

Revolução dos Dados: Sabemos realmente o que está acontecendo?

MSEE, Adriano Amaral

adriano.amaral@oracle.com

Big Data & Data Science



**The
Economist**

MAY 6TH - 12TH 2017

Theresa May v Brussels

Ten years on: banking after the crisis

South Korea's unfinished revolution

Biology, but without the cells

The world's most valuable resource



**Data and the new rules
of competition**

Ativo
mais
valioso!

ORACLE

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Muito melhor que petróleo

Não baseado em modelos de
escassez

Aumenta seu valor quando
conectado

SHARE

f SHARE
2874

TWEET

COMMENT
85

EMAIL

RISE OF THE MACHINES: THE FUTURE HAS LOTS OF ROBOTS, FEW JOBS FOR HUMANS



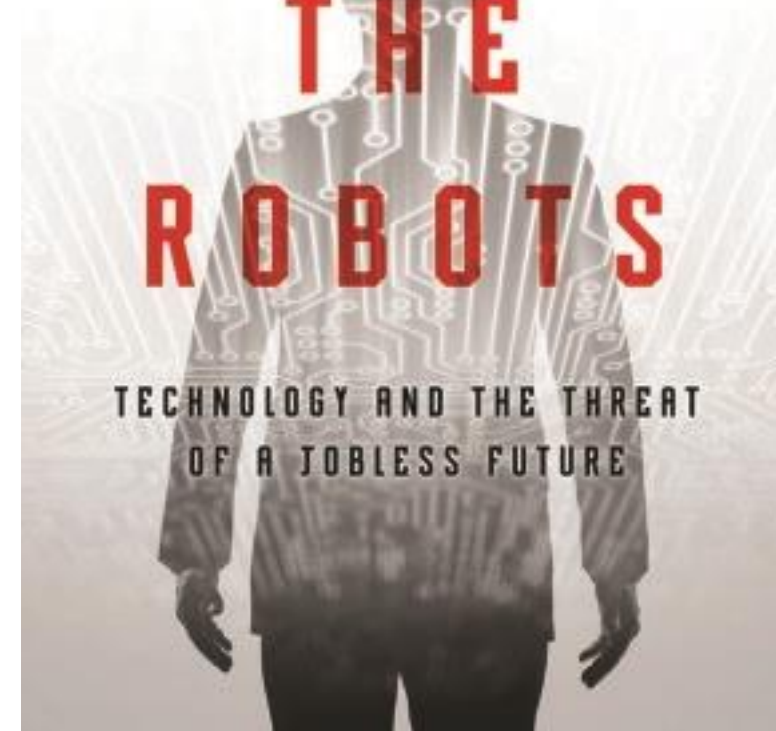
MARTIN FORD

RISE OF

THE

ROBOTS

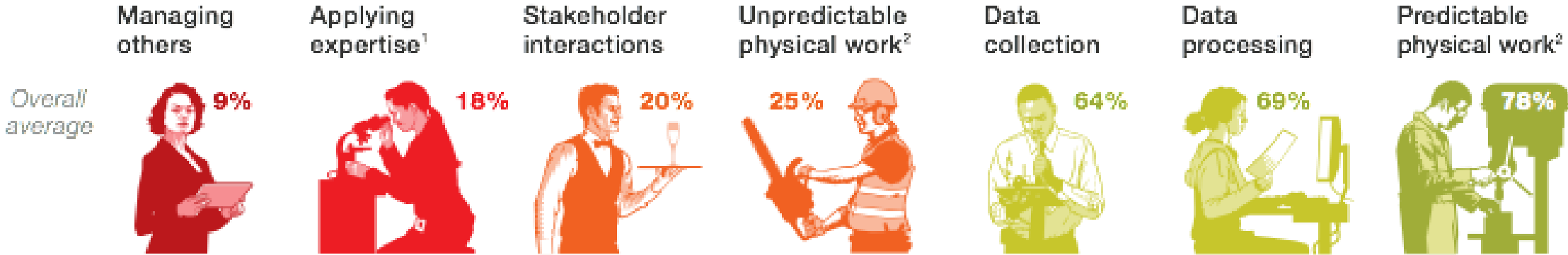
TECHNOLOGY AND THE THREAT OF A JOBLESS FUTURE



Mais criatividade...

Many types of activities in industry sectors have the technical potential to be automated, but that potential varies significantly across activities.

Technical feasibility: % of time spent on activities that can be automated by adapting currently demonstrated technology



<http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/where-machines-could-replace-humans-and-where-they-cant-yet>

YOUR READING LIST



'Tax The Robots' Says Bill Gates

FEB 17, 2017 @ 04:51 PM 213,779 VIEWS

'Tax The Robots' Says Bill Gates



Ian Morris, CONTRIBUTOR

I cover mobile, internet services and the good and bad of tech. [FULL BIO](#) ▾

Opinions expressed by Forbes Contributors are their own.



U.S. philanthropist Bill Gates, of the Bill & Melinda Gates Foundation - Photo credit: JUSTIN TALLIS/AFP/Getty Images

“Se os trabalhadores pagam por sua renda, os robôs também devem pagar”

Bill Gates



UNICEF USA *Voice*
How UNICEF Is Using Drones To Save Lives In Malawi



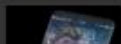
Tinder's Sean Rad On How Technology And Artificial Intelligence Will Change Dating

+93k views in the last 24 hours



Samsung Galaxy S8
Galaxy S8 Leak Reveals Samsung's Expensive Secrets

+61k views in the last 24 hours



iPhone 8 Leak
Reveals Significant

Rosie, a robô que detecta quando deputados usam mal o dinheiro público

Ferramenta financiada coletivamente na rede já forçou parlamentar a devolver verba gasta com cerveja



HELOÍSA MENDONÇA 

São Paulo - 24 JAN 2017 - 17:09 CET

Quantos auditores/analistas são necessários para fazer essas análises?



Dupla de programadores trabalha para ensinar robô a identificar irregularidades em gastos públicos. PEDRO VILANOVA (ARQUIVO PESSOAL)

Google Trends, May 2012 - April 2017

Big Data vs Machine Learning search terms



<http://www.kdnuggets.com/2017/05/machine-learning-overtaking-big-data.html>

Big Data > Analytics

Mercado brasileiro de big data e analytics movimentada US\$ 1,16 bi e já representa quase 50% da AL



Recomendadas



Atento assina acordo para aquisição do controle da Interfile



Cisco anuncia o primeiro gateway de internet seguro na nuvem



Huawei dá ênfase a projetos de transformação digital na CeBIT 2017

DataScience Cloud

Anúncio A data science platform that empowers data scientists to just do data science

Qual o tamanho do mercado?

Uma reflexão...



João está procurando emprego de pintor. Kursou um programa de formação no MEC de construção civil. Percebeu que existe investimentos altos em construção civil na página do SEBRAE. Foi ao local via aplicativo de empregos, e preencheu a vaga. Uma escola técnica próxima identificou uma demanda grande de oferta de cursos na construção civil...

Empregos

Benefícios e procura...

The screenshot shows the LONDON DATASTORE website. At the top left is the logo "LONDON DATASTORE". On the top right, there are links for "Register an Account" and "Login" with a user icon. Below the logo is a navigation menu with items: "Blog", "Data", "Topics", "Community", "Developers", "Boroughs", "GLA Analysis", "City Data Strategy", and "More". A search bar with the placeholder text "Search all datasets..." is positioned over a background image of the London skyline, featuring the London Eye and Big Ben. Below the search bar, a text update reads "Latest Updates: London Underground Performance Reports Modified 2 days ago". At the bottom, there is a row of nine data visualization cards, each with a title, a line chart, and a category label:

- TOTAL WORKFORCE JOBS**: Line chart showing an upward trend. Category: JOBS AND ECONOMY.
- LOST CUSTOMER HOURS (TUBE)**: Line chart showing fluctuations. Category: TRANSPORT.
- RECYCLING**: Line chart showing a steady upward trend. Category: ENVIRONMENT.
- RECORDED CRIME**: Line chart showing a downward trend. Category: COMMUNITY SAFETY.
- NET ADDITIONAL DWELLINGS**: Line chart showing a downward trend. Category: HOUSING.
- POPULATION OF LONDON**: Line chart showing a steady upward trend. Category: COMMUNITIES.
- CHILDHOOD OBESITY**: Line chart showing a steady upward trend. Category: HEALTH.
- INTERNATIONAL VISITORS**: Line chart showing fluctuations. Category: LONDON AS A WORLD CITY.
- TEAM LONDON VOLUNTEERS**: Line chart showing fluctuations. Category: GLA PERFORMANCE.

Parques Industriais

Onde construir uma indústria?

Open Data Sobre GeoNet

Localizar Meus Dados Entrar

City of Virginia Beach, VITA, Esri, HERE, DeLorme, NGA, USGS, NPS | Esri, HERE

Industrial Parks

Favorite Download dos Dados

APIs

Nenhuma licença especificada 1/20/2015 Conjunto de Dados Espacial 10 Linhas

This service contains the following layers: Business Districts, Industrial Parks, Business Parks, and Historically Underutilized Business (HUB) Zones.

