### Social Machines Observation and Analysis Applications for E-Government

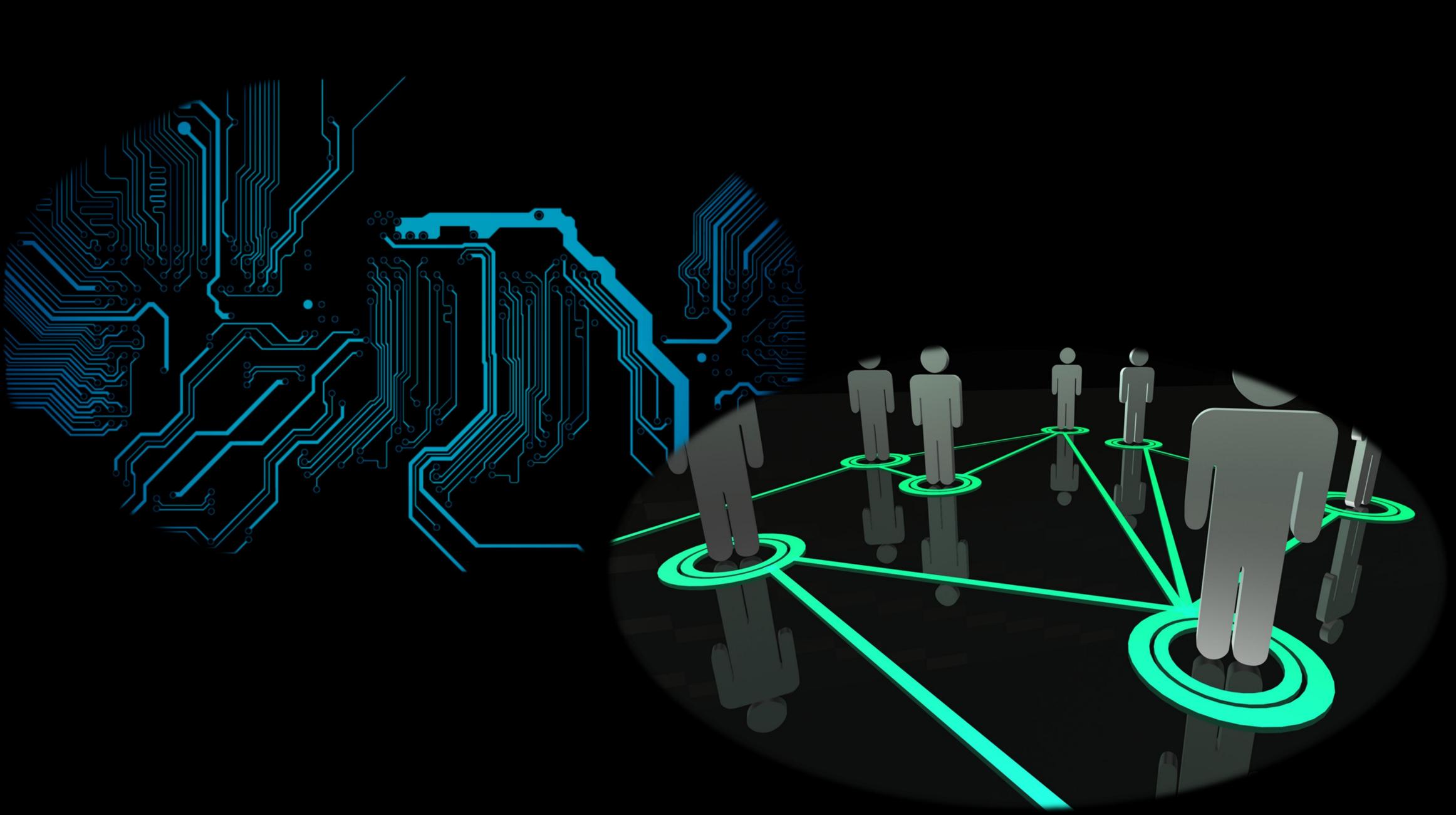
Ramine Tinati, University of Southampton Web & Internet Science

# Southampton



### Social Machines.

### Social Machines?



### **Observing Social Machines**

The Web represents an eco-system of social machines

The interactions and activity of humans, data, and infrastructure, all produce digital traces, representing the functionality of a social machines

Studying these digital traces can give insight into the health, popularity, and importance of a social machine.

