavaScript MVC framework
Web application built with AngularJS platform

Purchase Xenon for \$25

or Buy Extended License (33% discount)



CSS TEMPLATES

- ▶ Free
 - ▶ Bootstrap
 - ▶ Foundation
- ▶ Paid
 - ▶ Themeforest

```
1 <head>
2   <meta charset="utf-8">
3   <meta http-equiv="X-UA-Compatible" content="IE=edge">
4   <meta name="viewport" content="width=device-width, initial-scale=1">
5
6   <title>{% if page.title %}{{ page.title }} - {% endif %}{{ site.title }}</title>
7   <meta name="description" content="{% if page.excerpt %}{{ page.excerpt | strip_html | strip_newlines | truncate: 160 }}{% else %}{{ site.description }}{%
8   endif %}">
9
10  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css"
11  integrity="sha384-1q8mTJOASx8j1Au+a5WDVnPi2lkFfwwEAa8hDDdjZlpLegxhjVME1fgjWPGmkzs7" crossorigin="anonymous">
12  {% assign theme_name = site.jkan_theme | default: 'Default' %}
13  {% assign theme = site.data.themes | where:'name', theme_name | first %}
14  {% if theme and theme.src and theme.src != empty %}
15    <link rel="stylesheet" href="{{ theme.src }}">
16  {% endif %}
17
18  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/font-awesome/4.5.0/css/font-awesome.min.css">
19  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/select2/4.0.2/css/select2.min.css">
20  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/notie/3.0.0/notie.min.css">
21  <link rel="stylesheet" href="{{ site.baseurl }}/css/main.css">
22
23  {% if site.digital_analytics_program.enabled == true %}
24    <!-- US Digital Analytics Program - see https://analytics.usa.gov for data-->
25    <script id="_fed_an_ua_tag" src="https://dap.digitalgov.gov/Universal-Federated-Analytics-Min.js?agency={{ site.digital_analytics_program.agency
26    }}&subagency={{ site.digital_analytics_program.subagency }}"></script>
27  {% endif %}
28
29  {% if site.google_analytics.enabled == true %}
30    <!-- Google Analytics -->
31    {% include addons/google-analytics.html %}
32  {% endif %}
33
34  {% if site.hypothesis.enabled == true %}
35    <!-- Hypothesis.io -->
36    <script async defer src="//hypothes.is/embed.js"></script>
37  {% endif %}
```

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```
1 <head>
2   <meta charset="utf-8">
3   <meta http-equiv="X-UA-Compatible" content="IE=edge">
4   <meta name="viewport" content="width=device-width, initial-scale=1">
5
6   <title>{% if page.title %}{{ page.title }} - {% endif %}{{ site.title }}</title>
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8   endif %}">
9
10  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css"
11  integrity="sha384-1q8mTJOASx8j1Au+a5WDVnPi2lkFfwwEAa8hDDdjZlpLegxhjVME1fgjWPGmkzs7" crossorigin="anonymous">
12  {% assign theme_name = site.jkan_theme | default: 'Default' %}
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15    <link rel="stylesheet" href="{{ theme.src }}">
16  {% endif %}
17
18  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/font-awesome/4.5.0/css/font-awesome.min.css">
19  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/select2/4.0.2/css/select2.min.css">
20  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.5.0/css/font-awesome.min.css">
21  <link rel="stylesheet" href="{{ site.baseurl }}/css/main.css">
22
23  {% if site.digital_analytics_program.enabled == true %}
24    <!-- US Digital Analytics Program - see https://analytics.usa.gov for data-->
25    <script id="_fed_an_ua_tag" src="https://dap.digitalgov.gov/Universal-Federated-Analytics-Min.js?agency={{ site.digital_analytics_program.agency
26    }}&subagency={{ site.digital_analytics_program.subagency }}"></script>
27  {% endif %}
28
29  {% if site.google_analytics.enabled == true %}
30    <!-- Google Analytics -->
31    {% include addons/google-analytics.html %}
32  {% endif %}
33
34  {% if site.hypothesis.enabled == true %}
35    <!-- Hypothesis.io -->
36    <script async defer src="//hypothes.is/embed.js"></script>
37  {% endif %}
```

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div.jumbotron 1140 x 301



Browse by Category

Elements Console Sources Network Performance Memory Application Security Audits AdBlock

```

<head>...</head>
<body>
  <nav class="navbar navbar-default" data-component="navigation">...</nav>
  <section data-hook="main" class="container">
    <div class="jumbotron">
      <h1>Welcome to JKAN</h1>
      <p>
        A lightweight, backend-free open data portal, powered by Jekyll.
      </p>
      <p>...</p>
    </div>
    <h3>Browse by Category</h3>
    <div class="homepage-categories">...</div>
  </section>

```

Styles Computed Event Listeners >>

Filter :hov .cls +

```

element.style {
}
@media screen and (min-width: 768px)
.container .jumbotron,
.container-fluid .jumbotron
{
  padding-right: 60px;
  padding-left: 60px;
}
.container-fluid .jumbotron {
  padding-right: 15px;
  padding-left: 15px;
  border-radius: 6px;
}

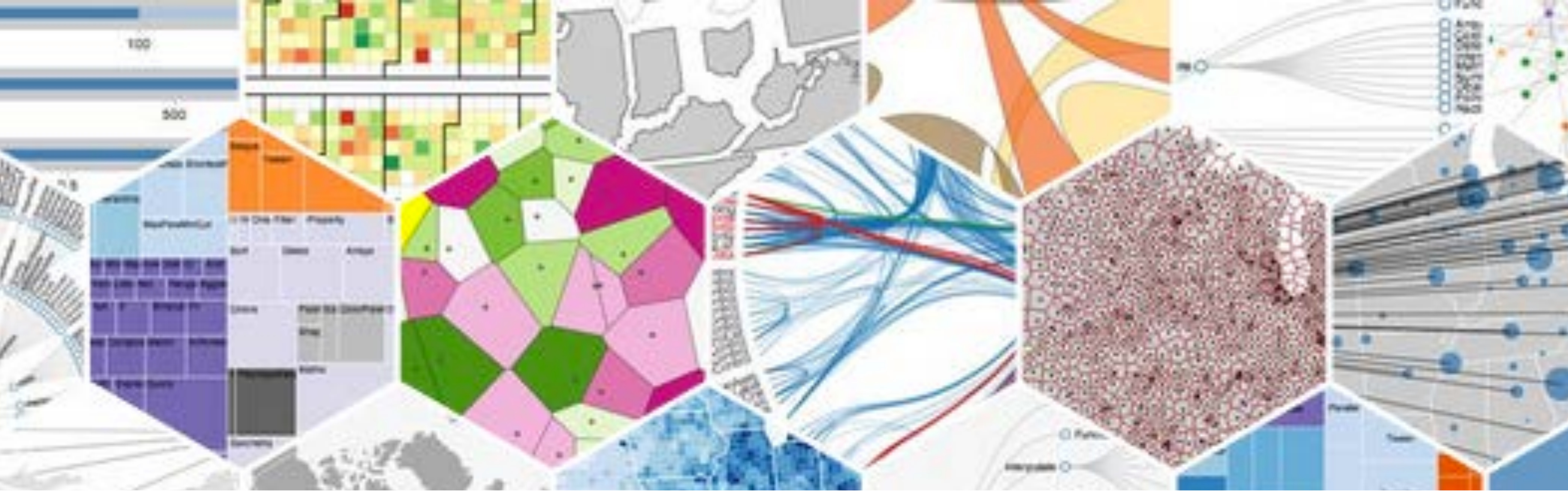
```

html body section.container div.jumbotron

CSS 101

- CSS is basically WYSIWYG
 - Inspect Element
- Most CSS frameworks rely on grid systems
 - Read Ellen Lupton's *Thinking with Type*
- CSS is rendered in order
 - Don't edit template files; add new customizations (eg custom.css)
- Watch for / think about @media tags for responsiveness
- Resources
 - <https://www.w3schools.com>
 - <https://multimedia.journalism.berkeley.edu/tutorials/css-intro/>


