4 Simple Recommendations for OSS

Software Development Best Practices Group.

https://softdev4research.github.io/recommendations/

Software Sustainability Institute

netherlands eScience center

"Four Simple Recommendations to Encourage Best Practices in Research Software"
doi:10.12688/f1000research.11407.1

THE CARPENTRIES

DTL

www.elixir-europe.org

Software development and open source best practices in ELIXIR

ELIXIR should adopt a policy that **encourages the Nodes to release their software under open source licenses** while respecting existing licensing restrictions and institutional policies. It is widely recognized that **transparent software development from day one improves the quality of the code** and associated documentation through community evaluation.

Researchers are afraid of putting their code out there.

- What if I write crap code that nobody likes?
- Will people judge me for the code I write?
- What if someone finds a bug in my code?
- What if I get scooped?
- What are the challenges of Open Software Development?

The Four Recommendations

Check for updates

OPINION ARTICLE

Four simple recommendations to encourage best practices in research software [version 1; referees: 3 approved]

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METRICS

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Referee Status: ✓ ✓ ✓

Version(s)	Invited Referees 1	2	3
Version 1 published 13 Jun 2017	✓ read report	✓ read report	✓ read report

1 **Roberto Di Cosmo**, Inria, France; Paris Diderot University, France

2 **Greg (Gregory V.) Wilson**, Rangle.io, Canada

3 **Stefanie Betz**, Karlsruhe Institute of Technology (KIT), Germany

https://softdev4research.github.io/recommendations/

4OSS recommendations

Recommendations to encourage best practices in research software

1. Develop publicly accessible open source code from day one

Start a project as open source from the very first day, in a publicly accessible, version controlled repository (e.g., github.com and bitbucket.org). The longer a project is run in a closed manner, the harder it is to open source it later.

2. Make software easy to discover by providing software metadata via a popular community registry

Facilitate the discoverability of the open source software projects by registering metadata related to the software in a popular community registry, making your source code more discoverable. Metadata might, include information like the source code location, contributors, license, references and how to cite the software.

3. Adopt a license and comply with the licence of third-party dependencies

1. OPEN SOURCE YOUR CODE FROM DAY ONE

Make your source code publicly accessible in a version-controlled repository (e.g. github.com, GitLab and bitbucket.org) and increase reproducibility, reusability and collaboration.

2. MAKE YOUR SOFTWARE DISCOVERABLE

Register your software metadata in a popular community registry (e.g. bio.tools) and increase your project's visibility.

3. MIND THE LICENSE

Adopt a license that specifies how others can use and distribute your software. Ensure that the software fits with the license of third-party dependencies.

4. DEFINE RESPONSIBILITIES

Let people know how they can contribute to your project and contact you.

Support Faster Scientific Discoveries with Four Simple Recommendations

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BEST PRACTICES

BETTER SOFTWARE

QUALITY + SUSTAINABILITY

FASTER SCIENTIFIC DISCOVERIES

ENDORSE:
https://softdev4research.github.io/recommendations/endorse/

Read more:
"Four Simple Recommendations to Encourage Best Practices in Research Software"
doi: 10.12688/f1000research.11407.1

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Why?	What?	How?
Software Sustainability	Open Source	?

Why?

Software Sustainability

BETTER SOFTWARE BETTER RESEARCH

What?

Open Source

How?

Bio.Tools

Collaborative lesson development

THE CARPENTRIES

The goal of this project is to **create open and reusable training materials to teach researchers and developers how to adopt the 4OSS** as development practices.

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The lesson is being developed in a 4-stage process

