

OPEN International ACCESS WEEK



ARISTOTLE
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OPEN
KNOWLEDGE
GREECE

Ανοικτά Δεδομένα Υγείας

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Summary

- Open Data concepts
- Health Open Data
- Examples
 - Active and Healthy aging
 - Health Education



A note on openness ... from OKFN

- *Open means freely shared for anyone, anywhere, to use for any purpose - see OpenDefinition.org*
- “Here at Open Knowledge, we think the answer is clear: knowledge should be open not closed.
- We believe that our knowledge society must have at its heart collaboration not control, empowerment not exploitation and that everyone – citizens, scientists, entrepreneurs, activists – should have access to the information they need to understand and shape the world around them.”

<https://okfn.org/about/vision-and-values/>



Principles on Open Data from Philippines

DATA CATEGORY	EXAMPLE DATASETS
Agriculture	Crops, fisheries
Earth observation	Weather, earthquakes, disaster management
Economy	Lead economic indicators, commodity prices, energy consumption
Education	Number of students per school, school performance
Environment	Pollution levels, greening programs
Geospatial	National and local maps, hazard maps, topography
Health	Hospital location and services, medicines
Infrastructure	National roads, tourist spots, broadband penetration
Public finance	National budget, government payroll, awarded contracts, tax revenue
Public safety	Crime statistics
Research	Experiment results, social science surveys
Social Welfare	Housing, conditional cash transfer programs
Statistics	National statistics, census