Atributos

INDUSTRIAL PARK NAME
Texto

Sobre

[Open Data](#)
Compartilhado Por: VBCGIS_OrgAcct1
Fonte de Dados: gismaps.vbgov.com

[Visualizar Metadados](#)
[Visualizar no ArcGIS.com](#)

Localizado Em

City of Virginia Beach Open Data

Empregos



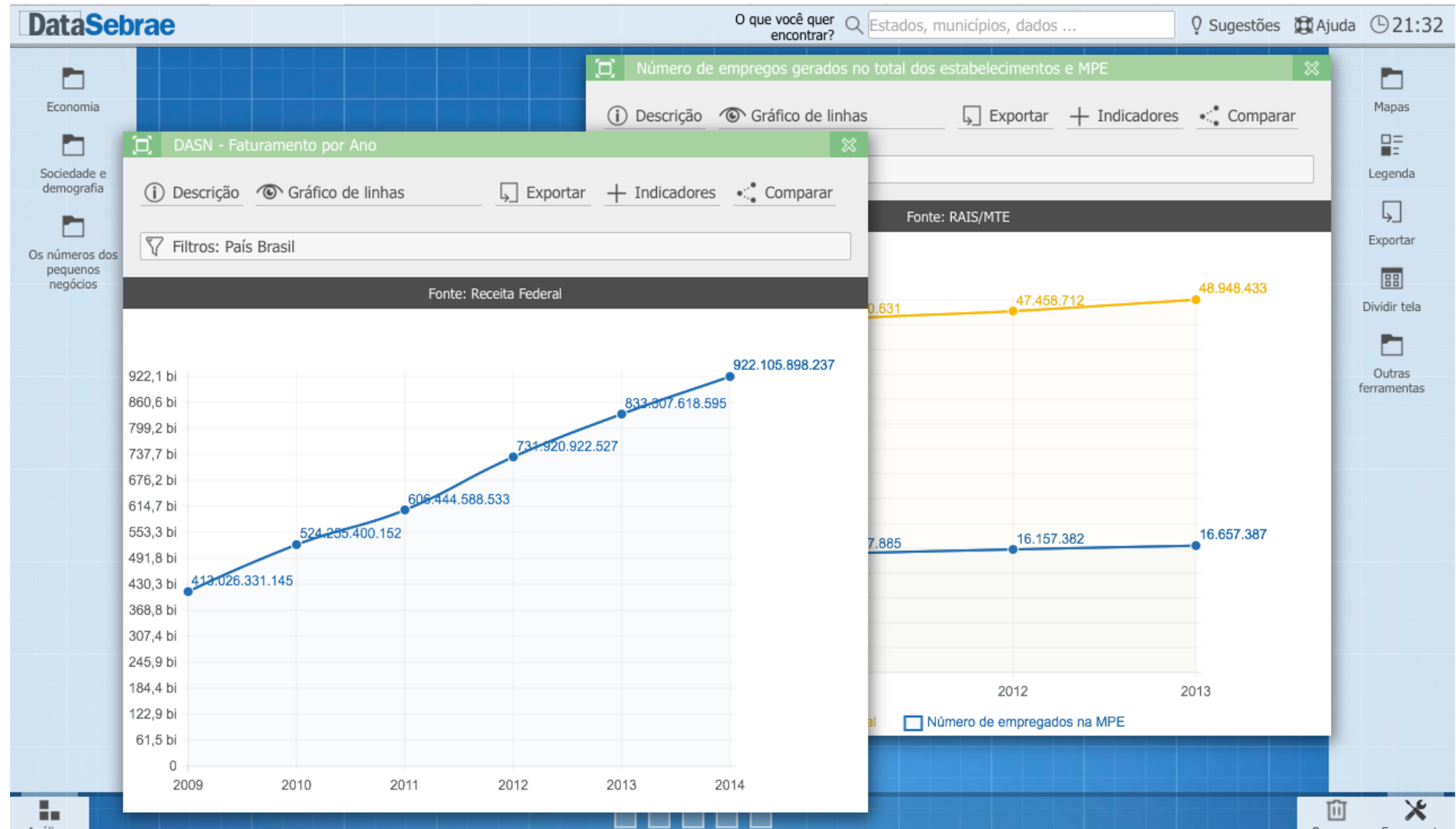
NYC Jobs

This dataset contains current job postings available on the City of New York's official jobs site ▶

	Job ID	Agency	Posting Type	# Of Positions	Business Title
1	172053	DEPT OF INFO TECH & TELECOMM	Internal	1	311 Call Center Manager
2	172546	DEPT OF HEALTH/MENTAL HYGIENE	External	12	City Research Scientist, Bureau of Childcare
3	172546	DEPT OF HEALTH/MENTAL HYGIENE	Internal	12	City Research Scientist, Bureau of Childcare
4	150760	DEPARTMENT OF FINANCE	Internal	1	Sr. Web Application Developer
5	150760	DEPARTMENT OF FINANCE	External	1	Sr. Web Application Developer
6	150851	DEPT OF ENVIRONMENT PROTECTION	External	1	Green Infrastructure Analyst
7	172790	DEPT OF HEALTH/MENTAL HYGIENE	External	1	Deputy Commissioner for Administration (OCME)
8	172790	DEPT OF HEALTH/MENTAL HYGIENE	Internal	1	Deputy Commissioner for Administration (OCME)
9	172874	DEPT OF HEALTH/MENTAL HYGIENE	Internal	4	City Research Scientist, Bureau of Environmental Sciences
10	172874	DEPT OF HEALTH/MENTAL HYGIENE	External	4	City Research Scientist, Bureau of Environmental Sciences
11	150851	DEPT OF ENVIRONMENT PROTECTION	Internal	1	Green Infrastructure Analyst
12	151131	NYC HOUSING AUTHORITY	External	1	Cost Estimating Manager
13	151405	DEPT OF ENVIRONMENT PROTECTION	Internal	4	Construction Project Manager Intern
14	151405	DEPT OF ENVIRONMENT PROTECTION	External	4	Construction Project Manager Intern
15	174736	DEPT OF ENVIRONMENT PROTECTION	Internal	1	Civil Engineer
16	174736	DEPT OF ENVIRONMENT PROTECTION	External	1	Civil Engineer
17	175362	DEPT OF HEALTH/MENTAL HYGIENE	Internal	1	Clerical Associate, Bureau of Vital Statistics
18	176149	DEPT OF HEALTH/MENTAL HYGIENE	Internal	1	Laboratory Microbiologist, Bureau of Sexually Transmitted I
19	151650	NYC HOUSING AUTHORITY	Internal	3	PLUMBER'S HELPER
20	151650	NYC HOUSING AUTHORITY	External	3	PLUMBER'S HELPER
21	151770	DEPT OF HEALTH/MENTAL HYGIENE	Internal	2	Field Medical Doctor, Bureau of School Health
22	151770	DEPT OF HEALTH/MENTAL HYGIENE	External	2	Field Medical Doctor, Bureau of School Health

Negócios

Direcionando novos negócios...



Escola Que Queremos

BRASIL DF BRASÍLIA

IDEB 2011

N/A

4.7

4.7

3.7

Seu Índice

0.0

0.0

0.0

0.0

Legendas

Escola Cidade UF Brasil

Não gostou?

ENTRE EM AÇÃO!



CEF 03 DE TAGUATINGA

Ambiente físico escolar



Estrutura Básica
Água, luz, banheiro e
saneamento básico



Biblioteca

Insumos e condições de funcionamento



Merenda



Merenda de Qualidade
Quantidade, variedade,
pessoal, e espaço para
cozinhar

Gestão escolar democrática



Dados da Educação

Avaliação, acompanhamento das escolas públicas!

PEC 276-2013 Eleição

Criará uma comissão de 256 pessoas eleitas pelo povo que será responsável somente por revisar as leis sobre os direitos dos políticos e partidos.

 Proposto pelo deputado **Leonardo Gadelha** do PSC

Votação: 9.642 votos, 6.598 sim, 3.044 não




O papo de boteco que chega ao Congresso

O Política de Boteco é a primeira iniciativa que levará aos bares do Brasil as discussões e projetos de lei mais controversos do Congresso Nacional e, entregará aos deputados e cidadãos os resultados dos debates que acontecem no Congresso.

SAIBA MAIS

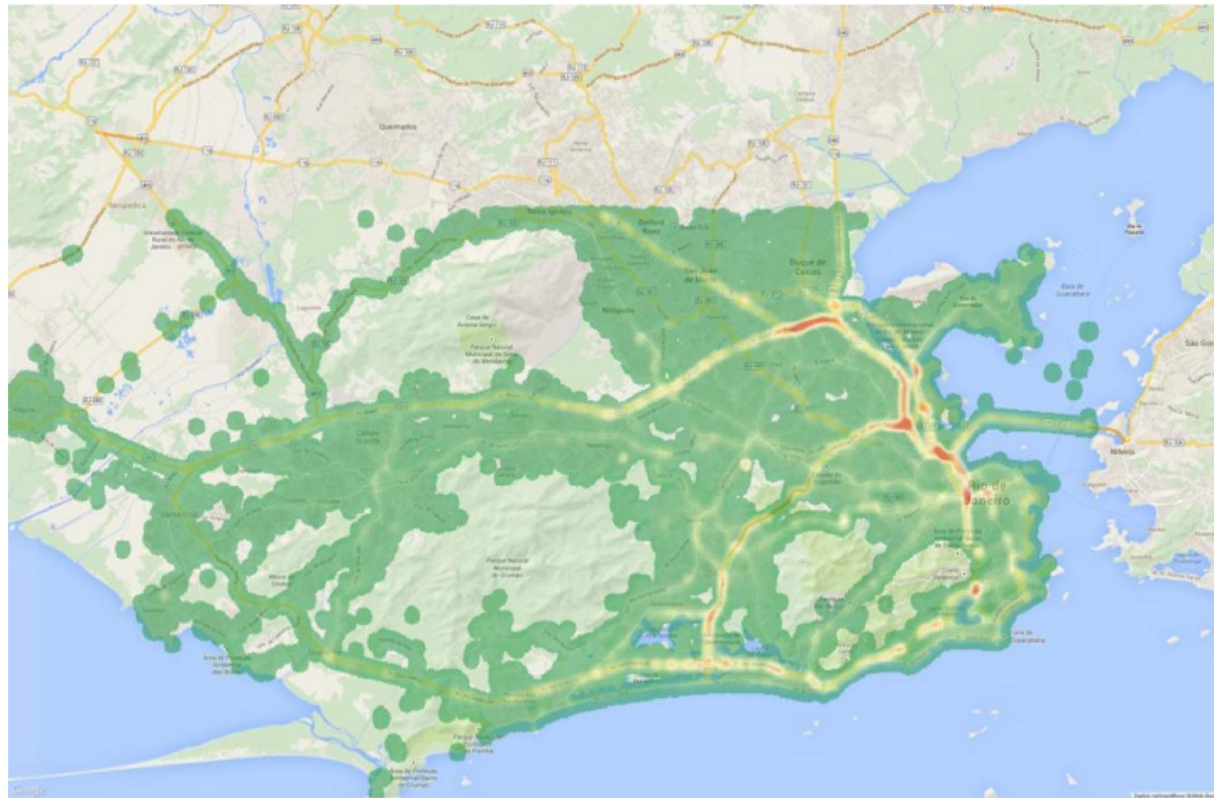
Dados da Câmara

Proposição de retorno



Car Accidents and Traffic Jams - 2013/2014

Every year, around 43.000 Brazilians die on transit.
Around 5% happens in Rio de Janeiro.

