

IMPERIAL

Quick Tips for Making Your Software Outlive Your Job

Richard Littauer, **Ian McInerney**, Daniel S Katz, Clare Dillon
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10 quick tips for making your software outlive your job

Richard Littauer^{1*}, Greg Wilson², Jan Ainali³, Eman Abdullah AlOmar⁴, Sylwester Arabas⁵, Yanina Bellini Saibene⁶, Kris Bubendorfer⁷, Kaylea Champion⁸, Clare Dillon⁹, Jouni Helske¹⁰, Pieter Huybrechts¹¹, Daniel S. Katz¹², Chang Liao¹³, David Lippert¹⁴, Fang Liu¹⁵, Pierre Marshall¹⁶, Daniel R. McCloy¹⁷, Ian McInerney¹⁸, Mohamed Wiem Mkaouer¹⁹, Priyanka Ojha²⁰, Christoph Treude²¹, Ethan P. White²²

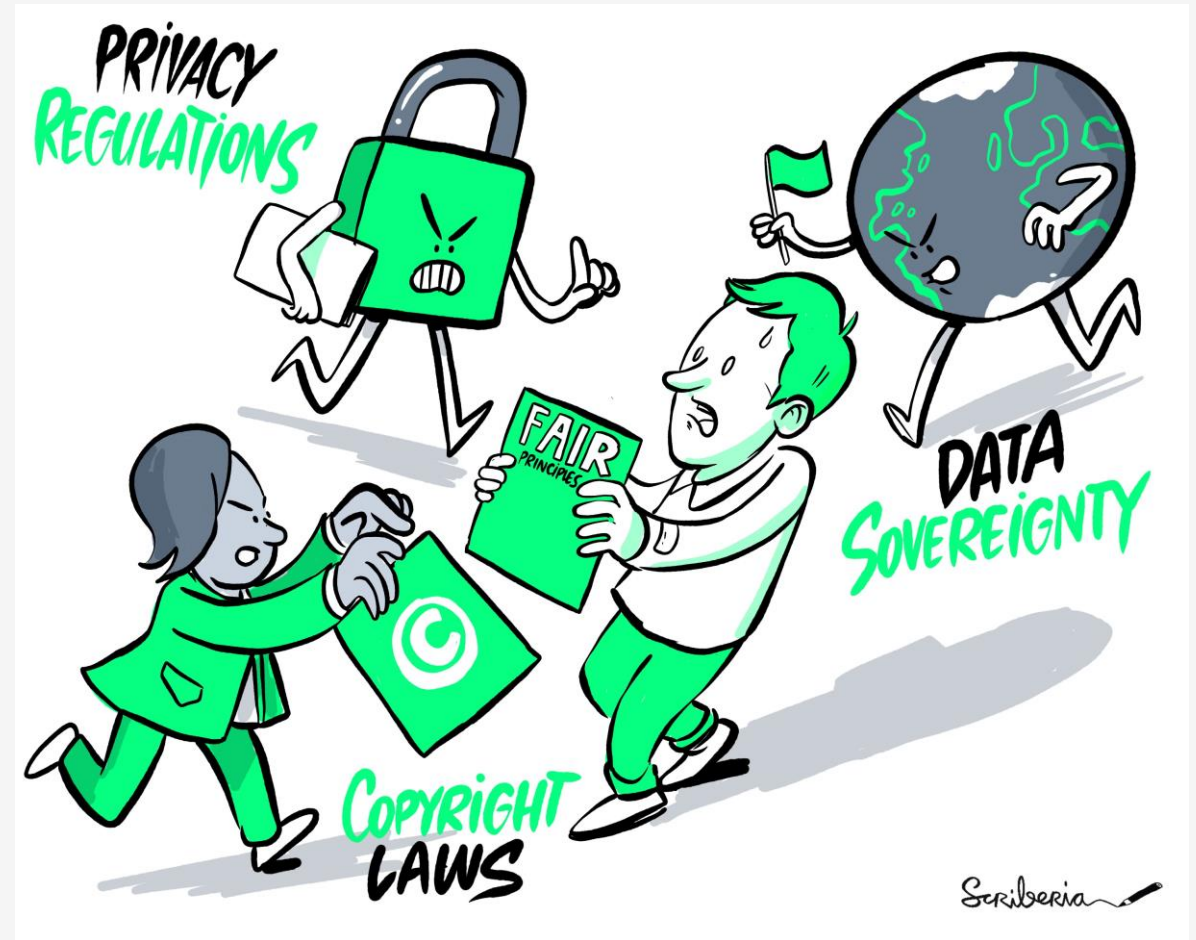


Why care?