HEALTH AND DATA: A LONG STORY



<http://www.epsiplatform.eu/content/open-health-care-data>

Maps of open data

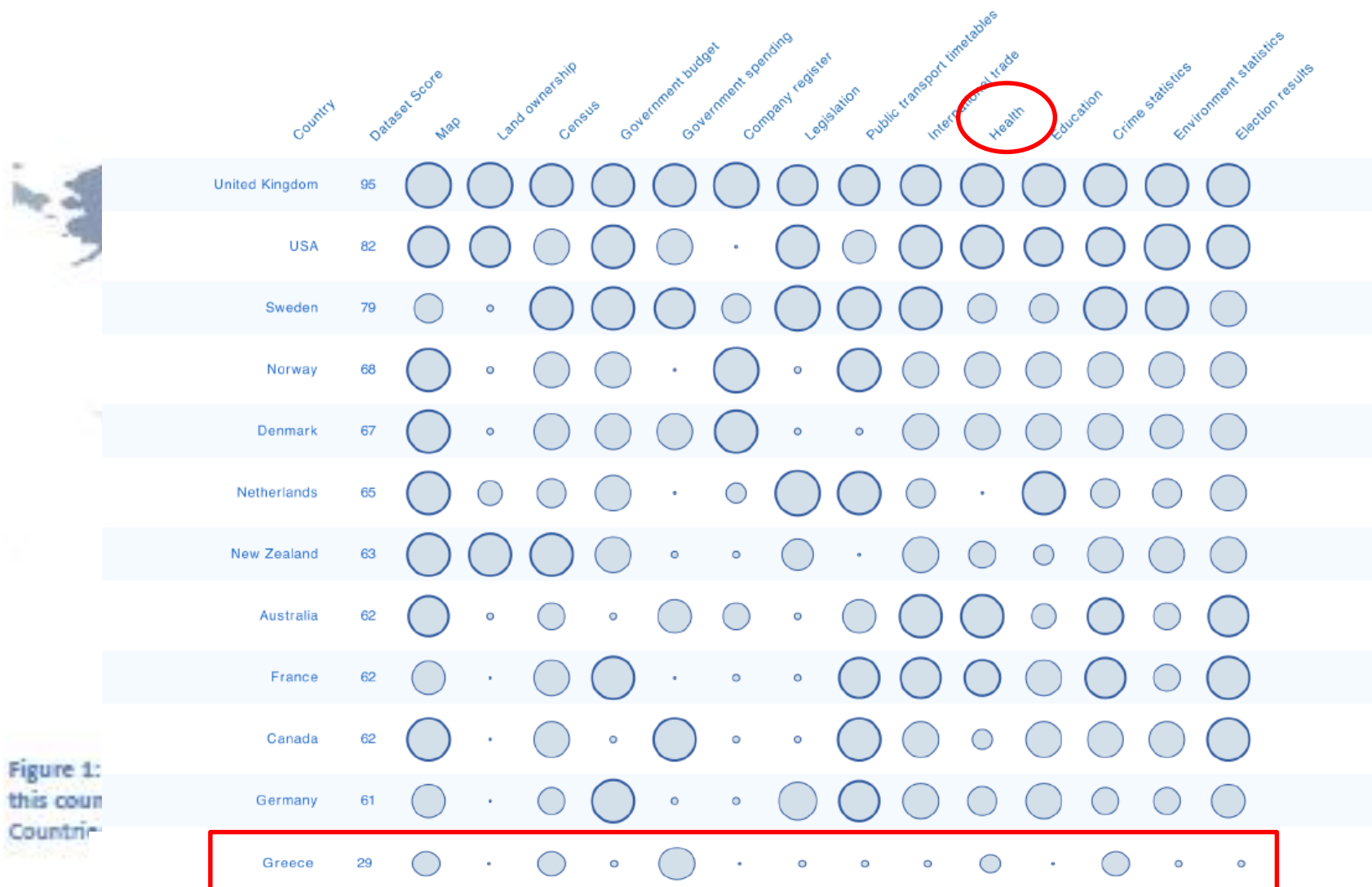


Figure 1:
this coun
Country

Health care data

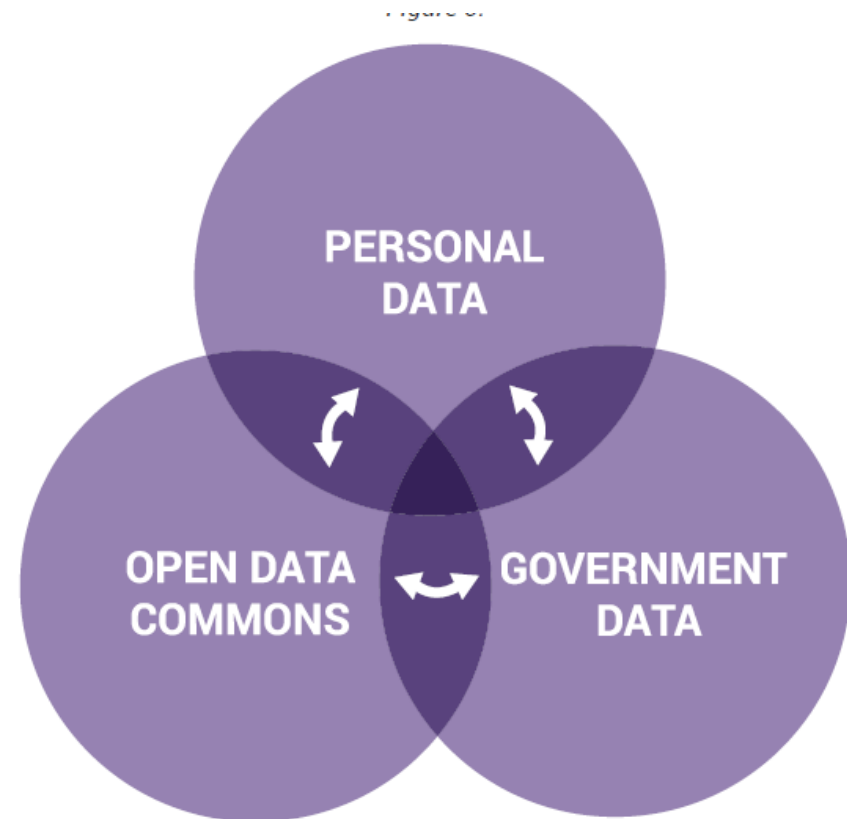
- exists in various forms with different added values:
 - Public spending and public policy on health care (very important for transparency and fight against recession...)
 - Performance indicators of individual health care providers (National Health System, Private Sector etc...)
 - General, anonymised information on population health statistics (e.g. data on occurrence of certain health conditions differentiated by age, income or location, morbidity, mortality etc...)
 - **Specific information about individuals (e.g. patient records)**

See more at: <http://www.epsiplatform.eu/content/open-health-care-data#sthash.UjDbulj7.dpuf>

Health Data type variations - an ecosystem

- combinations among big, government, and open data, all of which could fall in one of the three major categories below.
- big data (open or not) fall into:
 - personal or
 - proprietary data or
 - government secret data,

depending on the source of control.



Source: Pentland, A., et al. Big Data and Health: Revolutionizing Medicine and Public Health. December 2013.
<http://www.wish-qatar.org/app/media/382>

Big Data

- **Big data** are datasets whose **size is beyond the ability of typical database** software tools to capture, store, manage, and analyse.
- “maximizing computation power and algorithmic accuracy to gather, analyze, link, and compare large data sets; it is also about “drawing on large data sets to identify patterns in order to make economic, social, technical, and legal claims.”

