

CIVIC DATA VR

Can government use of Data VR make open, public data more accessible, useful, and impactful?

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MIT Media Lab

Patrick McCormick

paddy@post.harvard.edu

@solutist

Civic Data VR

1. Great expectations for public data
2. Mainstream but not game changing
3. Open data growth
4. Pattern recognition through Data VR
 - Public policy and service delivery
 - Government accountability
 - Citizen engagement

Great expectations for public data

- Establish **Identity, Privacy, and Security** policies
- Develop, publish **Open Data** policy
- Align to **Government Open Data** principles
 1. **Complete**: all public data not subject to privacy, security, privilege limits, is made available
 2. **Primary**: Data is as collected at the source, with highest possible level of granularity, not in aggregate or modified forms
 3. **Timely**: Data is made available as quickly as necessary to preserve value
 4. **Accessible**: Data is available to widest range of users for widest range of purposes
 5. **Machine processable**: Data is reasonably structured to allow automated processing
 6. **Non-discriminatory**: Data is available to anyone, with no requirement of registration
 7. **Non-proprietary**: Data is available in format over which no entity has exclusive control
 8. **License-free**: Data is not subject to any copyright, patent, trademark or trade secret regulation (reasonable privacy, security and privilege restrictions may be allowed)

Mainstream but not game changing

Tim Berners-Lee's 5 star framework for open data:

- * Data available with open license but not machine readable
- ** Data available, machine readable in proprietary formats
- *** Data available, machine readable in non-proprietary formats
- **** Data available using open linked formats
- ***** Data available, linked with other relevant data



Cows on [Selsley Common](#). The tragedy of the commons is a useful parable for understanding how [overexploitation](#) can occur.

wikipedia

Open data growth

- Tapping into the knowledge of citizens
- Open connectivity, shared data, APIs, sensors, IoT, apps
- Opening up decision making, planning processes
- Providing responsive municipal services
- Improving traffic and crisis management
- Mapping urban flooding and air pollution
- Enabling collaborative smart energy and sustainability
- Informing continuous urban design, embedded analytics

Terms:

- PII: Personally Identifiable Information - sensitive info
- P2P: Peer to Peer production – collaboration, crowdsourcing
- IoT: Internet of things – device to device communication
- Big data: high volume, often unstructured, use of pattern recognition

Smarter Cities: Turning Big Data Into Insight

City Planning and Operations

\$1 Trillion

global annual savings could be attained by optimizing public infrastructure.

Source: McKinsey

\$57 Trillion

in infrastructure investments will be needed between 2013-2030.

Source: McKinsey

Transportation Analytics

50 Hours

of traffic delays per year are incurred, on average, by travelers.

30 Billion

people all over the world travel approximately 30 billion miles per year. By 2050, that figure will grow to over 150 billion miles.

Cloud is driving cities in their digital transformation.

Water Management

60%

of water allocated for domestic human use goes to urban cities.

\$14 Billion

in potable water is lost every year because of leaks, theft and unbilled usage.

Source: World Bank

37,000

cloud experts support IBM's industry team alone.

\$6 Billion

has been invested by IBM in more than a dozen acquisitions to accelerate its cloud initiatives.

Open Cloud

IBM Intelligent Operations software is designed with cities, for cities, to provide the tools to monitor, visualize and analyze vital city services such as water and wastewater systems, transportation, infrastructure planning, permit management and emergency response.



Pattern recognition through Data VR



- Public policy and service delivery
- Government accountability
- Citizen engagement

Pattern recognition through Data VR

Challenges

- resources
- legacy IT systems
- legacy business processes
- data custodianship
- measurable outcomes
- PII

