

# EDAM ontology; tools and infrastructure


Lucie Lamothe<sup>1</sup>, Alban Gaignard<sup>2</sup>, Mads Kierkegaard<sup>3</sup>, Hager Eldakrouy<sup>4</sup>, Melissa Black<sup>5</sup>, Ivan Kuzmin<sup>6</sup>, Erik Jaaniso<sup>6</sup>, Bryan Brancotte<sup>7</sup>, Jon Ison<sup>1</sup>, Veit Schwämmle<sup>3</sup>, Matúš Kalaš<sup>8</sup>, Hervé Ménager<sup>1,7</sup>, and the EDAM community

EDAM is an ontology of **data analysis** and **data management**, within and beyond life sciences. It comprises concepts related to data analysis, modelling, optimisation, and data life cycle.

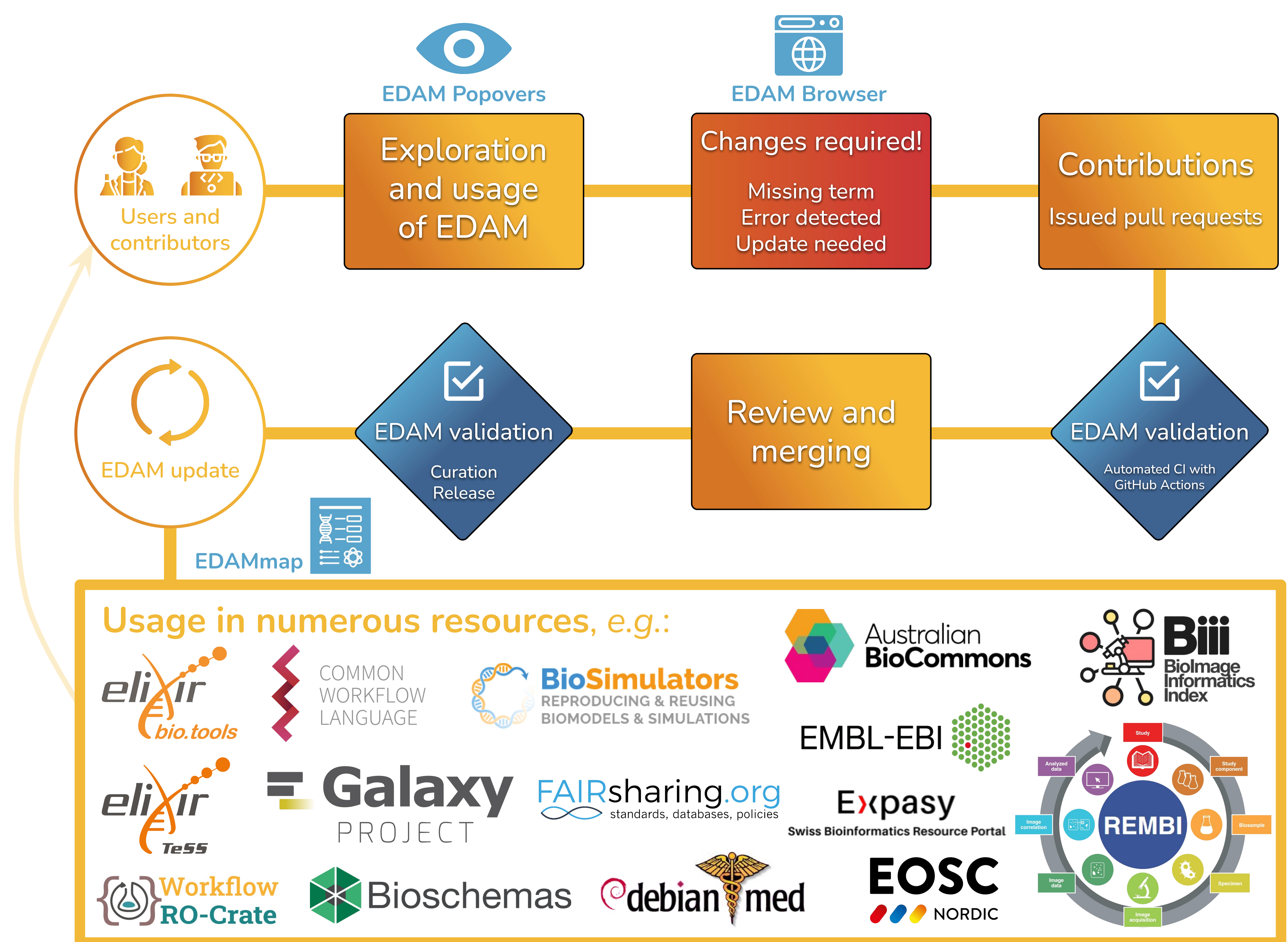
EDAM is developed in a *participatory* and *transparent* fashion, within a broad and growing *community of contributors* from both inside and outside of ELIXIR.

