

The potential of Open Source Software and Open Educational Resources for positive impacts on teaching, learning, and research is immense.

Open Source Software and Open Educational Resources

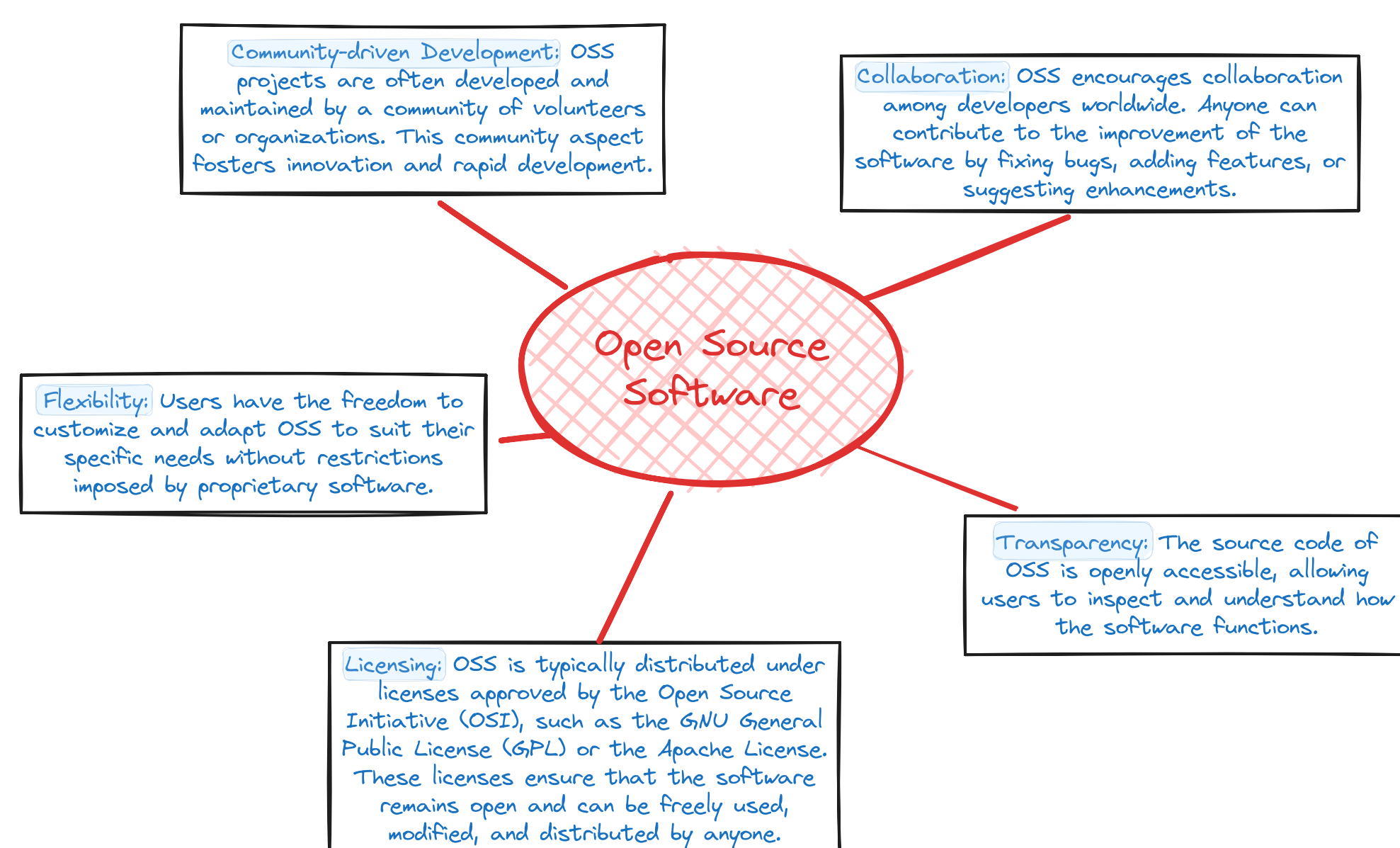
Ralph-Uwe Börner¹

✉ rub@geophysik.tu-freiberg.de

