SUSTAINABLE FREE AND OPEN SOURCE

Khem Raj Distinguished Engineer, Comcast

AGENDA





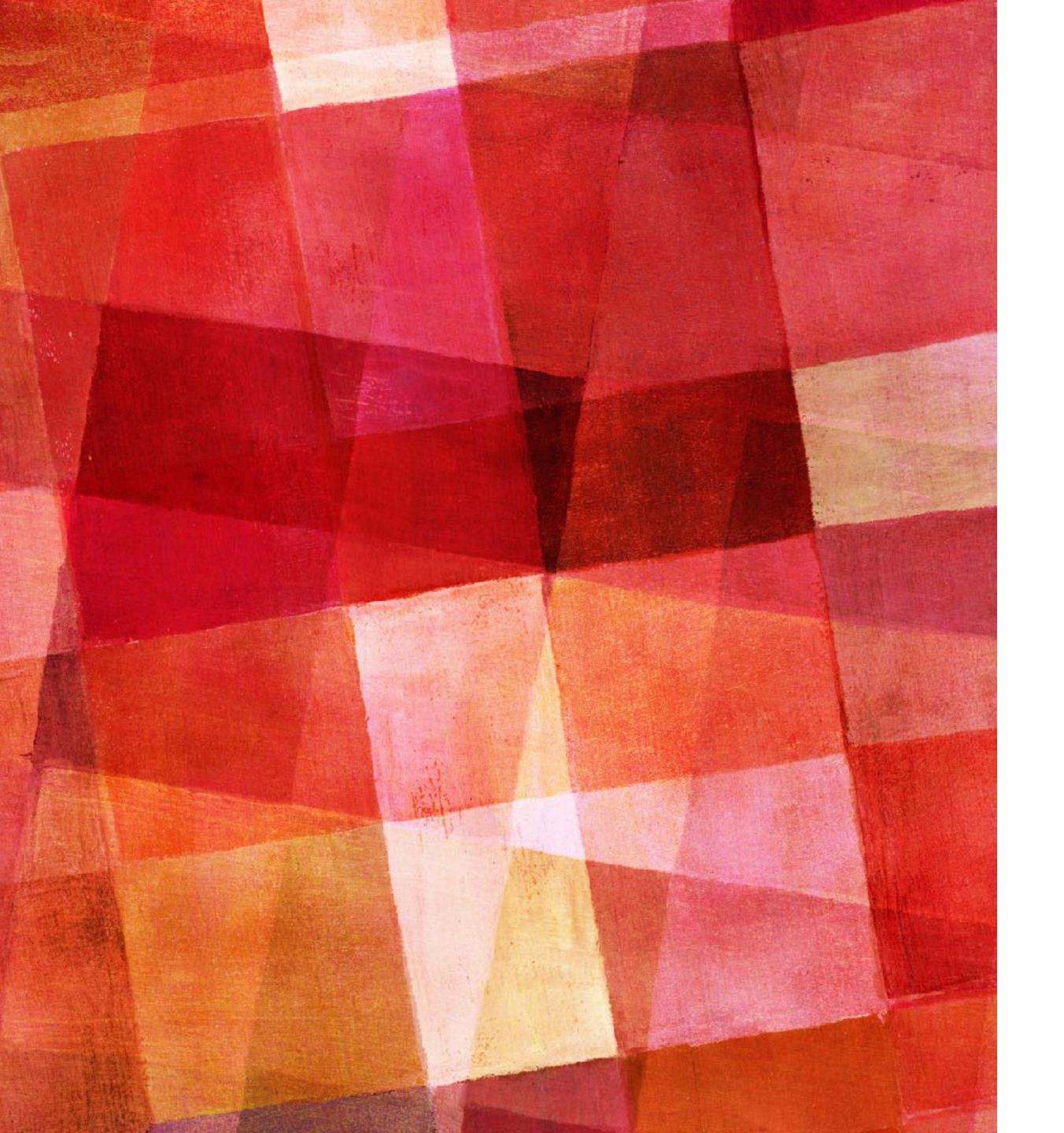


BUSINESS

COMMUNITY

DEVELOPMENT

OpenSource Models



ORIGINS

- ➤ Sharing Culture from Early days
 - ➤ Universities, research organizations
- ➤ Public Domain
- > Software is needed to keep the lights on
 - > needed to use the hardware

