

Assessing Accessibility

Usability & Infrastructure of Open Data Portals

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Intro

The Open Data
you need lives
HERE



Open Baltimore

Welcome to Open Baltimore Beta

Search Open Baltimore

City Government City Services

Housing & Development Crime

Culture & Arts Financial

Geographic Health

Neighborhoods Public Safety

Public Works Transportation

Publishing Departments

- Aging and Retirement Education
- Baltimore City Department of Transportation
- Baltimore City Health Department
- Baltimore Housing
- Baltimore Office of Promotion and the Arts
- Board of Directors
- Circuit
- Combined Charitable Campaign for Baltimore City (CCC)
- Crown Point Film Library
- Enterprise Geographic Information Services
- Environmental Control Board
- Finance
- Fire Department
- General Services
- Human Services
- Information Technology
- Legislative Reference
- Liquor License Board
- Mayor's Office of Emergency Management
- Minority and Women-Owned Business Development
- Non-Governmental
- Office of the Mayor
- Planning
- Police Department
- Public Works
- Recreation and Parks

Feedback

Name

Email Address

Comments and Suggestions

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Open Baltimore

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abert@s

PORTAL OPEN DATA DA XUNTA DE GALICIA

que é? | catálogo | condicións de uso | idea

Organiza o calendario do próximo curso

Descarga o calendario escolar 2017-2018, cos períodos vacacionais e todas as conmemoracións e aplícalo no teu ordenador ou dispositivo móbil

Catálogo de datos

Os máis vistos Os últimos

Calendario escolar 2017-2018

Calendario laboral 2017

Relación de Postos de Traballo (RPT) do ámbito de Función Pública

Últimas aplicacións

MeteoRoute

Servizos no mapa

Formatos máis comúns

WMS Web Map Service

WFS Web Feature Service

KML Keyhole Markup Language

XUNTA DE GALICIA

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政府資料開放平臺 DATA.GOV.TW

全部資料集 互動專區 最新消息 諮詢小組 關於平臺 登入/註冊

VISITORS TO TAIWAN

造訪台灣的外籍旅客們

找 請輸入想要搜尋的關鍵字

還在爬蟲嗎? 本平臺 28859 筆資料集全都放在 這裡

資料集

SOBRE PERGUNTAS & RESP

Central de Dados

Este site ainda está em desenvolvimento; os recursos aqui contidos podem ser usados, mas poderão ser alterados ou corrigidos a qualquer momento.

A Central de Dados é um repositório aberto de datasets Open Data em Portugal. Os dados aqui publicados são provenientes de diversas fontes e estão sob a curadoria do

Transparência Hackday e da Open Knowledge Portugal. O nosso objetivo é catalogar, afinar, complementar e publicar conjuntos de informação pública, para que possam ser reutilizados em visualizações, webapps, consultas e outros fins.

É possível seguir as novidades no Twitter!

A Central de Dados é uma ferramenta aberta e pública, e todo o código para a criação está disponível segundo uma licença de software livre.

Search datasets...

Datas de eleições e referendos

Datas de atos eleitorais e referendos em Portugal desde 1975

Fontes: CNE MAI

Eleições legislativas

Resultados das eleições legislativas desde 1976

Fontes: Tretas.org CNE MAI

Eleições Europeias

Resultados das eleições para o Parlamento Europeu

Fontes: CNE

Governos e Legislaturas

Governos, cargos e legislaturas

Fontes: Parlamento.pt

Datas das sessões plenárias do Parlamento

Lista das datas de todas as sessões plenárias no Parlamento

Fontes: Parlamento

Óbitos em Portugal

Vigilância de Mortalidade

Fontes: Ministério da Saúde

Violência doméstica

Número de ocorrências de violência doméstica entre 2008 e 2017

Fontes: DGA1 Direção Geral de Administração Interna

Nomes próprios em Portugal

Listas de ocorrências de nomes próprios, e de nomes próprios a rejeitados pelo IRN

Fontes: IRN Público.pt (2014) Público.pt (2015) Diário de Notícias (2016)

Códigos postais

Códigos postais e as áreas que lhes correspondem

Fontes: CIT

SPARÊNCIA HACKDAY PORTUGAL nos DATE WITH DATA

Portugal Journalism++ Agradecimentos Open Knowledge International

Portals mediate access to data

They have their own particular discourse

Each portal makes a 'promise' to the user



Jake Archibald

@jaffathecake

 Follow

It seems the web community has decided that developer experience dwarfs user experience, and I'm not sure what to do about that...

9:32 AM - 30 Dec 2016



177



569



Research Question

How can we measure the accessibility of OpenData Portals?

(with digital methods)

- “The frontend”
 - Semantic analysis: what are portals focused on?
 - Spatial analysis: relative relevance of the different sections in the portals
 - Code intricateness: is it correlated with visual intricateness?
 - Usability.gov-style analysis.
- Online talk?
 - Is the Open Data community voicing satisfaction/dissatisfaction online?
- Infrastructure
 - Programming Issues: how messy is the Portal’s infrastructure?

