NUI Galway
OÉ Gaillimh

DERI

Big Data In Ireland
Linked Data and beyond

Prof. Stefan Decker

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sfi Science Foundation Ireland
ENTERPRISE IRELAND
EUROPEAN REGIONAL DEVELOPMENT FUND
IRCSET
SEVENTH FRAMEWORK PROGRAMME

Enabling **networked** knowledge

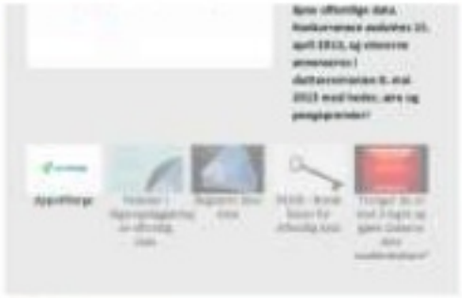
A Network of Knowledge

- Interconnected
- Universal
- All encompassing

- assists humans, organisations and systems with problem solving
- enabling innovation and increased productivity

Government Data Portals

Sir Tim Berners-Lee's talk from TED2009 on TED.com



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Archives

DERI

www.deri.ie

pro.europeana.eu/linked-open-data

europeana professional

Home | About us | Press & Events | Projects | Europeana Foundation | Europeana Network

Provide data | Re-use data

- Re-use data
- API services
- → Linked Open Data
  - In brief
  - Tech details
  - Datasets
  - Credits
- Case studies
- Cultural Commons
- Hackathons
- ThoughtLab

data.europeana.eu

EUROPEANA LINKED OPEN DATA (LOD)

The metadata for the 25 million objects in the Europeana portal is all **open**, in that it

DEUTSCHE NATIONAL BIBLIOTHEK

English | Kontakt | A-Z | Förderer | Datenschutz | Impressum | Hilfe

LEIPZIG FRANKFU

Home // Service // Digitale Dienste // Linked Data Service

- Home
- Wir über uns
- Aktuell
- Kataloge
- Erwerbung
- Netzpublikationen
- Service
  - Benutzung
  - Direktversand von

LINKED DATA SERVICE DER DEUTSCHEN NATIONALBIBLIOTHEK

Die Entwicklungen im Bereich Semantic Web zielen darauf ab, semantische Strukturen nachnutzbar und Daten besser zugreifbar zu machen. Des Weiteren erlauben die Konzepte des Semantic Web, Daten aus heterogenen Quellen miteinander zu verknüpfen, was eine Etablierung neuer Dienstleistungen mit sich führt. Im Zuge der Linked-Data-Bewegung bieten bereits eine Vielzahl von Anbietern (meist gemeinnützige Organisationen, Universitäten oder öffentliche Einrichtungen) ihre Daten in einer Semantic-Web-konformen Repräsentation an. Zu diesen Daten gehören insbesondere Daten, die von generellem Nutzen für die Allgemeinheit sind. Beispiele hierfür sind geografische Informationen, Thesauri, Lexika und auch

BIBLIOTECA NACIONAL DE ESPAÑA

BNE

Inicio | Catálogos | Colecciones | Servicios | Actividades | La Institución

Datos enlazados en la BNE >

- Fuentes de datos
- Tecnología
- Modelos (Ontologías)
- Enlaces relacionados
- Descarga de ficheros

Datos enlazados en la BNE

datos.bne.es es un proyecto ... Ontology Engineering Group ... Biblioteca Nacional de España, ... enriquecimiento de la Web Se... datos bibliográficos provenientes ... catálogo. Esta iniciativa se ha ... marcha con la publicación, con ... principios de Linked Data, de ... procedente de los catálogos bib... autoridad, haciéndolos disponi... de conocimiento RDF (Resource ... Framework). Además, estos da... interrelacionan con otros bases de conocimiento existentes ... Linking Open Data. De esta manera, España se suma a los p... otras instituciones como la British Library y la Deutsche Natio... han comenzado recientemente.

Los datos están publicados de acuerdo a las especificaciones ... la licencia Creative Commons Zero (CC0)

Acceso a la ...

Contacto

https://www.oclc.org/data.en.html

Google Gadget Ed... | Scoop.it!

OCLC.ORG | SIGN IN | CREATE AN ACCOUNT

Worldwide | English

OCLC The world's libraries Connected.