RECENT OPENSOURCE SOFTWARE TIMELINE

		Linux			
		Python			
	GNU project	PHP	LLVM	Bootstrap	
Emacs	GPL	FreeBSD	FireFox	Kotlin	
	GCC	NetBSD	Git	Linaro	
	PERL	Samba	Chromium	Rust	
	X-Windows	Apache	Android	Golang	
1970s	1980s	1990s	2000s	2010s	

OPENSOURCE BUSINESS MODELS

- > Support
- Dual Licensing
 - ➤ Commercial Use
 - ➤ Non-commercial use
- > Free Data
 - > Consumer interacts with service
- > Restricted license
- ➤ OpenSource Enablement code (tight-core)



Proposal: Permanently change all proprietary licensing to open source #2786



OSS BUSINESS MODELS

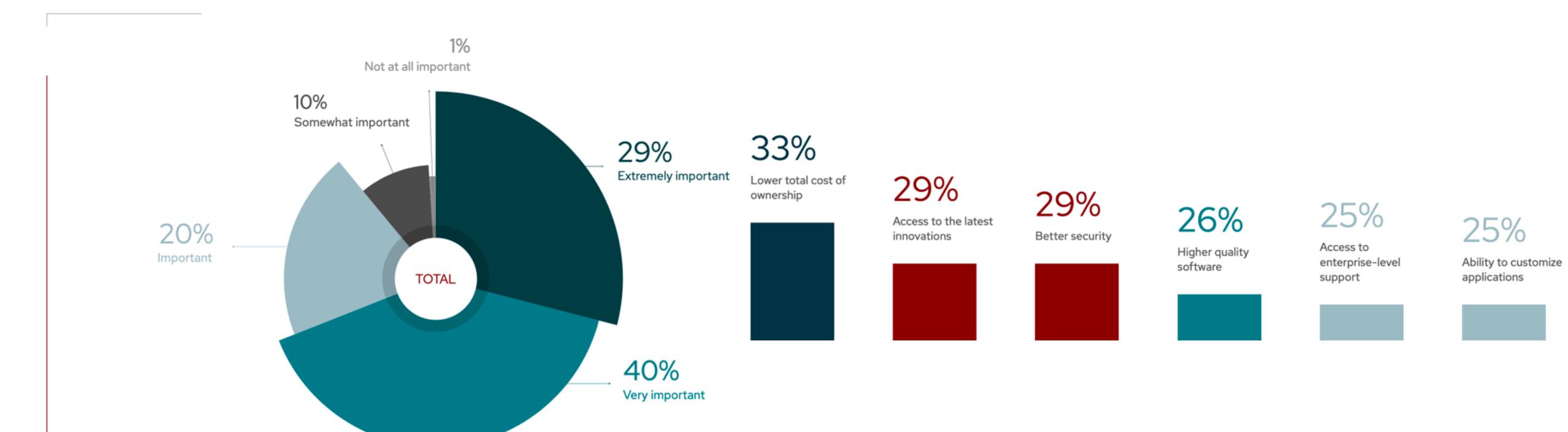
Projects are moving away from tight open-core model to a lose-core models

WHY CORPORATES CONSIDER OSS

- ➤ 2016 Future of OpenSource Survey from Black Duck
 - ➤ #1 Better Quality
 - ➤ #2 Features
 - > #3 Customizability
- ➤ 60%+ companies consider OSS before closed source alternatives
- ➤ 2017 Future of OpenSource survey from Black Duck
 - ➤ 60% companies increased OSS use
 - ➤ Low-cost
 - > Freedom to make changes

➤ 2019 Redhat Enterprise OSS Report States

Importance of enterprise open source



Communicate Comply Consume Open Source Program Office Contribute Culture Collaborate