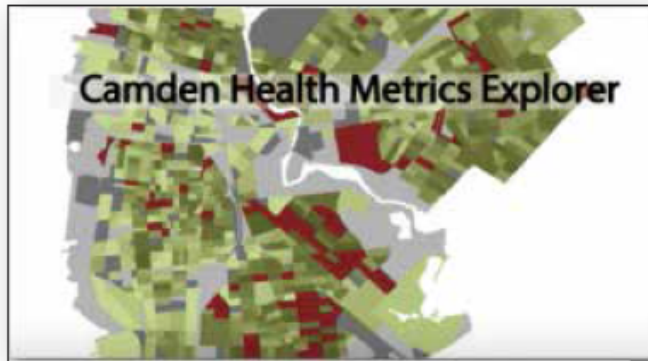
Manyika, J., 2011. Big data: The next frontier for innovation, competition, and productivity.
Available at: http://www.mckinsey.com/insights/business_technology/big_data_the_next_frontier_for_innovation.

UK - NHS - THE OPEN DATA ERA IN HEALTH AND SOCIAL CARE

The Open Access Week 2015

In truth, health data—like all data—exists on a continuum from open to closed. In this paper, we suggest three categories

of



The Camden Health Metrics Explorer, created by the Camden Coalition of Healthcare Providers (CCHP) (based in Camden, NJ, USA) and BlueLabs, is leveraging open datasets linked to health exchange information and claims data, providing actionable metrics in real time. They place a focus on “hotspotting”—the identification of patients who are heavy users of the healthcare system--providing targeted interventions to address their needs and change their utilization patterns. Based upon a metrics dashboard, the Coalition seeks to reach out to high risk patients to coordinate the critical period following discharge and the transition back to primary care. The Camden Coalition also works with community groups to provide preventive care and health education.⁷⁰

and the original data files are not included in the release. An example of published data would be NHS patient satisfaction surveys.

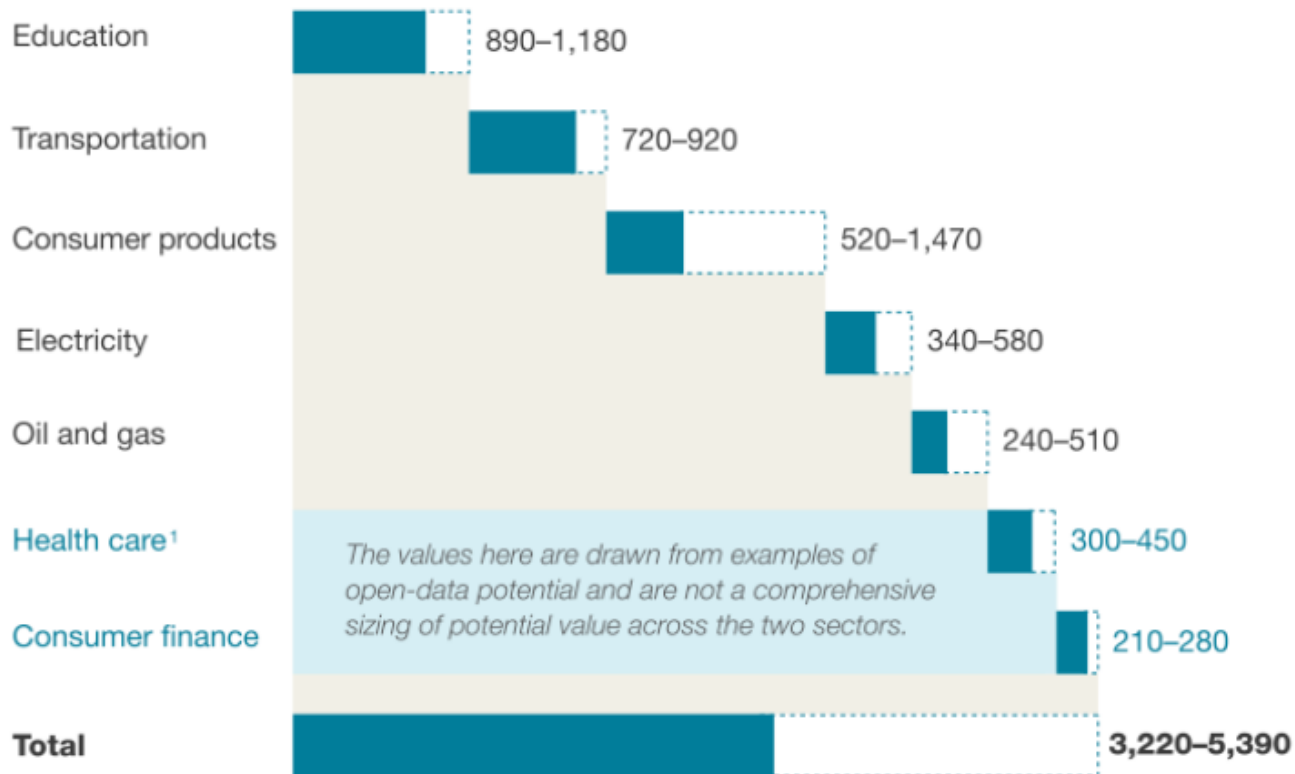


OPEN DATA & ECONOMIC VALUE

MCKINSEY

Open data can help unlock \$3 trillion to \$5 trillion in economic value annually across seven sectors.

