An extensible architecture for an ecosystem of visualization web-components for Open Data

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Outline

- Why should data be open?
- Our vision about Open Data
- ROUTE-TO-PA

- Architecture
- Use cases

Why should data be open?

- **Transparency:**
  - citizens need to know what their government is doing;
  - not just ***accessing*** to data, but is also about ***sharing*** and ***reusing*** data.
- *Transparency: it's about making a full "read/ write" society.*

Our vision about Open Data

- **This is a data**

01010100 01101000 01101001 01110011
00100000 01101001 01110011 00100000
01110100 01101000 01100101 00100000
01110100 01110101 01110100 01101111
01110010 01101001 01100001 01101100
00100000 01110100 01101111 00100000
01101100 01100101 01100001 01110010
01101110 00100000 01100010 01101001
01101110 01100001 01110010 01111001
00101110 00100000 01001001 00100000
01101000 01101111 01110000 01100101
00100000 01111001 01101111 01110101
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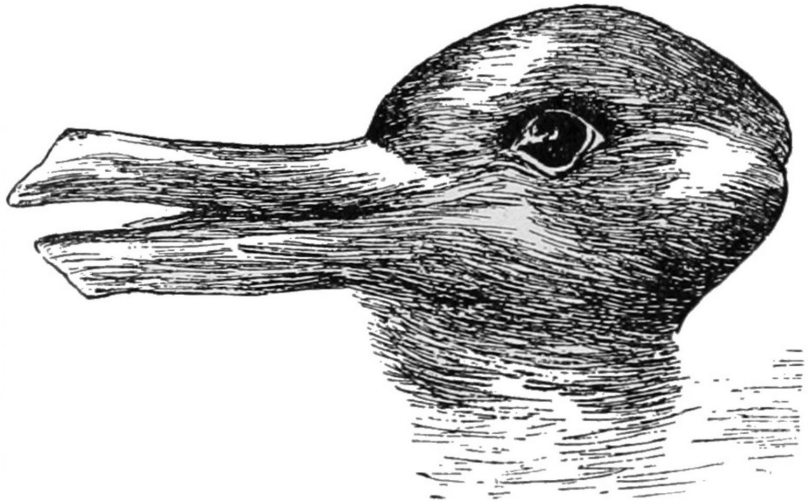
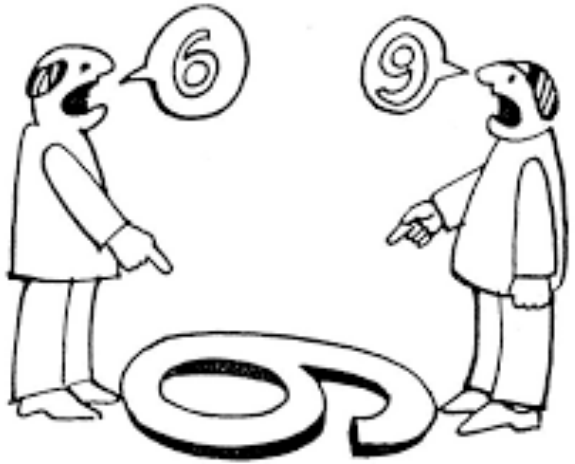
01110100 00100001



Our vision about Open Data



Our vision about Open Data

Show 10 entries Search:

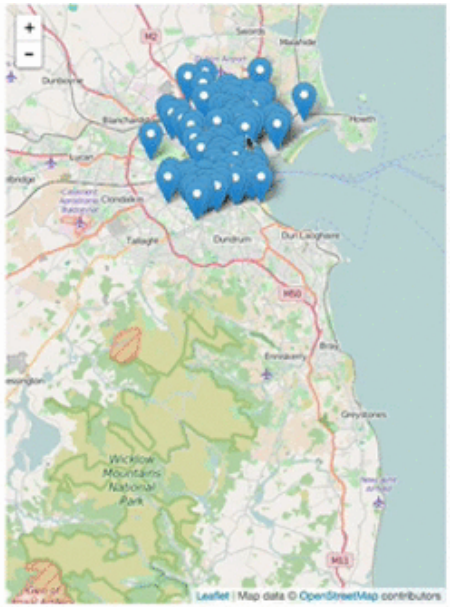
Source: http://ckan.routetopa.eu

Lat	Long	Location
53.3704431021414	-6.38566204739542	50 Burnell Park Avenue, Carpenterstown, Castleknock, Dublin 15
53.3705549492505	-6.37904598838631	15 Mulberry Drive, Carpenterstown Road, Castleknock, Dublin 15
53.3759621181457	-6.05564750985371	Ganton, Thormanby Road, Howth, Co. Dublin
53.3771036669717	-6.06513665714916	19 Woodside, Windgate Road, Howth, Co. Dublin
53.3777031058435	-6.05438173967134	9 Thormanby Lodge, Howth, Co.Dublin
53.3781954718046	-6.35967399299455	43 Woodview Park, Castleknock, Dublin 15
53.3804687868629	-6.06155762194807	21 Thormanby Lawns, Howth, Co. Dublin
53.3825968983149	-6.06251817074814	15 Asgard Road, Howth, Dublin 13
53.3840359993086	-6.09781461188301	67 Offington Park, Sutton, Dublin 13
53.3844192056622	-6.06434066266143	1 Thormanby Road, Howth, Co. Dublin

Lat	Long	Location

Showing 1 to 10 of 100 entries

Previous 1 2 3 4 5 … 10 Next



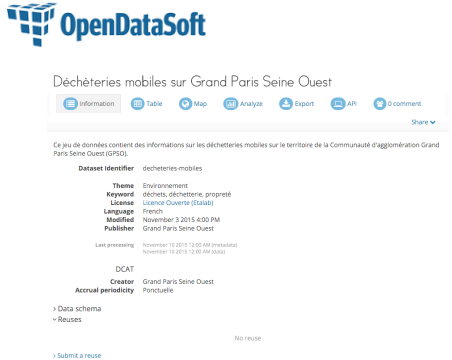
Source: http://ckan.routetopa.eu

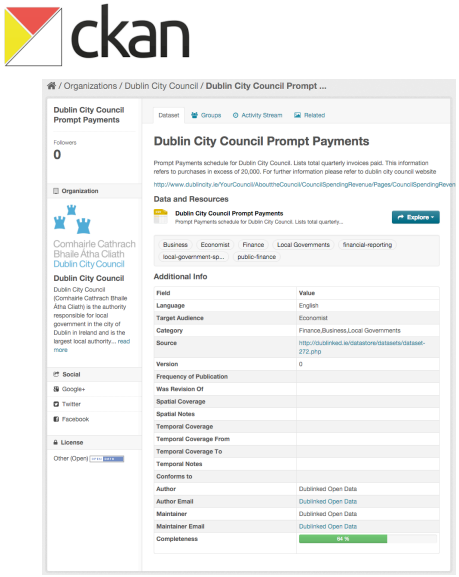
Powered by Route-to-PA

Our vision about Open Data

- ICT should contribute to solve this problem, by providing tools for
  - accessing;
  - reusing;
  - sharing.

- The data must be in machine readable format (example an access system must provide API).





ROUTE-TO-PA

- Raising Open and User-friendly Transparency-Enabling Technologies for Public Administration (ROUTE-TO-PA)
  - **12** Participants
    - research, industry, pilots
    - plus additional pilots
  - **6** Countries involved
  - **3** M€ funding
  - **3** research products
  - **4** research areas