```
▼ <div class="xe-widget xe-progress-counter xe-progress-counter-red">
  ▶ <div class="xe-background">...</div>
  ▼ <div class="xe-upper">
    ▼ <div class="xe-icon">
      ▼ <i class="linecons-wallet">
        ::before
      </i>
    </div>
    ▼ <div class="xe-label">
      <span>Median income</span>
      <strong class="num">$34,800</strong> == $0
    </div>
  </div>
  ▼ <div class="xe-progress">
    <span class="xe-progress-fill" data-fill-to="20" data-fill-unit="%" length data-fill-duration="3" data-fill-easing="true" style="width: %;">
    </span>
  </div>
  ▼ <div class="xe-lower">
    ▼ <strong>
      ▼ <a href class="disabled">
        <i class="fa-bar-chart"></i>
      </a>
      ▼ <a href class="disabled">
        <i class="fa-map-marker"></i>
      </a>
      ▼ <a href class="disabled">
        <i class="fa-database"></i>
      </a>
      ▼ <a href class="disabled">
        <i class="fa-check-square-o"></i>
      </a>
    </strong>
  </div>
  "
```



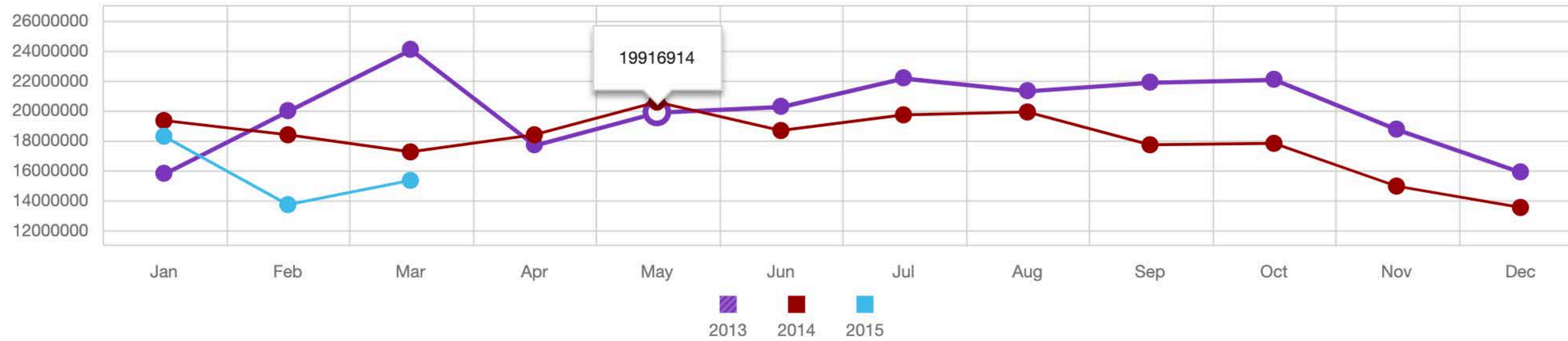
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D3

Chart, graph, visualize: <https://d3js.org/>



Municipal Water Use



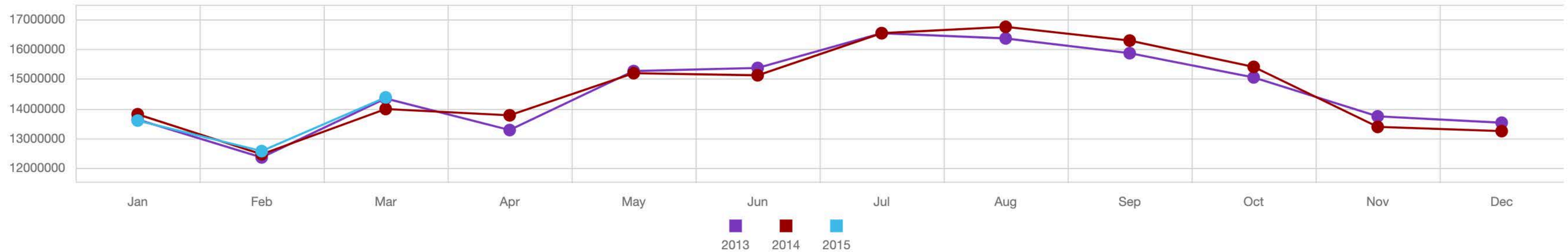
Goals for Improvement

- Low-Flow Faucets and Toilets
- Turf Removal
- Building Retrofits
- City Hall Chiller Retrofit
- Energy and Water Building Dashboard

Deep Dive: GSD

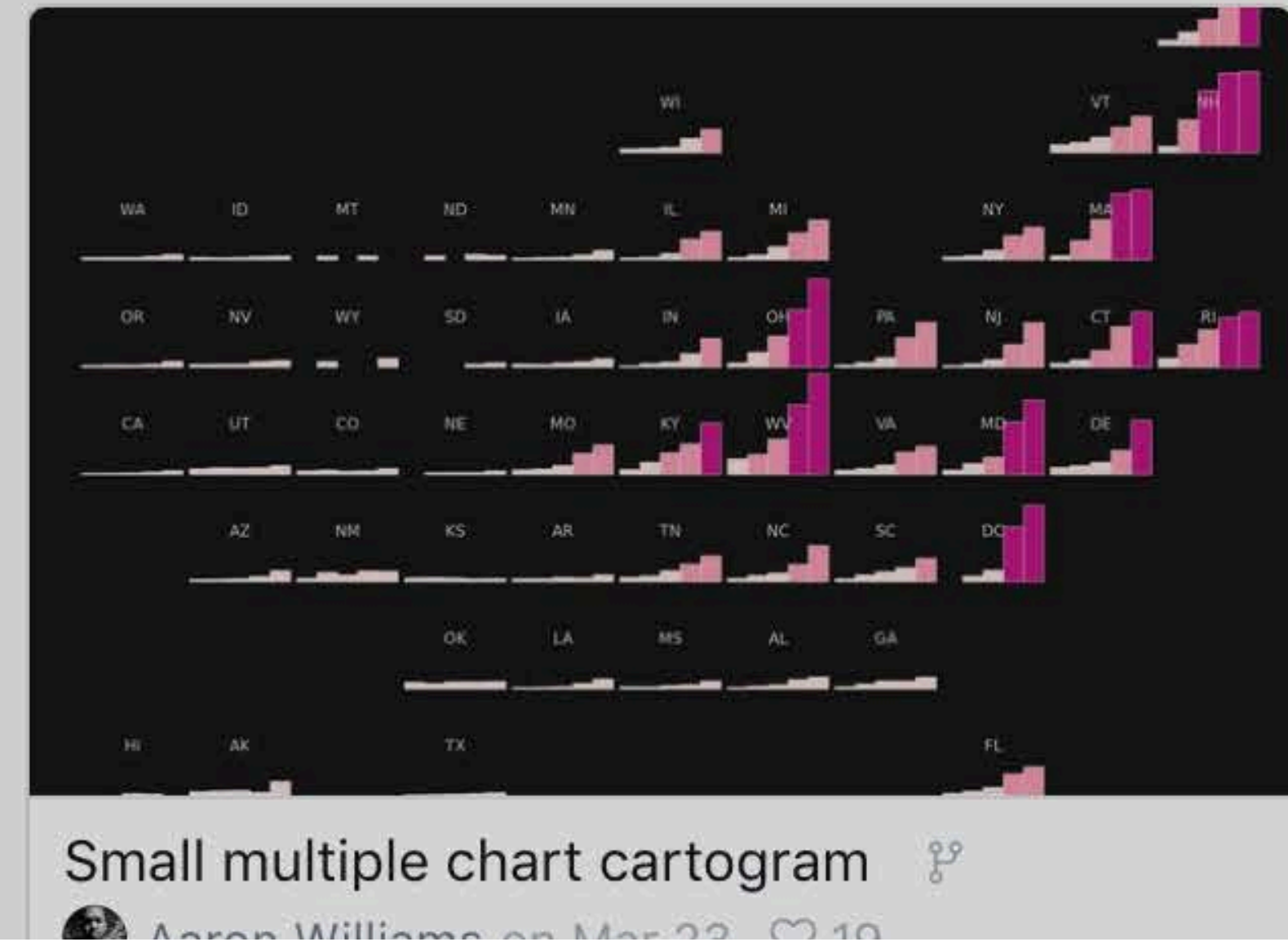
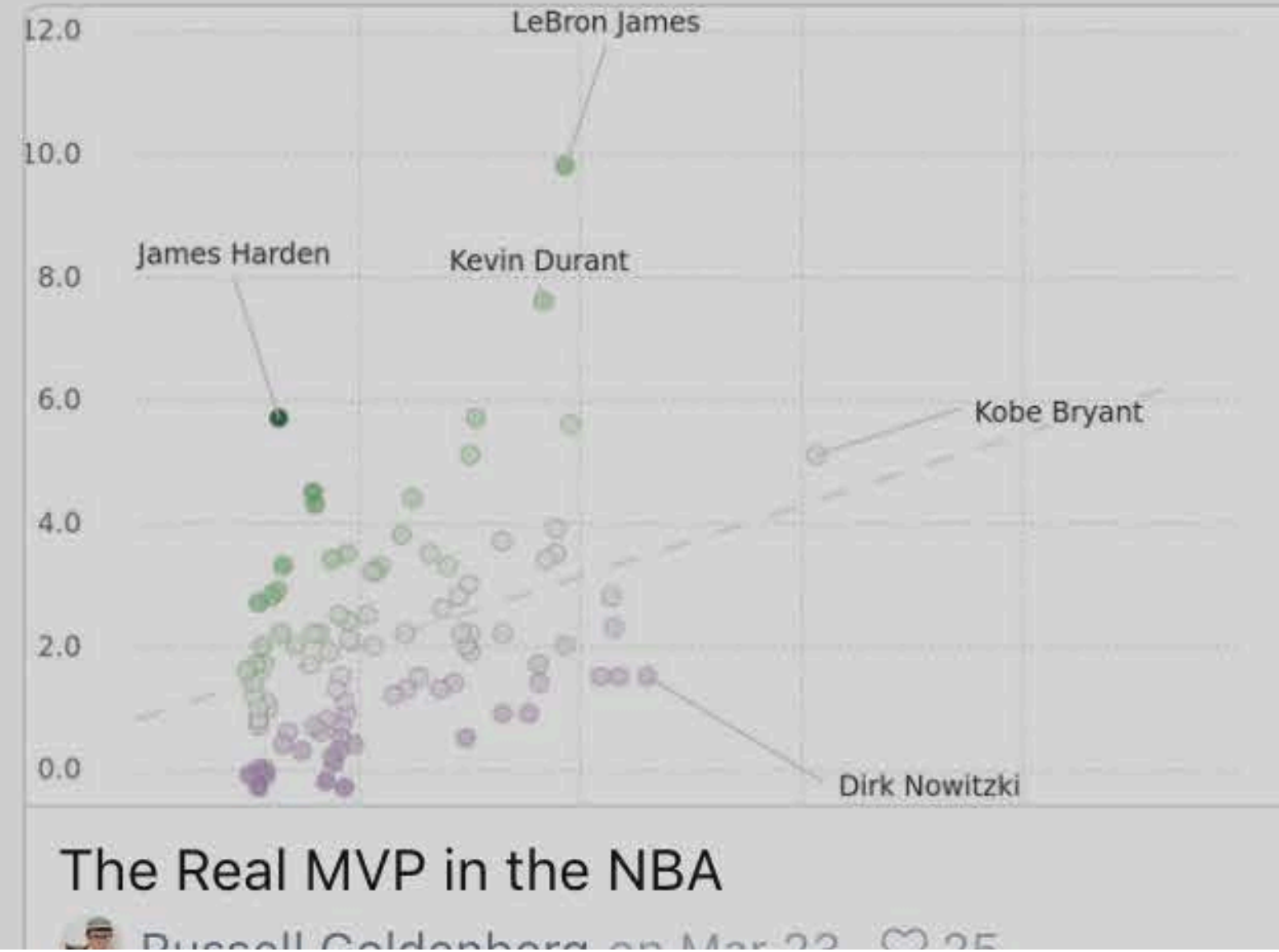


Municipal Electricity Use



Visualization

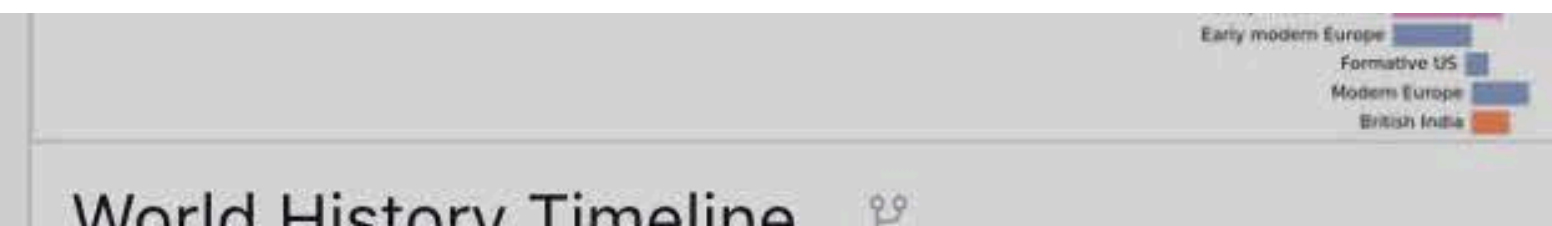