Search

Support & Training | Log in to Services | Contact Us | Librarian's Toolbox

About | Membership | Products & Services | Research | News & Events

Home > Products and Services > WorldCat > Linked data at OCLC

- WorldCat
- A global library resource
- WorldCat community
- WorldCat knowledge base

Linked data at OCLC

- Community
- Data sets & services
- Latest news
- Data licenses & attribution

Why WorldCat

data.nytimes.com

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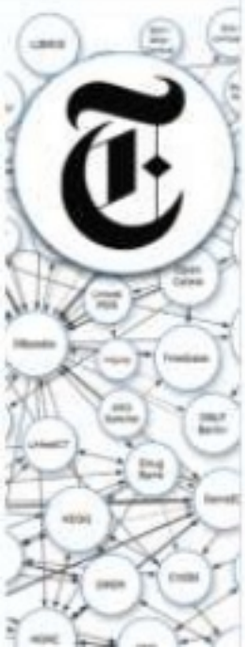
The New York Times

Linked Ope



data.nytimes.com

For the last 150 years, The New York Times has ... 2009, we began to publish this vocabulary as Link...

The Data

As of 13 January 2010, The New York Times has ... CC BY license. We provide both RDF documents a... various tag types and mapping strategies on data...

Type	Manually Map
People	4,978
Organizations	1,469
Locations	1,910
Descriptors	498

Browse individual data records:

A B C D E F G H I J K L

SKOS Files

Download all of the data records as SKOS Files.

...e.com linked data

... to data.nature.com

Triple count: 319,590,481 (319.5 million)

... Data Platform provides access to datasets from NPG published as ... made available through SPARQL services. Two different interfaces are ...y – a form interface for interactive queries, and /sparql – a service ...ote queries. Alternatively, use the search box below to enter a plain

...rch term | Search

...on, demos and data snapshots for downloading are available on the ...elopers portal.

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Sciences

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Digital Enterprise Research Institute

bio2rdf.org

Google Gadget Ed... Scoop.it!

BIO2RDF

Select an ID example

Submit

epsiplatform.eu/content/linked-data-climate-change

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epsiplatform

European Public Sector Information Platform

Europe's One-Stop Shop on Public Sector Information (PSI) Re-use

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Linked Data on Climate Change

tags: bonn climate change climate data Germany International Linked data LOD workshop
Posted by tonzijlstra on 20 May 2012

From the REEEP international secretariat:

Climate and development websites have blossomed in the past few years. Not only are organisations publishing their own information online, but many have become online 'knowledge brokers' who are hosting portals that pull together climate and development information from many sources.

A second annual Climate Knowledge Brokers workshop was hosted by the GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) and CDKN (Climate and Development Knowledge Network) on 19th and 20th May in Bonn.

Some 41 participants from 30 different climate-related organisations participated in the workshop to find new ways of linking up, sharing technologies, and making the online climate and development landscape more user-friendly.

At the event Linked Open Data was a central topic, and the challenges of making datasets open and available in machine readable formats was underlined at the workshop by Florian Bauer, REEEP's Director of Operations in charge of the reegle website. "In a world where the amount of available data is exploding, linking data from trusted and reliable sources is a critical factor to create resources that developing country policy-makers can rely on," said Bauer, "and we're looking forward to assisting other organisations faced with this same challenge."

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www.uniprot.org

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Search Blast Align Retrieve ID Mapping

Search in Query

WELCOME

The mission of UniProt is to provide the scientific community with a comprehensive, high-quality and freely accessible resource of protein sequence and functional information.

What we provide

UniProtKB — Protein knowledgebase, consists of two sections:
- Swiss-Prot, which is manually annotated and reviewed.
- TrEMBL, which is automatically annotated and is not reviewed.

Includes complete and reference proteome sets.

UniRef — Sequence clusters, used to speed up sequence similarity searches.

NEWS

UniProt release 2013_04 - Apr 3, 2013

Major progress in adenovirus annotation | Removal of MEDLINE identifiers

- Statistics for UniProtKB
- Swiss-Prot - TrEMBL
- Forthcoming changes
- News archives

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SITE TOUR

en.openei.org/wiki/Main_Page

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datasets, docs, maps — updates from the community — developer resources