¹ Institute of Geophysics and Geoinformatics, TU Bergakademie Freiberg

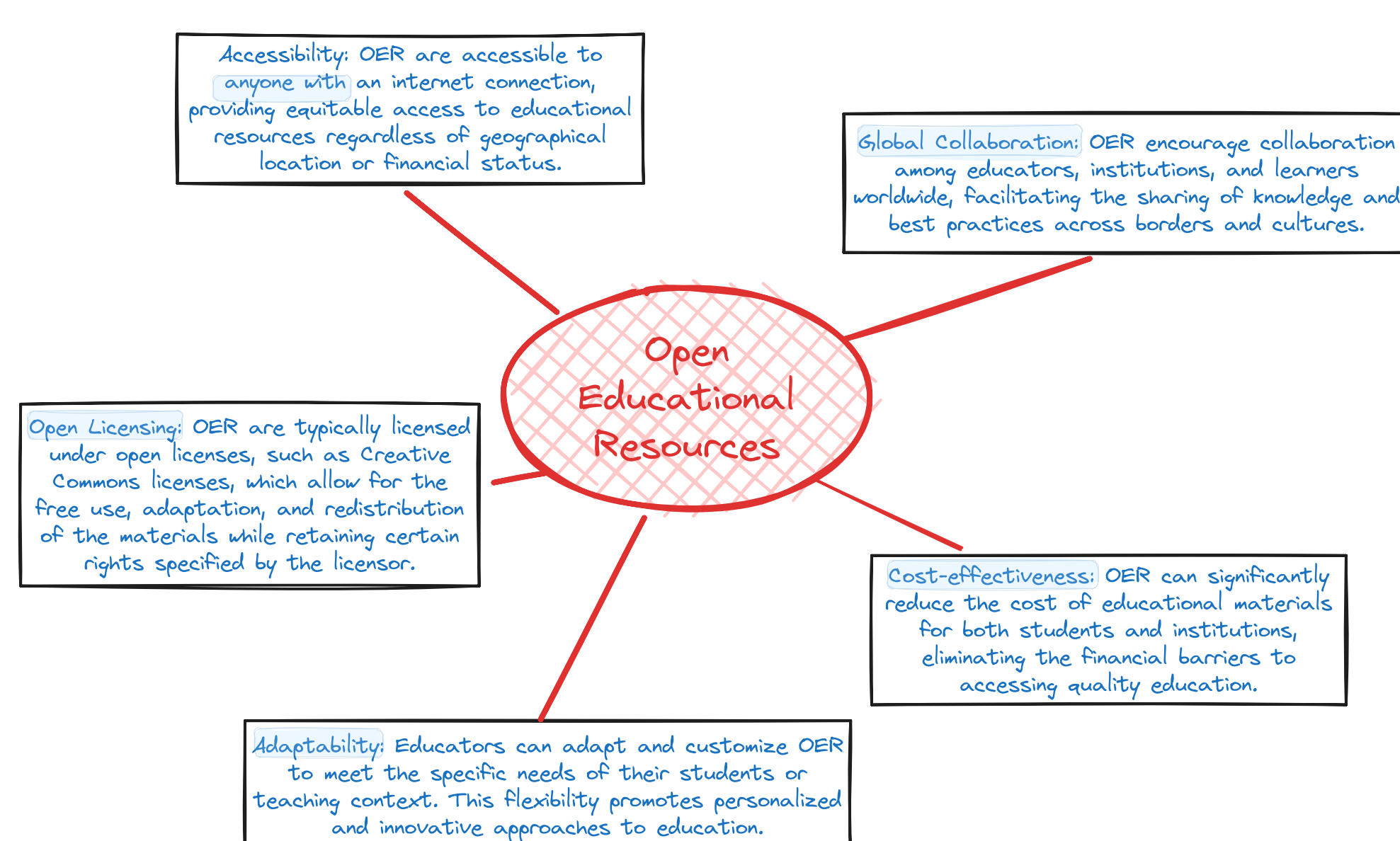
Open Source Software

Open Source Software (OSS) refers to software whose source code is freely available to users. This means that anyone can view, modify, and distribute the code as per the terms of the respective license.