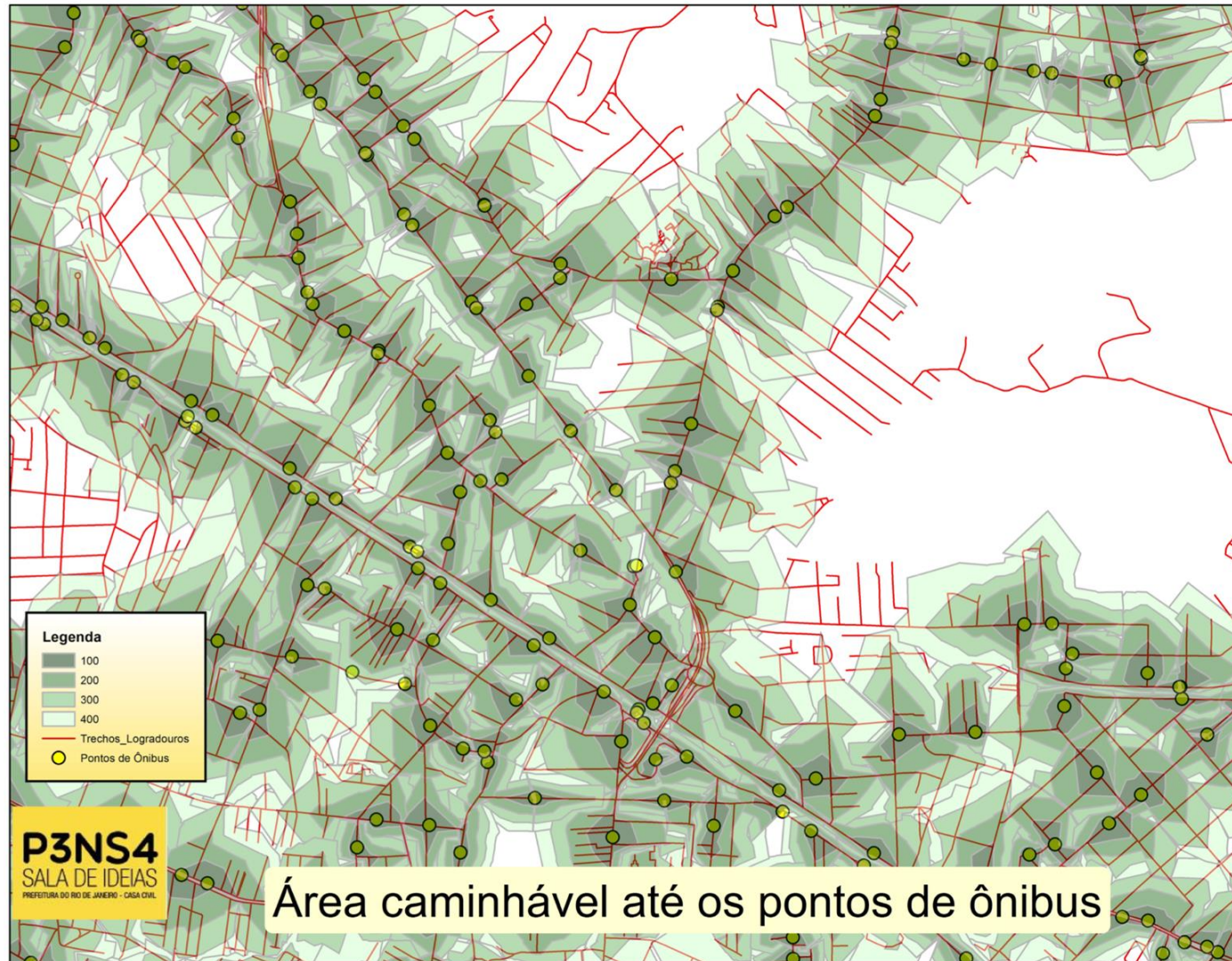


Geek Groups at Government – P3NS4

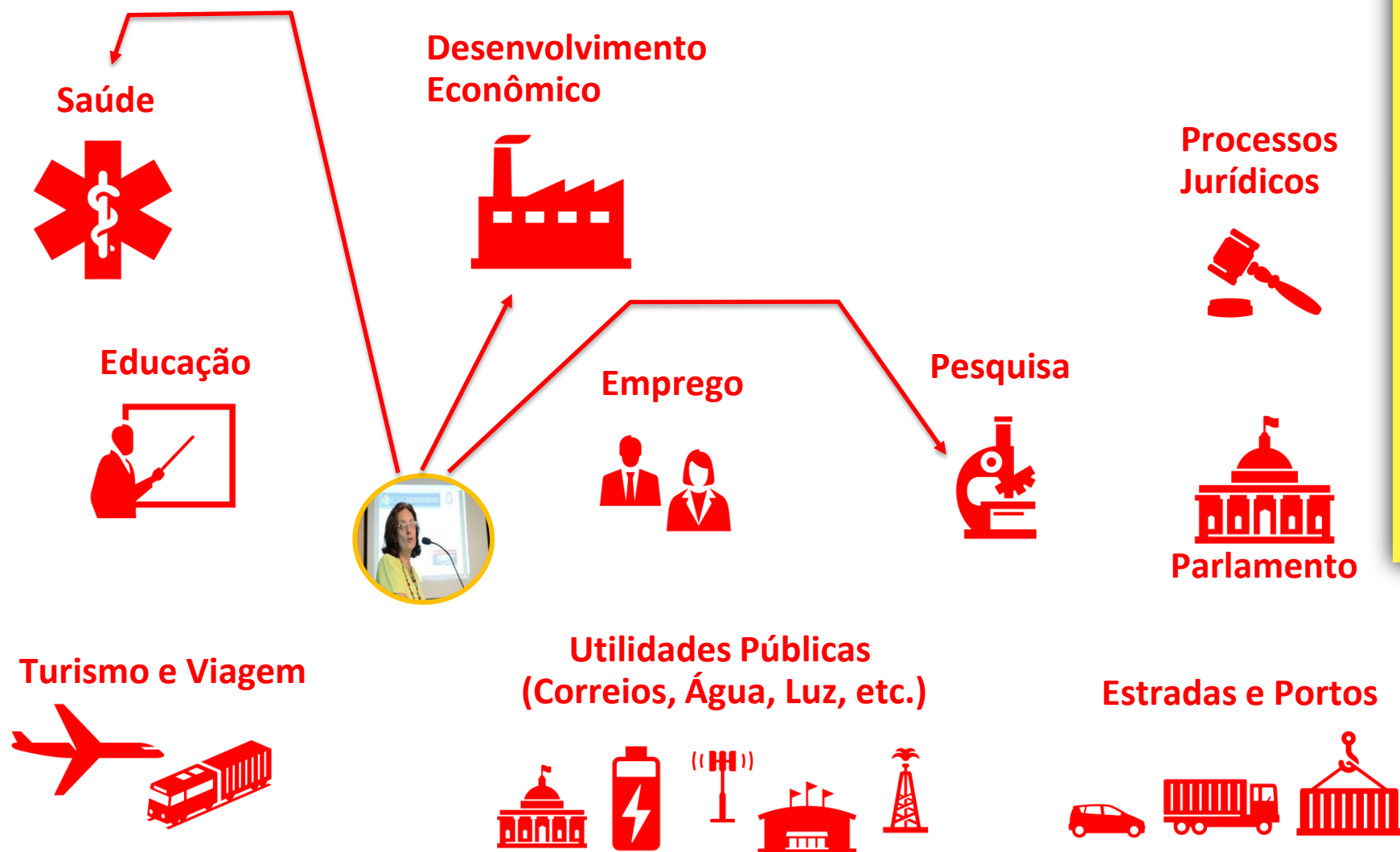


http://link.springer.com/chapter/10.1007/978-3-319-22479-4_6

What? People cannot access buses?



Uma reflexão...



Maria é pesquisadora e quer revolucionar a saúde. Procurou sobre dados de doentes crônicos e atendimento hospitalar. Descobriu que os médicos não prescrevem genéricos nos postos de saúde. Identificou que existe espaço usando dados públicos para criar uma start-up para ajudar os crônicos e reduzir custos hospitalares...

CASE STUDY

ICT for Accountable Public Service Delivery

How can citizen reporting help ensure public services are working for those who need them most?



THE WORLD BANK

PROJECT DATES

September 2011 to Present

SERVICES PROVIDED

Implementation, Service Design, Tech Development

PUBLICATIONS



Enabling Citizen-Driven Improvement of Public Services (4MR)



Governança

Caso Nigéria!




with knowing whether the services offered are working as providers lack the means to solicit citizen feedback. When represents the interests of only a fraction of users. This is at underdevelopment of infrastructure, including roads, as the ability of the country's poor to provide feedback. Effective public services have the fewest opportunities to

Monitoramento de Estabelecimentos de Saúde

HealthData.gov BETA

search 

About Datasets Blog Developers Agencies Contact Log in

 / Blog

/ How Journalists Used Public Data to Publish the Complication Rates of 16,000 Surgeons

How Journalists Used Public Data to Publish the Complication Rates of 16,000 Surgeons

Submitted by Anonymous (not verified) on Wed, 10/14/2015 - 15:55

How Journalists Used Public Data to Publish the Complication Rates of 16,000 Surgeons By Olga Pierce & Marshall Allen, Propublica

We had three goals in mind in creating [<https://projects.propublica.org/surgeons/>] "Surgeon Scorecard"], the first national online database to publicly name surgeons and measure how

New York

Compare the performance of surgeons practicing at hospitals in this state, in one of the following procedures:

Knee Replacement	Hip Replacement	Cervical (Neck) Spinal Fusion	Lumbar Spinal Fusion, Posterior Column	Lumbar Spinal Fusion, Anterior Column	Gallbladder Removal, Laparoscopic	Prostate Removal	Prostate Resection
------------------	-----------------	-------------------------------	--	---------------------------------------	--	------------------	--------------------

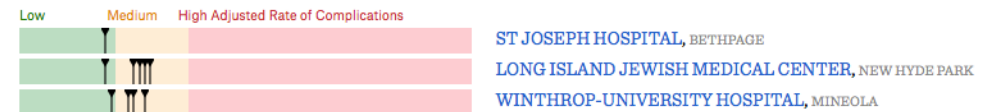
Gallbladder Removal, Laparoscopic

Laparoscopic cholecystectomy (ICD-9-CM code 51.23)

Minimally invasive gallbladder removal. This is performed most commonly when gallstones are blocking the flow of bile. [More information](#) »

59 New York hospitals performed this procedure on Medicare patients.	7 (12%) have at least one surgeon with a low adjusted complication rate.	! 2 (3%) have at least one surgeon with a high adjusted complication rate.
--	--	--

Sorted by the surgeon with the lowest adjusted rate of complications at each hospital, along with a measure representing the combined performance of surgeons and hospitals for these procedures.