Recent Community Activity

Blog
Groups
Discussions
Twitter
Videos

New Result Formats on OpenEI

Quarterly Smart Grid Data available for download on OpenEI

OpenEI maintenance March 8-9, 2013

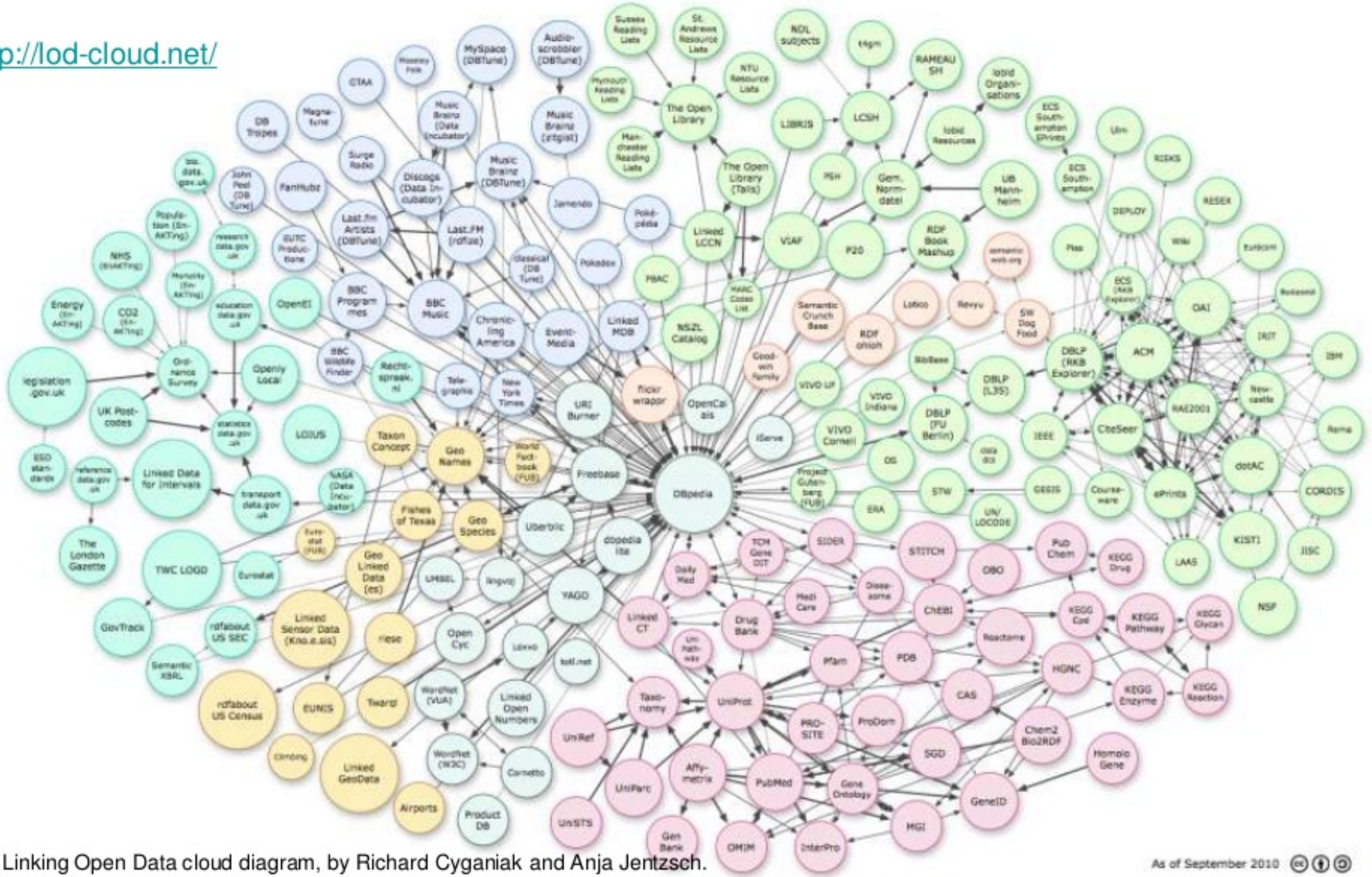
Colorado Meeting

Open Government

Get Widget

Linked Open Data

http://lod-cloud.net/

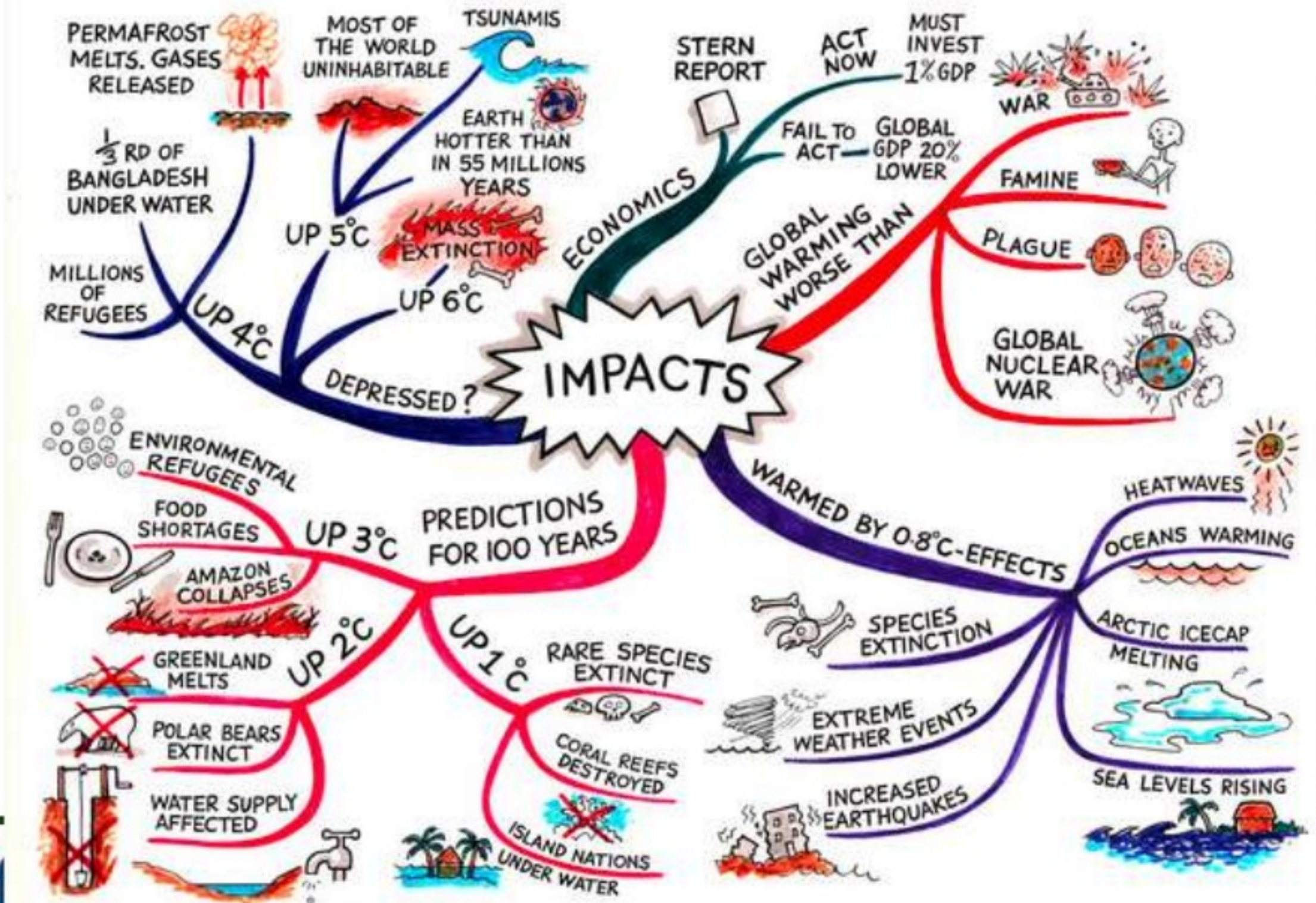


Linking Open Data cloud diagram, by Richard Cyganiak and Anja Jentzsch.

