how open data and knowledge sharing can facilitate regional growth: the case of agricultural sector

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www.agroknow.gr
WIRE 2014 conference
AGRO-KNOW: WHY, HOW AND WHAT WE ARE DOING
An company that captures, organizes and adds value to the rich information available in agricultural domain, in order to make it universally accessible, useful and meaningful.

http://www.agroknow.gr
knowledge aggregation & sharing solutions

Cultivation

- Educational
- Bibliographic
- Other

Unorganized Content in local and remote sites

Harvesting

- Ingestion
- Enrichment
- Translation
- Publication

Agricultural Data Platform

- Aggregate data from diverse sources
- Works with different type of data
- Prepare data for meaningful services

Blossom

- Data Discovery Services
- Widgets
- Authoring services
- Analytics services
open data relevant activities

• Participation in the data interoperability groups of the Research Data Alliance
  – wheat
  – germplasm
• Participation in Global Open Data for Agriculture and Nutrition (http://godan.info/)
• EU projects for the generation of a linked agricultural data infrastructure
  – agINFRA.eu
  – SemaGrow.eu
  – in G8 Open Data in Agriculture Action
    Plan for Europe
OPEN DATA IN AGRO-FOOD SECTOR
Agriculture is about to experience a “growth shock” in order to cover the exponentially increasing food needs of the global population

Key facts about agricultural trends

- All demographic and food demand projections suggest that, by 2050, the planet will face severe food crises due to our inability to meet agricultural demand – by 2050:
  - 9.3 billion global population, 34% higher than today
  - 70% of the world’s population will be urban, compared to 49% today
  - food production (net of food used for biofuels) must increase by 70%

- According to these projections, and in order to achieve the forecasted food levels by 2050, a total investment of USD 83 billion per annum will be required

- A large part of this investment will need to be focused on R&D
One of the most promising routes to agriculture modernisation is the provision of Open Data to all interested parties

Open Data in Agriculture

• In an era of Big Data, one of the most promising routes to achieve **R&D excellence in agriculture is Open Data**, and in particular:
  – provisioning,
  – maintaining,
  – enriching with relevant metadata and
  – making openly available a vast amount of open agricultural data

• The **use and wide dissemination of these data sets** is strongly advocated by a number of global and national policy makers such as:
  – The New Alliance for Food Security and Nutrition G-8 initiative
  – FAO of the UN
  – DEFRA & DFID in UK
  – USDA & USAID in the US
Global Country Boundaries 2012 Map

Website: http://data.fao.org

The Global Country Boundaries 2012 shows an up-to-date national boundaries of the world. In particular, the Sudan - South Sudan boundaries and the Jammu Kashmir area have been updated. The main source comes from the UN Cartographic Section. The whole package includes the following information: 1) a (...

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Διαθέσιμες δεδομένες

Αγορά Εργασίας
Αλεια
Βιομηχανία
Γεωργία
Αμπελουργικές καλλιέργειες
Γεωργικές εκτάσεις (Προσωρινά στοιχεία)
Καλλιέργειες (εκτός αμπέλων)
Δικαιοσύνη
Ειδούς Δαπ. Νοικοκυριών
Εμπόριο-Υπηρεσίες
Κτηνοτροφία
Μεταφορές
Οικοδόμηση-Κατασκευές
Πληθυσμός
Πολιτισμός-Ψυχαγωγία
Τουρισμός
Υγεία-Κοινωνική Προστασία
Urban Audit
Based on the top 25 main country producers from the last 5 years, this tool allows users to keep track of the historical levels of production (in tonnes) and the market share of today's top world producers dating from 1961 to 2009. Data can be visualized as a motion track Gapminder-type chart, a motion untracked bar chart, or a static line chart depending on the tab selected. [Source: FAO, (Raw Data)]
Greece

Income level
High income: OECD

GDP (current US$)
$249.1 billion 2012

Population, total
11.28 million 2012

World Development Indicators

Graph, map and compare more than 1,000 time series indicators from the World Development Indicators and more than 5,000 indicators from other collections such as Gender Statistics, African Development Indicators, and Education Statistics.

School enrollment, primary (% gross)
101% 2010

CO2 emissions (metric tons per capita)
7.7 2010
Introducing openFDA

More than 3 million adverse drug event reports at your fingertips.

Adverse drug event reports, 2004 to 2013, where an indication for use was hypertension.
open data is not always ready to be used....

• Messy data
• Should be collected/fused
• Should be filtered
• Should be validated
• Should be enriched with metadata to become discoverable
• Should be standardized to allow interoperability
opportunities for data oriented SMEs

1. Help organizations to open their data
   - consulting services
   - open source software as a service

2. Develop meaningful services using open data
   - data processing to improve quality
   - end users apps
USING OPEN DATA AND KNOWLEDGE SHARING IN AGRO-FOOD SECTOR
using open data to build an open and scalable infrastructure for food safety
using open data to support decision making for regional growth

browse agricultural resources and activities by geographical region to understand opportunities for grows at regional level
using open educational data to support training on organic agricultural localization to specific region by adapting content and using state of art language technologies
localizing open educational data to train the trainers

Title: Manager of a small meat producer
Description: This pathway presents the role of the manager of a small meat producer, the competencies they should possess, how they could improve his skills and a scenario of using GFSP learning infrastructure training opportunities.
Language: English

Job profile description of the persona

The manager of the meat producer company is exporting cooked ham to an international food distribution company. Still, he would like to find out more about the best practice in this field. In the supporting material, a manager can find information about the best practices in the industry.

Relevant competences that promote this person

The competences that a manager should possess are:
1. Legal knowledge & customer requirements
2. Team Management Skills
3. Management of Product Quality (see supporting material)
4. Quality Management and Assurance

Relevant training opportunities for this persona

Ways of improving the competences

The manager of the small meat producer company improves his competences by accessing a lot of material on portals, like the GSFP site. He enters various terms in the search bar and finds results as the below:

1. Hazard Analysis Critical Control Points (HACCP)
2. Methods of Determination for Drug Residue in Meat and Poultry
3. Methods of Determination for Artificial Colors in Foods
4. International Short Course in Food Safety

For more information, see the supporting material.

The manager visits all the interesting resources that he found and gets the materials he needs for improving his skills.
organizing events to spur innovation

challenges

creativity

hack using open data

everse
transferring innovation to the regional ecosystem

collaboration with stevianet.gr

platform for ag-machinery sharing

experiment
HOW WE COULD SHARE KNOWLEDGE BETWEEN EU/NATIONAL AND REGIONAL COMMUNITIES?
adapting open business models

Source diagram from Open Models concept paper: http://bit.ly/1p729Jm
taking stock of other existing work

Separate Independent (variably linked) actions

Collective and Cohesive Approach (More Collaboration, Coordination, Communication, Connection)
thank you

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