Seven portals analyzed (frontend and online talk)

1. Data.gov.uk (United Kingdom)
2. Data.gouv.fr (France)
3. Data.gov.au (Australia)
4. Dati.gov.it (Italy)
5. Datos.gob.mx (Mexico)
6. Data.gov (USA)
7. Opencanada.org (Canada)

Plus one case study about infrastructure issues → gov.uk (best rated according to openberometer.org + full source code on Github)

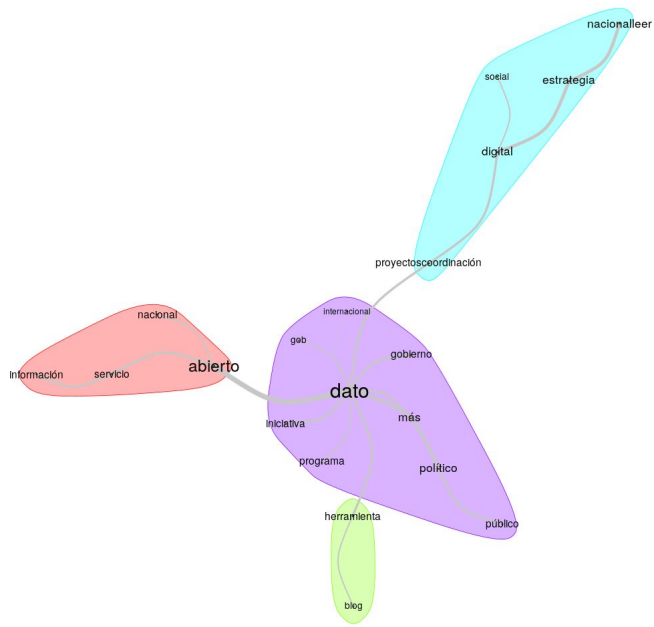
Semantic analysis

Research question : what do the portals *promise* to their readers ?

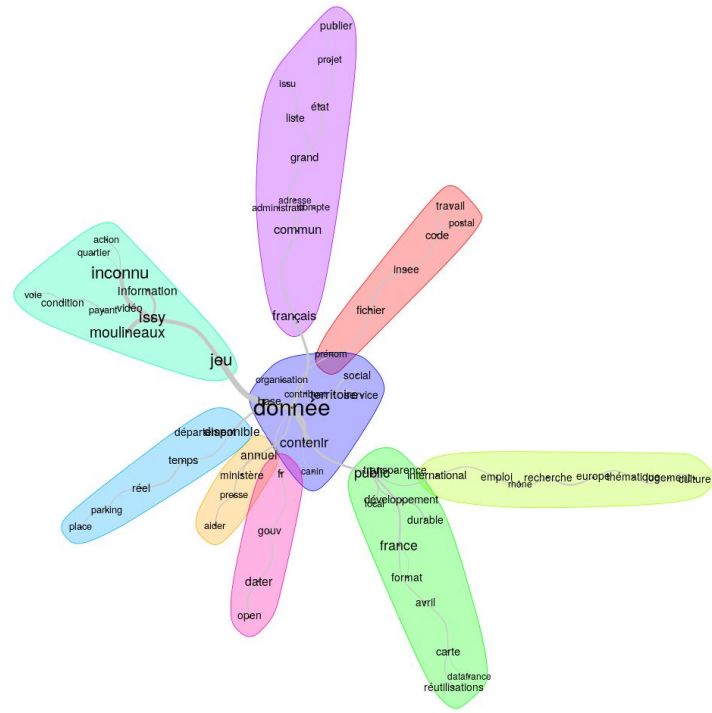
1. Quick semiotic analysis of the frontpage to see what is the first impression on the reader = what the website actually *means* ?
2. Scrape all words on the front page
3. Co-occurrence analysis (with community detection) with Iramuteq

Result: discourse/promise of the portal

Semantic analysis



datos.gob.mx (**México**)

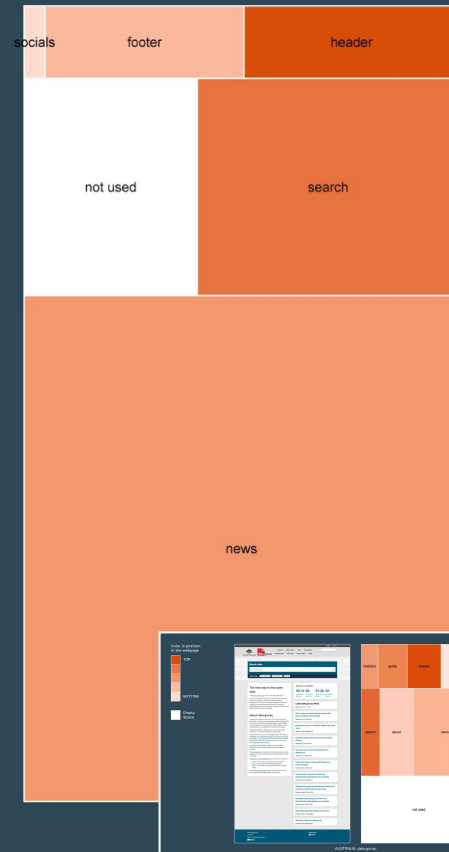
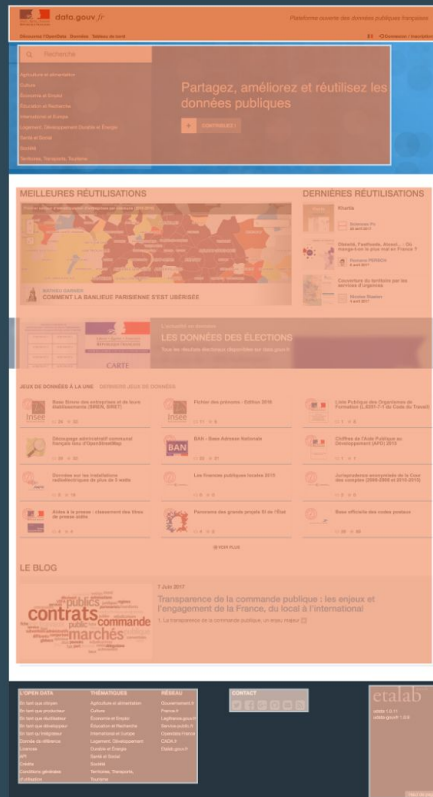


data.gouv.fr (**France**)

