

# The real costs of Open Source Sustainability @vmbrasseur

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 START YOUR TIMER! 

# Roads and Bridges: The Unseen Labor Behind Our Digital Infrastructure

WRITTEN BY  
Nadia Eghbal

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In 2016 Nadia Eghbal released "Roads and Bridges: The Unseen Labor Behind Our Digital Infrastructure"

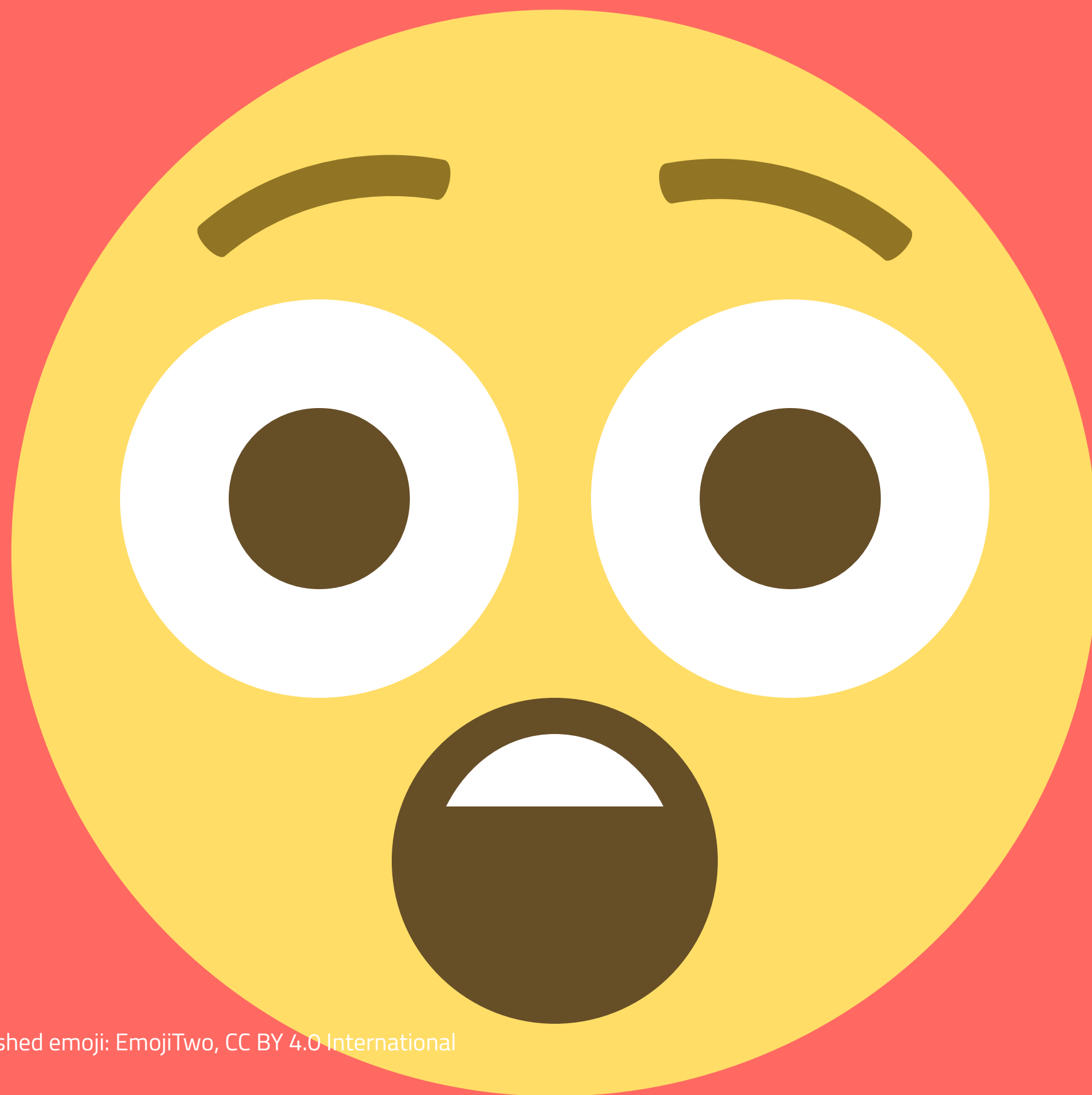
This 142 page report from the Ford Foundation shines a light on the woeful state of many critical open source projects and their maintainers.

