



Eyra



The Eyra Port project

Transparent data donation

A blue horizontal banner contains the title text. On the left, a pair of hands holds several colorful icons representing various data sources. On the right, there are white geometric shapes like squares, circles, and lines.

Adriënne Mendrik, PhD

March 11, 2022

Eyra Team



Emiel van der Veen



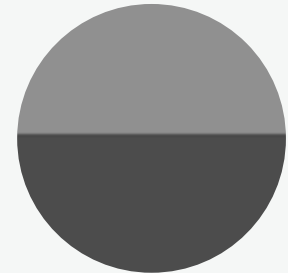
Neo Cheung



Adriënne Mendrik



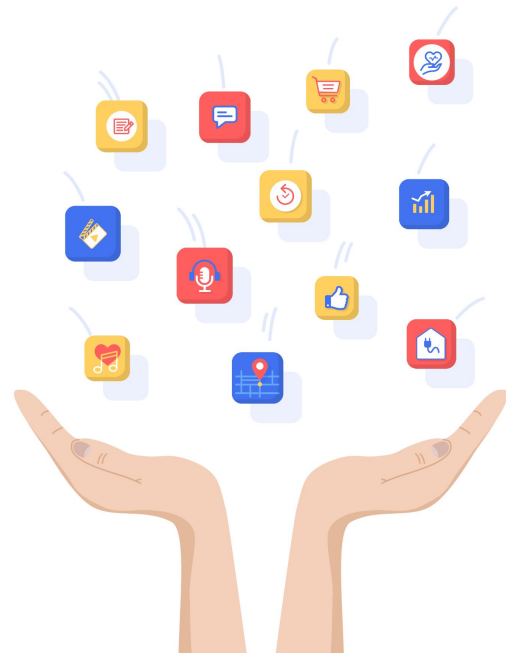
Jeroen Vloothuis



Tjerk Nan



About the Eyra Port Project



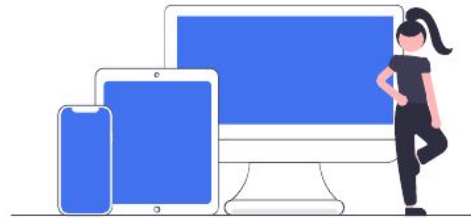


Data Donation Proof of Concept



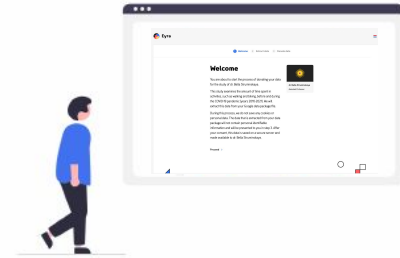
1

*Request Data Download
Package (DDP)*



2

*Download to Respondent
Device*



3

*Go to Data Donation
Platform*



Data Donation Proof of Concept



Local on Respondent Device (Control over Personal Data)