Potential value in open data, \$ billion

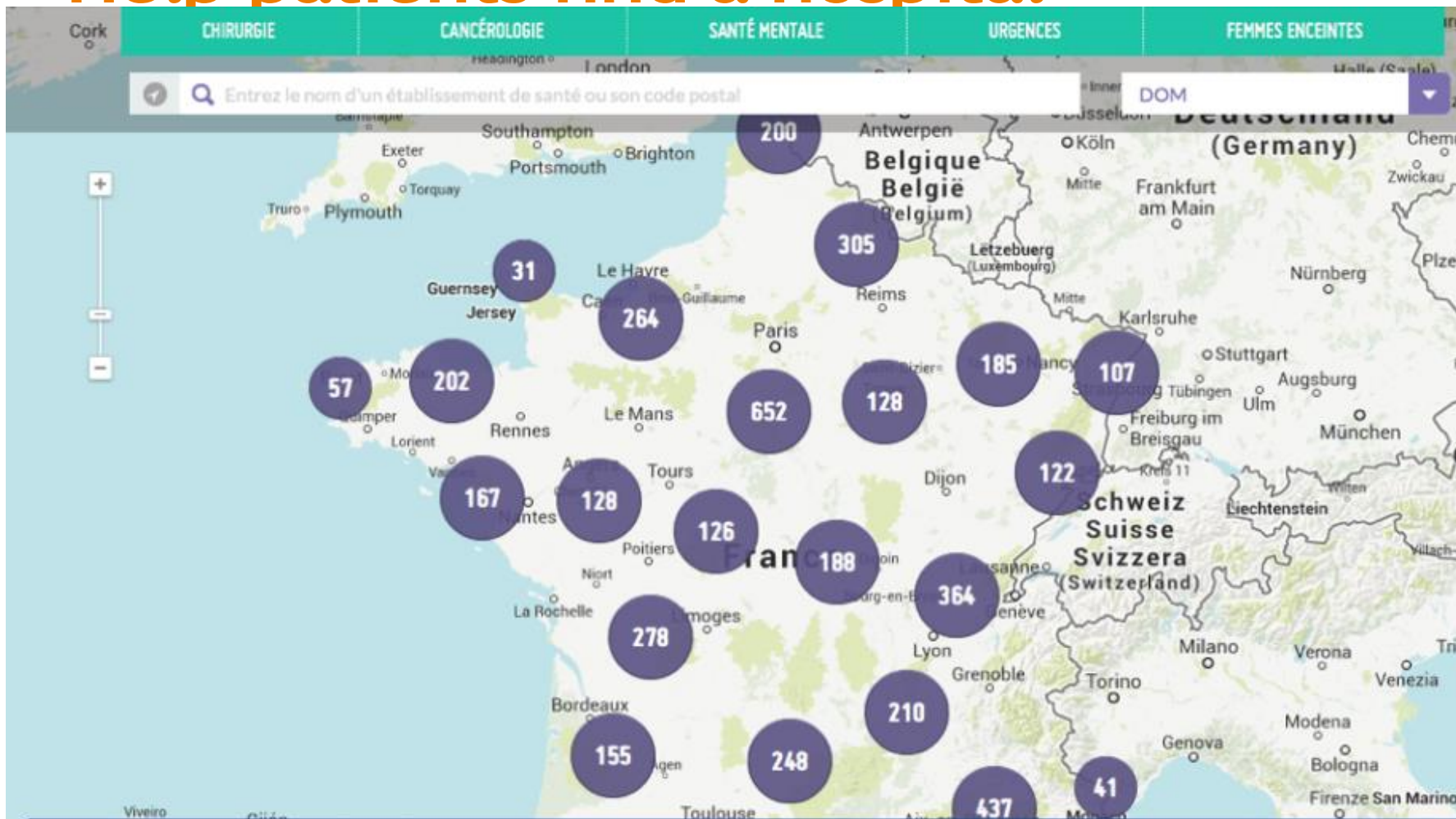


¹Includes US values only.