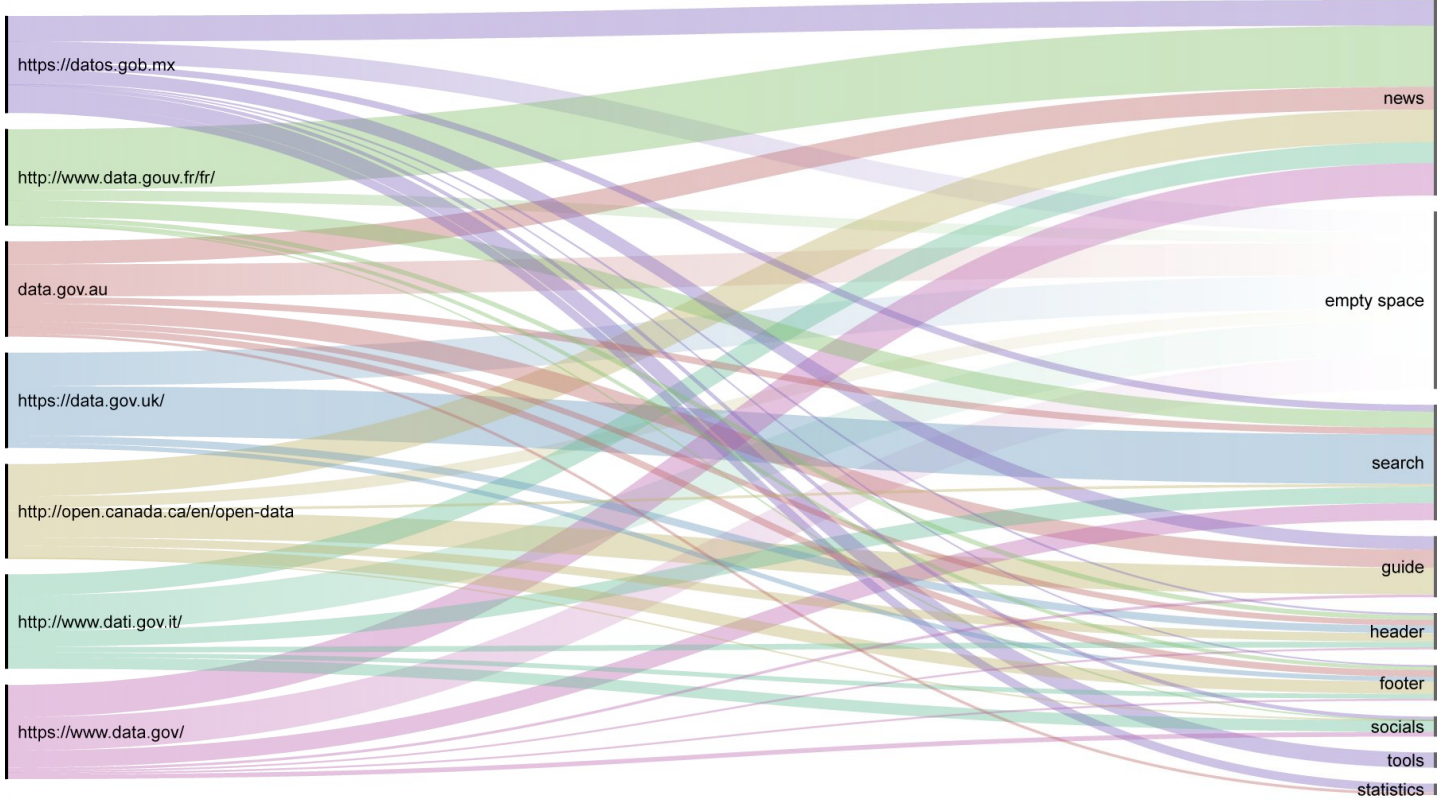
Methods > “the frontend” (2/4)

Spatial analysis

Result: How do institutions organise content across their portal home pages?