Transparent for Citizens



4

Select Location
DDP



5

Run Script to
Extract Data
from DDP



6

Show Extracted
Data Pending
Approval



7

Consent



Data Donation Proof of Concept

File selection

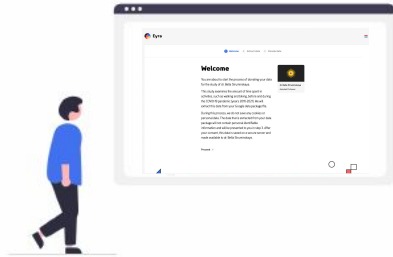
Javascript

Data Extraction

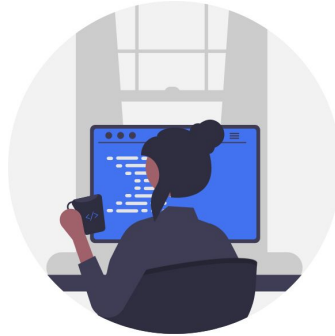
Python

Present data for consent

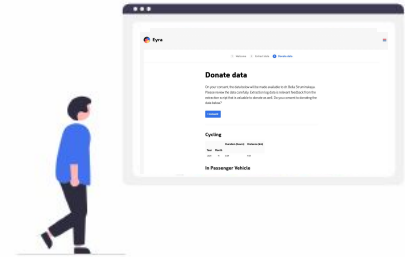
Javascript



*Data
Package*



*Extracted
Data*



Eyra

**Researcher or
Research Engineer**

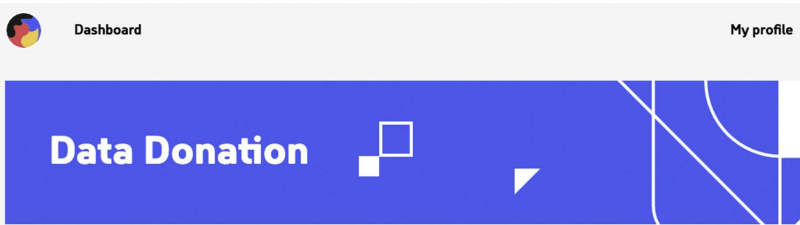
Eyra





Data Donation Proof of Concept

Boeschoten, L., Mendrik, A., van der Veen, E., Vloothuis, J., Hu, H., Voorvaart, R., & Oberski, D. L. (2022). Privacy-preserving local analysis of digital trace data: A proof-of-concept. Patterns, 100444.



Step 1: Download from Google

Go to the [Google Takeout page](#) and follow the indicated steps to download your Google data package.

Step 2: Select the downloaded data package

Once you have received your data package from Google and stored it on your device, [select the file location](#) of the package.

Note: your selected data package will not leave your device, only extracted data is sent to a server after your consent.

Step 3: Extract data

The script shown below will be run in your web browser to extract data from your data package. Make sure to use Chrome or Safari and close all other browser windows and tabs to save memory. During the extraction process your data will not leave your device. The extracted data will be presented to you at step 4. The extraction process may take a while.

Extract data

Script

The script that is used to extract the relevant data from your data package

```
""Script to extract data from Google Semantic History Location zipfile""
__version__ = '0.1.0'

import json
```



Data Donation Proof of Concept



Step 4: Donate extracted data

The data extracted from your data package is presented below. Make sure to review your data carefully. If you consent to making this data available for the researcher, click "Donate extracted data"

This study examines the change in travel behaviour during the COVID-19 pandemic. We therefore examined your Google semantic Location History data for January in 2019, 2020, and 2021. To be precise, we extracted per month the total number of visited places, and the number of days spend per place for the three most visited places. Also, we extracted the number of days spend in places and travelling, and the travelled distance in km.

Year	Month	Number of Places	Places Duration (days)	Activity Duration (days)	Activity Distance (km)	Place 1 (days)	Place 2 (days)	Place 3 (days)
0	2019 JANUARY	49	24.802	6.20	1536.637	10.019	6.696	1.389
1	2020 JANUARY	47	24.800	6.20	1503.830	9.622	7.390	1.637
2	2021 JANUARY	19	29.452	1.55	377.179	22.382	1.060	1.296

By clicking the button below, you consent to the following [terms and conditions](#).

Donate extracted data

A screenshot of a web dashboard interface. At the top, there's a navigation bar with a profile icon, the word "Dashboard", and "My profile" with a flag icon. Below this is a large blue header with the text "Data Donation". The main content area is titled "Received donations" and lists five entries, each with a participant ID, a received date, and a "Download" link. At the bottom of this list is a "Download all" button. Below the list is a section titled "Script" with the instruction "Paste your python script here" and a text area containing a Python script for extracting data from a Google Semantic History Location zip file.

Dashboard My profile

Data Donation

Received donations

Participant 19	Received Tuesday, June 29,13:41	Download
Participant 21	Received Thursday, September 23,12:34	Download
Participant 21	Received Monday, September 27,10:18	Download
Participant 24	Received today at 11:14	Download
Participant 24	Received today at 13:24	Download

[Download all](#)

Script

Paste your python script here

```
'''Script to extract data from Google Semantic History Location zipfile'''
__version__ = '0.1.0'

import json
import itertools
```





Data Donation Pilot

- **Research question**

This study examines the amount of time spent and distance covered in activities, such as walking and biking, before and during the COVID-19 pandemic (years 2016-2021).

