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Data Demand and Re- use in the Public Sector

*29 March 2022
10:00-12:00 CET*

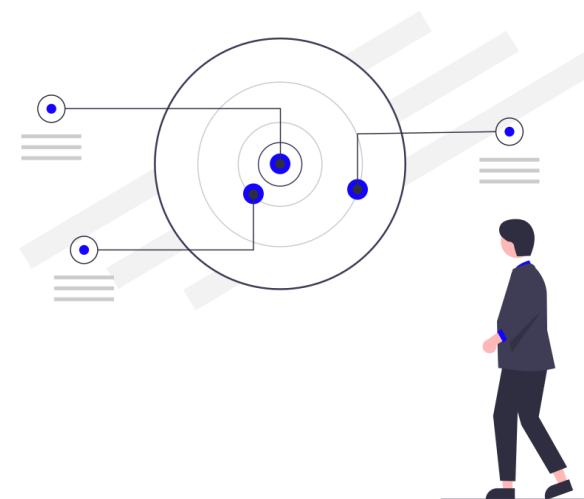


data.europa.eu The official portal
for European data



Goals

- Gain insight into the value of data re-use within the public sector
- Learn about different approaches to measure public institutions' data demand
- Strengthen the understanding of a demand-driven approach to data publication
- Reflect on how data.europa.eu can support data providers in taking on board public institutions' data demand



Agenda

10.00	Introduction to data re-use in the public sector and measuring demand <i>Charlotte van Ooijen, associate director digital government and data, the Lisbon Council</i>
10.30	Best practices with expert speakers <ul style="list-style-type: none">➤ <i>Frederika Welle Donker, assistant professor, Knowledge Centre Open Data, Delft University of Technology, the Netherlands</i>➤ <i>Antonin Garrone, product owner data.gouv.fr, Etalab-DINUM-Prime Minister's Office, France</i>
11.00	Short break
11.05	Interactive discussion How to improve the measurement of public institution's data demand in Europe, supported by data.europa.eu
11.25 (+30 min)	Recap and next steps
12.00	Closing

Introduction to data re-use in the public sector and measuring demand



Highlights discussion paper
“Measuring Data Demand
within the Public Sector”



What is happening in YOUR
organisations? (mini-survey)

https://data.europa.eu/sites/default/files/report/Discussion_Paper_Measuring_Data_Demand_Within_the_Public_Sector.pdf

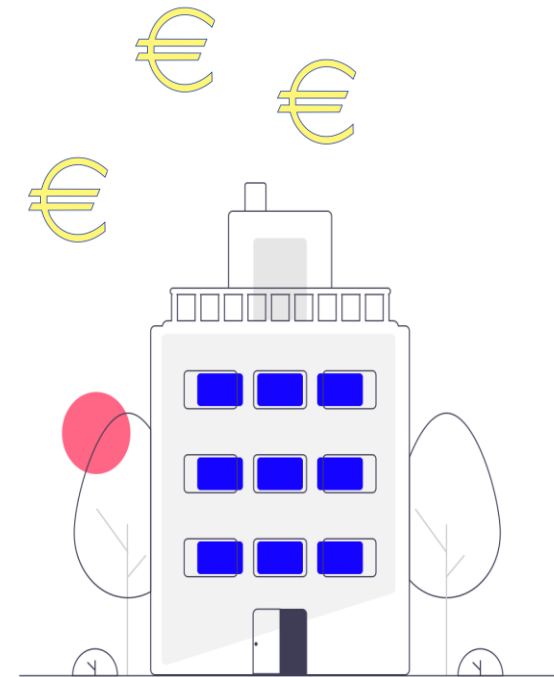
Data re-use in the public sector



Source: Van Ooijen, Ubaldi and Welby, 2019

Missed potential of data re-use in the public sector

- Historic focus on economic value creation > business users
 - Wrong assumption about free data flow in the public sector
 - Lack of drive to scale-up scattered best practices
- >> need to consider public institutions as data re-users from the outset of the data publication process!



Research questions

- What approaches and indicators do EU institutions and national public administrations have to measure the open data demand of public institutions as data re-users?
- What indicators to measure public institutions' open data demand are present in international measurement frameworks?
 - What do the indicators measure?
 - What method(s) are used for data collection?
 - What are the pros and cons of the different data collection methods?



Public institutions' data demand is...

a combination of:

- Popularity of existing datasets
- Interest in (new) data categories
- Requirements regarding data usability (quality, completeness, update frequency, quality of metadata, standardisation)
- Needs in terms of support to re-use (e.g. visualisation tools, online assistance, feedback mechanisms)

>> that are specific to data-driven applications in the public sector

Approaches by Member States

- Community engagement
 - Data awareness projects, hackathons, co-creation events, information sessions and regular training for civil servants
 - Consultations regarding data publication (not support)
 - E.g. Data communities in the Netherlands
 - User research (e.g. user surveys and interviews in France)
 - Portal features (e.g. rating system in Ireland)
- >> **Mechanisms to foster (not measure) general data demand (not by public institutions specifically)** are dominant

Approaches by EU institutions

- Little public evidence available, except:

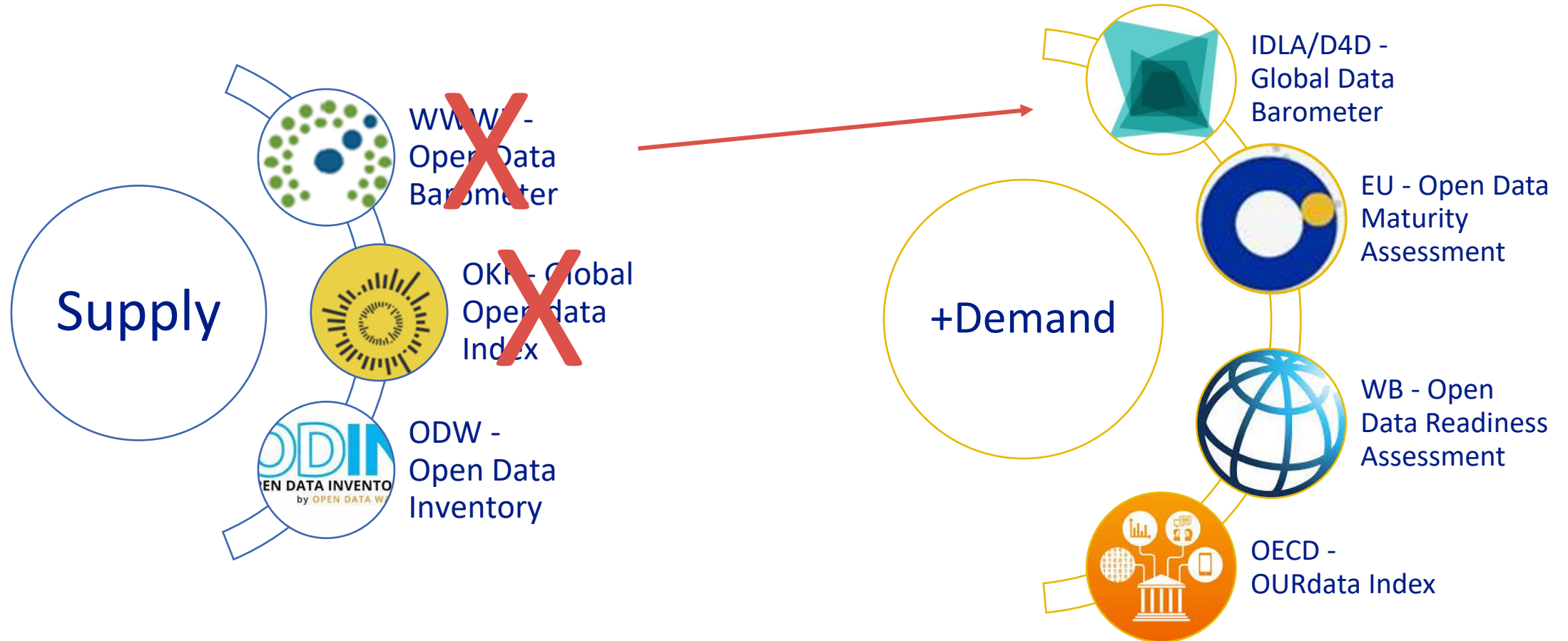
>> Under-documented?

Analytical Report n19



Analytical Report 19
UNDERSTANDING SUPPLY AND DEMAND IN DATASET SEARCH ON THE
EUROPEAN DATA PORTAL

International (open) data measurement frameworks



Demand-focused indicators



Global Data Barometer

- Core modules “governance” and “capability” e.g. *Yes*

There are clearly documented processes for soliciting and integrating feedback from external users to improve data quality. (No, Partially, Yes)



Open Data Maturity Assessment

- Dimensions “impact” and “portal”, e.g.

Has open data had a low/medium/high impact on increasing government effectiveness, e.g. improving quality of service delivery? Please provide examples



Open Data Readiness Assessment

- Dimension “Demand for Open Data”, e.g.

How responsive do external stakeholders consider the government is in responding to requests for information?

