Ερευνητικό Κέντρο Αθηνά
Athena Research Center

Big, Linked, and Open Data in Greece

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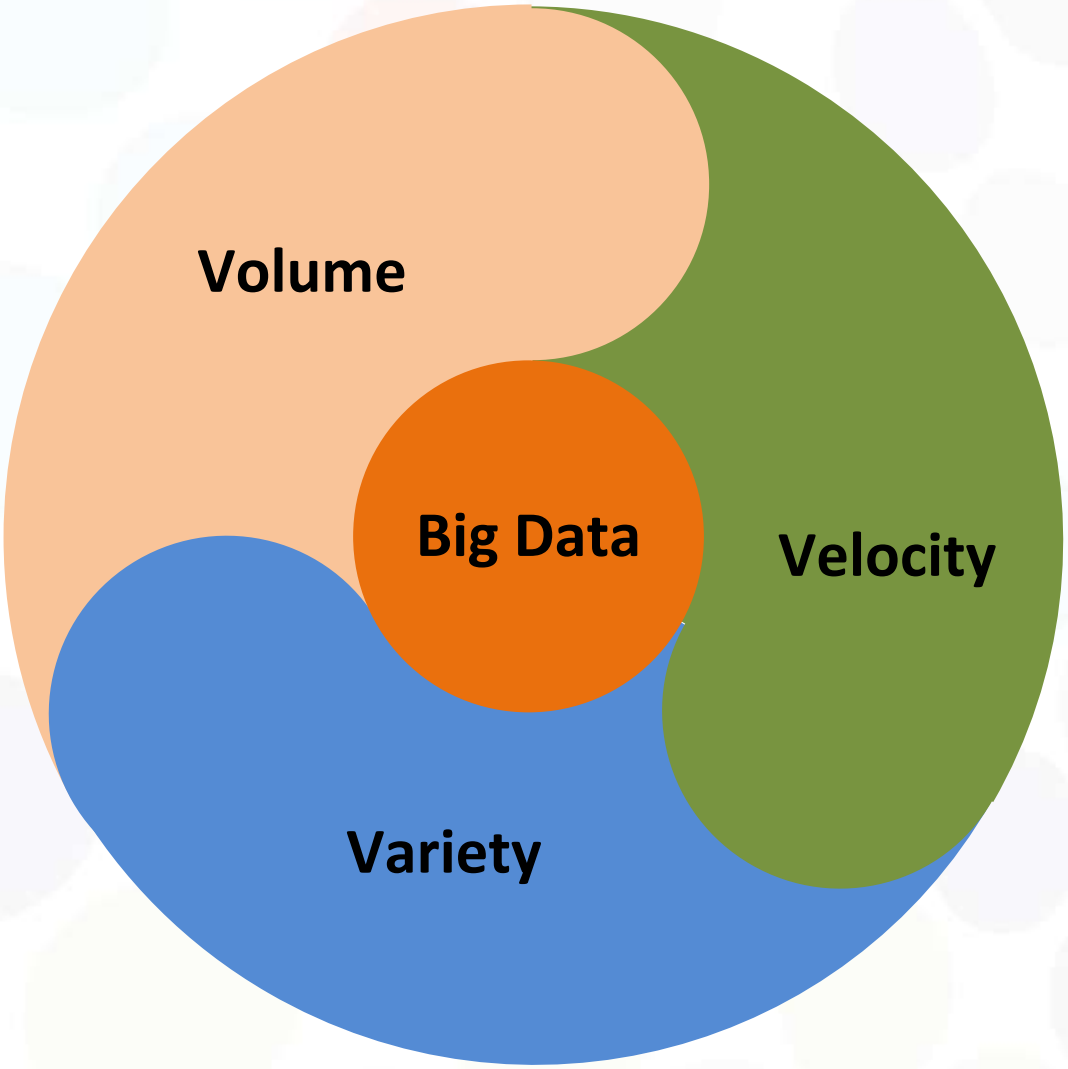
Institute for the Management of Information Systems
ATHENA Research Center

http://web.imis.athena-innovation.gr/~mter/

A challenge
An initiative
A technology
An opportunity

BIG DATA

Big Data characteristics



45% annual market growth

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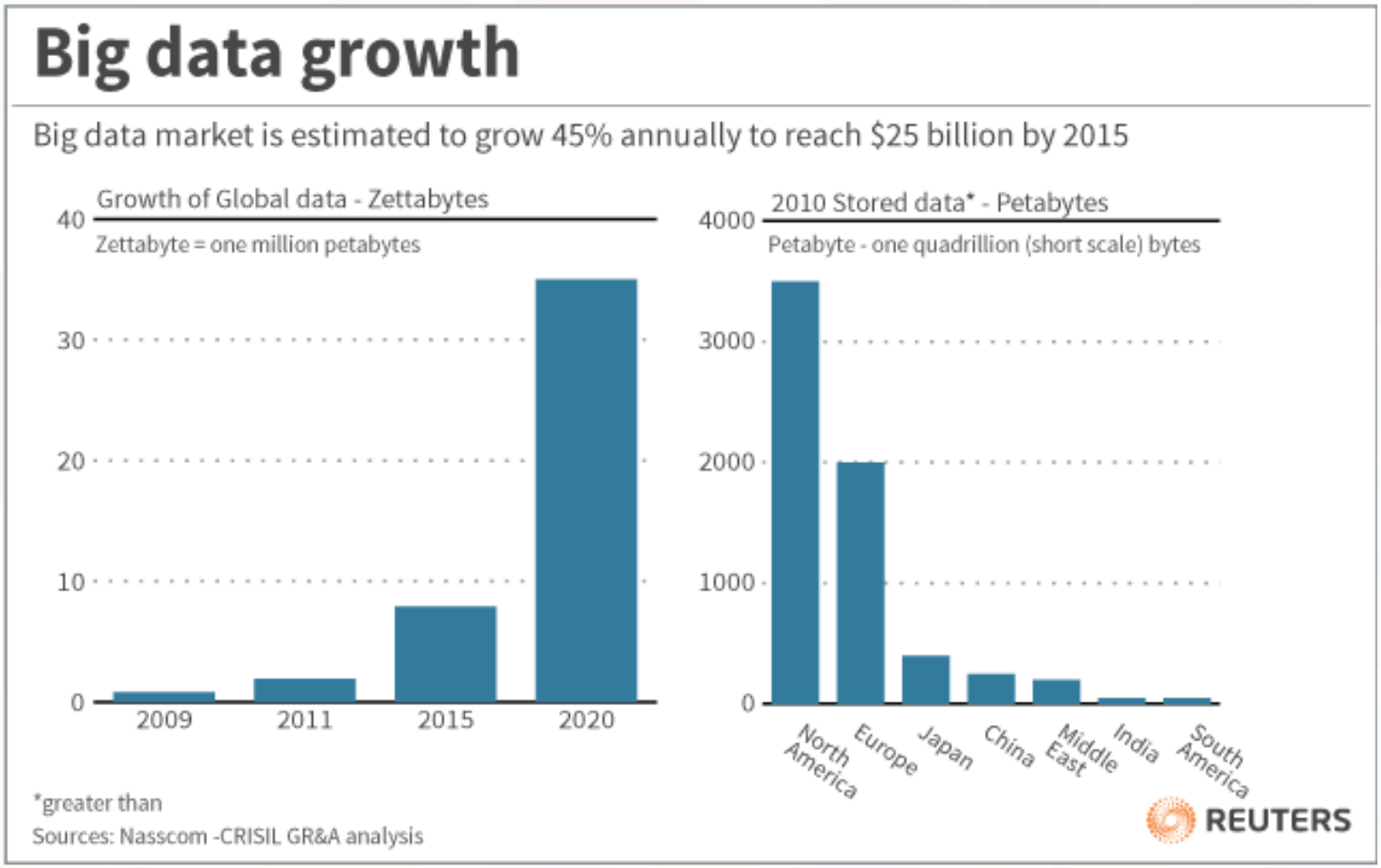