Spatial analysis

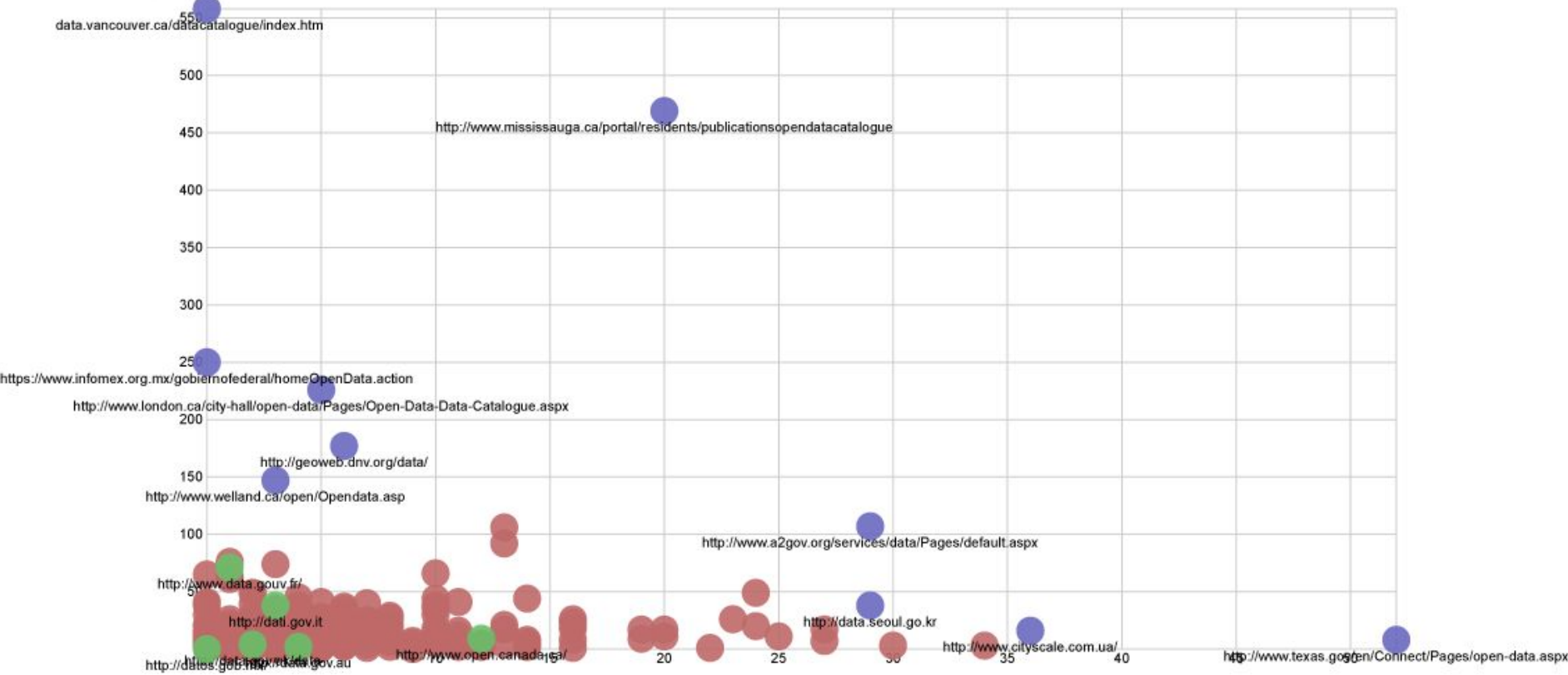


Recognised 8 different “types” of section: header, search, guide, tools, news, socials, statistics, footer.

Code analysis

- 1. Search for specific keywords on the code
- 2. Plot screen-captures according to code intricateness.

Result: Does the structure of the code relates to visual intricateness?

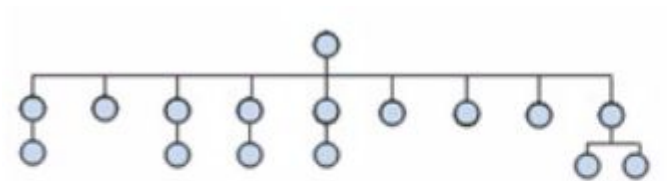


Information Architecture analysis

Adapted Usability.gov analysis based on Organization Structure and Organizational Scheme:

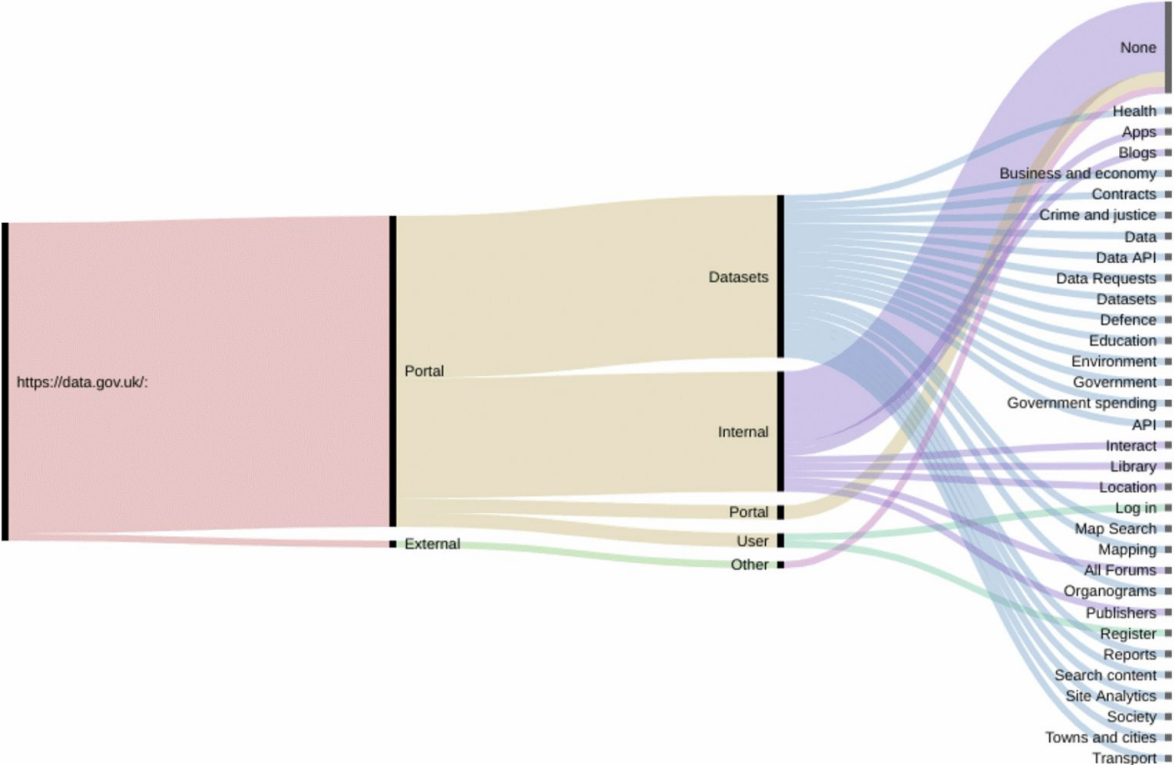
- 1. Map the structure of links present on the front page
- 2. Analyze the link arrangement on the front page

Result: Does the amount, structure and presentation of links affect data portal usability?



