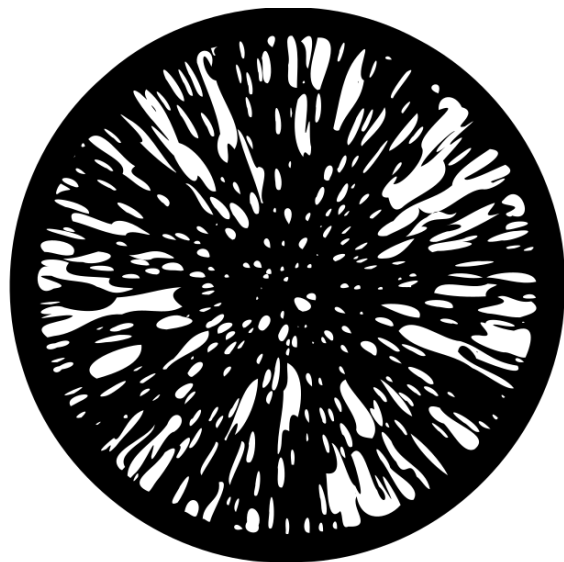


**WARP 10 MEETUP**

**For your eyes only**  
**Update on visual components**

Horacio Gonzalez  
@LostInBrittany





**Le Telegramme**



**WARP 10**

**MEETUP**

**2017-11-24**

# Horacio Gonzalez

@LostInBrittany

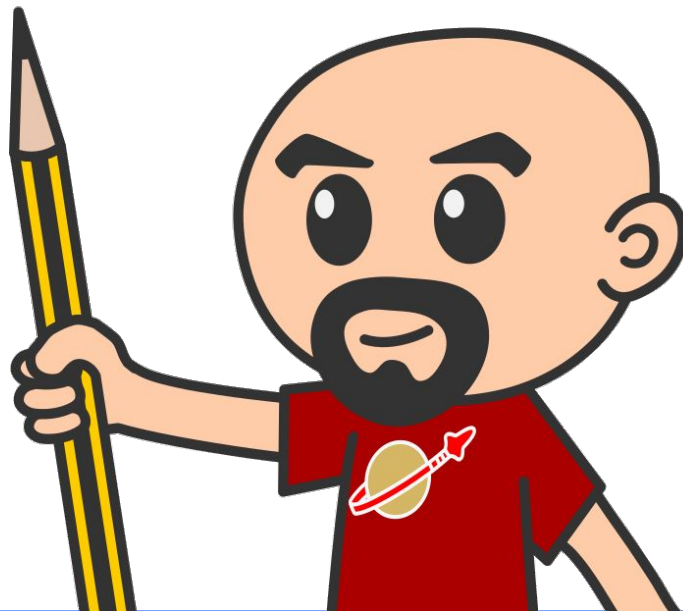
Spaniard lost in Brittany,  
developer, dreamer and  
all-around geek



<http://cityzendata.com>



**WARP 10**



Finist  
Devs  



**WARP 10 MEETUP**

@LostInBrittany



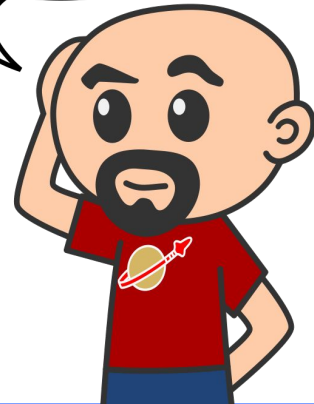
# Let me tell you a story...

---

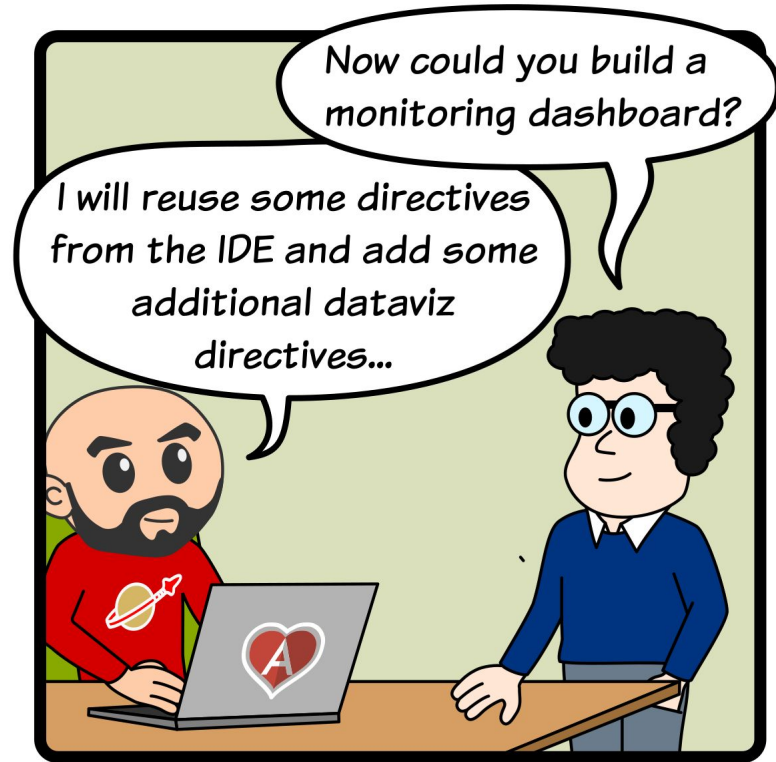
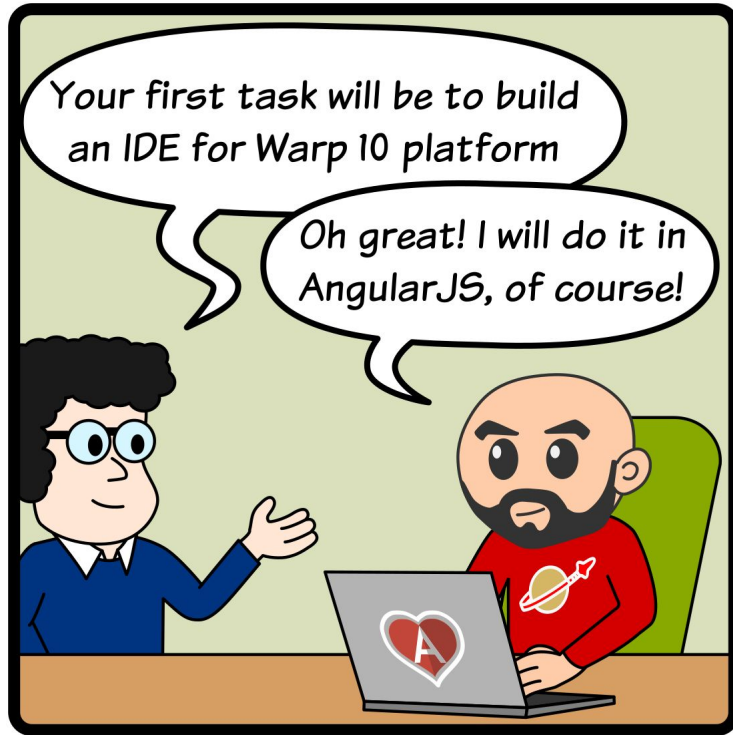
Because context matters