OPEN SOURCE PROGRAM OFFICES

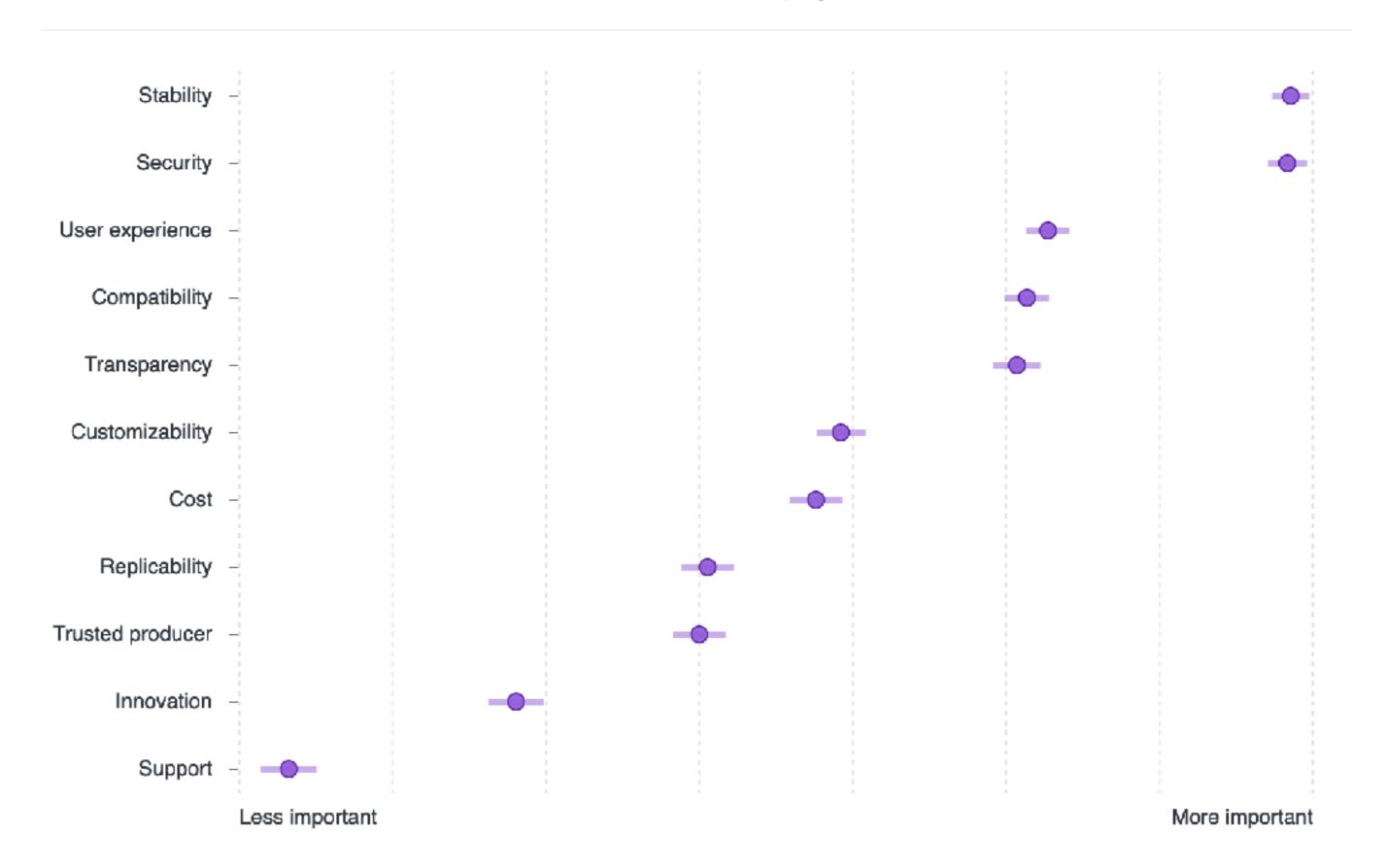
- ➤ Leverage External Projects
- ➤ Internal education transformation
- ➤ Advocates for internal developer communities
- ➤ Do not re-invent wheel
- ➤ Developer on boarding
- ➤ Generate Goodwill
- ➤ Feed Strategic projects
- Cultural Fabric