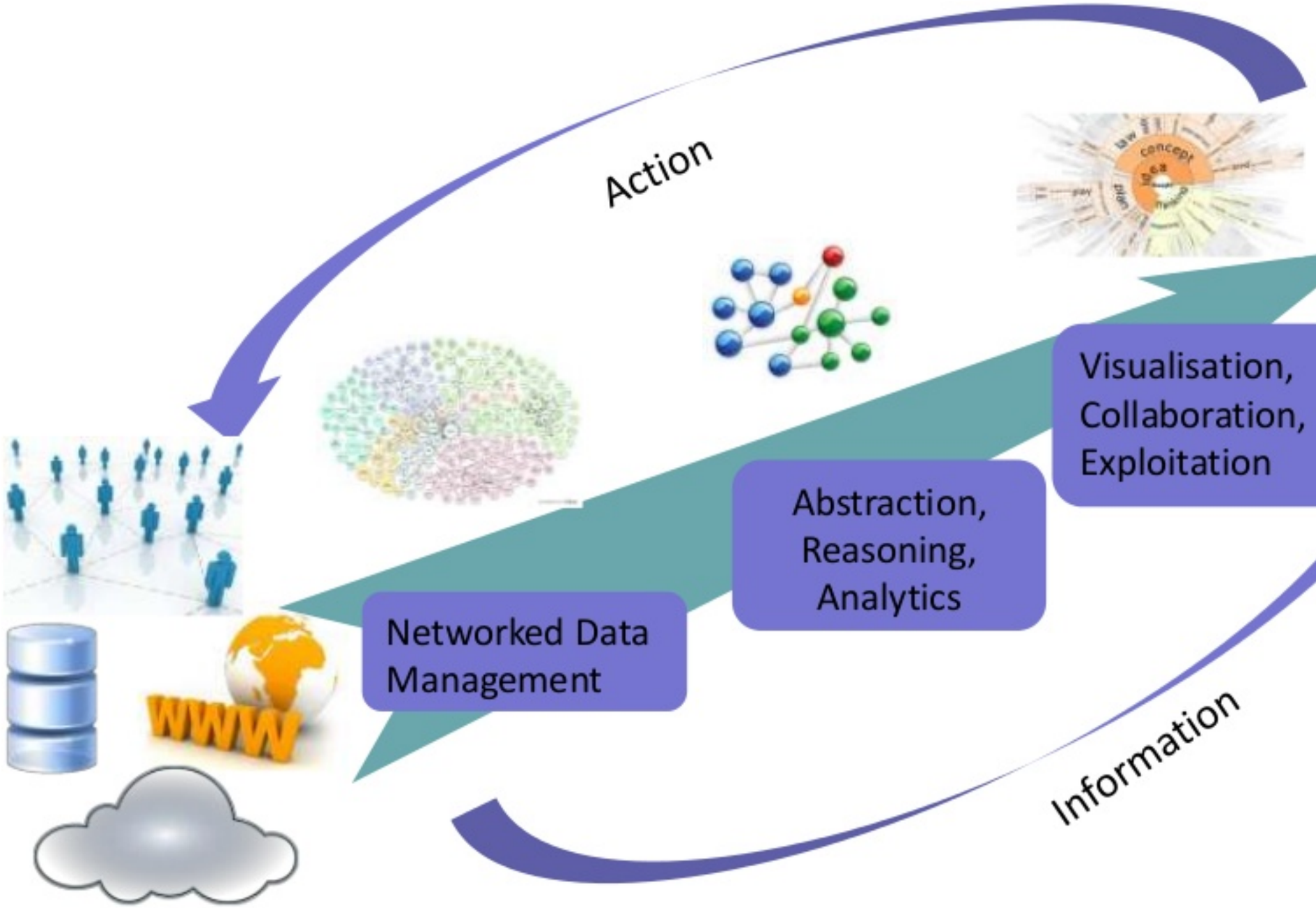
As of September 2010

Enabling **networked** knowledge

How to make sense?