Social machines can be considered in various classes i.e. social network platforms, e-commerce, crowdsourcing services, knowledge repositories, E-Government

Different classes exhibit certain measurable characteristics

### **Observing Social Machines**

The observation of a social machine is the first step to understanding, supporting, and (potentially) forecasting events and activity

At the micro-level studying them in isolation offers an insight into how humans are interacting with a specific system or set of activities (e.g. communicating)

At the macro-level, cross-system analysis can reveal insights about how multiple systems interact, thus providing a richer understanding of the Web

### Government as a social machine.

### Government as a social machine

The interface between government and the citizen is changing

The publication of data improves transparency, and increases the ability for citizens to engage in government processes, policy, and decision making

The availability of data, technology, applications, and communication tools help empower citizens, make better decisions, and improve themselves and their community

### Government + citizens + data





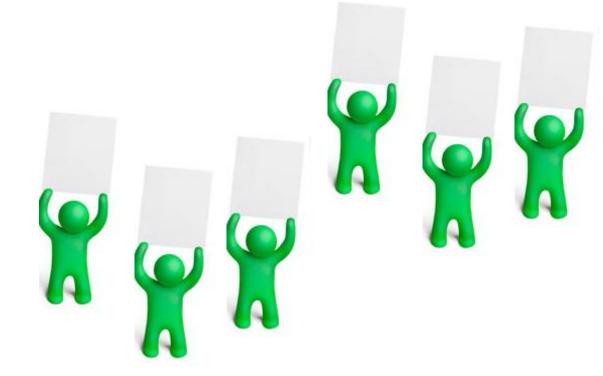




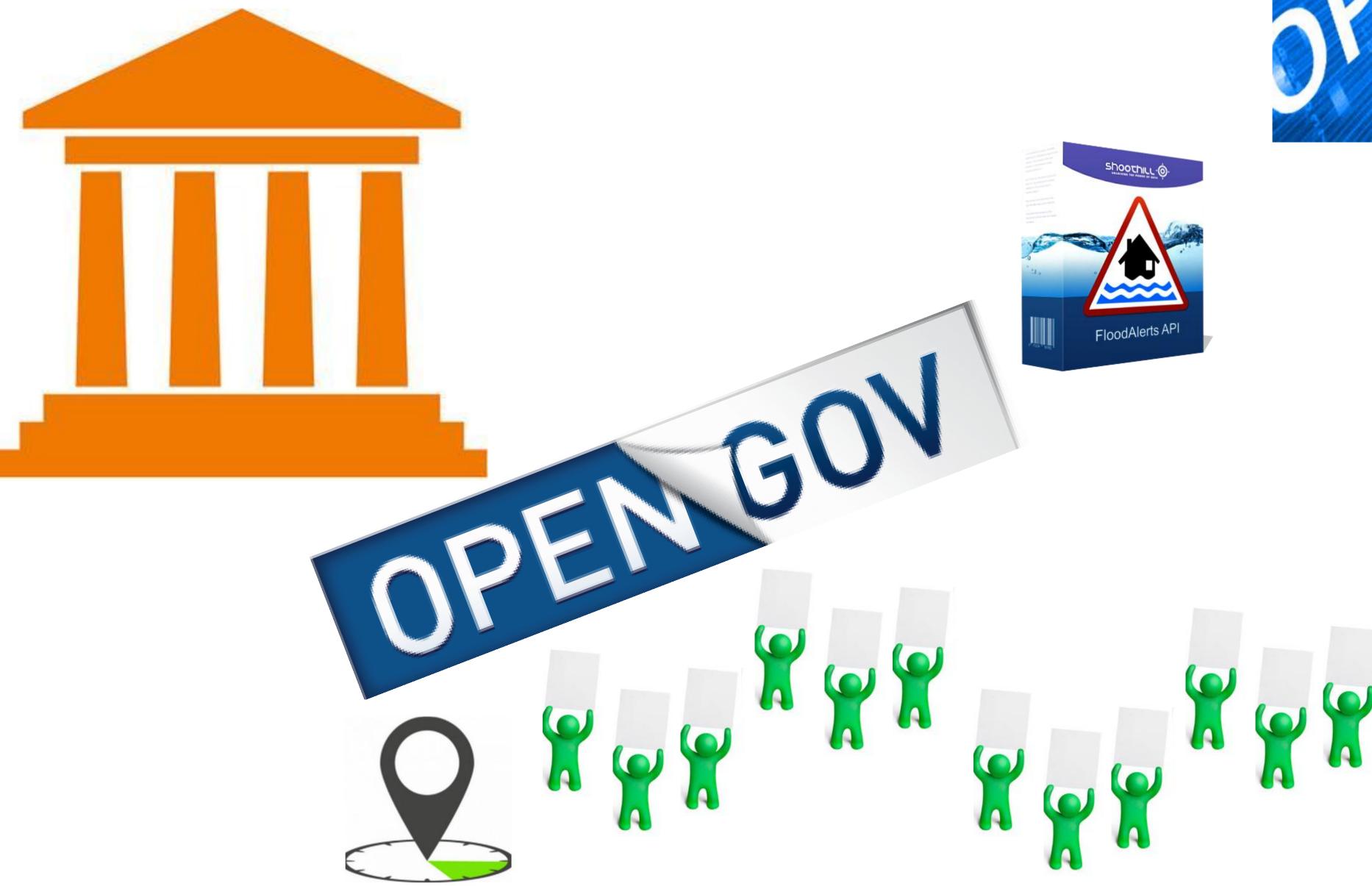
### Government + citizens + data



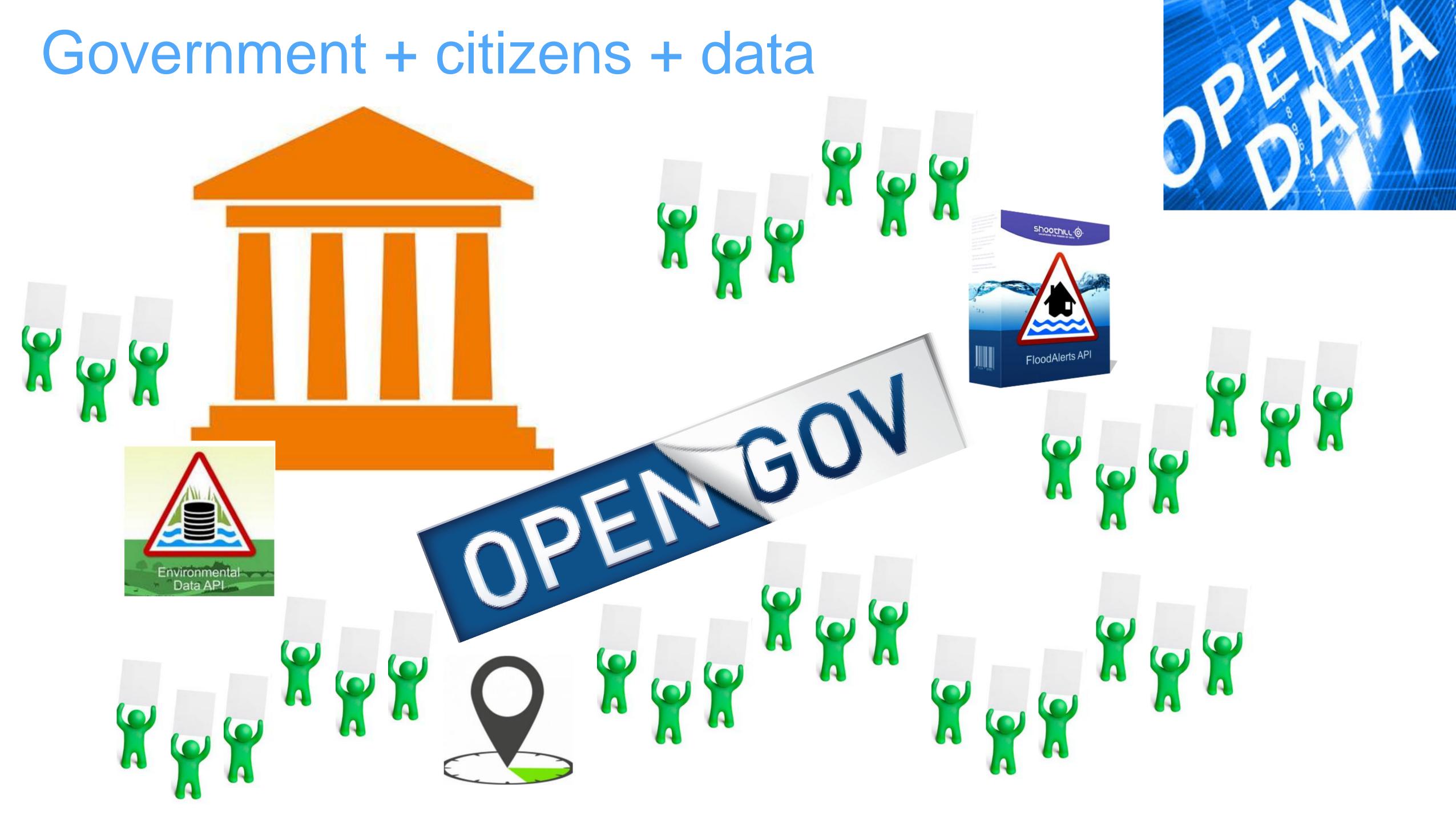




### Government + citizens + data







## Government as a Social Machine

the interaction between citizens, policy and governance.