Source: McKinsey Global Institute analysis

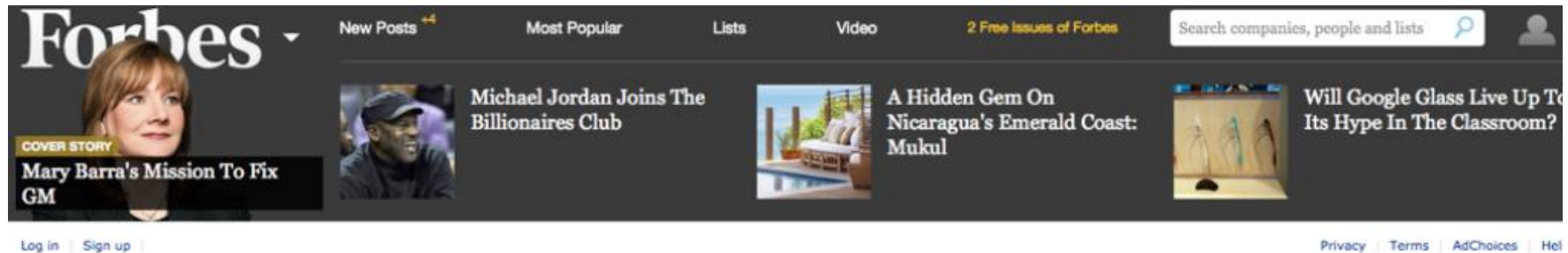
[HTTP://WWW.MCKINSEY.COM/INSIGHTS/BUSINESS_TECHNOLOGY/OPEN_DATA_UNLOCKING_INNOVATION_AND_PERFORMANCE_WITH_LIQUID_INFORMATION](http://www.mckinsey.com/insights/business_technology/open_data_unlocking_innovation_and_performance_with_liquid_information)

Help patients find a hospital



[HTTP://WWW.SCOPESANTE.FR/#/](http://www.scopesante.fr/#/)

Google Fit



Parmy Olson
Forbes Staff

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I cover agitators and innovators in mobile.
[full bio](#) →

TECH 6/12/2014 @ 6:00PM | 51,588 views

Exclusive: Google Wants To Collect Your Health Data With 'Google Fit'

[+ Comment Now](#) [+ Follow Comments](#)