- Academic life is uncertain
- Funding changes and people move between roles
- National and international funding is at risk
- Open Source software is more resilient
- Your work will last longer if you care about it lasting longer.

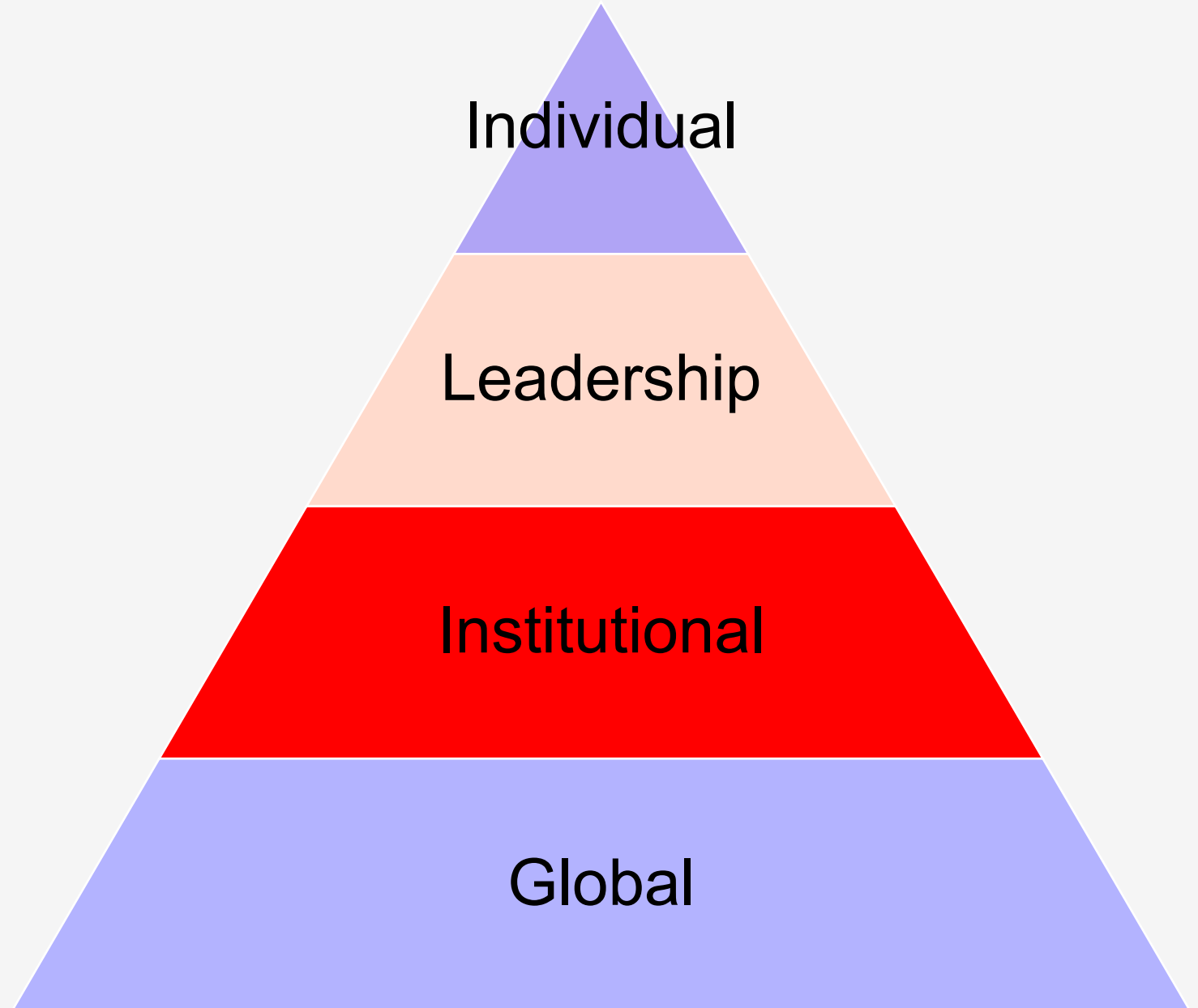
1) Stay within the law

- Be aware of
 - University policies
 - Department policies
 - Funder requirements
- Ask about policies in your next job