**"In a world driven by technology, we are putting increased demand on those who maintain our digital infrastructure."**

**— Nadia Eghbal**

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Prior to Nadia's report, few people outside of the immediate free and open source software communities knew how few people maintain the software that underpins a large amount of the internet and the services that run on it.



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After her report, however, a lot of the software industry was now aware of the dire situation faced by many of the open source projects on which they and their companies relied.

Most of them were shocked.

This was, of course, because they had been using open source but not participating in the communities. Had they engaged at all, they would have known what was going on.



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They being technologists, they  
did what they know how to do  
They started building software  
tools designed to collect  
money.

# Companies/Organizations for Open Source Funding

- Mozilla Open Source Support (MOSS) grants
- Liberapay
- Bountysource
- Open Collective
- Tidelift
- GitHub Sponsors
- Linux Foundation CommunityBridge
- ...and more

There has been a flood of newly launched endeavours directed toward getting funding to open source project maintainers

One or two are non-profits, but most of them are commercial and/or VC-funded  
Here's just a few of those new endeavours

# And others may be on the way...

- Several based on blockchain technologies
- Some emulating complicated financial instruments
- And others even more experimental than that

Sometimes when people talk to me about their ideas for this it feels like software people are taking this as an opportunity to try all the new, bleeding edge technologies and ideas.

And often those ideas are a bit bizarre.



**"Stunningly, although everybody agrees there is a problem (whether defined as 'volunteer burnout', community mismanagement or a greater lack of funding), the conversation has not progressed beyond meager, short-term solutions such as tipping or crowdfunding."**

