

Adventures in Open Science

NextGenBUG 2022



Open Science



Open Science

Open Source

Open Data

Open Contributions

Open Community


Open Core



Open Source



Open Source

Labrador

Search

Create New Project

[Log In / Register](#)

Filters

TEXT FILTER

PROJECT NAME

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z 0-9

SPECIES

[Mus musculus](#)

[Homo sapiens](#)

[Harpegnathos saltator](#)

[Mouse](#)

[Saccharomyces cerevisiae](#)


[Camponotus floridanus](#)

[Polistes canadensis](#)

[Arabidopsis thaliana](#)

[Drosophila melanogaster](#)

Labrador Dataset Browser




Video Tutorial

Labrador Dataset Browser

A database of datasets processed by the BI Bioinformatics group.

You can use [labrador](#) to find and download processed data or request new datasets. Projects are annotated with how they were processed.



You can use the table below to browse the projects and datasets. You can filter the visible data using the tools on the left. If you're looking for something really specific, try the search bar at the top of the page.

Key: ☒ Processing Complete ☒ Currently Processing ☒ Not Started ☒ Directory not found

Name	Datasets	Species	Cell Types	Data Types
Abad_2013	14	Mus musculus	ES cells, iPS cells	RNA-Seq
Adachi_2013	6	Mus musculus	ES cells	ChIP-Seq
Aiba_2009	88	Mus musculus	embryonic carcinomal cell, ES cell, TS cell, Mouse stem cell, Placenta, SNL-STO cell line, MEF, Embryonic germ cells, iPS-	RNA ChIP Microarray

Open Source

2010 First release

2012 Moved to GitHub

2015 Stopped active development

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DATA TYPES

Mus musculus

Homo sapiens

Harpegnathos saltator

Mouse

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Arabidopsis thaliana

Apis mellifera

Bombyx mori

Drosophila melanogaster

Nasonia vitripennis

ChIP-Seq

RNA-Seq

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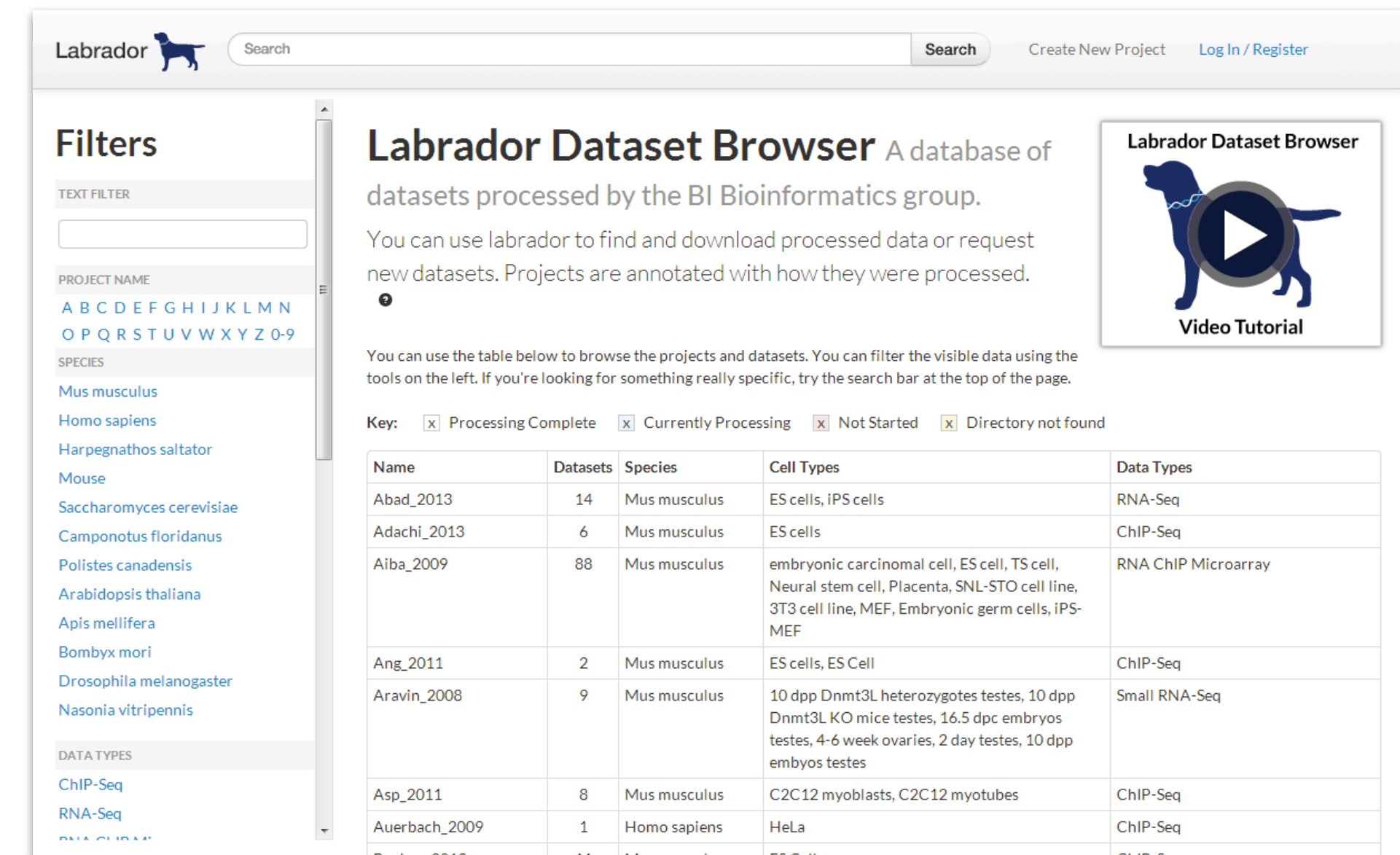
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Ang_2011	2	Mus musculus	ES cells, ES Cell	ChIP-Seq
Aravin_2008	9	Mus musculus	10 dpp Dnmt3L heterozygotes testes, 10 dpp Dnmt3L KO mice testes, 16.5 dpc embryos testes, 4-6 week ovaries, 2 day testes, 10 dpp embryos testes	Small RNA-Seq
Asp_2011	8	Mus musculus	C2C12 myoblasts, C2C12 myotubes	ChIP-Seq
Auerbach_2009	1	Homo sapiens	HeLa	ChIP-Seq
Baibac_2012	11	Mus musculus	ES Cells	ChIP-Seq