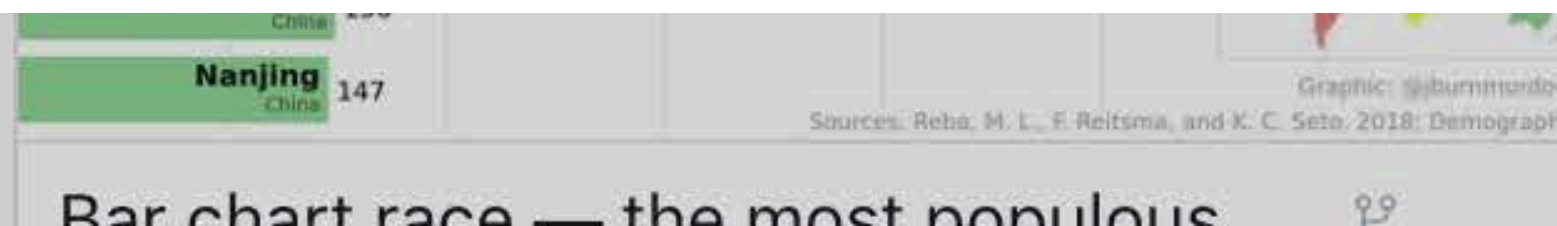
Explore and explain patterns in quantitative data using D3 and Vega.



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OPEN SOURCE D3 EXAMPLES

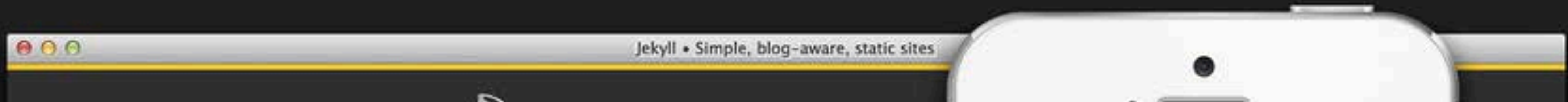
<https://observablehq.com/collection/@observablehq/visualization>



GitHub Pages

Websites for you and your projects.

Hosted directly from your GitHub repository. Just edit, push, and your changes are live.



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GITHUB PAGES

Deploy quickly, freely, and openly

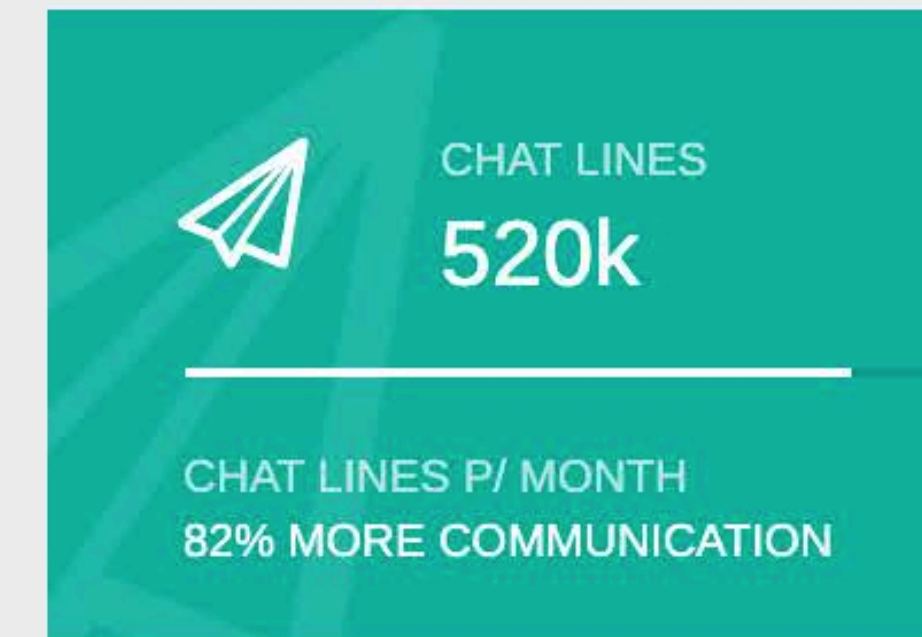
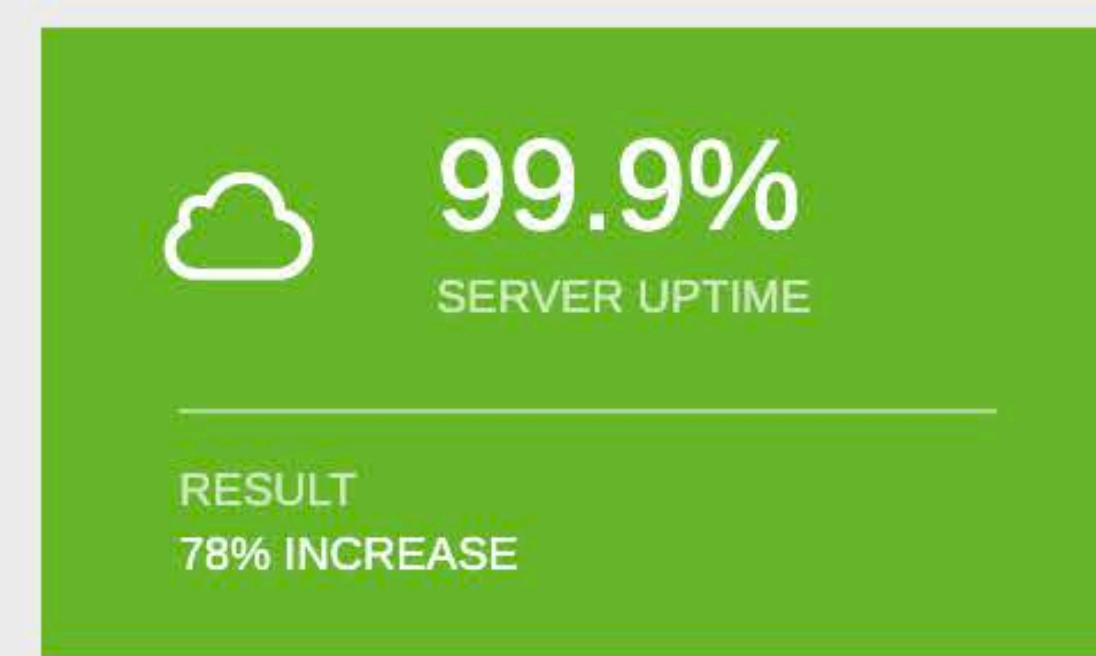
Simple

Static

plain text into
static websites

V1 WAS FULL OF LOTS OF EVERYTHING

*But that's not what anyone wanted.
And so: Pivot.*



to do list
Tasks

- Web Design
- Slicing
- WooCommerce
- Programming
- SEO Optimize

Add task...

08 March

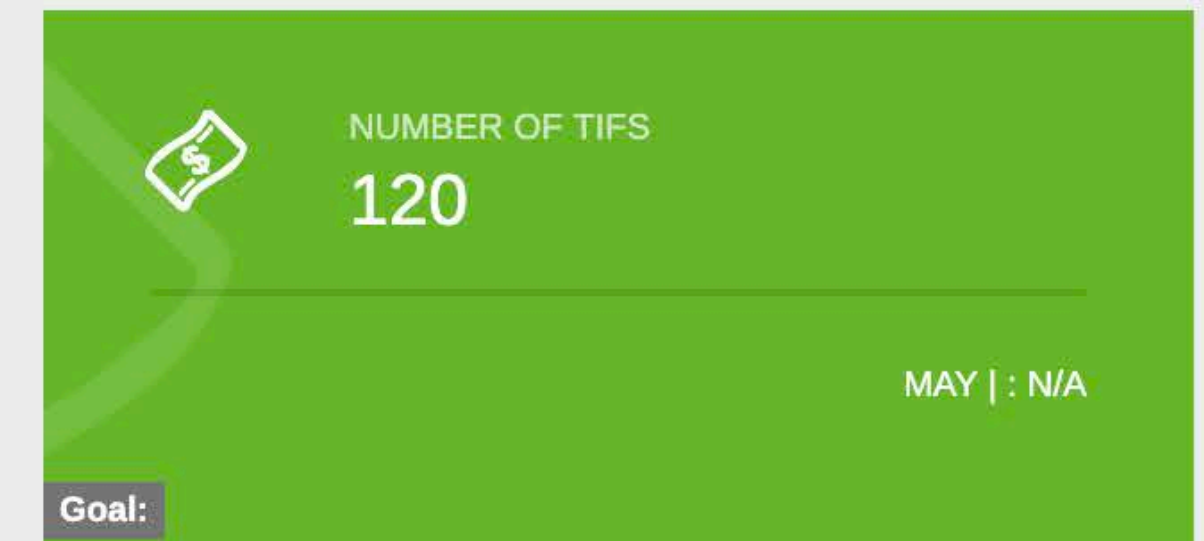
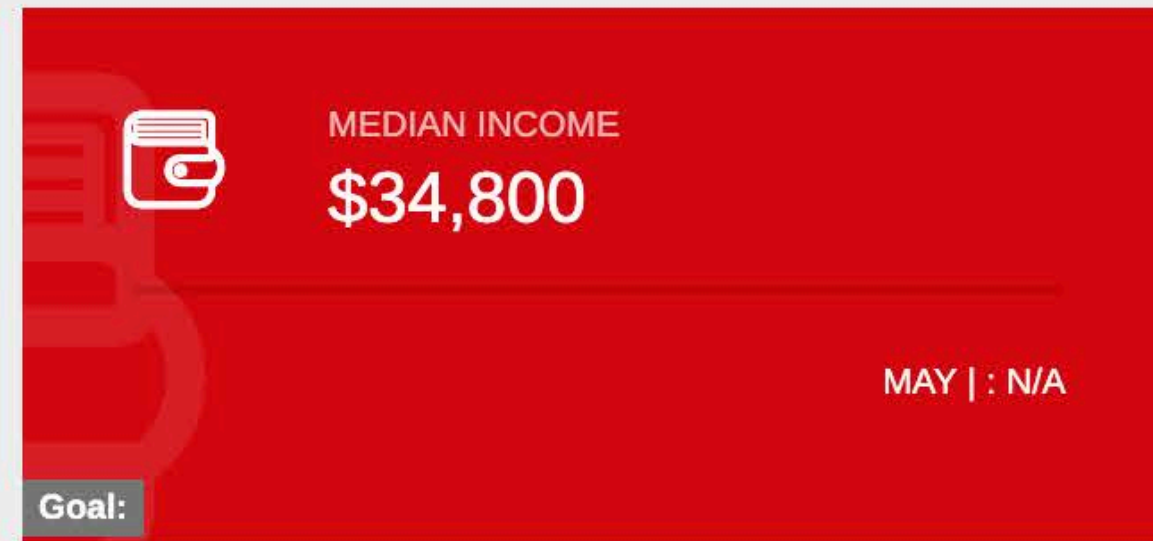
Fight against malnutrition
Aga Khan Bloomberg,
economic independence
inspire breakthroughs
benefit civil.

RETWEET

“

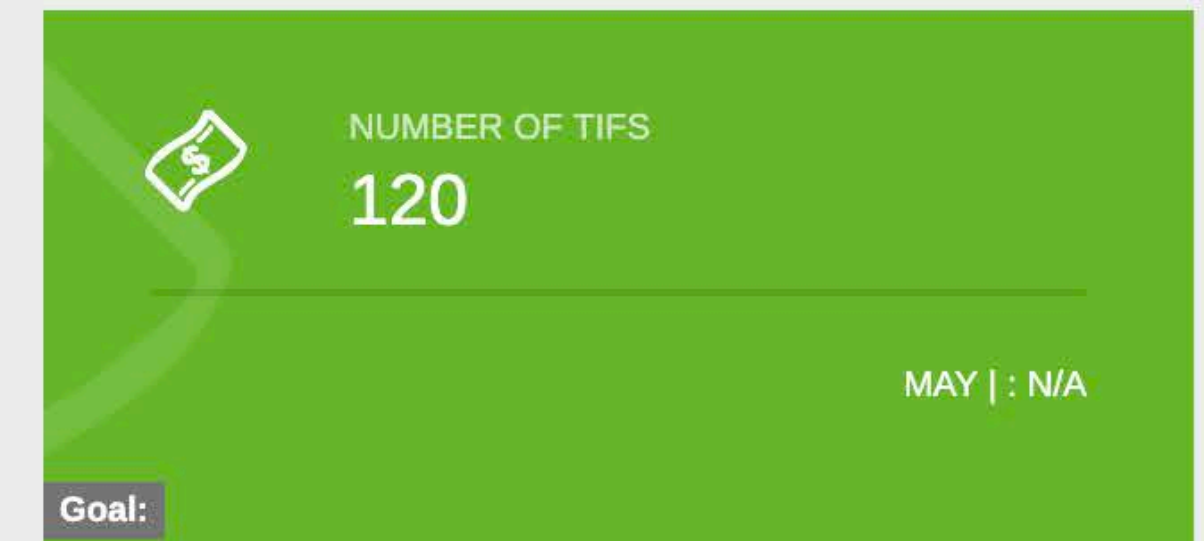
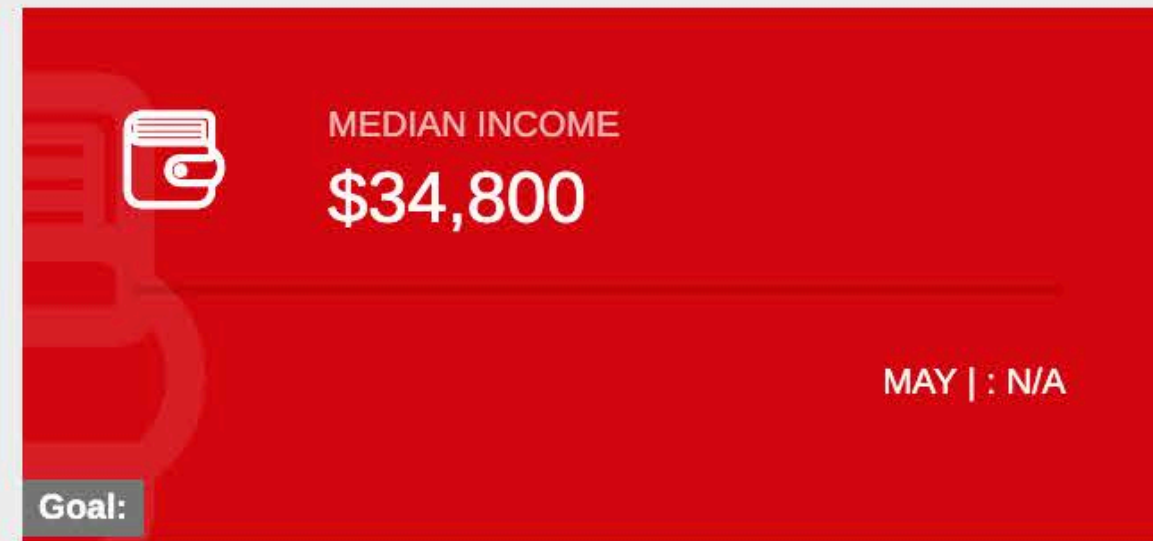
“As you consider building your own minimum viable product, let this simple rule suffice: remove any feature, process, or effort that does not contribute directly to the learning you seek.”

-Eric Ries



“SIMPLE, BEAUTIFUL, AND EASY TO USE”

Less was more.



MVP WAS HAND-CODED, NO DATABASE

*First version was just html,
with each element manually updated by the concierge. (me)*