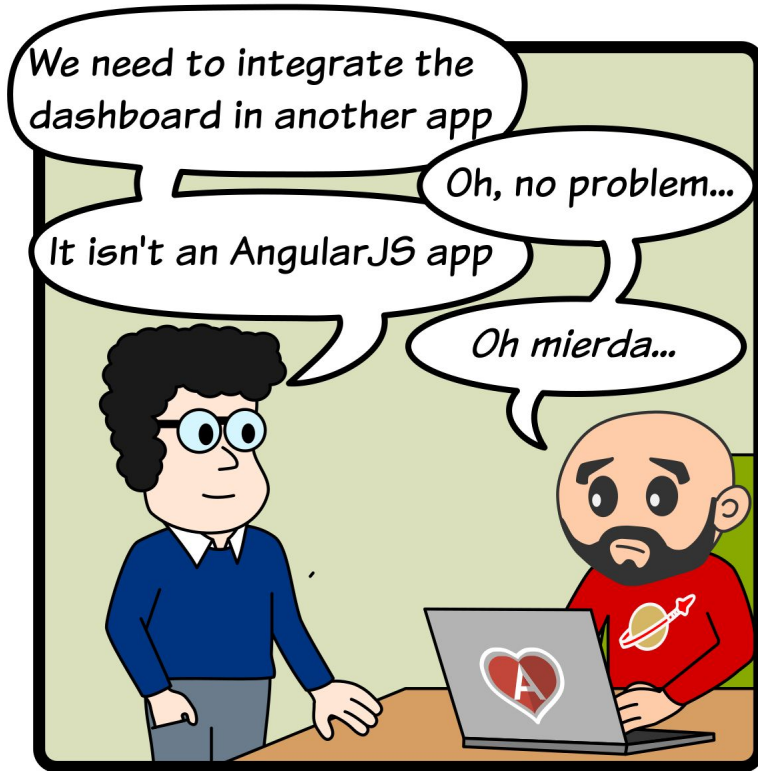
*The story is told  
from my point of view,  
some incoherences  
could be found...*



# A long time ago in an incubator far, far away...

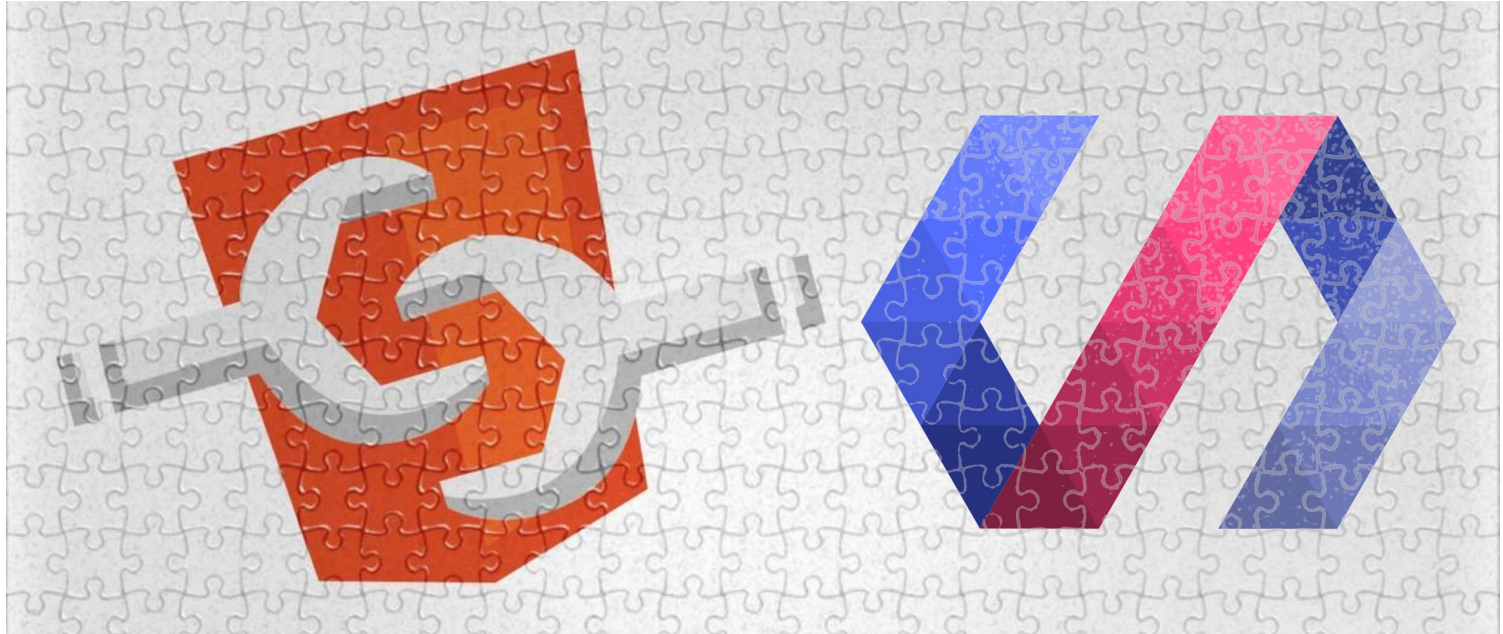


# Until we hit a wall





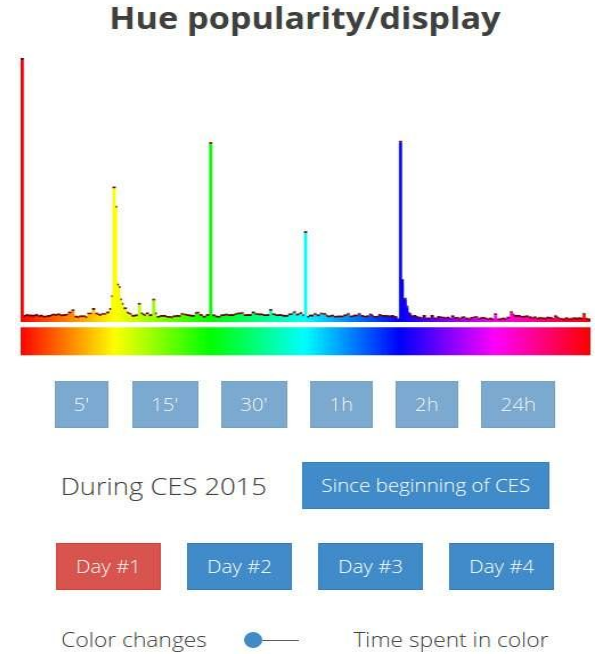
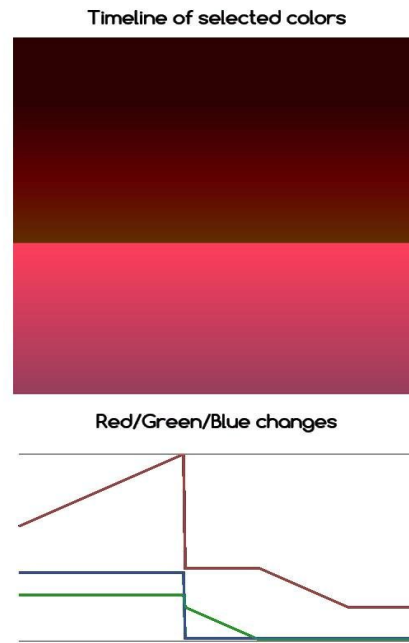
# Enter Web Components & Polymer



