

CS Track database

“Understanding the nature of Citizen Science in a rapidly changing world”

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CS Track database

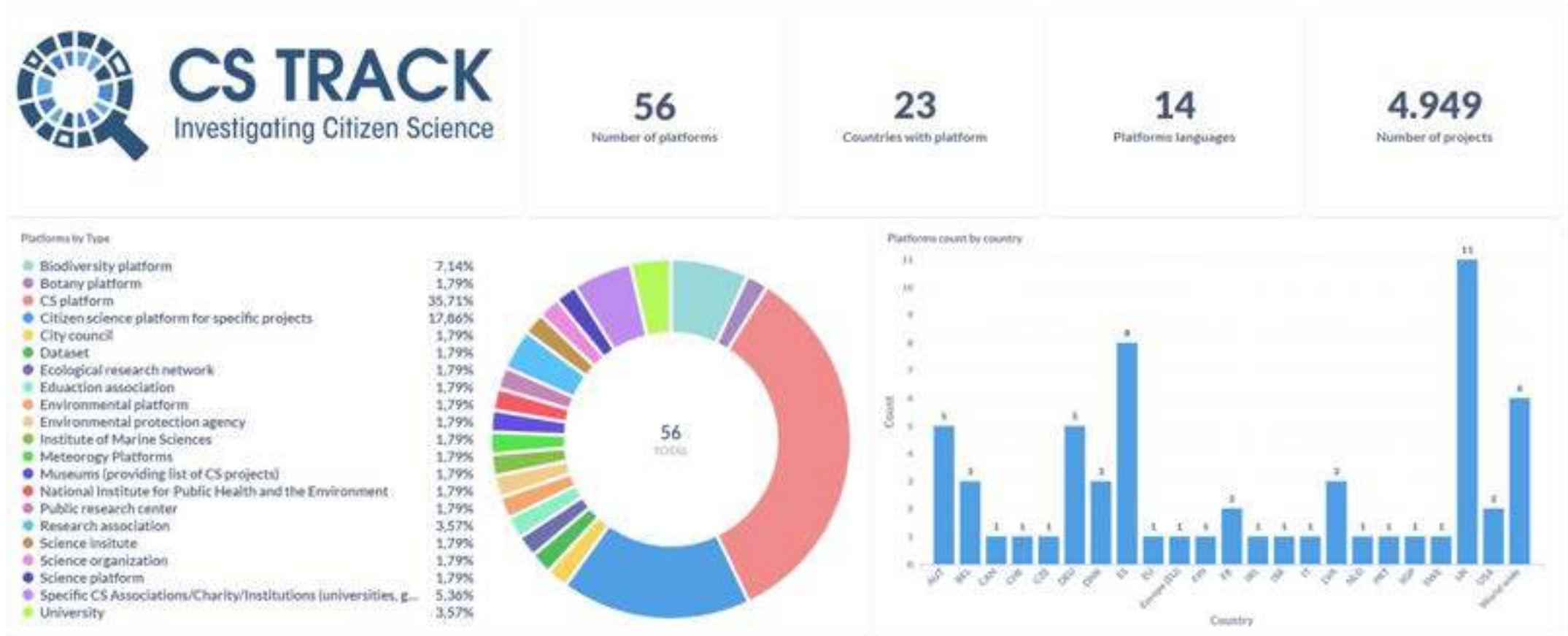
One central database aiming to compile **a comprehensive collection of CS projects**, mainly visible on the Web, as complete as possible.

The CS Track database opens a new perspective into CS knowledge by observing and characterizing initiatives through a quantitative approach that relies on **web-based and social-network analytics**.