```
▼ <div class="col-sm-5">
  ▼ <div class="xe-widget xe-progress-counter xe-progress-counter-red">
    ▶ <div class="xe-background">...</div>
    ▼ <div class="xe-upper">
      ▼ <div class="xe-icon">
        ▼ <i class="linecons-wallet">
          ::before
          </i>
        </div>
      ▼ <div class="xe-label">
        <span>Median income</span>
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      </div>
    </div>
  ▼ <div class="xe-progress">
    <span class="xe-progress-fill" data-fill-to="20" data-fill-unit="%" length data-fill-duration="3" data-fill-easing="true" style="width: %;">
    </span>
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  ▼ <div class="xe-lower">
    ▼ <strong>
      ▼ <a href class="disabled">
        <i class="fa-bar-chart"></i>
      </a>
      ▼ <a href class="disabled">
        <i class="fa-map-marker"></i>
      </a>
      ▼ <a href class="disabled">
        <i class="fa-database"></i>
      </a>
      ▼ <a href class="disabled">
        <i class="fa-check-square-o"></i>
      </a>
    </strong>
  </div>

```

ITERATE

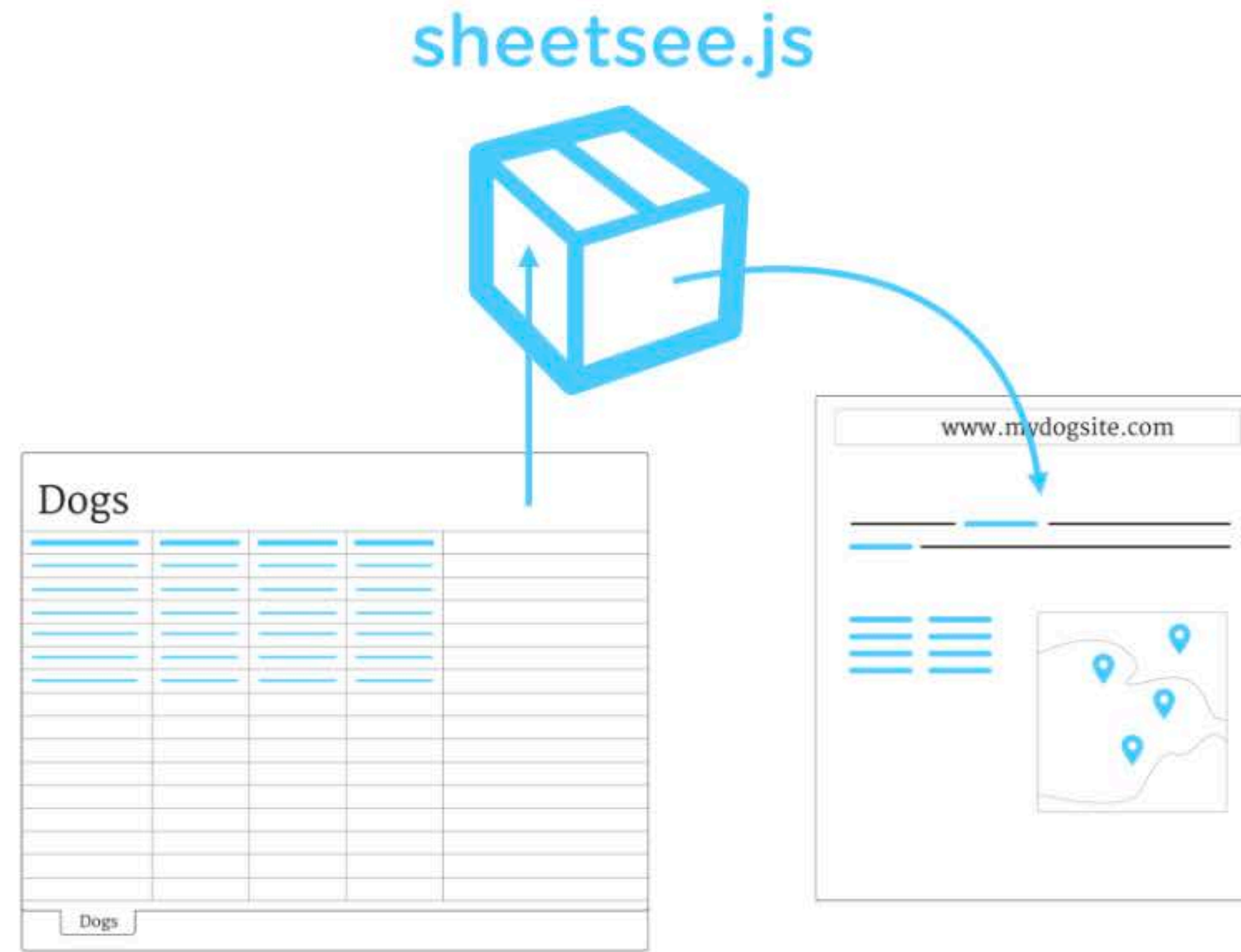


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SHEETSEE.JS

Pull data from spreadsheets: <http://jlord.us/sheetsee.js/>





Sheetsee.js is a client-side library for connecting Google Spreadsheets to a website and visualizing the information in tables and maps.

A few of the talks I've given:

- #RiseConf2015, *CDO as a Poor Man's Hacker* [deck] [press]
- NAGW: Keynote, *Data, Delivery, and Design* [video] [deck]
- Fabric of the City (Paris), *Building an Open Data Community* [video] [deck]
- Federal Communications Summit: Keynote, *Government is What You Make of It* [video] [deck] [press]
- Claremont McKenna College, *Technology and the Liberal Arts* [video] [deck]
- Philly Emerging Technology for Enterprise, *Designing 21st Century Government* [video]
- SXSW, *Hacking for Sustainable Cities* [press]
- Big Kansas City, *Technology and the Liberal Arts* [video]
- Making a Difference Asia, *Civic Startups as Game Changers* [video] [deck]
- Health DataPalooza, *Core Principles of Open Data*
- Personal Democracy Forum, *Digital Inclusion and Open Government*
- Digital Cities (Buenos Aires), *A Tale of Two Cities* [deck]
- Agile Alliance: Keynote, *The Principles of Agile and of Government* [video] [press]
- Next Generation of Government Leaders, *How to be a Poor Man's (Government) Hacker* [deck] [press]

Abhi Nemani - Talks for Website

File Edit View Insert Format Data Tools Add-ons Help Last edit was on January 1, 2016

100% \$ % .0 .00 123 Arial 10 B I U A

	A	B	C	D	E	F	G	H	I	J
1	venue	location	title	date	video	deck	press			
2	#RiseConf2015	Philadelphia, PA	CDO as a Poor Man's Hacker	December 2015		http://www.slideshare.net/abhinemani10/cdo-as-a-poor-man-s-hacker	http://technical.ly/2015/12/11/care-future-city-10-ideas-steal-civic-te			
3	NAGW: Keynote	Albuquerque	Data, Delivery, and Design	September 2015	https://medium.com/@abhinemani10/nagw-2015-keynote-data-delivery-and-design	http://www.slideshare.net/abhinemani10/nagw-2015-keynote-data-delivery-and-design				
4	Fabric of the City (Paris)	Paris, France	Building an Open Data Community	February 2015	https://medium.com/@abhinemani10/building-an-open-data-community	http://www.slideshare.net/abhinemani10/fabrique-de-la-cite-data				
5	Federal Communications Summit: Keynote	Washington DC	Government is What You Make of It	October 2014	https://medium.com/@abhinemani10/government-is-what-you-make-of-it	http://www.slideshare.net/abhinemani10/government-is-what-you-make-of-it	http://sdtimes.com/sd-times-blog-agile2013-keynote-the-user-exper			
6	Claremont McKenna College	Claremont, CA	Technology and the Liberal Arts	August 2013	https://medium.com/@abhinemani10/technology-the-liberal-arts-in-action	http://www.slideshare.net/abhinemani10/technology-the-liberal-arts-in-action				
7	Philly Emerging Technology for Enterprise	Philadelphia, PA	Designing 21st Century Government	May 2014	http://abhinemani.tumblr.com/post/136094903067/via-philly-ete-2014-49-designing-21st-century					
8	SXSW	Austin, TX	Hacking for Sustainable Cities	March 2012			http://science.time.com/2013/03/12/south-by-southwest-dont-fight-c			
9	Big Kansas City	KC, MO	Technology and the Liberal Arts	April 2012	https://medium.com/@abhinemani10/disruption-as-a-public-service-a9de086b171f#u4hjliddmd					
10	Making a Difference Asia	Hong Kong	Civic Startups as Game Changers	January 2013	https://medium.com/@abhinemani10/making-a-difference-asia	http://www.slideshare.net/abhinemani10/mad-a-nemani				
11	Health DataPalooza	Washington DC	Core Principles of Open Data	May 2013						
12	Personal Democracy Forum	NYC	Digital Inclusion and Open Government	May 2013						
13	Digital Cities (Buenos Aires)	Buenos Aires	A Tale of Two Cities	August 2012			http://www.slideshare.net/abhinemani10/a-tale-of-two-cities-digital-cities-buenos-aires			
14	Agile Alliance: Keynote	Nashville, TN	The Principles of Agile and of Government	June 2013	http://www.agilealliance.org/resour	http://searchsoftwarequality.techtarget.com/news/2240203127/Agile				
15	Next Generation of Government Leaders	Washington DC	How to be a Poor Man's (Government) Hacker	May 2012		http://www.slideshare.net/abhinemani10/how-to-be-a-poor-man-s-government-hacker	http://www.govtech.com/e-government/5-Traits-of-Action-Leaders.h			
16	World Bank	Washington DC	Spreading Innovation Around the Globe	February 2012						
17	InciteXchange	Philadelphia, PA	Redesigning Citizenship	March 2012			http://www.slideshare.net/abhinemani10/incitexchange-nemani-feb-16			



Input for Mayors Dashboard: MOED

abhi.nemani@lacity.org

File Edit View Insert Format Data Tools Add-ons Help Last edit was made 2 days ago by Ashley Atkinson

Comments Share

	A	B	C	D	E	F	G	H	I	J	
1	Metric	Value	Percentage	date	frequency	change	goal	color	icon	maplink	ch
2	New Payroll Jobs	85,491	71.2425	May	Since	7/1/2013	120,000 by FY17	green	linecons-lightbulb		
3	Jobs in Los Angeles	1,633,537	85	May	Y.O.Y.	2.40%	1,653,776	green	linecons-user		htt
4	Jobs for Angelenos	1,891,313	100	May	Y.O.Y.	2.50%	1,865,901	green	linecons-user		htt
5	Employment Growth Y.O.Y. Compared to CA	-0.30%		May	Y.O.Y.	N/A	Growth above CA	red	linecons-t-shirt		
6	Dollars Leveraged for Manufacturing Sector	\$57.8M		June	M.O.M.	N/A	\$45M	green	linecons-shop		
7	Film Production Days (FYTD)	52,773	96	May	Y.O.Y.	N/A	55,000 by FY15	green	linecons-videocam		
8	Federal Funding Raised with Promise Zone designation	\$36.4M	7.3	Q3FY15	Q.O.Q.	N/A	\$500M by CY24	green	linecons-location		
9	Homeless Veterans Housed	3,960	56%	May	M.O.M.	N/A	7,030 by CY15	grey	fa-home		
10	Unemployment Rate	7.80%		May	Y.O.Y.	-0.60%	4.8% (lowest rate	grey	linecons-camera		htt
11	TEU Cargo Containers through POLA (CYTD)	3,181,718		May	Y.O.Y.	-5.03%	8,340,065 (CY14)	grey	linecons-truck		htt
12	Passengers through LAX (CYTD)	28,950,613		May	Y.O.Y.	4.09%	TBD	grey	fa-paper-plane		
13	Veteran Job Placements	4,243	42%	Q3FY15	Q.O.Q.	N/A	10,000 by FY17	green	linecons-money		
14	Business Registrations	59,317		CY14	Y.O.Y.	2.63%	TBD	green	linecons-shop		
15	Mean Hourly Wage (LA Metro)	\$25.48		May '14	Y.O.Y.	M.O.M.	TBD	grey	linecons-money		htt
16	LA County Median Household Income	\$55,909		CY13	Y.O.Y.	2.90%	TBD	grey	linecons-money		
17	POLA Market Share (US)	18.60%		CY14	Y.O.Y.	N/A	TBD	grey	fa-tint		
18	POLA Market Share (West Coast)	39.80%		CY14	Y.O.Y.	N/A	TBD	grey	fa-tint		
19	POLA Market Share comp. to POLB	3.00%		CY14	Y.O.Y.	N/A	TBD	grey	fa-tint		
20	Visitors to Los Angeles	44.2M	88.4	CY14	Y.O.Y.	2.80%	50M by 2020	green	fa-group		
21	Housing Permits Issued	25,929	25.9%	June	M.O.M.	9.17%	100,000 by FY21	green	linecons-cloud	https://data.lacity.org	