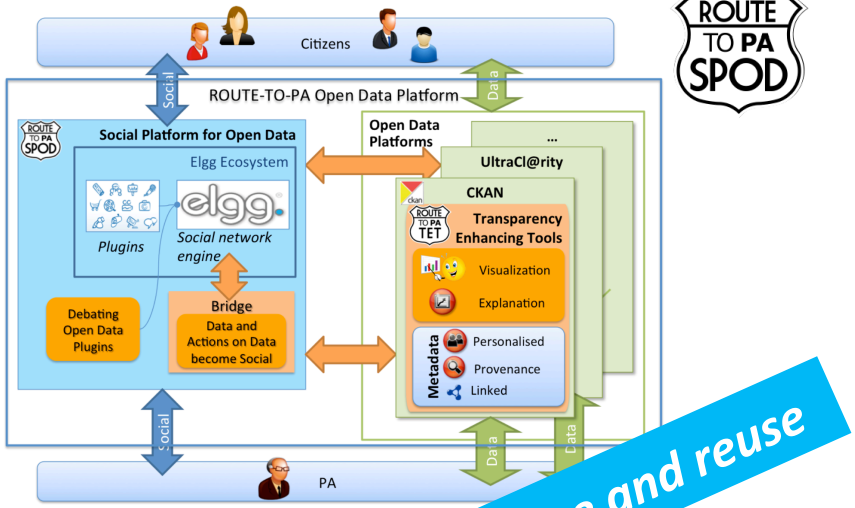
ROUTE-TO-PA answers …

Improving the engagement of citizens

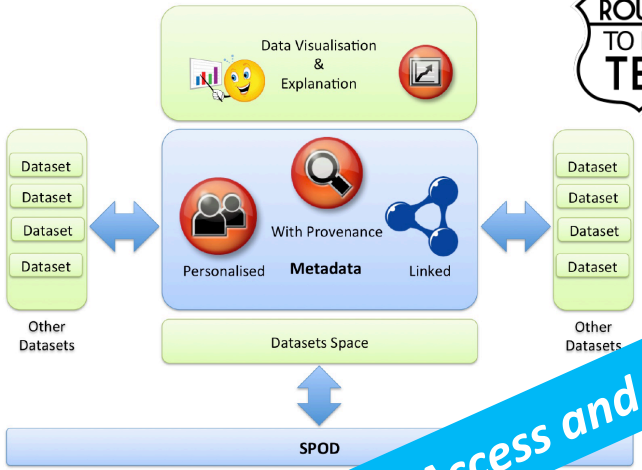
- Social interactions
  - Online communities
  - A “route” to PA for citizens
  - .. and viceversa
- Holistic understanding
  - A customized view…
    - by personalisation
    - for different segments
  - .. provides data of value to each citizen