- **Google Location History Data**

For each activity in the package, the number of hours spent and distance travelled in km per month from 2016 - 2021.



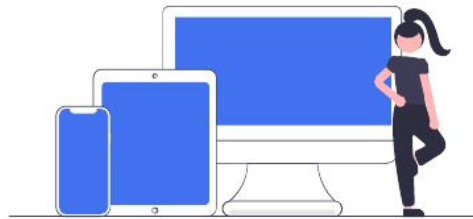


Data Donation Pilot



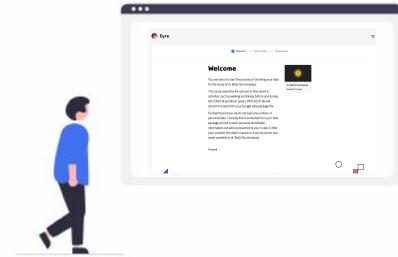
1

*Request Data Download
Package (DDP)*



2

*Download to Respondent
Device*



3

*Go to Data Donation
Platform*





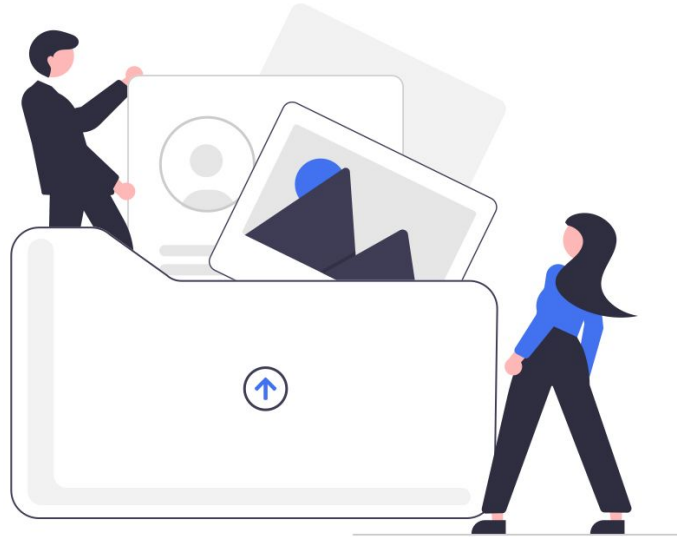
Data donation flow for Pilot

A screenshot of a web browser showing the Eyra data donation flow interface. The browser address bar shows the URL 'eyra.co/data-donation/pilot/donate/test123'. The page has a navigation bar with three steps: 'Welcome', 'Extract data', and 'Donate data'. The main content area features a 'Welcome' heading, a paragraph explaining the purpose of the data donation (for a study by Dr. Bella Struminskaya), a paragraph detailing the study's focus (time spent in activities during the COVID-19 pandemic), and a paragraph assuring privacy (no cookies or personal data saved). A 'Proceed >' button is located at the bottom of the main content area. On the right side, there is a profile card for 'dr. Bella Struminskaya, Assistant Professor' with a sunburst icon. The Eyra logo is visible in the top left corner of the page content.