Reuters graphic/Catherine Trevethan 05/10/12

Open
Data

Sharing public sector data

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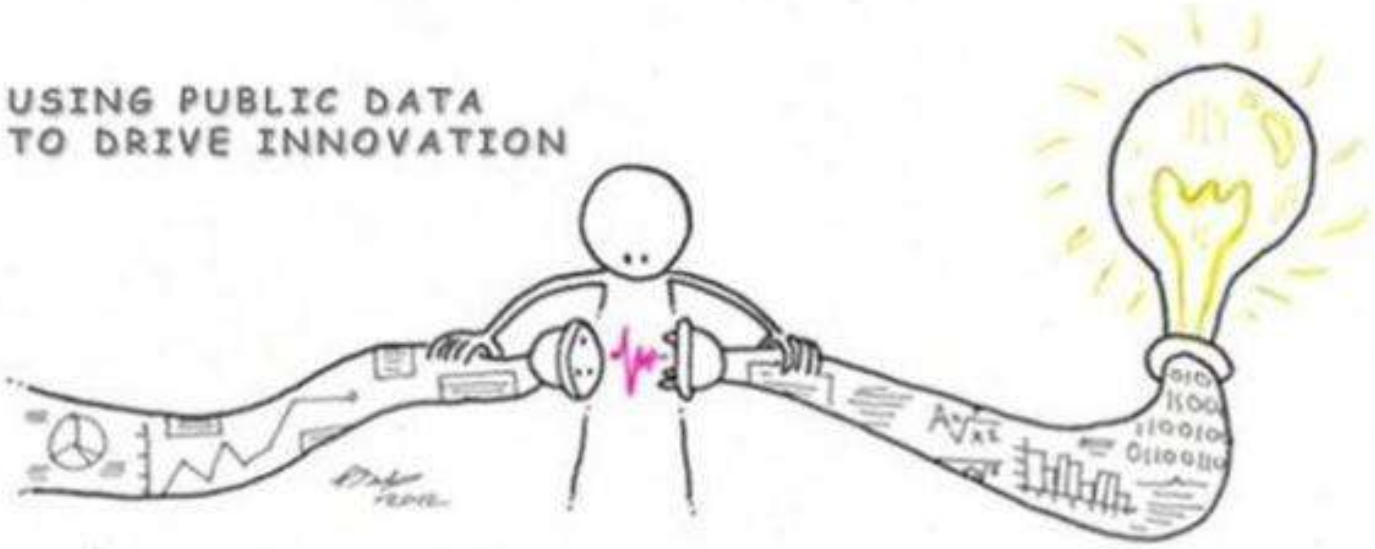
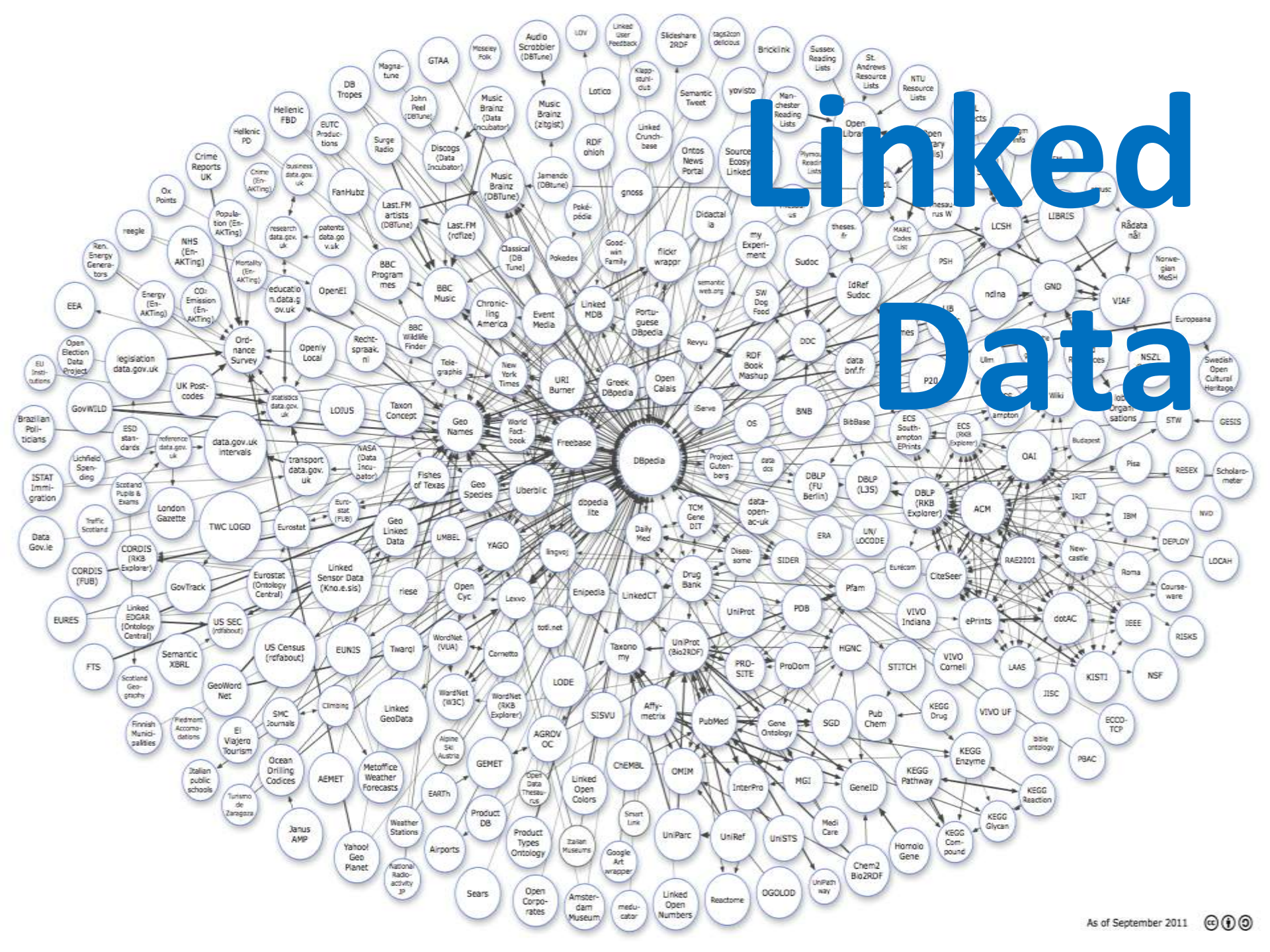