A modular approach to webapps



# So we began to build with Polymer

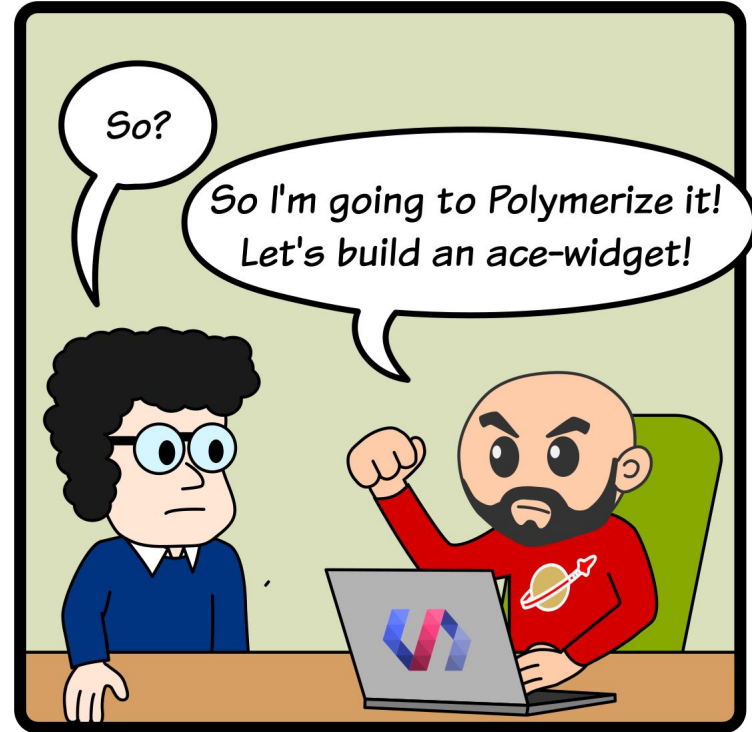
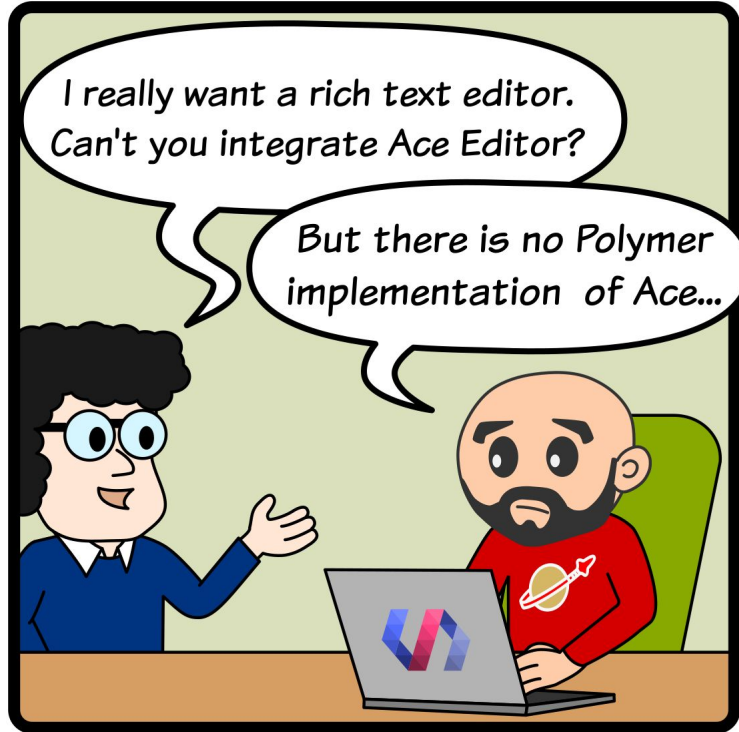


Our first Polymer app in production on 2014

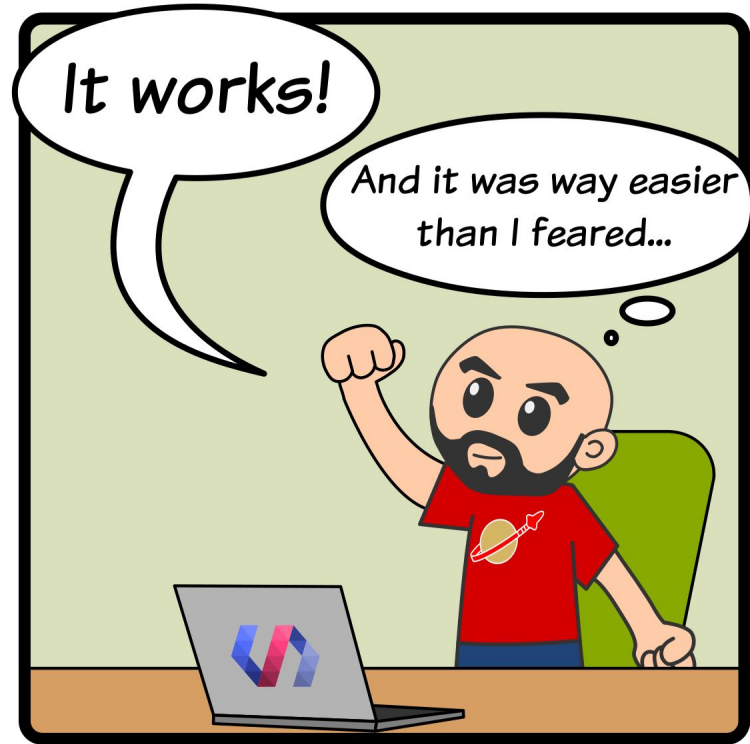
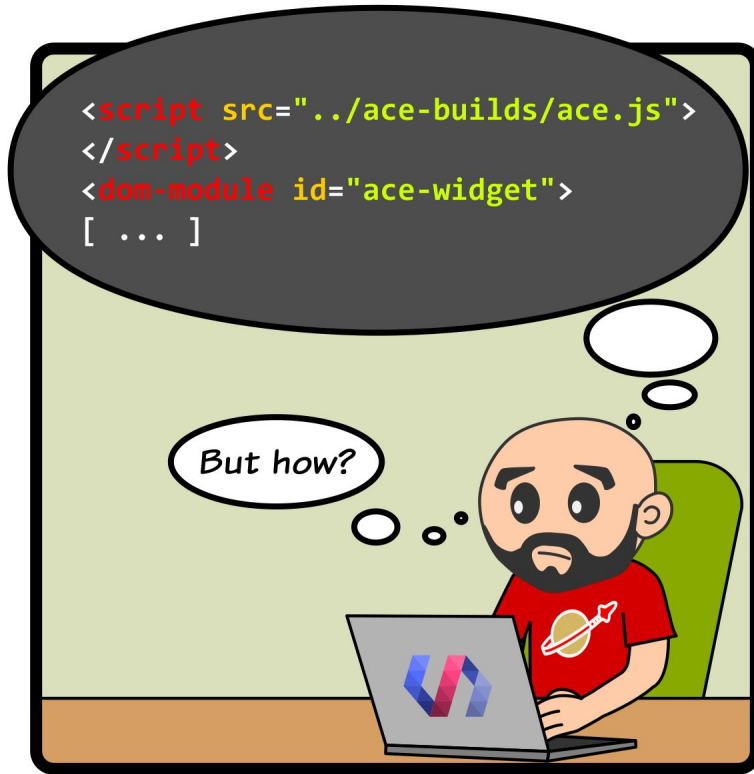




# Learning to Polymerize...



# And it doesn't hurt... too much



# Let's try something harder...

## dygraphs

[Documentation](#) ▾ [Examples](#) ▾ [Play](#) [Download](#) [Community](#) ▾ [Contribute](#) ▾

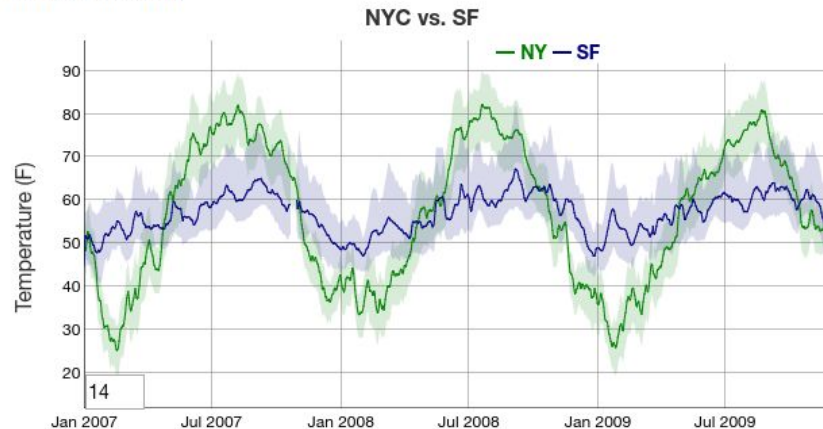
dygraphs is a fast, flexible open source JavaScript charting library.