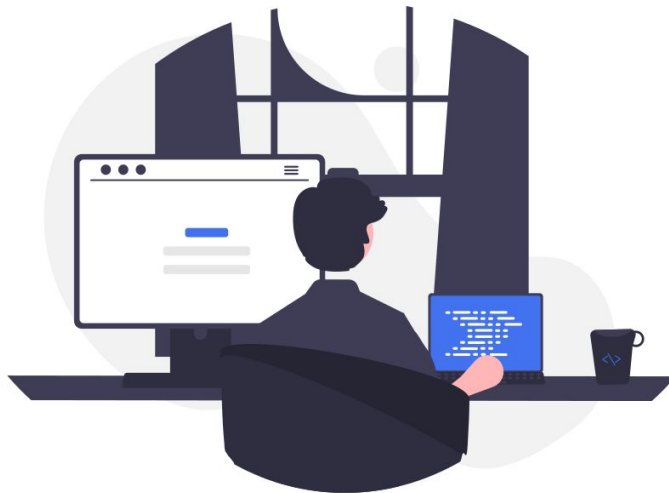




Export standalone workflow

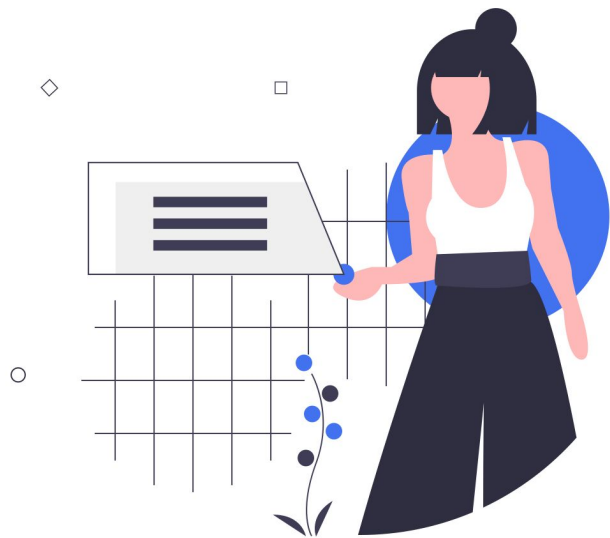


Playground for scripting



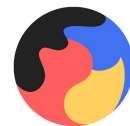


About sustainability



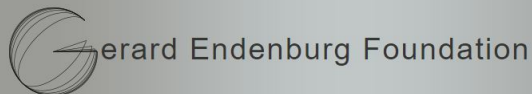
Aim Eyra

Provide sustainable software
as a service for science that
supports a quick and easy
workflow



Grant Gerard Endenburg Foundation

Home » Projecten



De Gerard Endenburg Foundation heeft de volgende projecten gehonoreerd:

2021:

'Wetenschap als gemeengoed: Gelijkwaardigheid en machtsverdeling in het Eyra ecosysteem'

Eyra is een organisatie die gelijkwaardigheid voorop stelt. Dit komt zowel terug in de manier waarop ze de organisatie van Eyra in willen richten als in hun visie statement: 'We work towards a world in which the current state of human knowledge is available to all of humankind, so anyone can learn from and build upon previous knowledge.'

Menselijke kennis is van iedereen en de huidige status van menselijke kennis zou voor iedereen beschikbaar moeten zijn. In dit project, gesteund door de GEF, werkt Eyra ondersteund door het Sociocratisch Centrum Nederland, toe naar de organisatorische en juridische borging van gelijkwaardigheid op basis van sociocratie in het Eyra ecosysteem.



Voor Eyra Leap B.V. betekent dit gelijkwaardigheid, medezeggenschap en mede-eigenaarschap voor de medewerkers, zodat alle medewerkers zo goed mogelijk samenwerken om de visie, missie en doelstelling van Eyra na te streven. Voor Stichting Eyra Nova betekent dit gelijkwaardigheid en medezeggenschap van afgevaardigden vanuit zowel Eyra Leap B.V., als de academische wereld en de maatschappij. Wetenschap wordt immers bekostigd door belastinggeld. Het is daarom belangrijk dat opgedane kennis zo goed en transparant mogelijk teruggegeven wordt aan de maatschappij, en dat zowel de maatschappij als de academische wereld daar ook zeggenschap over heeft.

Een mooie stap richting een sociocratisch ingericht Eyra ecosysteem voor de wetenschap.

