Sustainable Local Government Approaches..

Our world is Changing…

Graduate

Teacher

Engineer

ICT Manager

Directorate

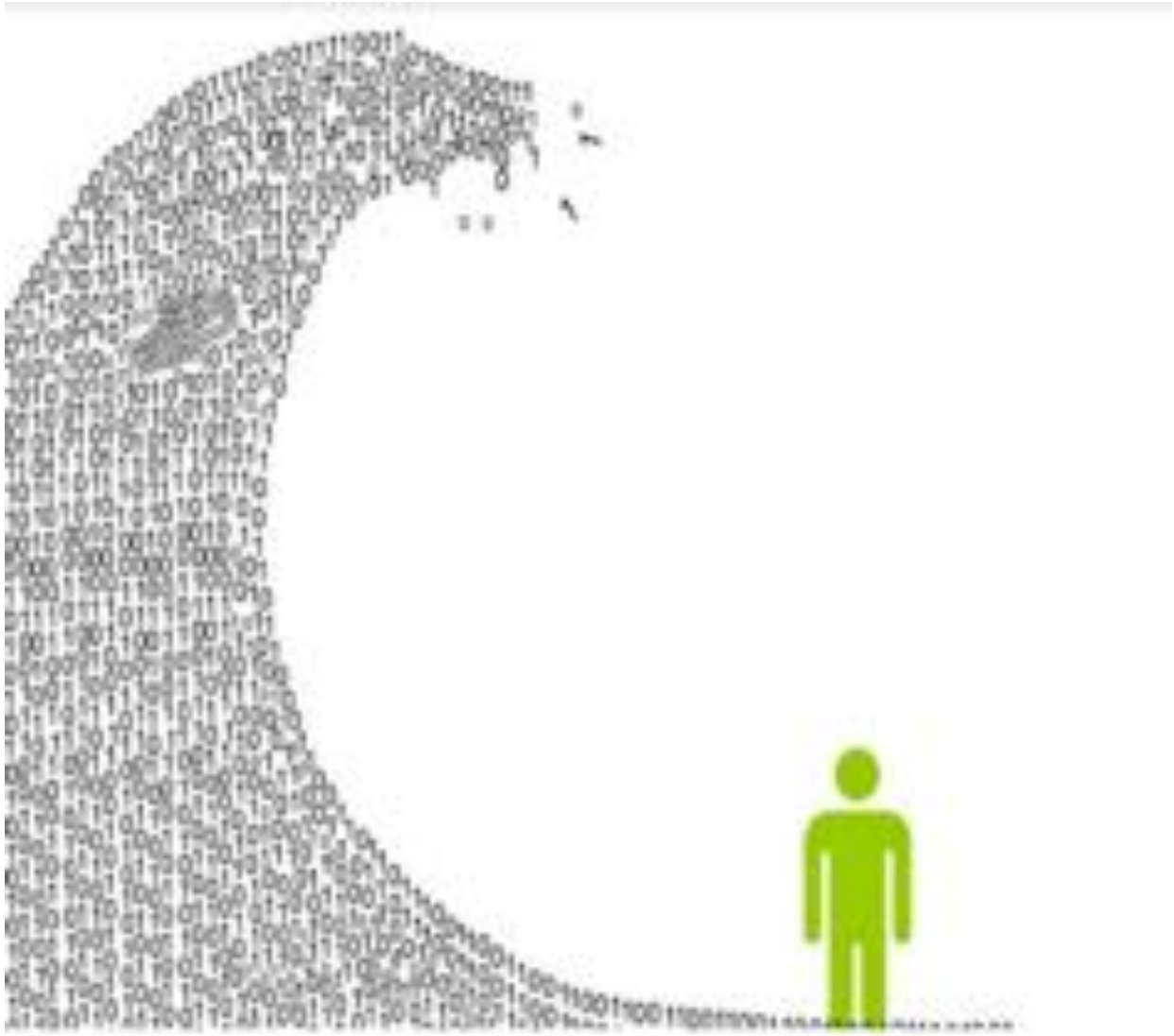
CEO

CTO

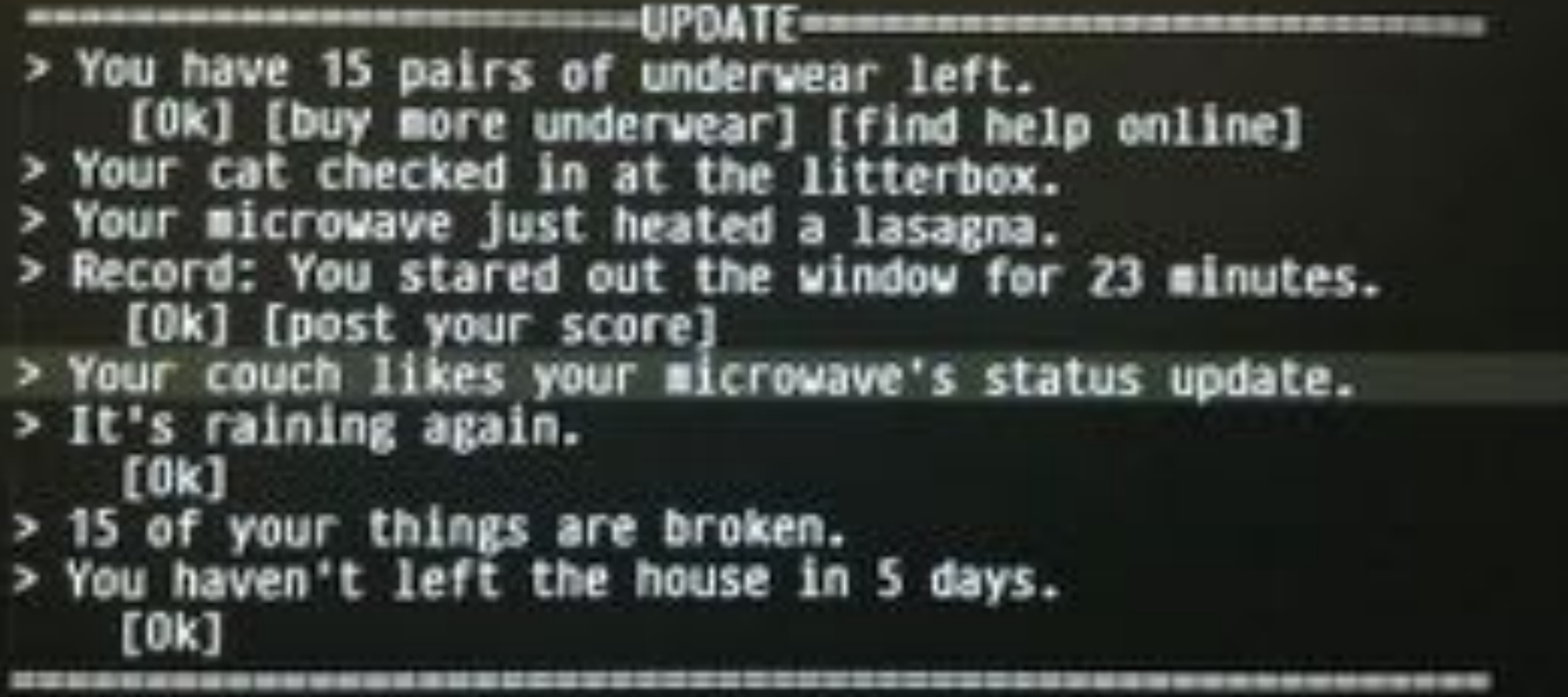
Change and Technology only move in one direction

We are now in the future….

Big Data



Internet of (SCARY) Things…



Evolution of the Desk
1980

every minute last year the world's internet users

- three billion of us –
- sent 204 million emails,
- uploaded 72 hours of YouTube video,
- undertook 4 million Google searches,
- shared 2.46 million pieces of Facebook content,
- published 277,000 tweets,
- posted 216,000 new photos on Instagram
- $83,000 on Amazon

C is for
Change

The World has changed…

We live in a Selfie Generation

Xerox Alto

Rio

IBM Simon

Fujitsu Stylistic

Fossil Wrist PDA

1970 1980 1990 2000 2010

Apple products

Macintosh 128k

iPod

iPhone

iPad

Apple Watch

What do these companies have in common..

No Cars

No Content

No Real Estate

no Inventory

Business Models based on Data Culture and Cloud

Local Government Management Agency

- Shared Services to the Local Government Sector in Ireland
  - Procurement
  - ICT
  - HR and IR
  - Business Technical support and shared services – Finance, Payroll, Planning, Housing, Libraries etc
  - Shared service bureaus
  - Office for Local Authority Management (OLAM)

Change?

- Effect on Local Government
- 30k less in the public sector / 3.4bn in payroll savings…
  - DPER / OGCIO
  - Staffing – (Employment Control Frameworks (ECF) / Haddington Road) 28% reduction
  - Budgets / 25% reduction in Budget (2009 – 2013)
  - CIO Council / National ICT Strategy
  - Reform Agenda (Programme for Government)
  - Local Government reform (PPF)
    PMO / LGER
- Local Government IT
  - Staffing
  - Maintain Skills / New Skills
  - Local Budgets
  - Mergers and Amalgamations
  - 31 Comms Rooms / Data Centres

Burning Platform??? – Create a Sense of Urgency…

Guiding Coalitions

- CIO Council / OGCIO
  - Cloud Procurement
  - Gcloud?
  - Government Networks?
- Office of Government Procurement
  - Category Council
- PMO / LGER
  - Shared Services
  - Shared Technology Platforms
  - Shared Delivery
  - BPI
- LGMA Role
  - Shared Services

New Local Government?

- PPF - Putting People First
- 3 Mergers
  - Limerick, Waterford, Tipperary
- 54 Amalgamations
  - Town Councils
- CDB -> LEO
- Rezoning
  - Carlow / Kilkenny / Waterford, Meath / Louth
- Reviews
  - Cork
  - Galway

Shared Services – it means many things…

- Leadership
- Change Management
  - Business as Usual, Cultural Shift, Continuous Improvement, Responsibility and Service Mapping
- Measurement – Measuring the Right Things
  - Selection, Cost Savings, Growth, Delivery
- Governance
  - Managing expectations, Innovations and Supplier Push
- Opportunity?
  - Reduce Complexity, Outsource Technology, Augment Services, Cloud Benefits
  - SHARING – Shared Services means SHARING….

We can rely on change..

- Abolishment of Town Councils –creation of Muni Districts
- Local Enterprise Offices
- Creation of Irish Water
- OGCIO / OGP
- Shared Services (PMO –Payroll, Treasury Management….. NPPR / HC)
- LG sector Saves 109m in procurement (2010 – 2012)
- Outsourcing – LPT, Drivers License, HEG
- OGCIO – Cloud and eGov Strategies
- Digital First, Digital by Birth, Digital by Default….
- New Local Gov Systems – MyPlan, FixYourStreet, NPPR, HC, POW, BCMS
- Open Source - New Models?
- Cloud v’s On Prem

Lots of Strategies…

- Public Sector Reform Plan
  - public services to be delivered faster, better and more
  - Intelligent, targeted use of ICT and eGovernment are key enablers for these improvements.
- eGovernment Strategy
  - services through multiple channels;
  - improve data sharing;
  - develop a more integrated approach within and across sectors
- Cloud Computing Strategy
  - Digital First, Digital by Birth, Digital by Default…
  - data centre consolidation
  - adoption of cloud computing
- Public Service ICT Strategy
  - Build to Share
  - Digital First
  - Data
  - Improve Governance
  - Increase Capability

Sustainability in Local Government ICT

- Virtualisation
- Consolidation of Data Centres
- Rationalisation
- Move to Shared Services
- Move to Cloud Services
- Reduction in ICT
- REUSE – Copy Others

Insource
Outsource

Radical Change is happening
With or Without your input / approval

Demands

Resources

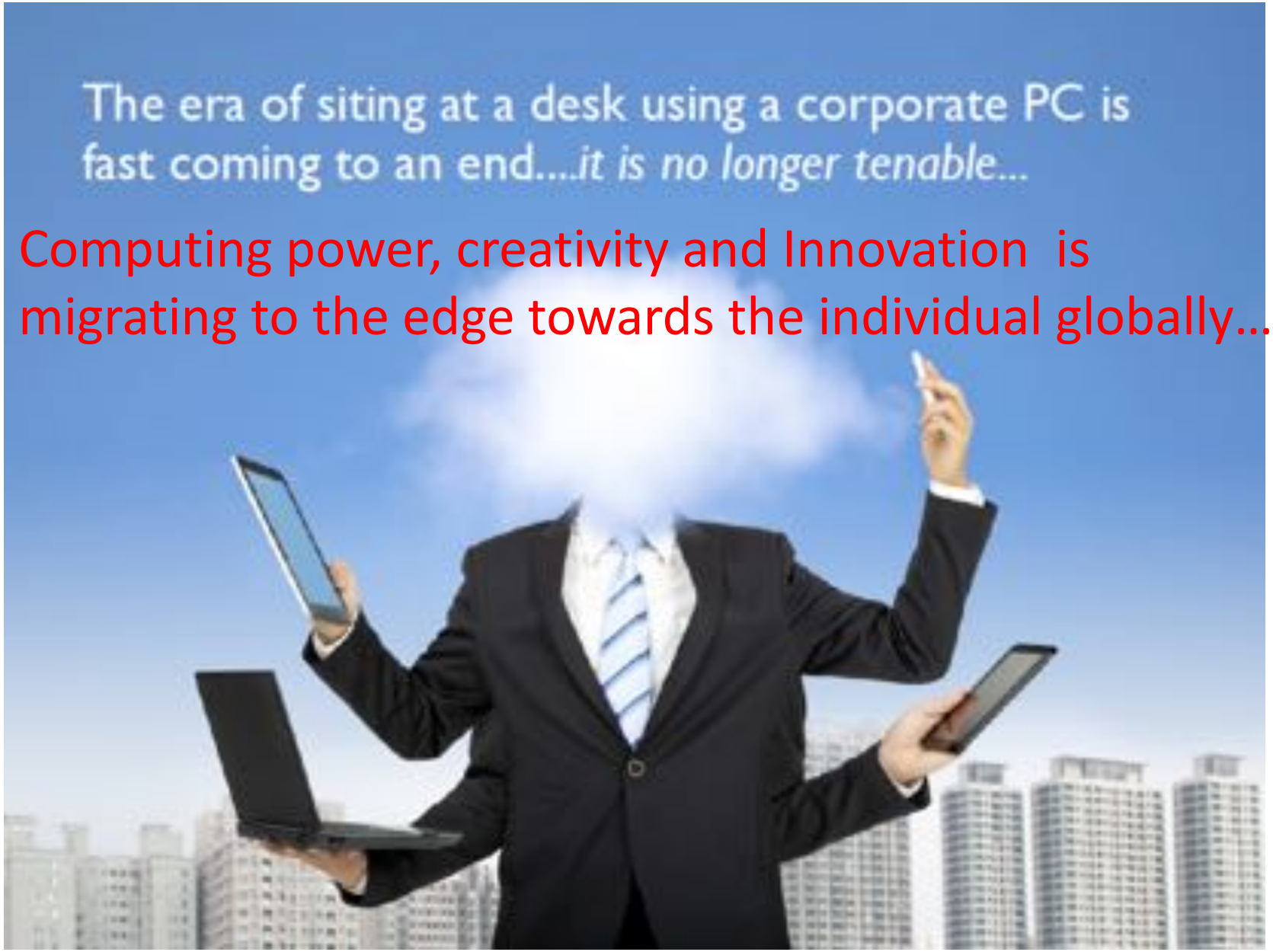
Shared Services – the future is here

- Libraries
  - Cloud System / Single Interface for all
- Housing
  - Stock Surveys – Handhelds –Android
  - HAP – Housing Assessment Programme
- Corporate
  - FixYourStreet – An OSS Application using Ushahidi (SDCC)
  - Corporate CRM – Back end to FYS and more (Cork, Limerick, Meath etc etc)
  - Open Office – Galway City replaced 250 desktops
  - Data.localgov.ie
  - WWW.LocalGov.ie – almost all Las have Drupal Website live in some area.
  - MyPay
- Roads
  - Road Opening Licenses / Online Roadworks Control
- Planning
  - Cork Co Co have Offered Odyssey
  - BCMS
  - Enforcements / Inspections
- Finance
  - ePayments

Understand What the Citizen Wants?