WHAT OSS USERS VALUE

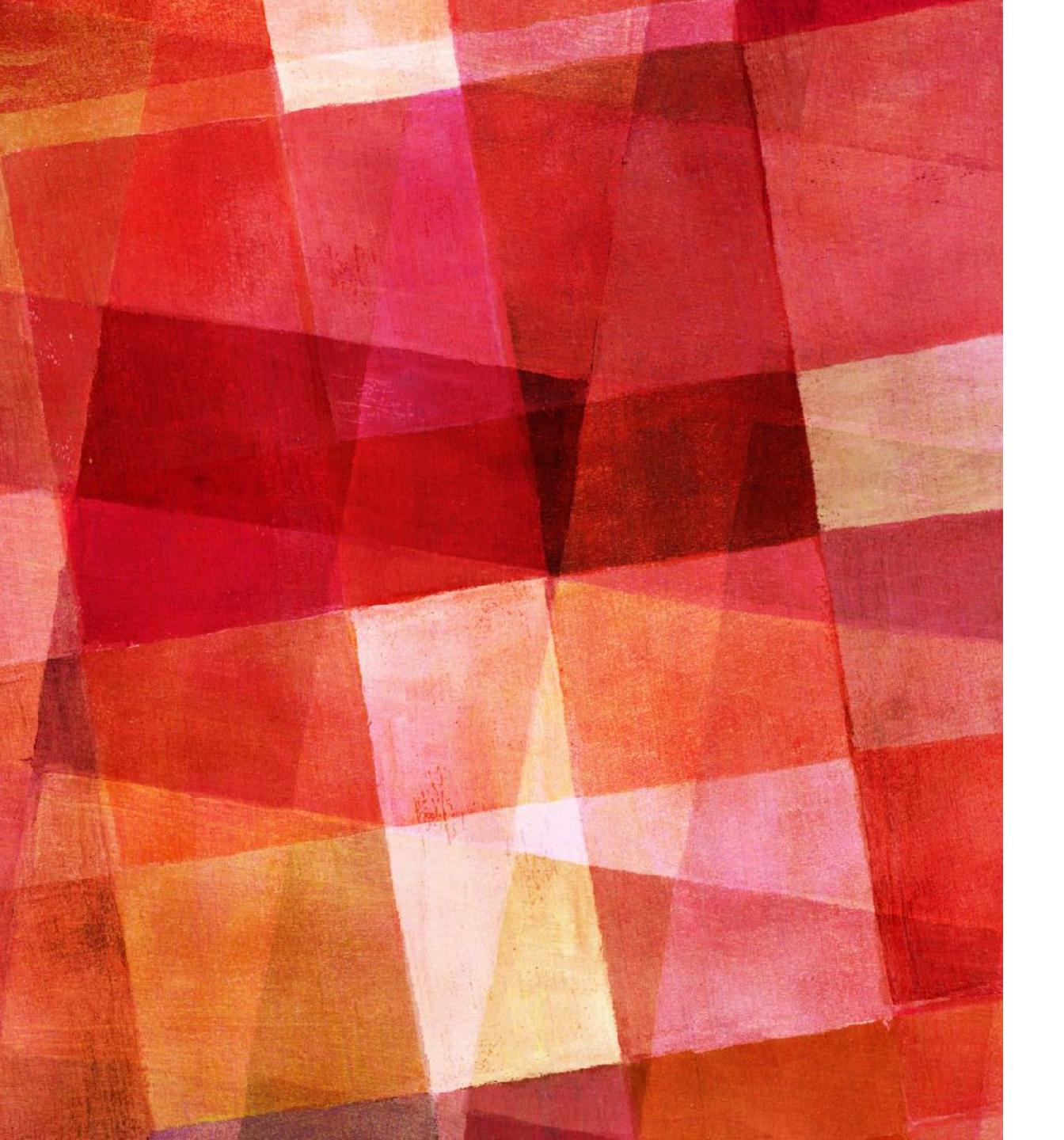
- > Stability
- > Security
- ➤ Transparency
- ➤ Customizability