Het Sociocratisch Centrum Nederland merkt een groeiende interesse naar juridische borging van de SKM. Zowel in het maatschappelijke domein in de vorm van buurtcoöperaties en bewonersinitiatieven, maar ook bij woongroepen en professionele samenwerkingsverbanden zoals VSV's en



HOME

Sociocratie

Stichting

GEF in beeld

Ondersteuner

Aanvragen

Projecten

Historie

Ambassadeurs

Over Gerard

Contact

Science as a commons: Equality and distribution of power in the Eyra ecosystem

Company

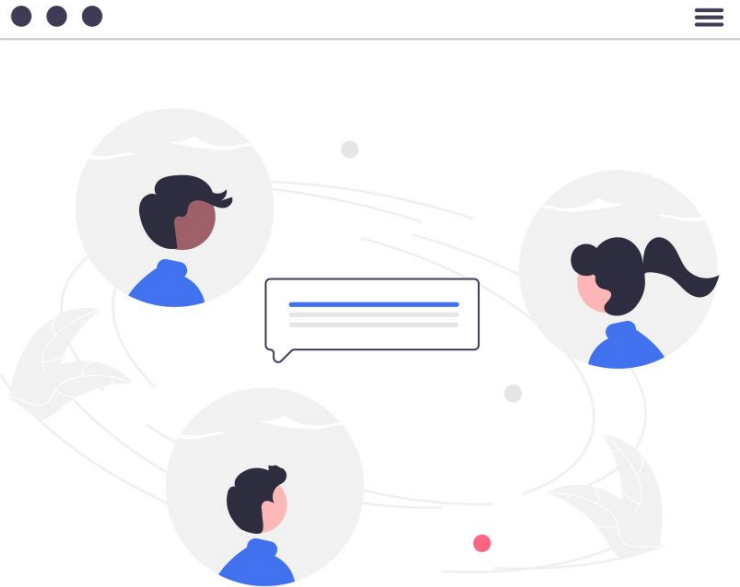
Eyra Leap B.V.

Foundation

Eyra Nova



Co-determination with Sociocracy



Sociocratic principles

Consent

Circles

Double-linking



Product building over investments



Panl

- Participant recruitment (Martin Tanis, VU), funded by PDI-SSH
- Participant pool management (Femke van Horen, VU), funded by the VU



Port

- Data donation (Funded by Daniel Oberski, UU)



Platform Digitale Infrastructuur
Social Sciences & Humanities

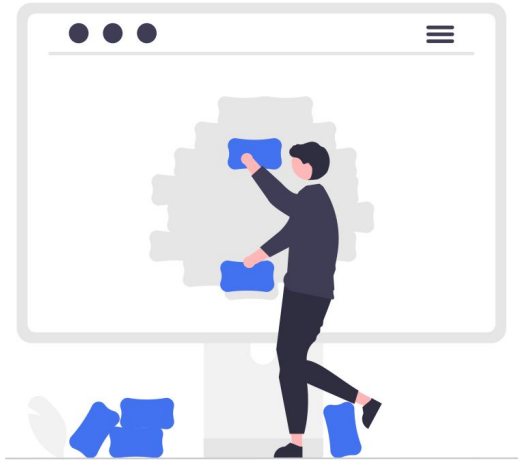


Universiteit Utrecht



Circular economy model

- Focus on high quality long-lasting digital solutions for science.
- Modular approach in Eyra Core codebase
 - All projects **contribute to** and **profit from** reusable digital modules
 - Design tailored toward **maintainability**
 - Enables **cost-efficient** development of new solutions



Elixir: scalable and maintainable



elixir

Elixir is a dynamic, functional language for building scalable and maintainable applications.

Elixir leverages the Erlang VM, known for running low-latency, distributed, and fault-tolerant systems. Elixir is successfully used in web development, embedded software, data ingestion, and multimedia processing, across a wide range of industries. Here is a peek:

```
iex> "Elixir" |> String.graphemes() |> Enum.frequencies()  
%{"E" => 1, "i" => 2, "l" => 1, "r" => 1, "x" => 1}
```



Open source and agile



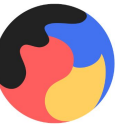
github.com/eyra



Mission



Empowering people to
push the boundaries of
human knowledge



Steward-ownership and fair revenue models





Thanks

<https://eyra.co>

[linkedin.com/company/eyraco](https://www.linkedin.com/company/eyraco)

connect@eyra.co



Eyra