Complicações cirúrgicas e monitoramento da qualidade dos serviços hospitalares, a partir dos Dados

Sharing Personal Genomes

The Personal Genome Project was founded in 2005 and is dedicated to creating public genome, health, and trait data. Sharing data is critical to scientific progress, but has been hampered by traditional research practices—our approach is to invite willing participants to publicly share their personal data for the greater good.

[Learn more >](#)

Participation

Donating your genome and health data to science is a great way to enable advances in understanding human genetics, biology, and health. We seek volunteers willing to donate diverse personal information to become a public resource.

[Learn about participating >](#)

Open Data

Open data is a critical component of the scientific method, but genomes are both identifiable and predictive. As a result, many studies choose to withhold data from participants and restrict access to researchers. The PGP's public data is a common ground to collaborate and improve our understanding of genomes.

[Use PGP data >](#)

Amostras de dados genômicos pessoais para pesquisa e estudos

Global Network
We are proud to be a part of the Global Network of Personal Genome Projects. Since the Personal Genome Project was founded at Harvard Medical School in 2005, the network has grown to include researchers at more than 100 institutions around the globe.

[Find out about the network >>](#)

Stay connected

iTriage – Health, Doctor, Symptoms and Healthcare search

By iTriage LLC

Open iTunes to buy and download apps.



Description

iTriage is a free app that puts you at the center of your healthcare—anywhere, anytime with iTriage Health, Doctor, Symptom & Healthcare Search app. Find medications, doctors and instantly get answers to your questions on your iOS device.

[iTriage LLC Web Site](#) | [iTriage – Health, Doctor, Symptoms and Healthcare search Support](#) | [Application License Agreement](#)

What's New in Version 5.24

New in iTriage 5.24

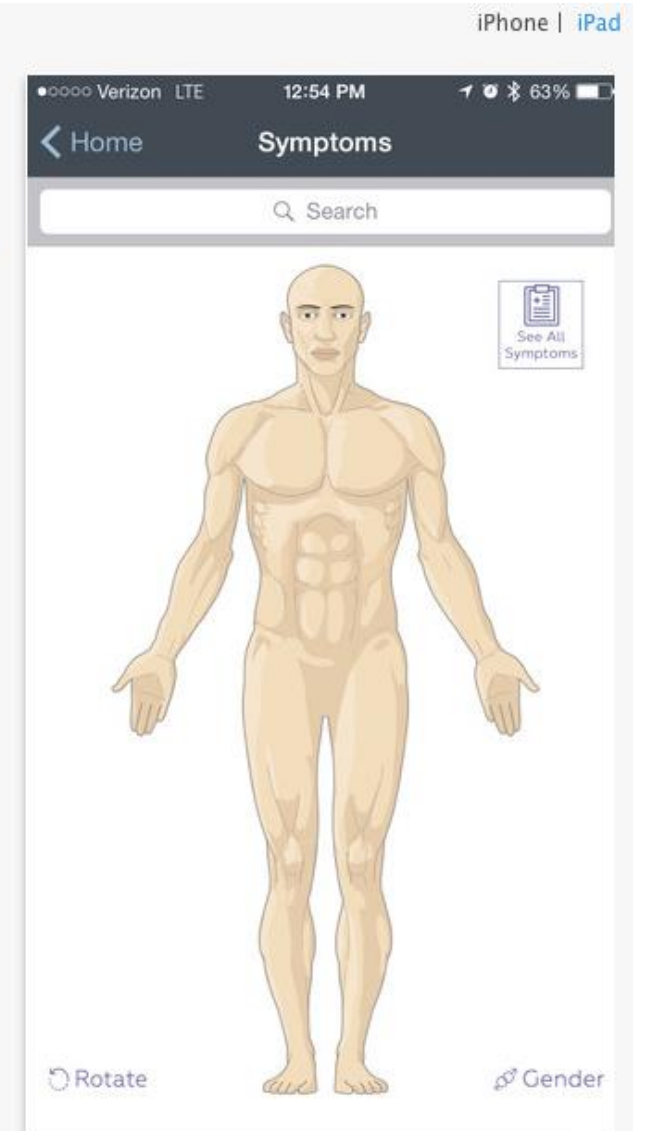
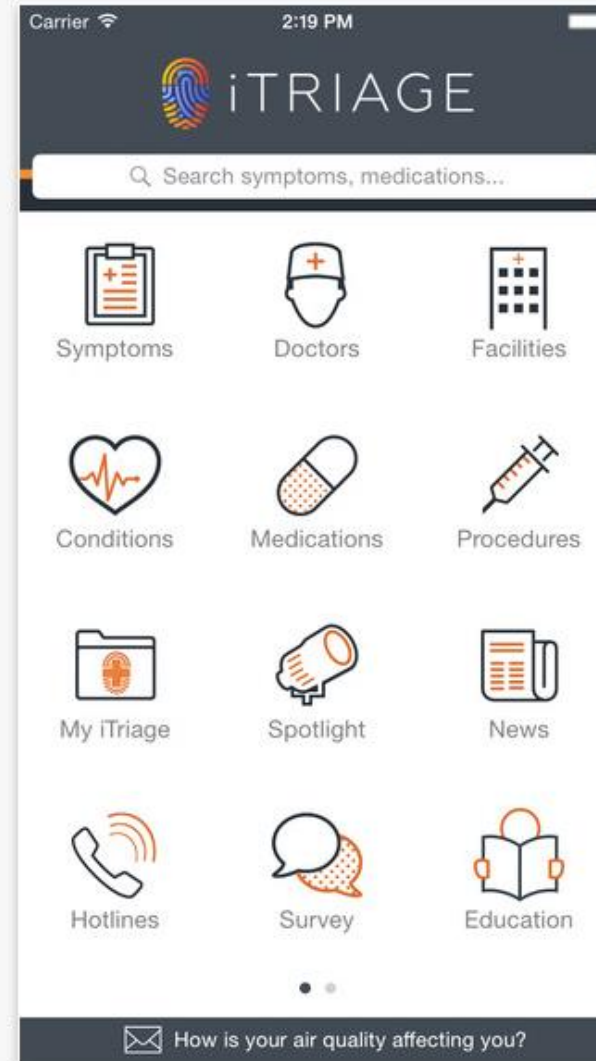
- Updated with the latest symptoms, procedures, medications, and conditions

[View in iTunes](#)

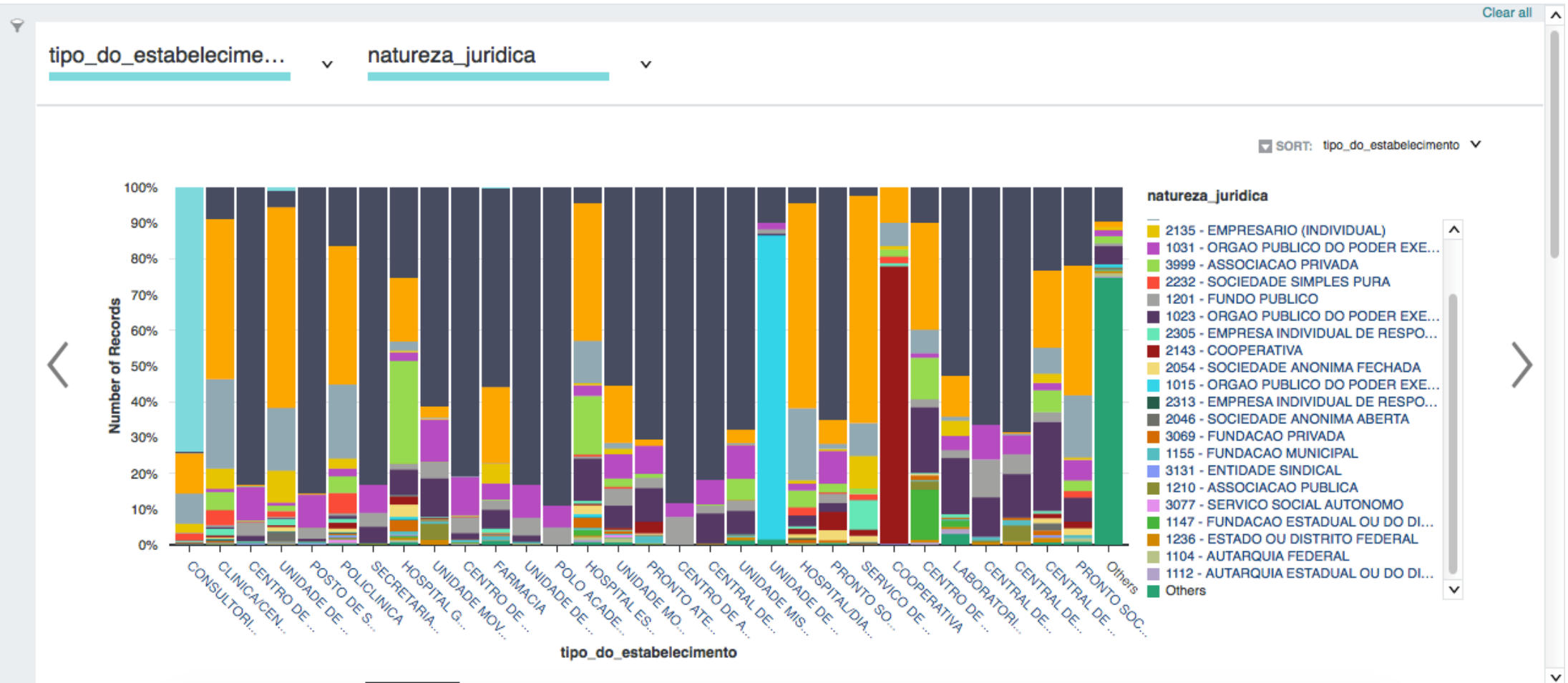
+ This app is designed for both iPhone and iPad

Triagem médica usando dados da saúde...

