



Open Data internationaal en de rol van het CBS

Statistics Netherlands

Olav ten Bosch

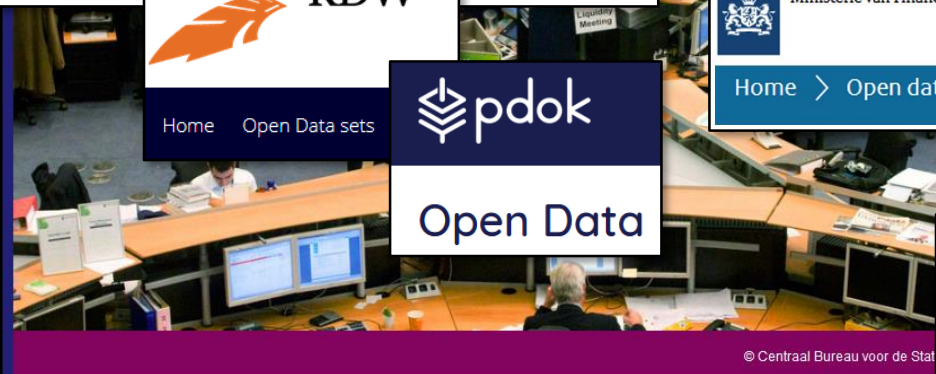
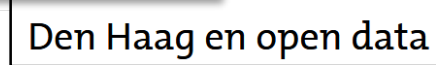
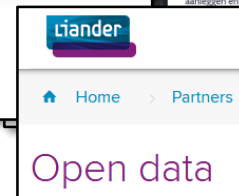
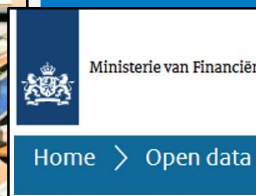
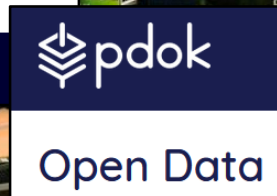
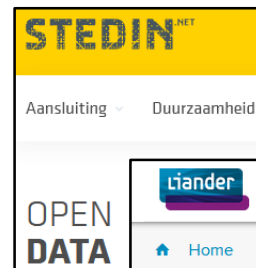
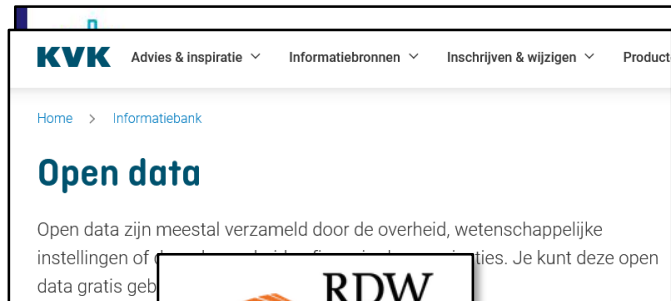
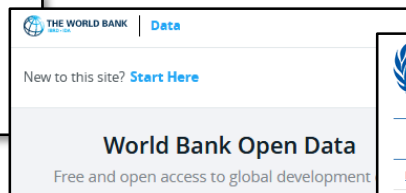
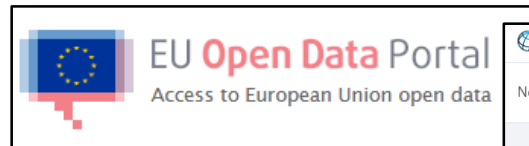
CBS Open Data gebruikersmiddag, Den Haag, 3 juni 2021

Even voorstellen...