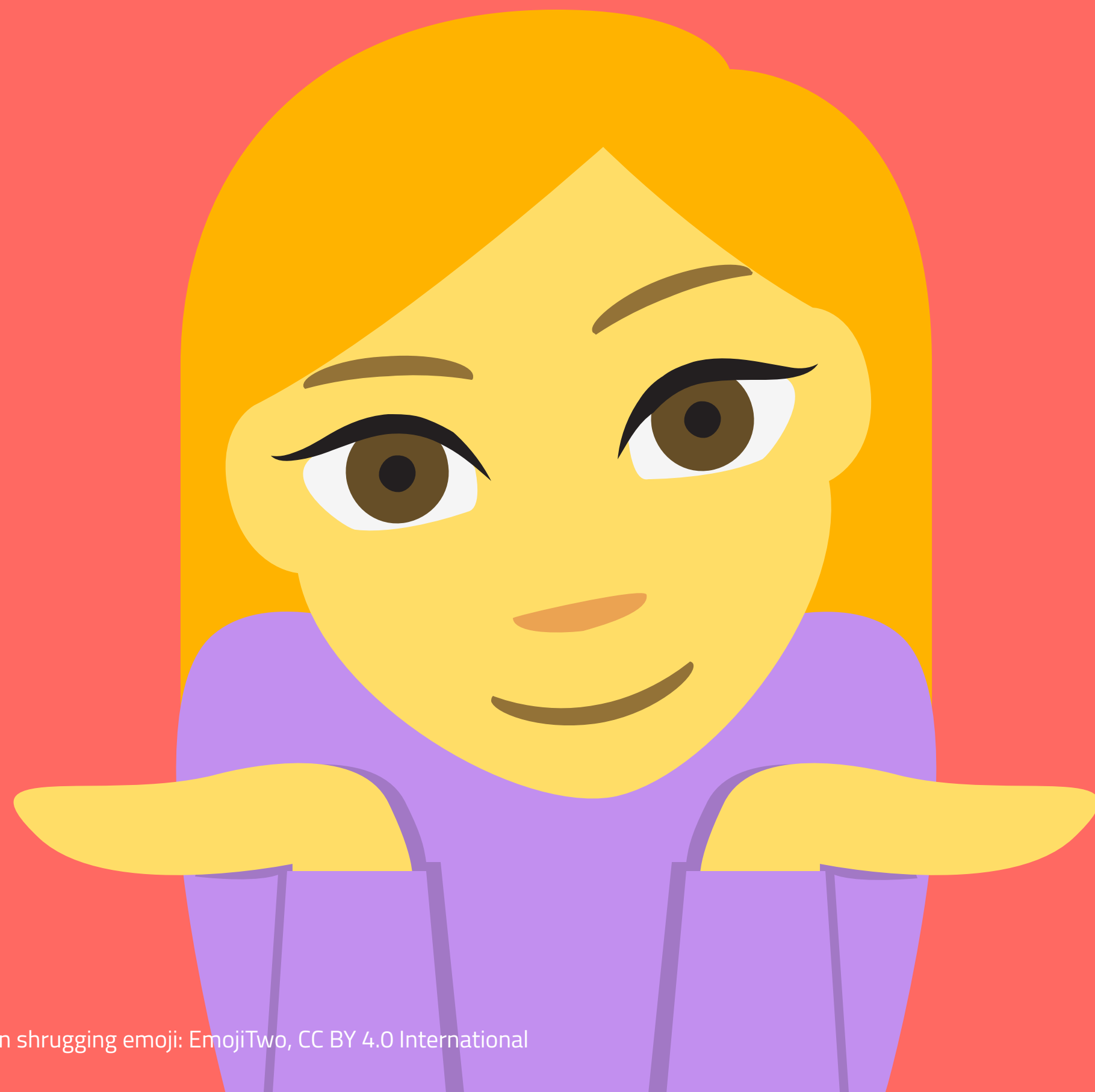
**— Nadia Eghbal**

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This despite the report's very clear focus on a multi-faceted approach to infrastructure maintenance.

But to people in our industry, "sustainable" seems to equate purely to "funded", so funding is where they focus.