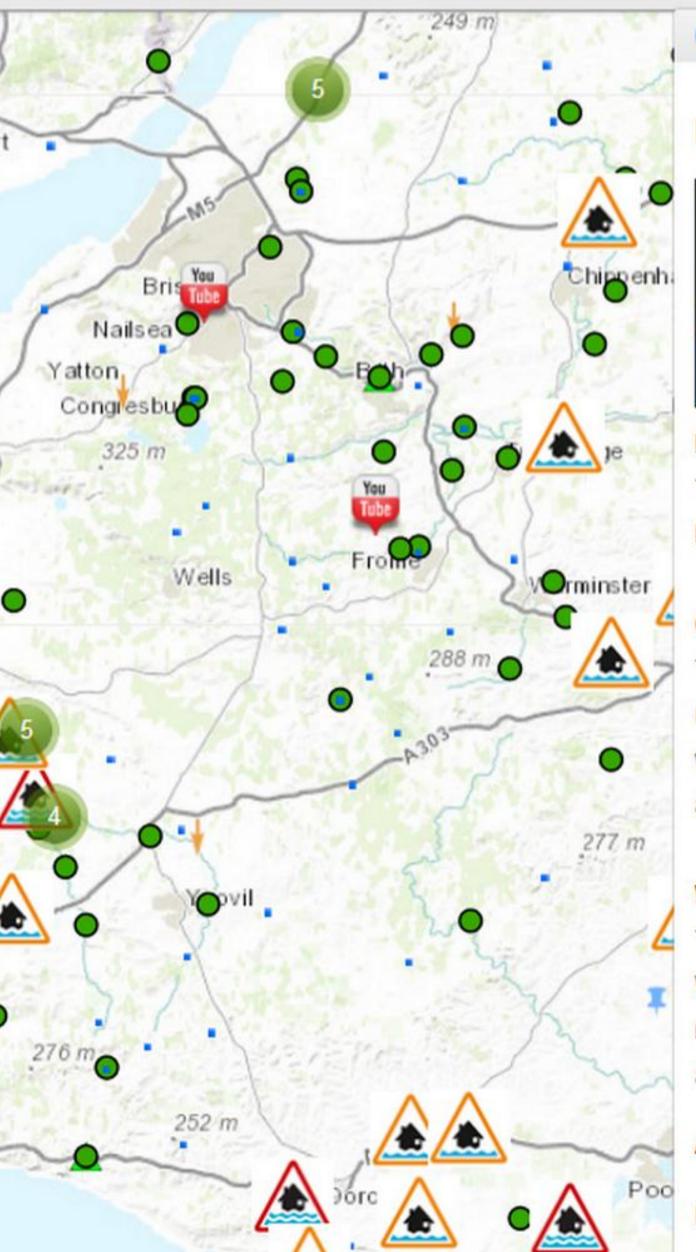
in combination with government social machine activity can contribute to helping government make better decisions:

Natural/Urban Disaster response Political campaigns Data-driven policy making Faster engagement with citizens

- (Digital) Government represent a complex social machine which support and improve
  - represents a co-constructed relationship between citizens, government, and data
- Observing the activity of specific social machines (such as Twitter, Weibo, Wikipedia),

### Examples of Government as Social Machines

#### Flood Warnings, Weat...



Q

#### About

### Live Flood Warnings, Weather Conditions and River Levels



CO Link

#### Live Flood Warnings

This layer shows live information about where there are flood warnings in place that have been announced by the Environment Agency. Flood warning codes explained.