ROUTE-TO-PA results …

- Social Platform for Open Data



- Transparency Enhancing Toolset



Share and reuse

Personalized Access and reuse

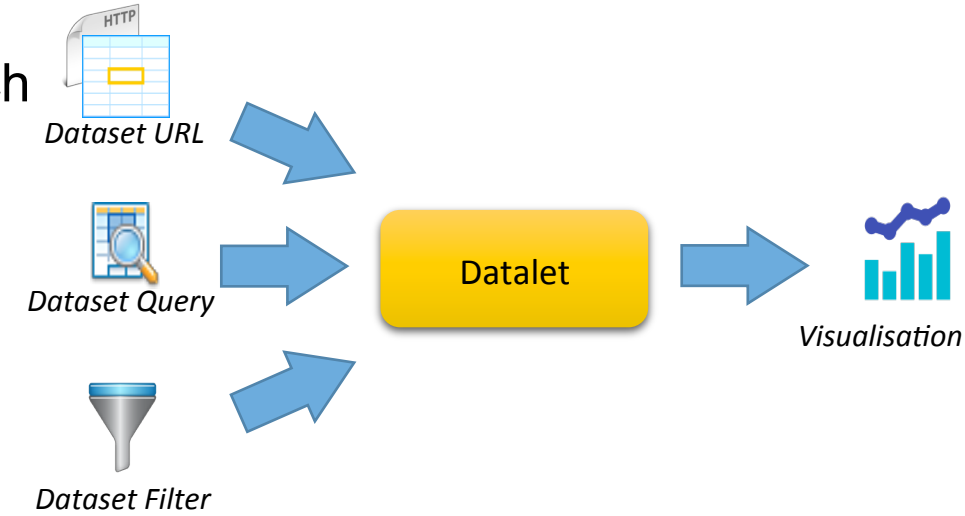
- Good practices and recommendations

Architecture

Architecture

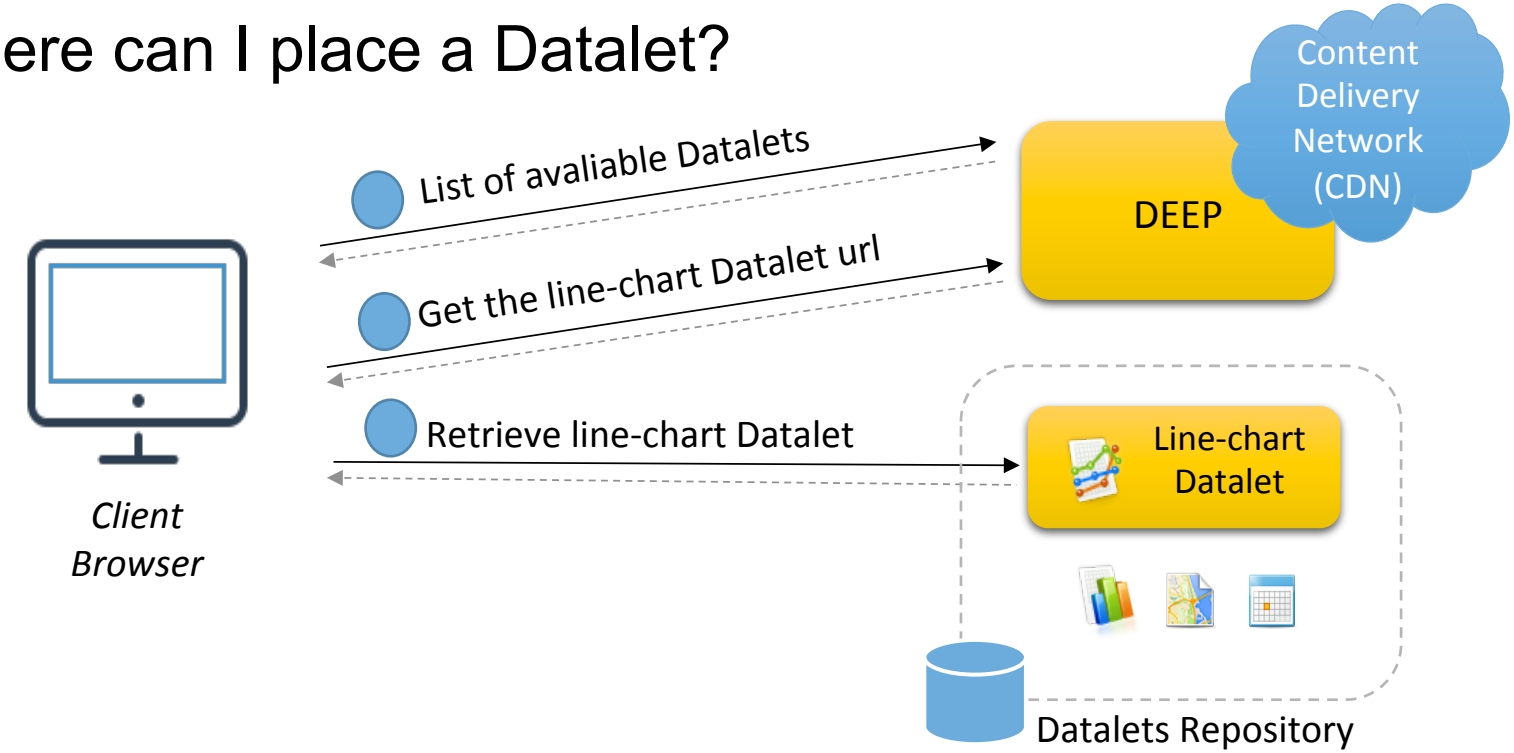
- The DataIEt-Ecosystem Provider (DEEP)
- What is a Datalet?
  - Self-consistent web content.
  - OO inspired.
  - Live Data-Driven approach

  for interacting visualisation.