What Government Delivers

MEANWHILE AT VW'S EMISSIONS TEST CENTER
THATS ANOTHER PASS ✅


The era of siting at a desk using a corporate PC is fast coming to an end....*it is no longer tenable...*
Computing power, creativity and Innovation is migrating to the edge towards the individual globally…

APPS

Third Platform

Open Source RFI

- Open Source hasn’t happened, because, open source hasn’t happened.
- There is no Open Source in Ireland

- We have to “do” something
- If Government creates a Demand – Supply will happen

- Donald Rumsfeld

THERE ARE KNOWN KNOWNS

THERE ARE THINGS THAT WE KNOW THAT WE KNOW. THERE ARE

KNOWN UNKNOWNS

THAT IS TO SAY, THERE ARE

THINGS THAT WE NOW KNOW WE DON'T KNOW

BUT THERE ARE ALSO

UNKNOWN UNKNOWNS

THERE ARE THINGS

WE DO NOT KNOW

WE DON'T KNOW

AND EACH YEAR WE DISCOVER

A FEW MORE OF THOSE

UNKNOWN

UNKNOWNS

Local Government adoption of open source

More and more public-sector organisations around the world use open source software!
Benefits IT portfolio -
Vertical Software that
1. Reduces total cost of ownership
2. Provides higher stability
3. Provides increased security
4. Gives greater overall control
Horizontal Software
utility software used across industries and includes, messaging. e-mail, collaboration tools and generic business application toolsets shown below.

Horizontal

CRM / Web / CMS /Office Automation
Document Management / Database
Graphics / GIS / Project Management

Vertical

Housing / Planning / Roads
Water / Library / Auditor
Fire / Risk Management
Community
Local Economy
Public Lighting
Franchise
Environment

THE SAME OLD THINKING
THE SAME OLD RESULTS

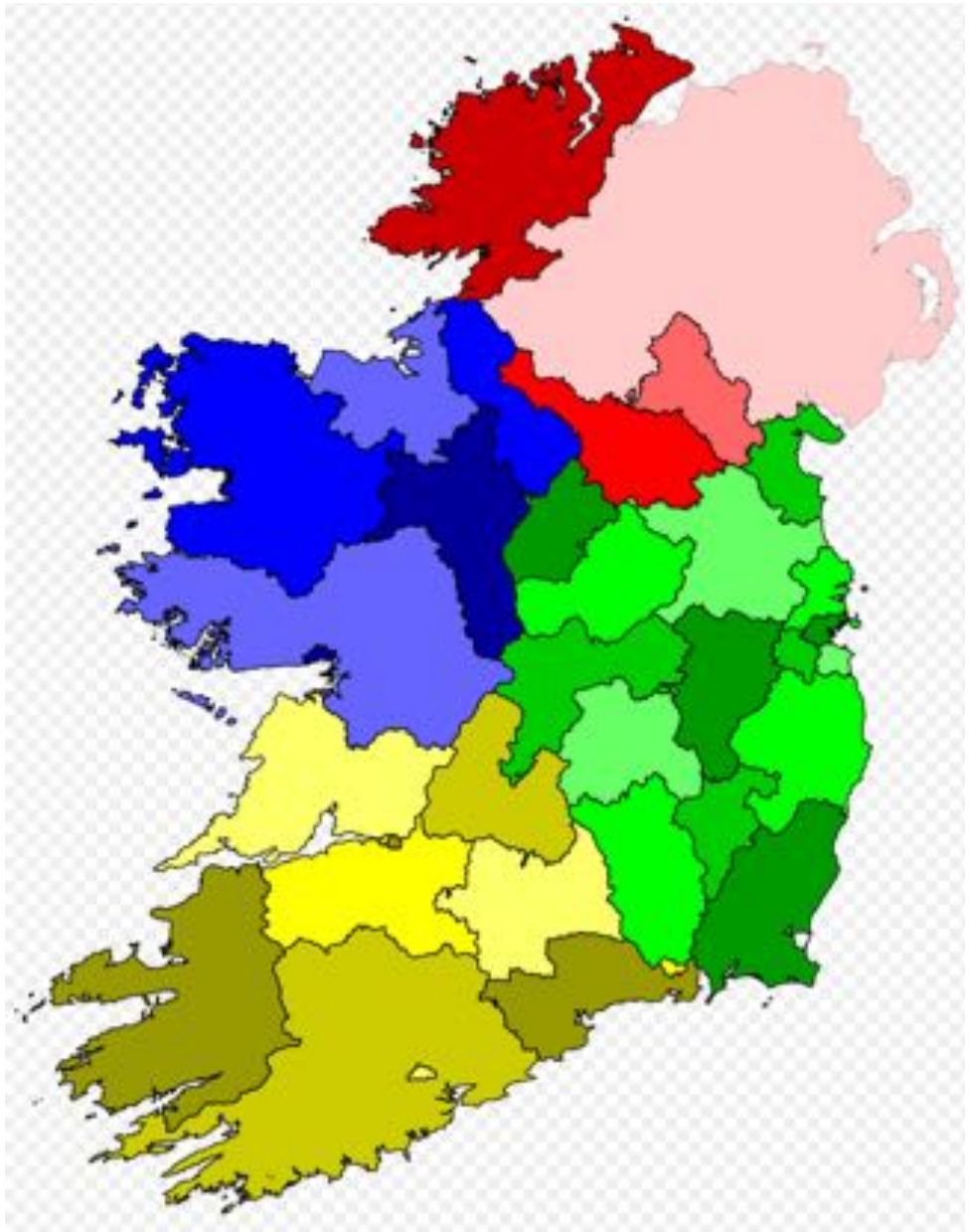
Huge
Centralized
System Programs
have a history of under delivery
very high costs & cannot
meet our varied and
dynamic future
needs

Big government & big companies favour big solutions...

When something much smaller will suffice, or even do the job far better!

Case Study

Local Elections….

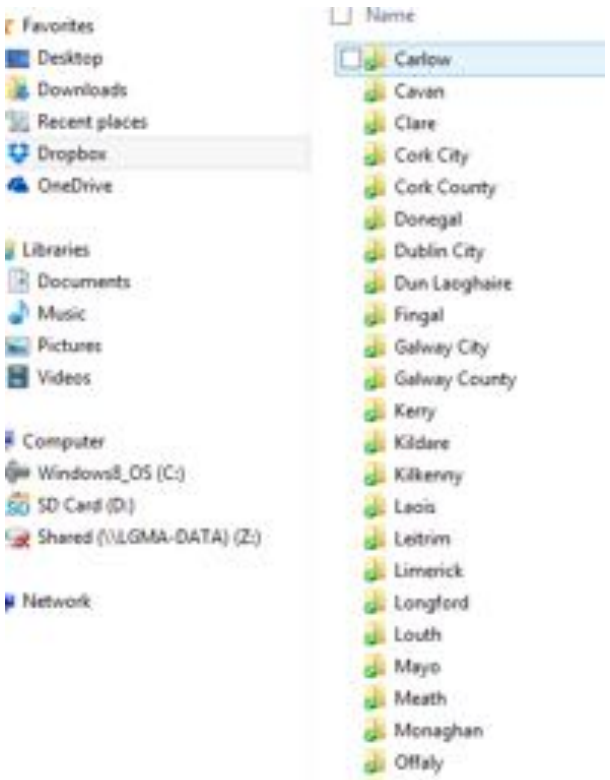


Problem
Over 400 Local Electoral Areas / LEA
34 Local Authorities
38 Count Centres
3.2m Voters

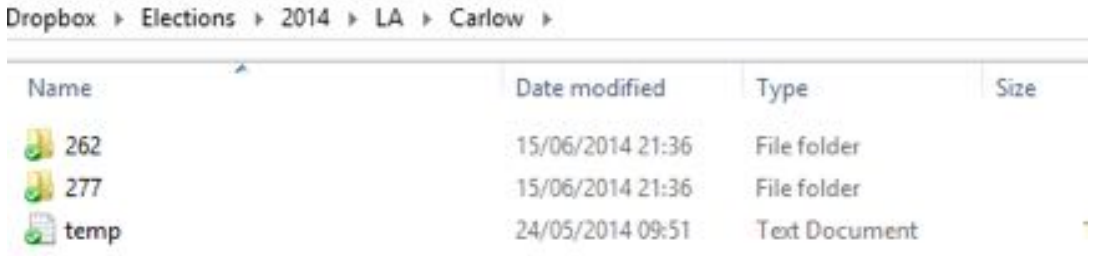
Desire
To have all of the Count Data available as open data as the local counts happen…

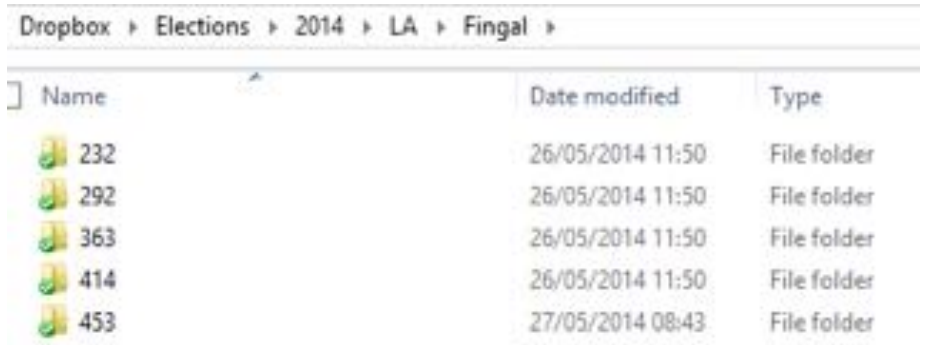
Solution?

1. Set up a Dropbox Account for each LEA

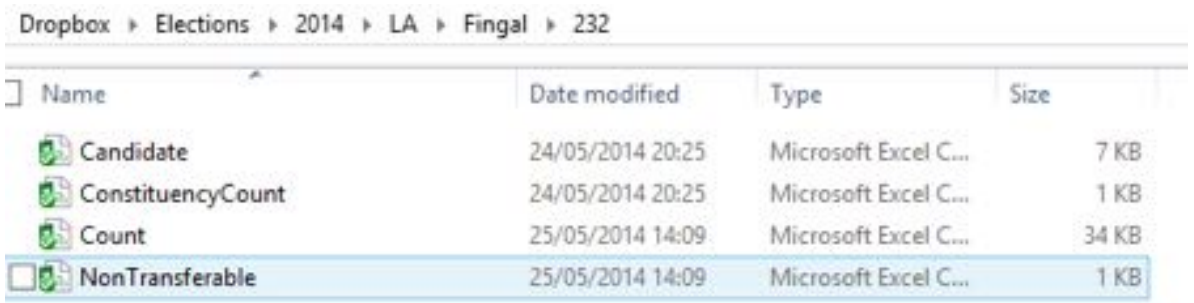


2. Each LEA set up as Separate Folders





3. Agree and Set up Standards for data



4. Set up way of Publishing Data…..

localgov.ie

powered by Portus

Select the constituency, then click on the map for more information

105

Select Constituency

Tweets

Follow

Local Election
@LocalElects2014
3 Jul

New visuals added - Pie-charts of 1st preference and total party vote + chord diagrams of vote transfers now live on data.localgov.ie

Expand

Local Election
@LocalElects2014
27 Jun

data.localgov.ie is back up and running. Issues with certain feeds have been addressed.