Information Architecture - Organization Structure analysis

Result: UK <https://data.gov.uk/> 45 total links 44 internal links, 1 external links




Information Architecture - Organizational Scheme analysis

Result: Navigating by the categories given on the front page will not include most datasets

Nation	Open Data Portal	Total Links	Total Datasets	# co2 Datasets by search	Total Categories	Icons	Total Datasets in Categories
Australia	http://data.gov.au/	48	30,135	25,535	(32)	No	480
Canada	http://open.canada.ca/en/open-data	119	118,360	57,943	(19)	No	320,459
France	http://www.data.gouv.fr/	269	27,437	21	9	No	-
Italy	http://www.dati.gov.it/	127	18,222	59	13	Yes	6,675
Mexico	https://datos.gob.mx	N/A	25,804	626	11	Yes	59 (2,280)
U.S.A.	https://www.data.gov/	77	195,790	169,747	14 (20)	Yes	20,236
United Kingdom	https://data.gov.uk/	45	41,346	28,421	12(10)	No	39,136

Information Architecture - Organizational Scheme analysis

Result: The UK deemphasizes the categories of Crime & Justice and Defense

 DATA.GOV.UKDATA
Opening up Government

HomeDataAppsInteract

RegisterLog in

Search for data...

Search for data

Q

Find data published by government departments and agencies, public bodies and local authorities. You can use this data to learn more about how government works, carry out research or build applications and services.

Browse data by theme

Business and economy

Small businesses, industry, imports, exports and trade

Crime and justice

Courts, police, prisons, offenders, borders and immigration

Defence

Armed forces, health and safety, search and rescue

Education

Students, training, qualifications and the National Curriculum

Environment

Weather, flooding, rivers, air quality, geology and agriculture

Government

Staff numbers and pay, local councillors and department business plans

Government spending

Includes all payments by government departments over £25,000

Health

Includes smoking, drugs, alcohol, medicine performance and hospitals

Mapping

Addresses, boundaries, land ownership, aerial photographs, seabed and land terrain

Society

Employment, benefits, household finances, poverty and population

Towns and cities

Includes housing, urban planning, leisure, waste and energy consumption

Transport

Airports, roads, freight, electric vehicles, parking, buses and footpaths

THEME

Environment (12982)

Towns & Cities (7196)

Mapping (5473)

Government (3135)

Society (3009)

Health (2066)

Government Spending (1852)

Education (1338)

Business & Economy (1124)

Transport (1120)

less

RESOURCE FORMAT

HTML (12372)

CSV (7067)

WMS (4919)

WCS (3961)

XLS (2270)

Historic Flood Map

Environment Agency

Historic Flood Map is a GIS layer showing t

Recorded Flood Outlines from river, the se

areas of land that have...

HM Land Registry Price Paid

HM Land Registry

Price Paid Data tracks the residential prop

lodged with HM Land Registry for registrat

residential property...

GB Road Traffic Counts

Department for Transport

The Department for Transport collects tra

level of traffic on roads in Great Britain. TH

street-level data for...

Historical monthly data for

Met Office

Monthly Historical information for 37 UK M

the early 1900s, but some go back as far a

temperature...

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Online Talk and Network Analysis

How is the usage of the portals reflected on social networks (Twitter)?

Which kind of actors are discussing open data on social networks?

Can we find evidence of data portals usage by citizens? Are there any negative experiences? (spoiler: we couldn't find any)