```

<script id="photogrid" type="text/html">
  <div class="row" data-equalizer>

    {{#rows}}
    <div class="col-sm-3">

      <div class="xe-widget xe-progress-counter xe-progress-counter-{{color}}">

        <div class="xe-background">
          <i class="{{icon}}"></i>
        </div>

        <div class="xe-upper">
          <div class="xe-icon">
            <i class="{{icon}}"></i>
          </div>
          <div class="xe-label">
            <span>{{metric}}</span>
            <strong class="num">{{value}}</strong>
          </div>
        </div>

        <div class="xe-progress">
          <span class="xe-progress-fill" data-fill-to="0" data-fill-unit="%" length data-fill-duration="3" data-fill-easing="true" style="width:
{{percentage}}%;"></span>
        </div>

        <div class="xe-lower">
          <strong><a href="{{chartlink}}"><i class="fa-bar-chart"></i></a>
          <a href="{{maplink}}"><i class="fa-map-marker"></i> </a>
          <a href="{{datalink}}"><i class="fa-database"></i></a>
          <a href="{{checklink}}"><i class="fa-check-square-o"></i> </a>
            {{date}} | {{comparison}}: {{change}}
          </strong>
        </div>
        <div class="label label-default">Goal: {{goal}}</div>

      </div>

    </div>

  </div>

```



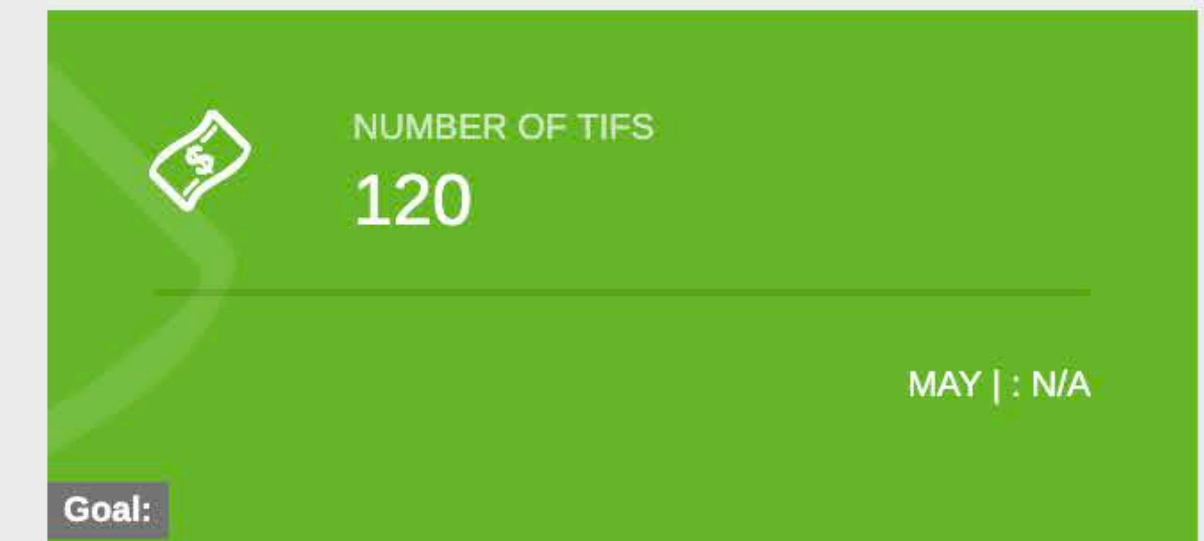
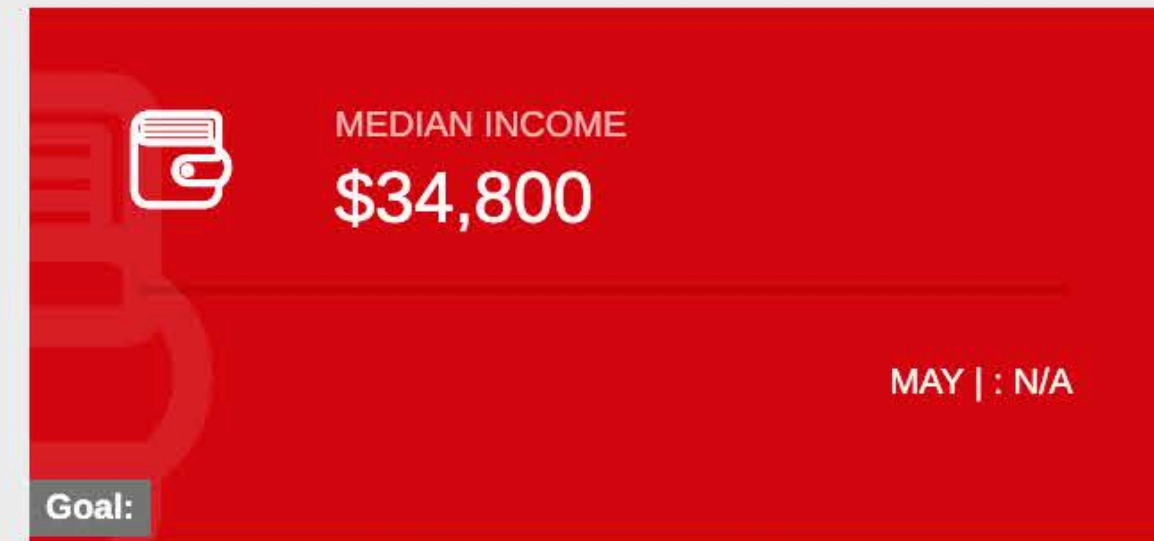
BENEFITS / DRAWBACKS

► Benefits

- No database; Google Spreadsheets powered
 - Revision history
 - Feels like Excel
- No login
 - Relies on existing g-suite account
- Relies on very common javascript library: JQuery
 - Only needs one more script to function
- Usage mirrors Jekyll

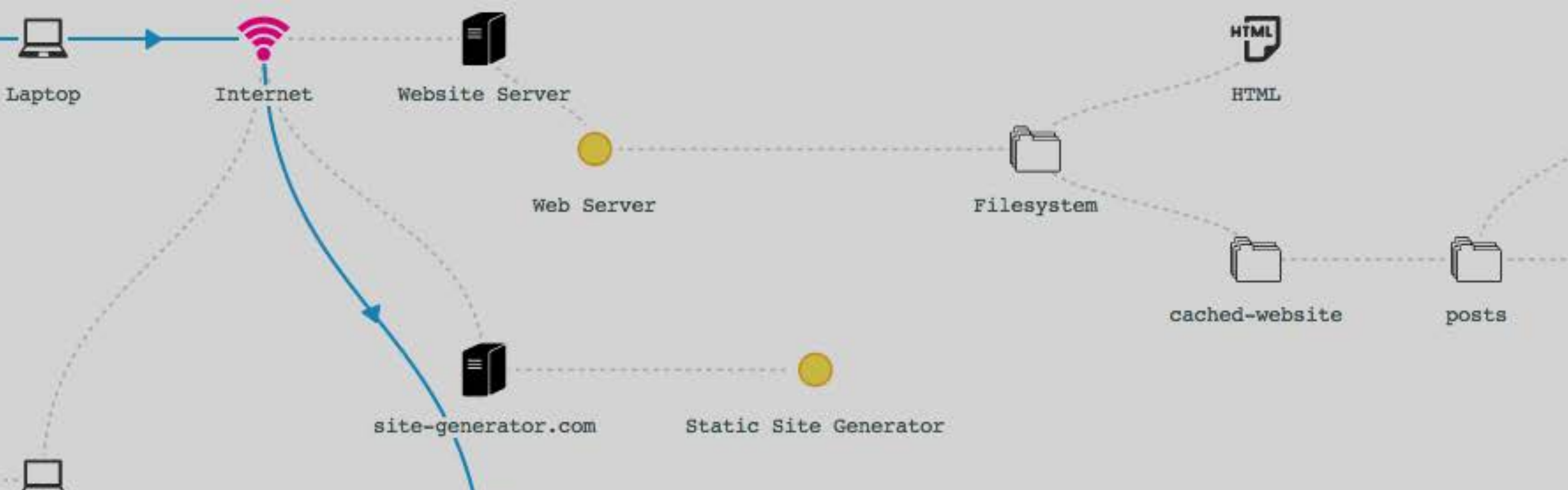
► Drawbacks

- No approval / workflow / management
- Data has to be public
- No file storage
 - Images must be stored elsewhere
- Individual sheets/documents needed for each page



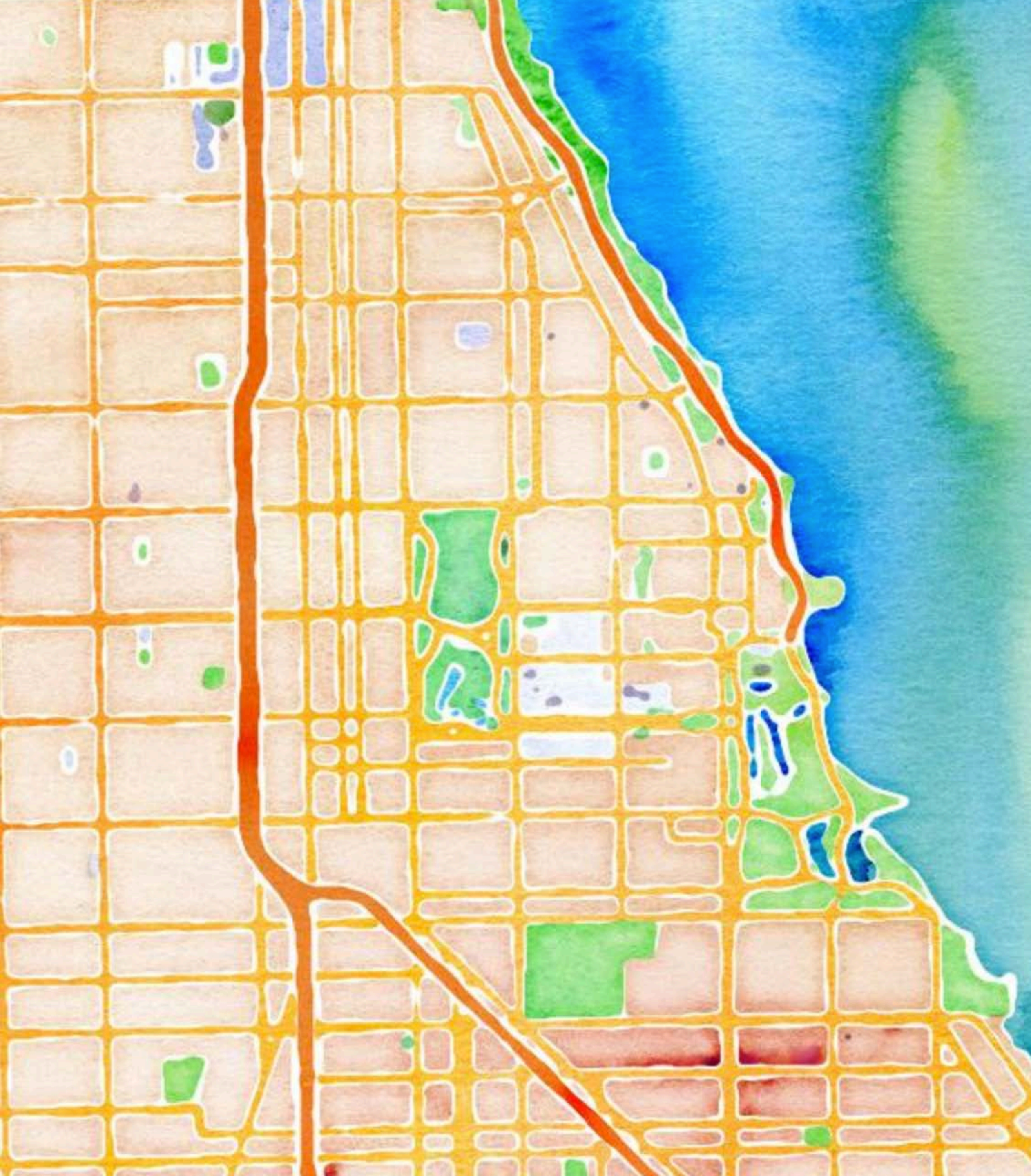
“SO CAN YOU MAKE MORE?”

After the MVP, the challenge was building for scale.



JEKYLL

Multi-page websites sans database: <https://jekyllrb.com/>



JEKYLL 101

- Templating system, not CMS
- Serves “static” HTML
- “Swiss army knife”
 - Blog, dashboard, policies, etc
- Markdown
 - Simple styling system for text
 - Eg Github Readme
 - Cheatsheet
 - <https://greenido.wordpress.com/2015/09/08/markdown-cheatsheet-101/>