Source: opensourcesurvey.org

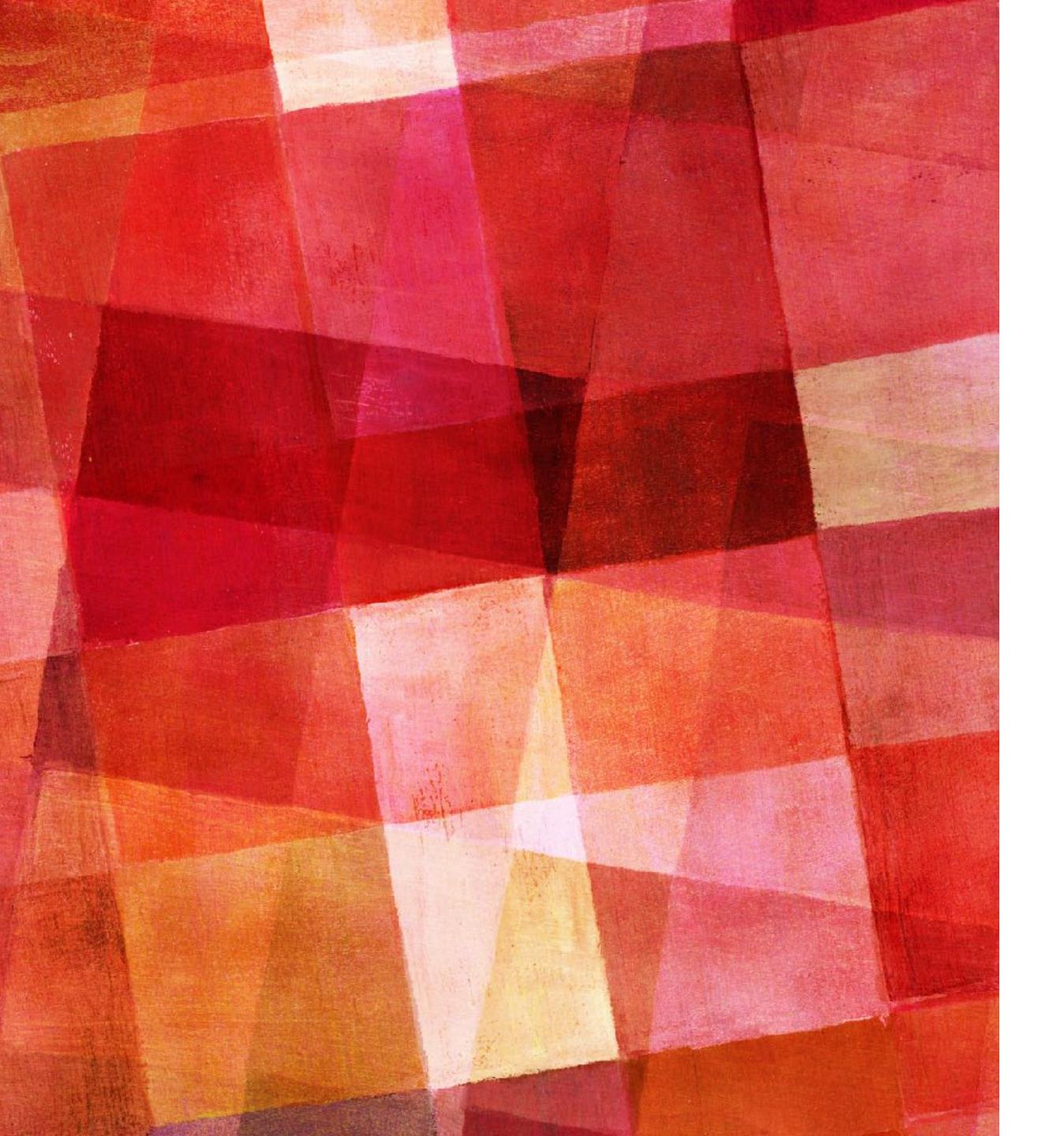


https://github.com/github/open-source-survey/



WHAT OSS USERS VALUE

- ➤ Documentation
 - ➤ Fosters inclusion
 - ➤ Often ignored
- Does not Count on
 - ➤ Lack of response
 - ➤ Negative Response
 - ➤ Conflicts
 - ➤ Rejection with out reason
 - > Rudeness