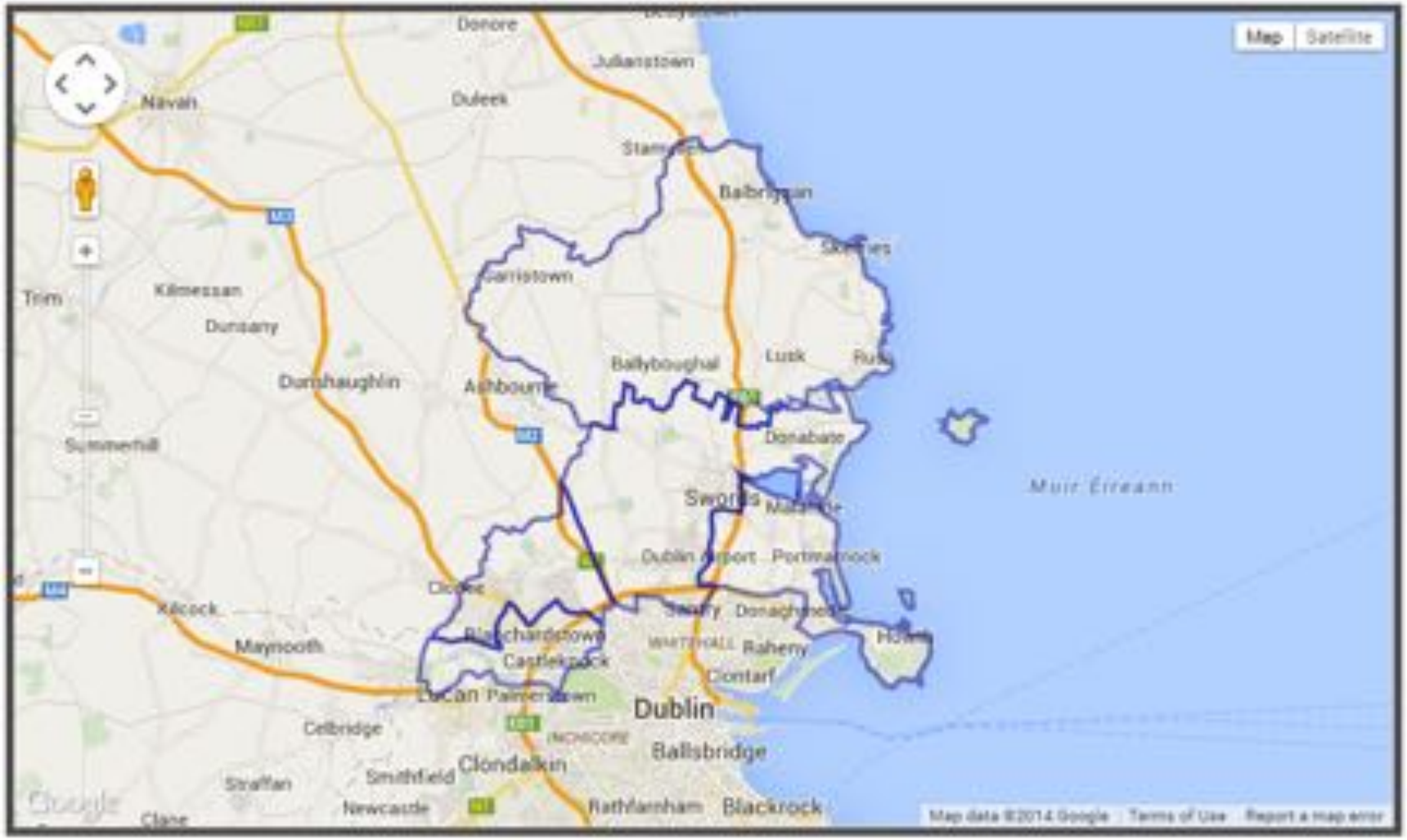
Expand

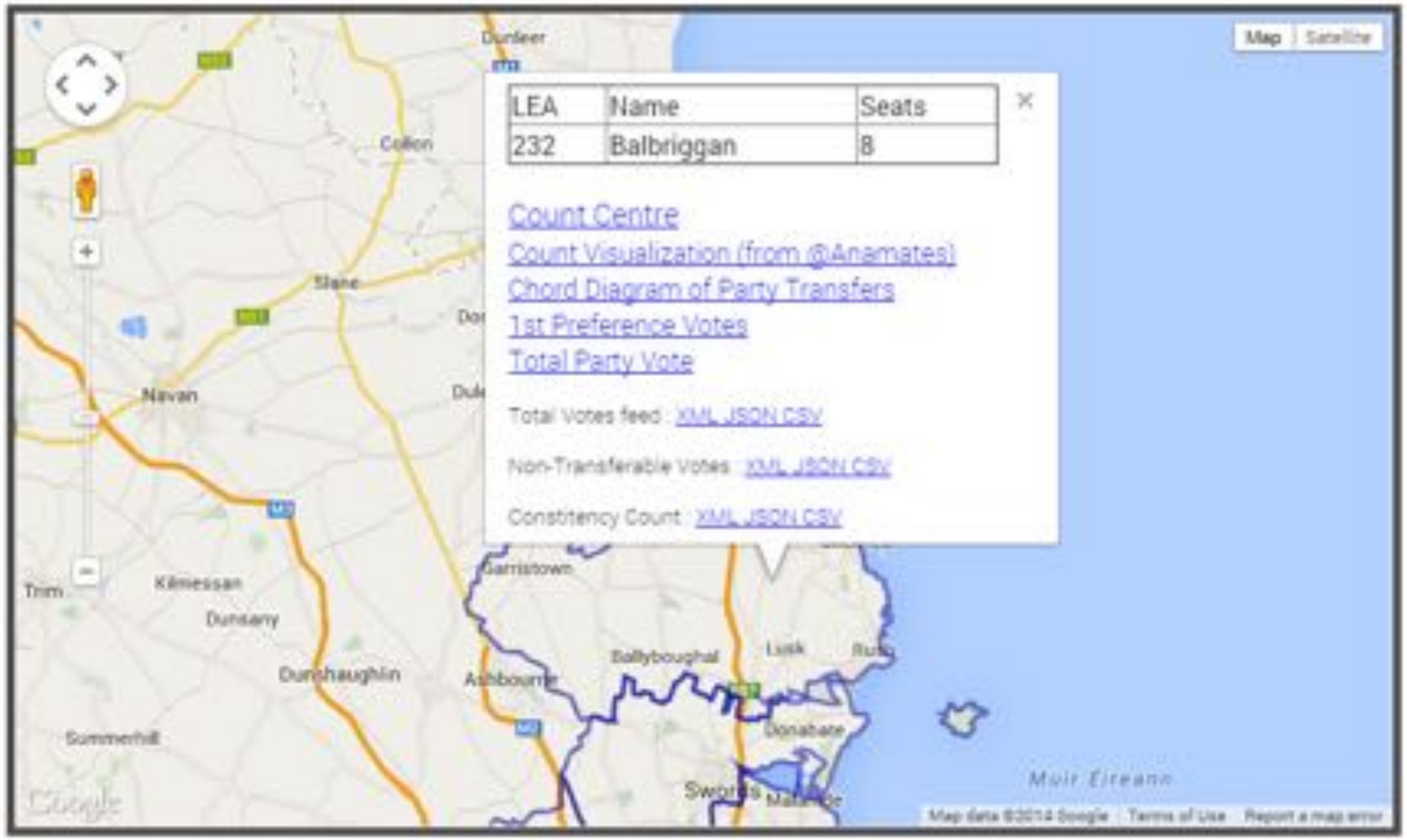
Local Election
27 Jun

Tweet to @LocalElects2014

Select Constituency
Carlow County
Cavan County
Clare County
Cork City and County
Donegal County
Dublin City
Dun Laoghaire-Rathdown Co.Co.
Fingal Co.Co.
Galway City and County
Kerry County
Kildare County
Kilkenny County
Laois County
Leitrim County
Limerick City and County
Longford County

Fingal Co.Co.


Map
Satellite
Donore
Julianstown
Navan
Duleek
Balbriggan
Garristown
Trim
Kilmessan
Dunsany
Ballyboughal
Lusk
Dunshaughlin
Ashbourne
Donabate
Muir Éireann
Kilcock
Maynooth
Clontarf
Dublin
Ballsbridge
Celbridge
Clondalkin
Smithfield
Rathfarnham
Blackrock
Map data ©2014 Google
Terms of Use
Report a map error


Map
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Dunleer
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Dunsany
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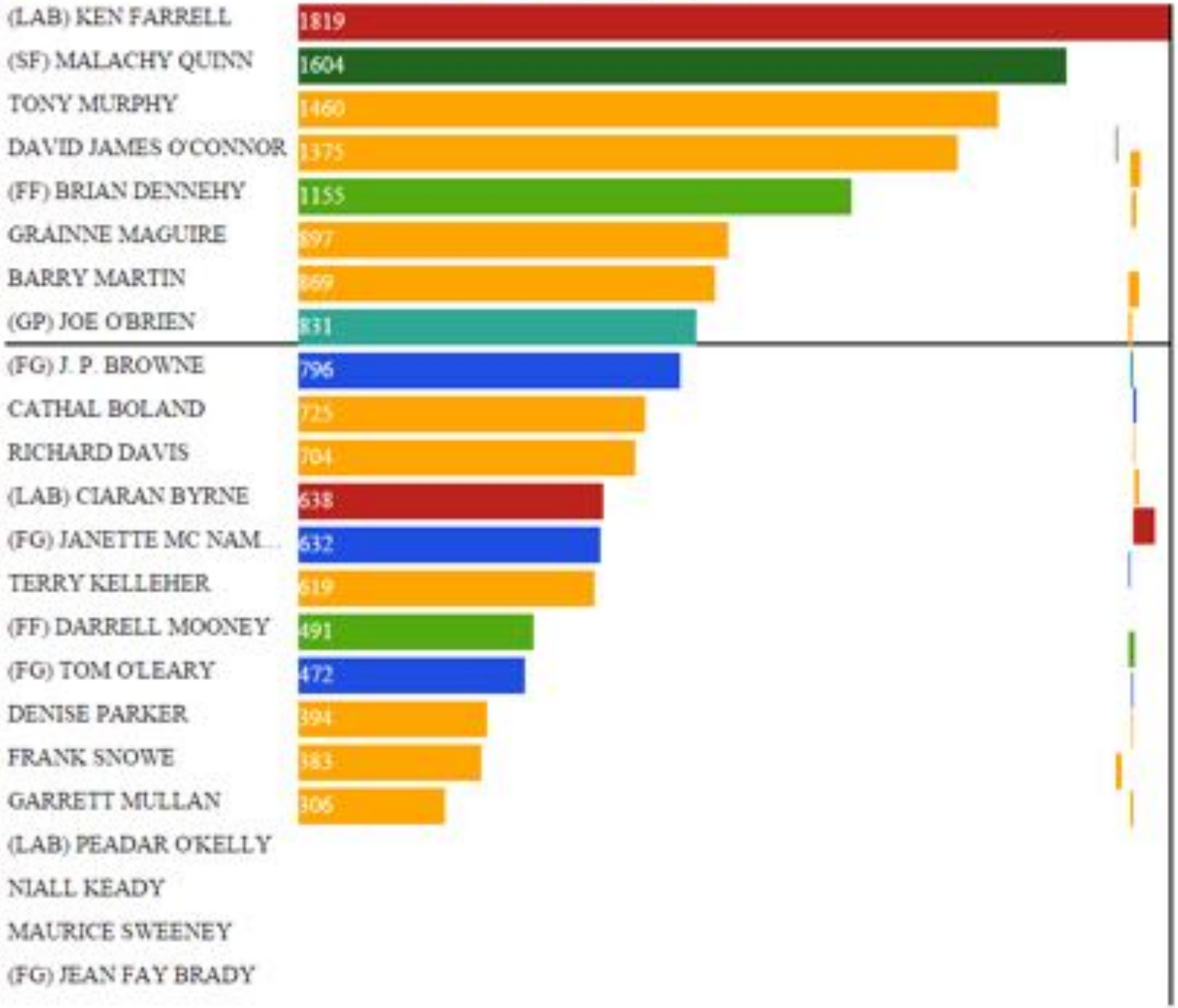
Summerhill
Garristown
Ballyboughal
Lusk
Donabate
Muir Eireann
Map data ©2014 Google
Terms of Use
Report a map error
LEA
Name
Seats
232
Balbriggan
8
Count Centre
Count Visualization (from @Anamates)
Chord Diagram of Party Transfers
1st Preference Votes
Total Party Vote
Total Votes feed : XML JSON CSV
Non-Transferable Votes : XML JSON CSV
Constituency Count : XML JSON CSV

Quota 1819 Seats 5 Count 6



Data collated

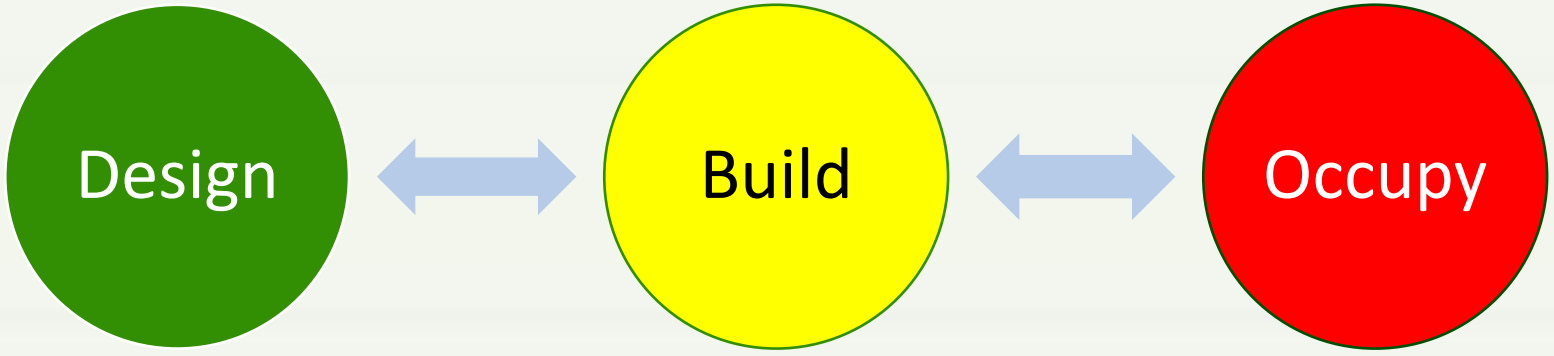
Data Stored

Data Mapped

Data Socialised

Case Study BCMS

Life Cycle Strategic Management



Design	Planning
Build	Building Control
Occupy	Keeping Communities Safe

Timeline

- Minister Decision on new Legislation October 2013
- New Legislation to be in place (live) 1st March 2014
- LGMA told to do development Mid October 2013
  - 2 Tenders – Front end / Back End
  - Front end has to be ready for 1st March – Registration / Forms /Payments
  - Back end has to appear to be ready 1st March – not scale required
  - Single Infrastructure / Data Infrastructure / ePayments in place
  - Legislation still being finalised on 28th February 2014
  - System Live on March 1st "2014

- To date
- 320,000 Documents, 17000+ Commencements, €3m fees

WHY A NATIONAL BCMS

Governments Vision for Reform

- Public Service Reform Plan
  - Action Plan for Jobs
  - Construction 2020
  - S.I. 9 of 2014
  - Shared resources

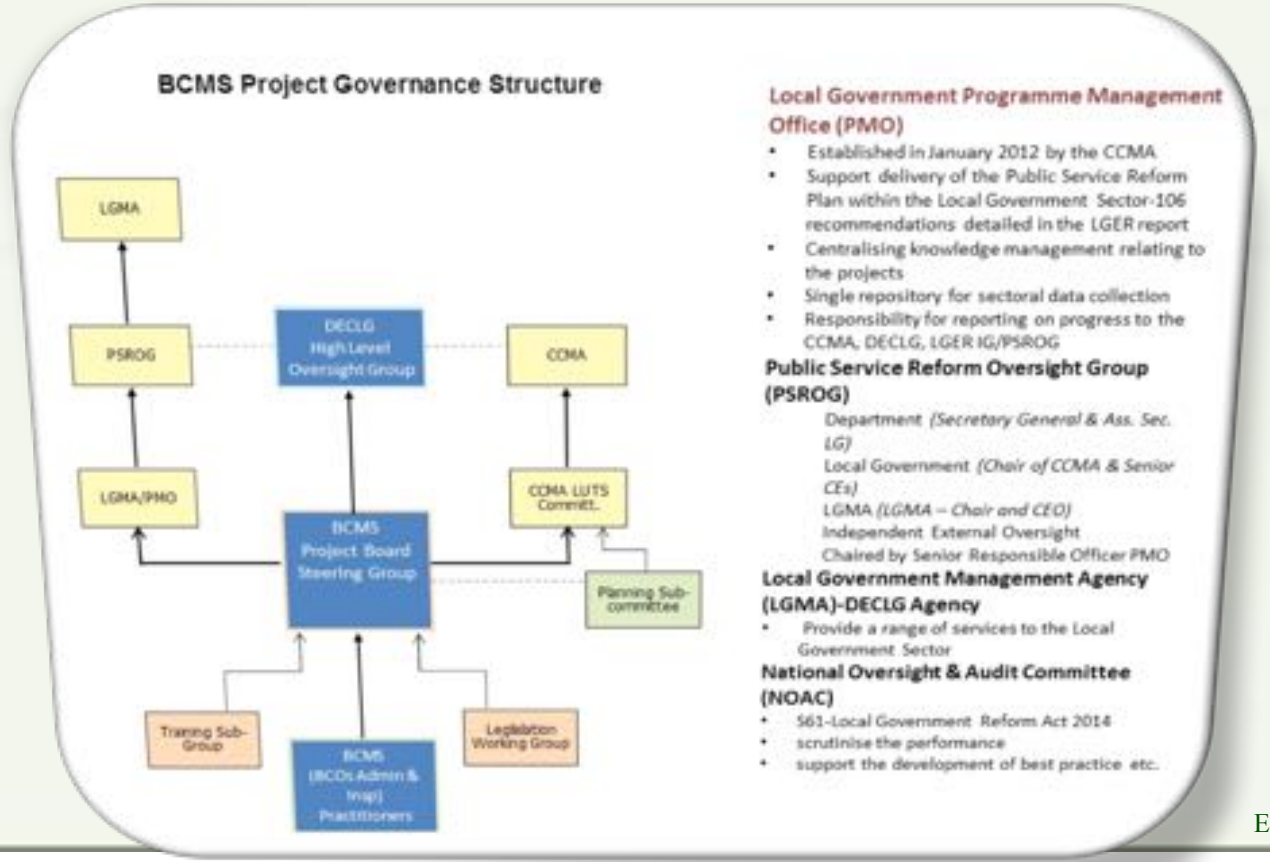
Consumer Protection

- Health & Safety in or about buildings
  - Sustainable buildings
  - Access & Use
  - Quality Construction
  - Transparent standard approaches

BCMS-Sector Design & Oversight

- **BCMS Project Board**
  - PMO/CCMA
  - LA Practitioners
  - IBCI
  - RIAI/EI/SCSI
  - CIF
  - CFA
  - NDFEM

- BCMS Steering Group
  - PMO
  - LA BCOs
  - LA Administration
  - IBCI
  - CFA



FRONT-END

LA Process Management
SugarCRM Based
Household Charge Infrastructure
Takes Data from Drupal
Back Office Functions

Public Interface
Drupal Based
Use Existing Local Government Portal
Reusable Components
Registration
Forms
Document Upload
ePayments

BCMS-Business Plan-6 Key Modules

- **Module 1-** Registration; Owners, Builders & Designers, Professionals.
- **Module 2-** Notification System; Prescribed Certification of works.
- **Module 3-** Guidance Templates; Good Practice & Knowledge Sharing.
- **Module 4-** Inspection; Monitoring & Assessment- Risk Based Inspection
- **Module 5-** Enforcement.
- **Module 6-** Reporting-Accessible Information