#### Current Rainfall (mm)

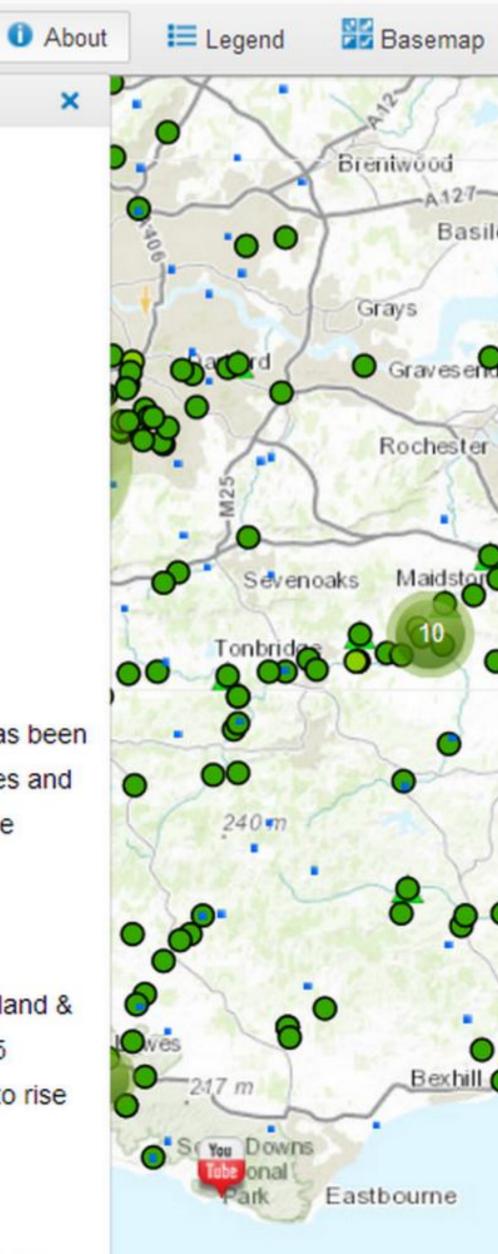
This is a live feed of rainfall from monitoring stations across the UK, which is updated every 15 minutes. This data has been released by the Environment Agency as part of flooding response efforts by the UK Government, emergency services and wider community. This map allows users to see where rainfall events are occurring and as a result where needs to be alerted to changes in flooding status.

#### Water Levels Status

This layer indicates if water levels are currently rising, falling or stable for selected rivers and bodies of water in England & Wales. This is calculated by taking account of the three most recent water level values, the feed is updated every 15 minutes so the value is based on the rough change over 45 minutes. Of course, in tidal areas it is normal for levels to rise and fall periodically. The map should only be used as a indicative guide to conditions.

#### Access and Use Constraints

Open Covernment Licence, This application was developed by KentCIS



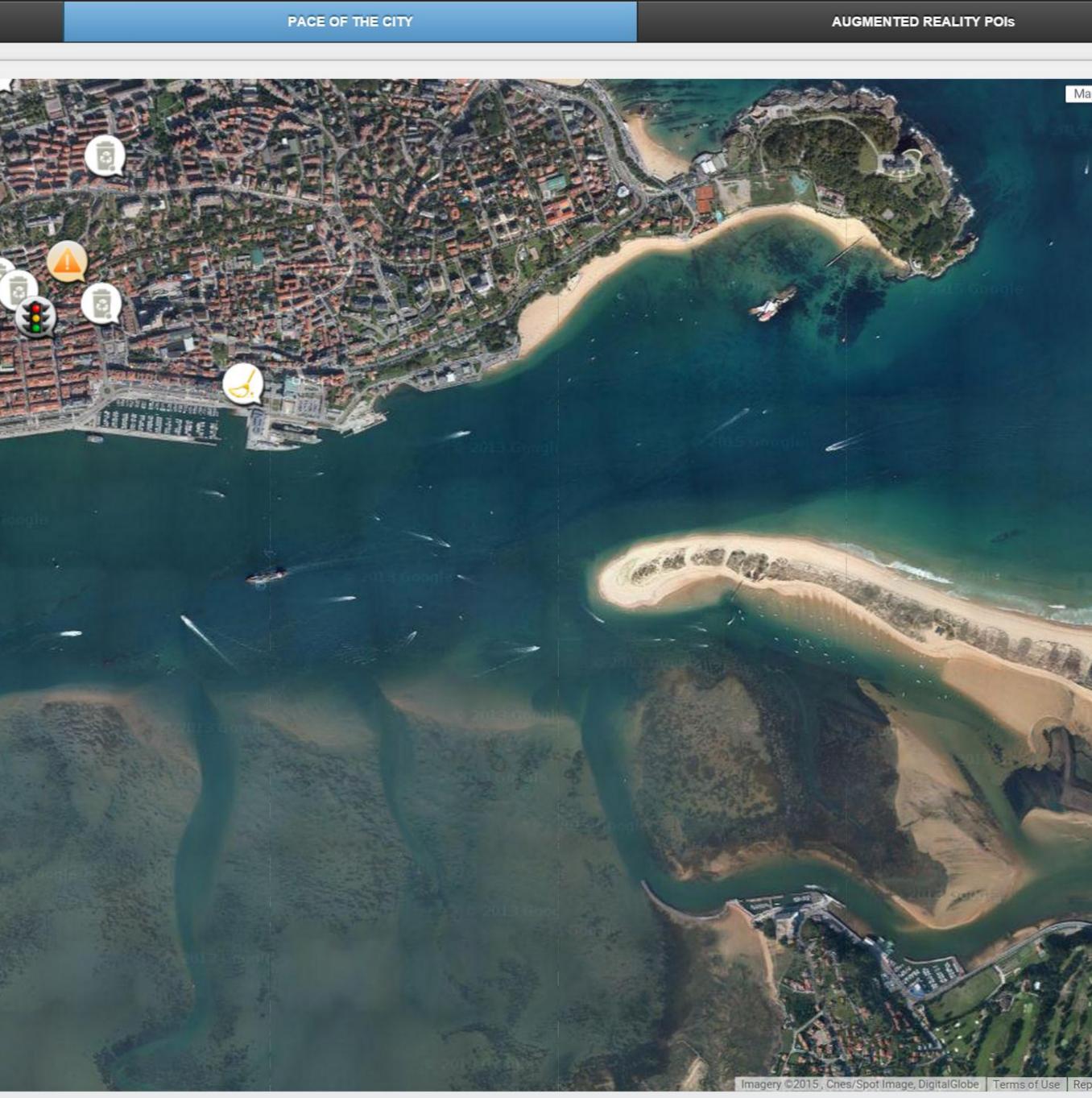
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#### TRAFICO: Problemas de aparcamiento