- Project manager R&D, internationale projecten
- Werkgebieden:
 - data en metadata standaarden
 - data validatie
 - web data / big data / scraping
 - statistisch informatica / OSS
 - data visualisatie
 - citizen science
- Vandaag: CBS in het internationale web van open data





© Centraal Bureau voor de Statistiek

Gemeenteambtenaren zien data explosief toenemen

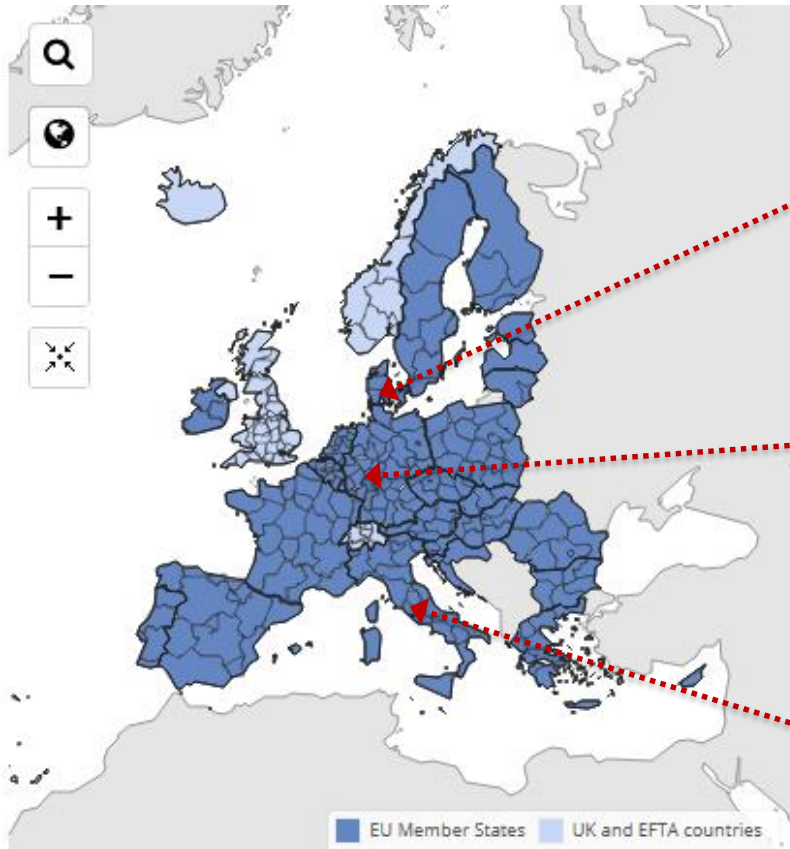
Een derde van gemeenten heeft duidelijk doel bij het verzamelen van data

25 mei 2020 10:04 | Christel Dieleman

Topic Overheid



Open data van andere stat. bureaus



STATISTICS DENMARK SEARCH

StatBank Denmark | Labour, income and wealth | Select from table AKU111K

Download file as... Edit table

Excel (*.xlsx) Pivot (clockwise)

☐ Codes in sep. columns
☒ Incl. Footnotes etc. Calculate

Labour force status in percentage by employment status, time, age and sex

	Total	Men	Women
Economic activity rate			
2020Q4			
Age, total	79.4	82.2	76.6
15-24 years	60.1	59.6	60.6
25-34 years	84.2	88.4	79.8
35-44 years	88.2	92.1	84.2
45-54 years	88.4	90.1	86.7
55-64 years	75.3	80.1	70.5

ISTATIS
Statistisches Bundesamt

GENESIS-ONLINE

Table		Demographic										Map
Download		  		Options		 						
Population (Female) (Under, reference date, marital status, age group)												
Source: Population (Female) (Under)		Reference date		Category		Marital status		Under		Map		
		Age group		Marital status		Under		Under				
2019-01-01												
Single		Under 15		Under 20		Under 25		Under 30		Under 35		
		Under 15		Under 20		Under 25		Under 30		Under 35		
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		Under 15		Under 20		Under 25		Under 30		Under 35		
		Under 15		Under 20								