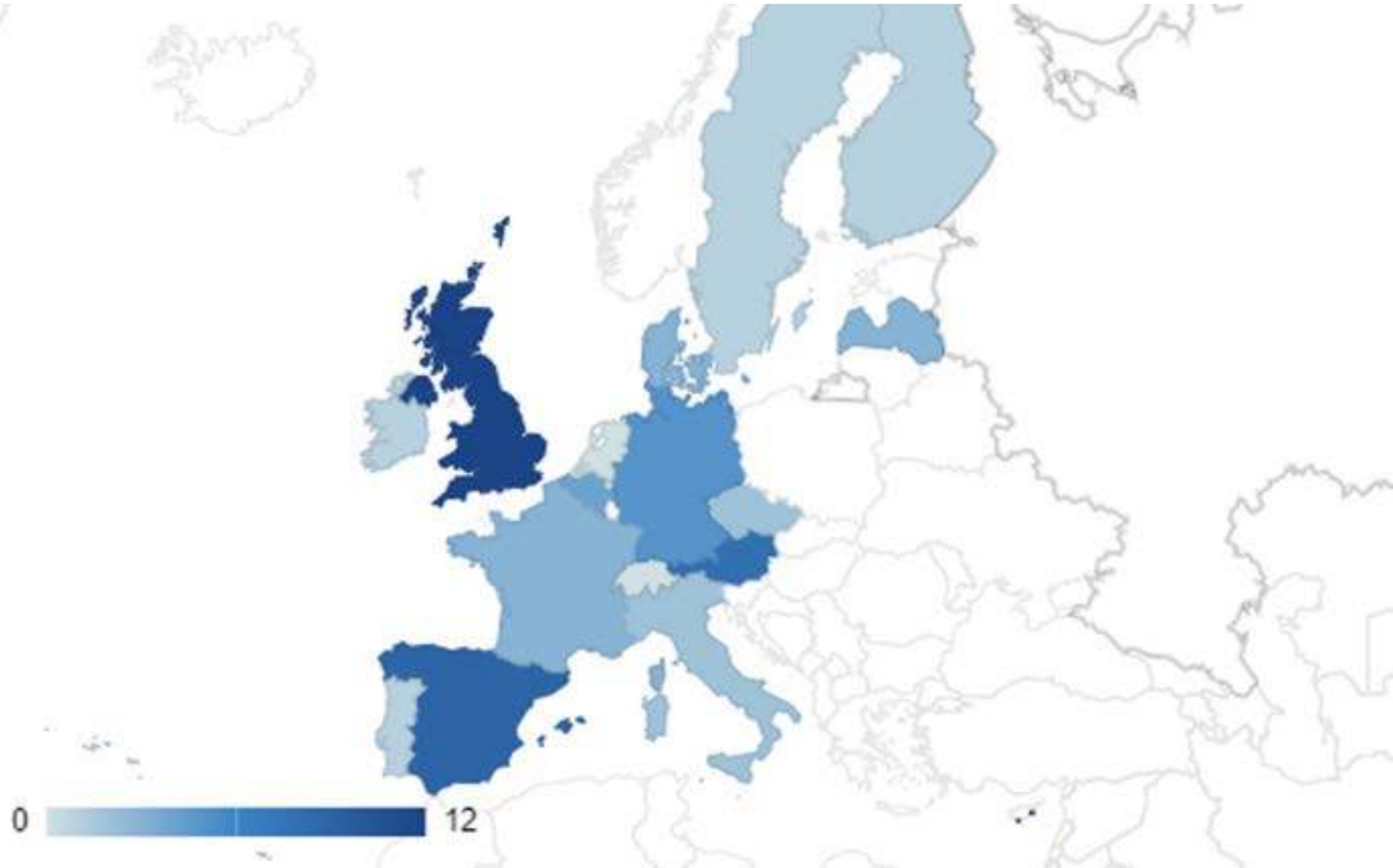
- Key national CS platforms and other organizations from the European Union and H2020 Associated Countries have been analysed using web scraping and manual extraction techniques.