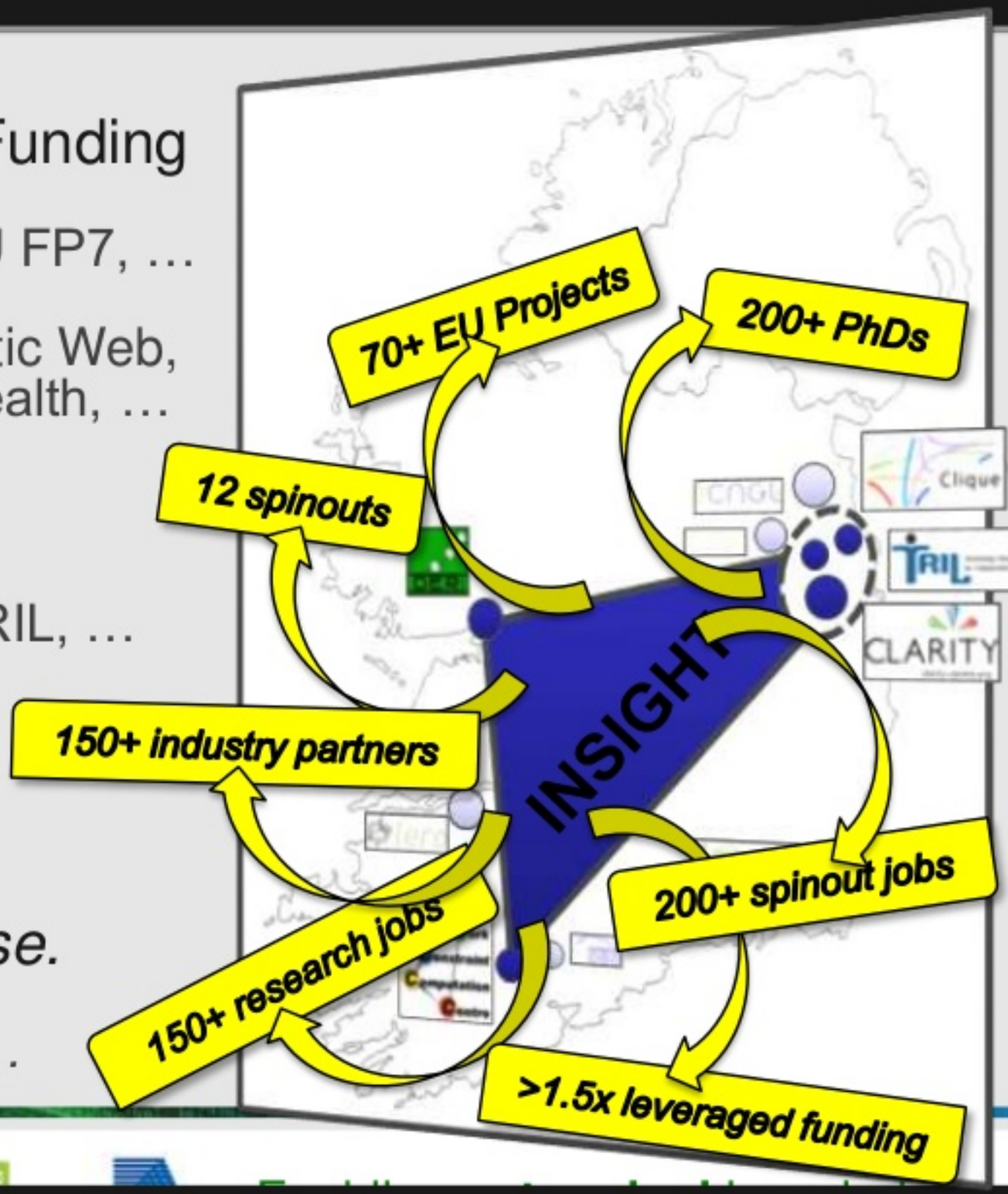
Knowledge Dashboard



INSIGHT – Ireland's Big Data Research Centre

Right Centre, Right Time – Why Insight?

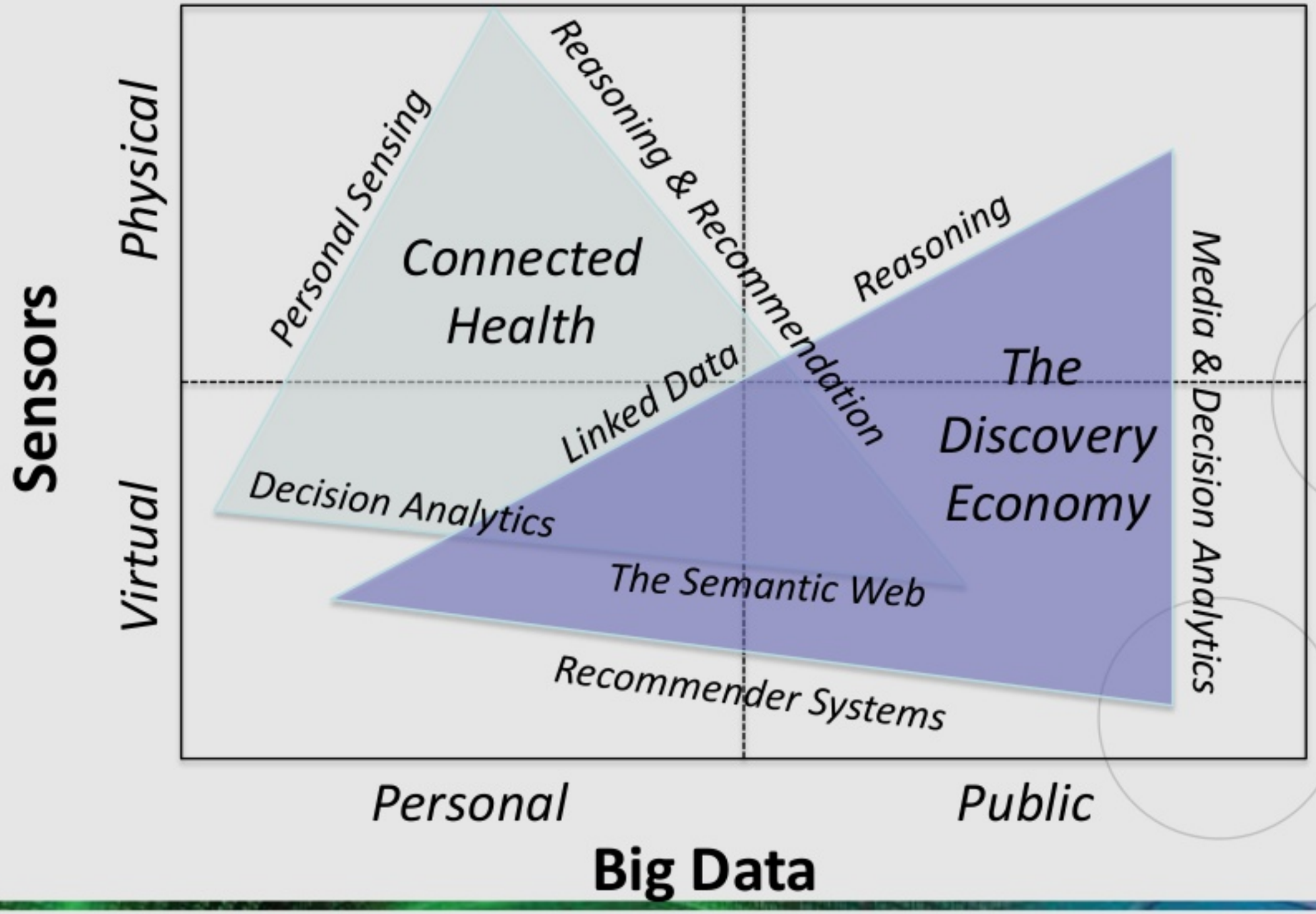
- ✓ A Decade of Basic Research Funding
  - Science Foundation Ireland, EU FP7, …
  - Core competency in AI, Semantic Web, the Sensor Web, Connected Health, …
- ✓ Leading Research Centres
  - DERI, CLARITY, 4C, Clique, TRIL, …
  - UCD, NUIG, UCC, DCU
  - plus TCD, NUIM, RIA, TNI
- ✓ *Ready-To-Go & Fit-For-Purpose.*
  - *60+ PIs/FIs, 300 researchers, …*