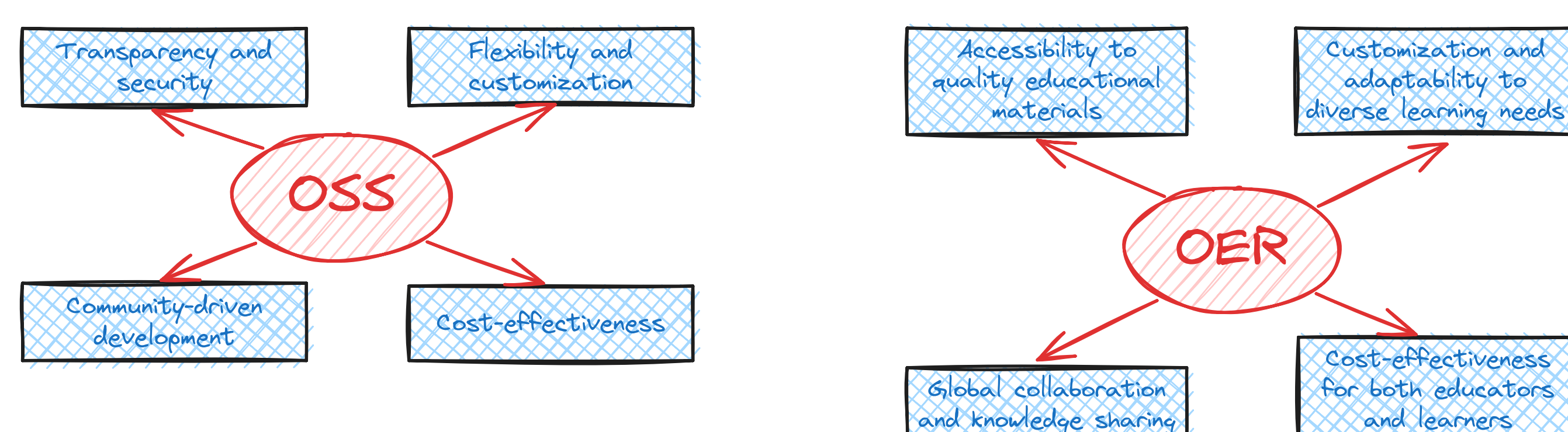


Open Educational Resources

Open Educational Resources (OER) refer to educational materials that are freely accessible, openly licensed, and available for use, reuse, modification, and sharing.



Benefits of OSS and OER



Recent Developments

Quarto

Quarto is an open-source scientific publishing system.



- Author using Jupyter notebooks or with plain text markdown in your favorite editor.
- Create dynamic content with Python, R, Julia, and Observable.
- Publish reproducible, production quality articles, presentations, dashboards, websites, blogs, and books in HTML, PDF, MS Word, ePub, and more.

MyST

MyST is an ecosystem of open-source, community-driven tools designed to revolutionize scientific communication.



MyST's powerful authoring framework supports blogs, online books, scientific papers, reports and journals articles.

Reactive Notebooks

marimo is an open-source *reactive notebook* for **Python** — reproducible, git-friendly, executable as a script, and shareable as an app.

When you change a variable, **Pluto.jl** automatically re-runs the **Julia** cells that refer to it. Cells can even be placed in arbitrary order - intelligent syntax analysis figures out the dependencies between them and takes care of execution.



Collection of Awesome OSS and OER