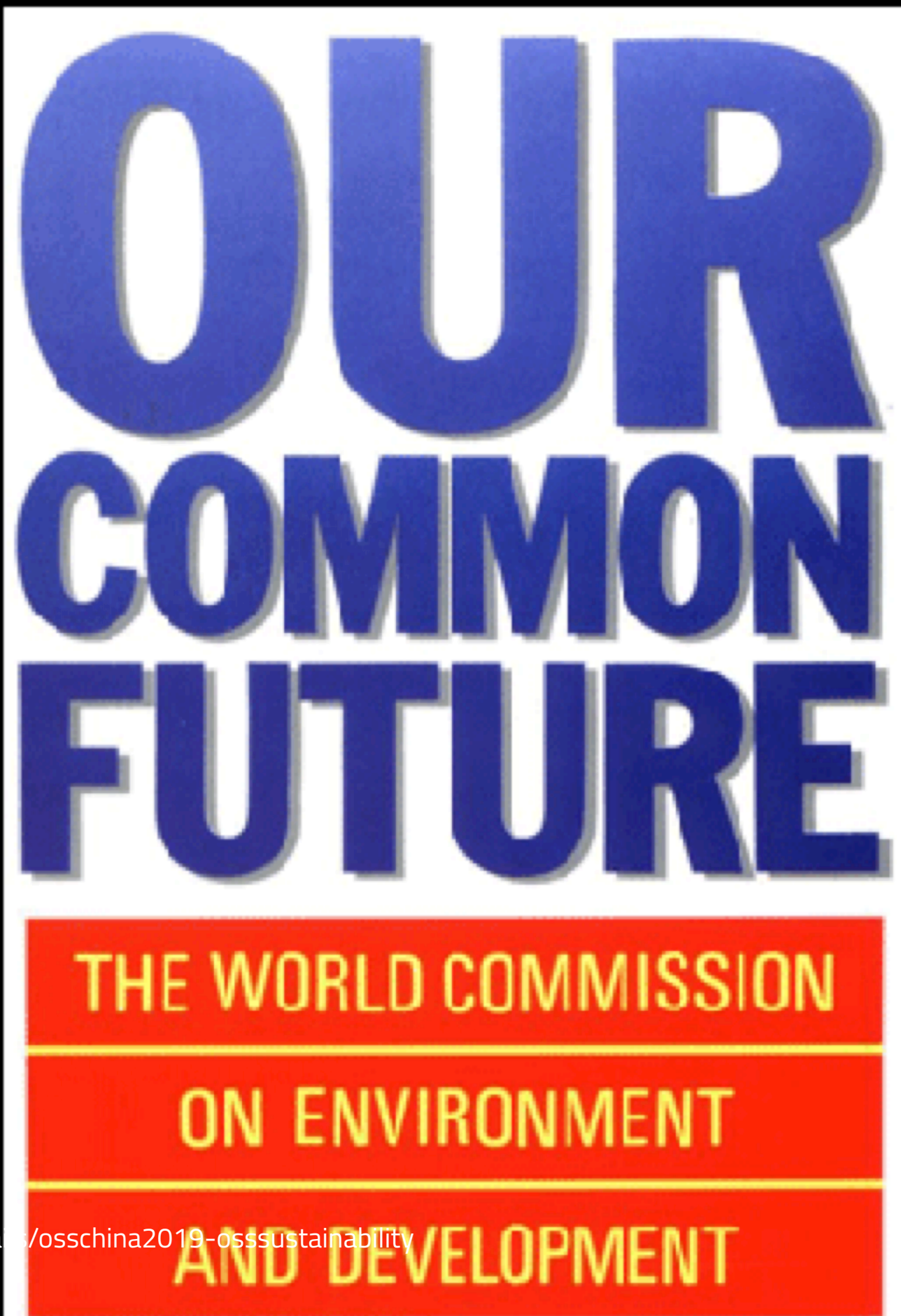




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As is often the case, it feels as though the software industry is reinventing the wheel rather than investigating how other industries have already tackled a problem.

If the software industry wishes to address the subject of sustainability, it should look to the corporate world for guidance.



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Specifically, it should look at Corporate Sustainability Planning, starting with this publication.

It's titled "Our Common Future: The World Commission on Environment and Development," but it's better known by this title:

# The Brundtland Report

[https://en.wikipedia.org/wiki/Our\\_Common\\_Future](https://en.wikipedia.org/wiki/Our_Common_Future)

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This report was published by the United Nations in 1987 after several years of international discussions about environment and development.

The report focuses on the environmental conservation and corporate responsibilities for human sustainability.

**"...development that meets the needs of the present without compromising the ability of future generations to meet their own needs."**

**— The Brundtland Report**

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The report recognised the need for a balance between economy and ecology

# Elements of Environmental Conservation and Human Sustainability

1. Poverty reduction
2. Wealth redistribution
3. Gender equality

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The report found that these three elements were key for meeting the goal of sustainable corporate development. Furthermore, it found that these elements were inseparable. They are "interlocking crises," each one a component of the greater crisis.

It's not a matter of a company choosing to focus on only one element.

All of the elements must be addressed simultaneously for there to be any effect.

None of them are optional.



# Corporate Sustainability Planning

<https://sloanreview.mit.edu/projects/corporate-sustainability-at-a-crossroads/>

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The Brundtland Report has led to the Corporate Sustainability Planning movement.

The MIT Sloan School of Business has done a lot of great work on this front.

This is an excellent article if you'd like to learn more.

# Elements of Corporate Sustainability Plans

From *FOSS as a Part of a Corporate Sustainability Plan* by **VM Brasseur**: <https://www.linuxjournal.com/content/foss-part-corporate-sustainability-plan>

<i>Inside the organisation</i>	<i>Outside the organisation</i>
Natural resource usage	Sustainability operations of entire supply chain
Diversity and inclusion	Overall impact of the corporation on the Earth and its inhabitants
Fair treatment of employees	

As I mentioned before, there are many elements to corporate sustainability and they all must be addressed simultaneously





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As you can probably imagine, coming up with and implementing a plan that covers all of those elements is going to take a lot of effort and time.

So why do companies do it? Is it purely altruism, because taking care of our world and its inhabitants is simply the right thing to do? Well, yes, but...