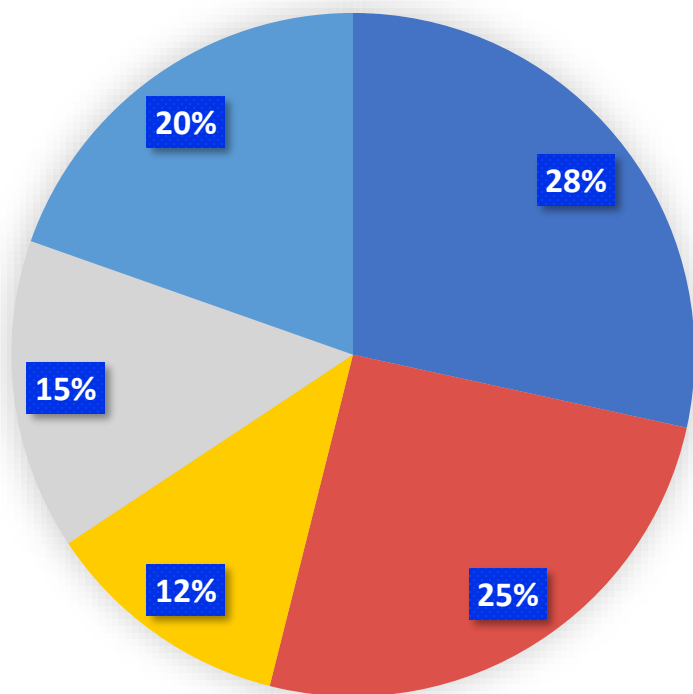


OURdata Index

- “Government support to the re-use” Pillar, e.g.

At the central/federal government are line ministries/agencies formally encouraged to raise awareness among public servants regarding the opportunities to re-use open government data inside the public sector?

About you



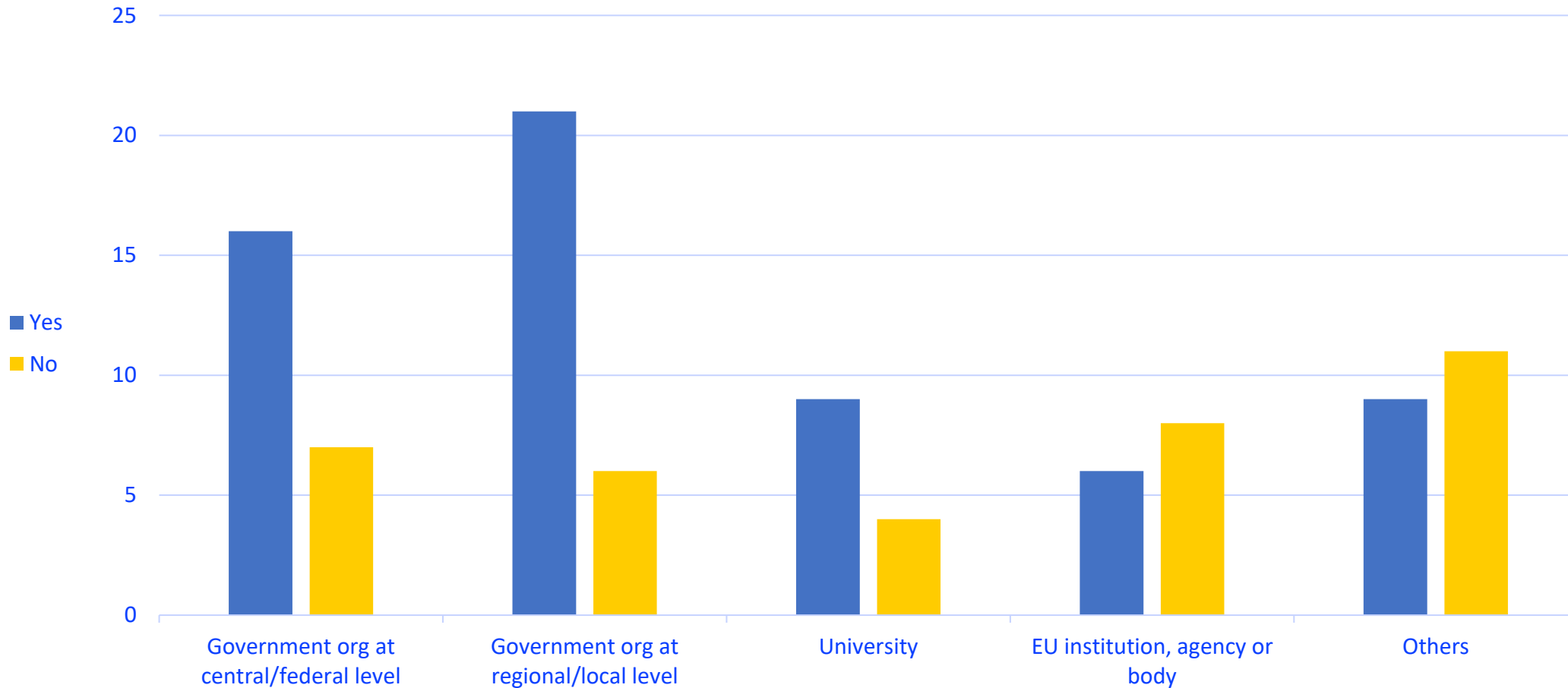
Tot: 108 respondents

- A government organisation at the central/federal level
- A government organisation at the regional/local level
- University
- An EU institution, agency or body
- Others

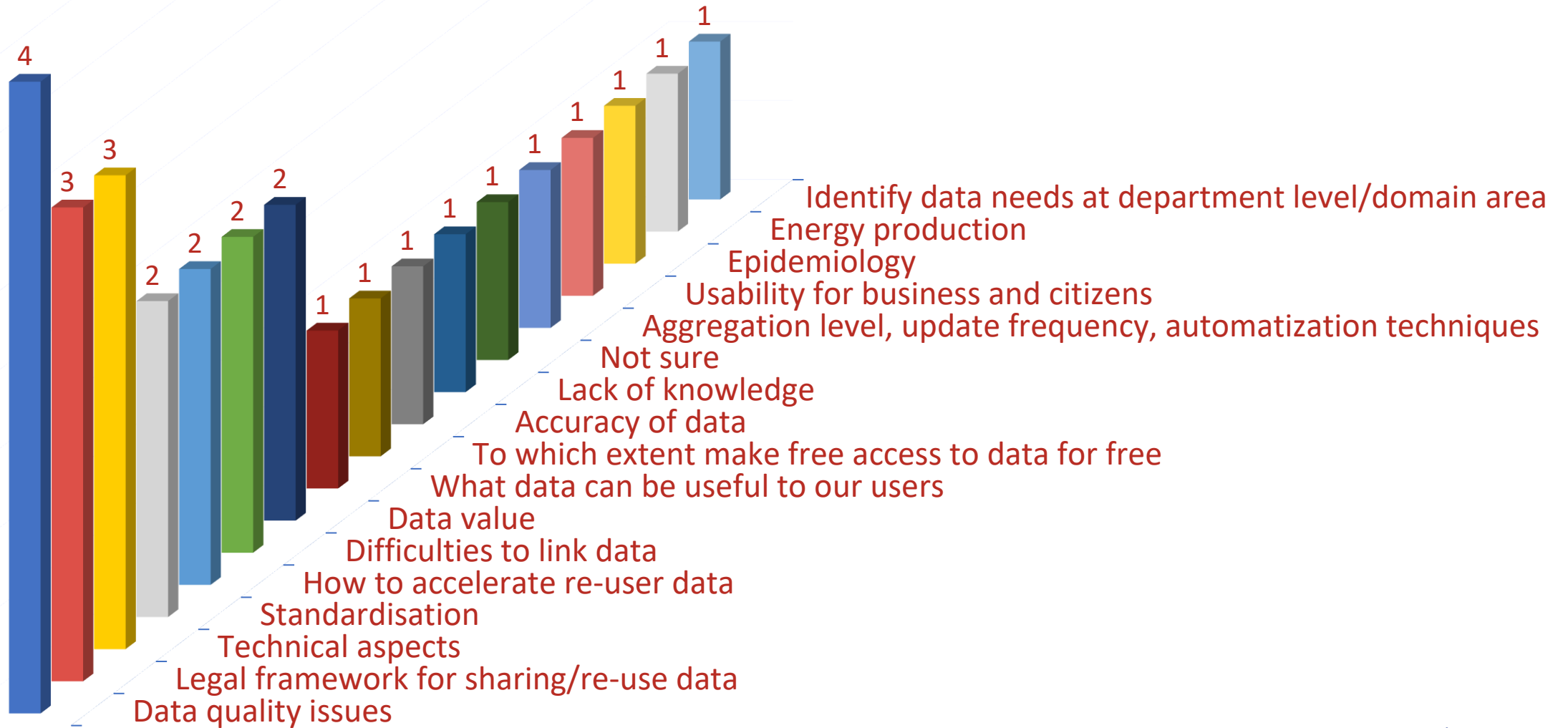
Other organisations include:

- Educational institution
- Individuals
- Civil society
- NGO
- Start up
- Think tank
- Industry
- Private sector
- Digital Innovation Hub
- Public institutions
- Networks
- Public sector

Had you given thought to data re-users from public institutions prior to this webinar?