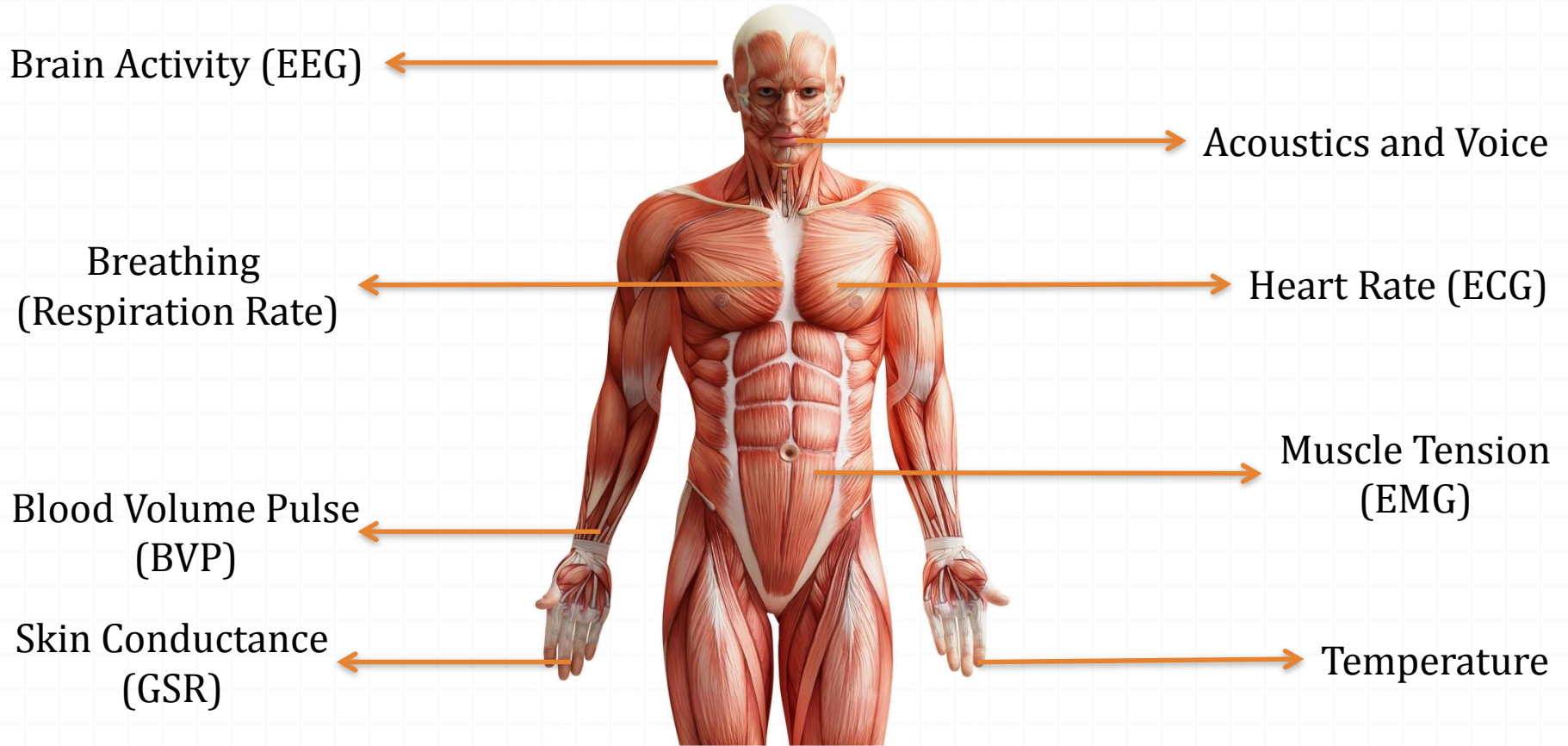


[HTTP://WWW.FORBES.COM/SITES/PARMYOLSON/2014/06/12/EXCLUSIVE-GOOGLE-TO-LAUNCH-HEALTH-SERVICE-GOOGLE-FIT-AT-DEVELOPERS-CONFERENCE/](http://www.forbes.com/sites/parmyolson/2014/06/12/exclusive-google-to-launch-health-service-google-fit-at-developers-conference/)

Source: Mateo Brunatti, ePSI platform

Examples from Active and Healthy Aging - Mobile Health

Different Modalities



A
notion
of the
‘quantified - self’

Sensor Platforms - Cameras



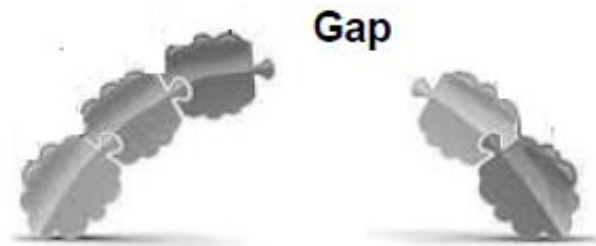
Some neglected key areas of Activity Trackers

Biocensor's technology

Hundreds of health and fitness apps

Ecosystems for monitoring and managing personal data

Apple, Acer, Asus, Dell, HP, Huawei, Lenovo, Microsoft, Samsung, Sony, Toshiba, ZTE



ICT Ecosystem

Needs of the elderly people

- We are not inventing new devices
- We are just trying to exploit the ICT Ecosystem for the benefit of the Elderly people.
- Our objective : Elderly people living independently for a longer time, feeling safe and socially connected



Entrance Scenery View



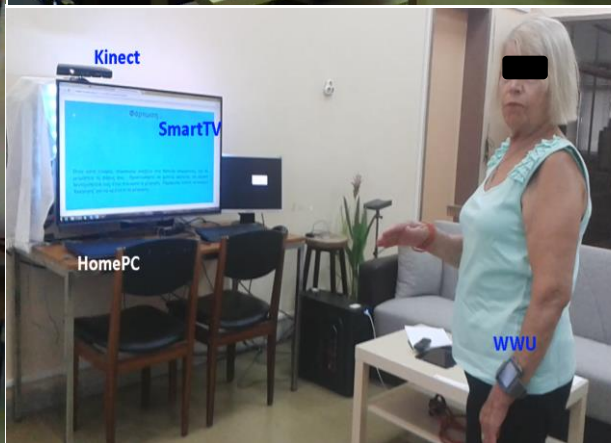
Living Room Scenery



Kitchen View



Unobtrusive set up



<https://www.youtube.com/watch?v=wxcvuY2zBHs>

<https://www.youtube.com/watch?v=4B7hggKdfEM&feature=youtu.be>

Can we leverage “Big Data” on Active and Health Aging?

- **Big data** are datasets whose **size is beyond the ability of typical database** software tools to capture, store, manage, and analyse.
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Manyika, J., 2011. Big data: The next frontier for innovation, competition, and productivity.
Available at: http://www.mckinsey.com/insights/business_technology/big_data_the_next_frontier_for_innovation.

If we make proper tools to exploit the richness of collected healthy aging data...
we will assist diagnoses and treatments

Aging
Society

Silver
Science

Silver
Economy





The UNCAP project on Active & Healthy Aging

- UNCAP: Ubiquitous iNteroperable Care for Ageing People
- UNCAP delivers an interoperable platform based on open industrial standards
- ...leveraging on existing technologies for biosensing, indoor/outdoor localisation and home-automation.
- Result: an open source, scalable and privacy-savvy ecosystem compatible with existing Personal Health Record systems, that can deliver novel services that can help aging people (incl. those with cognitive impairments) live independently and with dignity.