USING PUBLIC DATA
TO DRIVE INNOVATION


Linked Data
DBpedia
Freebase
Geo Names
YAGO
UMBEL
Open Cyc
Linked Sensor Data (Kno.e.sis)
Linked GeoData
Linked Open Colors
Linked Open Numbers
Linked MDB
Linked User Feedback
Linked Crunch-base
Linked Edgar (Ontology Central)
Linked Geo Data
Linked CT
Linked Open Numbers
Audio Scrobbler (DBTune)
Music Brainz (DBTune)
Music Brainz (Data Incubator)
Music Brainz (zitgist)
Last.FM artists (DBTune)
Last.FM (rdfize)
Jamendo (DBTune)
Classical (DB Tune)
Event Media
Chronic-ling America
BBC Music
BBC Programmes
BBC Wildlife Finder
BBC Nature
Discogs (Data Incubator)
Surge Radio
Magna-tune
John Peel (DBTune)
Lotico
RDF ohloh
Semantic Tweet
Slideshare 2RDF
tags2con delicious
Klapp-stuhl-club
Ontos News Portal
Source Ecosy
Bricklink
Sussex Reading Lists
St. Andrews Resource Lists
NTU Resource Lists
Man-chester Reading Lists
Open Librar
yovisto
Hellenic FBD
Hellenic PD
EUTC Produc-tions
DB Tropes
GTAA
Meseiey Folk
Audio Scrobbler (DBTune)
LOV
Crime Reports UK
Ox Points
Crime (En-AKTing)
business data.gov.uk
research data.gov.uk
patents data.gov.uk
FanHubz
Pokédex
Good-win Family
flickr wrappr
Didactalia
my Experi-ment
Sudoc
IdRef Sudoc
theses.fr
MARC Codes List
LCSH
LIBRIS
Rådata nå!
PSH
GND
ndlna
VIAF
Norwe-gian MeSH
Europeana
Swedish Open Cultural Heritage
NSZL
Wiki
Ren. Energy Generators
reegle
NHS (En-AKTing)
Population (En-AKTing)
Mortality (En-AKTing)
Energy (En-AKTing)
CO2 Emission (En-AKTing)
EEA
Open Election Data Project
legislation data.gov.uk
Ord-nance Survey
Openly Local
Recht-spraak.nl
UK Post-codes
GovWILD
Brazilian Poli-ticians
EU Insti-tutions
education.data.gov.uk
OpenEI
Pokédex
Revyu
RDF Book Mashup
SW Dog Food
semantic web.org
Portu-guese DBpedia
Greek DBpedia
Open Calais
URI Burner
New York Times
Tele-graphis
Taxon Concept
LOIUS
statistics.data.gov.uk
data.gov.uk intervals
transport data.gov.uk
reference data.gov.uk
ESD stan-dards
Lichfield Spen-ding
ISTAT Immi-gration
Scotland Pupils & Exams
London Gazette
TWC LOGD
Traffic Scotland
Data Gov.ie
CORDIS (RKB Explorer)
CORDIS (FUB)
EURES
FTS
Scotland Geo-graphy
Finnish Munici-palities
Piedmont Accomo-dations
El Viajero Tourism
Italian public schools
Turismo de Zaragoza
GovTrack
Eurostat (Ontology Central)
Eurostat
Eurostat (FUB)
US SEC (rdfabout)
US Census (rdfabout)
Semantic XBRL
GeoWord Net
SMC Journals
Ocean Drilling Codices
Janus AMP
AEMET
Climbing
EUNIS
Twarql
WordNet (VUA)
WordNet (W3C)
WordNet (RKB Explorer)
Cornetto
riese
Lexvo
lingvoj
totl.net
LODE
Geo Species
Fishes of Texas
Uberblic
dbpedia lite
Enipedia
Daily Med
Drug Bank
Disea-some
SIDER
TCM Gene DIT
data-open-ac-uk
Project Guten-berg
data dcs
DBLP (FU Berlin)
DBLP (L3S)
DBLP (RKB Explorer)
ACM
ERA
UN/ LOCODE
Eurécom
CiteSeer
RAE2001
Pfam
PDB
UniProt
Taxono my
UniProt (Bio2RDF)
PRO-SITE
ProDom
HGNC
STITCH
VIVO Cornell
VIVO Indiana
ePrints
dotAC
LAAS
IISC
KISTI
NSF
IEEE
RISKS
IRIT
IBM
NWO
DEPLOY
LOCAH
Roma
Course-ware
New-castle
Scholaro-meter
RESEX
Pisa
Budapest
STW
GESIS
OAI
ECS South-ampton EPrints
ECS (RKB Explorer)
BibBase
BNB
OS
iServe
data bnf.fr
DDC
P20
Ulim
Affy-metrix
SISVU
AGROVOC
GEMET
Alpine Ski Austria
EARTh
Product DB
Product Types Ontology
Italian Museums
Google Art wrapper
Smart Link
Weather Stations
National Radio-activity JP
Airports
Sears
Open Corpo-rates
Amster-dam Museum
medu-cator
Reactome
OGOLOD
UniPath way
Chem2 Bio2RDF
Homolo Gene
KEGG Com-pound
KEGG Glycan
KEGG Reaction
KEGG Pathway
KEGG Enzyme
KEGG Drug
Pub Chem
GeneID
MGI
InterPro
OMIM
ChEMBL
PubMed
Gene Ontology
SGD
UniSTS
UniRef
UniParc
VIVO UF
ECCO-TCP
PBAC
bible ontology
Metoffice Weather Forecasts
Yahoo! Geo Planet
As of September 2011