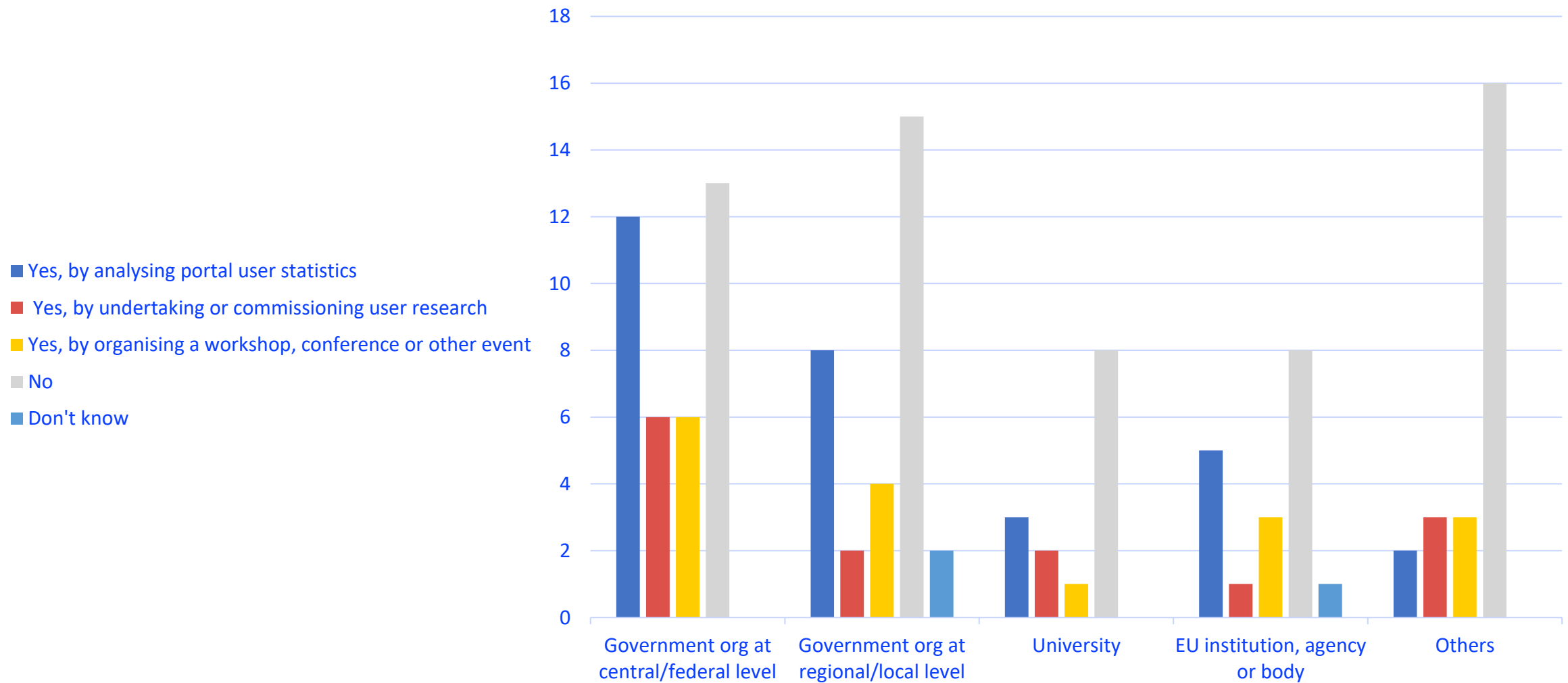


Issues with data re-users from public institutions

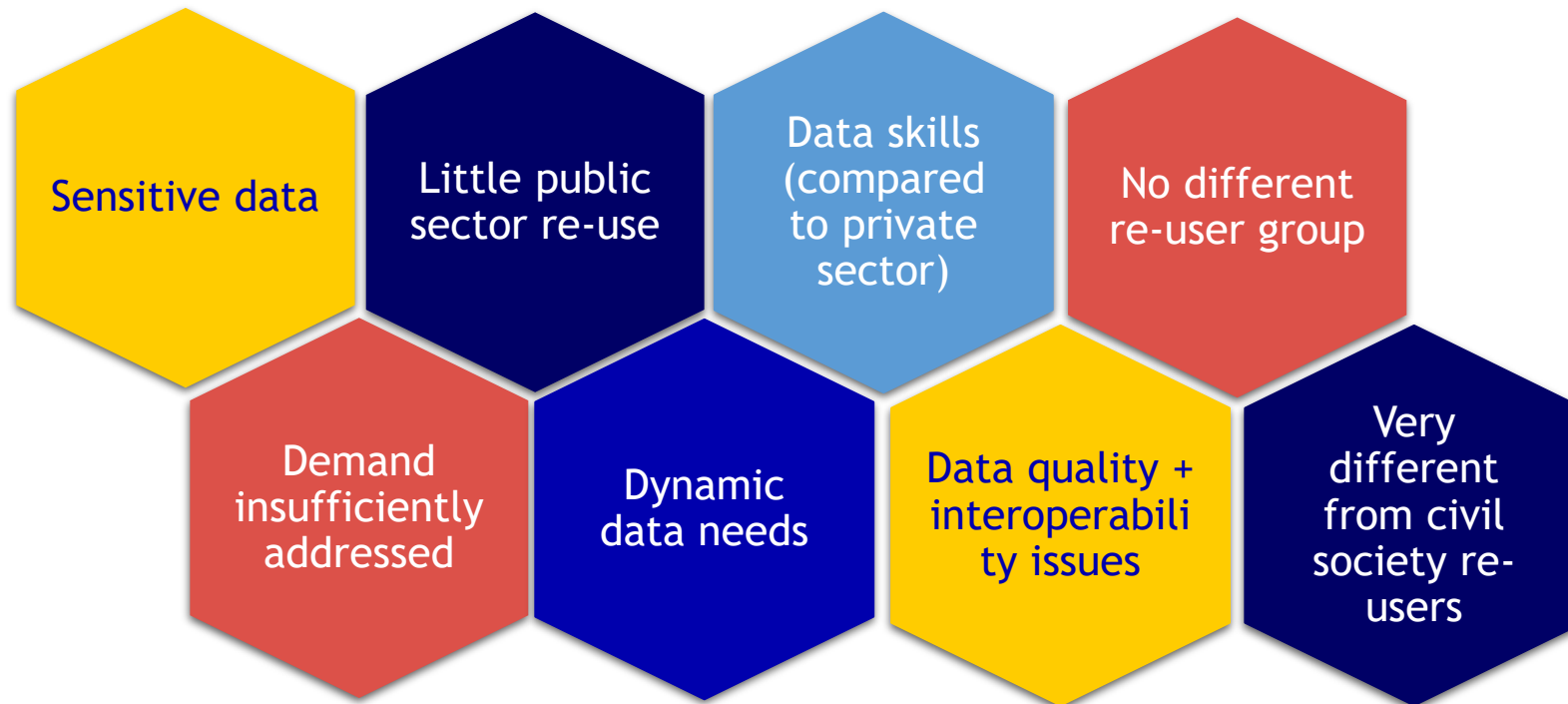


Tot: 28 answers received

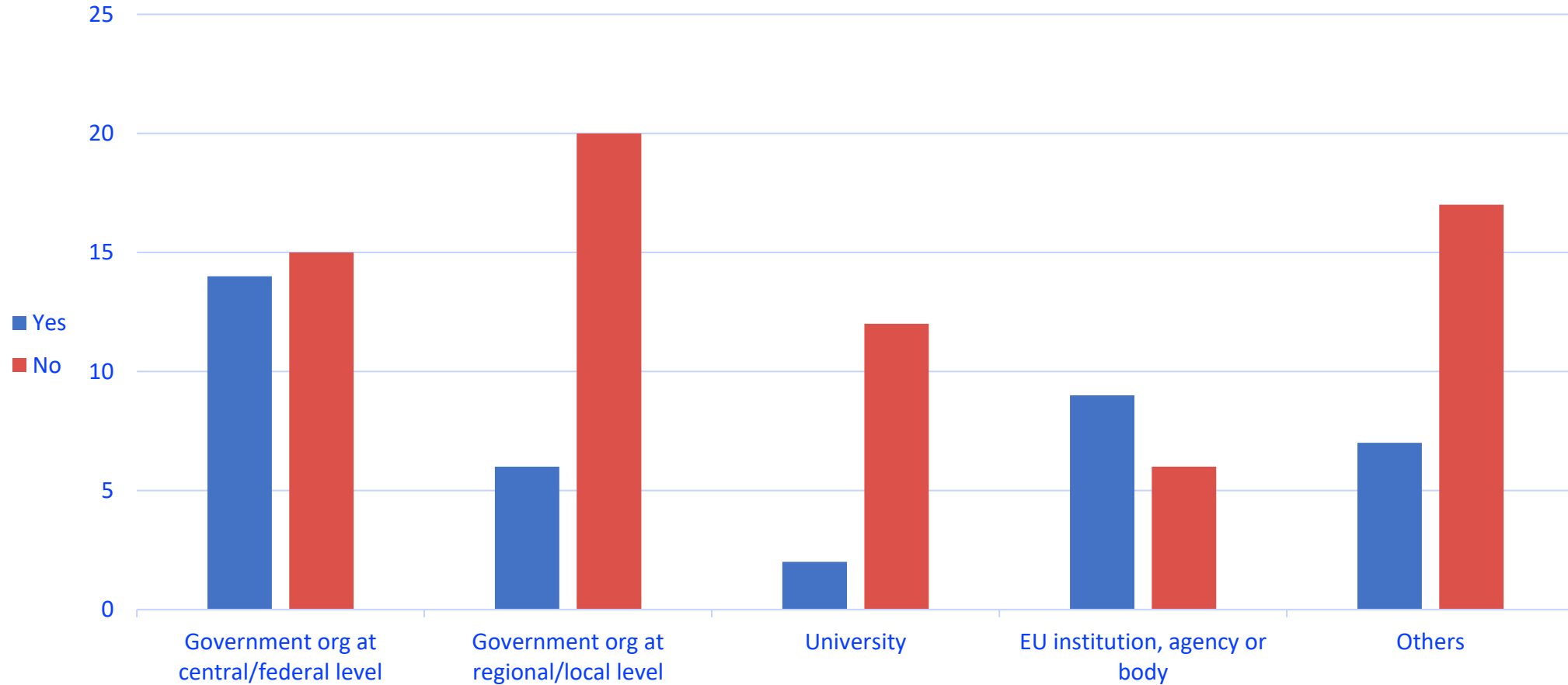
Has your organisation undertaken activities to assess the demand of data re-users from the public sector?