```

class="row" data-equalizer>

{{#rows}}
<div class="col-sm-3">

  <div class="xe-widget xe-progress-counter xe-progress-counter-{{color}}">

    <div class="xe-background">
      <i class="{{icon}}"></i>
    </div>

    <div class="xe-upper">
      <div class="xe-icon">
        <i class="{{icon}}"></i>
      </div>
      <div class="xe-label">
        <span>{{metric}}</span>
        <strong class="num">{{value}}</strong>
      </div>
    </div>

    <div class="xe-progress">
      <span class="xe-progress-fill" data-fill-to="0" data-fill-unit="%" len
    </div>

    <div class="xe-lower">
      <strong><a href="{{chartlink}}"><i class="fa-bar-chart"></i></a>
        <a href="{{maplink}}"><i class="fa-map-marker"></i> </a>
        <a href="{{datalink}}"><i class="fa-database"></i></a>
        <a href="{{checklink}}"><i class="fa-check-square-o"></i>
          {{date}} | {{comparison}}: {{change}}
        </strong>
    </div>

    <div class="label label-default">Goal: {{goal}}</div>
  </div>
</div>
{{/rows}}

```

_layouts/post.html

```

<script type="text/javascript">
document.addEventListener('DOMContentLoaded', function() {
  var URL = "{{ page.gdoc }}"
  Tabletop.init( { key: URL, callback: showInfo, simpleSheet: true, } )
})

function showInfo(data) {
  var html = Sheetsee.ich.photogrid({'rows': data})
  $('#photogrid').html(html)
  var optionsJSON = ["metric"]
  $('#photogrid a').each(function() {
    if($(this).attr('href') === '' || $(this).text() === 'N/A') {
      $(this).addClass("disabled");
    }
  });
}

```

Branch: master ▾

[bradley-tower](#) / [_posts](#) / 2015-06-28-mobi.html

Find file

Copy path

 **Abhi Nemani** switched ownership

926ba1d on Oct 23, 2015

0 contributors

12 lines (12 sloc) | 253 Bytes

Raw

Blame

History