It allows users to explore and interpret dense data sets. Here's how it works:

This JavaScript...

```
new Dygraph(div, "ny-vs-sf.txt", {  
  legend: 'always',  
  title: 'NYC vs. SF',  
  showRoller: true,  
  rollPeriod: 14,  
  customBars: true,  
  ylabel: 'Temperature (F)',  
});
```

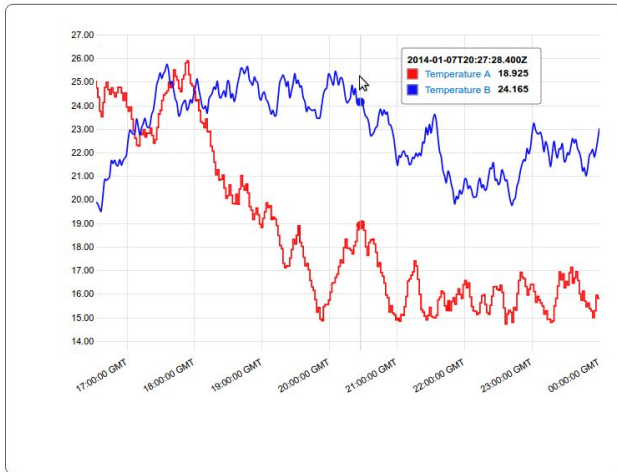
...makes this chart!



The chart is *interactive*: you can mouse over to highlight individual values. You can click and drag to zoom. Double-clicking will zoom you back out. Shift-drag will pan. You can change the number and hit enter to adjust the averaging period.



# And the result is as easy and painless...



A screenshot of a web browser's developer tools, specifically the 'Sources' panel. The file tree on the left shows a project structure with folders like 'components', 'warpl0-quantumviz', and 'warpl0-display-chart.html'. The main pane shows the source code of 'test-warpl0-display-chart.html'. The code includes HTML meta tags, a script tag for 'warpl0-quantumviz', and CSS styles for a container. The chart is rendered as a single line with the following data:

```
<div class="container">
  <warpl0-display-chart
    width="600"
    height="600"
    data: [{"t": "2014-01-07T20:27:28.400Z", "v": 18.925}], [{"t": "2014-01-07T20:27:28.400Z", "v": 24.165}]]>
</div>
</body>
</html>
```



# Quantum, an IDE for Warp 10

Warp10 Quantum

Choose your backend ▲

Distributed Warp  Choose another backend

## WarpScript

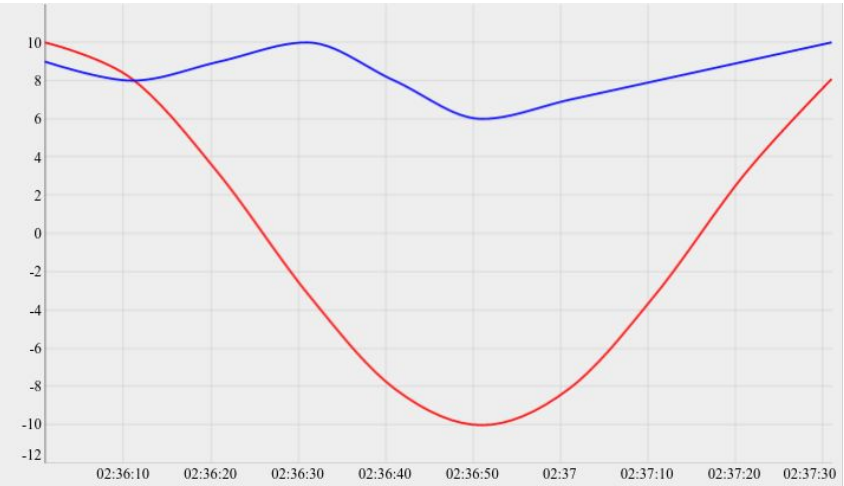
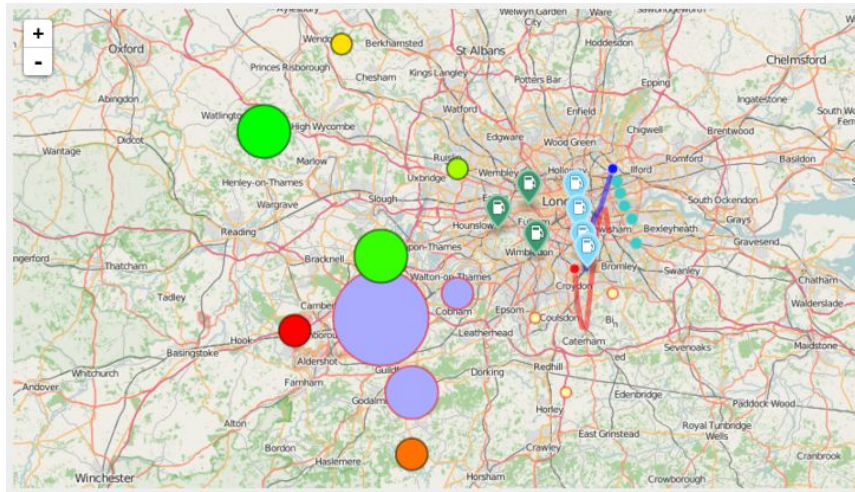
```
98 // On recupere tous les nombre d'operations des sorties et on le store dans 'outputs
99 $token '=Lib.nbops' { 'inout' 's' } NOW DUP FETCH
100 'outputs' STORE
101
102 // On reduit par application et on store dans 'outputsByApp' le nombre d'operations des entrees par application
103 [
104   $outputs
105   [ 'app' ]
106   reducer.sum
107 ]
108 REDUCE 0 INTEGRATE
109 'outputsByApp' STORE
110
111 // On va changer le signe de toutes les nombre d'operation de sortie pour pouvoir fair ela difference entre les entrees et les sorties
112 // On utilise un mapper_mul qui multiplie chaque datapoint par une valeur
113 // mapper_mul : https://www.warp10.io/reference/frameworks/mapper_mul/
114 [ $outputsByApp -1 mapper_mul 0 0 0 ] MAP
115 'outputsByApp' STORE
116
117 // On va additionner les nombre d'operation en entree avec les nombre d'operation en sortie en negatif (i.e. faire une soustraction)
118 // reducer.sum : http://www.warp10.io/reference/frameworks/reducer_sum/
119 [
120   $inputsByApp $outputsByApp
121   [ 'app' ]
122   reducer.sum
123 ]
124 REDUCE
125
126
127
...
```

Permalink: [Ly8gVm9pciBsZXMGZW50csOpZXMgdMgbGVziIHNvcnRpZXMgCi8viE9uIHNO...](https://www.warp10.io/reference/frameworks/reducer_sum/)