Experiences with data re-users from the public sector



Has your organisation ever acted as an open data re-user?



Tot: 108 answers received

Examples of open data re-use in the public sector

SOURCES
EUROSTAT
Icelandic institutions
Data.Overheid.nl
INE
CORDIS
ESTAT
European Commission
European Parliament
Datasets on EU funding programmes

DATA TYPES
Labour participation
Postal codes
Tax data
Administrative data for official statistics
Basic statistics (e.g. population data)
Energy statistics
Air quality measurements
Various statistics

Tot: 20 answers received

PURPOSES
To reshape electoral areas
For different studies
For impact assessments for legislative needs
To provide better accuracy when analysing aggregated citizens' profiles
To make comparisons among cities
To tailor products
To identify grant representatives to contact
For environmental and health impacts
For market research
To support the rationale for mental healthcare proposals

Conclusion

Feeble evidence in academic and policy literature of existing approaches and indicators developed by EU institutions and Member States to assess public institutions' open data demand

>> **not well-documented and published**

Available evidence suggests that initiatives are aimed at:

- **Fostering** demand for existing open data rather than **measuring** demand for (new) data and required support
- **Data re-users as a homogeneous group**, not public sector re-users specifically

Key questions



1. Why is it important to measure public institutions' data demand?
2. What are suitable engagement activities for public sector re-users?
3. What is needed to evolve demand measurement from an occasional to a structural activity?
4. How can automated metrics be leveraged to measure the data demand by public institutions?
5. To what extent can existing international indicators be re-used and complemented to measure public institutions' data demand?
6. How can data providers in EU institutions and Member States be supported in adopting a demand-driven approach towards the publication of open data for public sector purposes?

Open Data Reusers

data.europa academy webinar 29 March 2022

Data demand and re-use in the public sector.

Frederika Welle Donker,
Assistant Professor Delft University of Technology

f.m.welledonker@tudelft.nl

What to expect

- Quick overview of research carried out in 2019 for Dutch Ministry of the Interior & Kingdom Relations into open data reusers
- Developments since then

Open Data in the Netherlands

- Open data since 2011
- Ministry of the Interior and Kingdom Relations (BZK) responsible for Open Data Agenda
- Many open data portals
 - National: e.g. statistical data, geodata
 - Local: local governments
- Indications of large scale open data reuse
- However, by which types and for which goals?

Research Questions in 2019

1. Who are open data reusers?
 - Which types / categories?
 - Interrelations?
2. In which ways are open data reused?
 - How to find / which datasets, etc.
3. Which barriers do open data reusers encounter?
 - E.g. data quality
 - Which suggestions
4. What are the needs of open data reusers?
 - Accessibility
 - Quality

Research Methodology

- Quantitative analysis of IP numbers of log file data Jan-Feb 2019:
 - CBS Open Data Portal (statistical data)
 - PDOK Open Data Portal (geodata)
 - Data.overheid.nl (open government data)
- Qualitative analysis:
 - Online questionnaire (23 Nov. 2018-31 Jan. 2019)
 - Workshop TUD researchers 8 March 2019
 - Interview with reusers (June 2019)
 - Online validation with interviewees for rating
- Quantitative analysis of Tweets related to Open Data sentiment between 2010 and 2018

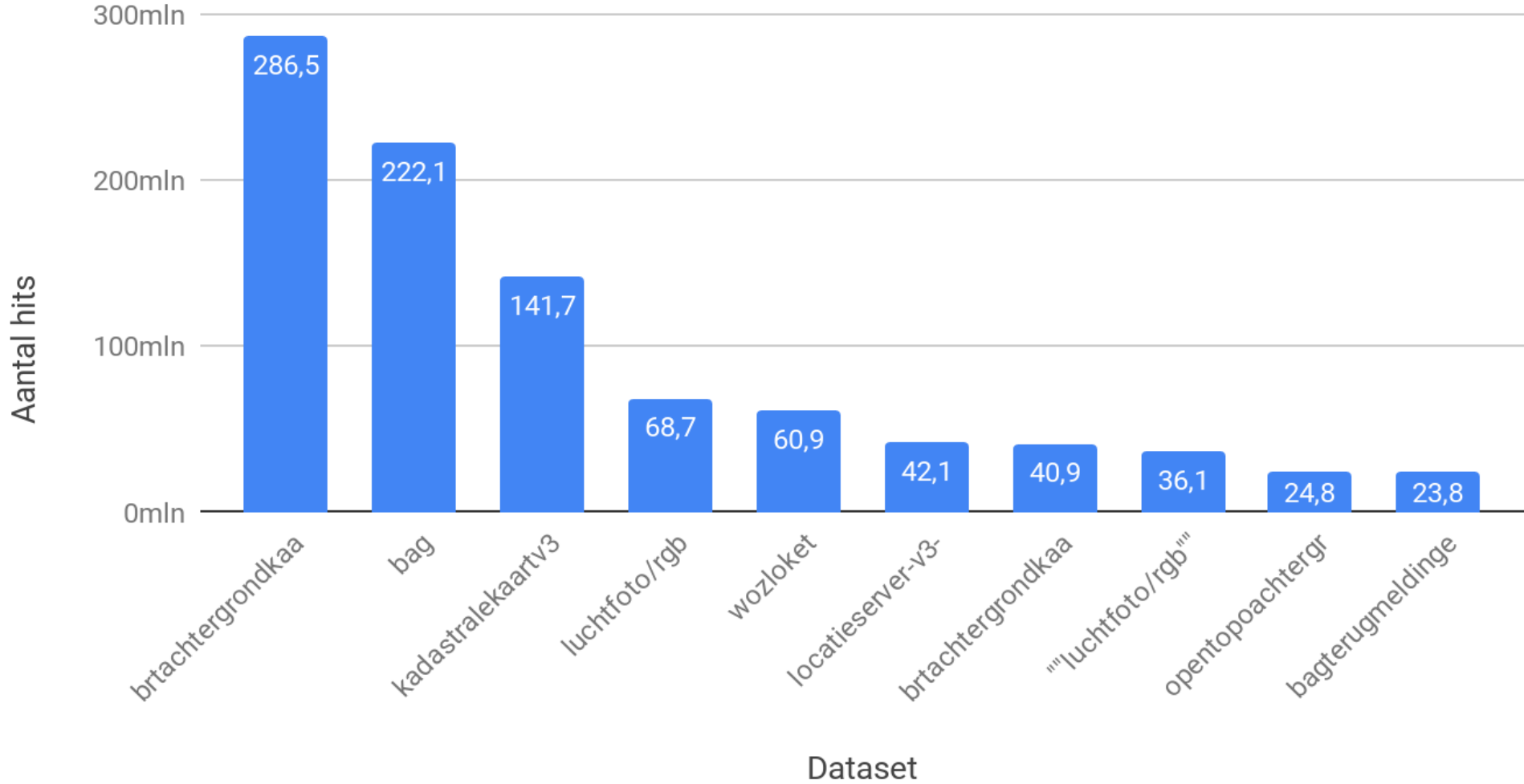
Identified types of reusers (as enablers)

- Commercial
 - Micro enterprises (1-9 staff)
 - Small to medium enterprises (10-249 staff)
 - Large enterprises (≥ 250 staff)
- Not-for-Profit
 - Government organisations
 - NGOs
 - Research / education institutes
 - Concerned citizens