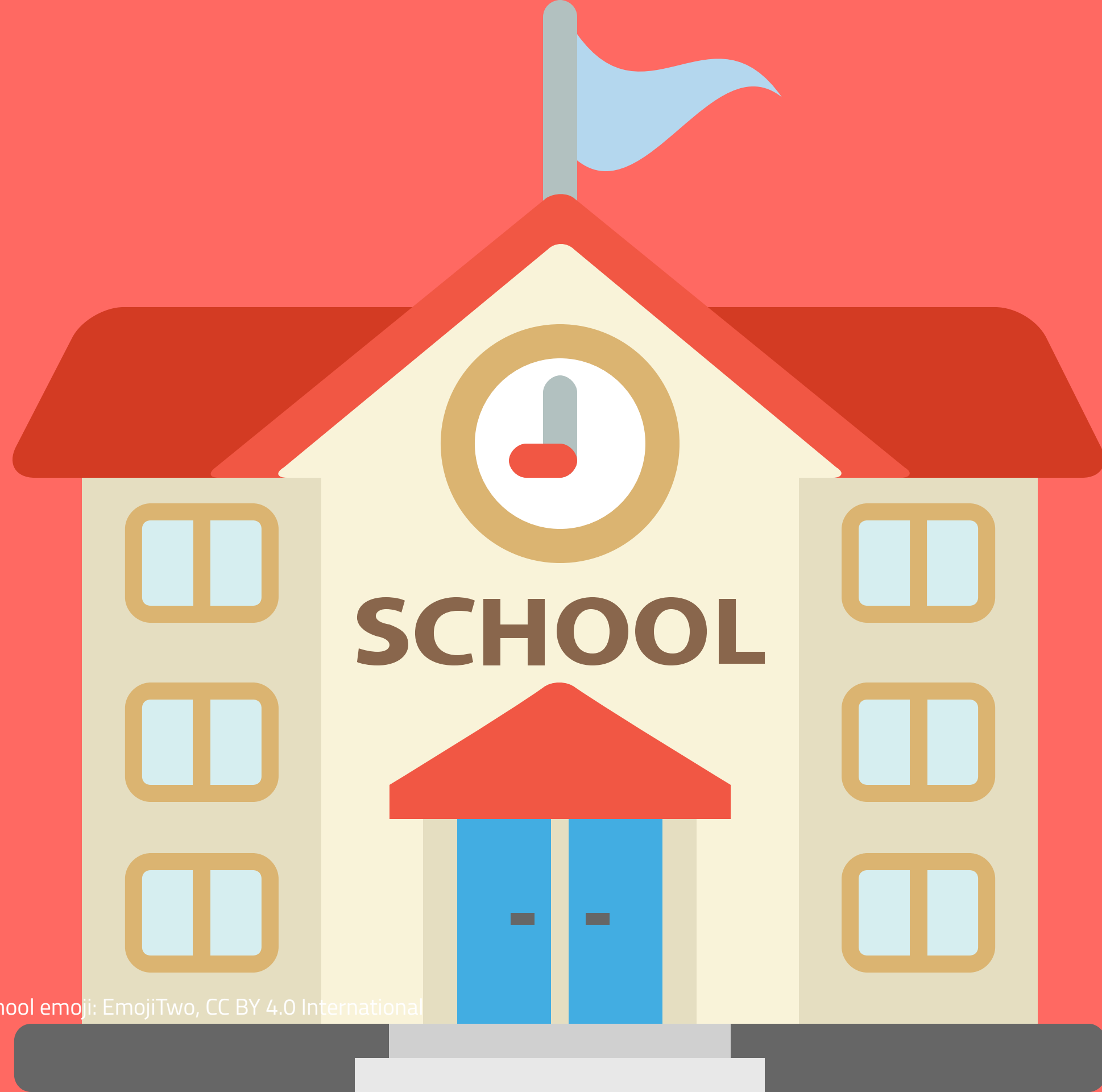


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They also do it because studies repeatedly show that a well-executed corporate sustainability plan is very good for profitability as well as for the planet and for humanity.

# Benefits of a well-executed corporate sustainability plan

- Collaboration between groups internally and externally
- Improved communication
- Increased innovation
- Increased external investment
- Improved employee retention and recruiting



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So what can this open source sustainability effort learn from corporate sustainability planning?

Well, for starters...

# **It's about more than just money.**

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Just as with corporate sustainability, open source sustainability requires a focus on much more than just money. I'm all for paying maintainers, but that alone isn't going to provide the support free and open source software needs for longevity and continued success.

# It's Complicated.

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And just as with corporate sustainability, there are "interlocking crises," each one a component of the greater crisis.

These elements are intertwined and inseparable.

They must all be addressed simultaneously. You cannot simply focus on one of them—funding, for instance—and then call it done.

# Elements of Open Source Sustainability

1. Contributing back
2. Human and environmental diversity
3. Community safety



# Contributing back

- Give back to the projects you use
- Can take many forms
  - In-kind contributions (servers, hosting, etc.)
  - Service contributions (programming, marketing, event management)
  - And, yes, monetary contributions

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The first element is contributing back to the projects on which your company relies.