CS Track database - overview

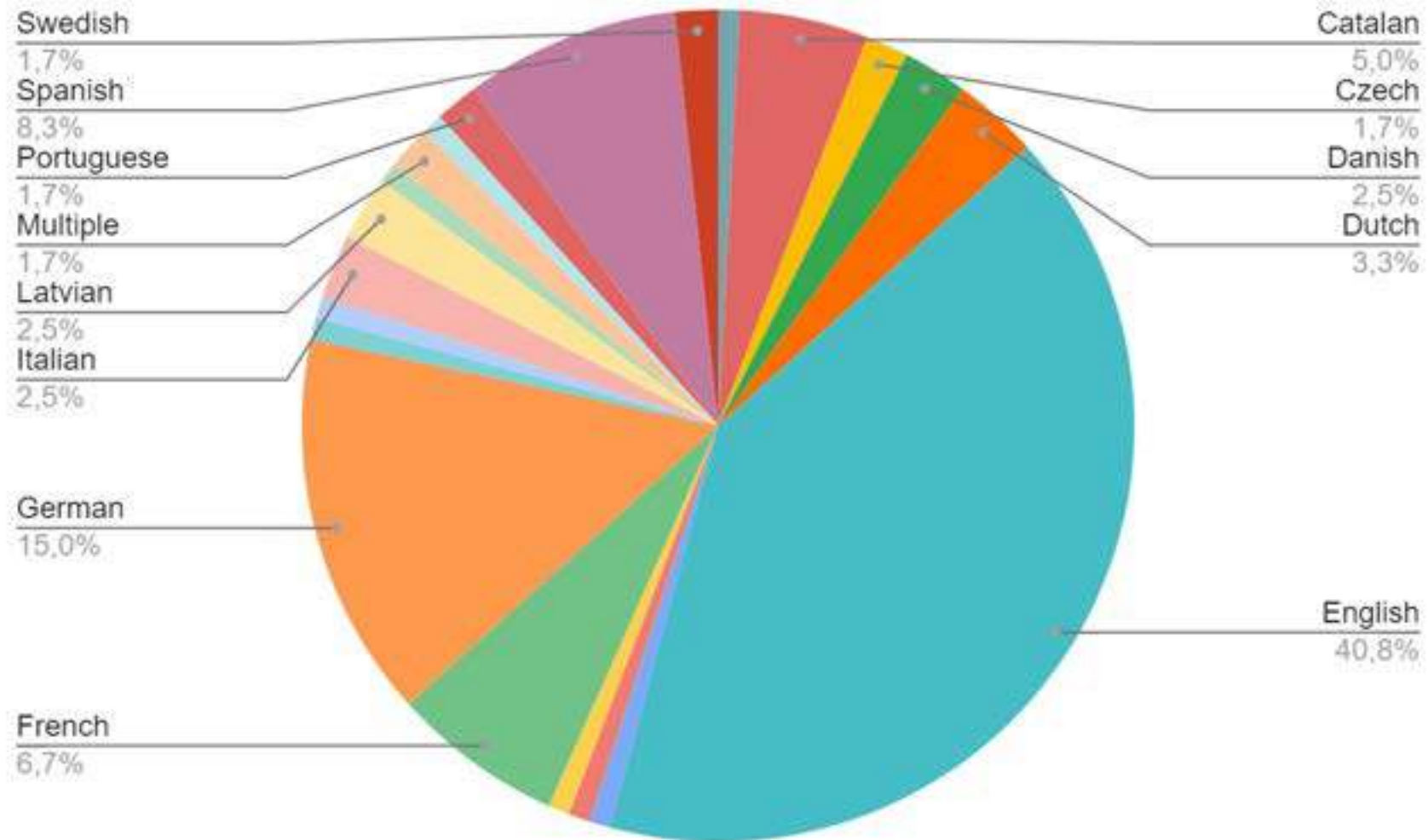
- Database (2022) overview



CS Track database - countries distribution

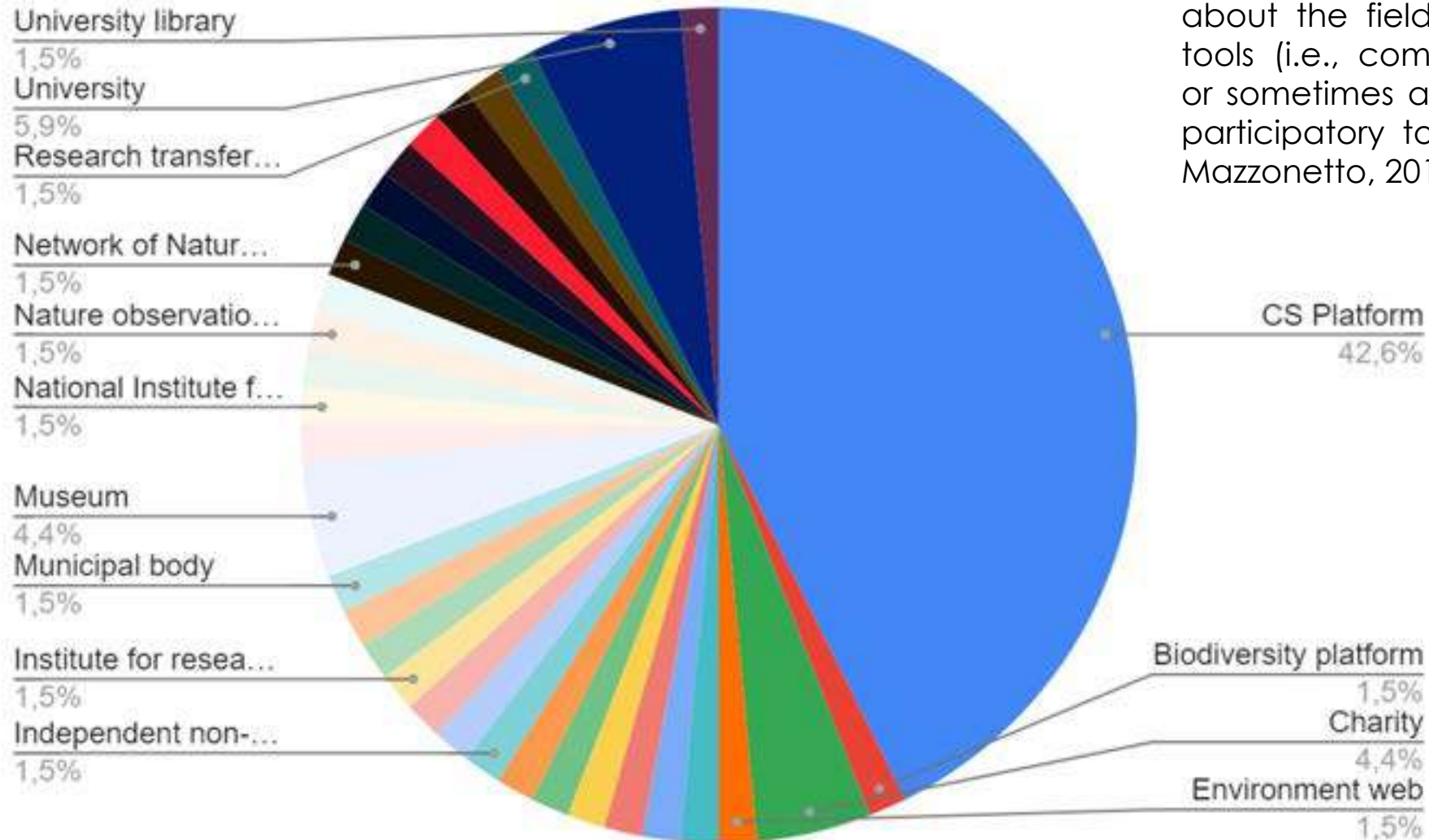


CS Track database - websites languages



CS Track database - Overview

CS platforms are digital platforms that share information about CS projects, activities, events, material or resources, news about the field, communication tools (i.e., comments or forums) or sometimes are also used as a participatory tool (Sanz, Gold & Mazzonetto, 2019)