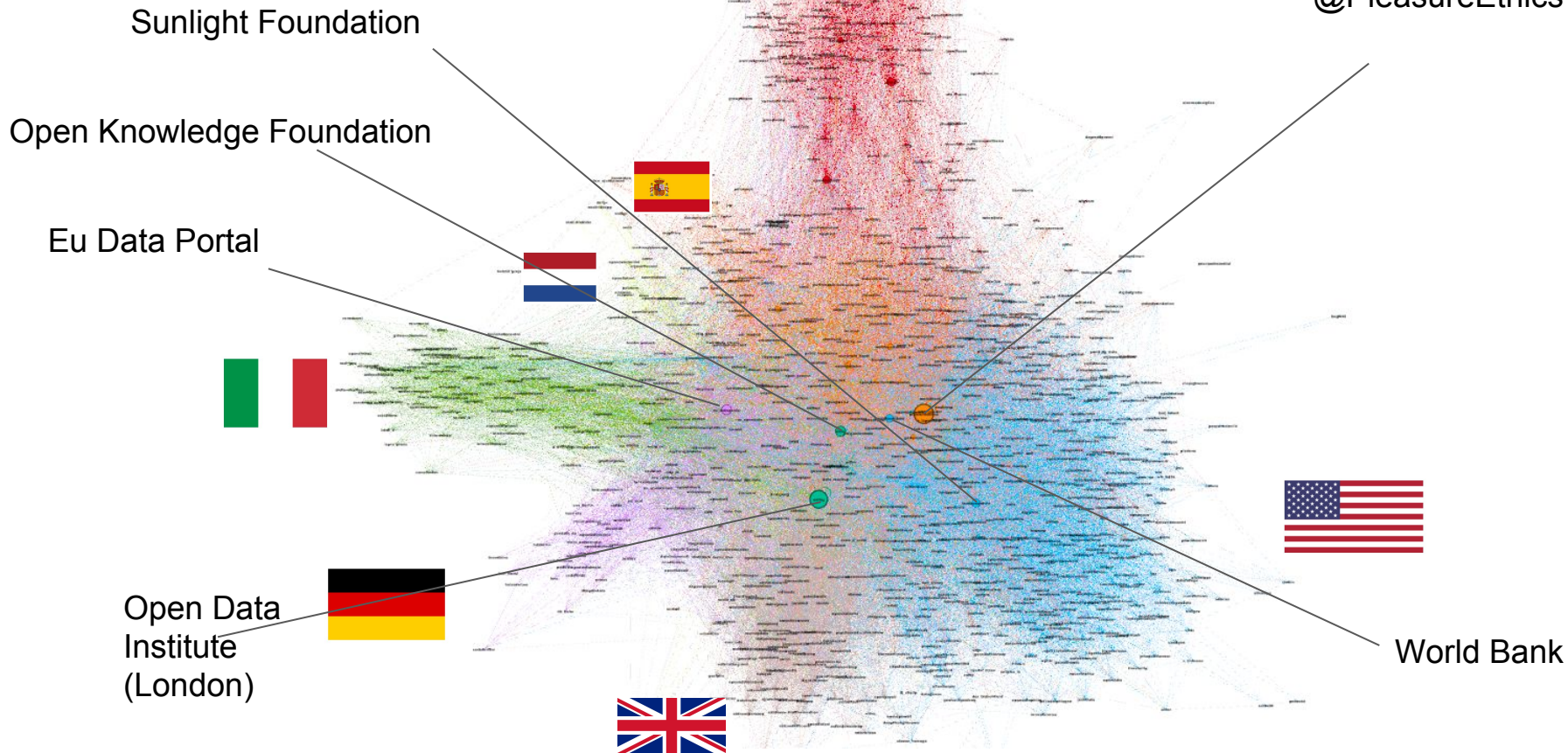
Online Talk and Network Analysis

Process:

- Collecting the data.
- Gephi: identifying clusters.
- Magnifying and dissecting the clusters: describing the nodes, using a sample cluster.
- Close reading: Isolating “negative” tweets and identifying dissenting voices.

The #opendata network

This is a guy
hijacking the hashtag
with great success:
[@PleasureEthics](#)



What about the negative experiences?

- Selected from the corpus the tweets containing **sad/angry emojis**.
- Got **320 tweets against a total of 1.600.000**
- A significant percentage of those are complaints about the (temporary) removal of the US data after the election of Trump.
- Most of them are people expressing **frustration** about working with data or **attending open data events**.

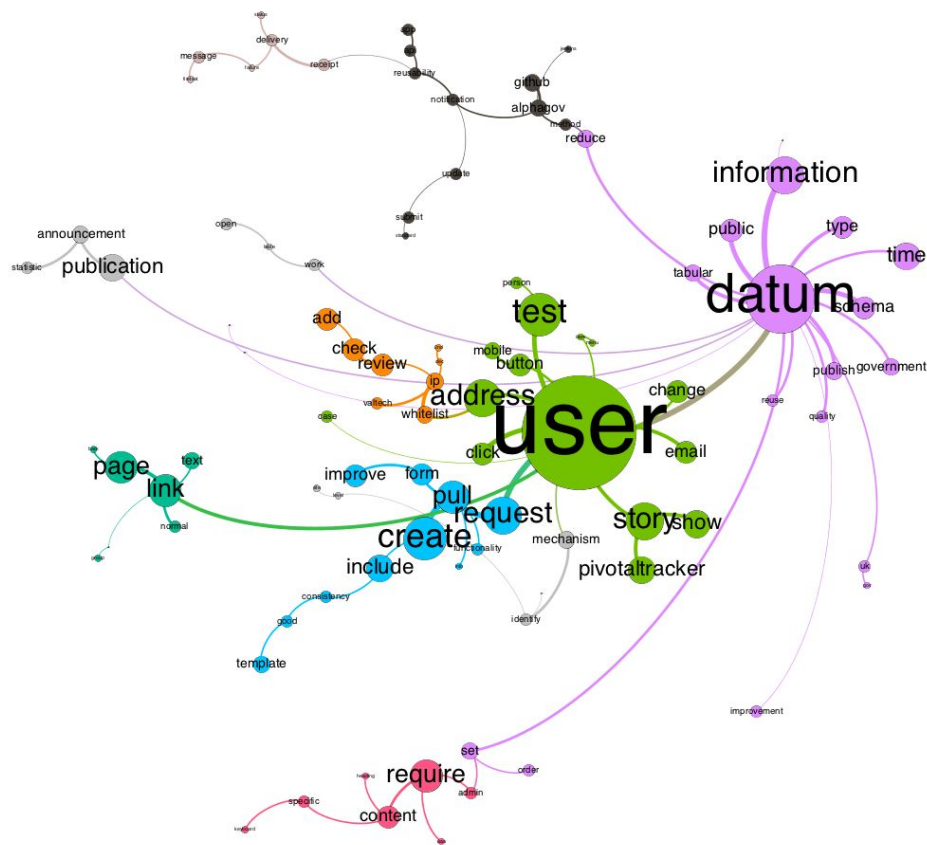
2015-08-20 christine_peets Drowning in a sea of #opendata 😞 #dissertationfun #twomoreweeks

Issue analysis

1. Scraping the open/closed issues of government projects on Github related to Open Data (14 international projects, the whole gov.uk website)
2. Co-occurrence analysis (with community detection) with Iramuteq
3. Issue-Label analysis (frequency)