The next WWW

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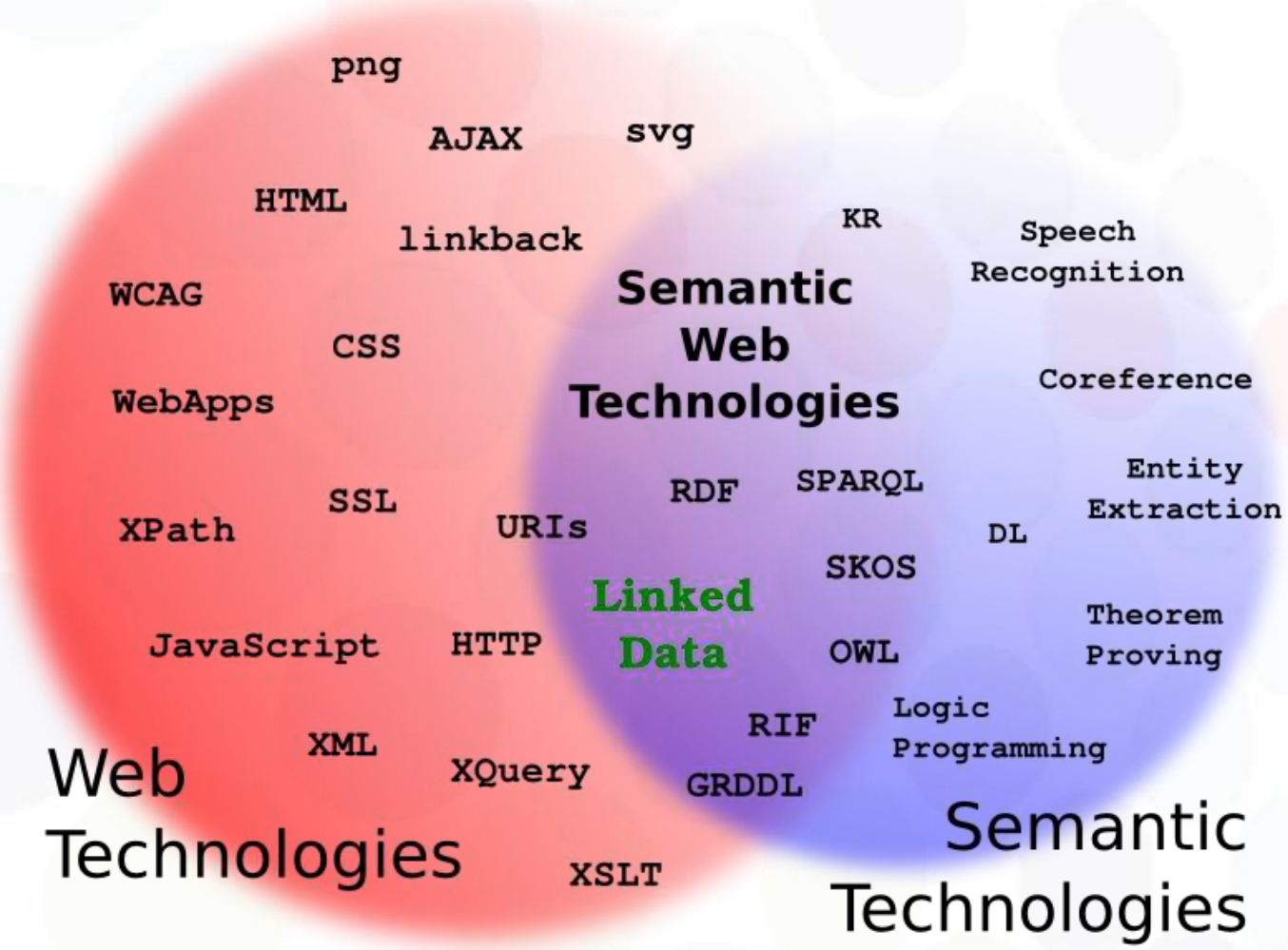