```
1 ---
2 layout: post
3 title: "MOBI"
4 date: 2015-06-28 08:12:25
5 categories: mayor
6 gdoc: 1_jkX0g0_jdskSpFve8xQqw9e1UAsiYD-lYWsi01uj0w
7 permalink: MOBI
8 ---
9 {% include viz/web.html %}
10 {% contentfor bottom %}
11     {% include viz/mobi-stat.html %}
12 {% endcontentfor %}
```

Homelessness

Veteran Homeless LA Monthly Housed



HOMELESS VETERANS HOUSED
4,630
 JULY | :
 Goal: 7,028 by 12/31/15

MONTHLY VETERAN HOMELESS HOUSED (CITY)
184
 JULY | :
 Goal: 434

TOTAL CHRONIC HOMELESS HOUSED (CITY)
2,798
 JULY | :
 Goal: 9,229 by 12/31/16

MONTHLY CHRONIC HOMELESS HOUSED (CITY)
176
 JULY | :
 Goal: 513



Part 4: How-to Open Data?

Contents

1. Defining Value

1. Data Quality & Standards & Permanence

2. Metadata & Attribution/Licensing

1. Metadata Formats:

@abhinemani

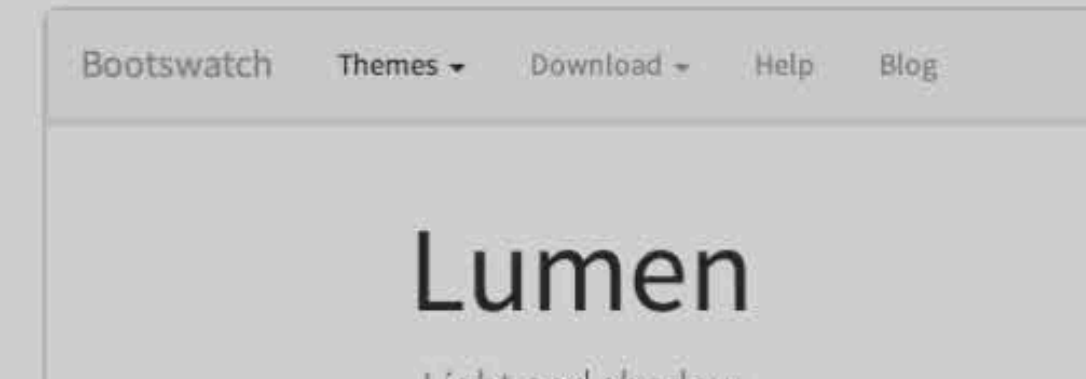
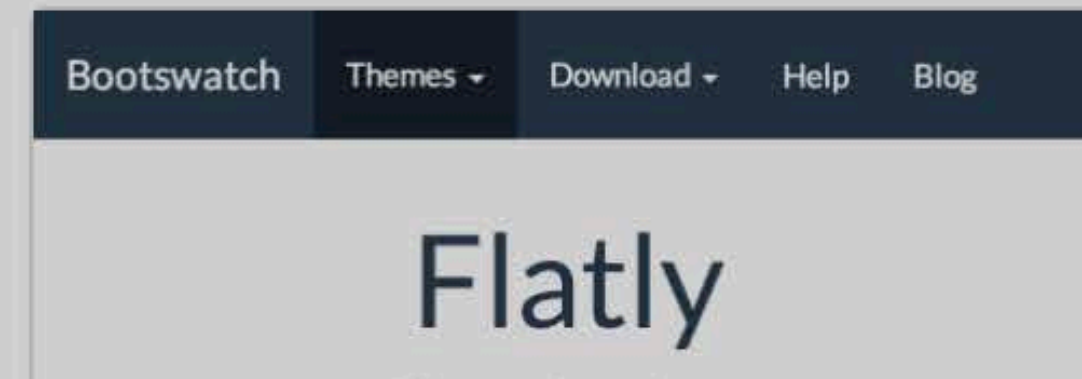
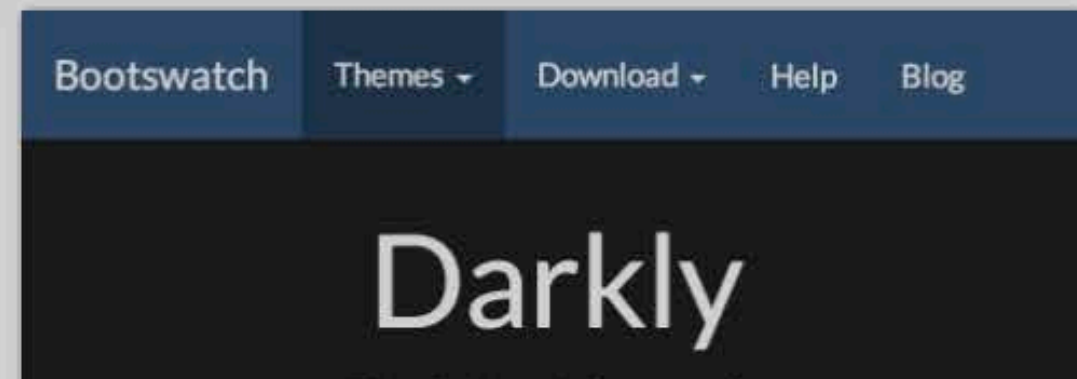
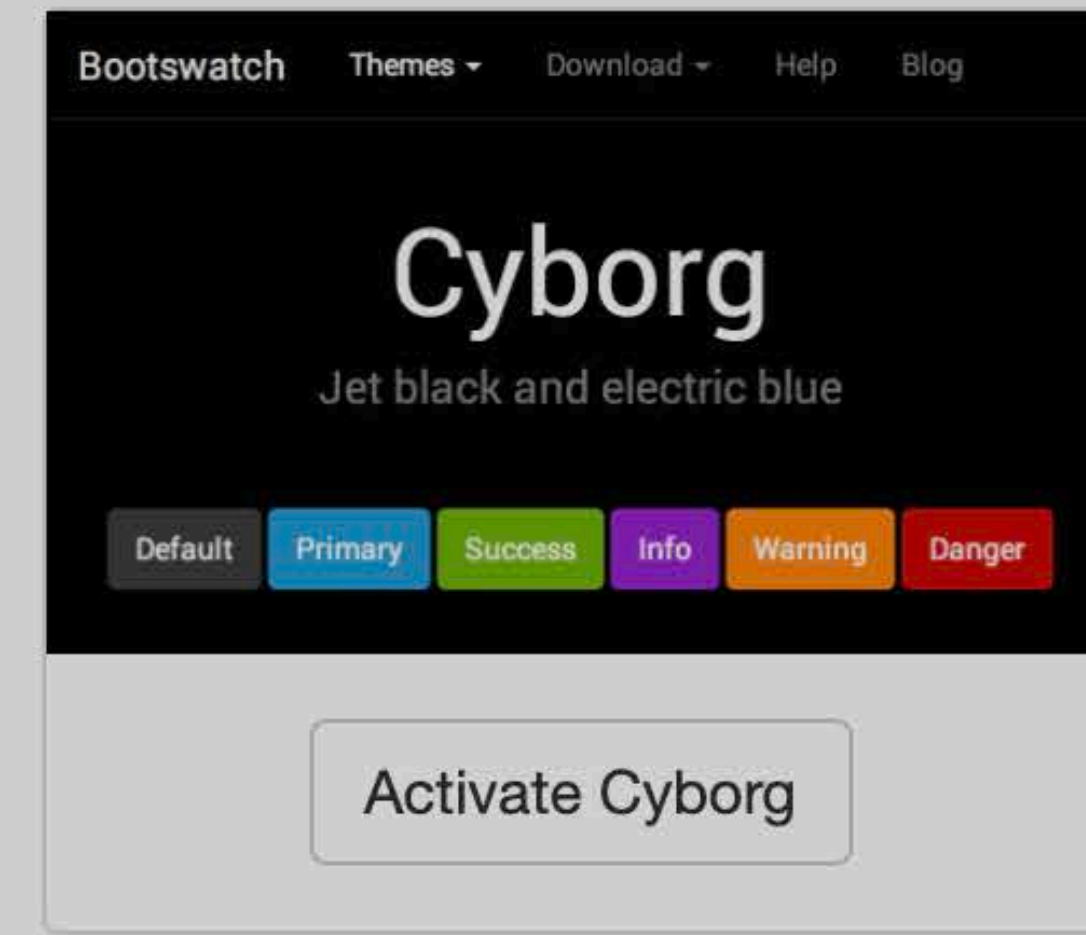
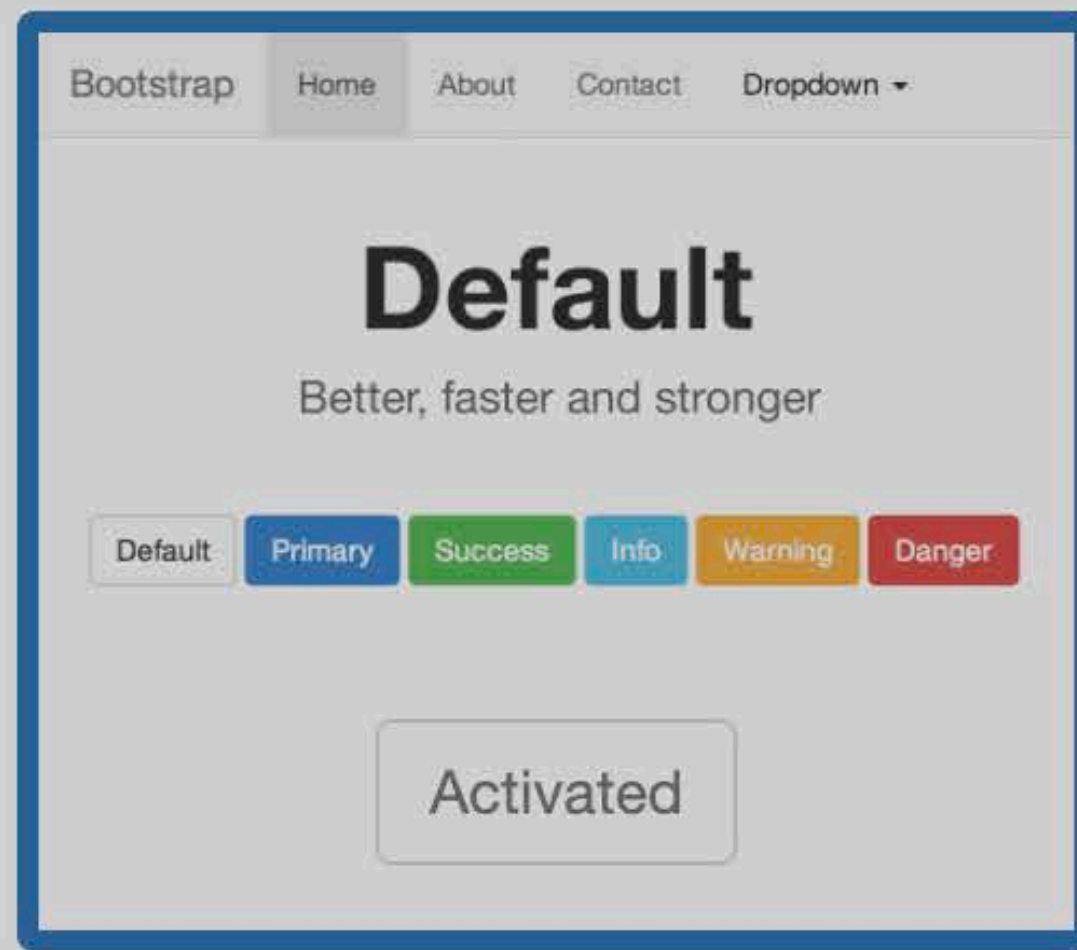
JEKYLL + GITHUB PAGES

Your civic Swiss Army Knife

Defining Value

Starting with the data that will bring the most value early on will give

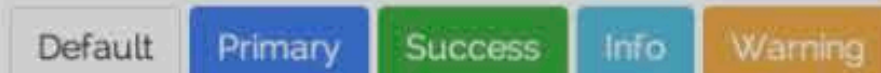
Theme



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BOOTSTRAP THEMES

CDN-hosted themes for easy deployment



Branch: gh-pages ▾

[jkan](#) / `_config.yml`

Find file

Copy path

 **abhinemani** Updated `_config.yml`

ca67596 4 days ago

3 contributors



89 lines (75 sloc) | 1.47 KB

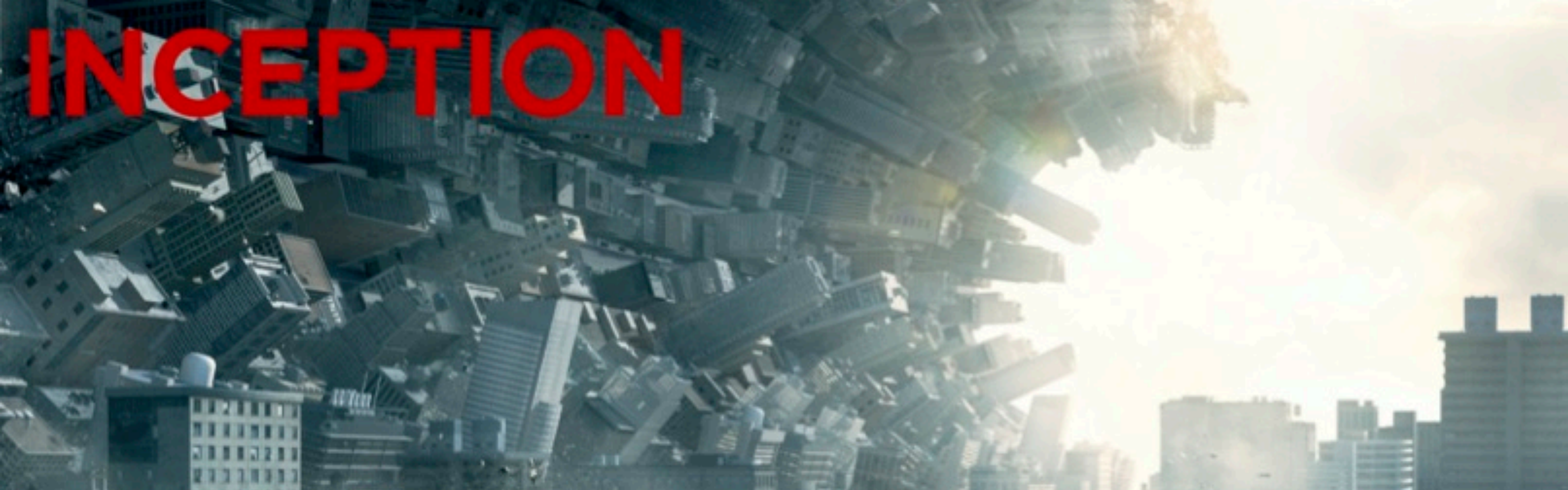
Raw

Blame

History

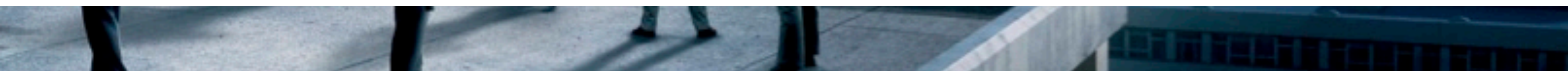