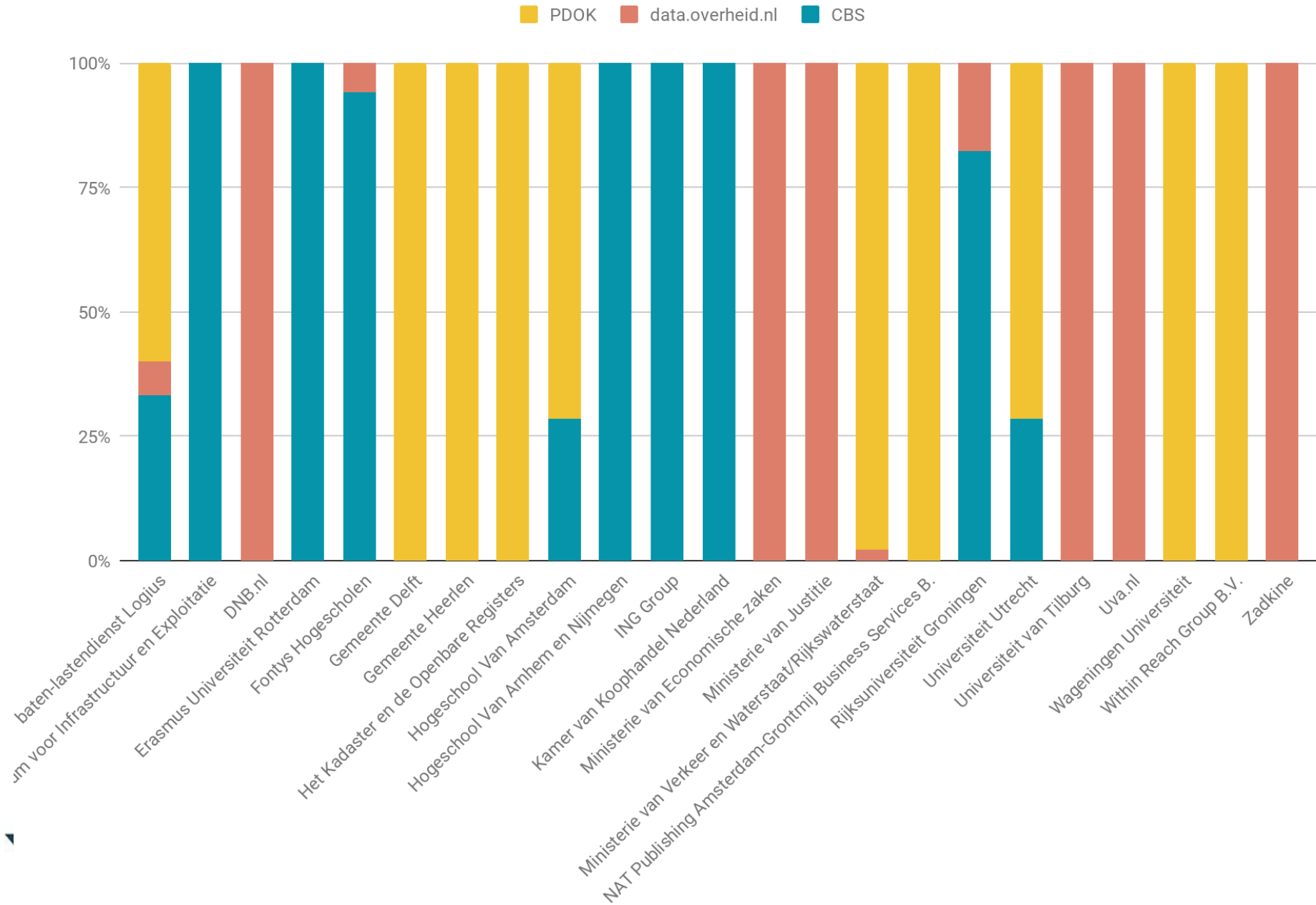
Conclusion Log File Analysis

- Most users from public sector, universities and via ISP
- Quarter of CBS users from abroad
- PDOK mostly users from the Netherlands
- PDOK data more often used for commercial goals than CBS data
- Circa 2x PDOK users compared to CBS (Statline) users
- Usage of `data.overheid.nl` much lower than for CBS and

Gebruiksaantallen top 10 datasets PDOK



Platformgebruik grootgebruikers open data



Conclusion Twitter sentiment analysis

- Most Tweets with neutral sentiment
- Twitter mainly used to announce new products / apps and no longer for questions related to open data
- Most comments related to
 - Findability
 - Data quality
 - Availability

Interviews with OD reusers

- 20 reusers selected after analysis of news items related to open data
- 12 reusers interviewed
 - Micro enterprises
 - SME / large enterprises
 - NGOs
 - Tinkering citizens / researchers / public servants
 - Knowledge institute (public sector)

Results interviews

- Reuse for:
 - Commercial purposes
 - Fee-based services / platforms
 - Free services / platforms
 - Societal purposes
 - To serve citizens
 - As spin-off of other activities
 - On behalf of the public sector

OD search strategies and sources

- Search via
 - Google
 - Own network
 - Social Media
 - Data catalogues (data.overheid.nl, National GeoRegister)
- Sources
 - Mainly direct from original data holder
 - Via thematic platforms (CBS, PDOK, NDW)
 - occasionally via commercial enterprises (Esri)

Most mentioned barriers

- Findability (of local gov't data)
- Structure
- M2M processability
- Actuality
- Detail level: too aggregated
- Fragmented supply, esp. of local gov't data
- File formats (complexity, size)
- Limited metadata / documentation
- Sustainability / long-term availability

prioritization of barriers to open data reuse by reusers

scattered data / no central location for local gov't OD

lack of standardisation of local gov't OD

no nationwide coverage of data

unsuitable formats for M2M processing

unclear structure of data

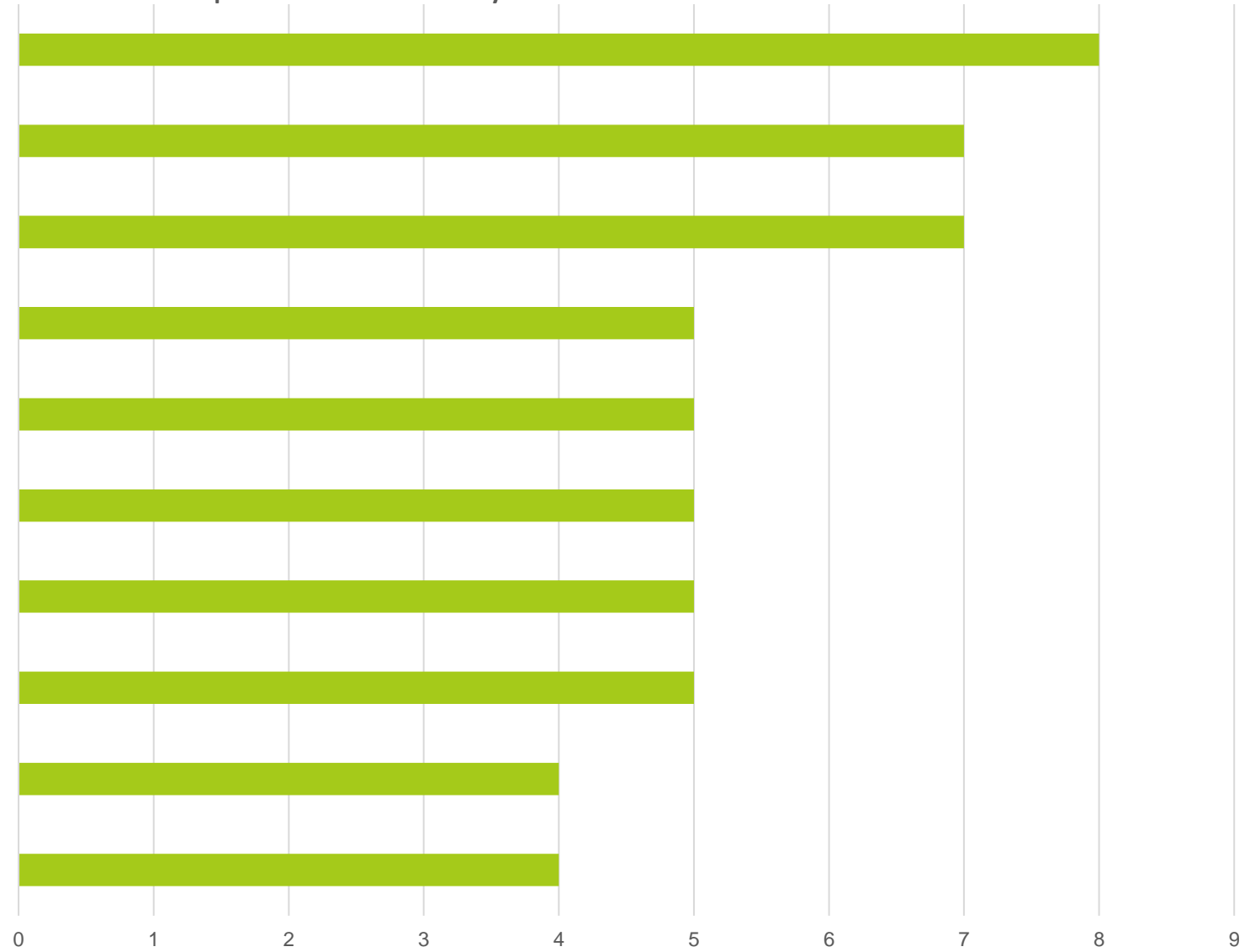
poor timeliness / no updates

user-unfriendliness of portals

data are overaggregated

errors / holes in datasets

server / API outages



Needs of OD reusers

- Multiple file formats
- Multiple data services (via APIs, data dumps and downloads)
- Show sample of dataset
- Better geo-referencing
- Data of local governments via 1 central platform
- Persistent identifiers
- Data governance (structure, standardisation, metadata, etc. but also having a CDI/CDO within the organisation)

Suggestions of OD reusers

- Data with higher level of detail made available via APIs
- Publication of datasets with standardised and consistent coding
- More integration between data platforms
- Gov't should make better of use expertise of private sector / knowledge institutes
- Better data governance
- Binding agreements with all levels of gov't and public enterprises which datasets should be made available

More feedback

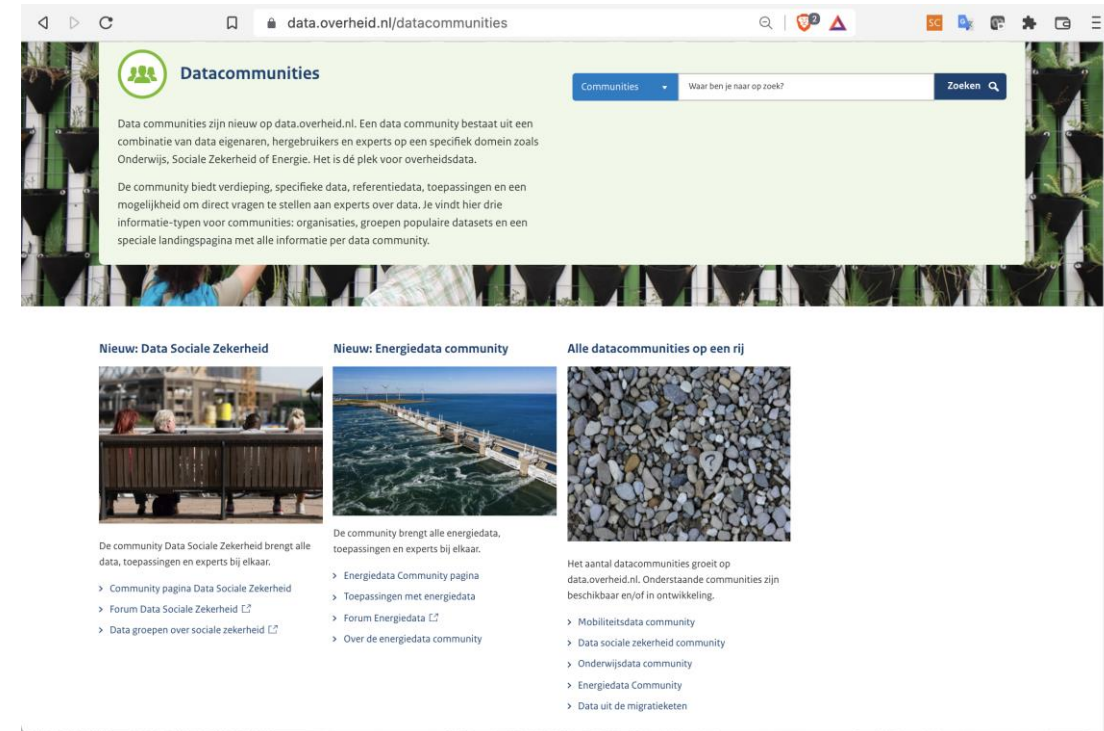
- More timely reaction to feedback of reusers
- Make sure there are easy reporting facilities (big red button)
- Communicate feedback / reported errors with other reusers
- Government:
 - Don a citizen's / company's hat more often
 - Visit a company to observe OD reuse in practice