An opportunity

e-Prescription

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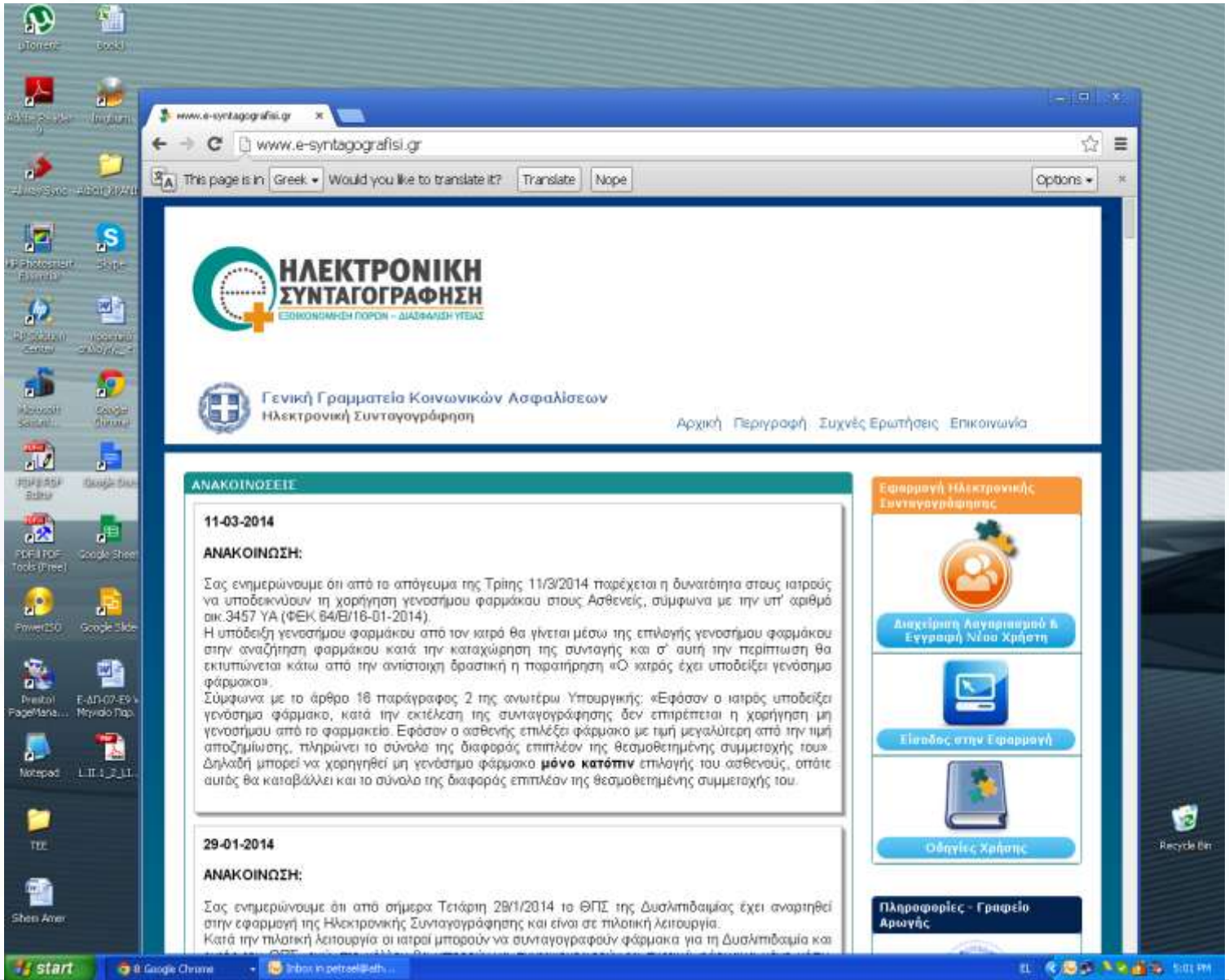
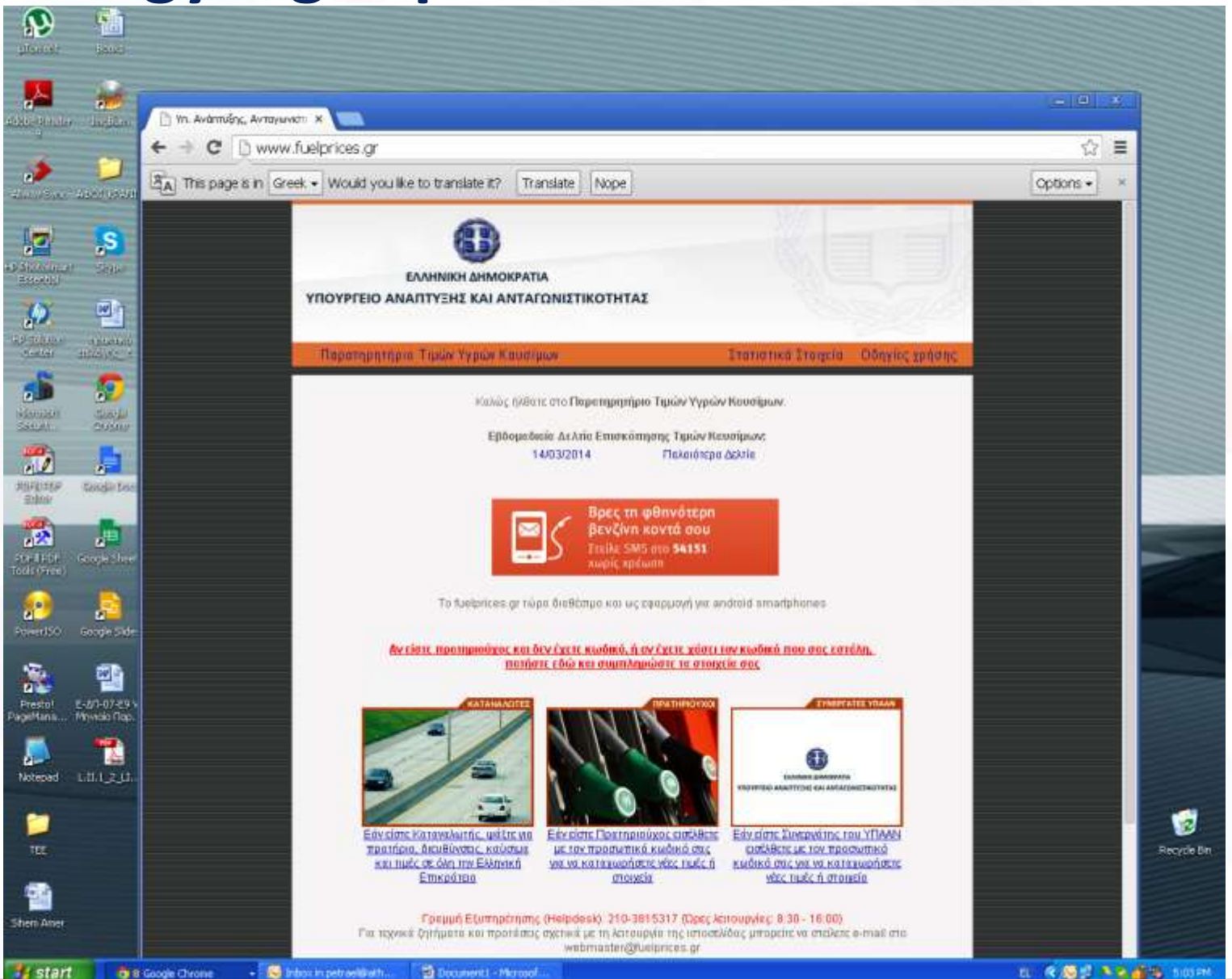


