Open Data and Visualisation Tools in the EU institutions

ESS Visualisation Workshop
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Publications Office of the European Union
European Union Open Data Portal
Single point of access
For humans and machines (API, Sparql)
Data in open formats

Metadata
DCAT, DC, ADMS
Controlled vocabularies

Multilingual
Interface in 24 languages
EuroVoc Thesaurus

Standardised licence
Reuse is allowed, also for commercial purposes

Engagement with users
Suggest dataset
Social media
Share your app
EU Open Data Portal data sources: 60 data providers

27 European Commission DG:
BUDG, CNECT, COMM, COMP, DEVCO, DIGIT, DGT, EAC, ECFIN, EMPL, FISMA, GROW, ESTAT, JRC, JUST, MOVE, MARE, NEAR, OIB, OIL, OLAF, OP, REGIO, RTD, SANTE, SCIC, SG, TAXUD

European Parliament, The Council, EIB, COR, EESC, ECB, the European Ombudsman, the European Data Protection Supervisor

25 European Union Agencies:
CDT, CEDEFOP, CHAFEA, EACEA, EASA, EASME, EASO, EBA, ECDC, ECHA, EDA, EEA, EFCA, EFSA, EIGE, EIT, EMSA, ESMA, ETF, EUROFOUND, FRA, F4E JU, FRONTEX, OSHA, SESAR

Top Publishers
- Eurostat
  (6195 datasets)
The world produces more than 2.5 exabytes of data every day!

How can we deal with it?

- Data visualisation
- Gives fast access to insight from the flood of data
- Makes data accessible
- Is one of the best ways to analyse and understand the huge volumes of data
- Is more compelling than isolated facts or text
Data visualisations in the EU institutions

- Interinstitutional survey on data visualisation tools
- Preparatory study: Collection of requirements for the catalogue
- Implementation of the online catalogue
- Generic data visualisation framework: standards, additional services, knowledge sharing

Supported by ISA

- 2015
- 2016 (Q1-Q2)
- 2016 (Q3)-2017
Internal survey of data visualisation tools in the EU institutions

Outcome:

There are a lot of data for which DGs have no visualisation tools yet

There is a variety of visualisation needs and data types

Conclusions:

The need for more collaboration and sharing

There are possibilities for synergies and harmonisation

Follow-up actions:

Creation of catalogue of data visualisation software and applications

One of the survey questions:
Are there special categories of data that you would like to visualise?

Yes: 46.4%
No: 53.6%
Data visualisation software

User requirements for data visualisation software

- Easy internal handling
- Data export in various formats
- Reusability
- Adaptable visualisation design
- Interaction with data
- Data storage
- Independence from the CMS
Preparatory study: specification and requirements for the catalogue of visualisation software

User requirements
- User requirements of the EU institutions compared with businesses, science and industries

Classification of data and visualisations
- A classification of data types and visualisation types
- Visualisation requirements for different data types

An inventory of data visualisation tools
- Based on EU staff contribution and desk research
- To feed the future catalogue

Specification of the catalogue
- Data model for the catalogue
- Use cases for the catalogue
- High-level architecture

Planning of next steps
- Definition of roadmap for the implementation
The catalogue of data visualisation software and applications

The objectives

A trusted source of information about available data visualisation software and applications

Practical examples and practices allowing EU institutions and national administrations to explore, interpret and communicate data more easily, effectively and efficiently

Key use cases

Discovery of information about available data visualisation tools which can:

* produce a specific type of data visualisation, e.g. a graph or a map;
* visualise a specific type of data, e.g. statistical, textual, or geospatial data.
The catalogue of data visualisation software and applications

Catalogue features
- Web based
- Text search
- Facets and filtering
- Harmonised metadata
- Linked to examples of visualisations
- Linked to data

Challenges
- Data classification
- Visualisation typology
- Choice of metadata for the catalogue
- Maintenance + updates
- Will it be sufficient?
One of the challenges:
Data and visualisations typology

A proposal for the classification of visualisation typology:

The challenge: Is it sufficient? What other visualisation typologies would be appropriate?
Creating an inventory of data visualisation software and applications

- Data visualisation software and applications used by the EU institutions:
  - Will be documented in the report following a software description template.
  - This template will allow for an inventory of software and applications
  - Entry in the catalogue
Visualisation applications
A collection of 37 applications published on EU ODP
The future catalogue of data visualisation software
A possibility: integration with EU ODP

Example user story: using faceted search to discover tools that can produce charts
The future catalogue: linking data with visualisations and software

Dataset Status of bathing water (EEA)

Software description and source codes

https://plone.org/products/eea.daviz

Visualisation Status of bathing water

https://plone.org/products/eea.daviz
Impact of the initiative on users

- Better access to data
- Improved data quality
- Increased data openness
- Efficiency
- Cost savings
- Better image of EU
- Workforce satisfaction
- Steeper learning curve
- Increased internal cooperation
- Quality and process improvement
- Productivity
- Better access to data
- Improved data quality
- Increased data openness
- Efficiency
- Cost savings
- Better image of EU
Impact of visualisations on data

- More Openness
- Standards
- Reusability
- Data linking
- More insight: better quality

Impact of visualisations on data
Reuse and sharing possibilities

Preparatory study will be published
- Data model for the catalogue
- Data and visualisation classification

Software
- Descriptions - Open and reusable
- Source codes published

Visualisations of data
- Open and reusable
- Embeddable if possible
Thank you for your attention

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