Istat | Istituto Nazionale di Statistica

STATBASE: ACCESS TO MOST FREQUENTLY REQUESTED DATA

ENVIRONMENT AND ENERGY	Population	Line charts	Series 2021 - last year
TERRITORIAL FEATURES	Households	Fertility indicators	Price of birth and marriage
POPULATION AND HOUSEHOLDS	Mortality		Marital - Age and year of birth
HOUSEHOLDS ECONOMIC CONDITIONS AND RESOURCES	Birthrate and fertility		
HEALTH STATISTICS	Mortality		
SOCIAL SECURITY AND WELFARE	Separations and divorces		
EDUCATION AND TRAINING	Migrations		
COMMUNICATION, CULTURE, LEISURE	Foreigners and immigrants		
JUSTICE AND SECURITY	Demographic projections		
DAILY LIFE AND CITIZEN SERVICES			
NATIONAL ACCOUNTS			

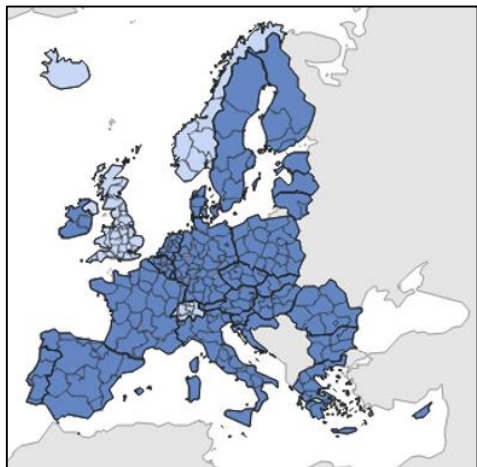


Nationaal versus EU data

- Statistieken zijn alleen vergelijkbaar als dezelfde ***classificaties*** (indelingen) en zelfde ***methoden*** worden gebruikt
- Voorbeeld classificaties:
 - leeftijdsklassen, huishoudgrootte, economische activiteit, producten indeling, soort onderwijs
- Voorbeeld methoden:
 - Seizoenscorrectie, ontbrekende data
- Wordt afgestemd tussen statistische bureaus en EU



The European Statistical System (ESS)



- 27 EU + IS, LI, NO + CH
- In totaal 312 organisaties die data aanleveren aan Eurostat (~9 / land)
- CBS doet *alle NL stats* 😊
- ESS is een complex data netwerk met één open data interface

<https://ec.europa.eu/eurostat/web/european-statistical-system>



Eurostat open data

The screenshot shows the Eurostat website interface. At the top, there's a header with the Eurostat logo and navigation links. Below this, a 'Recovery Dashboard' for COVID-19 is prominently displayed. To the left, a 'WHAT'S NEW?' section lists recent updates. Below that, the 'EURO INDICATORS' section is visible. On the right side, there's a 'STATISTICS BY THEME' section with various categories like 'General and regional statistics', 'Economy and finance', 'Population and social conditions', etc. The bottom of the page features a 'Statistics Explained' and 'Flagship publications' section.

