Publishing open reproducible research is sustainable and fair. The trend towards open science increases the pressure on authors to provide access to the source code and data underlying the computational results of scientific papers. Platforms provide solutions to support the publication of code and data.

What do I need?
- Platform hosting
- Choice of License
- Stage of the project
- Funding
- Supported research areas
- Supported submission formats
- Upload
- Copyright
- Storing
- Modification/Deletion after publication
- Sharing
- Searching
- Inspection
- Execution
- Manipulation

Platforms provide solutions to support the publication of code and data.

Take-home messages
1. Many platforms provide one-click reproduction, e.g. o2r.
2. All platforms cover a broad range of stakeholder needs.
3. You can use o2r to modify parameters and compare interactive Figures.

o2r
Provides one-click reproduction to manipulate parameters and compare results.

Binder
Launch analyses from Binder-ready repository and inspect the workflow in the browser.

Code Ocean
Commercial platform to create “capsules” for several programming languages. Inspect, execute and manipulate the analysis in the browser.

eLife RDS
Platform to publish scientific articles as executable documents with all code snippets on “Stencila”

Galaxy
Develop computational analyses without programming expertise using Jupyter Notebook.

Gigantum
Packages analyses in Git repositories. Offers a commercial client application to create and execute analyses locally and a cloud to collaborate with peers.

Manuscripts
Online tool to write executable collaborative documents based on literate programming within a UI.

REANA
Self-hosting platform that provides a set of CLI commands to run large analyses on a remote cloud.

ReproZip
Provides a set of CLI commands for encapsulating the analysis. It can be executed on a provided server or locally.

Whole Tale
Create a “Tale” for the analysis requirements so users can inspect and execute it in the original environment in browser.

Limitations
- Handling of sensitive (e.g. private) data solution: cloud based data enclaves or involvement of trustworthy authority
- Very large data sets and long computational times
- No guaranteed anonymity of authors within review process solution: anonymous version of the materials
- Need for specialised hardware
- Often no support for handling copyright
- Possibility of deleting materials after publication prevents permanent storage of code and data

Trends
- Self-hosting of the infrastructure
- Support for notebooks (e.g. RMarkdown, Jupyter)
- Provision of UI or integrated development environment instead of CLI commands