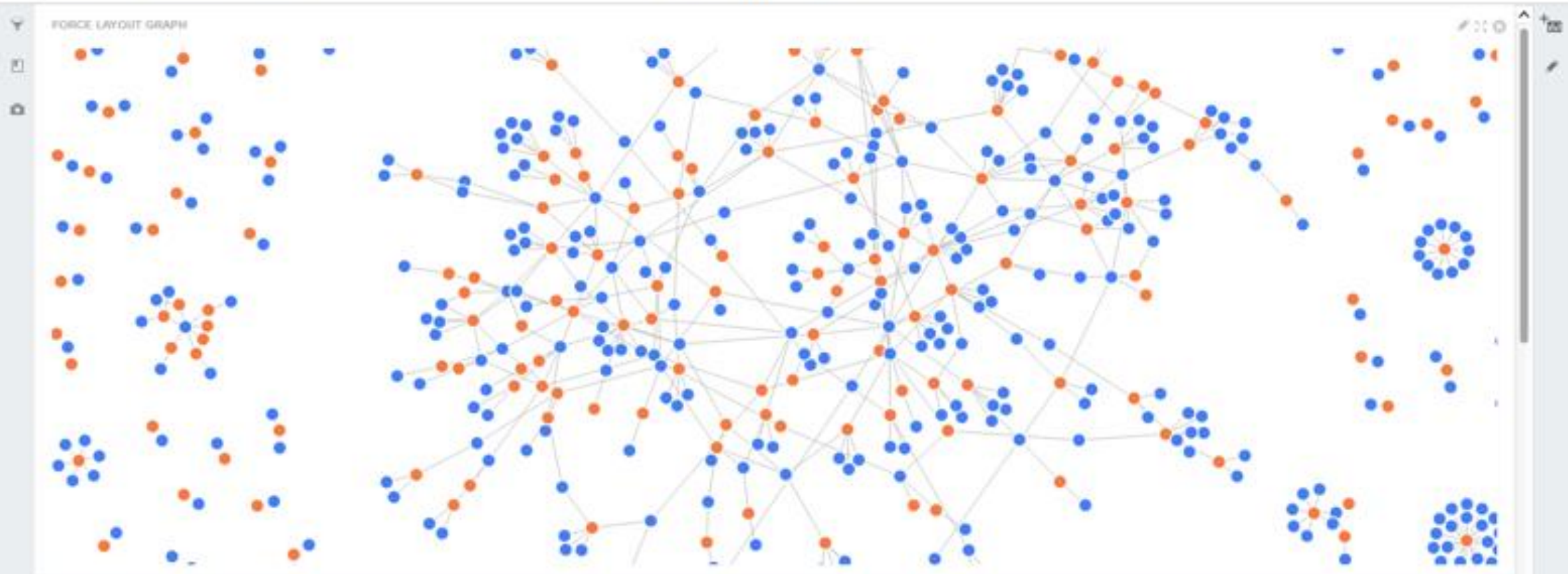
Screenshots



Monitoramento de Estabelecimentos de Saúde



Projeto Parlamentares: Grafo



SEPARATE CHART [View Icon] [Zoom Icon] [Reset Icon]

Emendas Parlam... Grafo [Close Icon] [Add Icon]

Emendas Parlam... Grafo [Close Icon] [Add Icon]

Emendas Parlam... Grafo [Close Icon] [Add Icon]

Emendas Parlam... Grafo [Close Icon] [Add Icon]

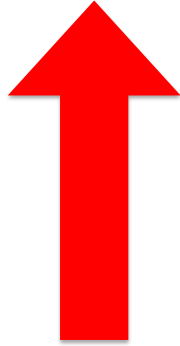
Emendas Parlam... Grafo [Close Icon] [Add Icon]

Emendas Parlam... Grafo [Close Icon] [Add Icon]

Criando valor...onde aplicar!

MINISTÉRIO DA
EDUCAÇÃO





Cidadãos

Demanda de novos serviços



Governos e Empresas

Adaptação para atender as
necessidades

As 3 Leis da Economia dos Dados

1. Dados advém da atividade;
2. Dados tendem a gerar mais dados;
3. Uso de plataformas é mais adequado;



McKinsey Global Institute
McKinsey Center for Government
McKinsey Business Technology Office



October 2013

Open data: Unlocking
innovation and performance
with liquid information



Dados em Valor

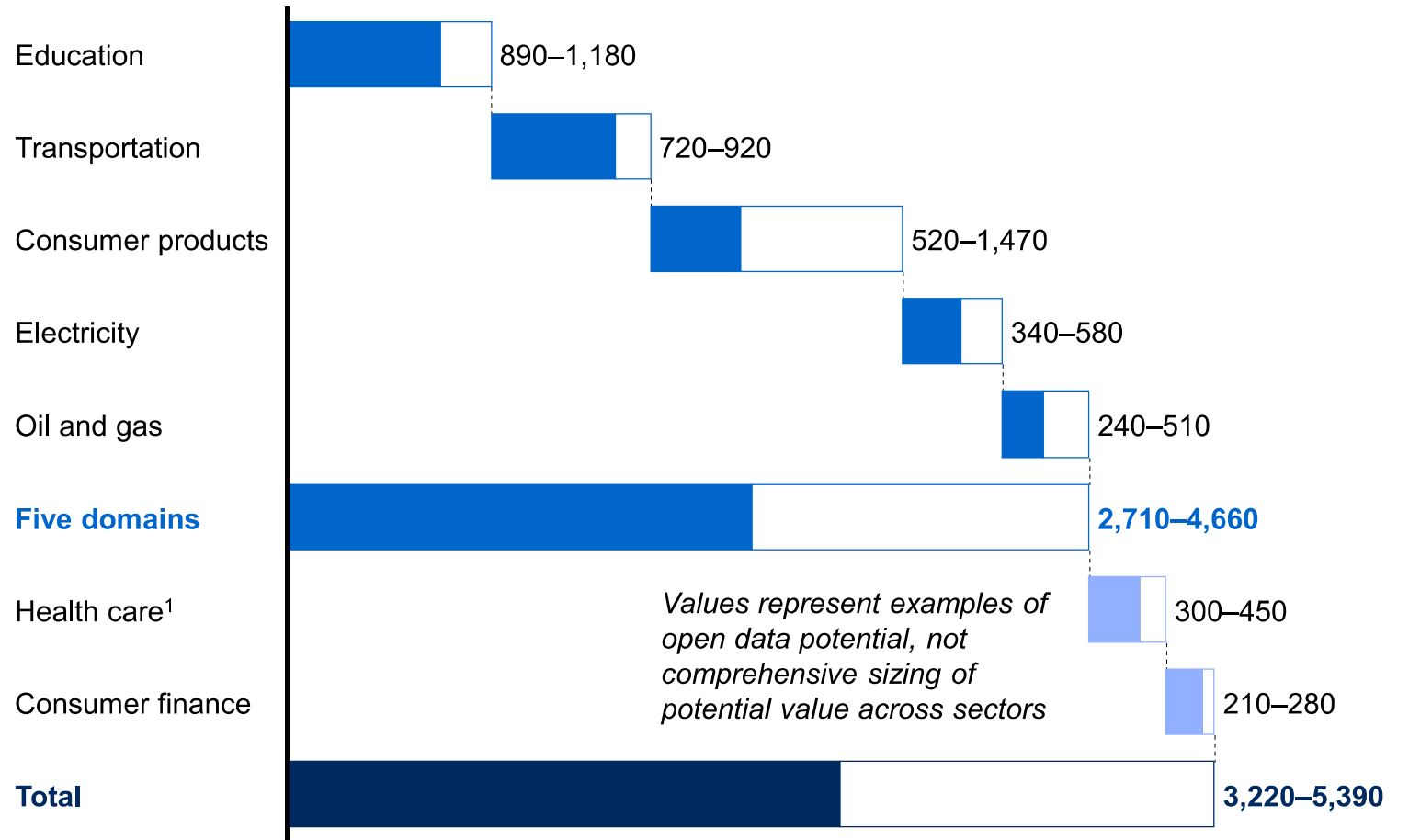
Como extrair valor dos dados?

Qual o Valor?

O **Valor** trancado em domínios de informação é imenso

Open data can help unlock \$3.2 trillion to \$5.4 trillion in economic value per year across seven “domains”

\$ billion



¹ Includes US values only.

NOTE: Numbers may not sum due to rounding.

SOURCE: McKinsey Global Institute analysis

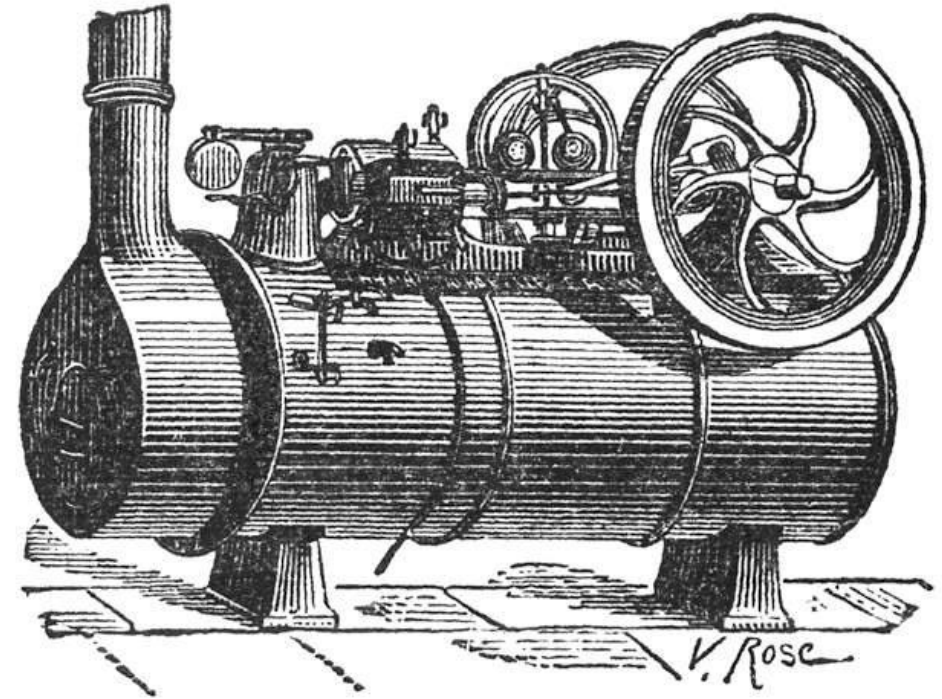
Revolução

Dados alimentando a transformação

The screenshot shows the Guardian website interface. At the top right is the logo "theguardian". Below it is a navigation bar with categories: UK, world, sport, football, opinion, culture, business, lifestyle, fashion, environment, tech, travel, and an "all sections" menu. The main article is titled "Open data is the raw material of 'new industrial revolution'" and is attributed to the "Public Leaders Network" and "Public Leaders viewpoint". The author is identified as the "Cabinet Office Open Data Team" and the date is "Monday 19 March 2012 10.00 GMT". There are social media sharing icons for Facebook, Twitter, Email, and LinkedIn, along with "Shares 0" and "Comments 0". A "Save for later" button is also present. The article's main image is a historical illustration of an industrial factory with a large bridge in the foreground. Below the image is a caption: "Open data is fuelling the modern industrial revolution. Photograph: Science & Society Picture Librar/SSPL via". To the right of the article is a "Most popular in US" section with three items: "At least 33 US cities used water testing 'cheats' over lead concerns", "Woman on UCLA shooter's 'kill list' found dead in her Minnesota home", and "Hillary Clinton: Trump is too dangerous and unstable to have the nuclear codes". At the bottom of the screenshot, there is a URL: "Abrir 'www.theguardian.com/environment/2016/jun/02/lead-water-testing-cheats-chicago-boston-philadelphia' em uma nova aba".