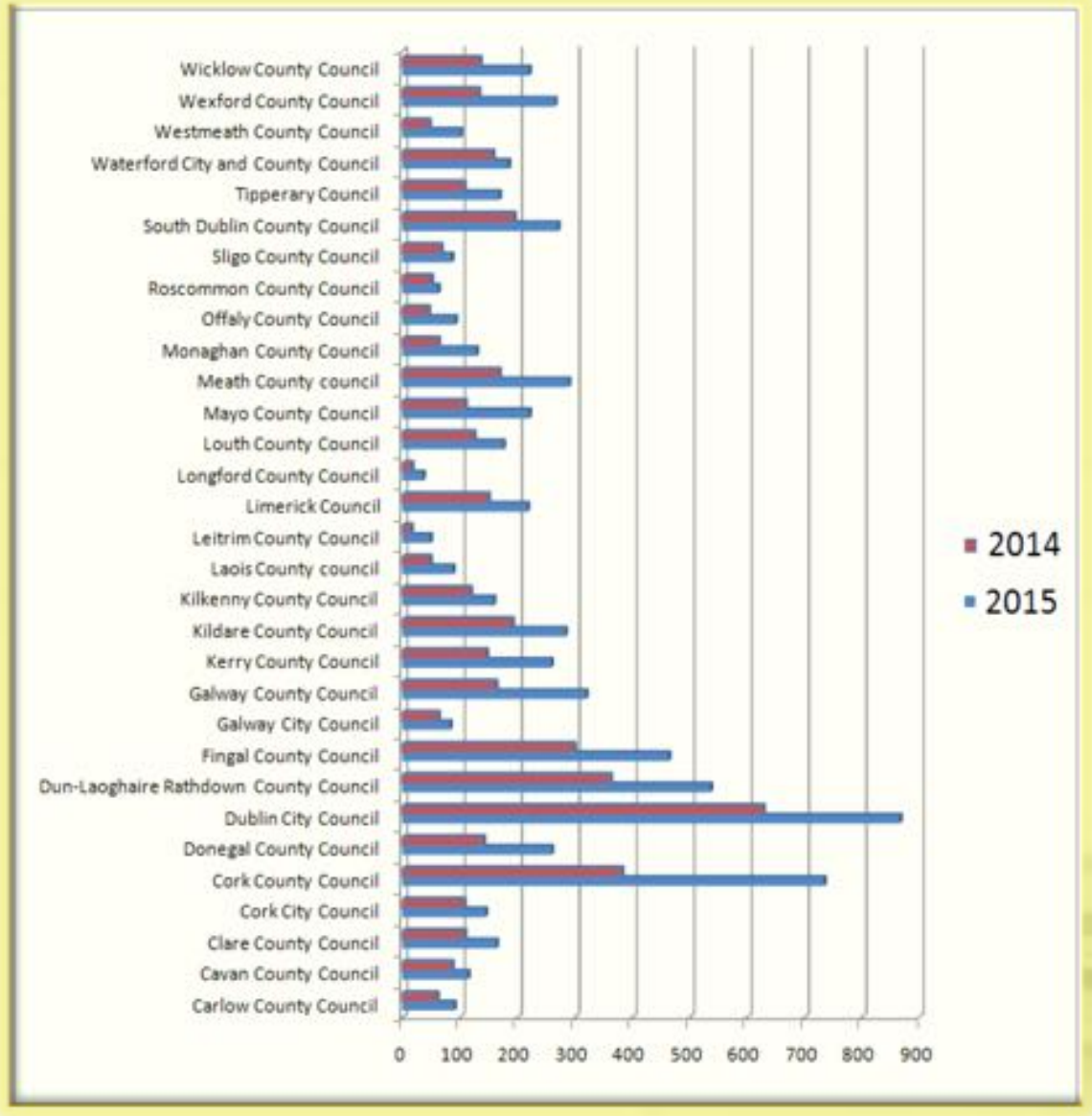
- **Centre of Excellence**
  - Governance
  - Guidance –shared learning
  - Risk, Compliance, Inspection / Enforcement

- **IT Enabler-**
  - Business Process (BPM)- flexibility
    - Registration
    - Notices
    - Payments
  - Data Analytics- Intelligence
    - Register
    - Service Indicators
    - Risk-Assessment
    - Search-active current state inventory
  - Cloud –Government cloud
  - Collaboration
    - RAPEX notifications etc.
  - Mobility
  - Hand-held inspection devices

Shared Services – SHARED SERVICE CATALOGUE..

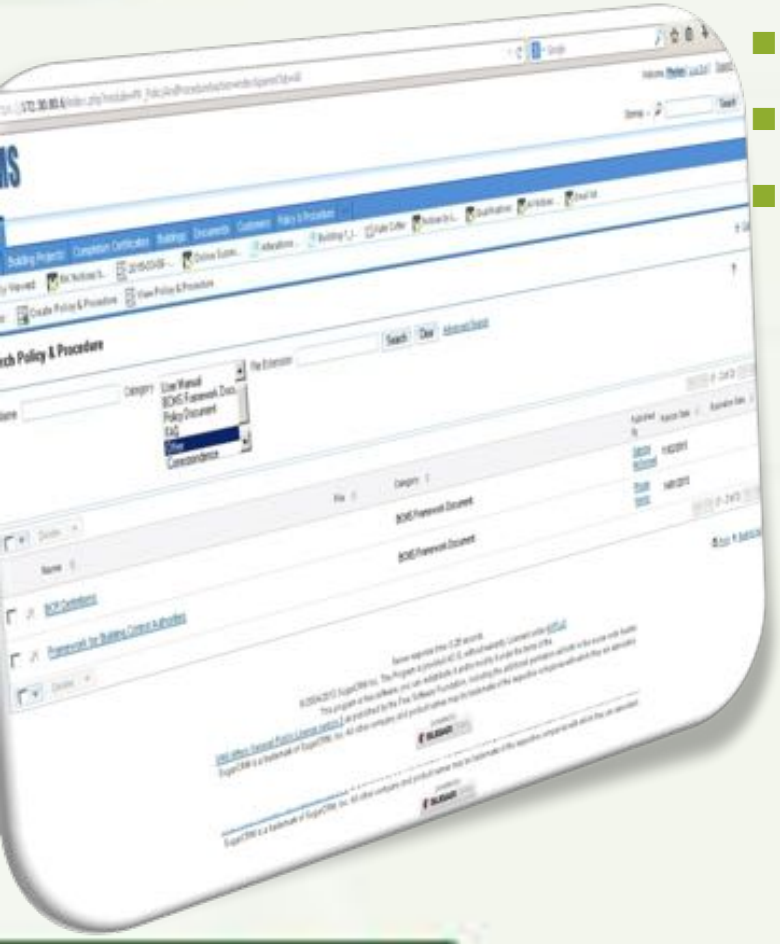
BCMS -18 Months On - Forms Phase 1

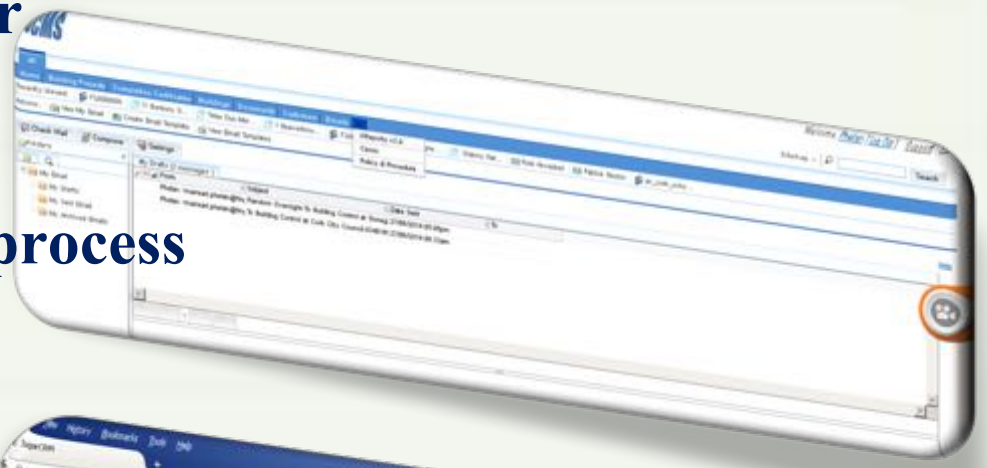
- Registration Complete
- Notification-4 Commencement Notices (CN) types
    1. 7 Day Notice
        1. (a)FSC
        2. (b)Declaration
    2. CN With Documentation
    3. CN Without Documentation
    4. CN with Opt Out - S.I. 385
    5. CCC (Certificate of Compliance on Completion)
    6. EU-tender to complete remainder of 31 forms i.e. FSC, DAC, Relaxation/Dispensation etc.

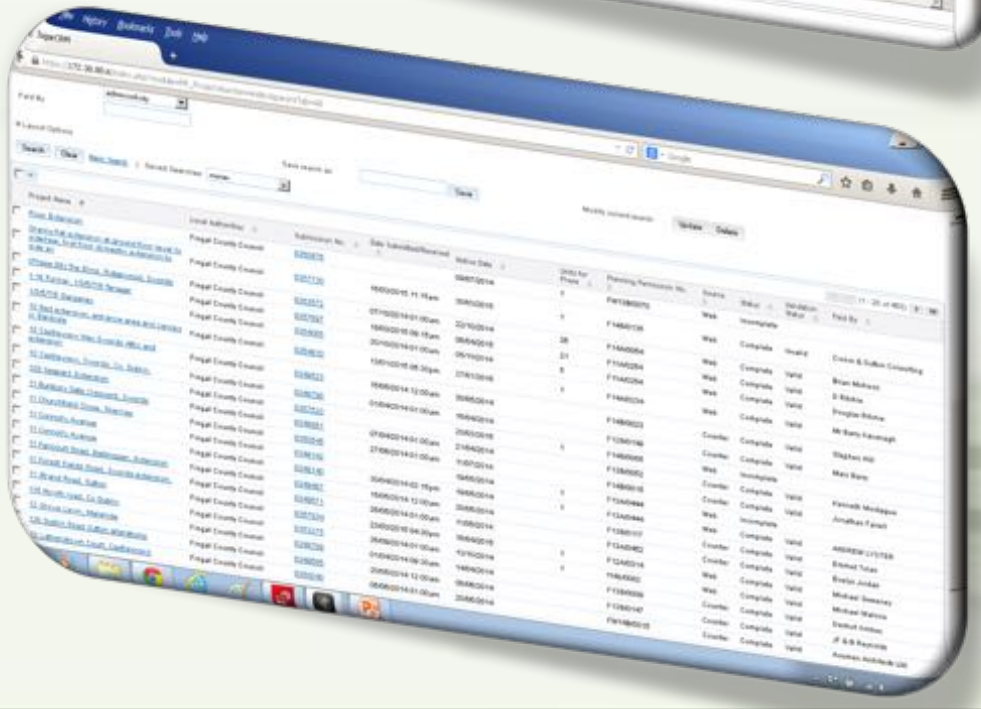


BUILDING CONTROL –Validation Process

- **Validation –Notices, Applications, Certificates**
- **Statutory Building Register**
- **Queries & F.O. I**
- **Service Indicators**
- **Assistance & guidance on process**







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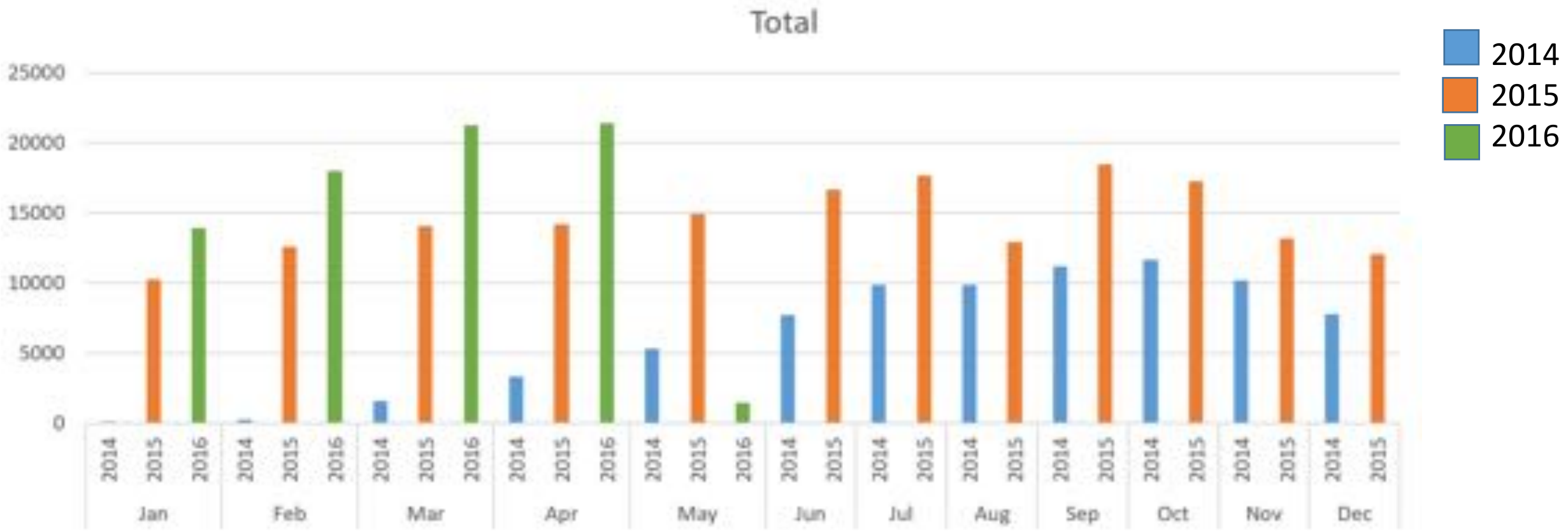
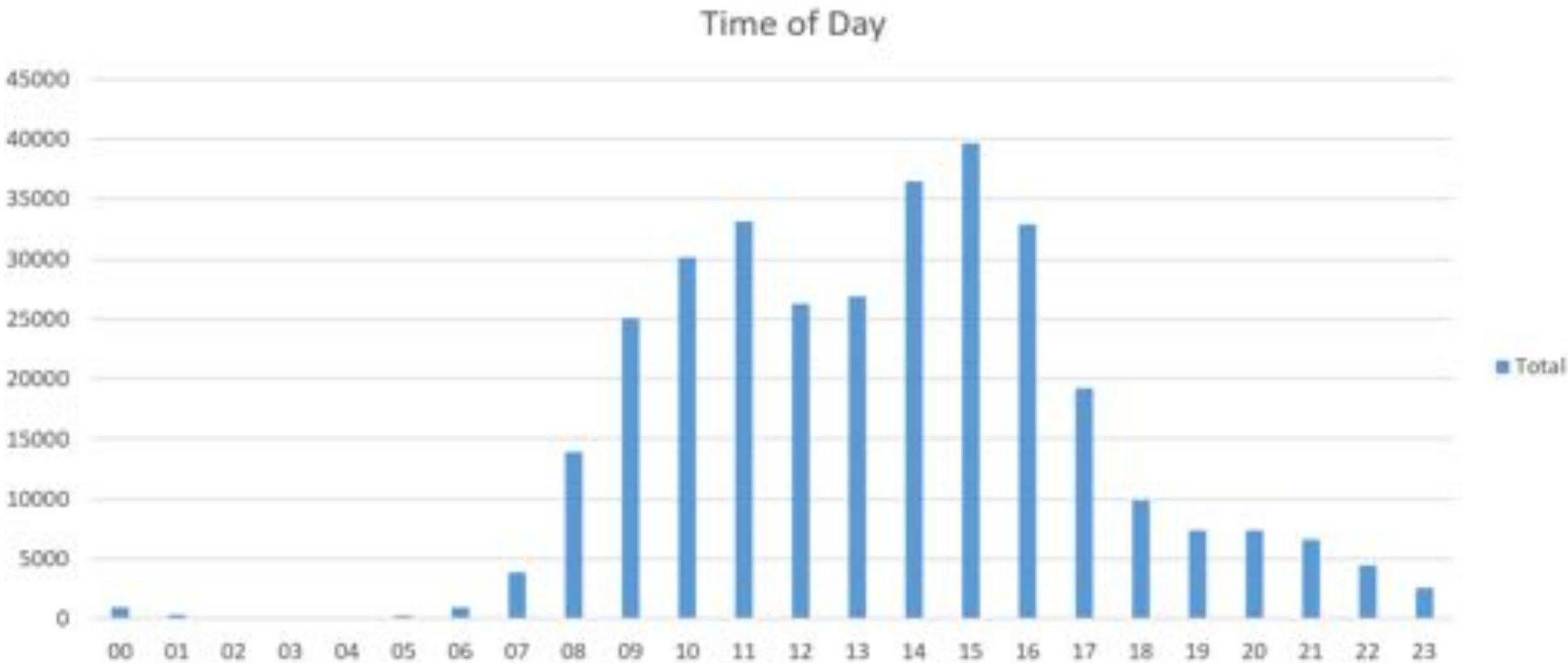
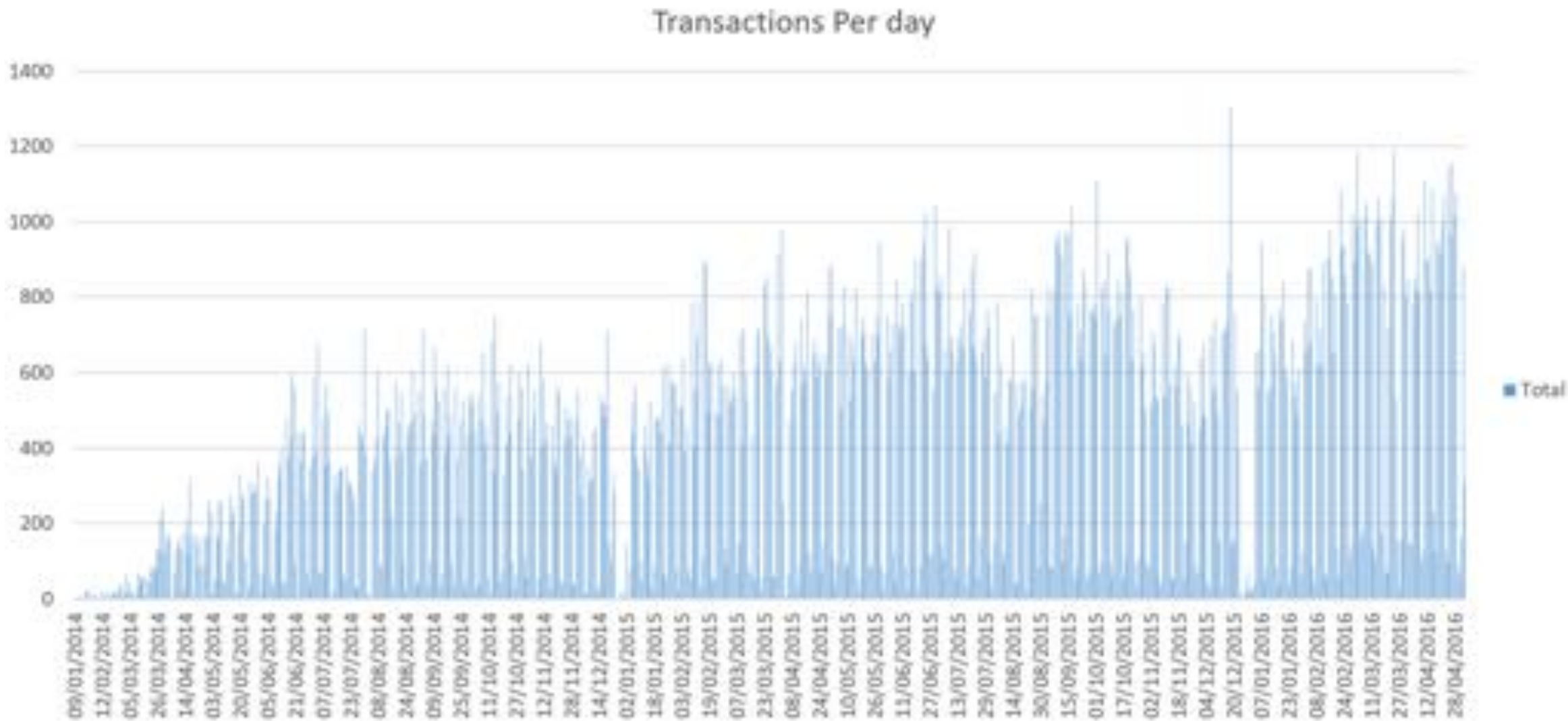
Transactions Month by Month