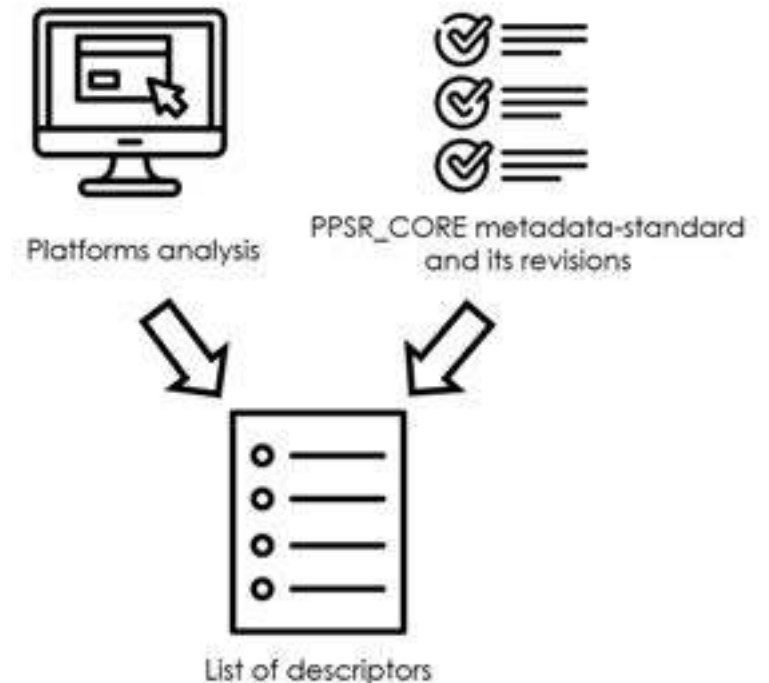


Database descriptors

A **descriptor** is an item that describes a characteristic of a citizen science project or data related to the project information.

The **list of descriptors** selected to build the CS Track database has been defined by analyzing:

- Websites and online platforms that contain CS project information
- PPRS_CORE metadata-standard [1] and the revisions made by Data and metadata working group [2][3]