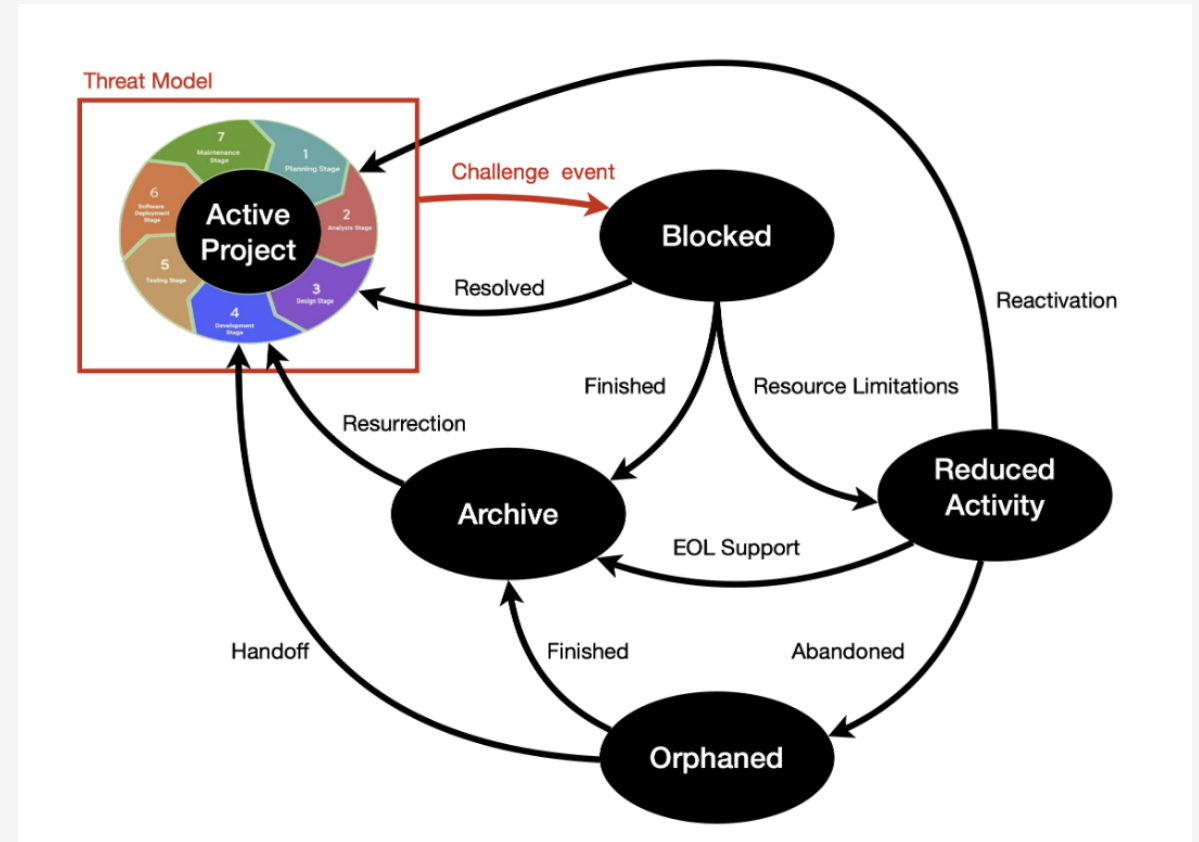


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2) Define your threat model



3) Decide if you are ending, pausing or handing off



4) Choose an open license (if you can)