Time of Day
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
00
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
Total


Transactions Per day
1400
1200
1000
800
600
400
200
0
09/01/2014
12/02/2014
05/03/2014
26/03/2014
14/04/2014
03/05/2014
20/05/2014
05/06/2014
21/06/2014
07/07/2014
23/07/2014
08/08/2014
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20/12/2015
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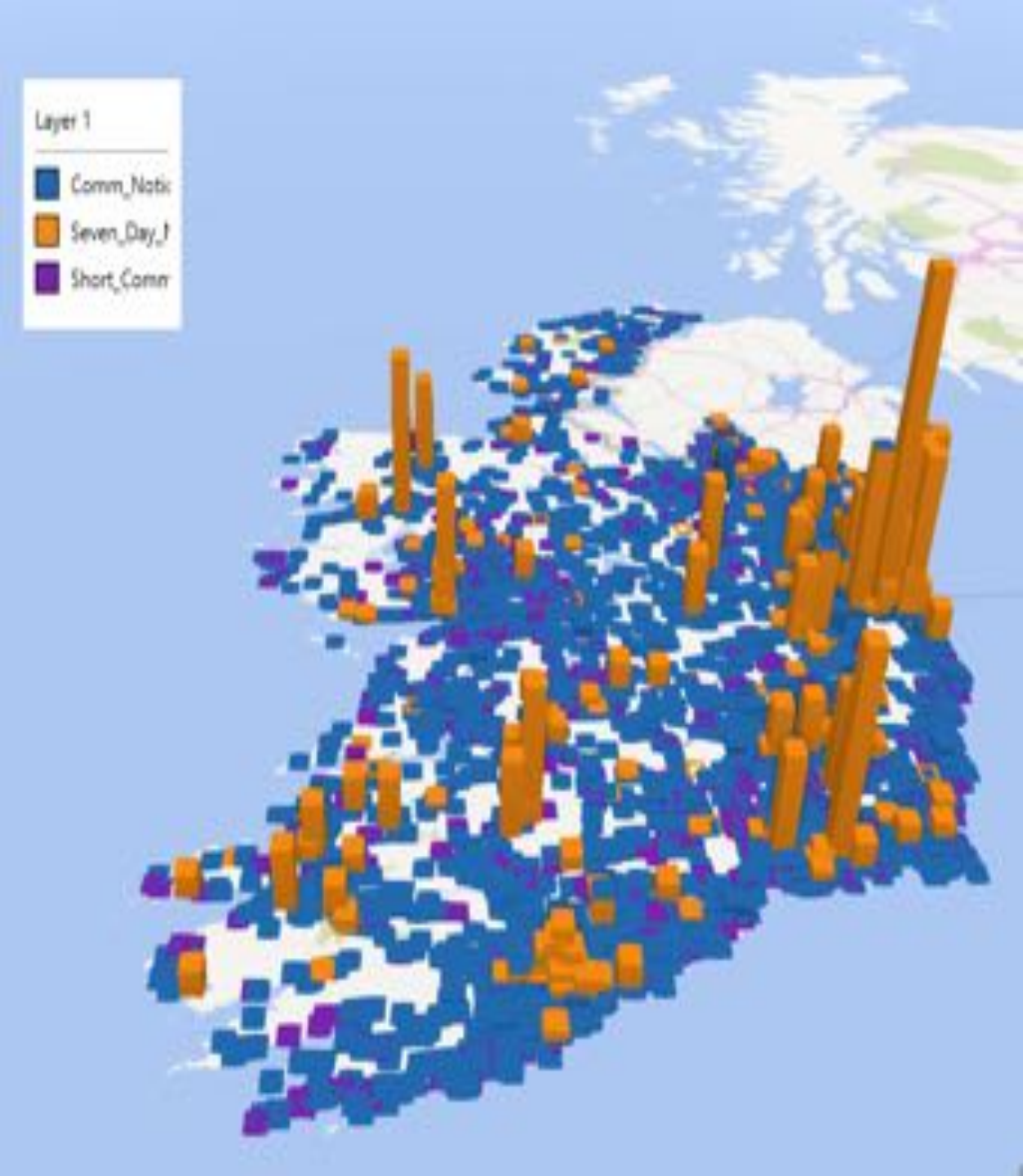
11/03/2016
27/03/2016
12/04/2016
28/04/2016
Total



Is it Busy?

- Over 320,000 documents
- Over €3m in fees
- 43,000 Builders, Architects, etc
- 17,000 Commencements..

BCMS Numbers Continued…

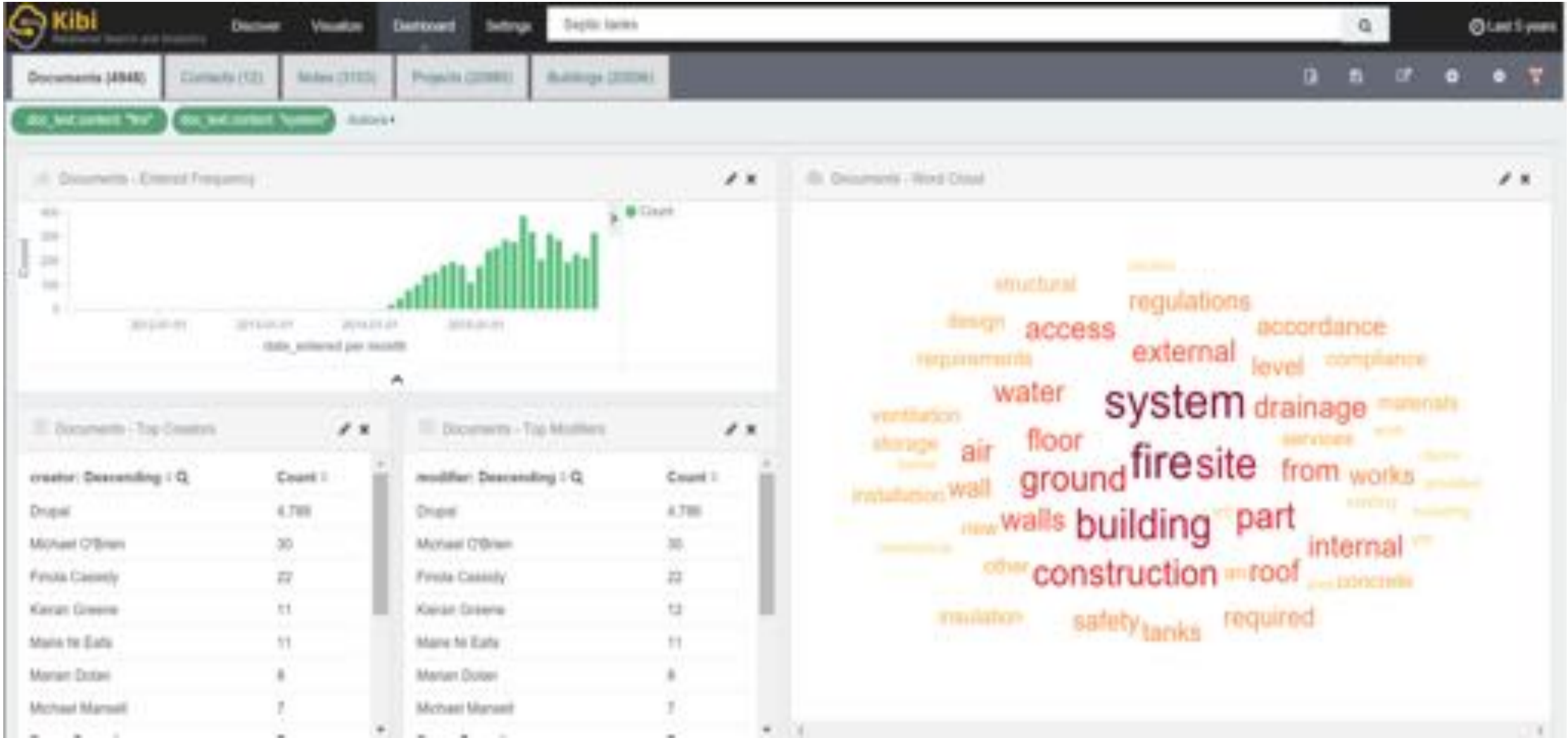
Row Labels	Count of Payment Source	Percentage
Counter	**1000**	
2014	836	24%
2015	139	1.4%
2016	25	1%
Web	**16453**	
2014	2580	76%
2015	9547	98.6%
2016	4326	99%
Grand Total	**17453**	

BCMS Numbers Continued…

Notice Type	Count of Payment Source
Comm_Notice	12120
Seven_Day_Notice	1164
Short_Comm_Notice	4169
Grand Total	**17453**

Notice Type	Count of Payment Source
Comm_Notice	12120
2014	2309
2015	6601
2016	3210
Seven_Day_Notice	1164
2014	187
2015	651
2016	326
Short_Comm_Notice	4169
2014	920
2015	2434
2016	815
Grand Total	17453

Word Cloud of 320,000 documents



SUGARCRM

Alfresco

Document Properties

Back to the List | Download | Checkout

Name: house_type_d_proposed_sections.pdf

Version:

Type:

Relate To:

Folder Path: 1522-fa-hd-zz-dr-a-0004_-_2103_-_

Creator:

Created On:

Modifier:

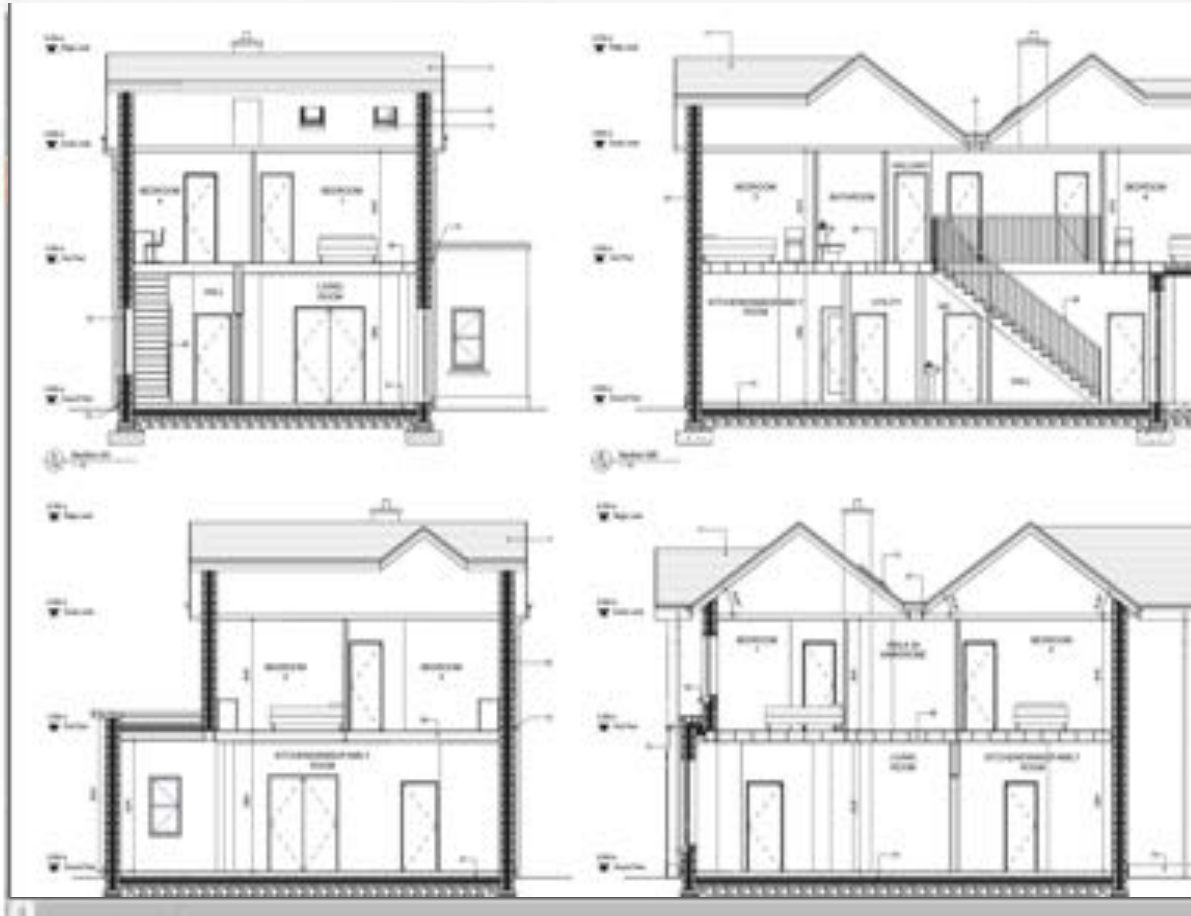
Modified On:

Document Actions

Select an Action

No Action | Action | File & Close

Document Previewer

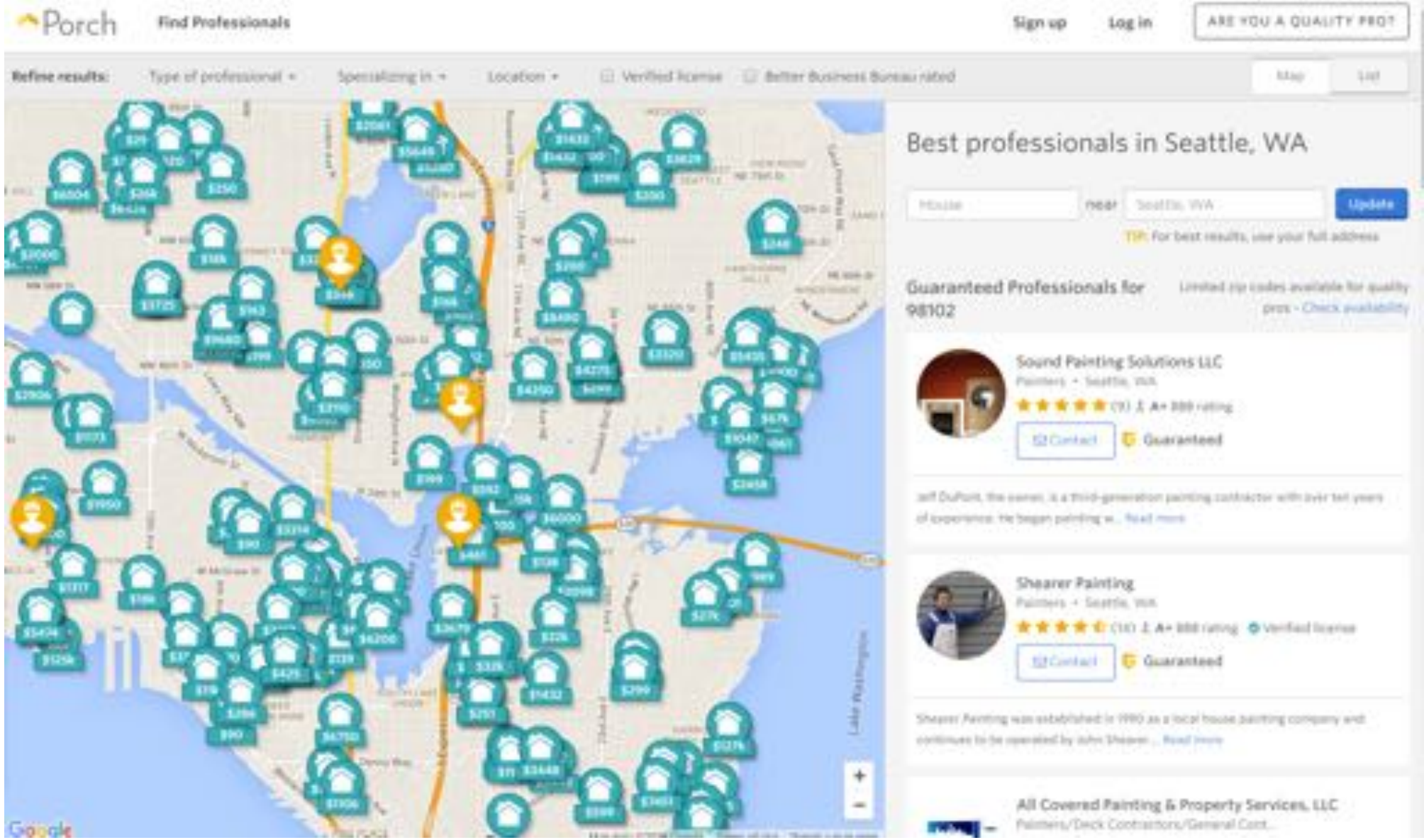


What about the Data…

- Escrow?
- Shared?
- Public?
- Available?
- Open?
- All of the above?
- Sustainable?

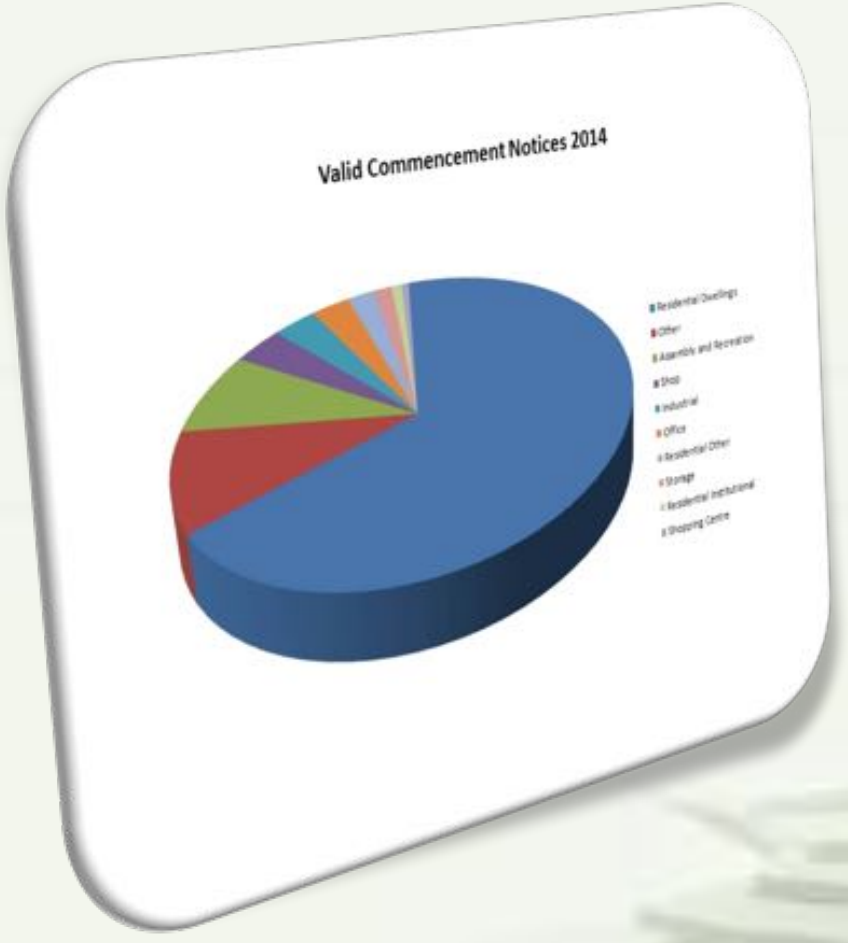
If we Open the data…

People will use it



Building Control Officer – Data

- Risk Based Assessment
  - Location
  - Type /Class
  - Use
  - Form of Construction
  - Complexity/Method of Construction
  - Stakeholders-Expertise of Builders, Designers, Owners, Assigned Certifiers
  - Seriousness of a Non-Compliance

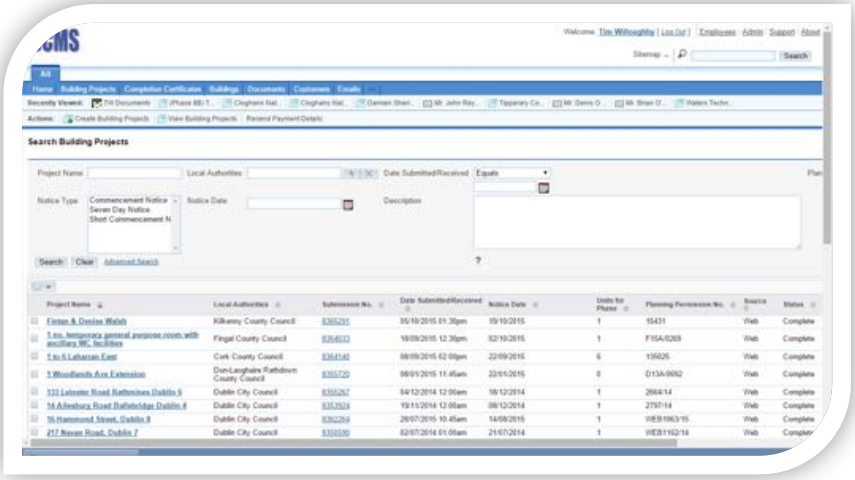


- Data Analytics

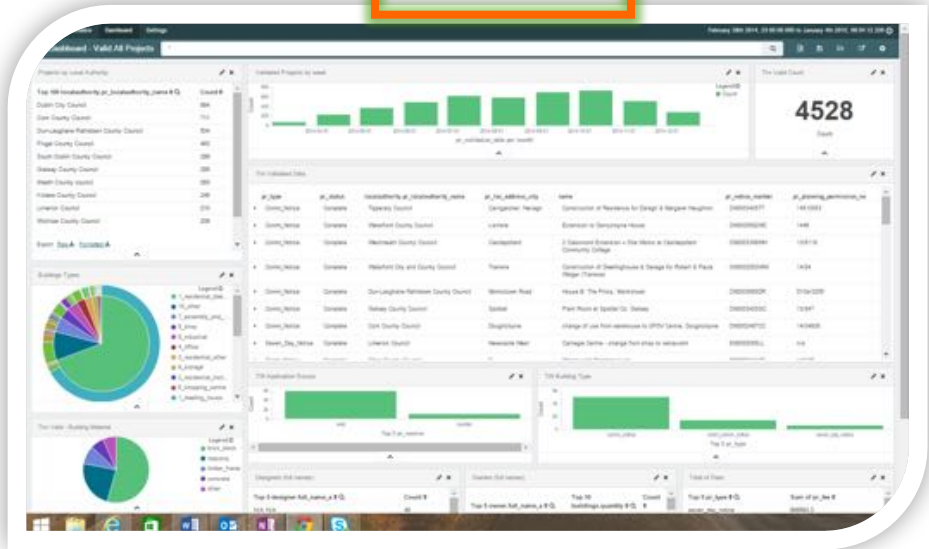
BCMS

Elastic Search

Kibana Dashboards



elasticsearch.



Structured Data

Documents

Mapping

Timelines

Real Time Data

Logs

hadoop

Reports

Discover Visualize Dashboard Settings

Tim Dashboard - Valid All Projects

Projects by Local Authority

Top 100 localauthority.pr_localauthority_name	Count
Dublin City Council	804
Cork County Council	711
Dun Laoghaire Rathdown County Council	534
Fingal County Council	483
South Dublin County Council	398
Galway County Council	295
Meath County council	293
Kildare County Council	249
Limerick Council	210
Wicklow County Council	208

Export: Raw Formatted

Validated Projects by week

The Valid Count

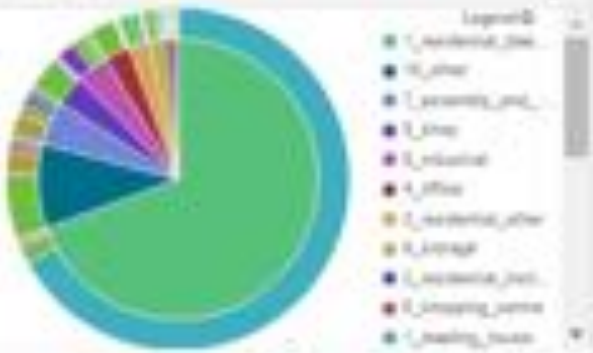
4528

Count

Tim Validated Data

pr_type	pr_status	localauthority.pr_localauthority_name	pr_loc_address_city	name	pr_notice_number	pr_planning_permission_no
Comm_Notice	Complete	Tipperary Council	Carrigatoher, Nenagh	Construction of Residence for Daragh & Margaret Houghton	D40/0344/77	144/0343
Comm_Notice	Complete	Waterford County Council	Lismore	Extension to Dromana House	D40/0350/40	1446
Comm_Notice	Complete	Westmeath County Council	Castlepollard	2 Classroom Extension + One Store at Castlepollard Community College	D40/0340/991	1031/10
Comm_Notice	Complete	Waterford City and County Council	Tramore	Construction of Dwellinghouse & Garage for Robert & Paula Ridger (Tramore)	D40/0320/0490	14/24
Comm_Notice	Complete	Dun Laoghaire Rathdown County Council	Monkstown Road	House @ The Priory, Monkstown	D40/0300/0K	D10e/0208
Comm_Notice	Complete	Galway County Council	Spiddal	Plant Room at Spiddal Co. Galway	D40/0340/0C	13/347
Comm_Notice	Complete	Cork County Council	Douglas/Ovens	change of use from warehouse to CFDV Centre, Douglas/ovens	D40/0340/10	14/0408
Event_Day_Notice	Complete	Limerick Council	Newcastle West	Carnegie Centre - change from shop to restaurant	D40/0330/LL	n/a

Buildings Types



TIM Application Statuses

TIM Building Type

Tim Valid - Building Material

Designers (full names)

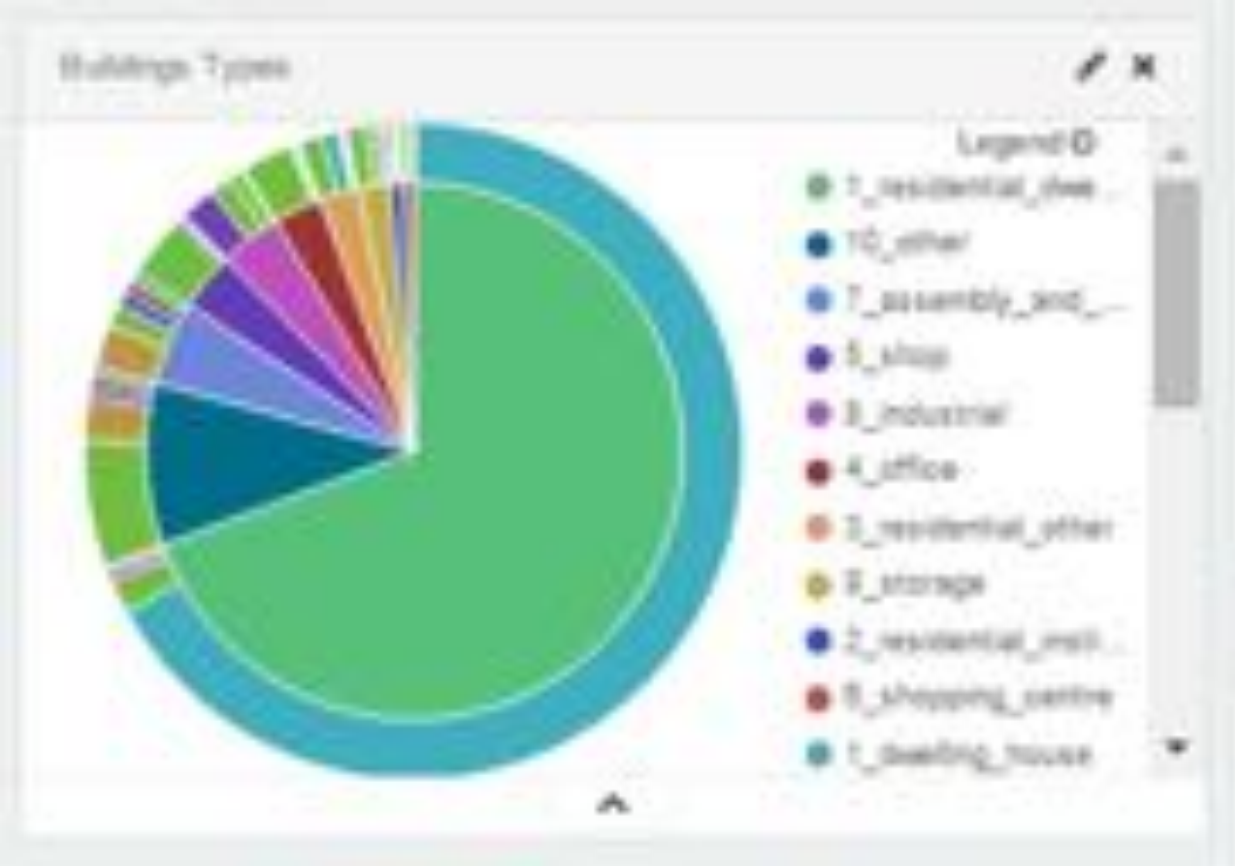
Top 5 designer.full_name_s	Count

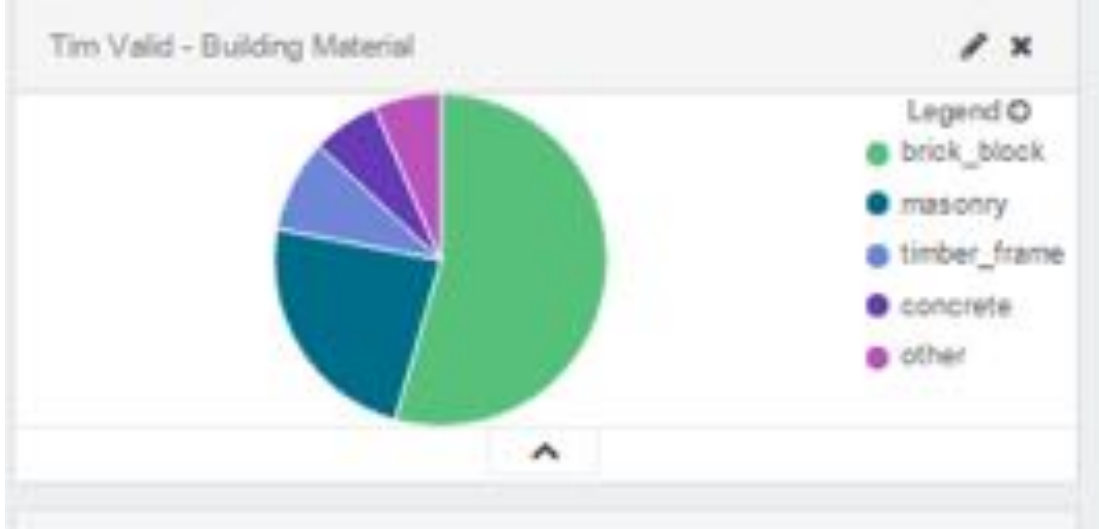
Owners (full names)