Result: A sneak peek of what programmers discuss and consider relevant

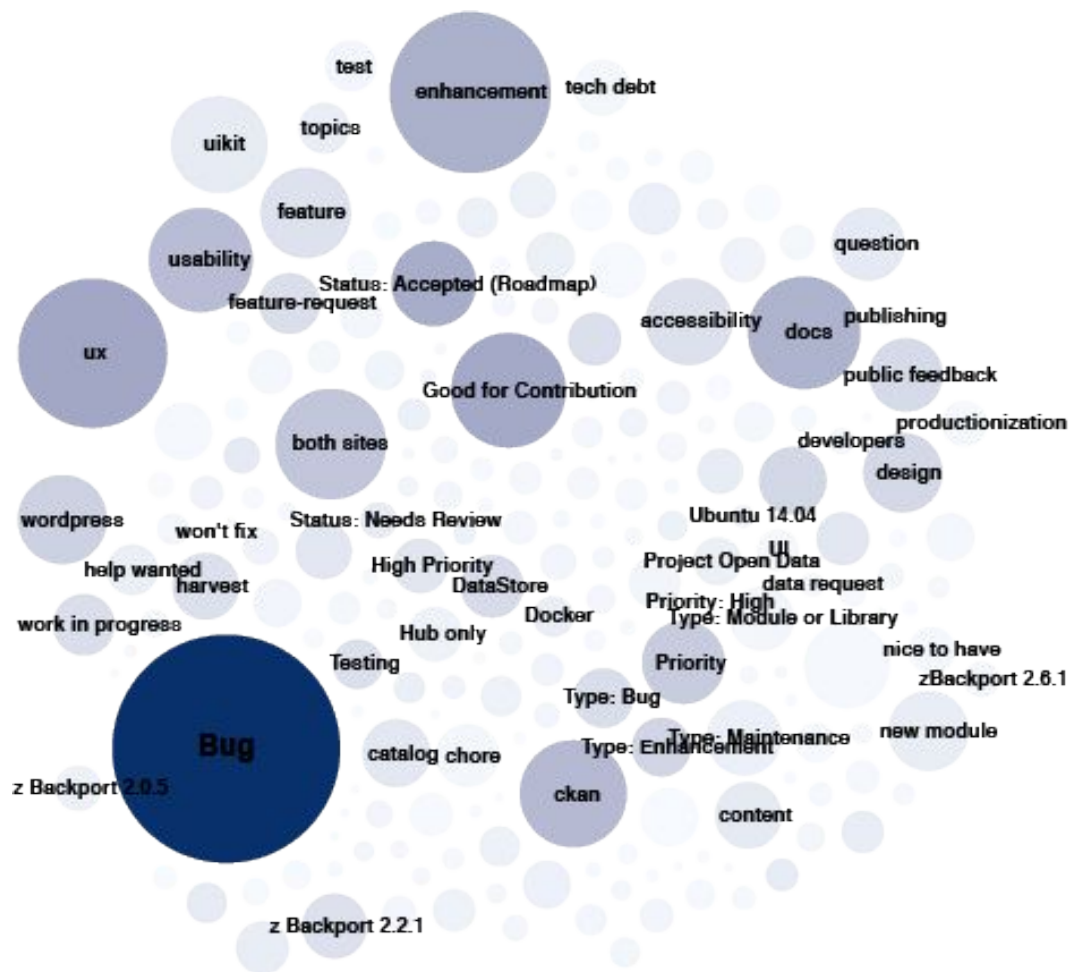
Methods > “the backend”



Issue analysis: gov.uk

Subset of issues related to **accessibility**

Methods > “the backend”



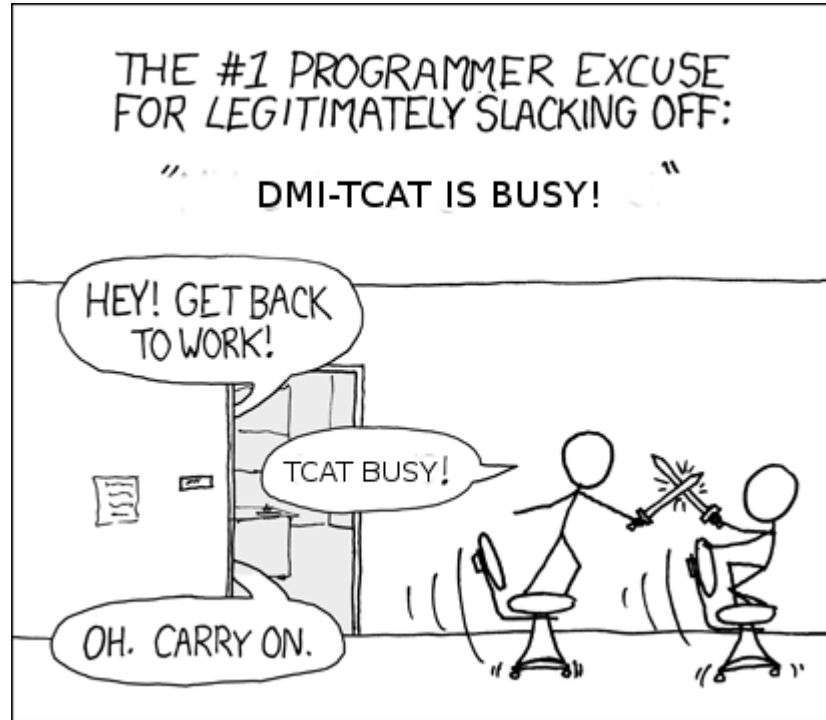
Issue analysis: gov.uk

Issue labels: frequency (size) and number of comments (color)