2015-04-07 20:50:38 si ya es dificil aparcar en la zona 10, nos quitan el aparcamiento en la calle Rubio, en las pocas plazas que quedan enfrente de la iglesia. Es indignante el manguneo en este sentido. <u>Estado incidencia</u>





## Web Observatories to support social machines

Governments are in the position to learn lessons from how other social machines function

What are design patterns and anti-patterns that can be used to further

There are various scenarios where government can borrow social machine building blocks: from the use of volunteer crowdsourced activities, to the engagement in citizen-led ventures.

Web Observatories provide a platform to facilitate the observation of existing social machines.

- improve their own functionality and improve citizen-government engagement

## Citizen Engagement

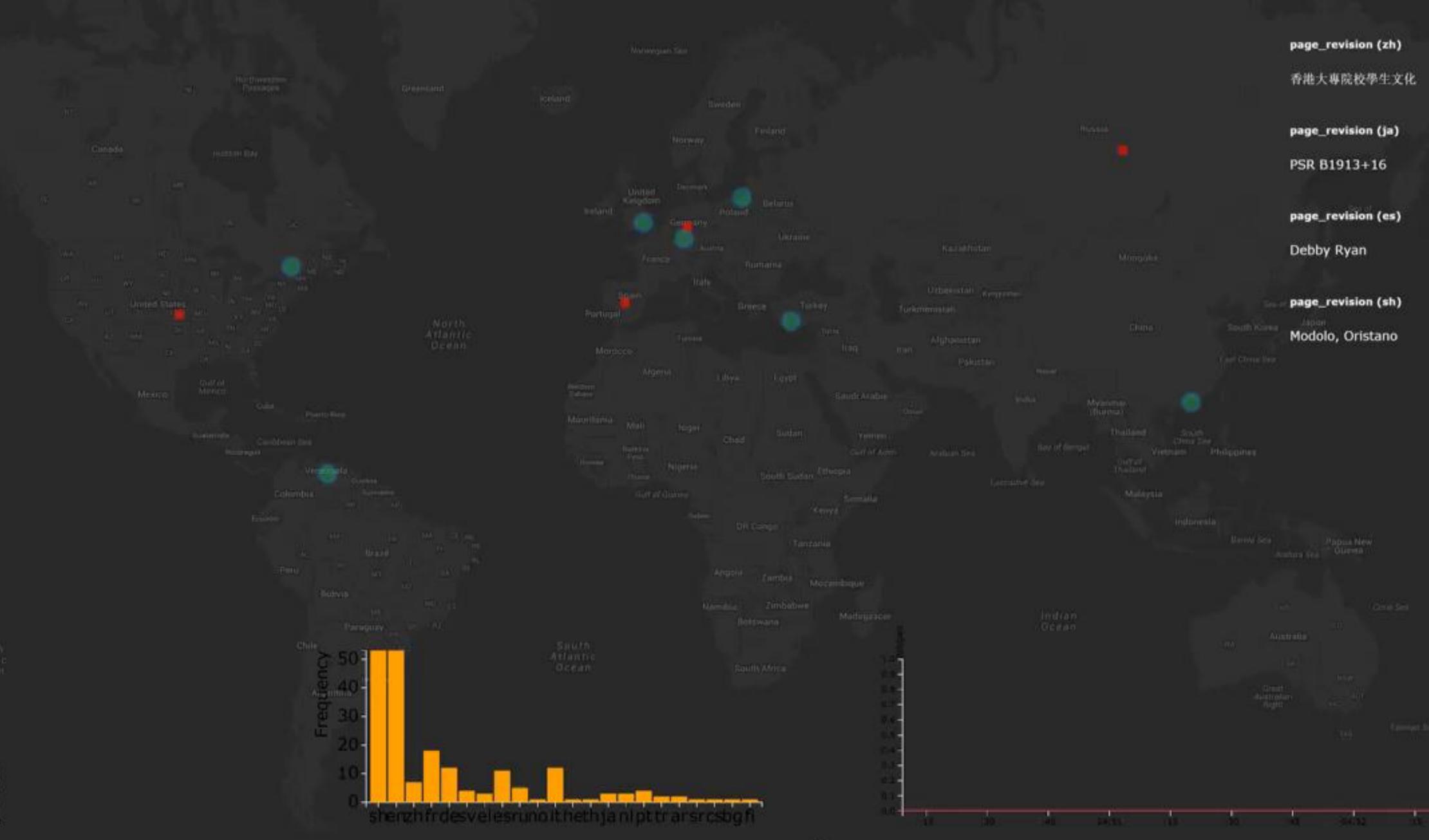


### Revs:190 Users:127 Wiki/Sec: 0.6

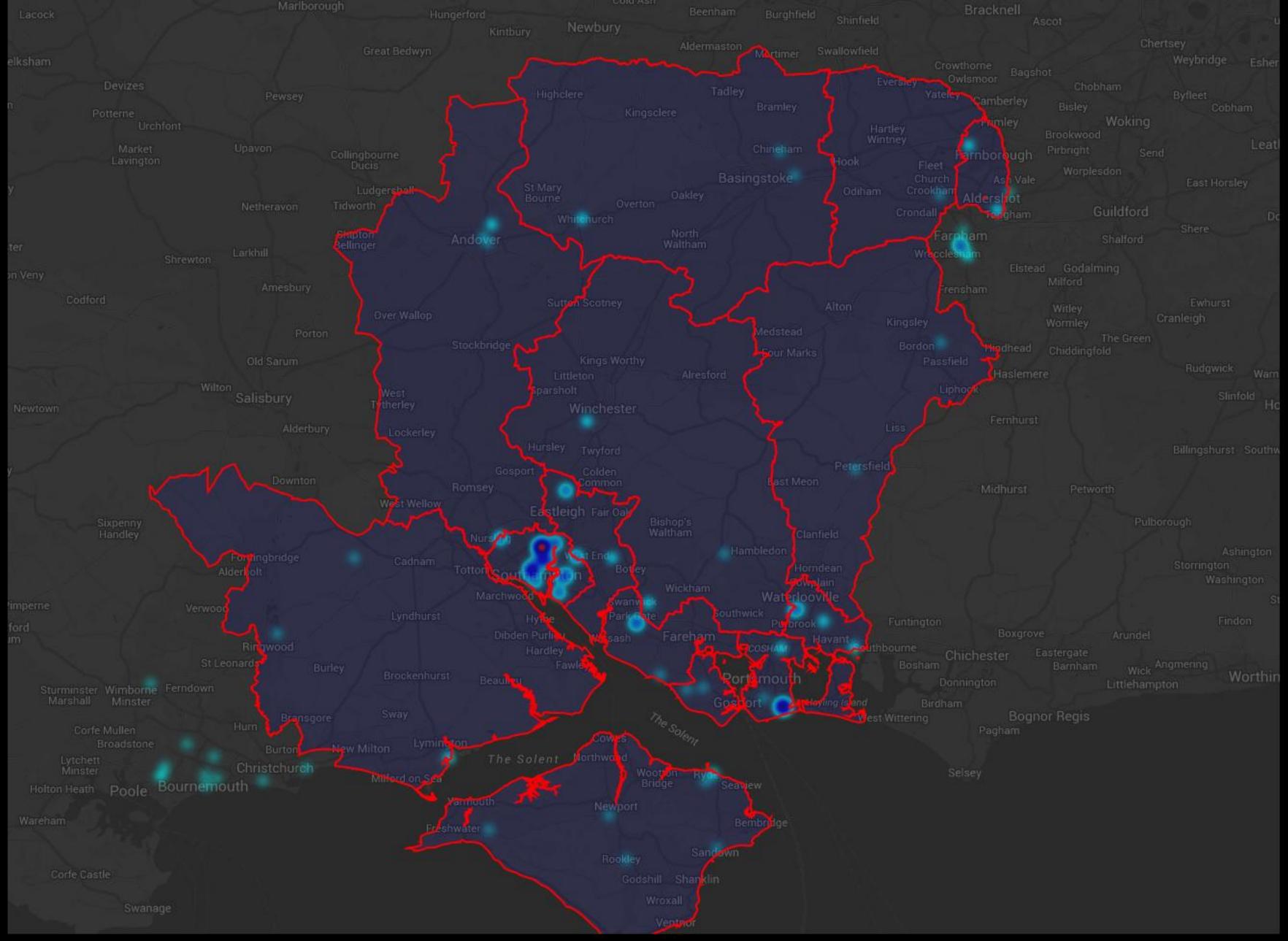
nig tan

North Paeilic Ocean





Coogle



Crime Overlay

#### **OBSERVATORY: HAMPSHIRE POLICE**

g wozza

I don't judge her I don't judge her but I could never love her

g wozza

I don't judge her I don't judge her but I could never love her

Lee Freeman