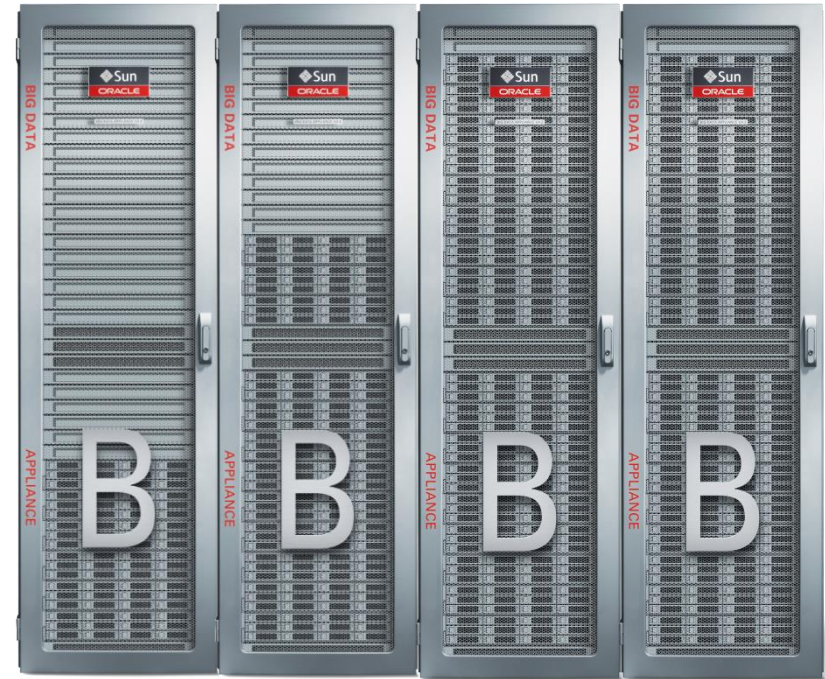
Carvão



Máquina a Vapor



Dados Abertos



Big Data



Plano Dados Abertos



LABORA

CREANDO UNA CULTURA DE INNOVACIÓN CON DATOS

Labora es la plataforma para emprendedores cívicos y sociales que ofrece herramientas de vanguardia y conecta con una red de clase mundial de empresas, mentores e inversionistas que acelera el impacto a través de la innovación con datos.

Fonte: labora.io

Prescription Savings Worth Millions Identified by ODI incubated company

2012-12-06 by [Emma Thwaites](#)

Innovative startups working with NHS doctors and academics have found a simple way to save millions of pounds

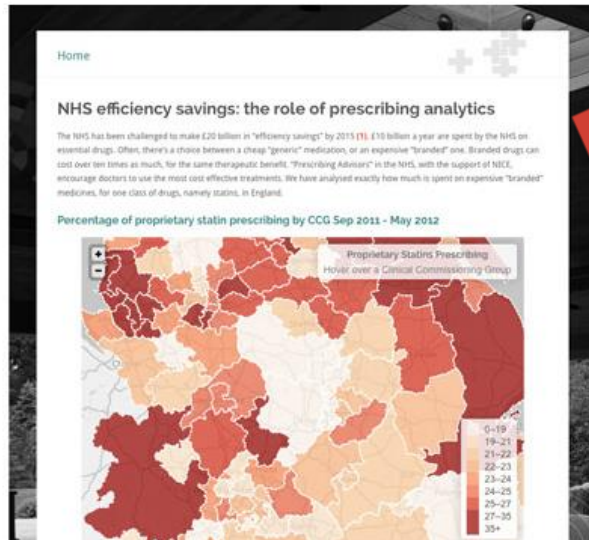
The savings were identified by [Mastodon C](#), a big data start-up company based at the ODI; [Open Health Care UK](#), the health technology start-up behind the NHS Hack Days; and Ben Goldacre, the doctor and writer behind [BadScience.net](#).

Key findings



Home
Detailed statin analysis
Why prescriptions matter
FAQ
Methodology
Contact us
About this site

About Prescribing Analytics
Prescribing Analytics is a joint venture of a group of UK technologists and NHS doctors, who believe in the power of data and technology to help the NHS.
Keep us in email at info@prescribinganalytics.com



Latest blog post

25 years of the web
data, open innovati

The ODI

17 November 2014

BLOG

200M libras/ano em
prescrições no Britânico
NHS

Institute

17 November 2014

NEWS

Prescrições Economia e desvios

<http://www.economist.com/news/britain/21567980-how-scrutiny-freely-available-data-might-save-nhs-money-beggar-thy-neighbour>



We believe the knowledge derived from financial data can transform the banking industry, its relation with customers and its role in the world.

Our latest product [Commerce360](#) showcases how today even the smallest entrepreneur has contextual business intelligence that once was the unique privilege of big business. [More...](#)

Fonte: bbvadata.com

Click on the regions below to see the difference.