1. CarpentryCon:
defining lesson learning outcomes, structure and contents

Dublin June 1st
14 participants
In 4 teams
One per each recommendation

The lesson is being developed in a 4-stage process

2. Hackathon in Utrecht
produced the first lesson draft

2 days
15 in person participants
3 online participants

The lesson is being developed in a 4-stage process

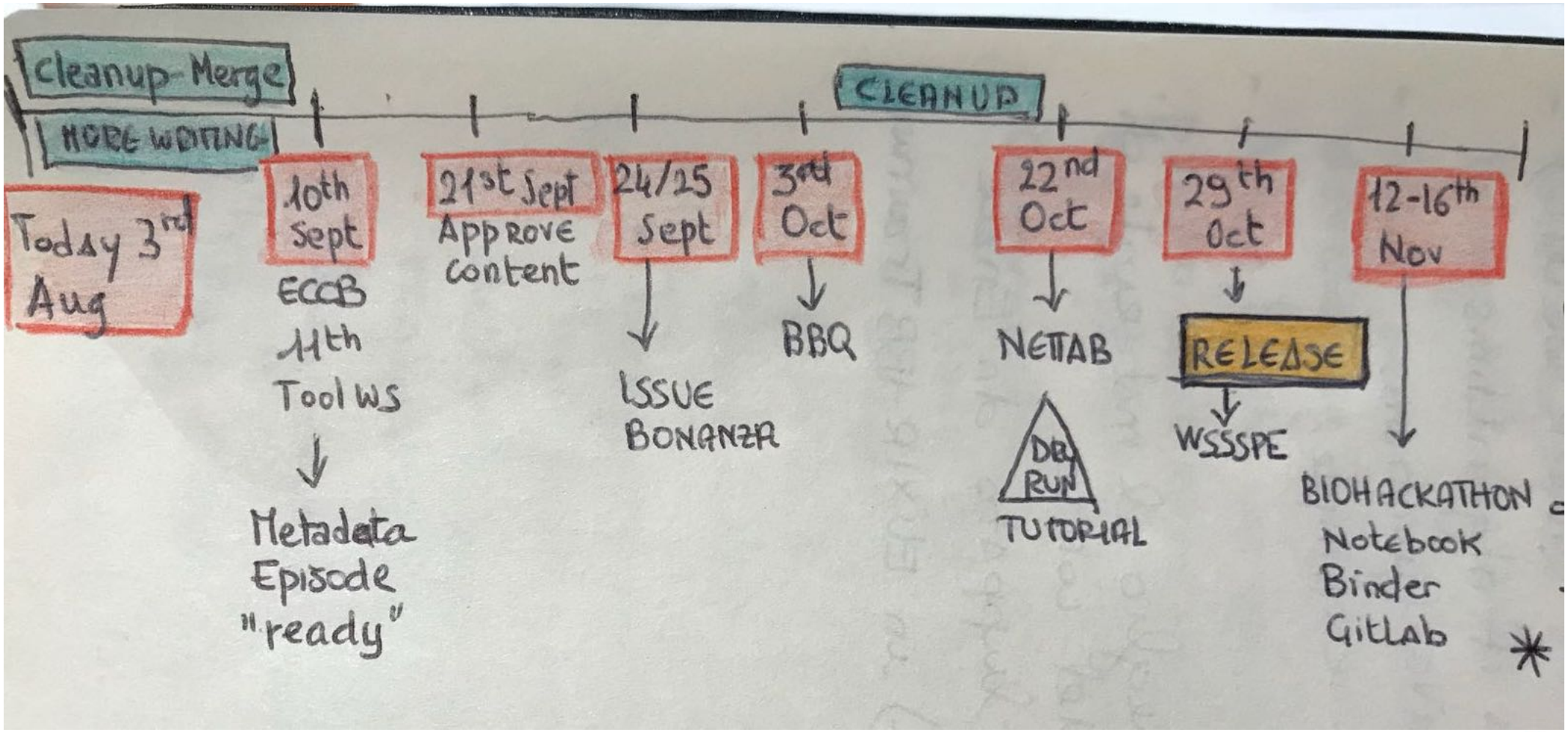
3. Online lesson refinement through GitHub issues and pull requests (Aug-Oct 2018)

The lesson is being developed in a 4-stage process

4. NETTAB (Oct 2018)
satellite meeting to release the first version of the material.

Future:
BioHackathon, Paris, November

Timeline


Cleanup-Merge
MORE WRITING
CLEANUP
Today 3rd Aug
10th Sept
ECCB
11th
Tool WS
Metadata Episode "ready"
21st Sept
Approve content
24/25 Sept
ISSUE BONANZA
3rd Oct
BBQ
22nd Oct
NETTAB
DRY RUN
TUTORIAL
29th Oct
RELEASE
WSSSPE
12-16th Nov
BIOHACKATHON
Notebook
Binder
GitLab
*

https://softdev4research.github.io/4OSS-lesson/

Schedule

	Setup	Get ready, create a repository and create accounts if needed
00:00	1. Introduction	Why are best practices necessary in research software? How Open Source can help with better quality of software?
00:10	2. Make source code publicly accessible from day one	What are the benefits of making my software project public from the beginning? How do I make my project publicly accessible? What resources are available to help me document my software? What are the best practices in open software development? How do I publish my open source software?
00:10	3. Adopt a licence and comply with the licence of third-party dependencies	What a licence does? What is an open source licence? What is the importance of your lincece for third-party dependencies?
00:10	4. Define clear and transparent contribution, governance and communication processes	How does someone start contributing to my project? What do I need to consider about project design and governance? How do people communicate within the project?
01:25	5. Make software easy to discover by providing software metadata via a popular community registry	Why are metadata important in research software? What are good metadata? Which are the most commonly used platforms for registering research software data?
03:40	Finish	

Get involved, talk to us!

/SoftDev4Research/4OSS-lesson

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