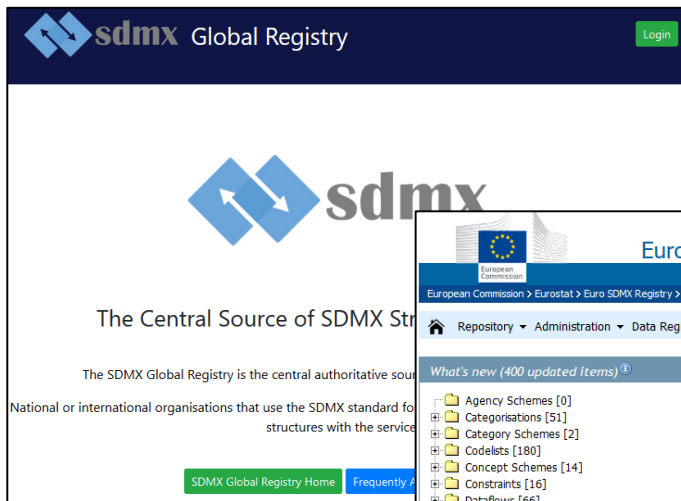
<https://ec.europa.eu/eurostat>

The screenshot displays the Eurostat database navigation tree. The tree is organized into several sections: 'DATABASE', 'Information', 'Browse statistics by theme', 'Statistics A - Z', 'Experimental statistics', 'Bulk download', 'Web Services', 'Access to microdata', 'GISCO Geographical Information and maps', 'Metadata', and 'Data validation'. The 'Metadata' section is highlighted, showing a list of metadata types including 'COVID-19: support for statisticians', 'ESS Reference Metadata', 'Reporting Standards', 'Classifications', 'Code lists', 'Legislation and methodology', 'Concepts and definitions', 'National metadata', and 'SDMX InfoSpace'. A blue box labeled 'Gecoördineerde metadata' is overlaid on the 'Metadata' section, with red arrows pointing to the 'Metadata' section and the 'SDMX InfoSpace' section.

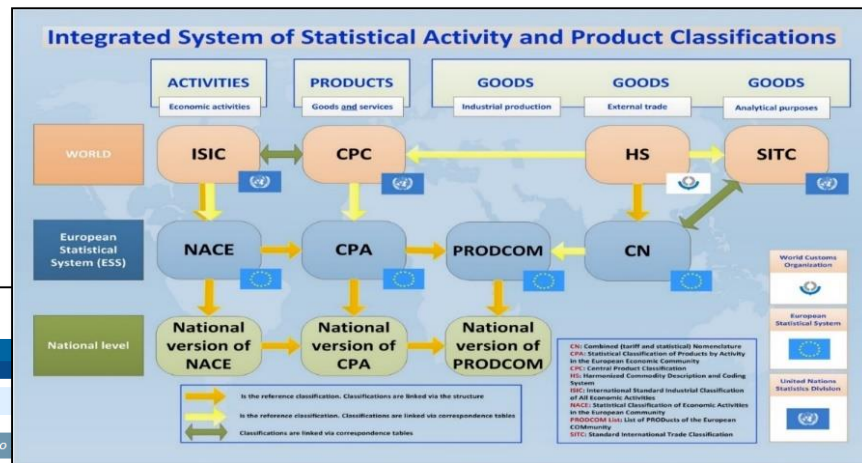
		NL	NL	NL	AT	AT	AT
		ED5_2	ED5_4	ED5_6	ED5_2	ED5_4	ED5_6
Y15-19	M	388.506.00	87.845.00		207.397.00	40.055.00	
Y15-19	F	348.180.00	105.122.00		196.396.00	40.109.00	
Y20-24	M	147.547.00	304.843.00	32.914.00	38.190.00	195.956.00	6.025.00
Y20-24	F	113.683.00	302.285.00	58.774.00	44.167.00	178.659.00	9.780.00
Y25-29	M	145.426.00	274.327.00	144.391.00	38.905.00	193.455.00	33.819.00
Y25-29	F	134.442.00	272.442.00	147.500.00	55.222.00	176.261.00	39.369.00
Y30-34	M	187.385.00	313.804.00	170.348.00	51.558.00	226.001.00	59.562.00
Y30-34	F	174.078.00	316.986.00	154.756.00	77.182.00	205.791.00	48.187.00
Y35-39	M	207.117.00	292.498.00	177.474.00	57.416.00	236.755.00	64.577.00
Y35-39	F	202.327.00	311.159.00	137.292.00	89.658.00	207.902.00	48.564.00
Y40-44	M	186.722.00	273.577.00	165.421.00	53.297.00	205.370.00	57.613.00
Y40-44	F	222.961.00	262.347.00	124.215.00	91.764.00	175.214.00	42.525.00
Y45-49	M	186.055.00	232.988.00	159.199.00	53.361.00	161.539.00	47.003.00
Y45-49	F	248.615.00	206.722.00	109.029.00	94.381.00	137.052.00	31.871.00
Y50-54	M	213.709.00	234.366.00	152.520.00	56.797.00	156.467.00	42.642.00
Y50-54	F	294.182.00	189.778.00	97.133.00	102.371.00	134.851.00	21.407.00
Y55-59	M	174.792.00	171.550.00	97.418.00	51.757.00	130.758.00	38.312.00
Y55-59	F	249.356.00	123.521.00	58.463.00	100.540.00	116.207.00	14.691.00
Y60-64	M	153.826.00	142.369.00	72.426.00	67.485.00	117.202.00	32.504.00
Y60-64	F	225.589.00	98.892.00	45.429.00	131.455.00	92.611.00	9.800.00
Y65-69	M	127.607.00	123.301.00	55.463.00	55.071.00	75.193.00	18.580.00
Y65-69	F	228.760.00	75.612.00	33.078.00	121.776.00	52.789.00	5.187.00
Y70-74	M	118.453.00	83.684.00	46.014.00	52.971.00	70.638.00	16.584.00
Y70-74	F	225.483.00	63.129.00	21.758.00	122.955.00	58.503.00	5.670.00
Y75-79	M	93.842.00	56.156.00	30.765.00	39.892.00	45.309.00	12.685.00
Y75-79	F	206.081.00	47.803.00	20.828.00	132.288.00	54.048.00	5.918.00
Y_GE80	M	80.029.00	43.589.00	21.066.00	36.027.00	33.787.00	11.210.00
Y_GE80	F	256.965.00	44.239.00	18.564.00	156.833.00	48.436.00	5.329.00