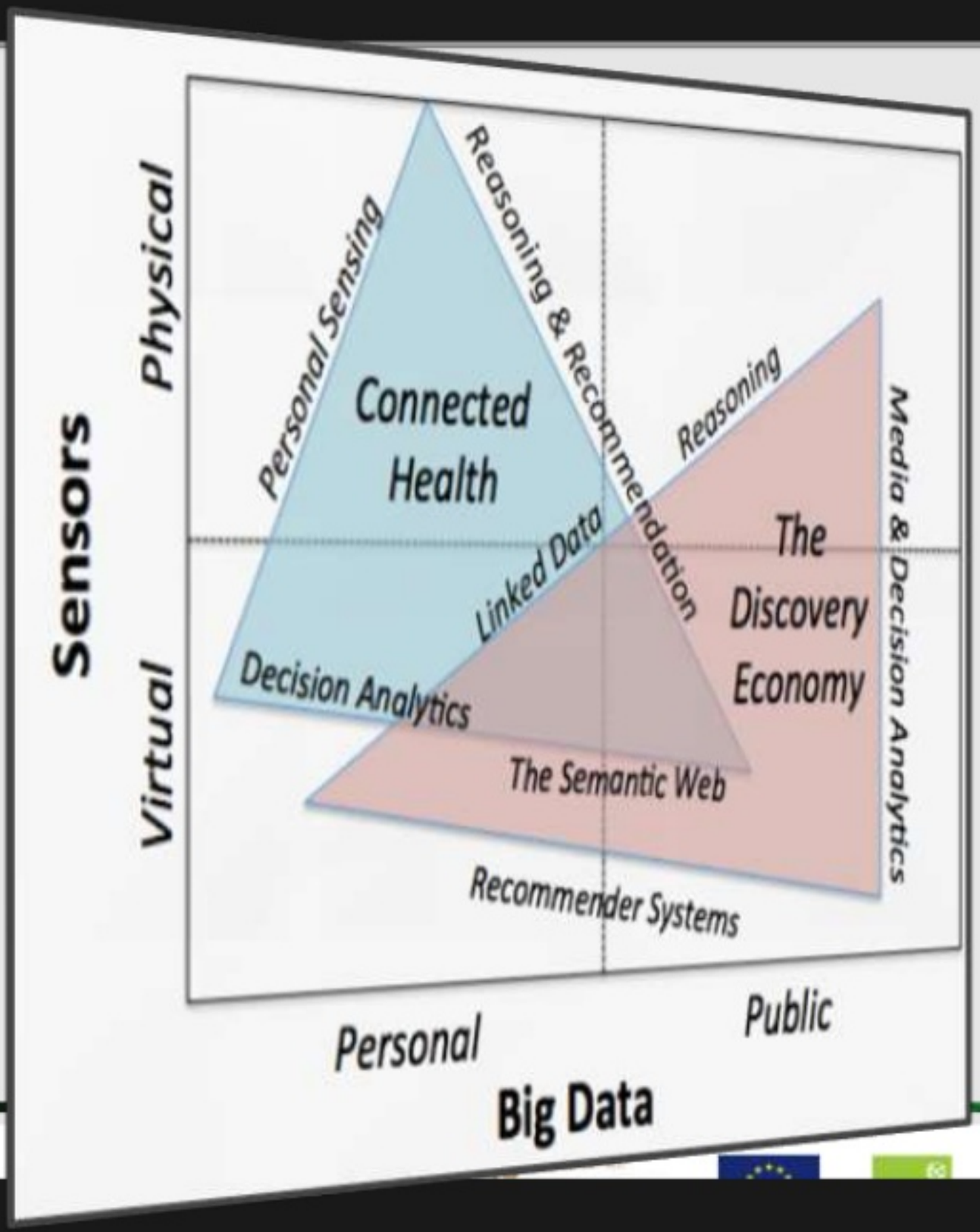
Right Place - Why Ireland?