@FrenchAtheist absolutely. There lives will be far happier without religion. @AtheistEnigma @Redone68 @StaunchA @wombleweb

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east hants: 9 basingstoke: 3 eastleigh: 17 fareham: 4 gosport: 2 hart: 7 havant: 13 isle of-wight: 8 new forest: 35 portsmouth: 11 rushmoor: 4 southampton: 20 test valley: 14 winchester: 28



### **Collective Decision Making**







Person 256104 from Germany Has taken part in galaxy\_zoo Classifying the AGZ0003ftw Object at 15:41:39 Person Not Logged In from Ukraine Has taken part in chimp Classifying the ACP0004ezt Object at 15:41:42 Person panoptes-1255296 from United States Has taken part in planet\_hunter Classifying the APH00005cx Object at 15:41:46

Person Not Logged In from Taiwan Has taken part in hard\_cell Cessifying the AHC00025ji Object at 15:41:48 Person panoptes-1255095 from United States Has taken part in serengeti Classifying the ASG001evbf Object at 15:41:50 Person Not Logged In from Switzerland Has taken part in worms Cassifying the AWS0000hwj Object at 15:41:53 Person panoptes-1255296 from United States Has taken part in planet\_hunter Cassifying the APH00003td Object at 15:41:53

Person 214794 from United States Has taken part in worms Classifying the AWS00007fm Object at 15:41:55 Person panoptes-1255095 from United States Has taken part in serengeti Classifying the ASG0018zjq Object at 15:41:55 2077 classifications 47 talk messages 56 users 24 countries 2051 subjects 22 projects

### **Twitter Cascade Statistics**

Filtering By Keyword: # Filtering By Language: Active Cascades: 113 Active Roots: 0 Active Stubs: 0 Active Children: 0

Longest Cascade: Longest Cascade ID: Total Processed Cascades: 113 Total Unqiue Cascades: 0 Total Processed Nodes: 465

#### Twitter Cascade Merges

#torneoexaCarlota #padresCarlota #UnTemaMuyDomingo



### Summary

Government, specifically those working towards an 'e-government' approach are now in the position to build their own social machines using the socio-computation building blocks

Government (and citizens) have the change to observe and make decisions based on real-time human activity, at scale.

Governments have the chance to improve their own social machines to further improve their own processes and engagement with citizen.

Open Data and Open Government are essential, but citizen engagement is also required!

Social Machines are co-constructed



### Thank You

@raminetinati r.tinati@soton.ac.uk raminetinati.co.uk