Main conclusions

- Improve findability of data:
 - intuitive search functionality for non-expert reusers
- Improve open data governance:
 - (Top-down) directing and coordinating open data of local governments and public enterprises
 - Unambiguous semantics / structure / standardisation
- Think in societal challenges and consider which datasets will contribute to solutions
 - involve per challenge stakeholders / science
 - Commercial reusers have limited time

Actions taken

- Data communities via `data.overheid.nl`
- Open Data User Meetings



Data communities in data.overheid.nl

The screenshot shows a web browser at the URL `data.overheid.nl/en/search/communities`. The page is titled "7 communities" and features a sidebar on the left for filtering results. The main content area lists seven data communities, each with a green icon of three people and a brief description.

Filter your results

- Metadata language (2)**
 - Dutch (5)
 - English (2)
- Relates to (5)**
 - Dataverzoeken (6)
 - Datasets (6)
 - Groepen (6)
 - Organisaties (4)
 - Toepassingen (2)
- Last modified (3)**
 - Last month (2)
 - Last year (3)
 - More than a year ago (2)

7 communities

Sort by: [Relevance](#) / [Last modified](#) / [Popularity](#)

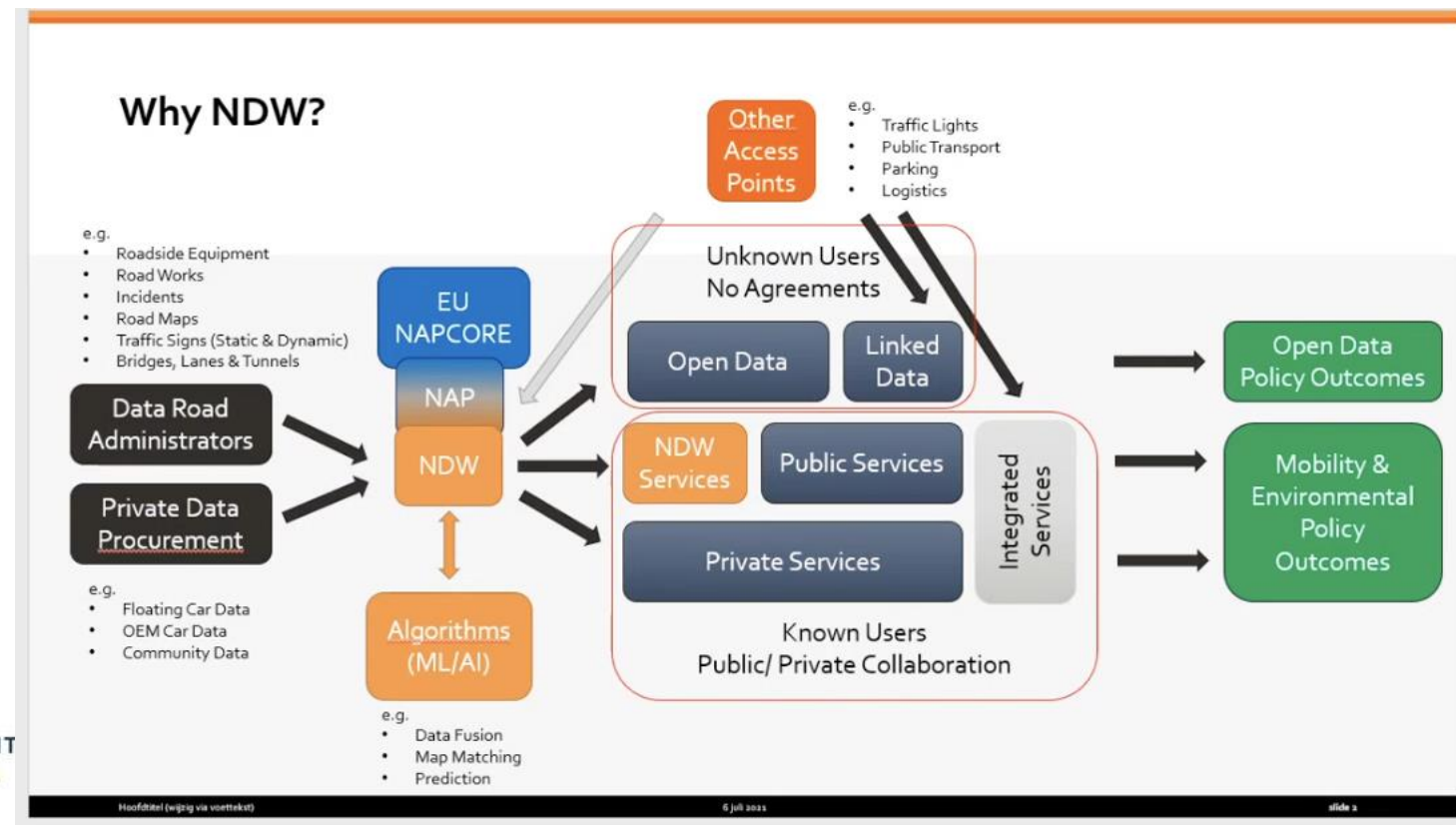
- COMMUNITY**
Energiedata
Energiedata Community Op deze landingspagina tref je alle data aan over het onderwerp energie. De Energiedata Community brengt alle data, toepassingen en dataverzoeken in het domein Energie bij elk...
- COMMUNITY**
Data Sociale Zaken
Dataregister Ministerie van Sociale Zaken en Werkgelegenheid Dit is het dataregister van het ministerie van Sociale Zaken en Werkgelegenheid. Het dataregister bestaat uit datasets die door of in ...
- COMMUNITY**
Open data Migratieketen
De centrale plek voor data over migratie. Deze data zijn afkomstig van de Migratieketen van het Ministerie van Justitie en Veiligheid.
- COMMUNITY**
Mobility Data Community
Mobility Data Community The Mobility data community brings together all data, applications and data requests in the Mobility domain. Here you will find all mobility and traffic related datasets. Can't...
- COMMUNITY**
Mobiliteitsdata Community
Mobiliteitsdata Community De Mobiliteitsdata community brengt alle data, applicaties en dataverzoeken in het Mobiliteit domein samen. Hier vind je alle mobiliteits- en verkeersgerelateerde datas...
- COMMUNITY**
Educational data
Educational Data Community The education data community brings together all data, applications and data requests in the Education domain. Here you will find all education-related datasets. Can't find ...
- COMMUNITY**
Onderwijsdata
Onderwijsdata Community De onderwijsdata community brengt alle data, toepassingen en dataverzoeken in het domein Onderwijs bij elkaar. Hier vind je alle onderwijs gerelateerde datasets. Kun je spec...

Impressions from research since 2019

- Shift from open data as a goal to a means
- Shift towards digital transformation
- Shift from data portals to data platforms
- (some) Anticipation of upcoming EU legislation