New Horizon 2020 AUTH projects

smokefreebrain.org

quitting in progress

Welcome to SmokeFreeBrain

Lead partner:
Aristotle University of Thessaloniki
Lab of Medical Physics
<http://medphys.auth.gr>
Co-ordinator: Panos Bamidis

To be activated soon..

Get In Touch

Feel free to contact us if you have any questions.

Medical physics Laboratory
Department of Medicine
Aristotle University of Thessaloniki

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<http://smokefreebrain.org/>

@smokefreebrain

PROGNOSIS
SAY YES TO PROGNOSIS

Prognosis
Υγεια/Ιατρικά/
Φαρμακευτικά
YES!

Χρησιμοποιήστε την εφαρμογή

Σας αρέσει

Μήνυμα

Χρονολόγιο Πληροφορίες Φωτογραφίες Σε πόσους αρέσει Βίντεο

Αρέσει σε 723 άτομα στον Leonidas Hadjileontiadis και 15 ακόμα φίλους

Προσκαλέστε φίλους να δηλώσουν ότι τους αρέσει η Σελίδα

ΠΛΗΡΟΦΟΡΙΕΣ

Ζητήστε να μάθετε τη διεύθυνση του χρήστη Prognosis

Ζητήστε τον αριθμό τηλεφώνου του χρήστη Prognosis

<http://prognosisproject.net/>

ΦΩΤΟΓΡΑΦΙΕΣ

Δημοσίευση Φωτογραφία/Βίντεο

Γράψτε κάτι...

Δημοσίευση

Prognosis
1 Αυγούστου

Prognosis receives inaugural @MSFTImagine Ability Award! Amazing moments!

iPrognosis for Parkinson's Disease

Examples from Medical Education

Towards Open Learning

**Let us Opening up Learning,
Education and Training for ALL!**



**Open Research and Open Education –
The hidden treasures**

Christian M. Stracke (eLC / ICORE / University of Duisburg-Essen, Germany)
Ignasi Labastida (OEC / CC / University of Barcelona, Spain)

Bamidis Oct 2015

mEducator central idea

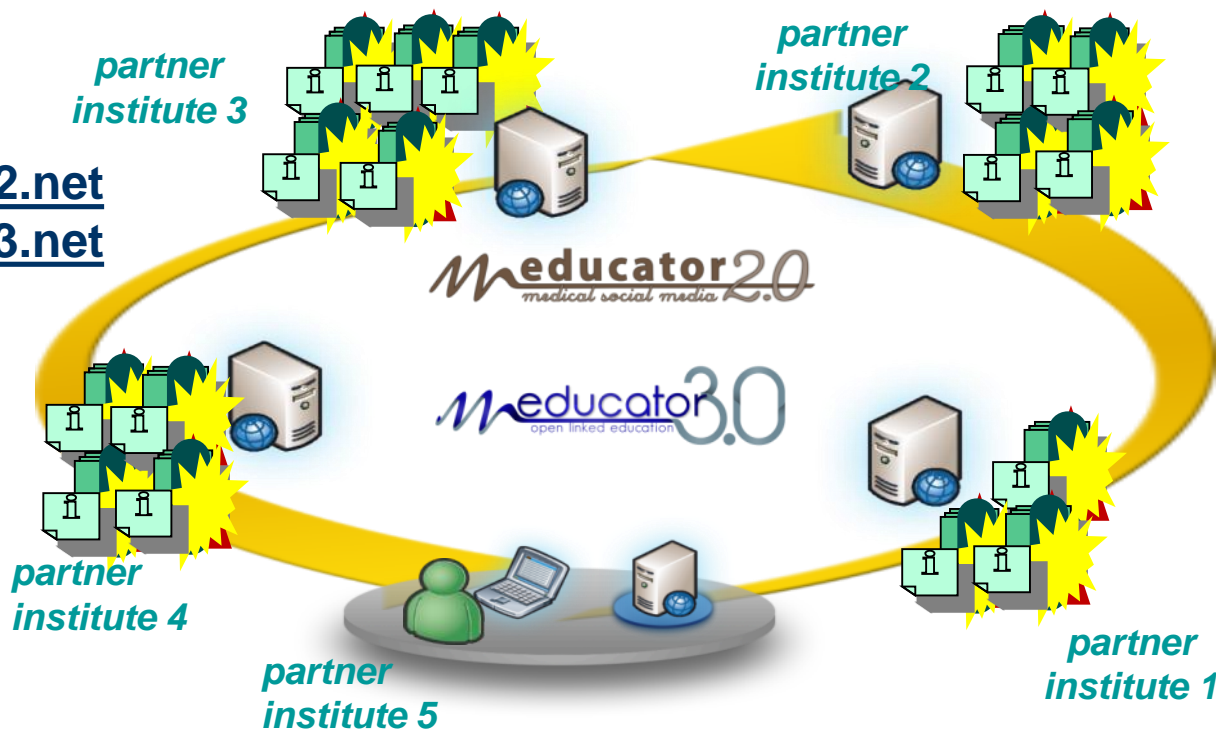
- discover, retrieve, use, rate, re-use and **re-purpose** educational content *irrespective* of any **L**earning **M**anagement **S**ystem use
- Target 1: providers and users of such content:
 - expert instructors (academics / health professionals)
 - students / learners
- Target 2: technical providers of educational (health care) solutions