Labrador Dataset Browser

Video Tutorial

Open Source

- 2010 First release
- 2012 Moved to GitHub
- 2015 Stopped active development
- 2017 Contributions from Russell Hamilton
- 2018 Fixes from Simon Andrews
- 2021 Updates from Steven Wingett
- 2022 Security patches from Altos Labs



Open Data



Open Data


SRA-Explorer


🛒 0 saved datasets

SRA Explorer



This tool aims to make datasets within the Sequence Read Archive more accessible.

Search for:



GSE30567[All Fields] 



Max Results

100  

Start At Record

0  

Need inspiration? Try [GSE30567](#) , [SRP043510](#) , [PRJEB8073](#) , [ERP009109](#) or [human liver miRNA](#) .


Select relevant datasets and click *add to collection*. When you're finished, view all saved datasets with the button in the top right of the page, where you can copy the SRA URLs.

Open Data

ewels.github.io/AWS-iGenomes/

AWS iGenomes

Common reference genomes hosted on AWS S3



This resource hosts commonly used bioinformatics reference genomes with the help of a grant from [AWS Programs for Research and Education](#).

In order to get the references, you need to sync the files from S3 to your EC2 environment. This web page contains two tools to help you with that - a [command builder](#) and a [command-line script](#).

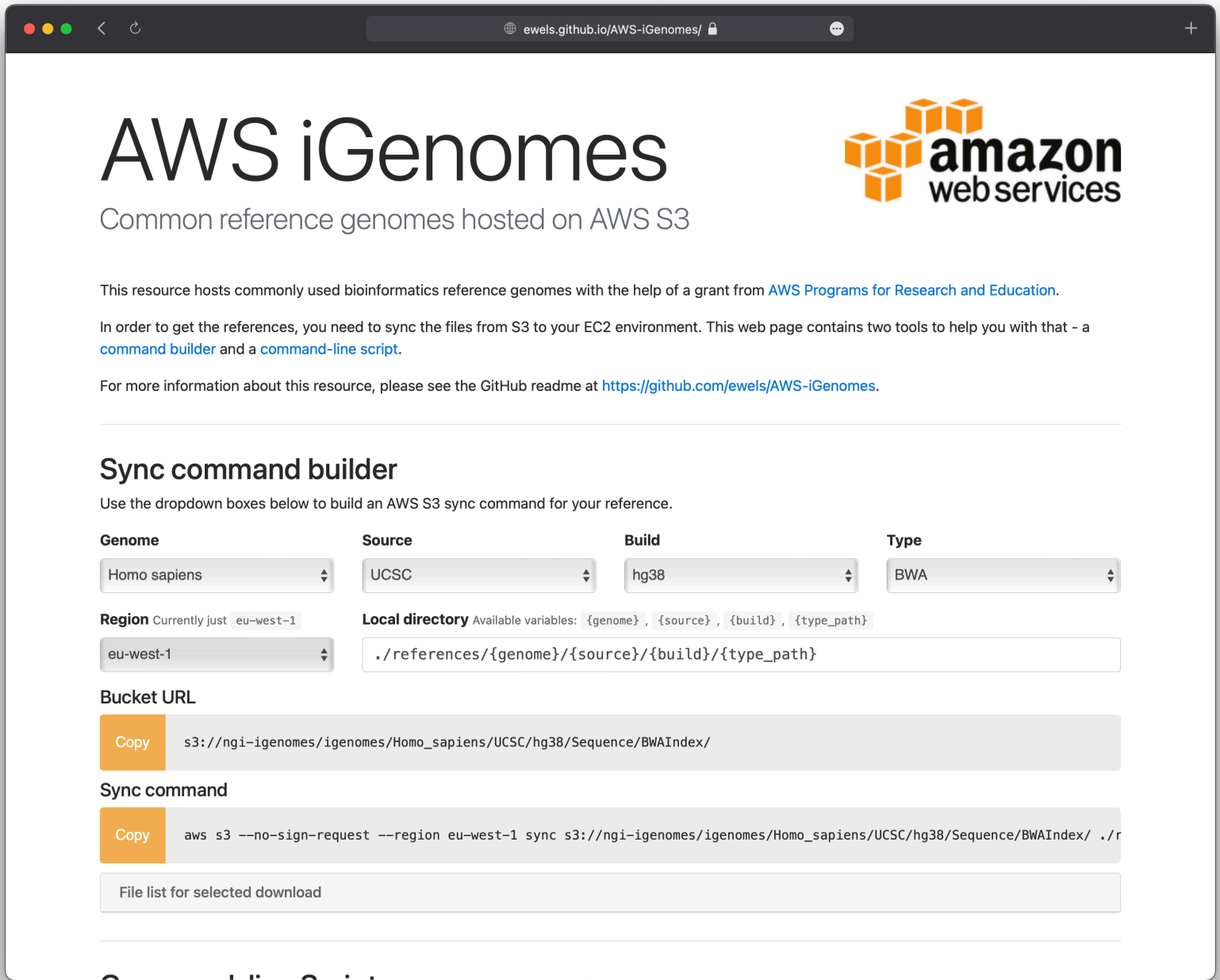
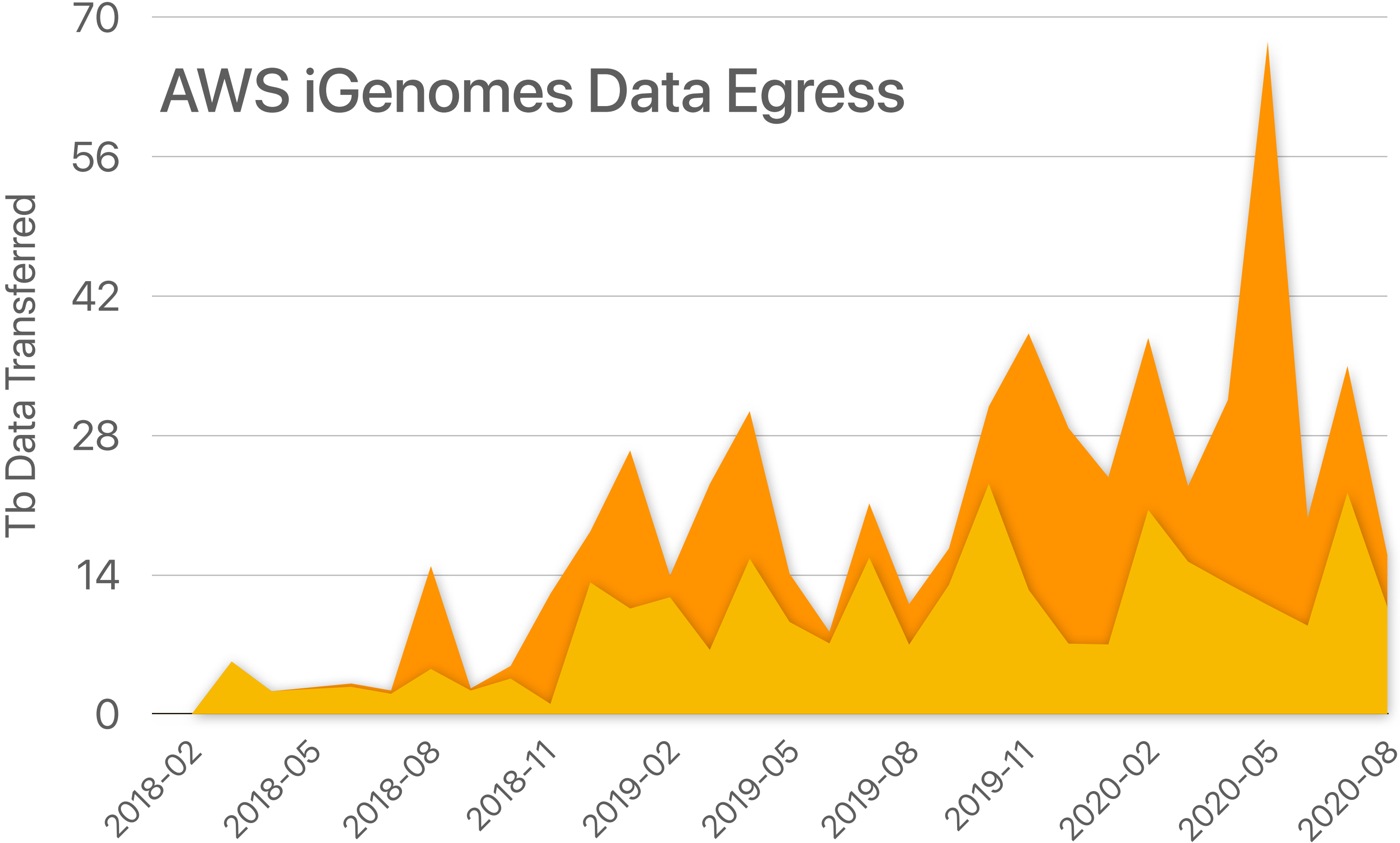
For more information about this resource, please see the GitHub readme at <https://github.com/ewels/AWS-iGenomes>.