Energy – gas prices



Environment

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Open (Up) Data

Country: Greece

Commitment Description:

Open government data is a tremendous resource that is as yet untapped. The government produces and collects a vast quantity of high-quality data as part of its ordinary working activities. If this data is made open, it can have huge potential benefits - as commented by the private sector, during the online deliberation of this action plan. Hopefully informal partnerships will be fostered among the actual stakeholders of open data with the purpose to provide applications and services that have measurable positive effects on real people's lives, inspire innovation and stimulate financial growth.

Activity Stream

A New OGP Blog Post has been posted: 3rd Samos Summit 2012: "Open Data and Interoperability for Governance, Industry and Society"

A New Commitment has been added: "Boost Public Engagement"

ΙΠΣΥ IMIS

Ερευνητικό Κέντρο Αθηνά
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Research Excellence

Expertise

Networks

I ♥ DATA

Research Excellence in Big Data Management

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- Foundational Research
- Scalable Analytics
- Data sharing
- Storage
- Quality

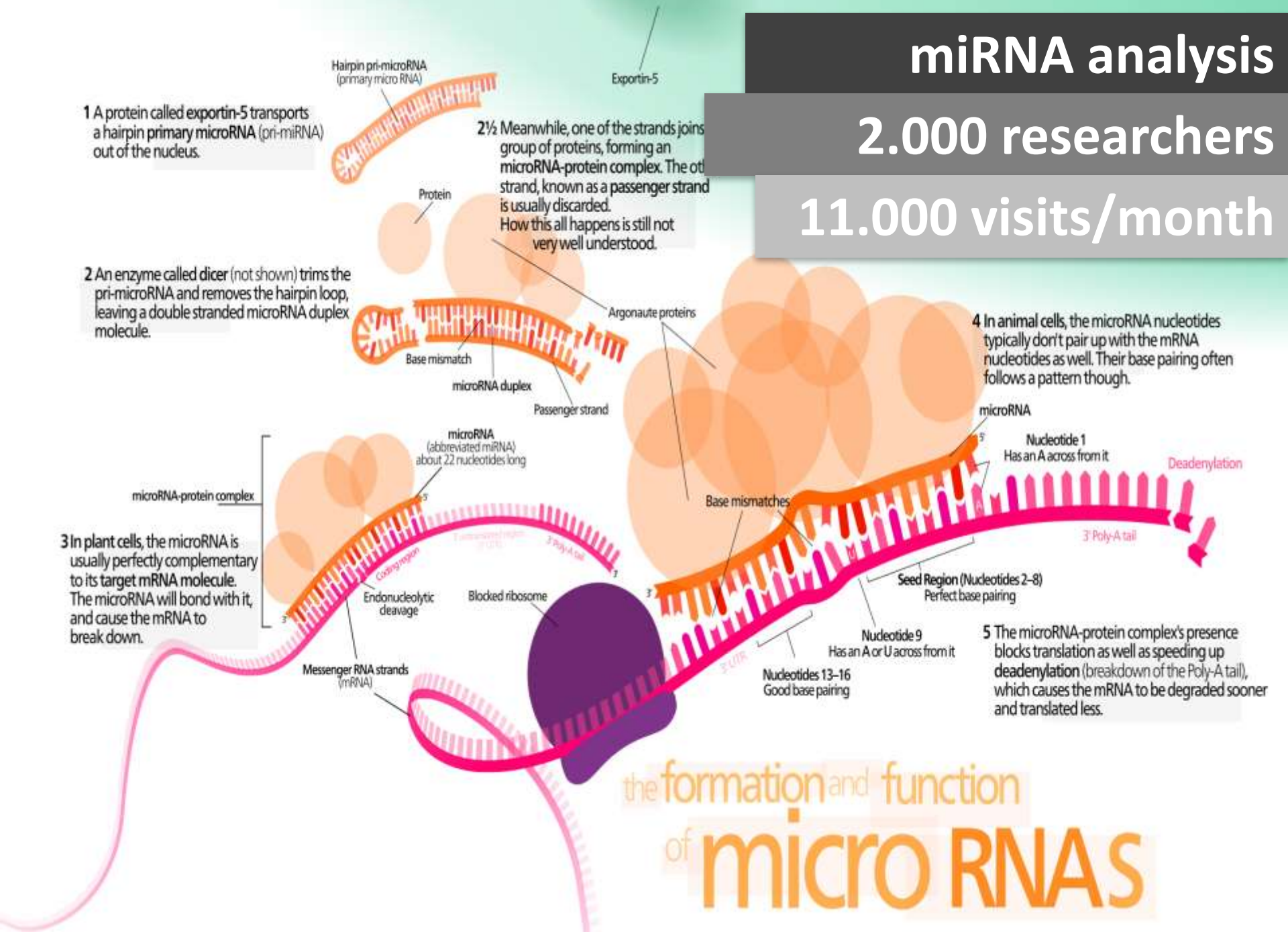
ΜΕ.Δ.Α

Μεγάλα Δεδομένα Πρόκλησεις, Μέθοδοι & Τεχνικές Αποδοτικής Διαχείρισης

miRNA analysis

2.000 researchers

11.000 visits/month



Search or type a command Explore Gist Blog Help SpirosAthanasiou

PublicaMundi

Scalable and reusable open geospatial data

http://www.publicamund... contact.publicamundi@i...