The main product/service

1. mEducator 2.0: loosely coupled LCMSs via mashup technologies (Web2.0)
2. mEducator 3.0: LCMSs linked via (semantic) linked services (Web3.0)

www.meducator2.net
www.meducator3.net



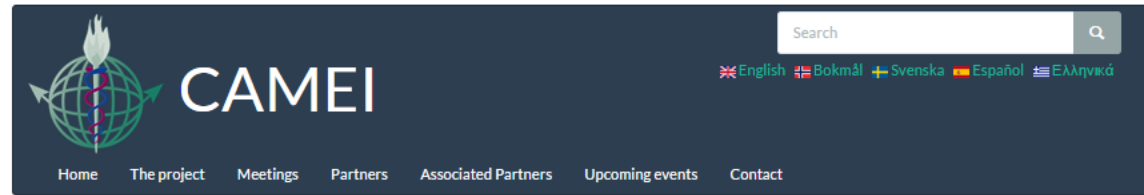
mEducator Video

<http://www.youtube.com/watch?v=HK5psY48kaQ>

CAMEI FP7 EU Project

CAMEI

Coordination Actions in the
scientific era of Medical
Education Informatics for
fostering IT skills for healthcare
workforce in the EU and USA



CAMEI EU Project
Welcome to CAMEI EU project

Main activities

- Coordinate research activities and policies towards the development of renewed educational material and programs
- Boost new trends for acquiring new knowledge by the healthcare workforce in EU and USA
- Foster trans-national access to research infrastructures from both EU and USA partners and establish a network of best practices in Medical Education Informatics
- Provide the ground so the healthcare workforce could gain IT skills and the trust on eHealth will be established

[Read more](#)



Keep me
informed!

Email

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Live Doc - White Paper on IT skills for
healthcare workforce in the EU and
USA and cooperation opportunities

CAMEI as an official networking
partner to
digital health days

ons in the
Medical
informatics for
healthcare
J and USA



17 & 18 June 2015
Thessaloniki, Greece
CAMEI Summer School

<http://www.camei-project.eu/>

Medical Learning Analytics (MLA)

- a completely new field, under-researched...
- encompasses the leverage of **Learning Analytics** technologies for boosting **medical educational** practices
- *...and establishing best practices in obtaining student interaction quality*
- *...by optimising learning in medicine and health sciences and fostering those activities that achieve clinical competency.*

Info:

- **mEducator:**
 - YouTube [mEducatorproject](#) channel
 - [The project final video is in YouTube:](#)
<http://www.youtube.com/watch?v=HK5psY48kaQ>
 - Follow us in Facebook and twitter (meducator, @meducator)
- **LLM and LLMcare**
 - www.longlastingmemories.eu
 - www.llmcare.gr
- **USEFIL**
 - www.usefil.eu
- **ePBLnet**
 - www.epblnet.eu
- **CAMEI**
 - <http://www.camei-project.eu/>
- **UNCAP**
 - <http://www.uncap.eu/>
- **SmokeFreeBrain**
 - <http://smokefreebrain.org/>
- pdbamidis@gmail.com Follow me @bamidis



Home About Important dates & submissions Programme Venue and



17 & 18 June 2015
Thessaloniki, Greece

CAMEI Summer School

Home > CAMEI Summer School

CAMEI Summer School

The CAMEI summer school aims to train the provision of IT skills to healthcare workforce, material applied in different contexts. The sur Education and technologies in providing opp

<http://mei2015.camei-project.eu/content/comei-summer-school>



Home About Important dates & submissions Programme Venue and useful information



17 & 18 June 2015
Thessaloniki, Greece

CAMEI Summer School

Welcome

Dear Colleagues,

We are glad to invite you to attend the 2nd International Conference take place in Thessaloniki, Greece from Thursday 18th to Satur

The conference is held in the premises of the Research Dissemination Center. The 2015 aims to bring together researchers in the multi-disciplinary

User login

<http://mei2015.camei-project.eu/>