Database descriptors - example

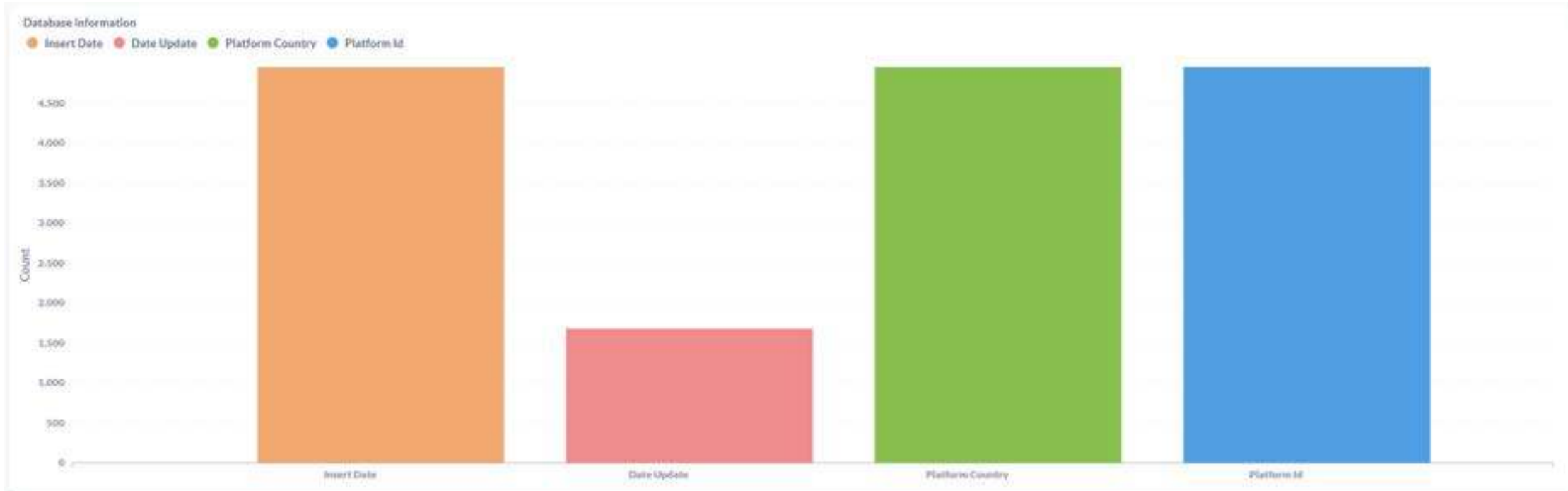
The **Mosquito Alert** CS project, information extracted from [Eu-citizen.science](#), [Scistarter](#), [Parcs de Catalunya](#) and [World Environment Situation Room Citizen Science portal](#).

From these, we obtained the following descriptors *Description*, *Status*, *Location*, *Volunteers profile*, etc...

The image shows a screenshot of the Mosquito Alert project page on the eu-citizen.science platform. The page is divided into several sections, with several key areas highlighted by red boxes:

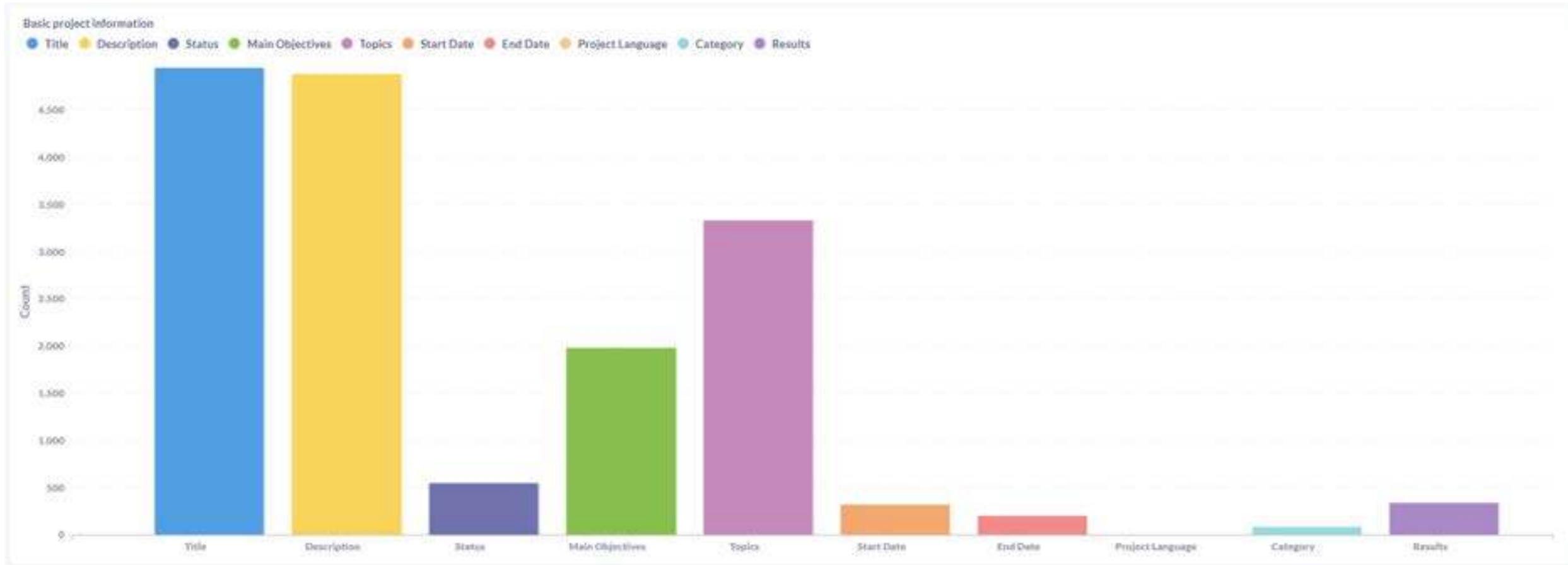
- Status:** A box highlighting the 'Status' section, which shows 'Active' and 'Not'.
- Location:** A box highlighting the 'Location' section, which shows 'Spain' and 'Iberia'.
- Description:** A box highlighting the 'Descripción' section, which states: 'Mosquito Alert es una plataforma ciudadana para investigar y controlar mosquitos transmisores de enfermedades globales. A través de una aplicación móvil, los observadores voluntarios envían fotografías de sus hábitats de mosquito tigre. Con estos datos, los científicos estudian su distribución para poder implementar medidas de seguimiento y control'.
- Participación:** A box highlighting the 'Participación' section, which states: 'Participación: Público general'.
- Requisitos de formación:** A box highlighting the 'Requisitos de formación' section, which states: 'ninguno, pero hay que conocer mínimamente la especie. Las citas son validadas posteriormente a partir de fotografías'.
- Entidad de investigación y coordinación:** A box highlighting the 'Entidad de investigación y coordinación' section, which states: 'El proyecto es coordinado por un equipo interdisciplinar de investigadores de diversas entidades: el Centro de Estudios Avanzados de Blanes (CEAB), el Consejo Superior de Investigaciones Científicas (CSIC), el Centro de Investigación Ecológica y Aplicaciones Forestales (CREAF) y el Catalan Institute for Research and Advanced Studies (ICREA)'.
- Más información:** A box highlighting the 'Más información' section, which provides the URL: 'http://www.mosquitoalert.com/'.
- Footer:** A box highlighting the footer text: 'Mosquito Alert - This data set has been created through the efforts of the Mosquito Alert team and the thousands of citizen scientists who have volunteered their energy and contributed reports on the Mosquito Alert platform. Participate Now'.

Data categories about project information



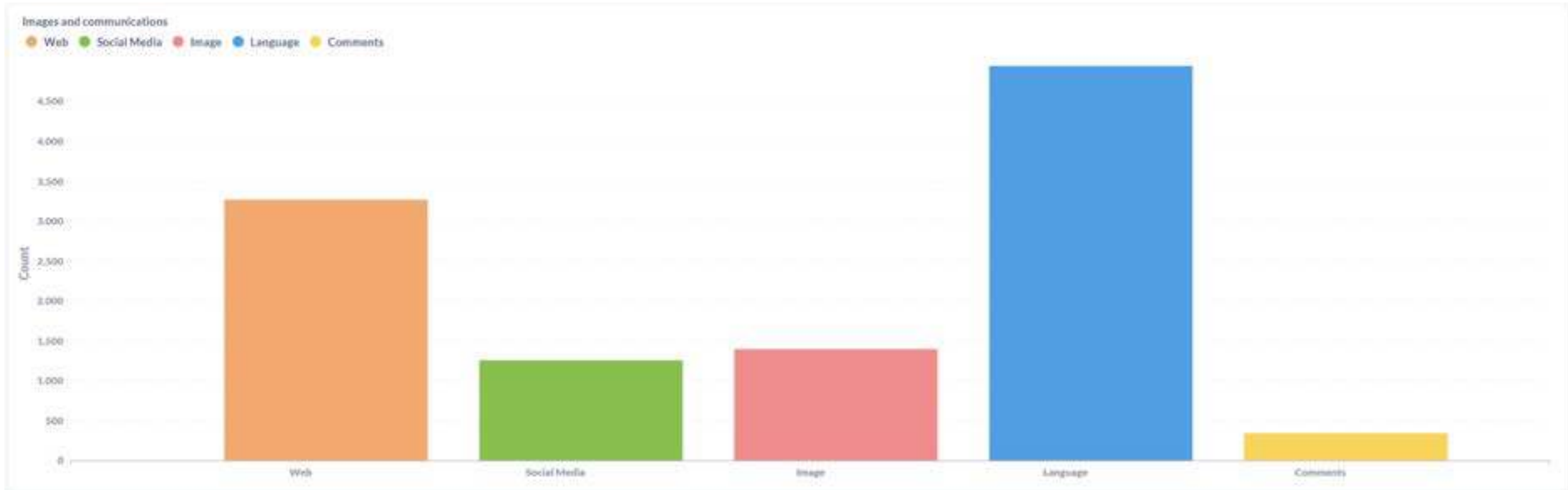
<http://database.cstrack.upf.edu/public/dashboard/8ebd08b0-94f0-4fc4-9551-51028aa9c29f>