Find a repository... New repository

ol3

JavaScript ★0 221

forked from openlayers/ol3

OpenLayers 3

Updated a day ago

openlayers

JavaScript ★0 582

forked from openlayers/openlayers

Updated a day ago

Leaflet

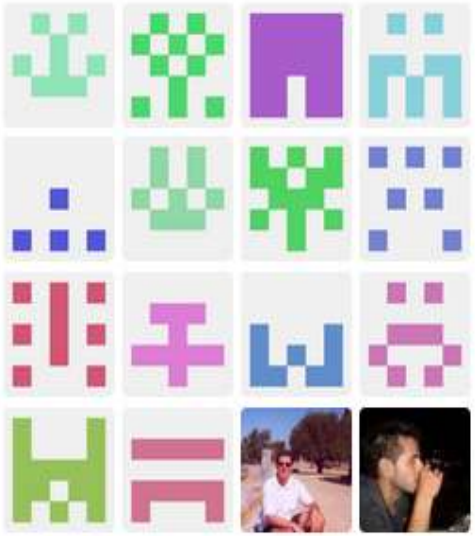
JavaSc

forked from Leaflet/Leaflet

JavaScript library for mobile-friendly interactive maps

Updated a day ago

Members 17 >



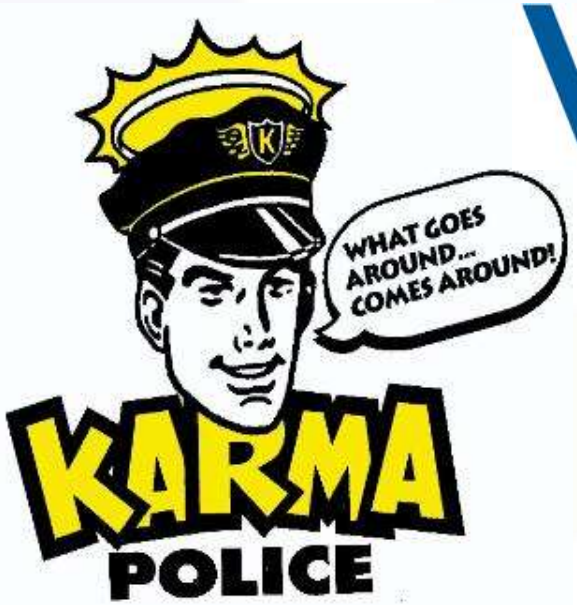
Add a member by username

Good foundations

Tap into actual users

Free publicity

Readers



W3C®

OSGeo
Your Open Source Compass

OGC®
Making location count.

RDA
RESEARCH DATA ALLIANCE
EUROPE

mozilla
FOUNDATION

ΕΕΛ/ΛΑΚ

StatData Camp 2010
Δημόσια, Ανοικτά Δεδομένα
<data
GeoDataCamp 2010
19-20 Νοεμβρίου
</data>
INTERNATIONAL
OPEN DATA
HACKATHON
ΜΟΝΑΔΕΣ ΑΡΙΣΤΕΙΑΣ
ΑΝΟΙΧΤΟΥ ΛΟΓΙΣΜΙΚΟΥ

stack.linkeddata.org

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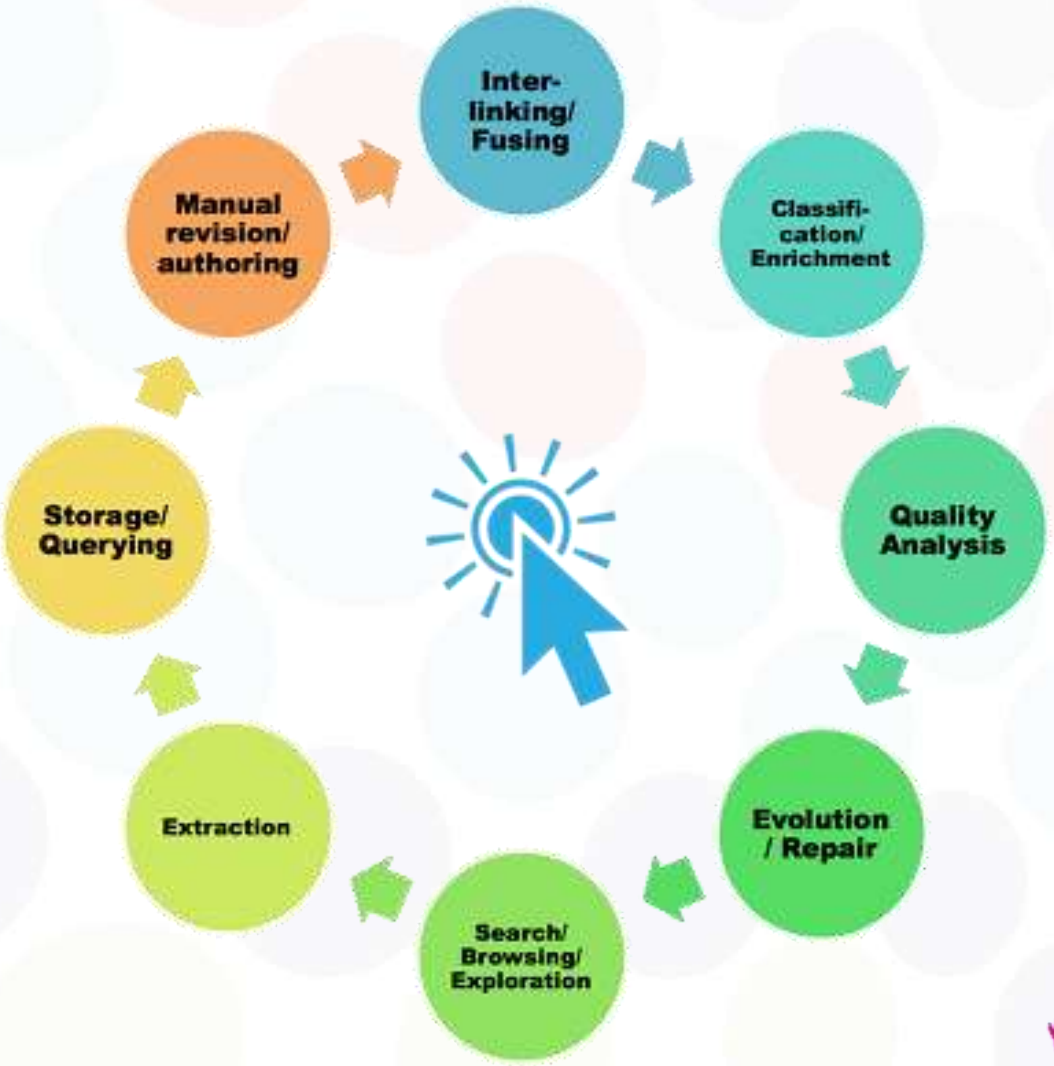