Baja California Sur

San José del Cabo

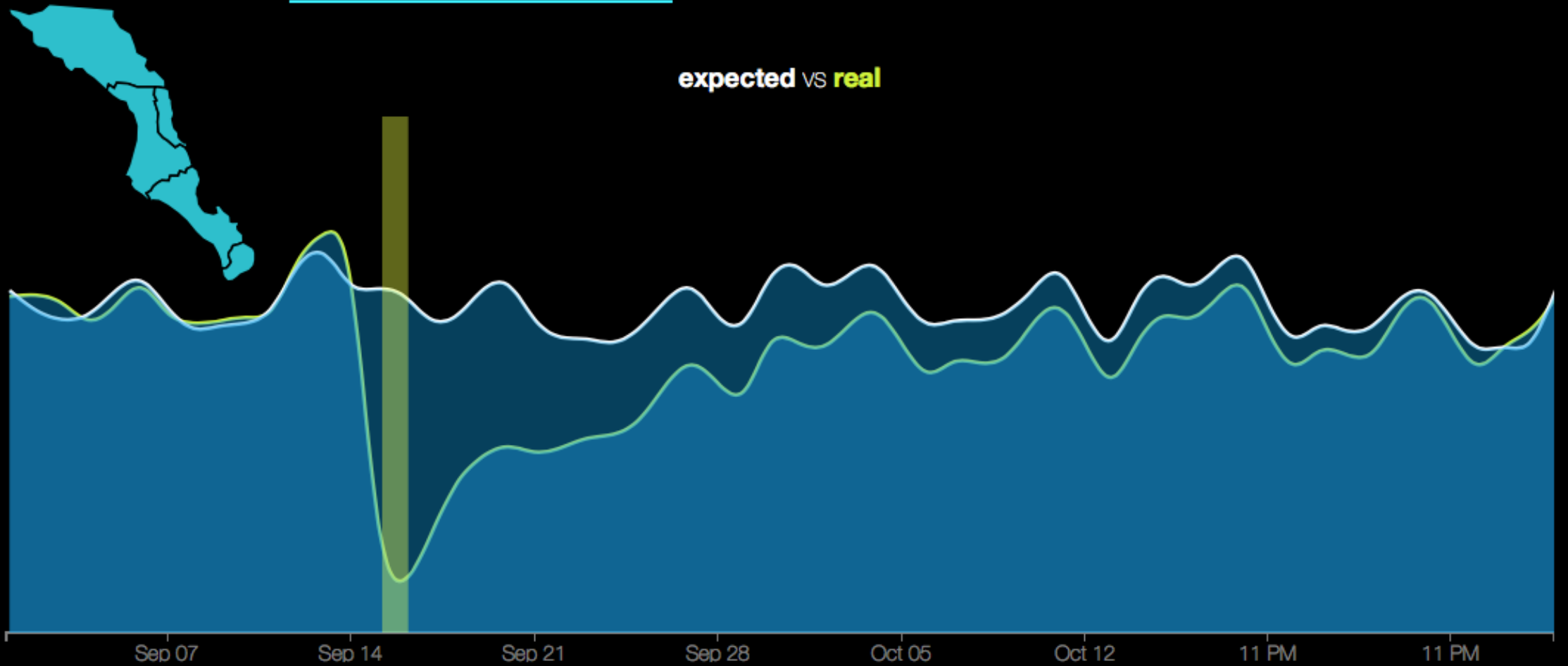
Todos Santos

La Paz

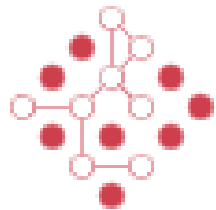
Mulegé

expected vs real

Transactions

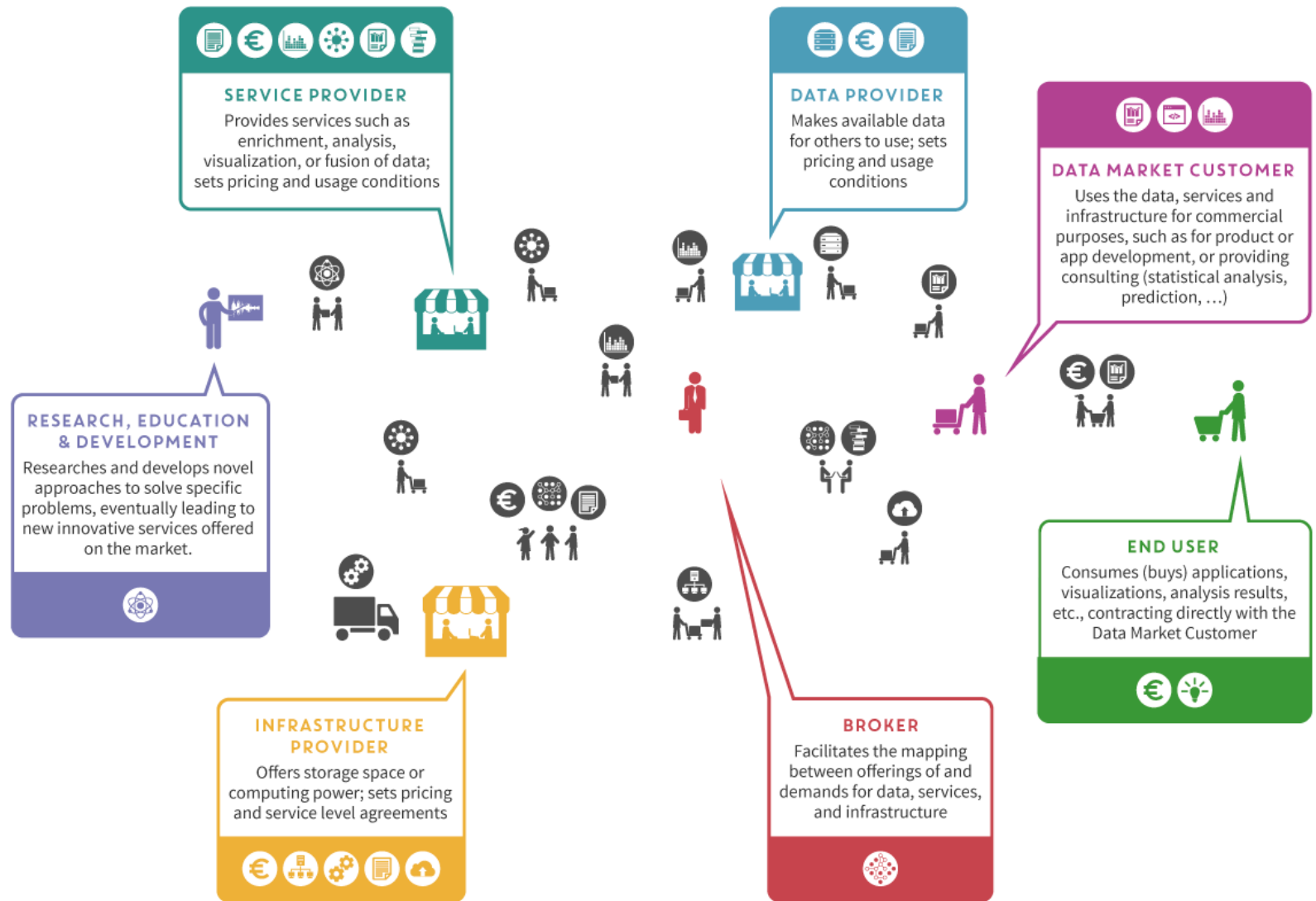


Fonte: bbvadata.com



DATA MARKET AUSTRIA

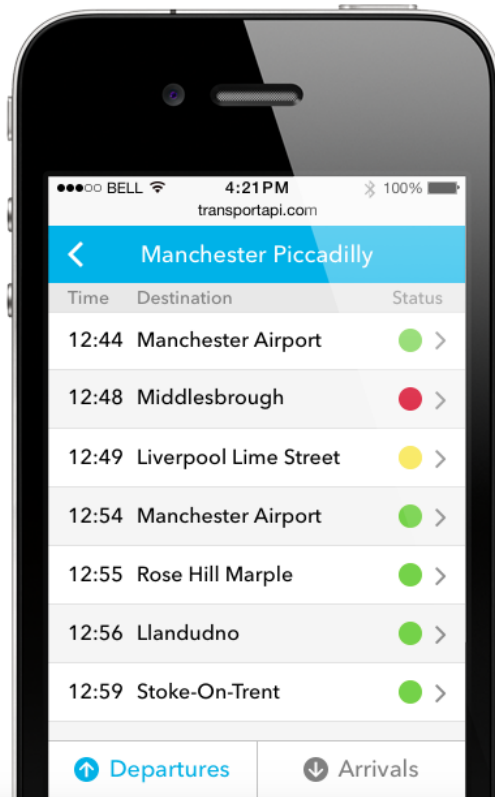
Österreichs erstes digitales Ökosystem für
Daten, Business und Innovation



the digital platform for transport

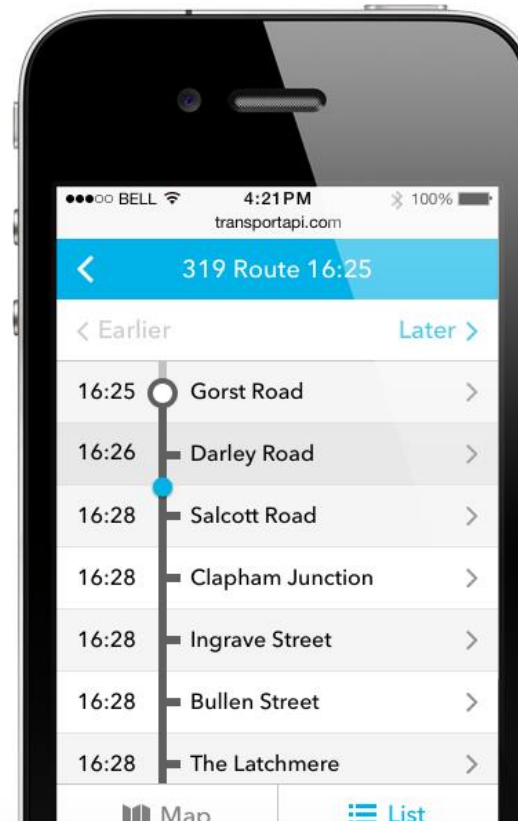
[Learn more](#)





Performance indicators

Past, present and future we've got it covered. Historic and realtime snapshots of the public transport network. Great for modelling and predictions.



Live departures

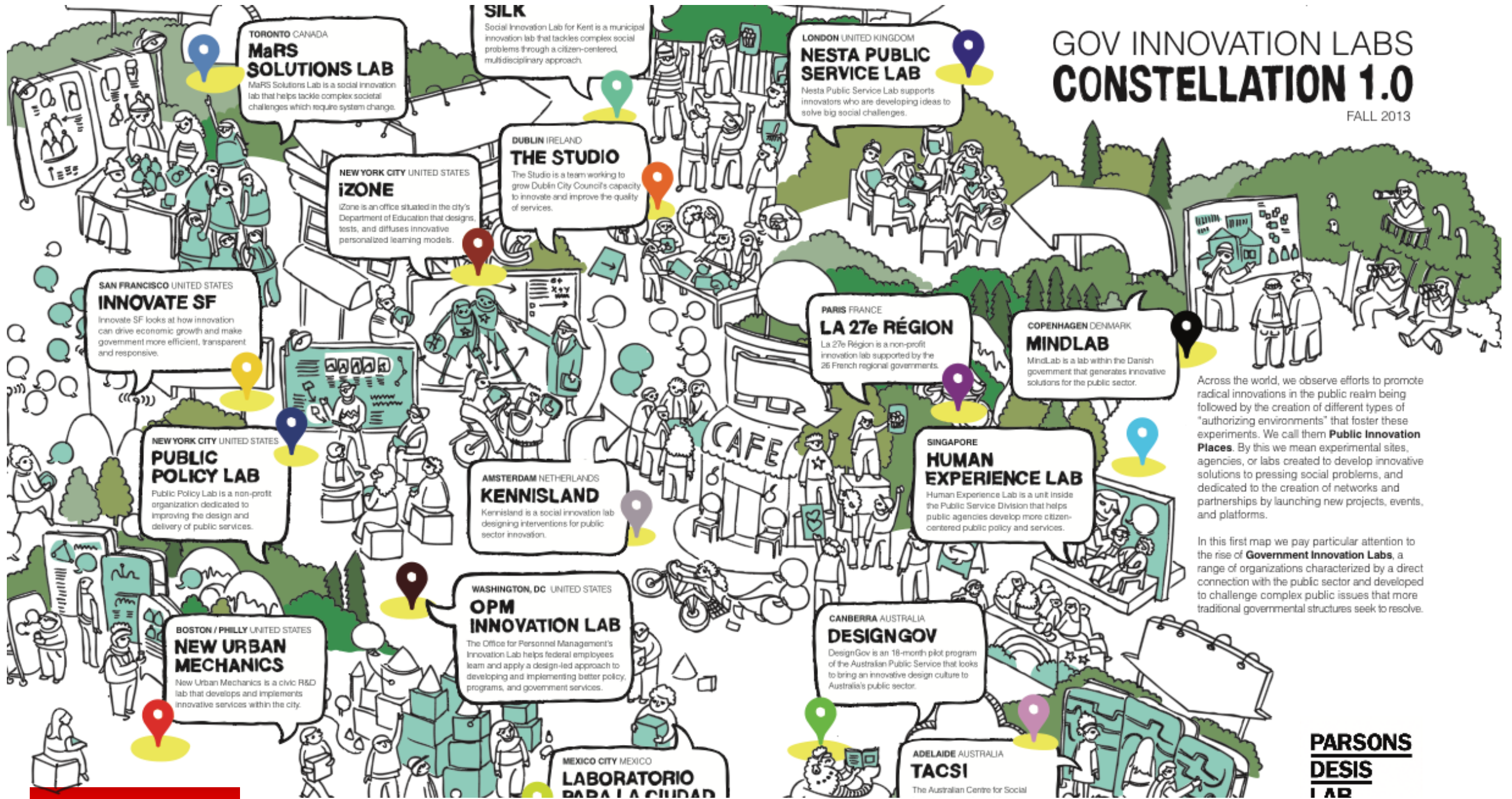
Train, bus or tube power your applications with real time transport data giving your customers up to the minute information.

Proximo www.
Revolução 20 anos!