Community extensions of EDAM are:

 **EDAM Bioimaging** (including machine learning)

 **EDAM Geo** for interdisciplinary applications, such as global and planetary health

The community-driven development comes with a set of *challenges*.

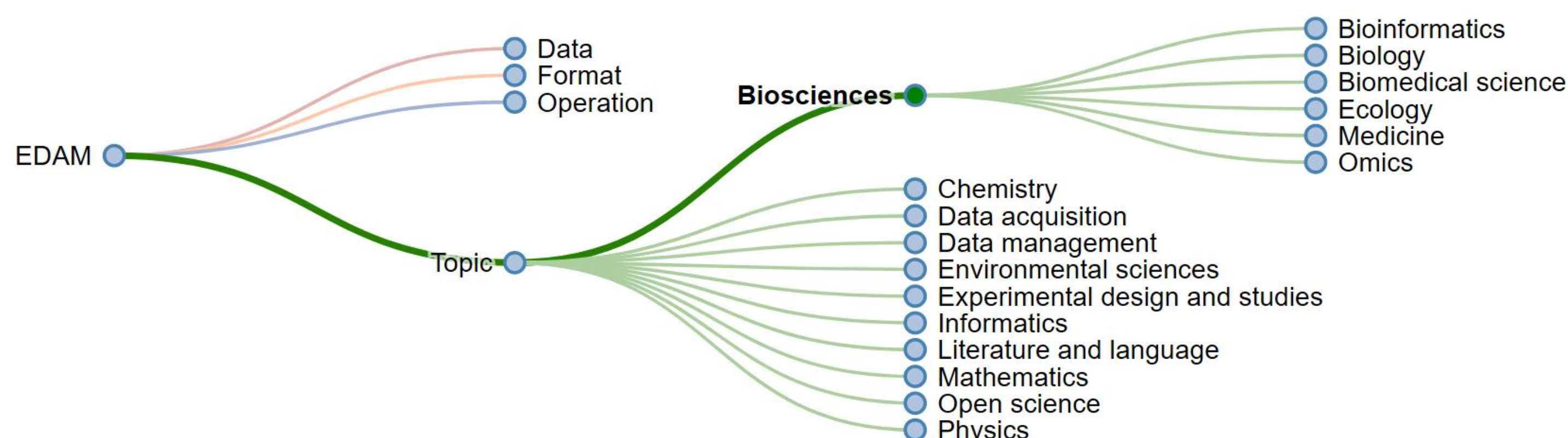


Design by Alban Sauvalle, IFB-core, ELIXIR France. Using icons from Flaticon.com

To help the community use and contribute to EDAM, a set of tools are provided:

## EDAM Browser

A web interface that lets users **explore EDAM** and its usage graphically. It also allows contributors to **submit a suggestion** to the GitHub repository using a graphical user interface.



## EDAM Popovers

A web-browser extension showing details of EDAM concepts selected in any website.



## EDAM validation

The quality-control tooling includes standard tools such as **HermiT** and **ROBOT**, plus a custom validator working on both the syntactic and semantic levels. The validation tools are integrated in **continuous integration (CI)** workflows, using GitHub Actions. Additional tests are available for **curation**.

## EDAMmap

A tool for **text mining** EDAM ontology concepts from natural language text, such as published scientific articles.

<sup>1</sup> CNRS, Institut Français de Bioinformatique, IFB-core, **France** (J.I. at the time of contribution)

<sup>2</sup> Nantes Université, CNRS, INSERM, L'institut du thorax, **France**

<sup>3</sup> University of Southern Denmark, Ødense, **Denmark**

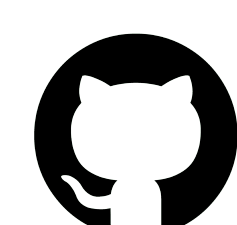
<sup>4</sup> Outreachy intern (EDAM), Cairo, **Egypt** (at the time of contribution)

<sup>5</sup> Outreachy intern (EDAM), São Paulo, **Brazil** (at the time of contribution)

<sup>6</sup> University of Tartu, **Estonia**

<sup>7</sup> Institut Pasteur, Université Paris Cité, Bioinformatics and Biostatistics Hub, **France**

<sup>8</sup> University of Bergen, **Norway**



[edamontology](https://github.com/edamontology)



[@edamontology](https://twitter.com/edamontology)