<https://ec.europa.eu/eurostat/web/main/data/web-services>

Open ESS metadata:



registry.sdmx.org



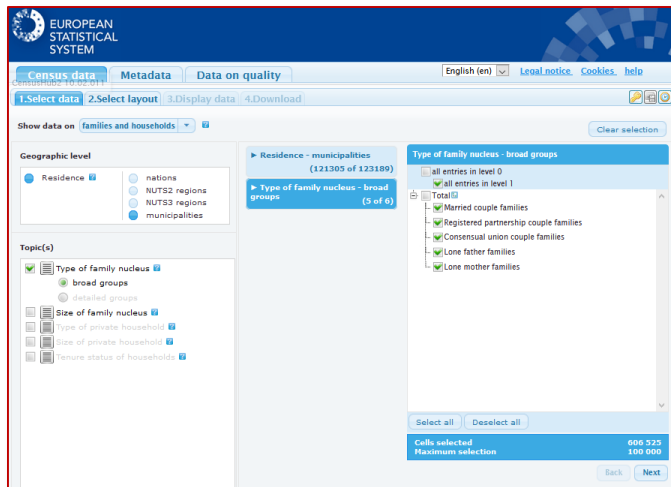
Web of classifications
(Linked Open Data)



<https://webgate.ec.europa.eu/sdmxregistry>

Census Hub: open volkstelling data

- Open data uit **volkstellingen** (NL: vanuit registers)
- Personen, huishoudens, woningen tot op **gemeente** niveau
- Query over alle EU landen



<https://ec.europa.eu/CensusHub2>

CBS in de startblokken voor de Volkstelling 2021

17-5-2021 10:00 / Auteur: Miriam van der Sangen



<https://www.cbs.nl/nl-nl/corporate/2021/20/cbs-in-de-startblokken-voor-de-volkstelling-2021>