GOV INNOVATION LABS CONSTELLATION 1.0

FALL 2013



Across the world, we observe efforts to promote radical innovations in the public realm being followed by the creation of different types of "authorizing environments" that foster these experiments. We call them **Public Innovation Places**. By this we mean experimental sites, agencies, or labs created to develop innovative solutions to pressing social problems, and dedicated to the creation of networks and partnerships by launching new projects, events, and platforms.

In this first map we pay particular attention to the rise of **Government Innovation Labs**, a range of organizations characterized by a direct connection with the public sector and developed to challenge complex public issues that more traditional governmental structures seek to resolve.

**PARSONS
DESIS
LAB**

Bigdata: Definição...

“Big Data é qualquer dado que é oneroso demais para gerenciar e extrair valor”

Michael Franklin
Thomas M. Siebel Professor of Computer Science
Director of the Algorithms, Machines and People Lab
University of Berkeley

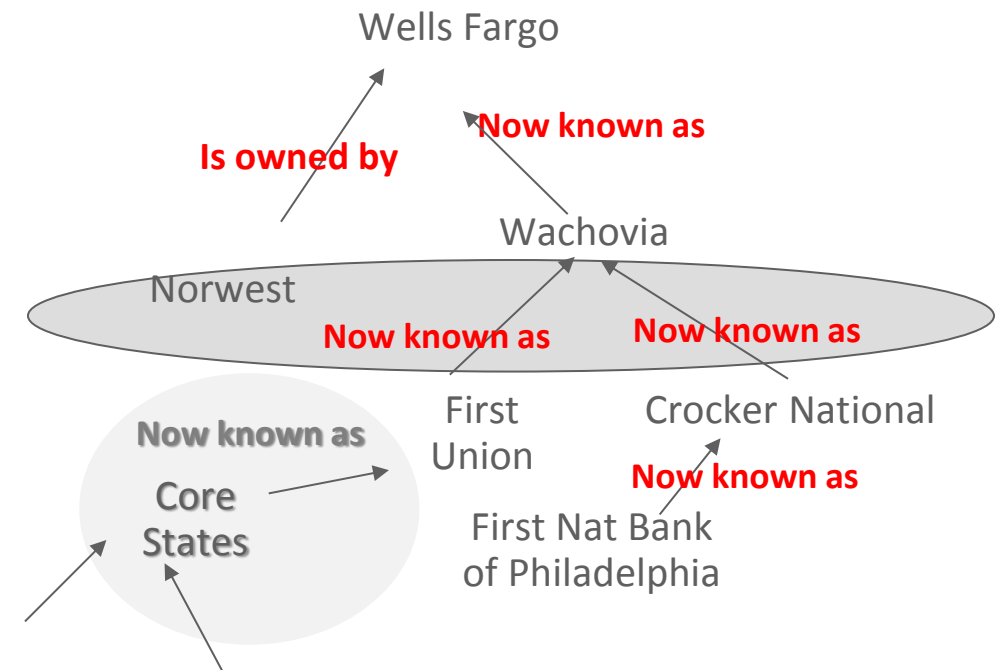
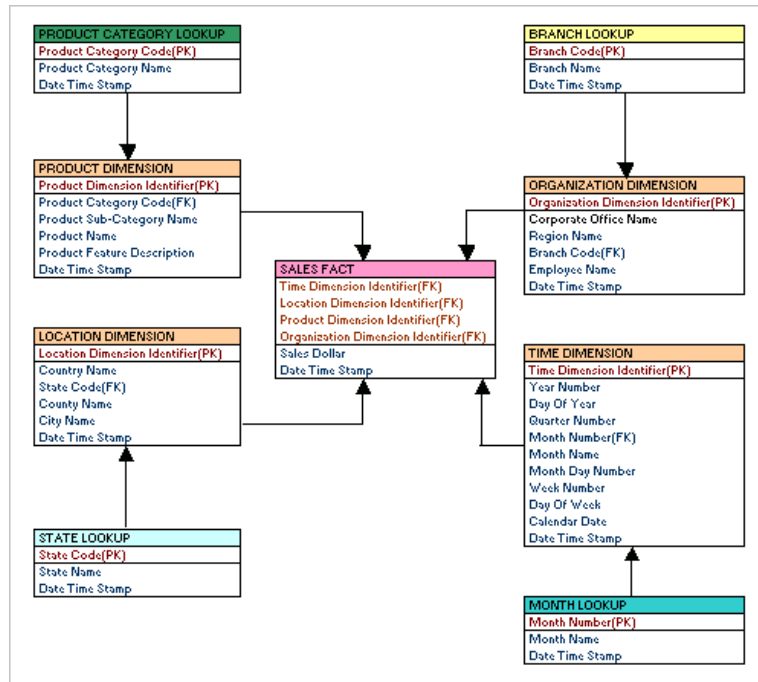
Estático e
Sistêmico

Dinâmico e
Integral

Orientado aos Dados

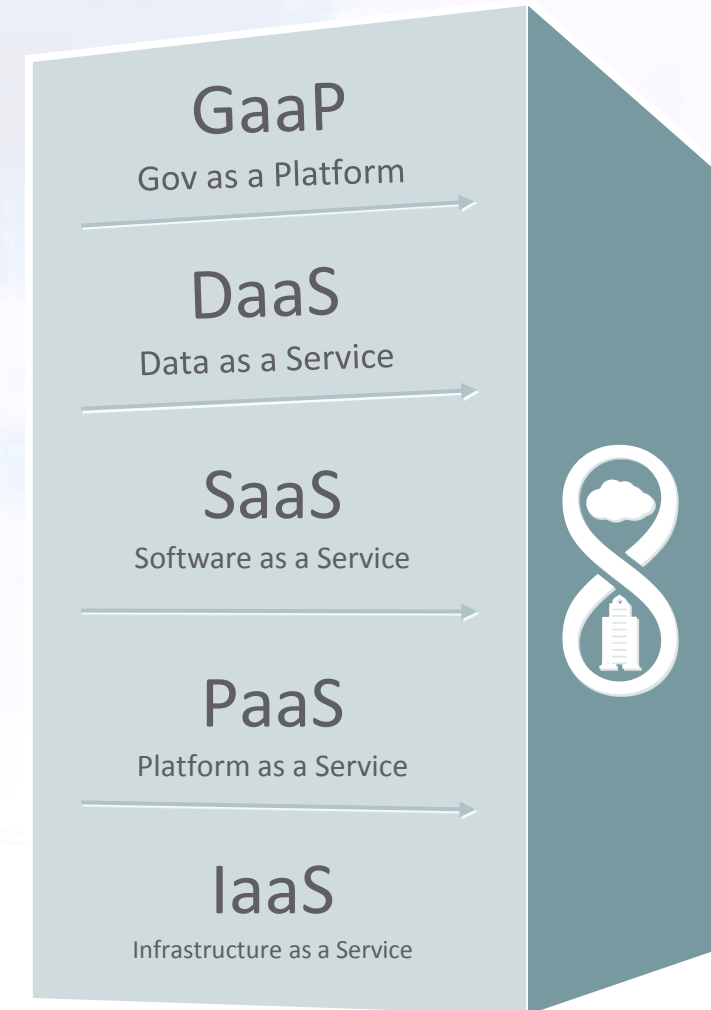
Modelagem e Complexidade

Simplificado e Sêmantico



Governo numa nova fronteira

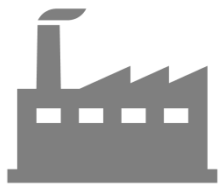
Repensando o Governo e sua forma de atuar



Abrindo os Dados



Cidadão



Empresas



Governo como Plataforma

GaaP

Conteúdos



Sistemas



Documentos



Políticas



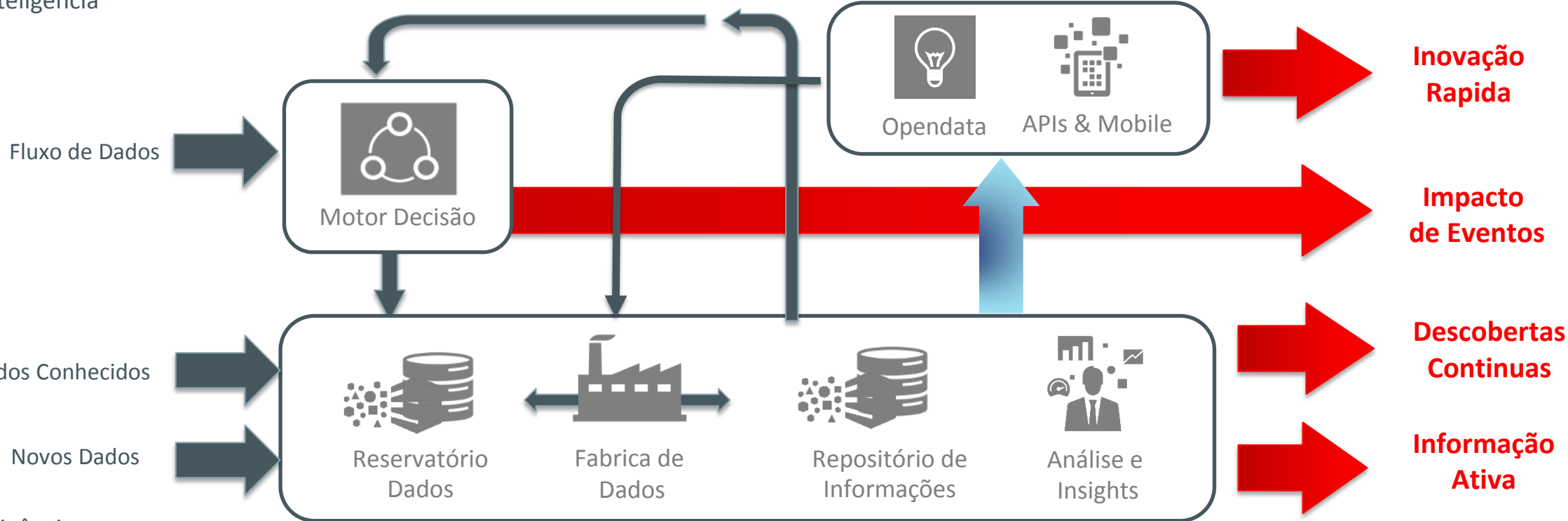
Governança e Controle dos Casos



Segurança dos Dados e Casos

Gestão

Inteligência



Inteligência

Descoberta



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