EXECUTE



# QuantumViz / GeoQuantumViz

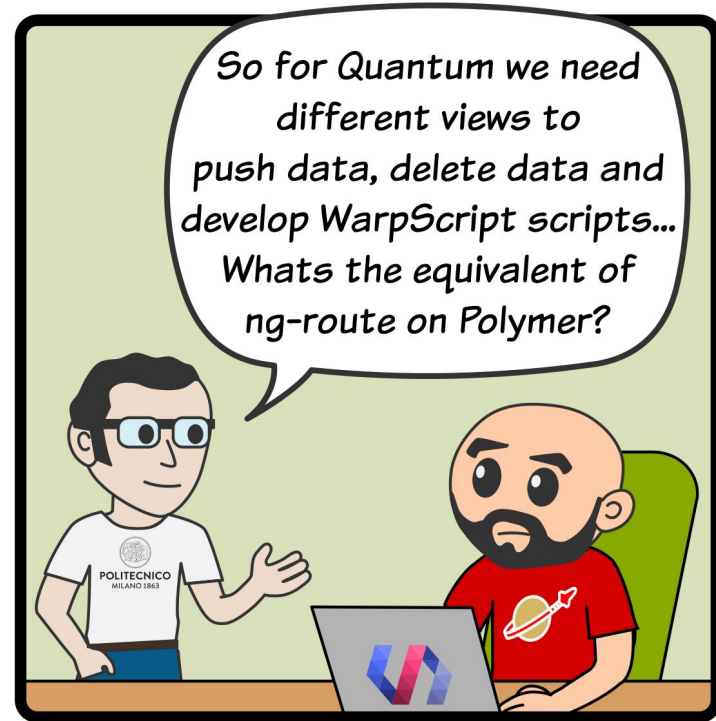
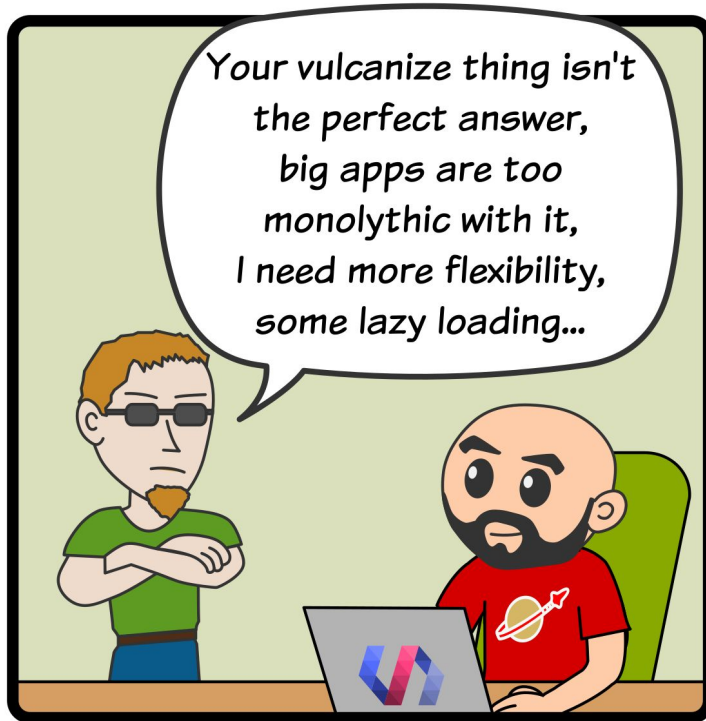


## Visualization widgets for Warp 10

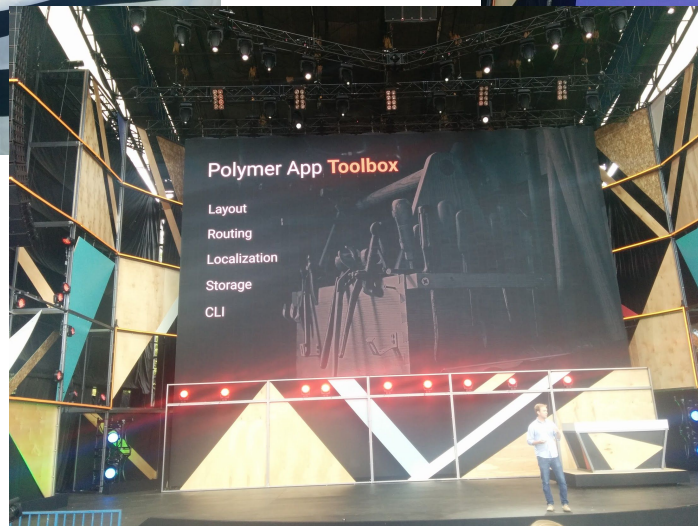
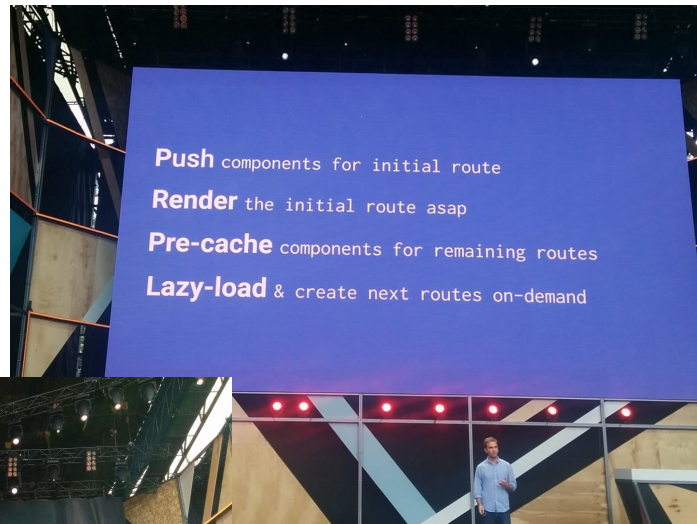