WHAT OSS USERS VALUE

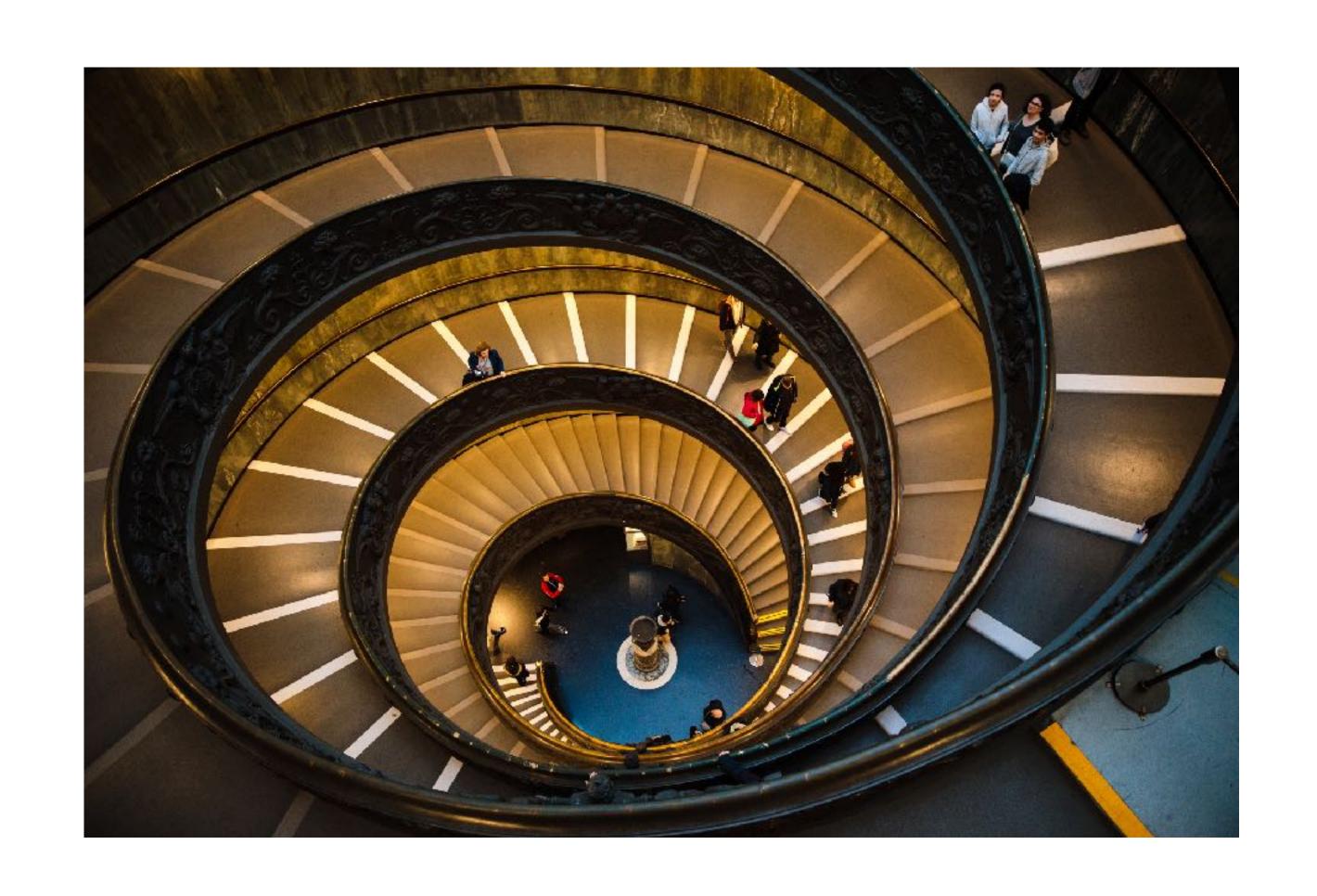
- Responsiveness
- ➤ License Terms
- ➤ Inclusiveness
- ➤ Activity
- ➤ Contribution Guidelines
- ➤ Code of Conduct
- ➤ Widely Used

CONTRIBUTOR FUNNEL

USERS

CONTRIBUTORS

MAINTAINERS



FABRIC OF COMMUNITY

- > Open source project participants
 - > Author
 - ➤ Owner
 - Maintainer
 - ➤ User
 - ➤ Contributors
 - > Members

SUSTAIN THE SUSTAINABILITY

- > Care for contributors
- ➤ Always think about bringing new contributors
- ➤ Community over code
- > Create and document contribution process and guidelines
- ➤ Document Release process
- ➤ Establish clear communication channels
 - ➤ IRC, mailing lists, forums
- ➤ Analytics
- ➤ Mentorship
- ➤ Nudge towards helping-culture