Architecture

- Where can I place a Datalet?

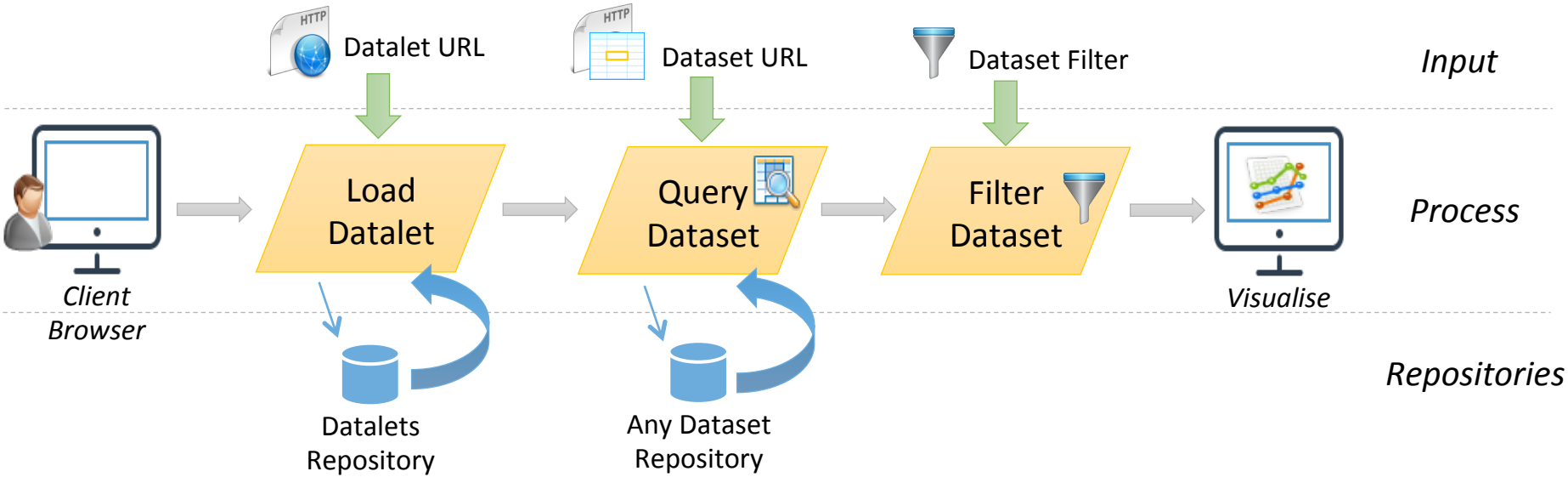


Architecture

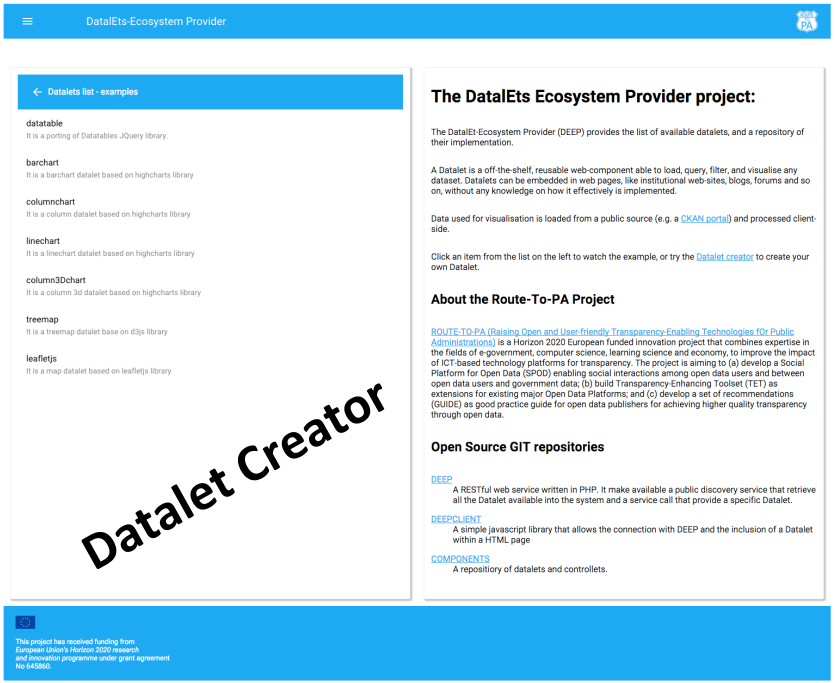
- Building bricks?
  - Web-Component
  - JavaScript and Code Injection
  - RESTful service
  - Polymer
  - HTML 5
  - CSS
  - JSON
  - PHP