# But was it production ready?



# Google I/O 2016. Polymer App-Toolbox



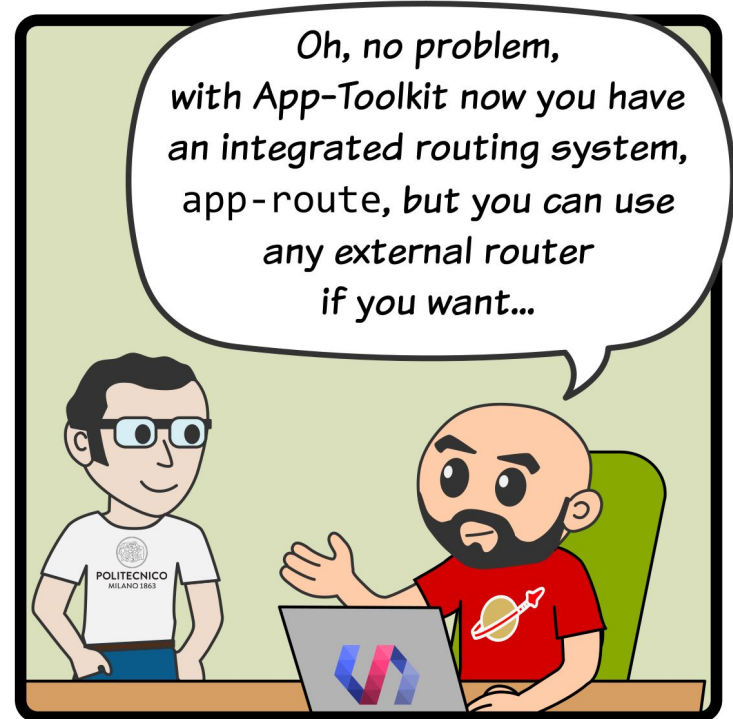
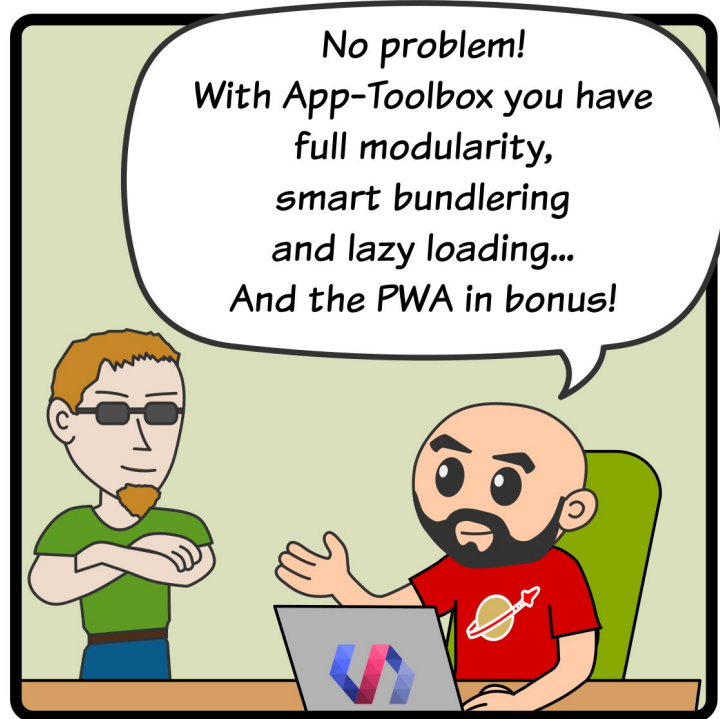
# Polymer App-Toolbox

Everything you needed to build big apps

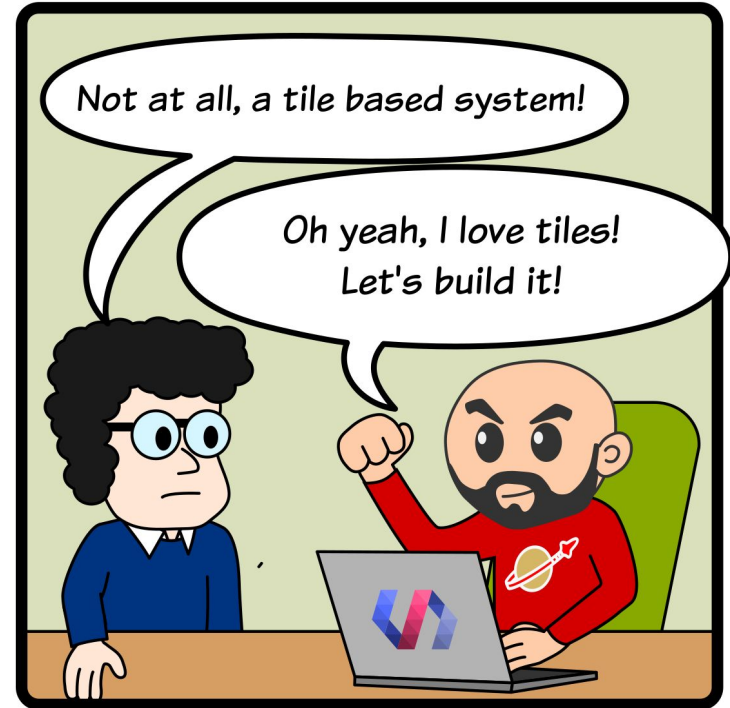
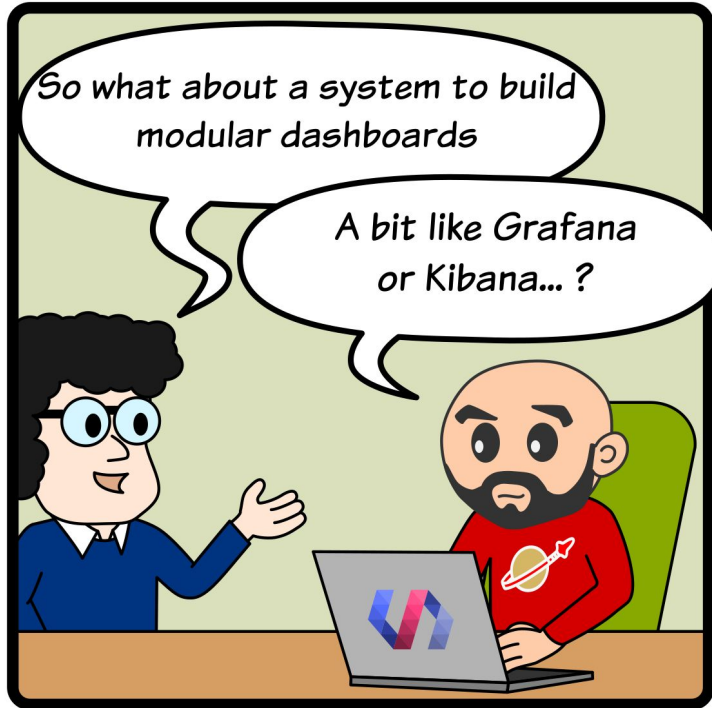
- app-layout elements
- app-route
- app-localize-behavior
- app-storage
- Polymer CLI



# And then we were feature-complete



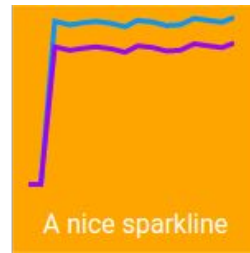
# And a new challenge could emerge



# warp10-tiles

---

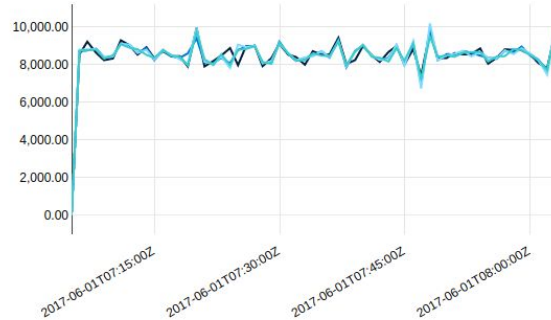
bricks for quickly assemble  
tile-based dashboards