SUSTAIN THE SUSTAINABILITY

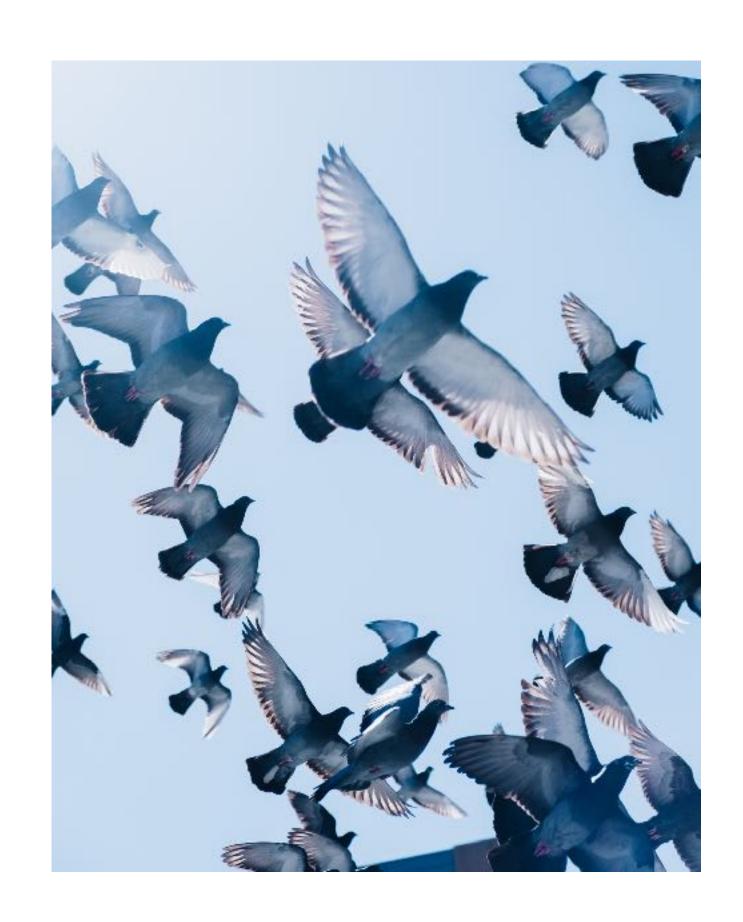
- > Free Riders
 - ➤ No one notices breakages in infra
 - ➤ Remember "Heartbleed"
- ➤ Brittle Digital Infrastructure
- ➤ Support Individual OpenSource Developer
 - > Patreon, License Zero
- > Support the project
 - ➤ Tidelift, OpenCollective
- ➤ Adopt a "give-back" culture

YOU DON'T HAVE TO BE A CODER

- ➤ Contribution does not mean code
- ➤ Event planning Like this one
- ➤ Design
- > Documentation
- ➤ Help people
- > Code



OSS LEADERSHIP





Closer View its headed in a direction

SEEDS OF CHANGE

What would you like to see most in minix?

349 posts by 321 authors 🐨



Linus Benedict Torvalds



Hello everybody out there using minix -

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).

I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torv...@kruuna.helsinki.fi)

PS. Yes - it's free of any minix code, and it has a multi-threaded fs. It is NOT protable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-(.

How old was youngest kernel contributor?

4

author Waisa Roponen <maisa.roponen@gmail.com> 2014-11-24 09:54:17 +0200

committer ## Jonathan Corbet <corbet@lwn.net> 2014-11-24 07:40:35 -0700

commit 690b0543a813b0ecfc51b0374c0ce6c8275435f0 (patch)

tree afff985a0c48f307ae3752735eb6aa7d1da5c649

parent lf999d14fc7f772fbdd19151ebe5ee081f53dd49 (diff)

download linux-690b0543a813b0ecfc51b0374c0ce6c8275435f0.tar.gz

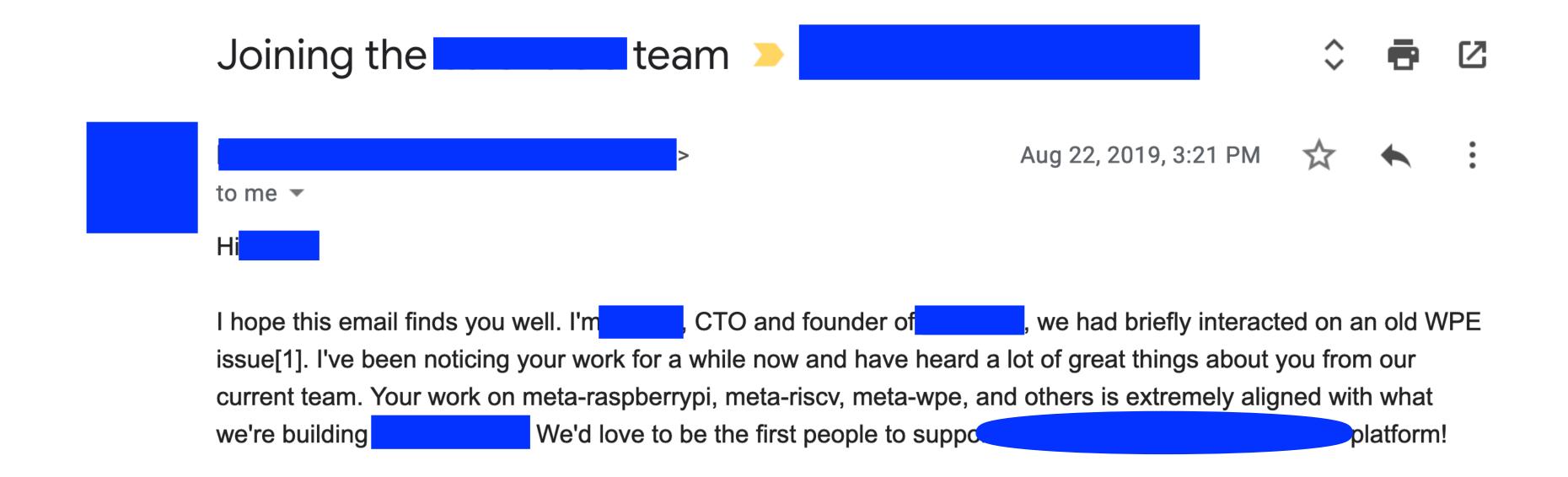
Documentation: fix formatting to make 's' happy