National Road Traffic Data Portal

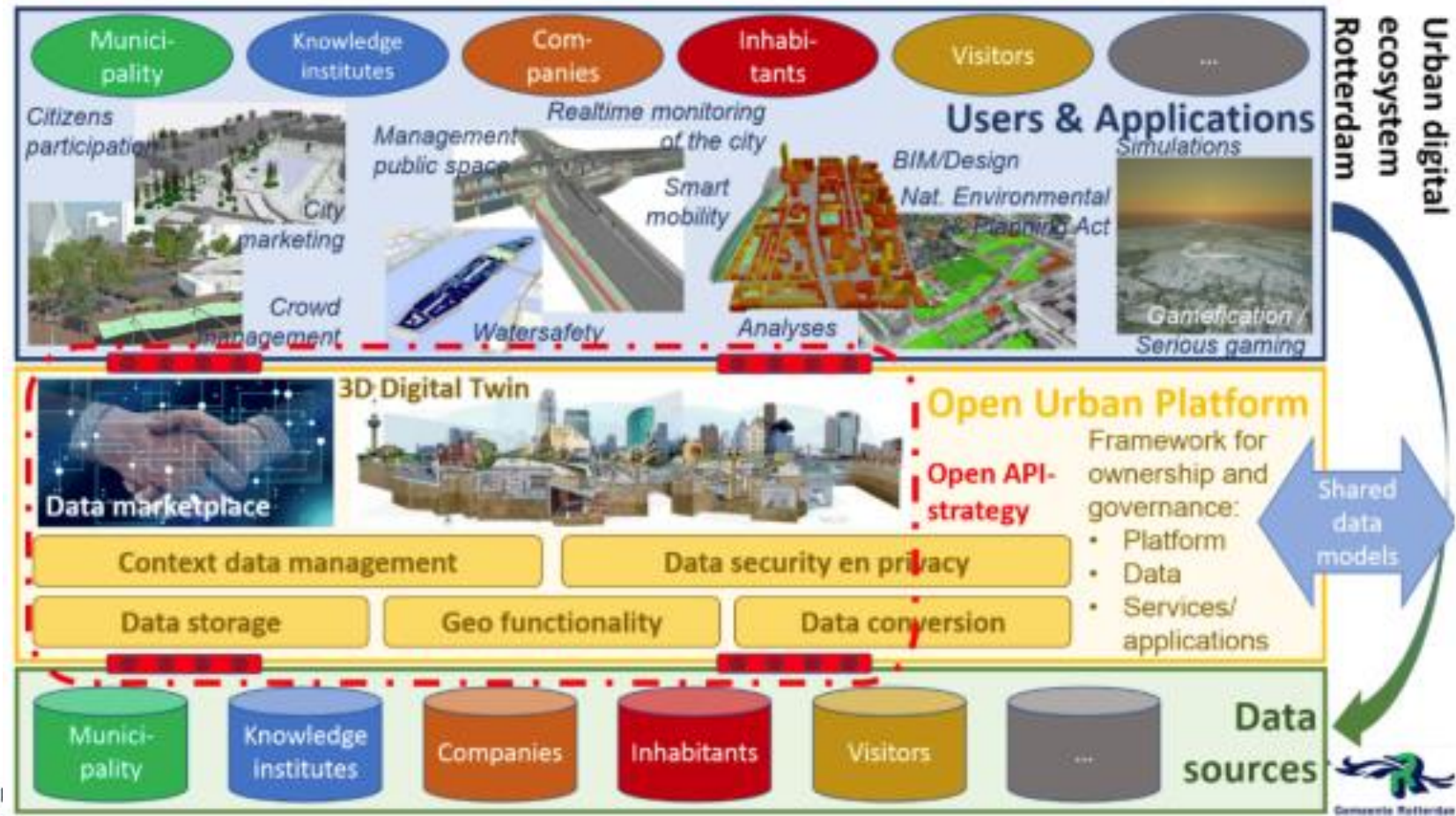
- 20 Gov't national and local agencies as data suppliers
- 11 Market parties through 'Data4Data' / 'Data4Services' agreements to enhance data quality



Data Platforms as hybrid platforms

- Data platforms integrating Digital Twins with private sector data, sensor data, citizens' data

Source:
Rotterdam
School of
Management
Erasmus
University
(2021). Digital
City Rotterdam:
Open Urban
Platform, p. 4

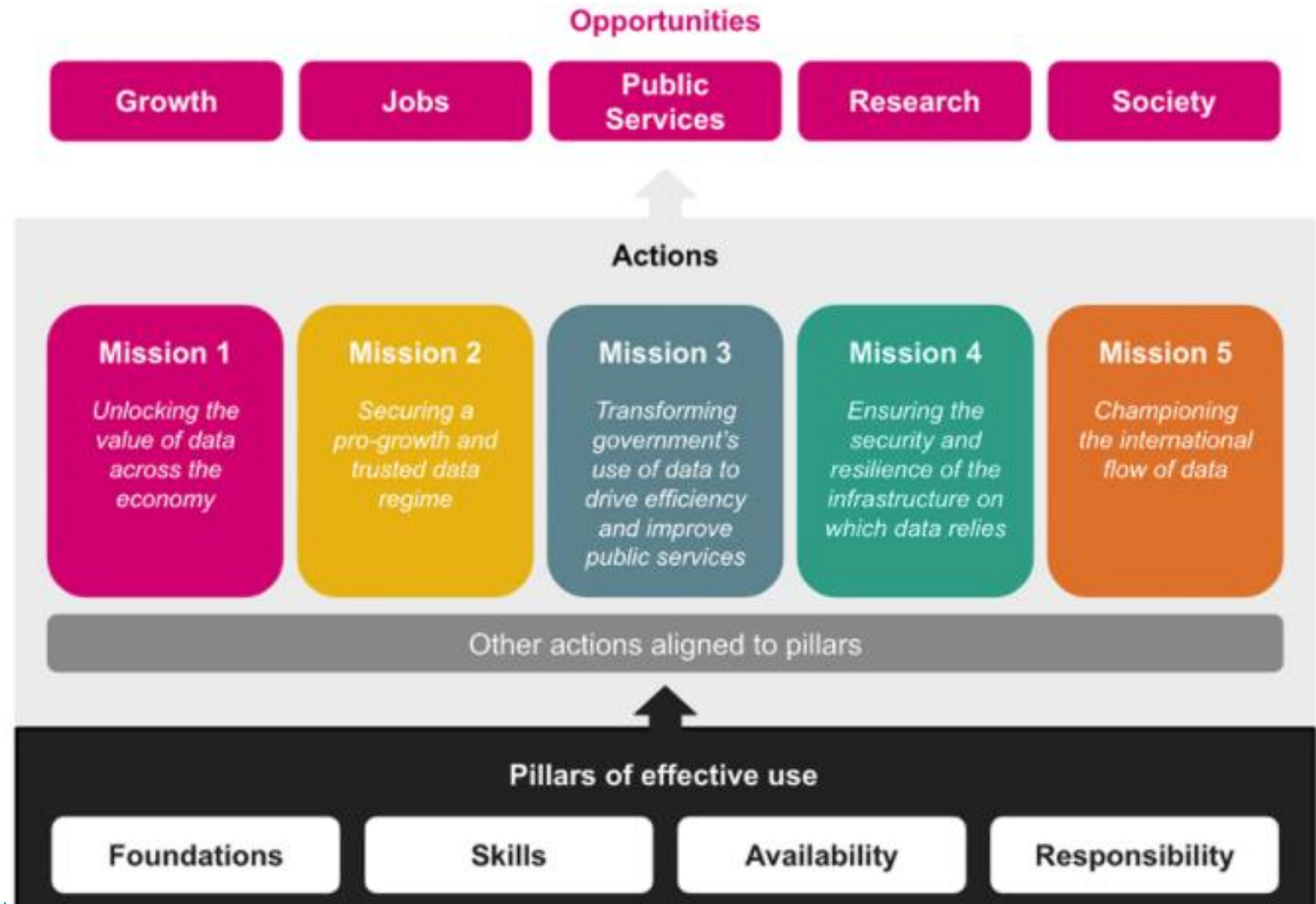


UK National Data Strategy 2020

National Data Strategy Forum in 2021

Includes data ethics & transparency of algorithm-assisted decision-making

→ TRUST



Estonia

- Has a head start in terms of data literacy skills and trust in e-services
- X-Road as a Data Exchange Platform interconnecting public sector data and citizens data.
 - Citizens provide consent which public register data may be shared with which private sector parties
- Kratt strategy to boost uptake of AI in the public sector and in the private sector

Common issues raised in the meetings

- How to get in touch with OD reusers?
- How to deal with lack of resources?
- How to build trust?
 - AI developments
 - Decision-making based on algorithms
- How to increase digital skills / data literacy?

Open data not a goal but a means?

- Publishing open data a by-product for many public sector organisations
- Within local administrations no broad recognition of the value of their data for others, especially other public sector bodies
- With increasing datafication of cities (sensor data), data ownership and data sharing more important
- In an (open) data ecosystem all stakeholders – including other public sector users – need to be involved

EU Data Strategy by 2030

- Aim is to create a **single European data space** – a genuine single market for data open to data from across the world – where personal as well as non-personal data, including sensitive business data, are **secure and businesses also have easy access to an almost infinite amount of high-quality industrial data**, boosting growth and creating value, while minimising the human carbon and environmental footprint.
- It should be a space where **EU law can be enforced effectively**, and where **all data-driven products and services comply with the relevant norms of the EU's single market**

See <https://ec.europa.eu/legal-content/EN/TXT/?qid=1593073685620&uri=CELEX%3A52020DC0066>

The expectations are high

Projected figures 2025



530%

increase of global
data volume

From 33 zettabytes
in 2018 to 175
zettabytes



**€829
billion**

value of data
economy in the
EU27

From €301 billion
(2.4% of EU GDP)
in 2018



**10.9
million**

data
professionals in
the EU27

From 5.7 million in
2018



65%

Percentage of EU
population with
basic digital skills

From 57% in 2018

And more to be negotiated

- Data Governance Act (25 Nov. 2020)
- Digital Services Act (15 Dec. 2020)
- Digital Markets Act (15 Dec. 2020)
- Artificial Intelligence Act (April 2021)
- Data Act (Feb. 2022)

If only it were simple ...

Thank you for your attention

f.m.welldonker@tudelft.nl

Part of this presentation builds on research carried out in 2020 to 2022 for the Twinning Open Data Operational (TODO) Project, funded from the European Union's Horizon 2020 research and innovation programme under Grant Agreement Number 857592 – TODO, www.todo-project.eu

Data demand and re-use in the public sector

March 2022

data.gouv.fr

Today's program

How to foster data reuse in the public sector ?

How do we measure data demand?

How do we measure usage?

Some use cases

What is Etalab?

Data opening and data circulation

- data.gouv.fr
- api.gouv.fr

Data exploitation

- Data science, artificial intelligence

Innovation and openness of public action

- Public Interest Entrepreneurs



How to foster data reuse
in the public sector?