Data categories about project information



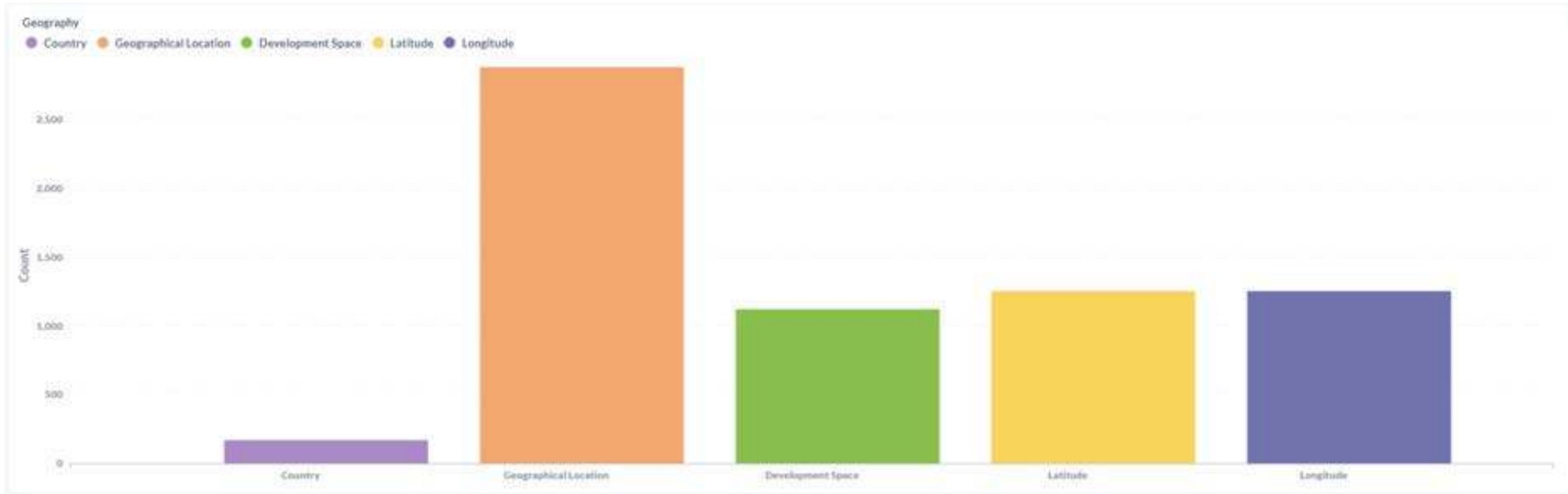
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Data categories about project information



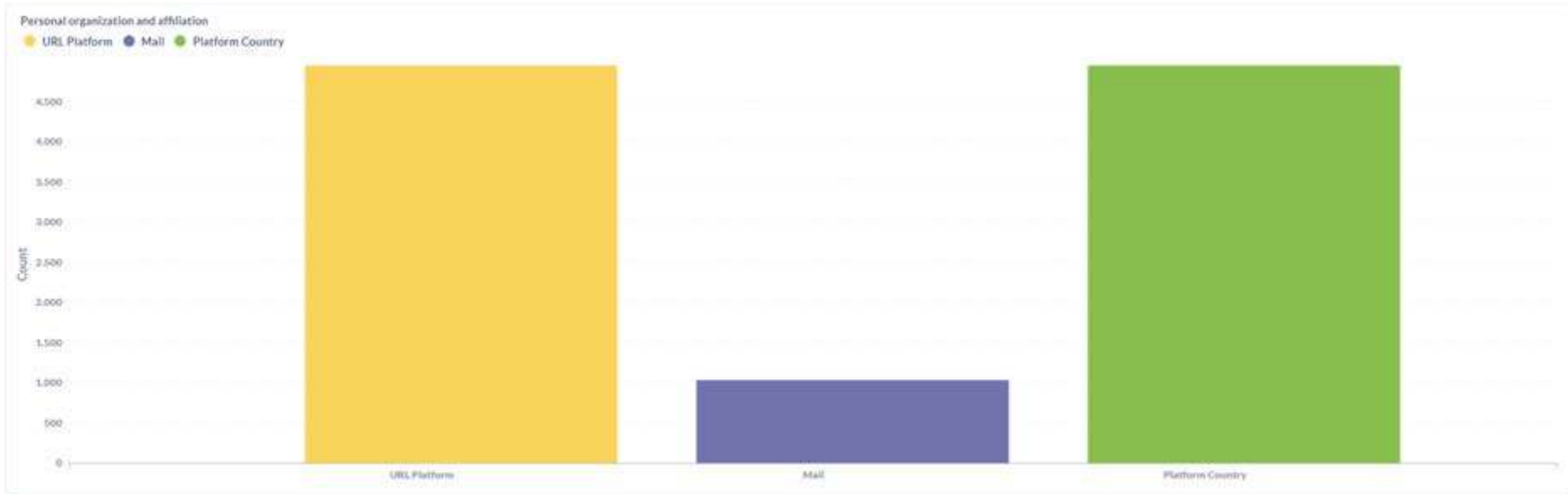
<http://database.cstrack.upf.edu/public/dashboard/8ebd08b0-94f0-4fc4-9551-51028aa9c29f>