Free riders degrade the longevity and success of FOSS

While money is undoubtedly always welcome by projects, service and administrative assistance also is and often is needed more.

I have employed maintainers of projects that are vital pieces of Open Source infrastructure. They worked on the projects full time. I know how much money we were paying them.

No amount of money could make up for the fact that they were still working 60-80 hours a week on these projects.

They would have accepted more money, but what they actually needed was more HELP.

So before you default to sending money, check with what the projects that are important to your company actually need to ensure their longevity.

# Human and environmental diversity

<https://hbr.org/2016/11/why-diverse-teams-are-smarter>

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Contributing back helps to support the second element of Open Source Sustainability as well.

For the sake of FOSS, getting more and more varied people involved will not only provide more resources for development, it also will provide more innovation and stability.

Growing body of research consistently shows that diverse teams outperform heterogeneous ones

Diverse perspectives encourage more and clearer communication

Diverse perspectives -> more ideas.

More ideas -> more innovation in products, processes, policies, and problem solving.

# Human and environmental diversity

[https://www.schneier.com/essays/archives/2010/11/the\\_dangers\\_of\\_a\\_sof.html](https://www.schneier.com/essays/archives/2010/11/the_dangers_of_a_sof.html)

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But there's more to diversity in FOSS than the human participants. A lot of companies go out of their way to use open source solutions so they can avoid vendor lock-in. A single vendor becomes a single point of failure. The same is true for open source projects. Consolidation under single services and single service providers form a monoculture within open source. Be they human, ecological, or technological, monocultures are consistently shown to be risks to businesses. As open source an participant rather than an open source onlooker, your company has the power and ability to protect against the creation and dominance of monocultures within open source.

# Community safety

<https://hbr.org/2017/08/high-performing-teams-need-psychological-safety-heres-how-to-create-it>

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It's not possible to build a diverse contributor base for projects where people don't feel safe.

As an open source participant, your company is in the position to witness unprofessional and unwelcoming behaviour and speak out against it.

Belittling comments. Personally directed criticisms. Sexualised language, imagery, or behaviors. Bigoted, racist, sexist, or hateful language.

Unwelcome simulated or actual physical contact.

These actions scare people away from contributing or force them to leave if they're already a part of the project.

Actions such as these undermine the trust required to create the psychologically safe environment that is necessary for a thriving open source project and community.

Without community safety, a FOSS project is unlikely to have a long and successful life.

# Community safety

**<https://www.contributor-covenant.org/version/1/4/code-of-conduct>**

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One way your company can help to ensure community safety is to restrict its contributions only to open source projects that both have and enforce a code of conduct.

The Contributor Covenant, listed here, is very commonly used by open source projects and is a very good example of a code of conduct.

Of course having a code of conduct is one thing, and empathetically enforcing it is another.

Before your company contributes to an open source project, don't simply check whether it has a code of conduct in place but also ask the project about its enforcement policies and procedures.



# Elements of Open Source Sustainability

1. Contributing back
2. Human and environmental diversity
3. Community safety

So those are three elements of open source sustainability



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# What will your company's Open Source Corporate Sustainability Plan look like?



# It Depends.

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There is no one right way to do this.  
Each company has its own needs.  
Each company has different projects  
that are strategically important to it.  
Each of those projects will have their  
own needs that will help the project's  
success and longevity.

# Getting started on an Open Source Corporate Sustainability Plan

1. Determine which project(s) are strategically important for your company.
2. Evaluate the success and longevity needs of that project (in collaboration with the community).
3. Contribute, engage, participate.

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While the steps look simple, they're actually quite involved.

There is no one-size-fits-all solution here.

Your company must do the hard work of thinking this through and implementing a long-term strategy.



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As with a typical Corporate Sustainability Plan, an Open Source Corporate Sustainability Plan is something that will take time, patience, and commitment. It cannot be rushed. You cannot take short cuts. You cannot address only one element and expect to be successful.



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However, if you put in the time  
and the work, you'll find it's  
worth it.