Top 10 owner.full_name_s	Top 10 buildings.quantity	Count

Total pr_type

Top 5 pr_type	Sum of pr_fee


Buildings Types
Legend


Tim Valid - Building Material
Legend
brick_block
masonry
timber_frame
concrete
other

TW Building Type
6k
4k
2k
0
Count
comm_notice
short_comm_notice
seven_day_notice
Top 5 pr_type

Projects by Local Authority
Count
Dublin City Council 884
Cork County Council 711
Dun Laoghaire Rathdown County Council 534
Fingal County Council 483
South Dublin County Council 298
Galway County Council 295
Meath County council 283
Kildare County Council 245
Limerick Council 210
Wicklow County Council 208
Export Raw Formatted

BCMS - Inspection/Enforcement - Phase 3

- Mobile Technology

Sample Inspection Plan
- one off house

1. **Design**
2. **Formation**
3. **Foundation**
4. **Ground Floor**
5. **Wall Plate level**
6. **Roof Level**
7. **Completion**

The Inspection Plan is dependent on many factors including -

a)type of building and type of construction;

b)method of construction;

c)how serious the consequences of a particular contravention might be;

d)the impracticability or impossibility of subsequent inspection of closed up work; and

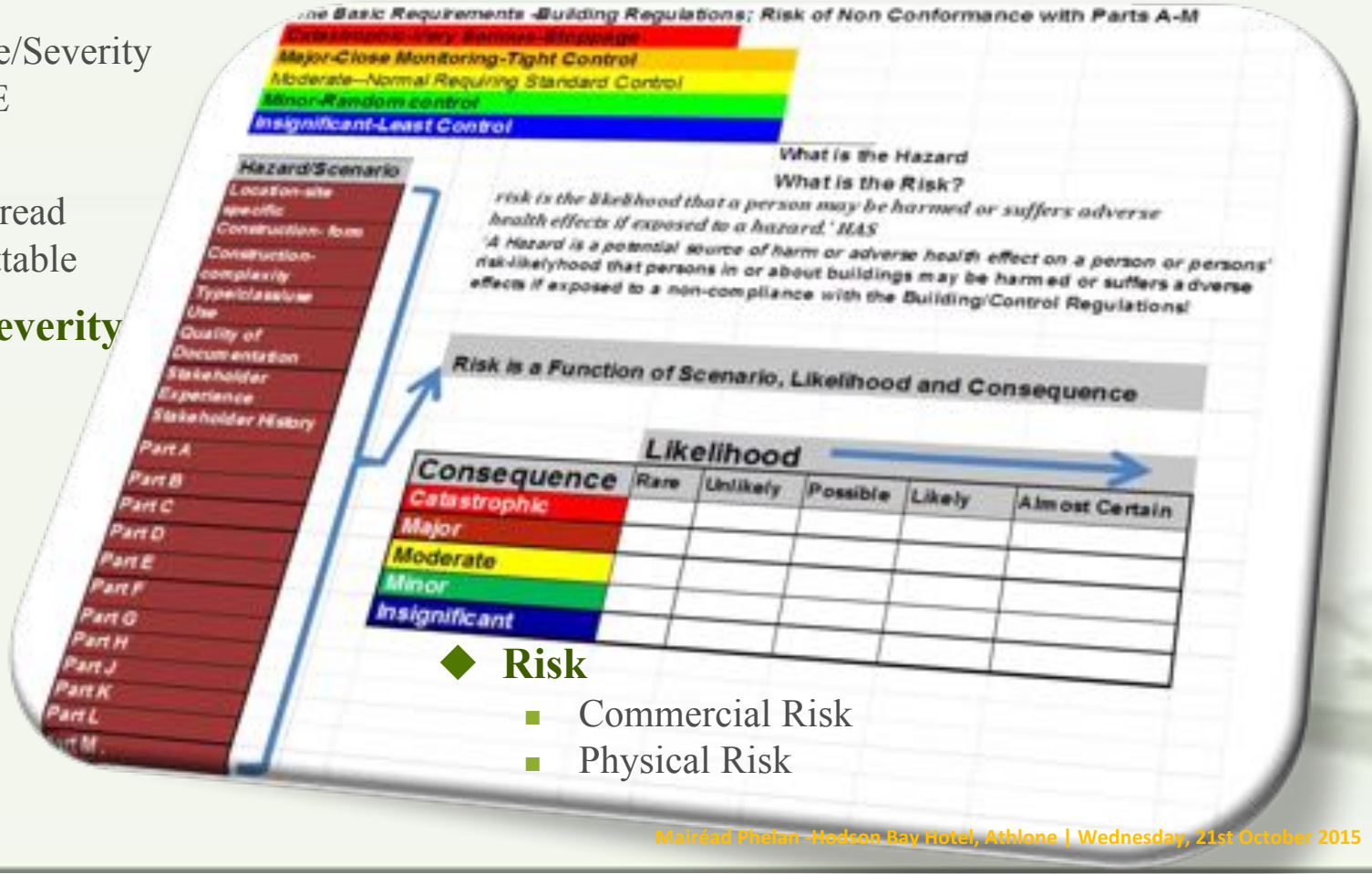
e)speed of construction.

f)Stakeholder Experience & Competency

RISK-BASED INSPECTIONS = COMPLIANCE

Identify → Analyse → Evaluate → TREAT → MONITOR & REVIEW

- **Risk-likelihood of a non-compliance**
  - Hazard - Scenario
  - Likelihood
  - Consequence/Severity
    - PRIME
- **Risk**
  - How widespread
  - Is it transmittable
- **Consequence/Severity Level**
  - Catastrophic
  - Major
  - Moderate
  - Minor
  - Insignificant



- **Risk**
  - Commercial Risk
  - Physical Risk

01/01/0001 00:00

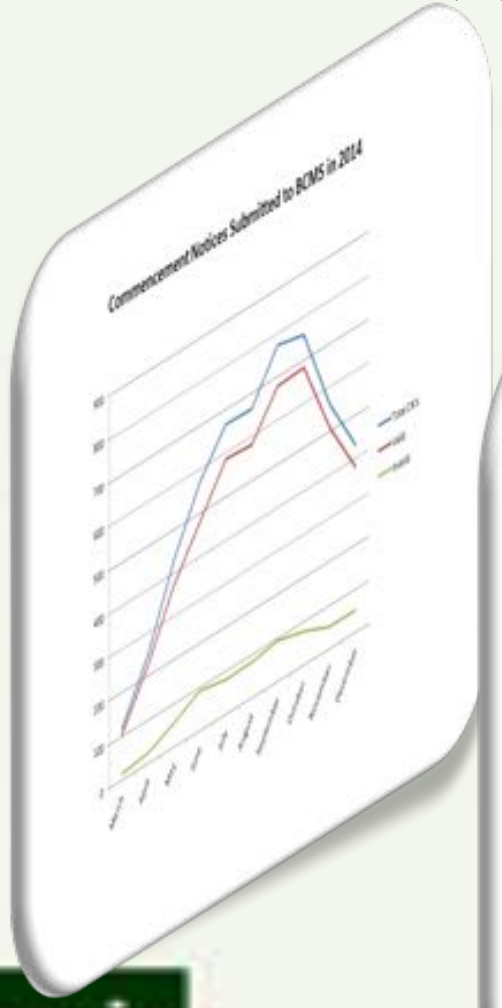
GOVERNMENT DATA –ECONOMIC INDICATORS

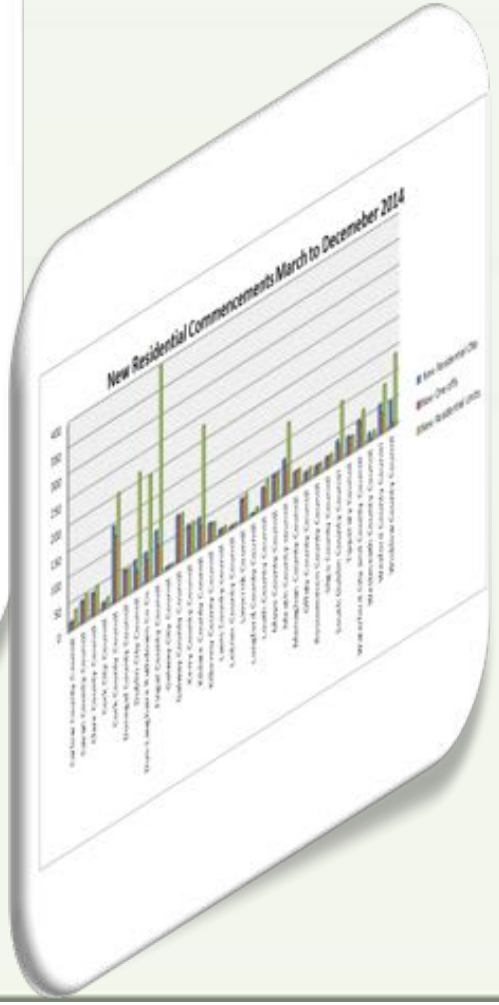
- **Self-builds**
  - Self-builders with more than one Commencement Notice
  - Stakeholder Involvement-
    - Builder –as Owner, Builder, Designer, Assigned Certifier in projects
    - Extensions-type & location –tax incentives

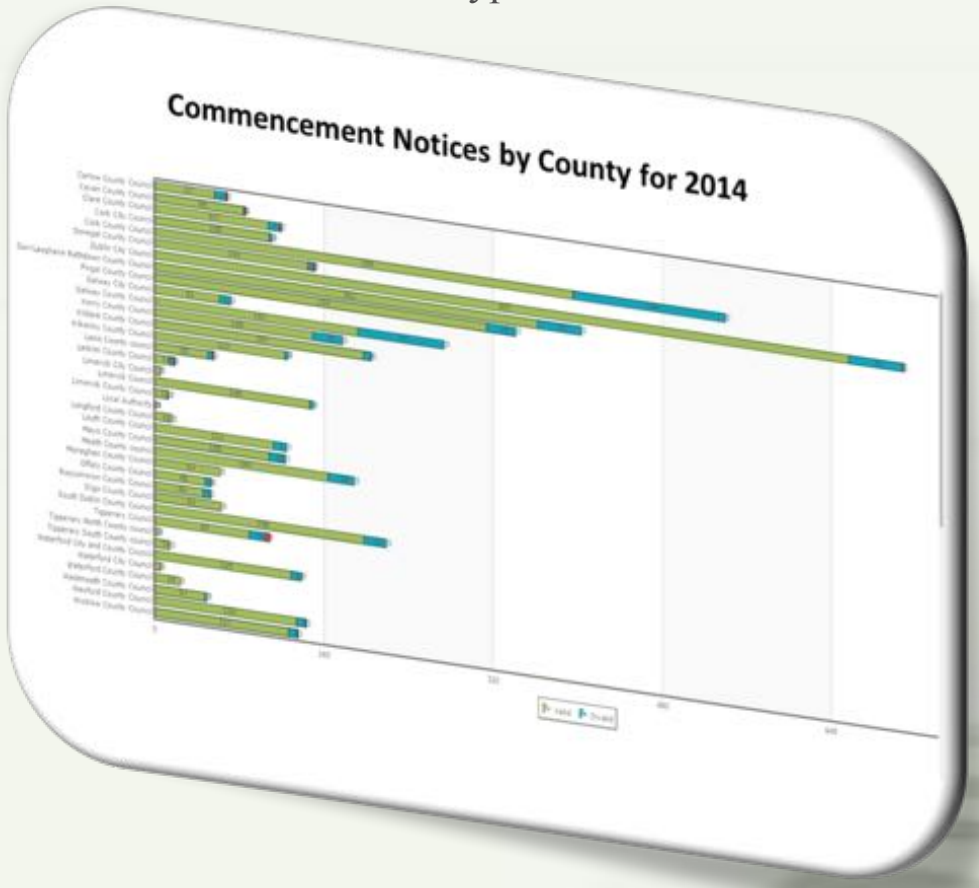
LOCAL AUTHORITY MANAGERS DASHBOARD

- **Performance Indicators**
  - Inform planning
  - Environment-wells, septic tanks

- **BCMS building Statistics**
  - Location
  - Use Type
  - Construction type







localgov.ie

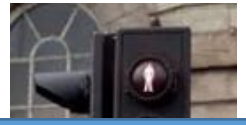
BCMS Futures.. | BIM

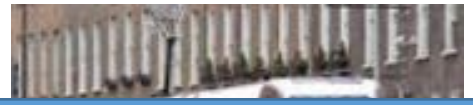
3D Printing and 3D Models..

A “Real” Smart City?

Smart Sustainable Cities

- Public Lighting
- Traffic Lights
- Building Management
- Social Housing





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Lots of data being created
How much being used
How much is capable of being used?

How Much Data do you create?