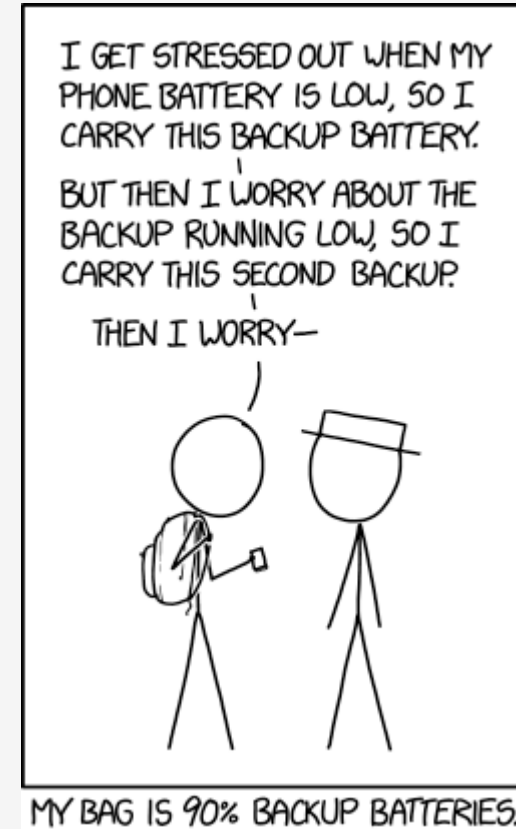
- Released software should have a clear license
 - Do not write your own or rely on “public domain”
- How to choose?
 - Does your employer require/recommend one?
 - Is there a standard license in your ecosystem?
 - Do you want industry users/contributors?
- Resources
 - [Choosealicense.com](https://choosealicense.com)
 - Open Source Initiative
 - Ethical licenses

Full name	Identifier	FSF Free/Libre?	OSI Approved?
BSD Zero Clause License	0BSD		Y
Attribution Assurance License	AAL		Y
Abstyles License	Abstyles		
AdaCore Doc License	AdaCore-doc		
Adobe Systems Incorporated Source Code License Agreement	Adobe-2006		
Adobe Glyph List License	Adobe-Glyph		
Amazon Digital Services License	ADSL		
Academic Free License v1.1	AFL-1.1	Y	Y
Academic Free License v1.2	AFL-1.2	Y	Y
Academic Free License v2.0	AFL-2.0	Y	Y
Academic Free License v2.1	AFL-2.1	Y	Y
Academic Free License v3.0	AFL-3.0	Y	Y
Afmparse License	Afmparse		
Affero General Public License v1.0 only	AGPL-1.0-only		
Affero General Public License v1.0 or later	AGPL-1.0-or-later		
GNU Affero General Public License v3.0 only	AGPL-3.0-only	Y	Y
GNU Affero General Public License v3.0 or later	AGPL-3.0-or-later	Y	Y
Aladdin Free Public License	Aladdin		
AMD's plpa_map.c License	AMDPLPA		
Apple MIT License	AML		
Academy of Motion Picture Arts and Sciences BSD	AMPAS		
ANTLR Software Rights Notice	ANTLR-PD		
ANTLR Software Rights Notice with license fallback	ANTLR-PD-fallback		
Apache License 1.0	Apache-1.0	Y	
Apache License 1.1	Apache-1.1	Y	Y
Apache License 2.0	Apache-2.0	Y	Y
Adobe Postscript AFM License	APAFML		
Adaptive Public License 1.0	APL-1.0		Y
App-s2p License	App-s2p		
Apple Public Source License 1.0	APSL-1.0		Y
Apple Public Source License 1.1	APSL-1.1		Y
Apple Public Source License 1.2	APSL-1.2		Y
Apple Public Source License 2.0	APSL-2.0	Y	Y
Arphic Public License	Arphic-1999		
Artistic License 1.0	Artistic-1.0		Y