No discrimination between users

- There is no strict distinction between public bodies and any other users
- Everyone is welcome to publish both datasets and reuses
- Moderation is done post publication


Data discoverability

- Better-off the search experience
- Editorial selection (popular or trending datasets)

Jeux de données

Rechercher un jeu de données sur data.gouv.fr

[Rechercher dans les réutilisations](#)

Rechercher 

License ▾ Couverture Territoriale ▾ Date de Publication ▾ Mots-clés ▾ Formats ▾ Organisation ▾

349 résultats Trier par : Vues ▾

Data quality

- Encourage the use of data schemas
- Foster metadata quality (quality scoring)

Aménagements cyclables

Spécification du schéma de données d'aménagements cyclables

Adopté



Arbres urbains

Spécification des attributs liés aux arbres urbains dans le cadre d'un inventaire du patrimoine arbo [...]

Adopté



Arrêtés permanents de circulation pour le transport de marchandises

Spécification du fichier d'échange relatif aux arrêtés permanents de circulation pour le transport d [...]

Publié



Base Adresse Locale (BAL)

Budget des collectivités et établissements publics locaux

Catalogue simplifié

Foster exchange between stakeholders

Portal features

- Discussions
- Community ressources
- Reuses

Community animation

Discussions (85)

+ Démarrer une nouvelle discussion

Discussion entre l'organisation et la communauté à propos de ce jeu de données.

Début de discussion ▾

Données DOM/TOM

Copier le lien vers la discussion 



Guillaume Deschamps

24 mars 2022

Bonjour,
Les données SITADEL ne contiennent pas les PC pour les DOM/TOM ?
Cordialement,



BVED SDES

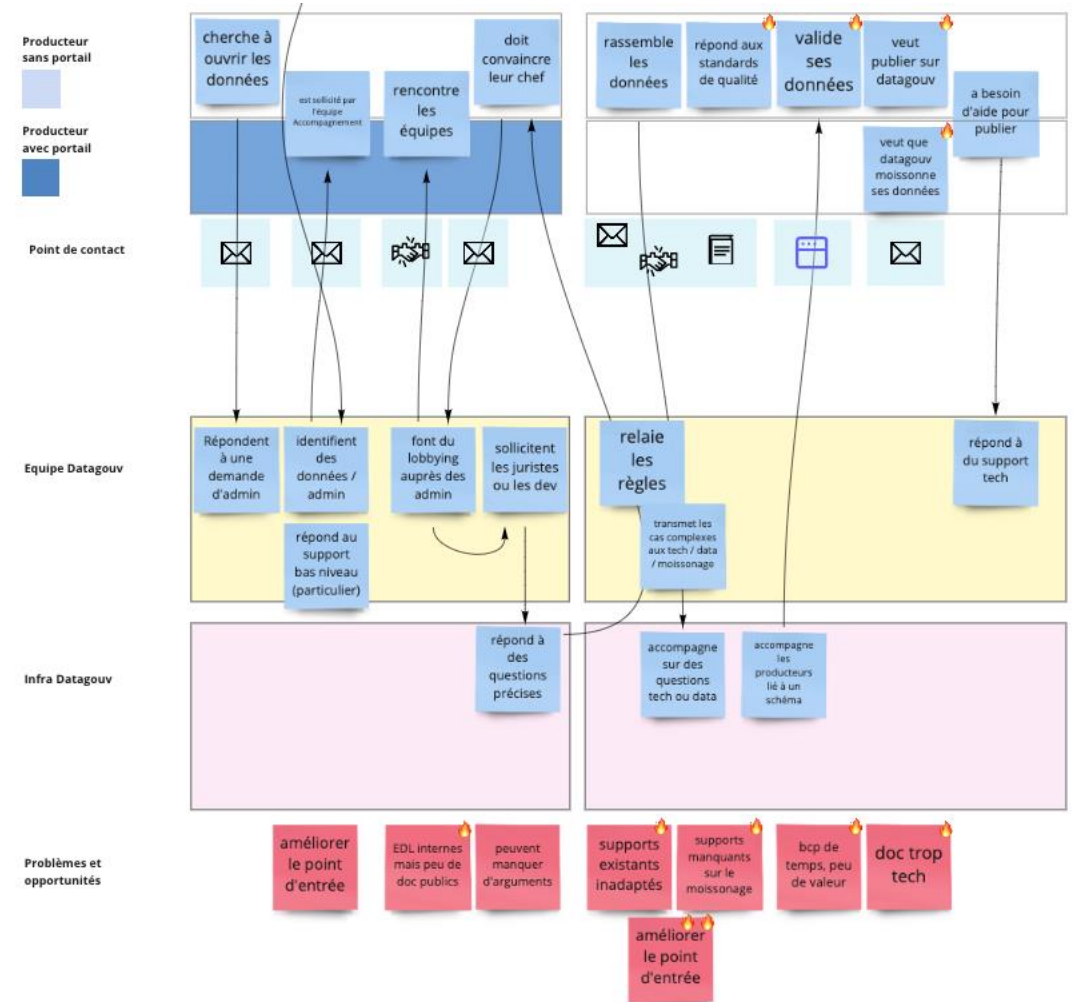
24 mars 2022

Bonjour.
Nous vous communiquons la réponse du service traitant ce sujet :
Sitadel contient les données des DOM mais pas celles des COM, qui relèvent d'un autre régime.
Cordialement.
BEV

Répondre >

→ Simplify data reuser onboarding

- A lot of ressources : guides et documentations
- A need to display the right ressource at the relevant moment
- Build user story



How do we measure data
demand?

A dedicated team

Empowers producers on the publication

- Data literacy
- Technical and legal support
- Proactive team that works on specific thematic

Next step : empowers producers on how to measure usage and data demand

- Understand their needs
- Ressources on metrics
- Ressources on community animation

✉ The struggles of user support

- A lot of unqualified requests
- Limited resources to answer
- Public bodies contact us directly

Vous avez une question sur les données ouvertes ou sur data.gouv.fr ? Contactez-nous !

Pour commencer, nous aimerions faire connaissance :

Qui êtes-vous ?

Particulier

Chercheur ou journaliste

Administration centrale

Collectivité territoriale

Entreprise

Association

Autre

Comment pouvons-nous vous aider ?

Problème technique dans l'utilisation de data.gouv.fr

Signaler une faille de sécurité

Faire un retour sur la plateforme

Demande relative à l'ouverture des données publiques

Référencer mes données sur data.gouv.fr

Faire une demande d'homologation de licence

Faire certifier mon organisation sur data.gouv.fr

Question sur des données géographiques

Autre

How do we measure
usage?

 Understanding your user

Who are they?

What are they doing and why?

How do they use the portal?

What are their frustrations and needs?

Different ways to measure usages

Quantitative methods

- Portal metrics
- Surveys

Qualitatives methods

- User interview
- Editorial use cases



 Set relevant indicators

 Establish qualitative impact indicators

- Data discoverability
- Data quality

 Beware of vanity metrics

- Number of datasets or reuses
- Numbers of visits

Reuses referencing

We encourage data reusers to share their work

- Critic to information
- To measure impact
- To encourage discussion

Reuses (3032)



Reuses referencing

- Public bodies often doesn't identify themselves as such
- Incitive to publish reuse of their own datasets too

Cartographie des indicateurs sur les crimes et délits

0 favourites

Published on March 16, 2022



Reuser Metadata Actions



Région Centre-Val de Loire

La Région Centre-Val de Loire poursuit la mise en œuvre de mesures d'avenir pour relever les défis d'un nouveau développement économique, social et environnemental. L'activité et l'emploi, la protection de notre environnement, la solidarité entre les générations et entre les territoires sont au...

132 datasets 3 reuses

Reuser Metadata Actions



Institut National de la Statistique et des Etudes Economiques (Insee)

L'Institut national de la statistique et des études économiques (Insee) collecte, produit, analyse et diffuse des informations sur l'économie et la société françaises. Ces informations intéressent les pouvoirs publics, les administrations, les entreprises, les chercheurs, les médias, les...


43 datasets 2 reuses


SUMMARY


1. Description
2. Used datasets ⁽¹⁾
3. Discussions ⁽⁰⁾
4. More reuses

Some use cases!

 Produce, exploit and distribute data (open data by design)

 *Accès Libre* gathers and maps information on the accessibility of establishments open to the public

 *Camino* opens the data of the mining domain to share information on projects and facilitate their management

 *Datagir* develop simulators that evaluate the environmental impact of our behaviors (food, everyday objects, mobility, telecommuting).

 National address database

 Used in many private and public applications : autocomplete


 Facilitate broadband network installation

 Used to more locate firefighter responses more accurately

 The repertory of entreprise

 *Signal Conso* : allows consumers to report anomalies.

 *Signaux Faibles* : facilitate the targeting of government remedial actions towards companies in difficulty.

 *Annuaire des Entreprises* : find all public information concerning French companies.

Merci !
Thank-you!!!

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To conclude...

data.europa.eu The official portal
for European data



Please
provide us
your
feedback!



Please take a minute to help us move forward with the data.europa academy

Up next...

Keep an eye on upcoming activities:

- data.europa blog posts
- Follow-up paper on fostering data-driven value creation in the public sector
Mid-2023

Open data representatives are invited to continue the discussion on the **data.europa academy Collaboration Channel**



Join more initiatives of the data.europa academy to continue learning

Join our upcoming events:

- Webinar on Citizen-generated Data
On 21 April 2022, from 14:00-15:00 CET
- Webinar on The Role of data.europa.eu
in the Context of the EU Data Spaces
On 4 May 2022, from 14:00-15:00 CET

Thank you for your participation!