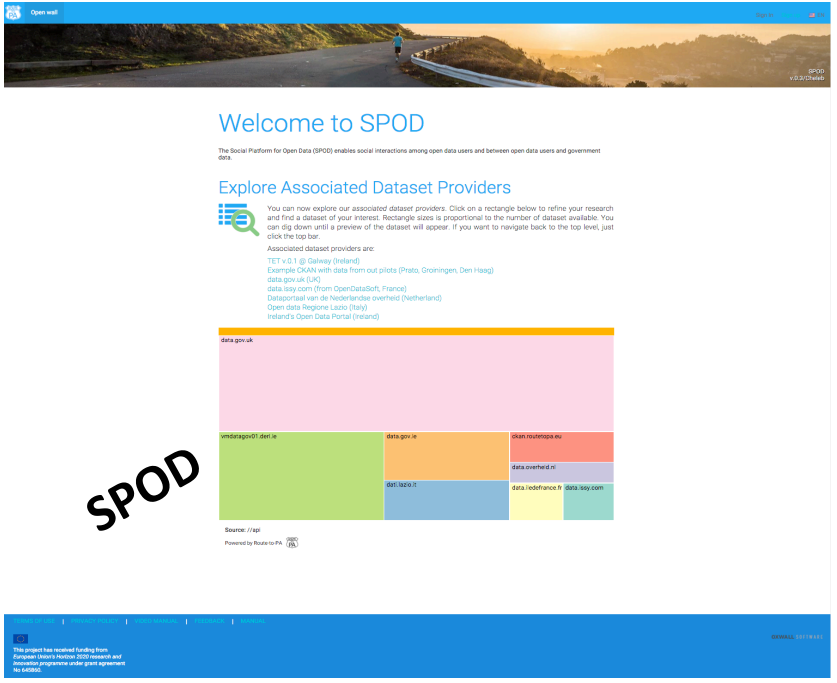
Architecture

- Work-Cycle



Use cases


DataIEts-Ecosystem Provider
Datalets list - examples
datatable
It is a porting of Datatables JQuery library.
barchart
It is a barchart datalet based on highcharts library
columnchart
It is a column datalet based on highcharts library
linechart
It is a linechart datalet based on highcharts library
column3Dchart
It is a column 3d datalet based on highcharts library
treemap
It is a treemap datalet base on d3js library
leafletjs
It is a map datalet based on leafletjs library
The DataIEts Ecosystem Provider project:
The DataIEt-Ecosystem Provider (DEEP) provides the list of available datalets, and a repository of their implementation.
A Datalet is a off-the-shelf, reusable web-component able to load, query, filter, and visualise any dataset. Datalets can be embedded in web pages, like institutional web-sites, blogs, forums and so on, without any knowledge on how it effectively is implemented.
Data used for visualisation is loaded from a public source (e.g. a CKAN portal) and processed client-side.
Click an item from the list on the left to watch the example, or try the Datalet creator to create your own Datalet.
About the Route-To-PA Project
ROUTE-TO-PA (Raising Open and User-friendly Transparency-Enabling Technologies fOr Public Administrations) is a Horizon 2020 European funded innovation project that combines expertise in the fields of e-government, computer science, learning science and economy, to improve the impact of ICT-based technology platforms for transparency. The project is aiming to (a) develop a Social Platform for Open Data (SPOD) enabling social interactions among open data users and between open data users and government data; (b) build Transparency-Enhancing Toolset (TET) as extensions for existing major Open Data Platforms; and (c) develop a set of recommendations (GUIDE) as good practice guide for open data publishers for achieving higher quality transparency through open data.
Open Source GIT repositories
DEEP
A RESTful web service written in PHP. It make available a public discovery service that retrieve all the Datalet available into the system and a service call that provide a specific Datalet.
DEEPCLIENT
A simple javascript library that allows the connection with DEEP and the inclusion of a Datalet within a HTML page
COMPONENTS
A repositiory of datalets and controllets.
This project has received funding from European Union's Horizon 2020 research and innovation programme under grant agreement No 645860.
Datalet Creator