It knows more about you than your partner…

Where you are ?
Where you have been ?
Where you are likely to be going to ?
Who you have met ?
Who you are going to meet ?
Who you call ?
Who calls you ?
Who you TXT - IM - Link ?
All your contacts
All your urls
All you passwords
What you are doing now ?
What have you done in the past ?
What games you play ?
What apps you use ?
What music you listen to...?
What you watch...?
What you read...?
++++++++++

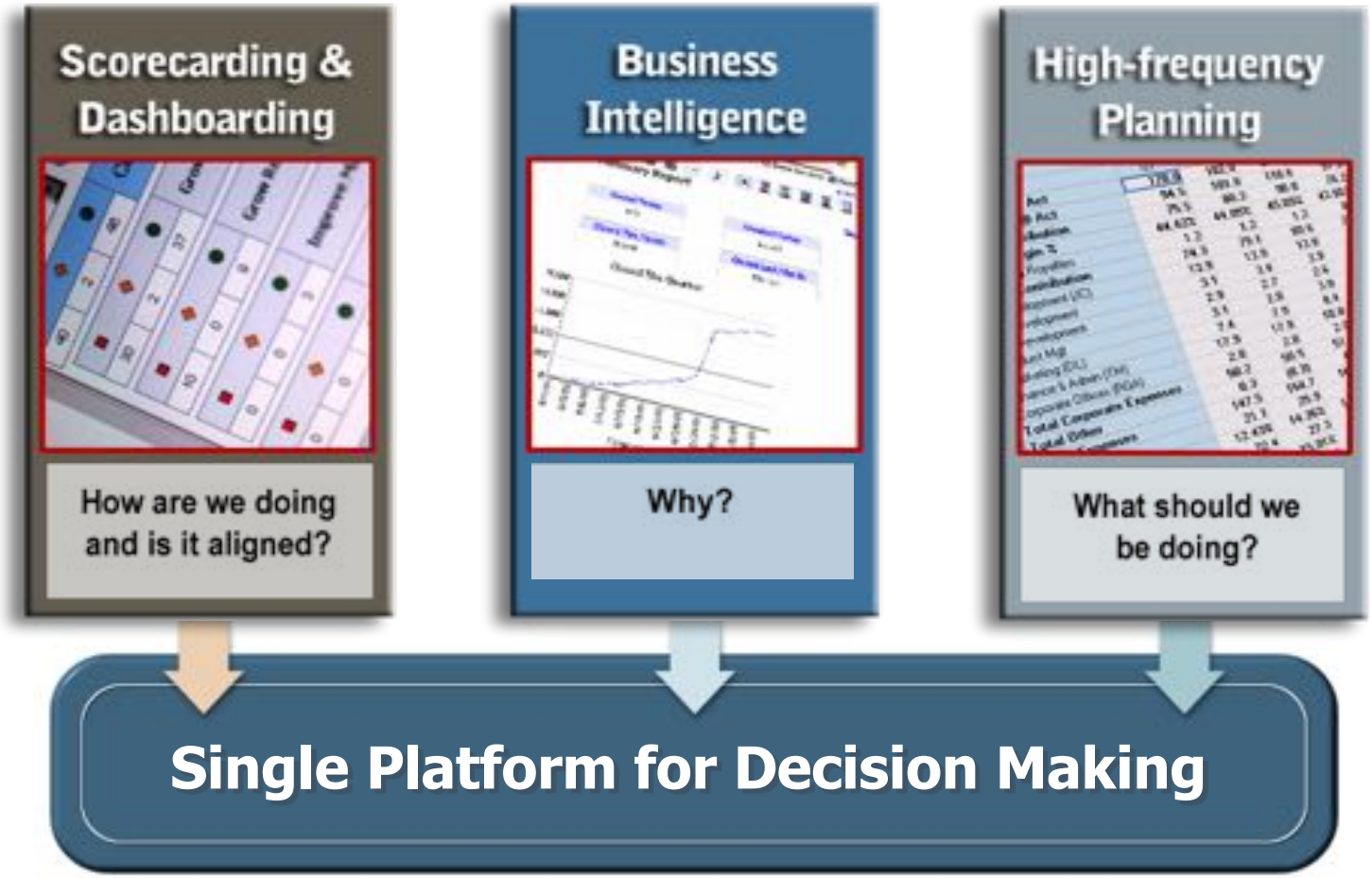
Source : Peter Cochrane

LOTS OF DATA, LITTLE DECISION-READY INFORMATION

- The sector needs to turn data into intelligence
- Our reporting is cumbersome and Silo based; typically paper-based with many versions of the truth
- Manually intensive analysis processes; ad hoc analysis
- Mainly manual processes for information gathering and collation
- Single Geographic Queries are the norm

- **Data are hidden away in departments, databases, applications, geographies; impossible to coordinate**
- **Data latency, accuracy, completeness issues**

SINGLE DEFINITION OF THE TRUTH



Augmented Reality

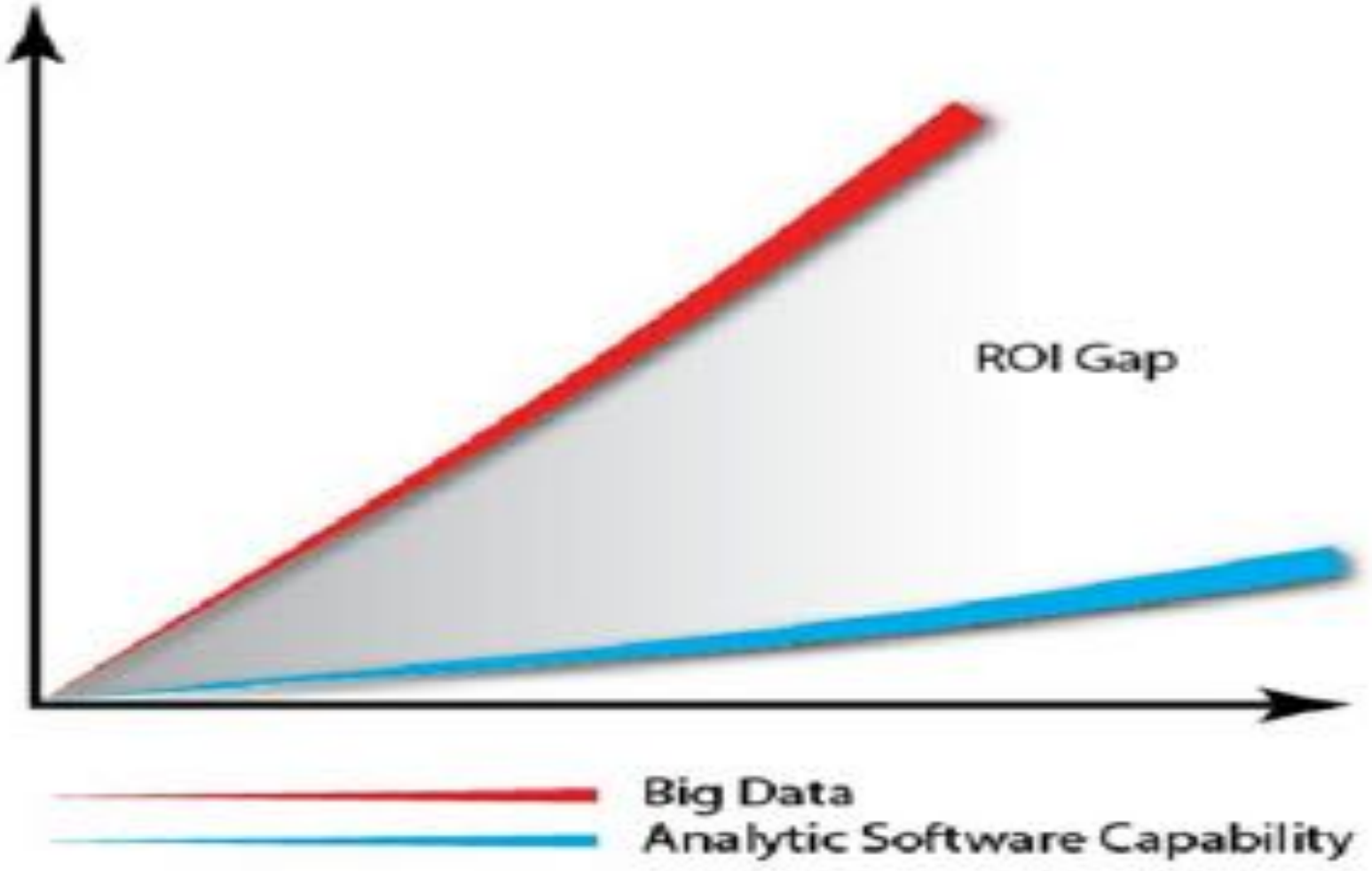
Next Generation Design

Thinking Matters More!

Challenges in Ireland

- Vertical institutional structures (OGCIO / OGP)
- Perverse incentives (Number of Tenders…)
- Misuse of capital/labour substitution (Leasing as an Option?)
- Outsourcing v. integration/reform
- Customer service strategies
- Generation Y / Facebook Generation
- Consumer Society

The More data we have… the less we (have time to) Understand it



Typical Individual effort

many hours, one map

OpenStreetMap, 2016

1m Contributors, one map

amazonmechanical turk
Artificial Artificial Intelligence

Already have an account?
Sign in as a Worker | Requester

Your Account | HITs | Qualifications

Introduction | Dashboard | Status | Account Settings

Mechanical Turk is a marketplace for work.

We give businesses and developers access to an on-demand, scalable workforce.
Workers select from thousands of tasks and work whenever it's convenient.

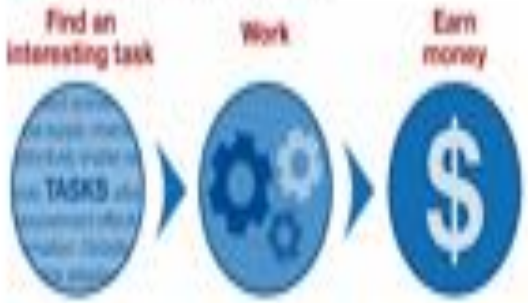
152,764 HITs available. View them now.

Make Money
by working on HITs

HITs - Human Intelligence Tasks - are individual tasks that you work on. Find HITs now.

As a Mechanical Turk Worker you:

- Can work from home
- Choose your own work hours
- Get paid for doing good work



Find HITs Now

or learn more about being a Worker

Get Results
from Mechanical Turk Workers

Ask workers to complete HITs - Human Intelligence Tasks - and get results using Mechanical Turk. Register Now

As a Mechanical Turk Requester you:

- Have access to a global, on-demand, 24 x 7 workforce
- Get thousands of HITs completed in minutes
- Pay only when you're satisfied with the results

Get Started

Our Lives are Different…

- We communicate on — Facebook, Chat, Twitter, MMS
- We Research Information — Blogs, eNews, Wiki, YouTube
- We Buy — eBay, Amazon, Dell, Deal Done, etc…
- We Travel - Tripadvisor, Flickr, RyanAir, Hotels,
- We Meet / Retate - Linkedln, FaceBook, Friends
- We Play – xBox, Playstation, Online games, ¡TV
- We expect the Government to fit into these paradigms too…

Understand what are the Driving Forces…

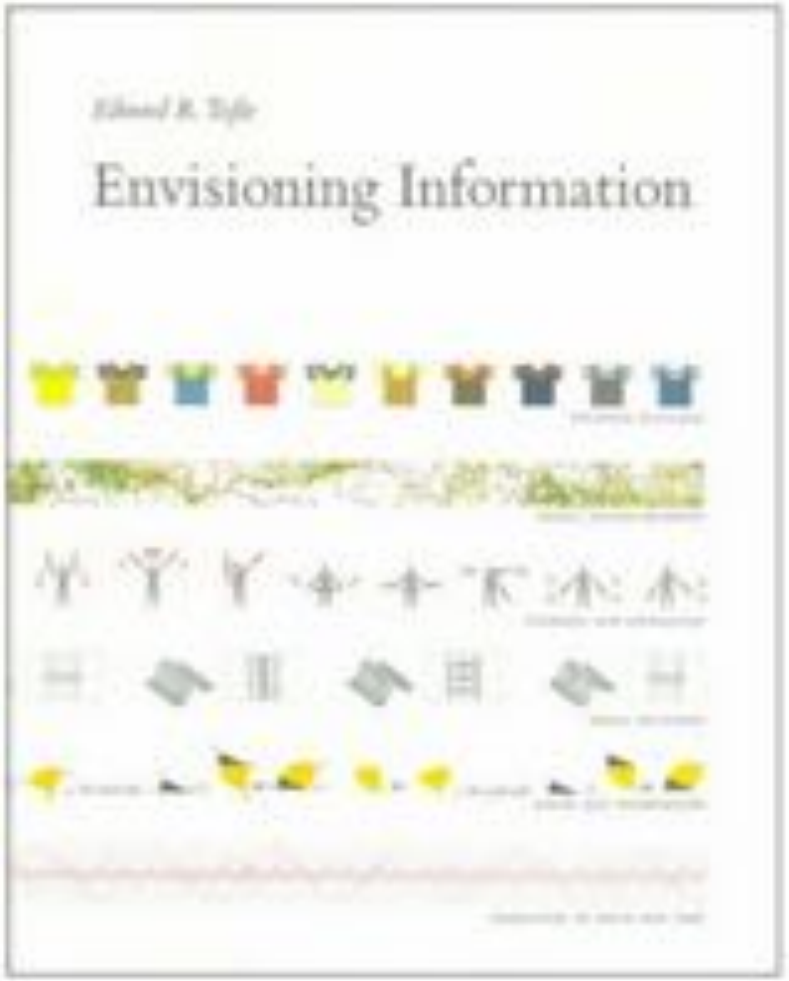
- Government Focus
  - Understanding, Efficiency, Accountability
- Technology Innovation Focus
  - Data as a Platform, Semantic Web
- Reward Focus
  - Profit, Recognition
- Digitising Government Focus
  - Computerisation / Technology Drive
- Problem Solving Focus
  - New Skills needed to work on new Challenge
- Social / Public Sector / Enterprise
  - More Focussed Services

Conclusions

- Change is constant
- Cloud is the Future
- Social is a Reality
- Mobile is already taking over
- Data has to keep up…

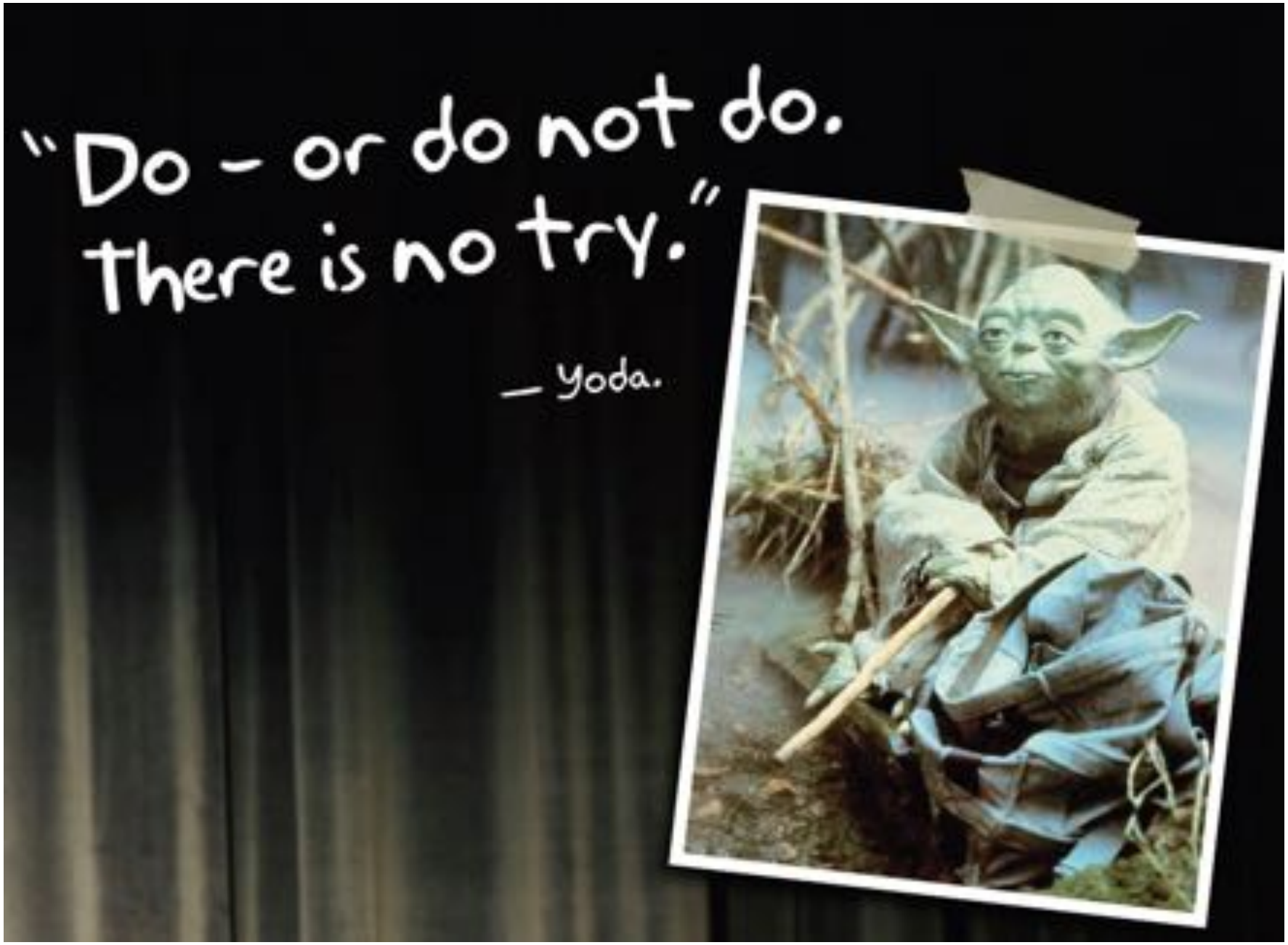
References

- We live in “Flat Land” – There is danger in making representations more seductive than the truth
- Envisioning Information - Tufte



“We shall build this big thing in the clouds” – “ we will be unbeatable”

Microsoft Azure


"Do - or do not do.
There is no try."
_ Yoda.