Snapshot of SPDX License List

5) Save everything in multiple places

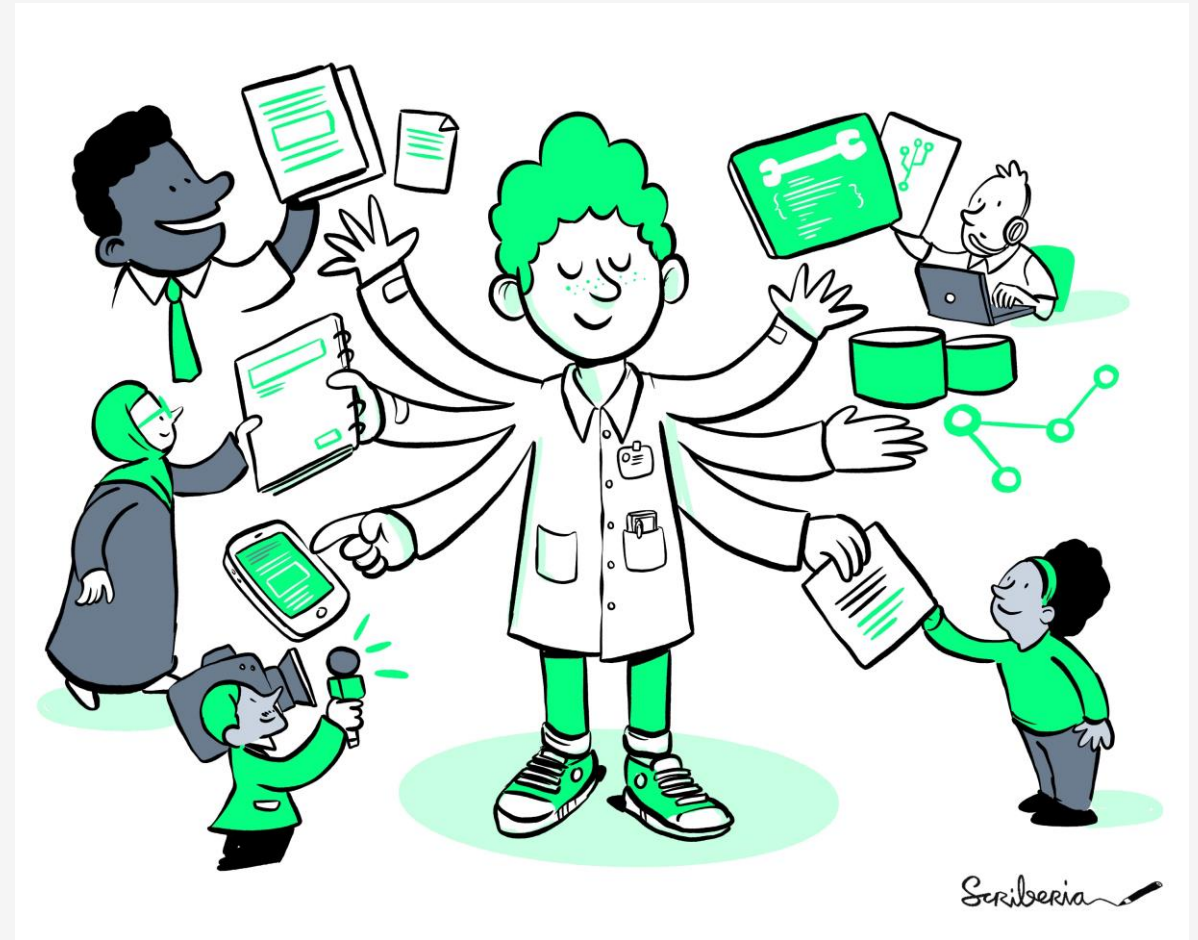
- Distribute copies of your software across platforms
 - Remove single point of failure
- Don't rely on your institution's platforms/logins
- Mirror code across places
 - GitHub
 - GitLab
 - BitBucket
 - Codeberg
- Archive releases
 - Zenodo
 - FigShare
 - Personal websites



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6) Encourage community adoption