Open data van andere internationale organisaties

 Statistics Division

data.un.org

EUROPEAN CENTRAL BANK

EUROSYSTEM

sdw.ecb.europa.eu



International
Labour
Organization

ilostat.ilo.org



INTERNATIONAL MONETARY FUND

data.imf.org



THE WORLD BANK
IBRD • IDA

data.worldbank.org



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

stat.unido.org



OECD

BETTER POLICIES FOR BETTER LIVES

stats.oecd.org



Food and Agriculture Organization
of the United Nations

www.fao.org/faostat

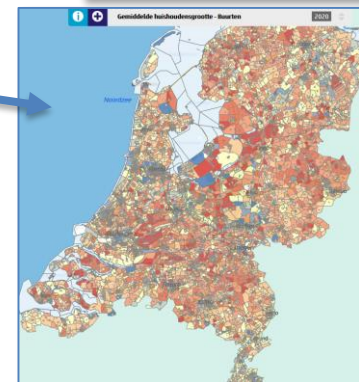
Other:
UNESCO
BIS
IEA





UNSD WG Open Data

- CBS lid van de UN WG on OD
- Programma 2020/21:
 - ***Interoperability:***
interop richtlijnen + data maturity model
 - ***Local level statistics:***
best practices laag-regionale open data,
balans detail v. onthulling
 - ***Open by default:*** betekenis voor officiële
statistiek; open data licenties; juridisch kader



SDGs: Sustainable Development Goals

UN 2015: "blueprint to achieve a better
and more sustainable future for all"
target 2030



sdgs.un.org/goals

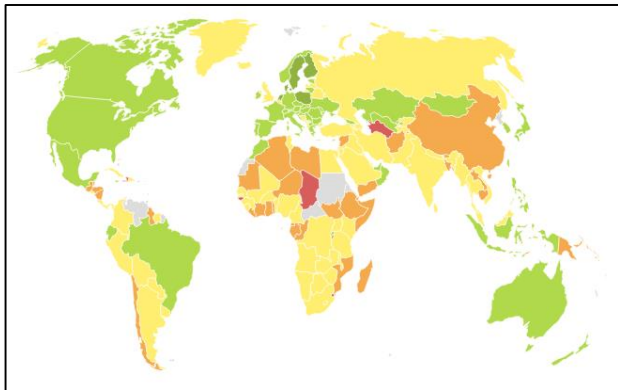


www.sdg.org/#api



ODIN: Open Data INventory

- **Open Data Watch**: non-profitorg. voor open data in officiële statistiek
- Meet de **dekking** en **openheid** van de open data
- 2020: NL 6^e van 187 landen 😊



odin.opendatawatch.com

Data Categories

- | | |
|---|--|
| ☒ Population & vital statistics | ☒ Labor |
| ☒ Education facilities | ☒ Price indexes |
| ☒ Education outcomes | ☒ Government finance |
| ☒ Health facilities | ☒ Money & banking |
| ☒ Health outcomes | ☒ International trade |
| ☒ Reproductive health | ☒ Balance of payments |
| ☒ Food security & nutrition | ☒ Agriculture & Land Use |
| ☒ Gender statistics | ☒ Resource use |
| ☒ Crime & justice | ☒ Energy |
| ☒ Poverty & income | ☒ Pollution |
| ☒ National accounts | ☒ Built environment |

Data Elements

- ☒ Indicator coverage and disaggregation
- ☒ Data available last 5 years
- ☒ Data available last 10 years
- ☒ First administrative level
- ☒ Second administrative level
- ☒ Machine readable
- ☒ Non-proprietary
- ☒ Download options
- ☒ Metadata available
- ☒ Terms of use