Data categories about project information



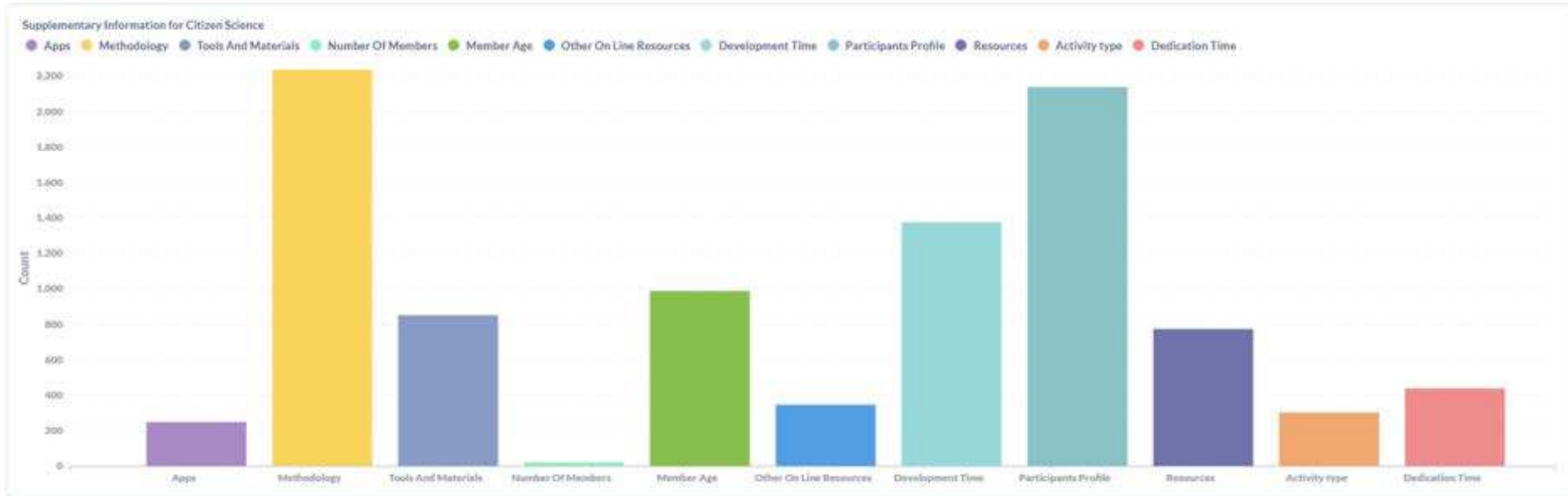
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Main Challenges and Conclusions

Challenges:

- The quality and variety of data collected from CS platforms >> different webpage structures and metadata standards
- Different languages

Conclusions:

- There is still work to be done to standardize the data structure of CS Platforms/Projects visible online
- Obtain extra information by applying advanced computational analysis techniques
 - Research areas, SDGs, skills of CS practice, learning outcomes
- Defining a data vocabulary for each descriptor to standardize information

More details, read: Calvera-Isabal, M., Santos, P., Hoppe, H., & Schulten, C. (2023). How to automate the extraction and analysis of information for educational purposes. [Cómo automatizar la extracción y análisis de información sobre ciencia ciudadana con propósitos educativos]. *Comunicar*, 74.

<https://doi.org/10.3916/C74-2023-02>

**Questions?
Thank you!**

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