Open wall
Welcome to SPOD
The Social Platform for Open Data (SPOD) enables social interactions among open data users and between open data users and government data.
Explore Associated Dataset Providers
You can now explore our associated dataset providers. Click on a rectangle below to refine your research and find a dataset of your interest. Rectangle sizes is proportional to the number of dataset available. You can dig down until a preview of the dataset will appear. If you want to navigate back to the top level, just click the top bar.
Associated dataset providers are:
TET v.0.1 @ Galway (Ireland)
Example CKAN with data from out pilots (Prato, Groiningen, Den Haag)
data.gov.uk (UK)
data.issy.com (from OpenDataSoft, France)
Dataportaal van de Nederlandse overheid (Netherland)
Open data Regione Lazio (Italy)
Ireland's Open Data Portal (Ireland)
data.gov.uk
vmdaragon01.deri.ie
data.gov.ie
ckan.routetopa.eu
data.overheid.nl
dati.lazio.it
data./edefrance.fr
data.issy.com
Source: //api
Powered by Route-to-PA
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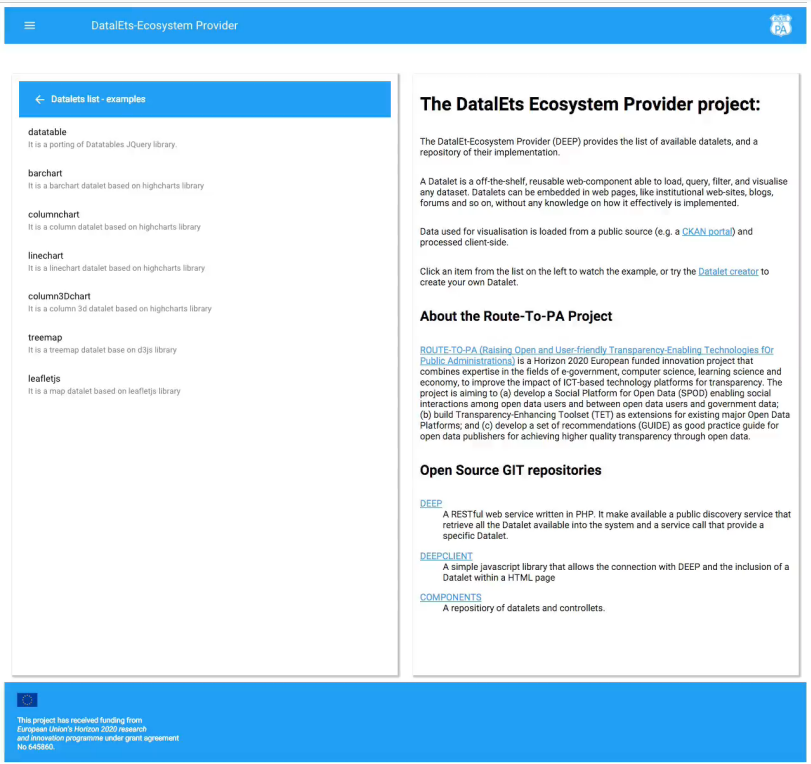
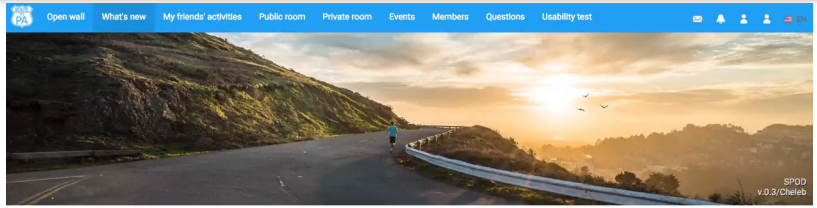
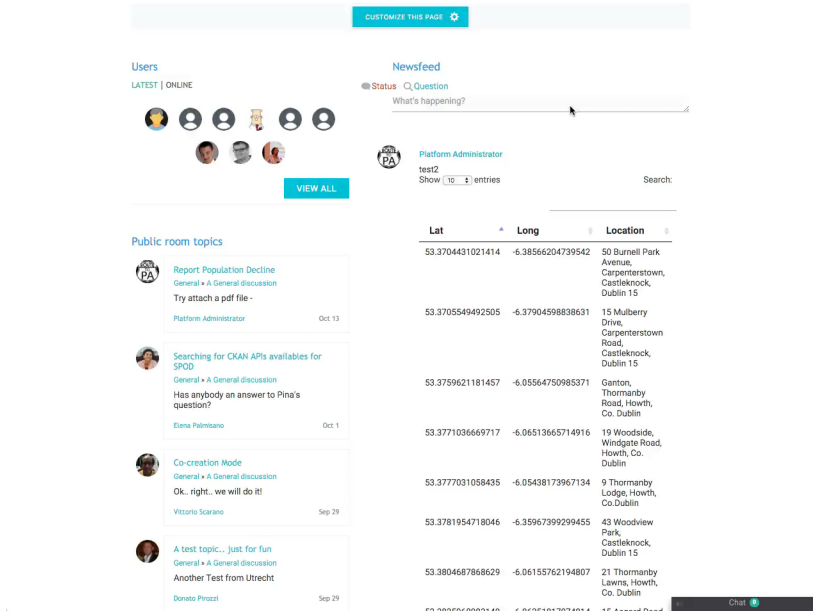
SPOD