"That letter [the last s] is sad because all the others have those things [=] below them and it does not."

This patch fixes the tragedy so all the letters can be happy again.

Signed-off-by: Maisa Roponen <maisa.roponen@gmail.com>
[The author being 4 years old needed some assistance]
Signed-off-by: Tero Roponen <tero.roponen@gmail.com>
Signed-off-by: Jonathan Corbet <corbet@lwn.net>

HONE YOUR SKILLS



ALL HANDS ON DECK



Mothership

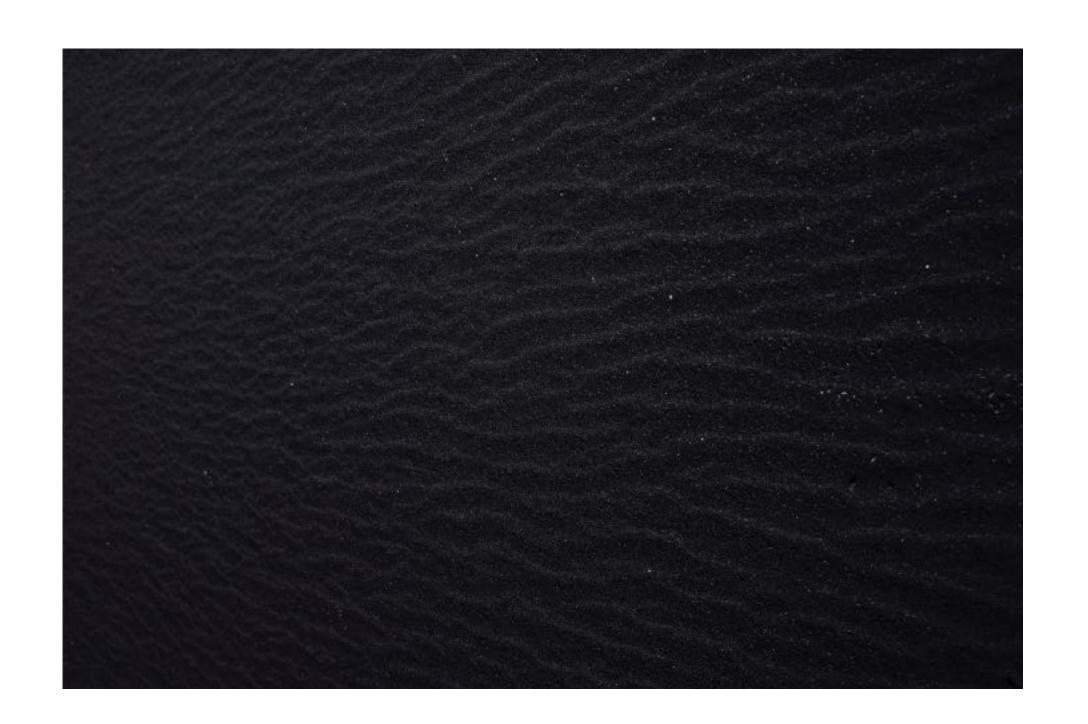
OSS MODELS ARE GOING EVERYWHERE

- ➤ Open Hardware
 - > Arduino
- Open Chips
 - > RISC-V
 - ➤ OpenPOWER
- ➤ Open Data
 - ➤ Open Energy Data Initiative
 - ➤ Governments

INNOVATION TIPPING POINT

Then





Journey from Followers to trailblazers

THANK YOU FOR YOUR ATTENTION