Sync command builder

Use the dropdown boxes below to build an AWS S3 sync command for your reference.

Genome	Source	Build	Type
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Open Data



Total storage: ~5.5TB

Human STAR index: ~30GB

- Tb within AWS
 - Tb to internet
- (stacked plot)

Open Contributions



Open Contributions



Open Contributions

Packaged (easy to install)

Simple user interface

Usage documentation

Sensible defaults



Open Contributions

Packaged (easy to install)

Simple user interface

Usage documentation

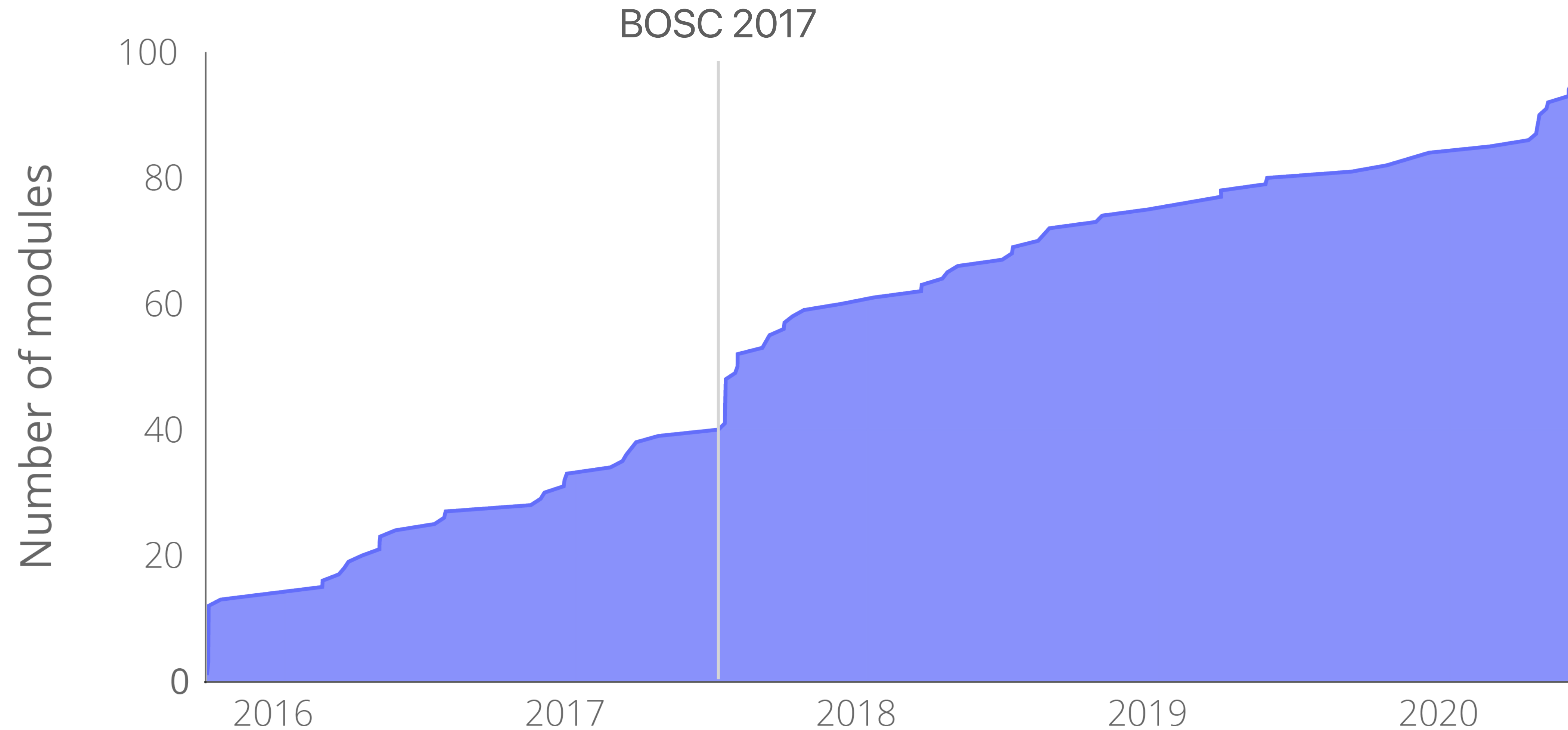