Datalet Creator



SPOD


Open wall
What's new
My friends' activities
Public room
Private room
Events
Members
Questions
Usability test
SPOD
v.0.3/Cheleb


CUSTOMIZE THIS PAGE
Users
LATEST | ONLINE
VIEW ALL
Public room topics
Report Population Decline
General › A General discussion
Try attach a pdf file -
Platform Administrator
Oct 13
Searching for CKAN APIs availables for SPOD
General › A General discussion
Has anybody an answer to Pina's question?
Elena Palmisano
Oct 1
Co-creation Mode
General › A General discussion
Ok.. right.. we will do it!
Vittorio Scarano
Sep 29
A test topic... just for fun
General › A General discussion
Another Test from Utrecht
Donato Pirozzi
Sep 29
Newsfeed
Status
Question
What's happening?
Platform Administrator
test2
Show 10 entries
Search:
Lat
Long
Location
53.3704431021414
-6.38566204739542
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-6.35967399299455
43 Woodview Park, Castleknock, Dublin 15
53.3804687868629
-6.06155762194807
21 Thormanby Lawns, Howth, Co. Dublin
Chat

Conclusions and Future work

- **Security**
  - Datalets certification mechanism (trust in data provenance).
- **Efficiency**
  - Client side efficiency (caching mechanism).
  - Server side efficiency (CDN).
- **Smart** visualisation
  - Suggesting Datalets/Dataset according to statistics and metrics.

Questions?

- www.routetopa.eu
- deep.routetopa.eu
- ROUTE-TO-PA coordinator:
  - Vittorio Scarano (University of Salerno, Italy)
  - coordinator@routetopa.eu

Thank you for your attention.