Technology: statistical data / API's



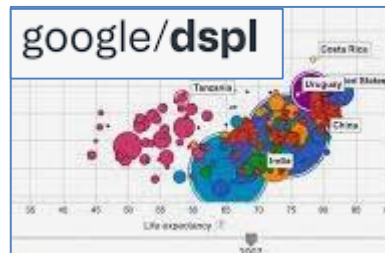
OASIS



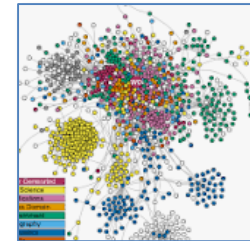
Statistical Data and Metadata eXchange



The RDF Data Cube Vocabulary



Data documentation Initiative



Linked Open Data



Event: EU Open Data days 2021



The screenshot shows the homepage of the EU Open Data Days event. At the top is the Publications Office of the European Union logo and a navigation bar with links: HOME, LAW, EU PUBLICATIONS, RESEARCH AND INNOVATION, OPEN DATA, PUBLIC PROCUREMENT, and EU WHOISWHO. The main banner features the text 'EU OPEN DATA DAYS' and '23 - 25 NOVEMBER 2021' on a dark blue background with a pattern of light blue dots. Below the banner, the title 'EU Open Data Days – Shaping our future with open data' is followed by a paragraph: 'Online from Luxembourg to the world: The Publications Office of the European Union is organising the first EU Open Data Days'. A sidebar on the left contains the 'EU OPEN DATA DAYS' logo and the dates '23 - 25 NOVEMBER 2021'. The main content area continues with a paragraph about data as a key asset for digital transformation, followed by another paragraph about the event as a knowledge hub. At the bottom, two boxes are shown: 'EU DataViz' for '23 - 24 NOVEMBER 2021' and 'EU Datathon' for '23 NOVEMBER 2021'. Blue arrows point from these boxes to the corresponding event banners on the right.

Publications Office
of the European Union

HOME LAW EU PUBLICATIONS RESEARCH AND INNOVATION OPEN DATA PUBLIC PROCUREMENT EU WHOISWHO

EU OPEN DATA DAYS
23 - 25 NOVEMBER 2021

EU Open Data Days – Shaping our future with open data

Online from Luxembourg to the world: The Publications Office of the European Union is organising the first EU Open Data Days

Data is a key asset for digital transformation. It is a building material for research and innovation, personalised products and services, powerful new technologies and better decision-making. These translate into solutions to societal challenges that can improve and even save people's lives, as the current pandemic demonstrates. Open data is also freely available to generate value through reuse.

This unique online event will serve as a knowledge hub, bringing the benefits of open data and its reuse to the EU public sector, and through it to people and businesses. Get inspired and discover the latest trends and most innovative solutions!

The EU Open Data Days comprise:

EU DataViz
23 - 24 NOVEMBER 2021

EU Datathon
23 NOVEMBER 2021

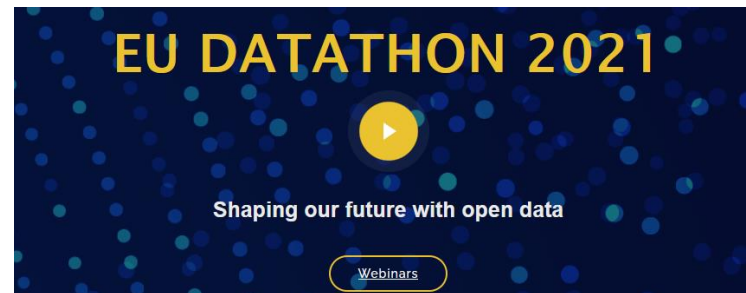


A blue banner for 'EU DATAVIZ'21. The text '23-24 NOVEMBER 2021' is at the top. Below it, 'EU DATAVIZ'21' is written in large white and yellow letters. At the bottom, the tagline 'Shaping our future with open data' is written in white.

23-24 NOVEMBER 2021

EU DATAVIZ'21

Shaping our future with open data



A dark blue banner for 'EU DATATHON 2021'. The text 'EU DATATHON 2021' is at the top in yellow. Below it is a yellow play button icon. At the bottom, the tagline 'Shaping our future with open data' is written in white. A small yellow button with the word 'Webinars' is in the bottom right corner.

EU DATATHON 2021

Shaping our future with open data

Webinars

<https://op.europa.eu/en/web/euopendatadays>

@EU_opendata

CBS is partner

Questions, ideas, suggestions



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awesome

awesomeofficialstatistics.org

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@emio1





Voor wat er **feitelijk** gebeurt