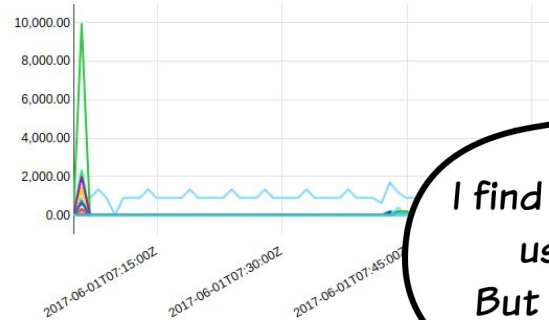


# Our first monitoring dashboards

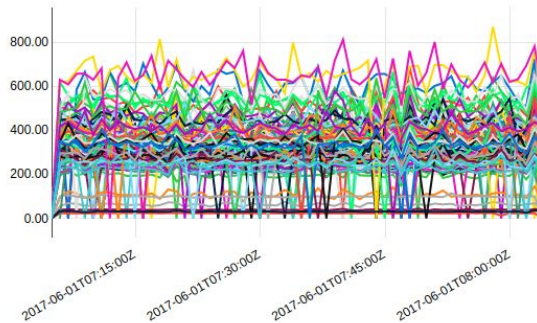
HBase puts per second per store



HBase read requests per second per RegionServer



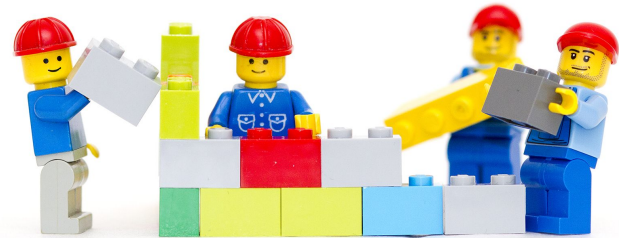
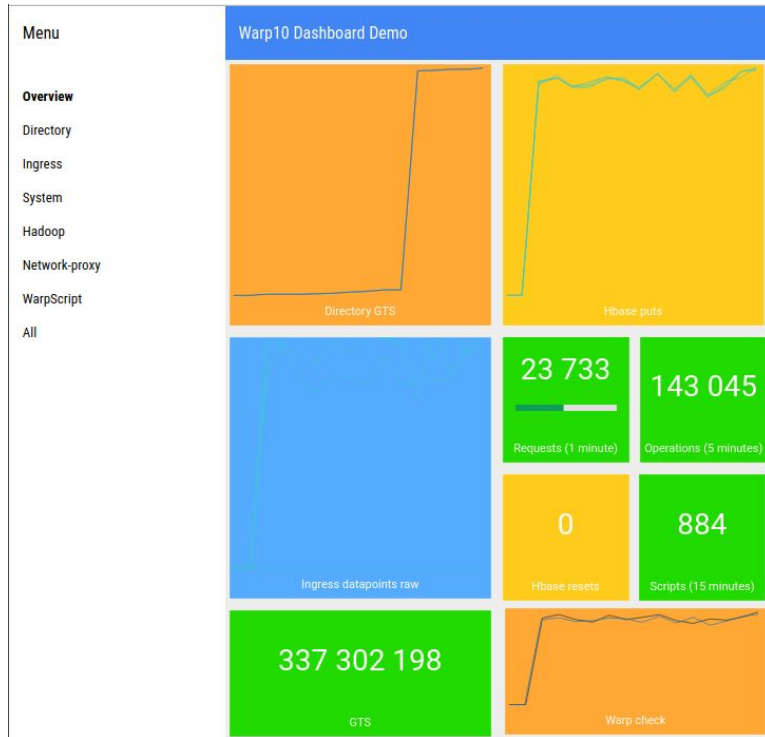
HBase write requests per second per RegionServer



I find it very clear and user-friendly...  
But I'm maybe a bit biased



# A modular approach for dashboards



# Fast-forward to a v.2



# Monitoring industrial IoT

Menu

Main

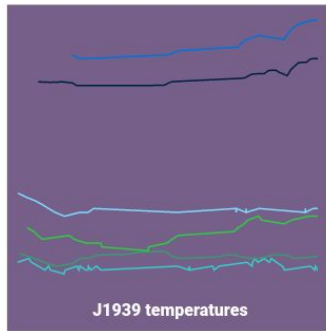
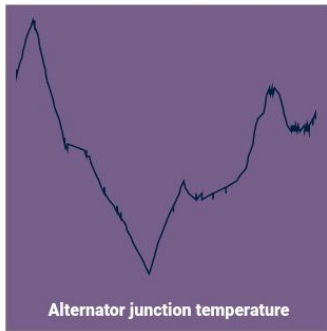
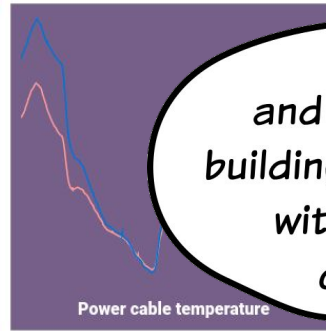
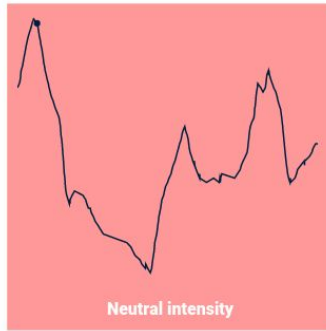
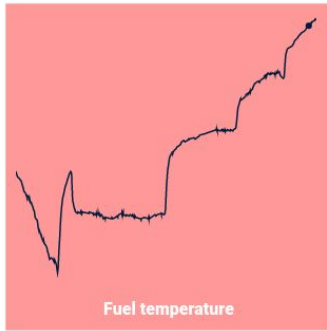
Intensity and voltage

Temperatures

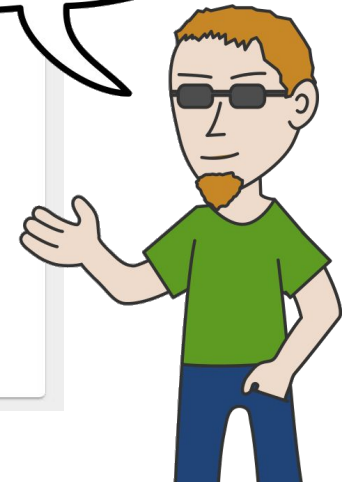
Pressure and humidity

Datalogger

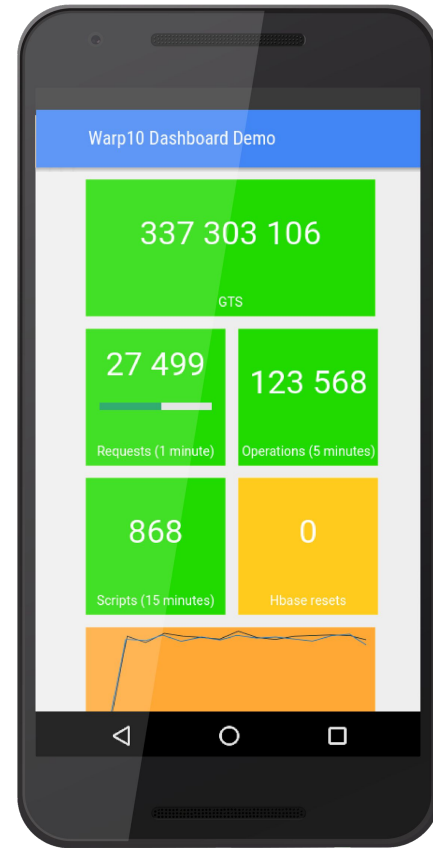
My App



Good...  
and what about  
building a dashboard  
without a line  
of code?



# Easy and painless PWA



# Warp 10 and the Dataviz

---

Hero or menace?