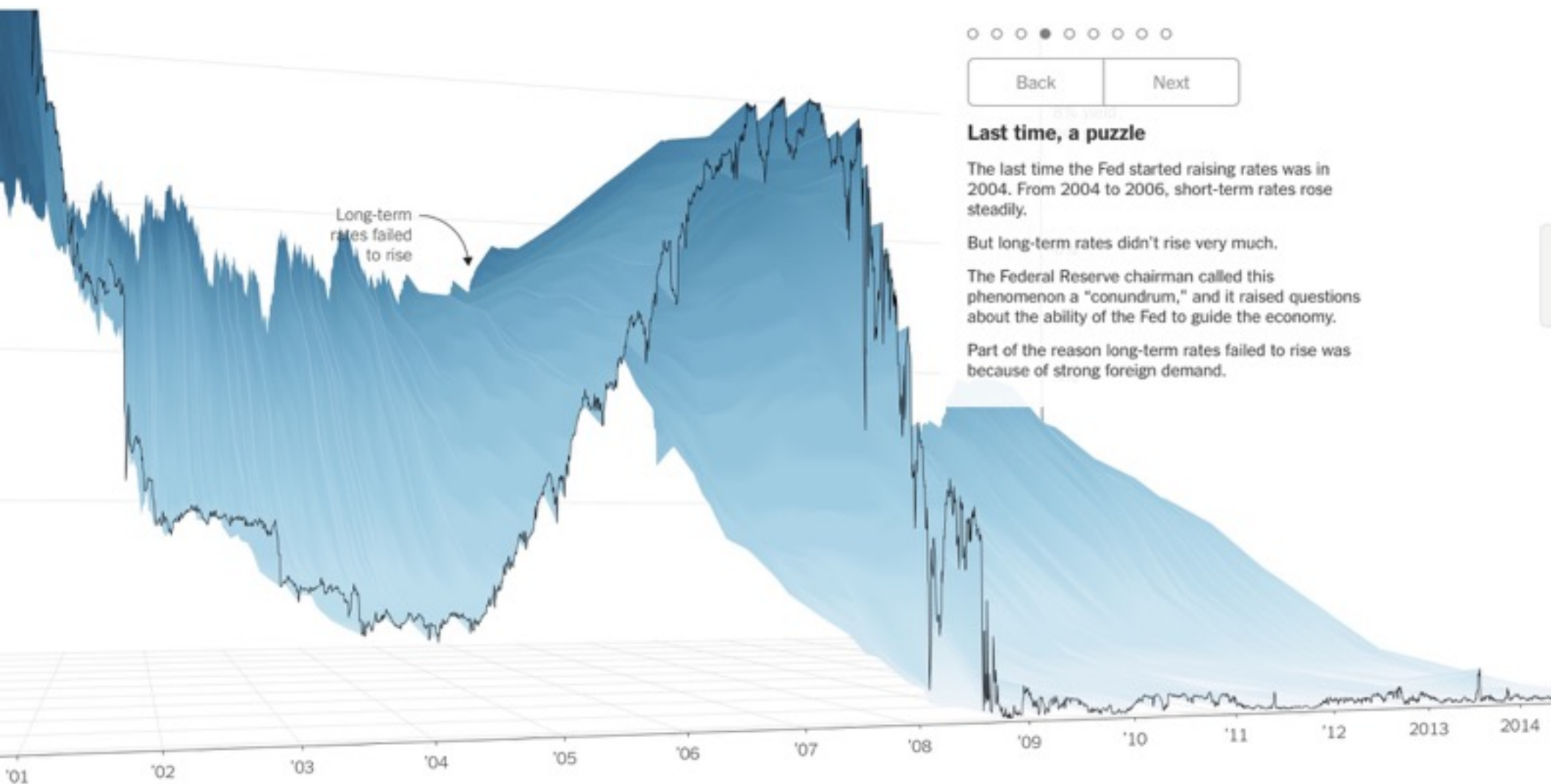
Opportunities

- evidence based policy
- operational efficiency
- cross-sector collaboration
- new revenue sources
- improved data

- Public policy and service delivery
- Government accountability
- Citizen engagement

A 3-D View of a Chart That Predicts The Economic Future: The Yield Curve

By GREGOR AISCH and AMANDA COX MARCH 18, 2015



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Last time, a puzzle

The last time the Fed started raising rates was in 2004. From 2004 to 2006, short-term rates rose steadily.

But long-term rates didn't rise very much.

The Federal Reserve chairman called this phenomenon a "conundrum," and it raised questions about the ability of the Fed to guide the economy.

Part of the reason long-term rates failed to rise was because of strong foreign demand.