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**Slides:** <https://archive.org/details/osschina2019-ossustainability>

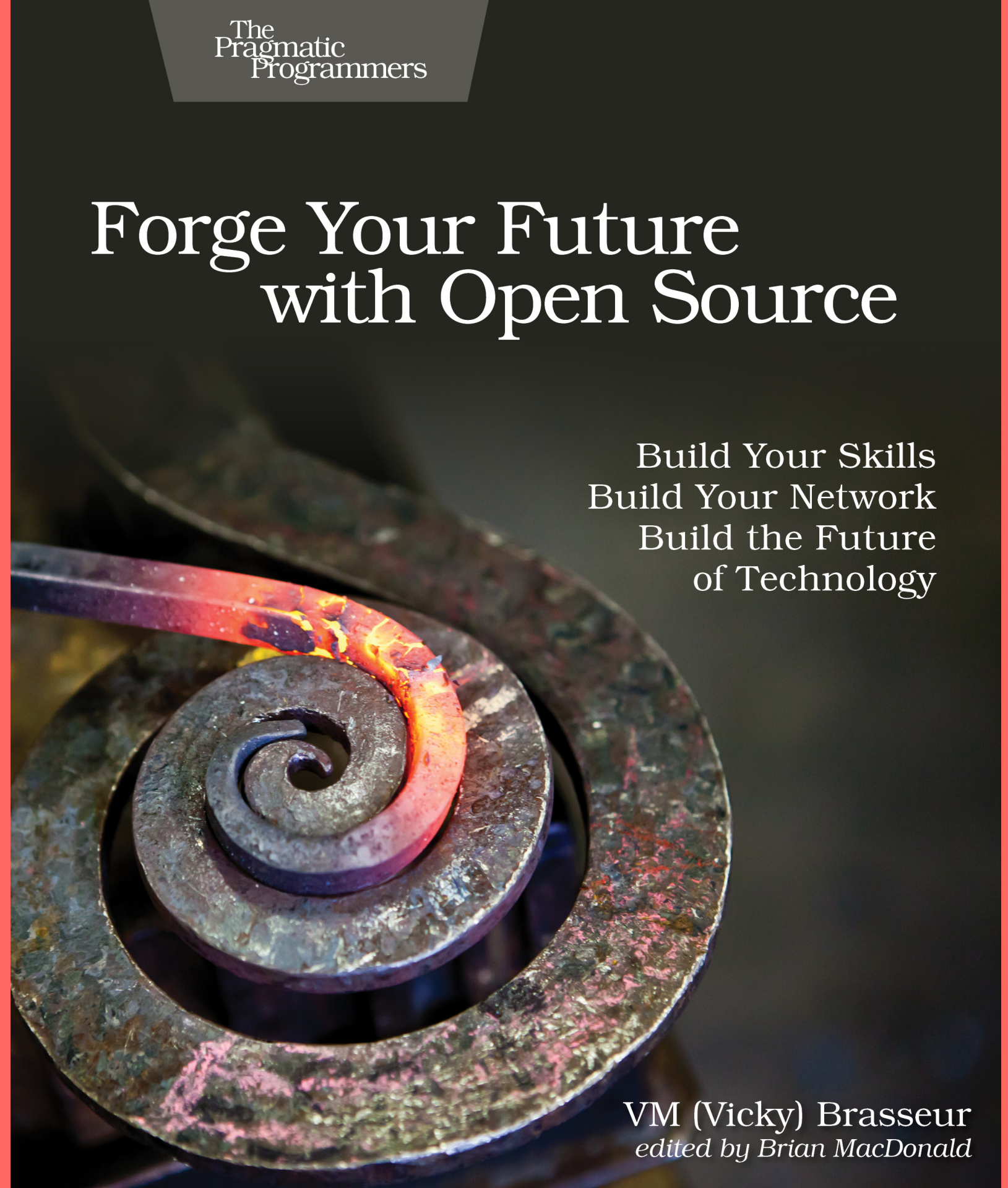
**Book:** <https://fossforge.com>

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The  
Pragmatic  
Programmers

# Forge Your Future with Open Source

Build Your Skills  
Build Your Network  
Build the Future  
of Technology



VM (Vicky) Brasseur  
*edited by Brian MacDonald*

I am VM Brasseur, Director of Open Source Strategy for Juniper Networks

I am also the author of this, the first and only book about how to contribute to free and open source software projects.

You can find me here at Twitter

You can find these slides already here on Internet Archive.

Thanks to the Open Source Summit team for having me  
And thanks to you for being here