# For us Dataviz is a two edged sword



Not our business but we can't ignore it



# Dataviz without data means nothing



It's the icing on the cake



# Yet many customers think dataviz is all



And are rather vocal about it



# Danger of misconception





# Danger of polarization



# A bit of dataviz can make a difference

Patterns and Duplicates demo

## Look for duplicates

Choose a period  
April 2017

START SEARCH STOP SEARCH

Reference	Creditor Id	Transactions	Amount
3117100DVZT29SDG	VV9445137707416516812739877	11	744.9
0217108EG2N68SDG	VV9445137707416516812739877	33	18
0517108EGKDSJSDG	OC65B5450308080513471821Z17	1	15
3817115E48CEOSDG	VV9405553734061795310983643	1	1
2517114E26TOBSDG	JP89LECE4871645426	1	25
3417111EV2VZKSDG	VV9407336705241271878359394	2	1
3217103EBMCSJSDG	VV464513870654T712470923657	1	14.28
2617100DV8PASSDG	VV9404336700136341883085896	1	49
3717103EA49QRSDG	VV9408836709869231873554521	1	90
3717109ENSFDBSDG	VV940694070920518596523042	3	3
3817115E5KBKWSDG	VV9445172701396747749511813	1	29
2517114E26TOBSDG	JP94SIOD4237593902	1	198.4
0817100DYAB12SDG	VV9455643709093521393923024	1	314.18



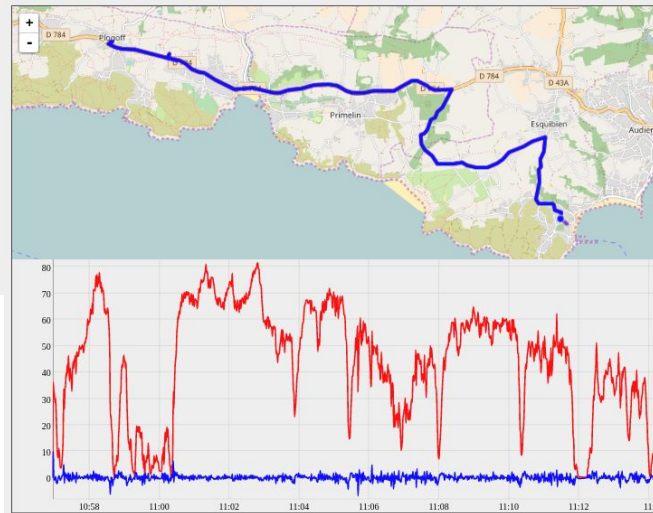
POC BNP - Cityzen Data / Demo Sprint #1

Select day  
Mercredi, 22 mars 2017

### Paramétrage des seuils

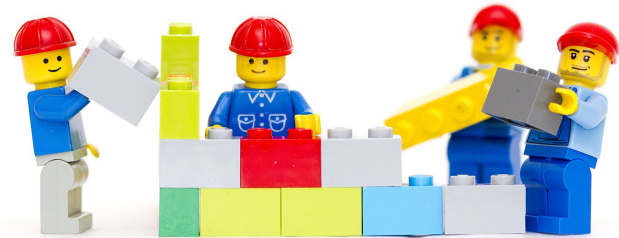
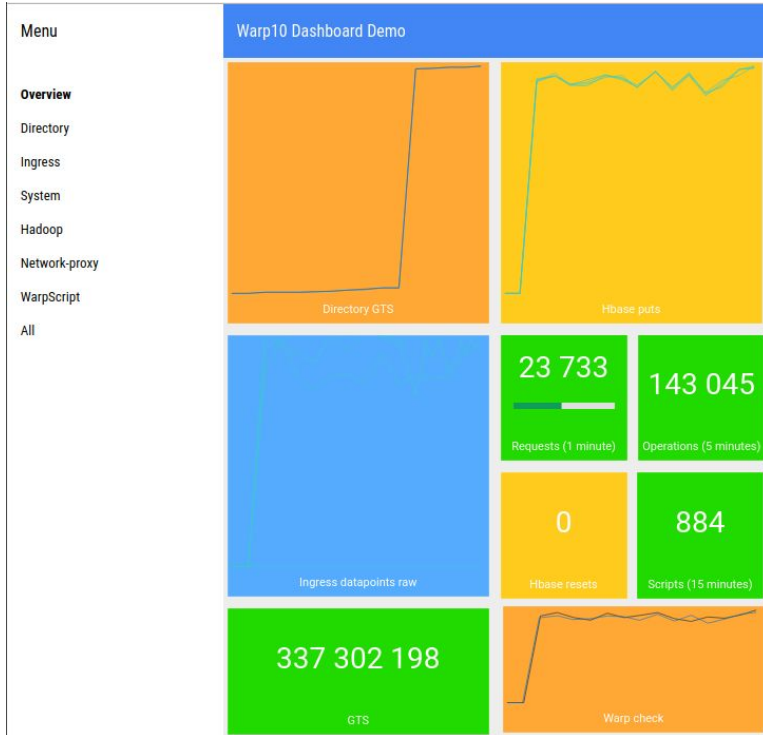
PASS	ICORE
Nombre d'opérations 0 opérations	Nombre d'opérations 0 opérations
Montant 0 € cents	Montant 0 € cents
Délai 0 s	Délai 0 s

SS — ICORE

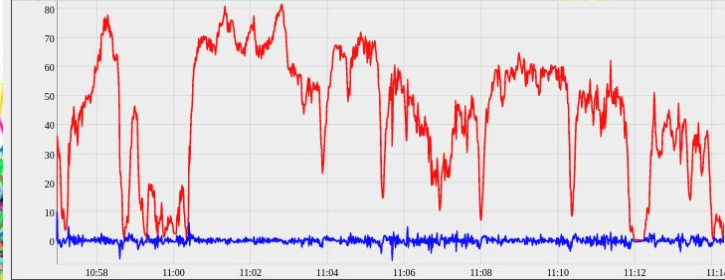
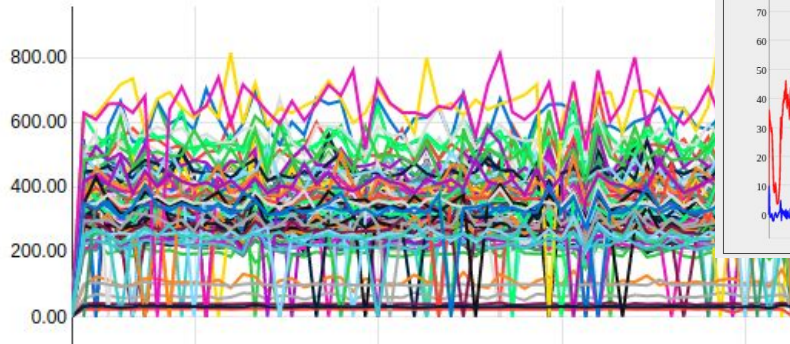
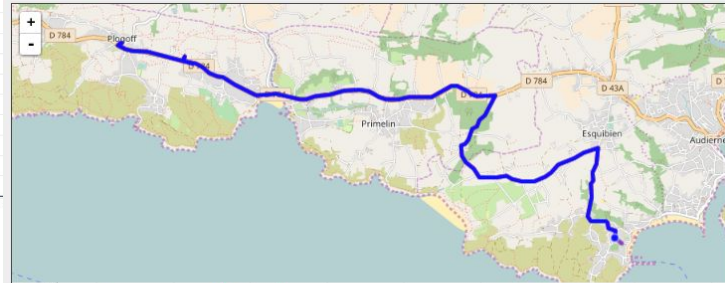
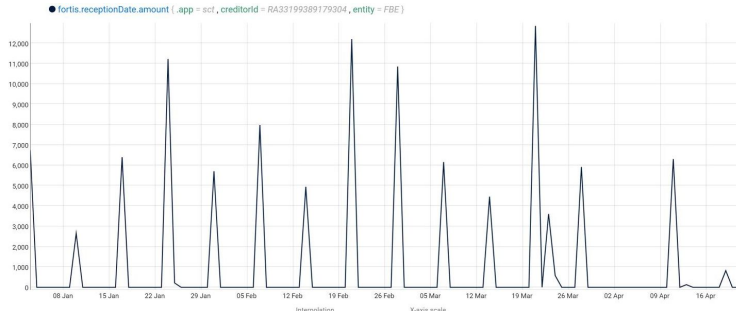




# Quick and painless visualization tools



# Dataviz web components collection



# Conclusion

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That's all folks!