Conclusion

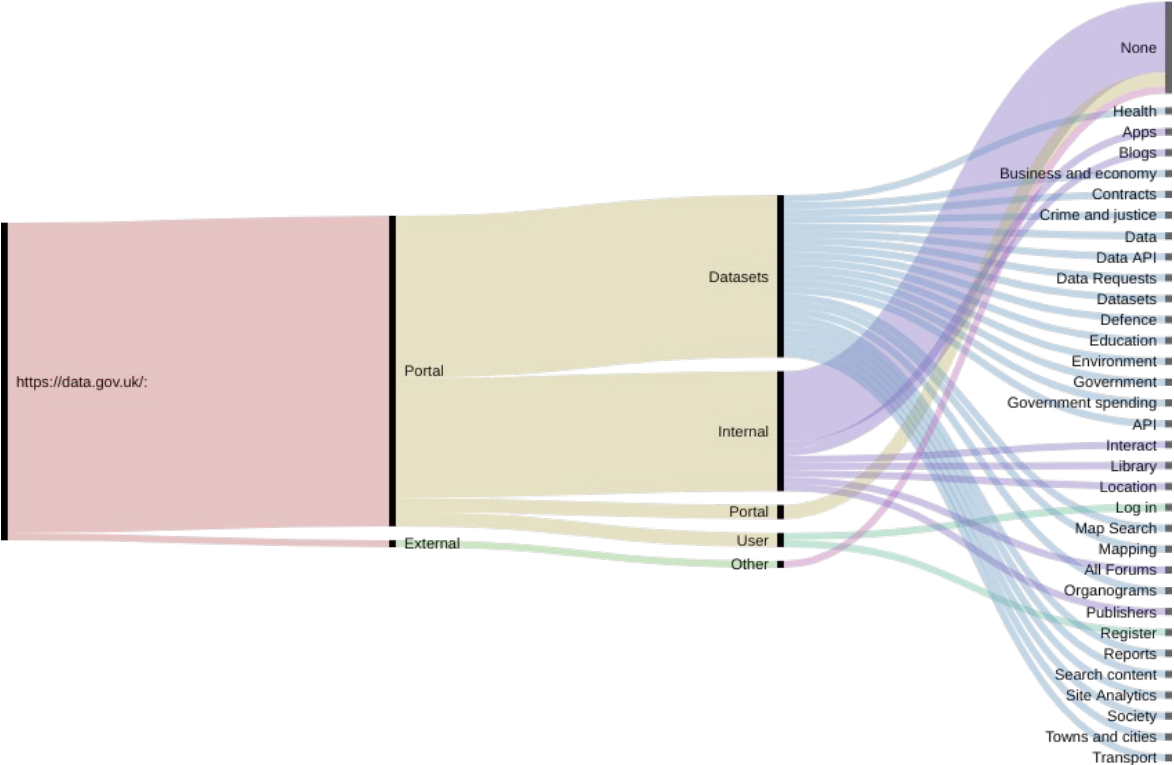
- To get a picture of the accessibility of a portal, it is necessary to combine different types of methodologies (only one doesn't make it)
- Although most portals look alike (international standards), their discourse and the type of relationship they establish with the user are **very** different.
- There seems to be a relation between how complicated the infrastructure of a portal is and its accessibility.

So long and thanks for all the fish!



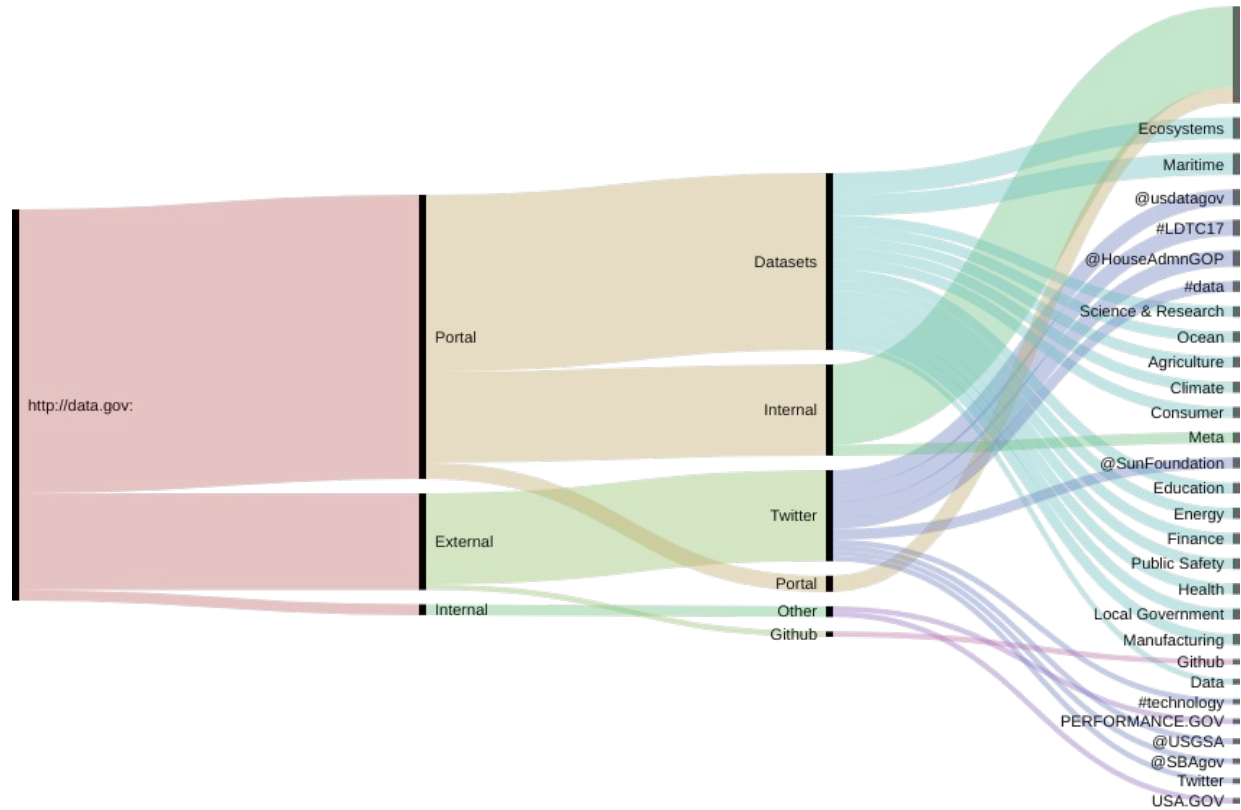
Information Architecture - Organization Structure analysis

Result: UK <https://data.gov.uk/> 45 total links 44 internal links, 1 external links



Information Architecture - Organization Structure analysis

Result: U.S.A. <https://www.data.gov/> 77 links 56 internal links, 21 external links



Information Architecture - Organization Structure analysis

Result: France <http://www.data.gouv.fr/> 269 total links 249 internal links, 20 external links