- ✓ National Strategic Alignment
  - Prog. for Government & Research Prioritisation
  - Natural evolution of CSETs and SRCs.
  - EI Centres (Data Analytics & Connected Health)
- ✓ Vibrant Industry Sector
  - MNCs, SMEs, Startups
  - Transforming service oriented industry.
- ✓ INSIGHT Partners
  - 30+ engaged industry partners.
  - €30m contribution to budget.

Research Program



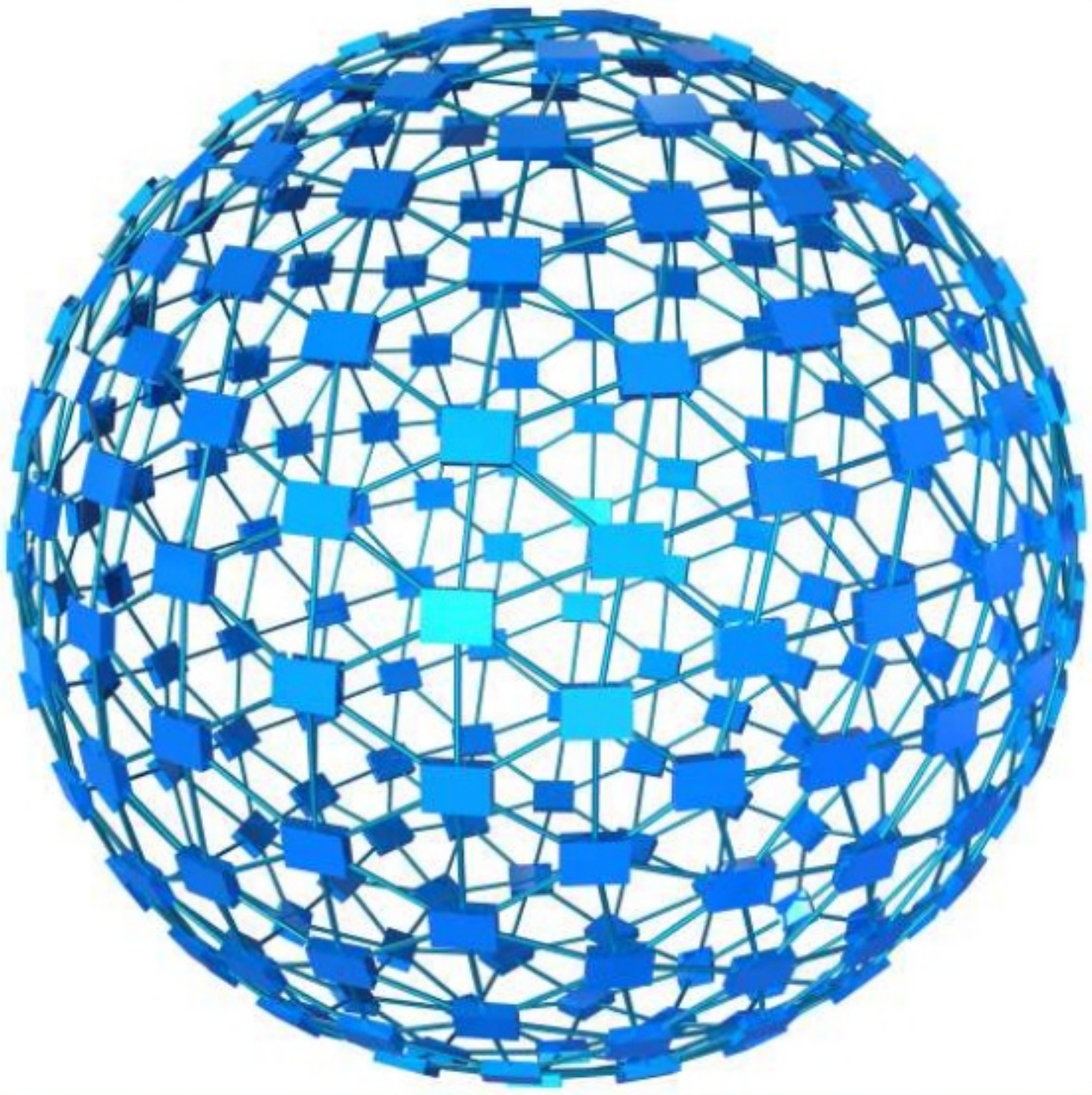
Application Focus



- ✓ Connected Health
  - Novel Personal Sensing
  - Lincor, Vitalograph, BiancaMed, UCB Pharma…
  - Personalized treatment plans.
- ✓ The Discovery Economy
  - The Future of News
  - Elsevier, the Irish Times, Storyful,…
  - Transforming information discovery.

A Platform Technology for Transforming Society & Industry

A Network of Knowledge is more than just data…



- It is people, communities…

- And then it assists humans, organisations and systems with problem solving
- enabling innovation and increased productivity