GeoKnow

DATA.GOV
pycsw

6
E962
65
8
4.98 λεπ.
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image © 2010 DigitalGlobe
Image © 2010 European Space Imaging
© 2010 Tele Atlas
38°00'21.48" B 23°33'35.89" E ανύψ 2 πόδια
©2010 Google
Eye alt 17.17 λεπ.

geodata.gov.gr

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ΔΗΜΟΣΙΑ ΔΕΔΟΜΕΝΑ, ΑΝΟΙΚΤΑ ΔΕΔΟΜΕΝΑ

Open data

Geospatial data

8/2010

open source

ΙΜΣΥ IMIS

Services

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Αρχική > Δεδομένα > Ανα φορέα

Δημόσια, Ανοικτά Δεδομένα

ανα φορέα | ανα θεματική κατηγορία | αλφαβητικά | ημερομη

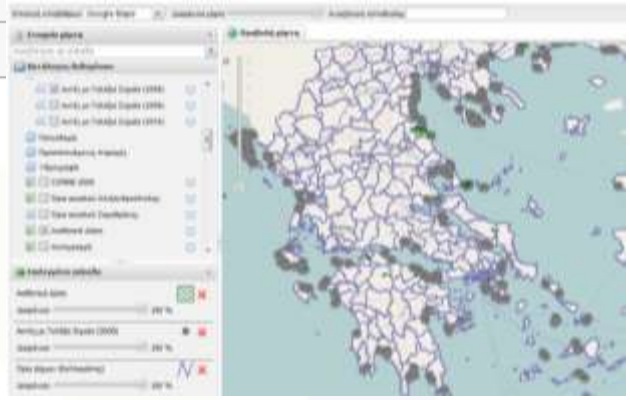
Αποκεντρωμένη Διοίκηση Ηπείρου - Δυτικής Μακεδονίας
Γενική Γραμματεία Αθλητισμού
Δήμος Θεσσαλονίκη

Πρόσβαση

SHP | GML | KML | Χάρτης

Λεπτομέρειες

Άδεια:	Creative Commor
Έκδοση:	ver. 1.0
Γεωγραφική Κάλυψη:	16.76871,30.6554
Μοναδικό Αναγνωριστικό:	a3539e9a-e290-4
Μεταδεδομένα:	



Data?

Public transport
Απαλλοτριώσεις
Public WiFi
ΣΧΟΑΑΠ
Water quality
District plans
Fires
Blue flags
Habitats
Census
Hydrography
CORINE
Admin boundaries
NATURA
Schools

Who?

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ΟΡΓΑΝΙΣΜΟΣ ΑΣΤΙΚΩΝ ΣΥΓΚΟΙΝΩΝΙΩΝ ΑΘΗΝΩΝ

Αποκεντρωμένη Διοίκηση Ηπείρου – Δυτικής Μακεδονίας

Δ Ι Α Ζ Ω Μ Α

ΚΑΠΕ
CRES

ΟΡΓΑΝΙΣΜΟΣ ΡΥΘΜΙΣΤΙΚΟΥ ΣΧΕΔΙΟΥ & ΠΡΟΣΤΑΣΙΑΣ ΠΕΡΙΒΑΛΛΟΝΤΟΣ ΑΘΗΝΑΣ

φορέας διαχείρισης
ΛΙΜΝΟΘΑΛΑΣΣΑ ΜΕΣΟΛΟΓΓΙΟΥ

Κτηματική Υπηρεσία Έβρου

Κτηματική Υπηρεσία Πειραιά

ΟΚΧΕ

ΚΟΙΝΩΝΙΑ ΤΗΣ ΠΛΗΡΟΦΟΡΙΑΣ ΑΕ

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Προστασίας του Πολίτη

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Παιδείας
Διά Βίου Μάθησης και Θρησκευμάτων

ΥΠΟΥΡΓΕΙΟ ΠΕΡΙΒΑΛΛΟΝΤΟΣ ΕΝΕΡΓΕΙΑΣ & ΚΛΙΜΑΤΙΚΗΣ ΑΛΛΑΓΗΣ

ΕΛΛΗΝΙΚΗ ΑΣΤΥΝΟΜΙΑ

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
Υπουργείο Εσωτερικών

In numbers

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380.000 visitors/ 109 countries/ 1.000 daily users / 1TB of geospatial data / 179 data sets / 58TB uploaded data / 20M of direct benefits for the public sector / 50% of visitors for professional use

9/2010

data.gov/community

2/2014

data.gov/open-gov/

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Research projects

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PublicaMundi	Scalable and Reusable Open Geospatial Data
DIACHRON	Managing the evolution and preservation of the Data Web
GeoKnow	Linked (open) geospatial data storage, management, querying, integration, visualization
ESPAS	Near-earth space data infrastructure for science espas-fp7.eu
SimpleFleet	Democratizing fleet management simplefleet.eu
EarthServer	European scalable earth science service environment earthserver.eu
MEDA	Efficient Management for Big Data – Challenges, Methods and Techniques.

Research projects

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iMarine	Data infrastructure for marine living resources and fisheries management **i-marine.eu**
MERMAID	Off-shore energy platforms based on waves and wind, with additional uses **mermaidproject.eu**
CHESS	Personalized storytelling guiding in museums **chessexperience.eu**
HBP	Human Brain Project **humanbrainproject.eu**
OpenAIRE	Implementation of Open Access to pubs European policy **openaire.eu**
Optique	High-scale parallel dataflow processing of ontology-based data **optique-project.eu**

Research projects

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Arcomem	Leveraging the Wisdom of the Crowds for Intelligent Preservation **arcomem.eu**
INTER-ACT	International Network for Terrestrial Research and Monitoring in the Arctic eu-interact.org
EFG1914	European Film Gateway 1914 for Europeana **project.efg1914.eu**
CONFES	Converged Network Infrastructure Enabling Resource Optimization and Flexible Service Provisioning
National RTD projects	**CAP** (Community of the Airport Portal) **MoDiSSENSE** (Distributed Platform for Social Network Services on Mobile Devices) **MICRORNA** (Exploring the role of MicroRNAs in diseases: a computational, experimentally verified approach)

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Thank you!