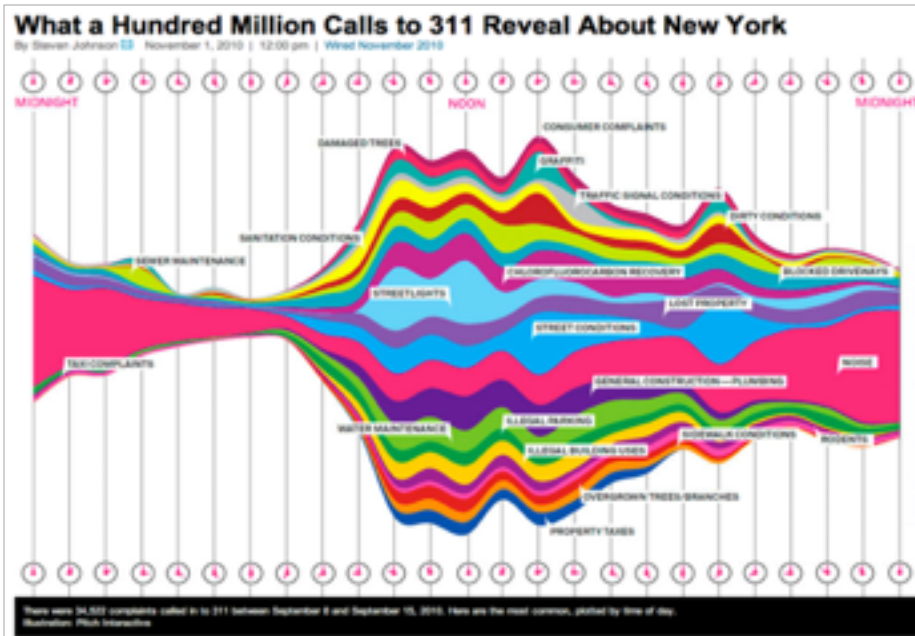
Pattern recognition through Data VR



each 311 incident and restaurant is geocoded to the nearest street centerline

Pattern recognition through Data VR

- Engaged community contributes to open data and smart services
- Proximity to universities, knowledge economy resources
- Real-time monitoring to address water leaks, sewer and drainage issues
- Transport apps ease multi-modal mobility
- Responsive trash collection, maintenance save time and money
- Street parking availability apps, dynamic pricing, smart parking garages
- Smart lighting improves safety, efficiency, quality of life



FixMyStreet

[Report a problem](#) [All reports](#) [Local alerts](#)

Problems in this area

[Email us new local problems](#) | [RSS feed](#)

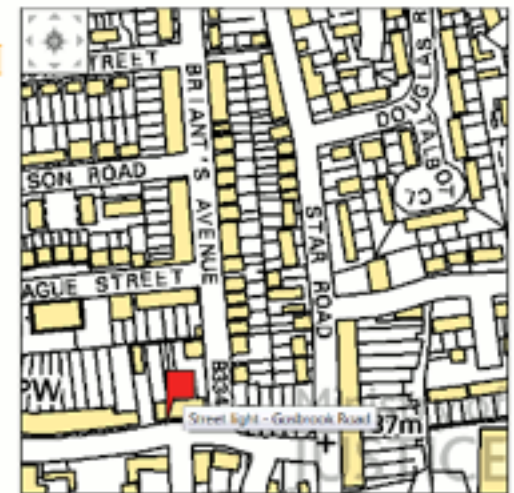
To report a problem, simply [click on the map](#) at the correct location. If you cannot see the map, [skip this step](#).

Reports on and around the map

- [Street Lights - Gosbrook Road](#)
- [Landfill not collected](#)
- [Light not working](#)
- [New Bath Required - Champion Road \(fixed\)](#)
- [Street light - Gosbrook Road](#)
- [Pothole in Sand Road \(fixed\)](#)
- [Street light coming on too late - Mill Green \(fixed\)](#)

Closest nearby problems (within 7.3km)

- [Street light on during the day \(fixed\)](#)
- [Traffic Light broken \(3.3km\) \(fixed\)](#)
- [Faulty Right Turn Demand Sensor \(3.3km\)](#)
- [Faulty Demand Sensors, Built Out and Misaligned Traffic Light Heads \(3.3km\) \(fixed\)](#)
- [Pothole Not Collected \(fixed\)](#)
- [Slippery Footpath in Falkland Road, Caversham \(fixed\)](#)
- [Faulty Demand Sensors - Westfield Road/Gosbrook Road](#)



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[1 km pin](#) | [Include state reports](#)

Pattern recognition through Data VR



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