Sensible defaults

Extensibility

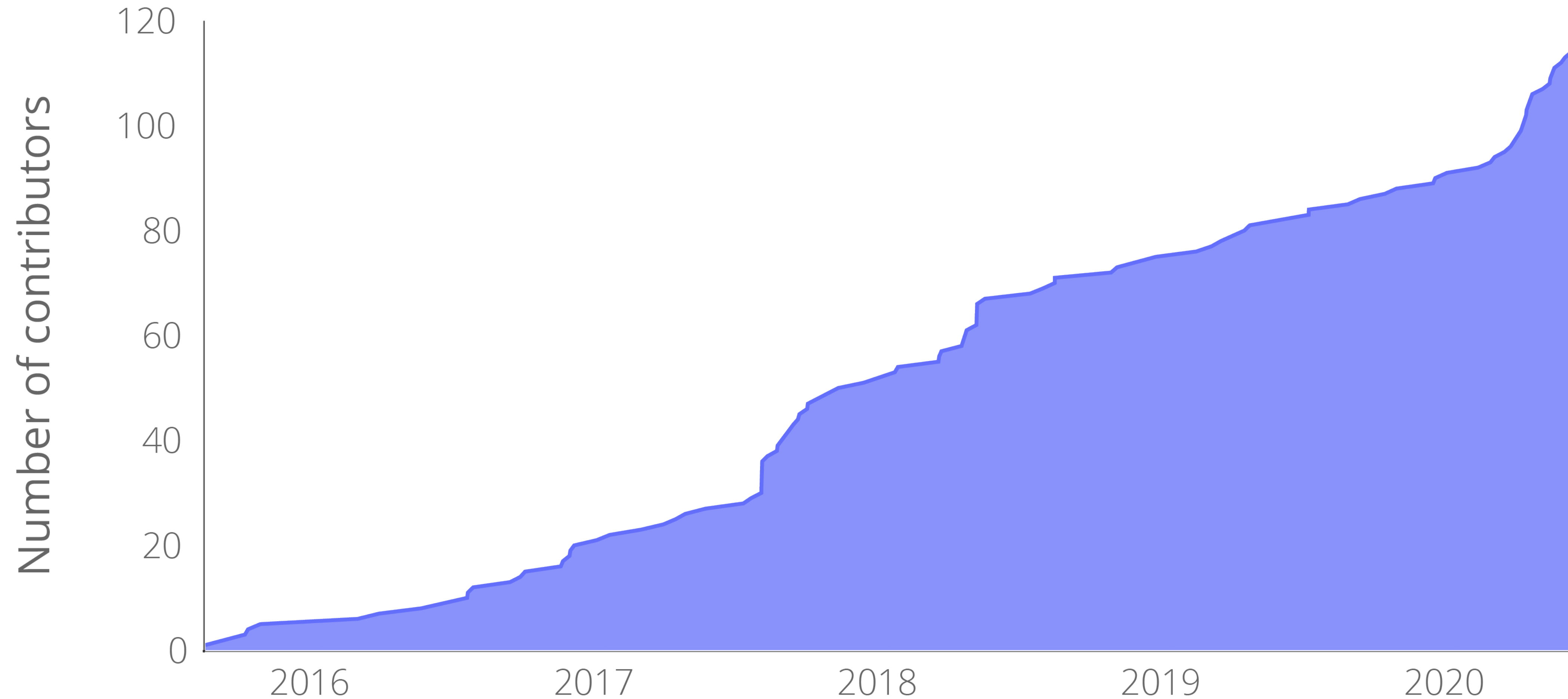
Developer documentation



Open Contributions



Open Contributions



Open Contributions



0.45

per day



Open issue

0.23

per day



Open pull request



Open Community



Open Community

nf-core 



nf-core



71
PIPELINES

<https://nf-co.re>



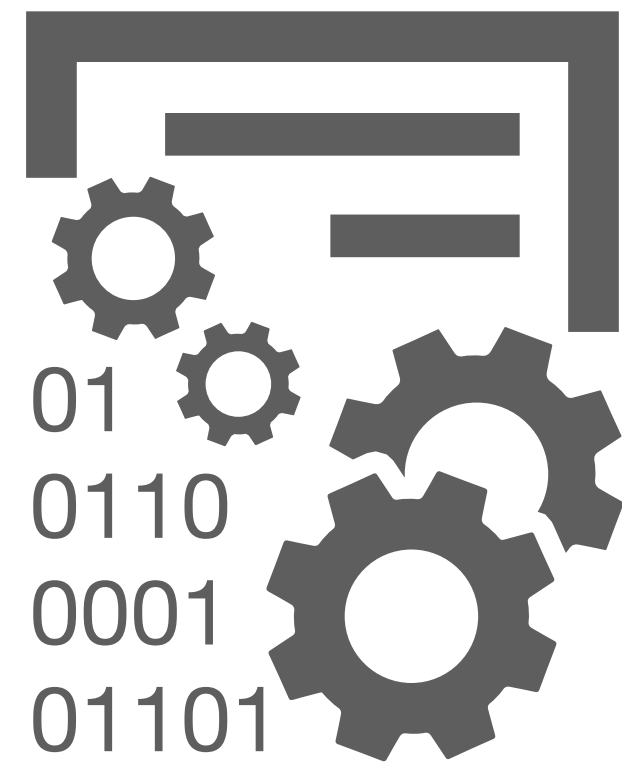
Running pipelines

Writing pipelines

Testing / automation

<https://nf-co.re>

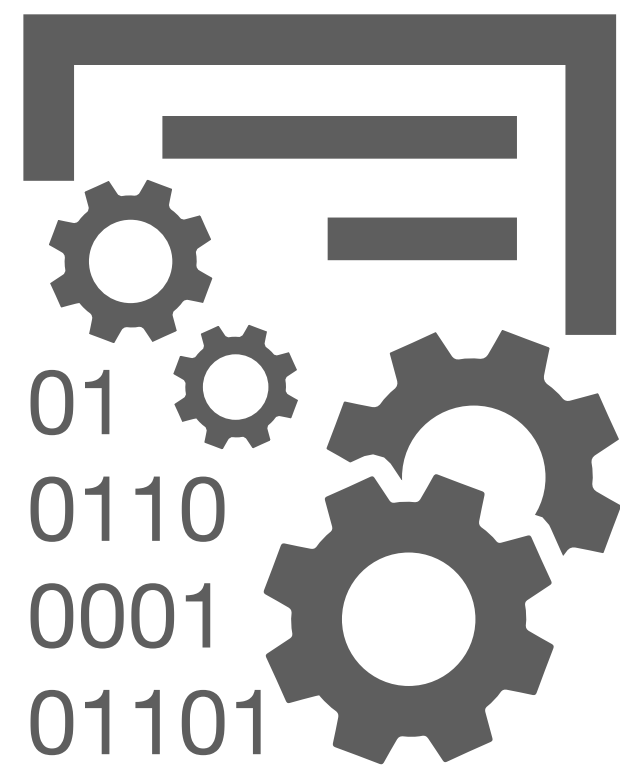
nf-core



692

MODULES

<https://nf-co.re>



692

MODULES

21

SUB-
WORKFLOWS

<https://nf-co.re>

Open Community

Removal of institutional branding

Defined scope and guidelines

Generous access rights

Focus on developer tooling



Open Community

Removal of institutional branding

Defined scope and guidelines

Generous access rights

Focus on developer tooling

Automated testing

Enforced code review

nf-core 



Open Community



> 4000

Members on Slack




Open Community

nf-core 

320  Open issue

*nf-core hackathon
(3 days)*

298  Open pull request



Open Core



Open Core

Nextflow and nf-core are supported by:

Chan Zuckerberg Initiative



Open Core

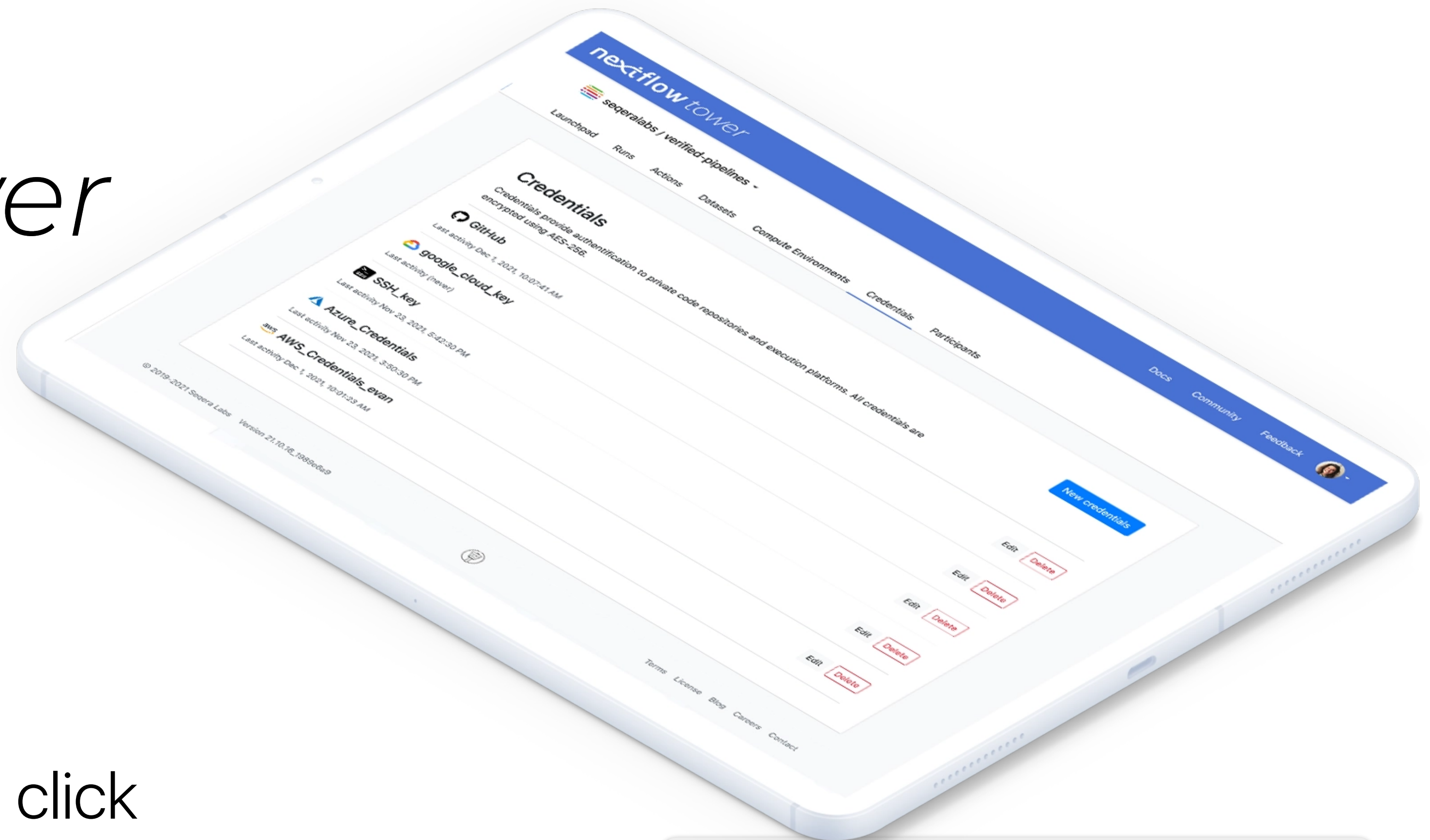


Intuitive launchpad interface

Launch, manage, and monitor

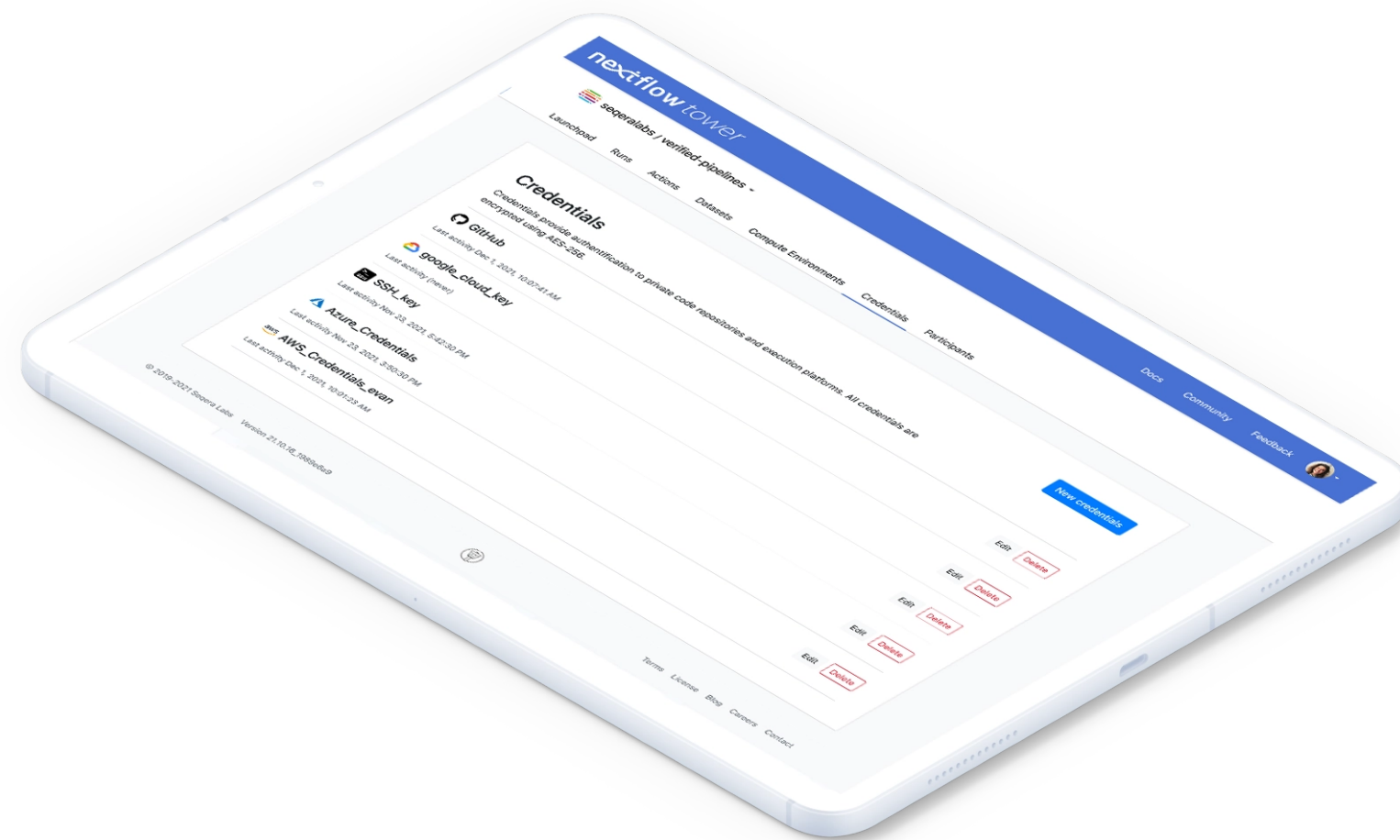
Share runs and work in teams

Create cloud infrastructure with a click



<https://tower.nf>

Open Core



<https://tower.nf>

Open Core



nextflow



Open training materials

Open source code

Open communities



Phil Ewels

<https://phil.ewels.co.uk>

phil@seqera.io



tallphil



ewels



seqeralabs

<https://seqera.io>

**Chan Zuckerberg
Initiative**



nextflow SUMMIT 2022

<https://summit.nextflow.io>

Mentorship applications

Close November 1st 2022

Nextflow / nf-core training

6-10 March 2023

nf-core hackathon

20-24 March 2023

<https://nf-co.re/join>