```
1  title: JKAN
2  greeting: Welcome to JKAN
3  description: A lightweight, backend-free open data portal, powered by Jekyll.
4  baseurl: /jkan
5  logo: /img/jkan.png
6
7  # Site theme
8  jkan_theme: Default
9
```



@abhinemani

INCEPTION





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RISKS / GOALS / ANTI-GOALS



RISKS & ANTI-GOALS

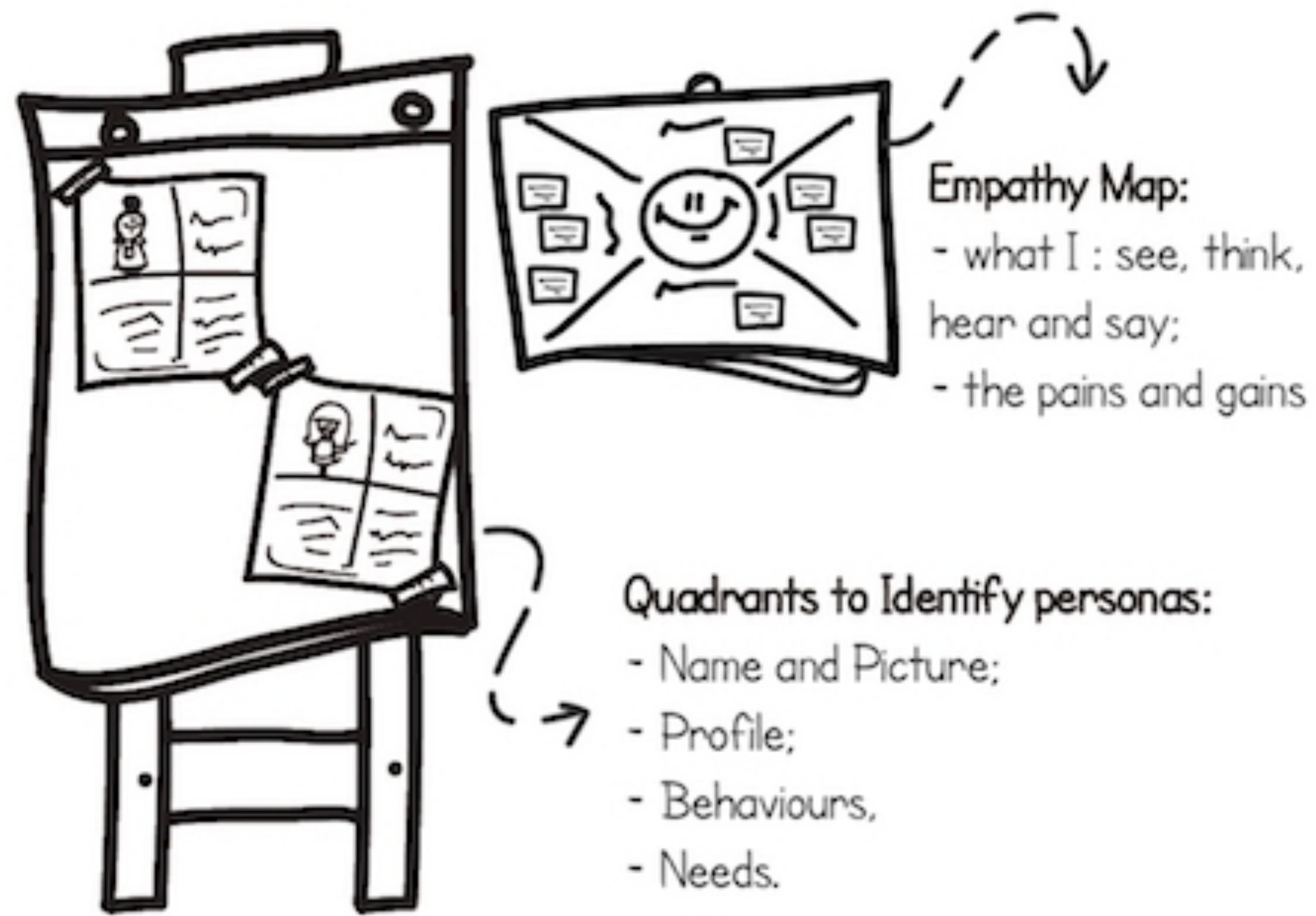
- Risks
 - Business risks
 - Technical risks
 - Legal / policy risks
- Anti-goals
 - What is out of scope?
 - What should we ***not*** worry about?



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PERSONAS





PERSONAS

PERSONAS

- ▶ Personas put your user research to work
- ▶ “Fake” identities to design your app for
- ▶ Make them as real as possible
 - ▶ Picture
 - ▶ Bio / personality
 - ▶ Goals / frustrations
- ▶ Resources
 - ▶ <https://www.hubspot.com/make-my-persona>



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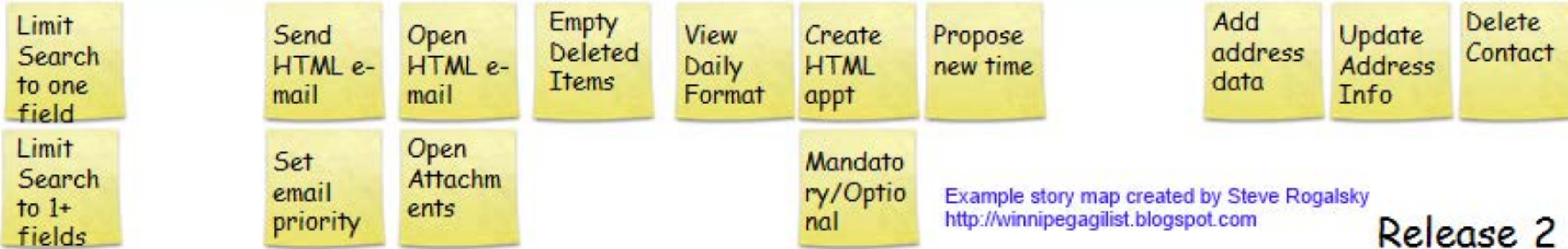
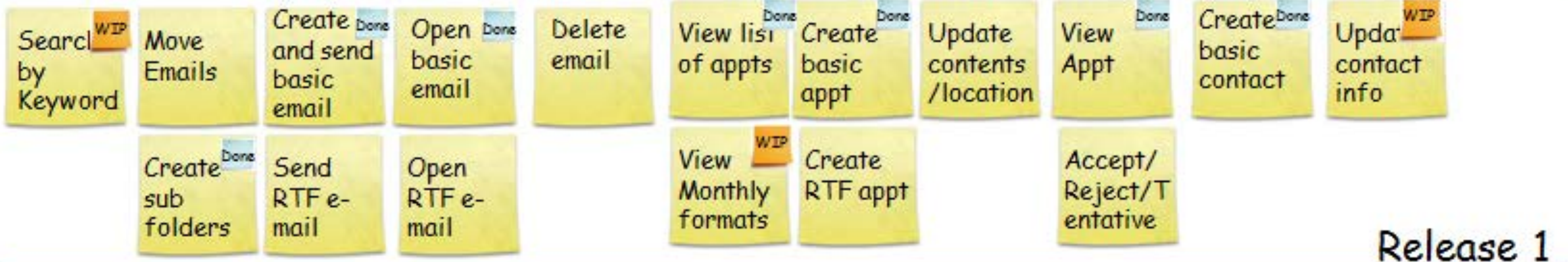
USER STORIES





USER STORIES

- ▶ What would each persona want to do?
- ▶ Start big and then then break it up
 - ▶ Example
 - ▶ Sarah (Department head) updates Mayor on new monthly metri
 - ▶ Sarah creates account
 - ▶ Administrator authorizes account
 - ▶ Sarah logs into administrative view
 - ▶ Sarah changes metric
 - ▶ New metric approved by administrator
 - ▶ New metric published to publish dashboard
 - ▶ New metric(s) email generated for Mayor
 - ▶ Email edited by Sarah
 - ▶ Email approved by administrator
 - ▶ Email sent
 - ▶ New metric(s) text generated for Mayor
 - ▶ Text edited by Sarah
 - ▶ Email approved by administrator
 - ▶ Email sent
- ▶ Then PRIORITIZE



Example story map created by Steve Rogalsky <http://winnipegagilist.blogspot.com>

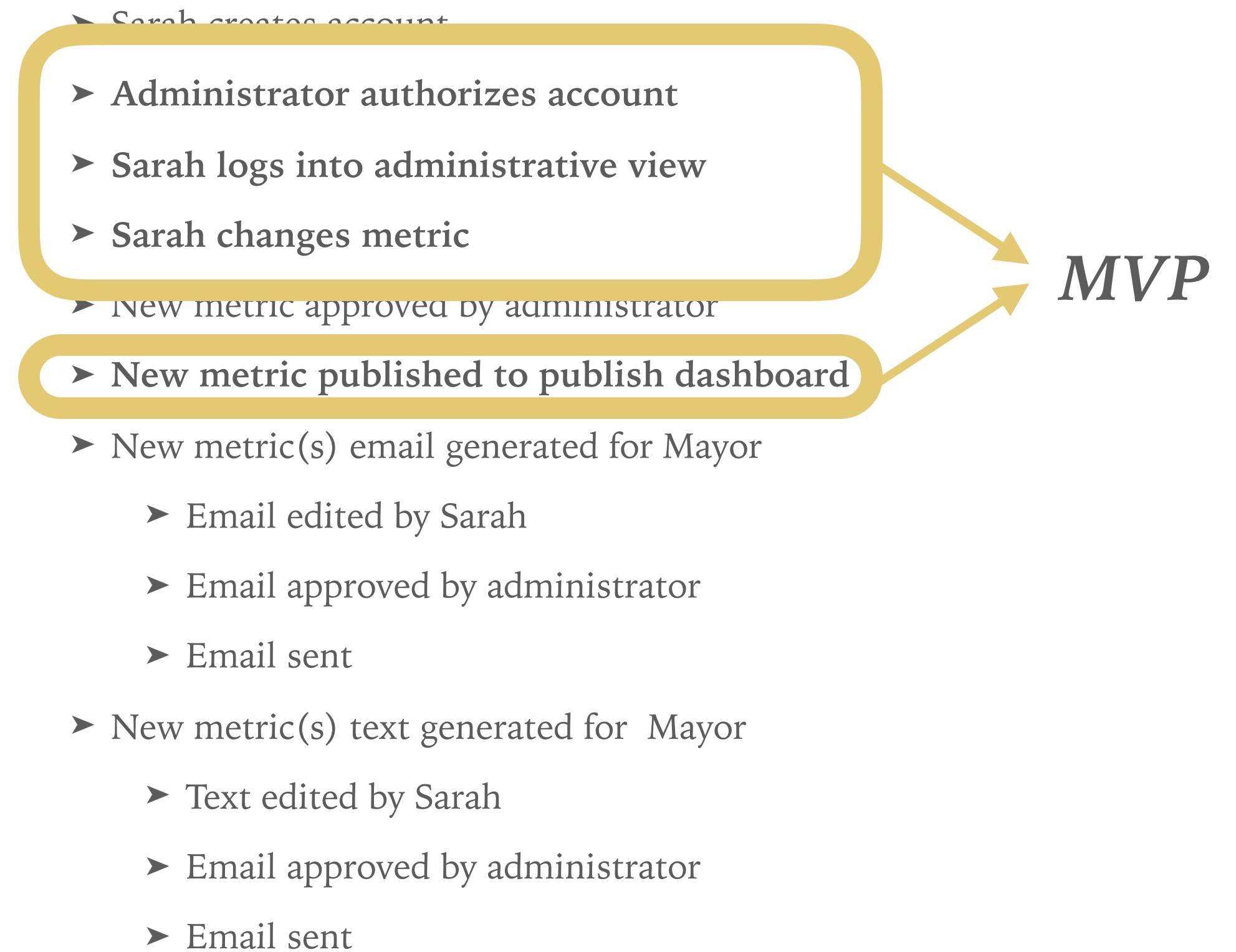




Image Credit: InfoQ

USER STORIES

- ▶ What would each persona want to do?
- ▶ Start big and then then break it up
 - ▶ Example
 - ▶ Sarah (Department head) updates Mayor on new monthly metri



ASSIGNMENTS: 4/10/2019

- Deploy the JKAN, a Jekyll-based app, using the wizard online and set up a local instance, working in pairs.
 - The challenges involved here are mostly going to be around setting up the local environment, properly using Github and Heroku, and understanding the web frameworks well enough to make changes. Overcoming these should set you up well for the final, and we'll be working with CSS, Github, and Heroku, which should inform your understanding of front-end development and deployment. Plus, your JKAN instance can serve as your personal datastore of sorts for the data you come across that you'll eventually integrate in your final.
- Steps
 - Follow the instructions on JKAN.io (Links to an external site.)Links to an external site. to deploy an online instance of JKAN. (This should be relatively quick.)
 - Email me a link to the deployment (eg <https://abhinemani.github.io/jkan/>) and the forked github repo (eg <https://github.com/abhinemani/jkan>) with the name of the students, and submit the link to the deployment to Canvas to indicate completion.
 - Clone the forked code to your machine locally from Github.
 - Follow the instructions to install the Jekyll and Bundler ruby gems (and all its necessary requirements -- eg ruby) on your local machine: <https://jekyllrb.com/docs/installation/> (Links to an external site.)Links to an external site.
 - Run "bundle install" and then "bundle exec jekyll serve" from the command line from inside the JKAN folder you cloned to your machine. An instance *should* now be running at [http://localhost:\[name-of-the-repo\]](http://localhost:[name-of-the-repo])
- Over the next few weeks, while continuing on the syllabus, we will go over principles of open data, CSS, and front-end development/deployment to better equip you for customizing the application, and I'll be giving you assignments after each class to push your out-of-the-box deployment into something unique, in an iterative approach, and populate it with data.

ASSIGNMENTS: 4/15/2019

Readings

- *Beyond Open Data: The Data-Driven City* by Mike Flowers
- *Why Data Must Drive Decisions in Government* by Beth Blauer
- *Louisville's Strategic Use of Data to Drive Continuous Improvement* by Theresa Reno-Weber

Project Work (*Ongoing through end of next week*)

- Begin / continue to customize CSS on JKAN instance
 - Try out a different theme
 - Create a custom.css file, and add customizations
- Create individual deployments / forks for each team member