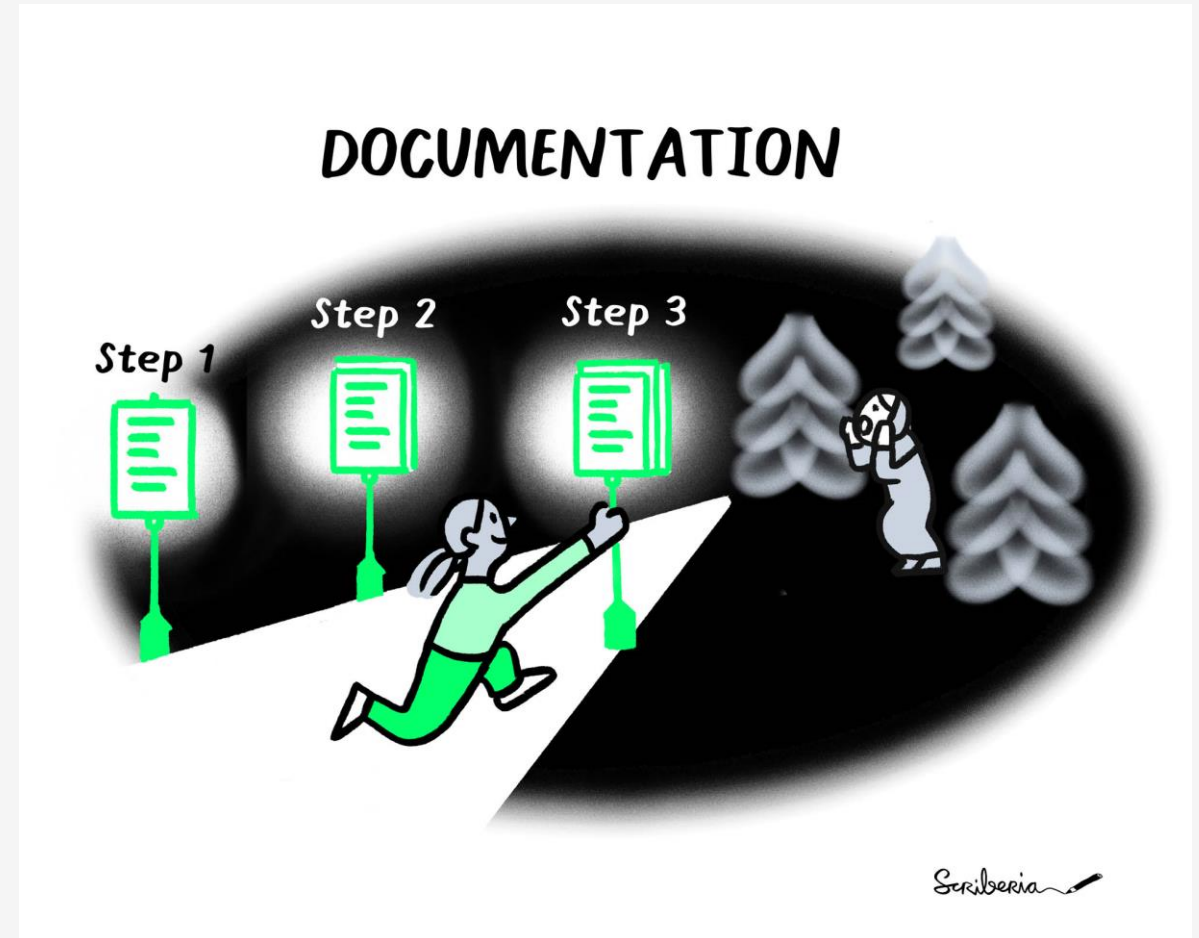
- Publishing != publicizing
- Use all available channels
 - Social media
 - Discussion forums
 - Newsletters/ mailing lists
- Make your project known
 - Present at conferences
 - Give tutorials



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7) Do what you're supposed to (if you have time)

- DOI with Zenodo
- Get peer review of your software/project
 - JoSS, JORS, etc.
 - SSI evaluation
- Document *how to use* the software
- Document data dependencies
- Describe software/library dependencies
- Write simple tests
 - Can also be documented examples/sample notebooks
- Document *how to contribute* to the software/project



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8) Do what you can (if you have to act quickly)

- Say what your code does and how to use it
 - Understanding the inputs/outputs and expected behavior is more useful than code comments
- Make a screencast
 - Show common workflows
 - Include closed captions
- Save it in the Software Heritage Archive
- Clean up code
- Document the project status
 - Say if it is being maintained
 - If archived, say why



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9) Talk about what you're doing

- Share what you're doing beyond the code
 - Talk with colleagues
 - Post on social media channels
 - Share both things that *have* and *haven't* worked
- Write down what has happened in your own logs
- Process your emotions.



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10) Organize

- Don't just play defense
- Engage with
 - Professional societies
 - Initiatives
 - Boards, academic or otherwise



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10 Quick tips:

- 1) Stay within the law
- 2) Define your threat model
- 3) Decide if you are ending, pausing or handing off
- 4) Choose an open license (if you can)
- 5) Save everything in multiple places
- 6) Encourage community adoption
- 7) Do what you're supposed to (if you have time)
- 8) Do what you can (if you have to act quickly)
- 9) Talk about what you're doing
- 10) Organize

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