KDE GOALS

KDE's Accessibility Goal
A two-year Overview

Akademy, 7 September 2024

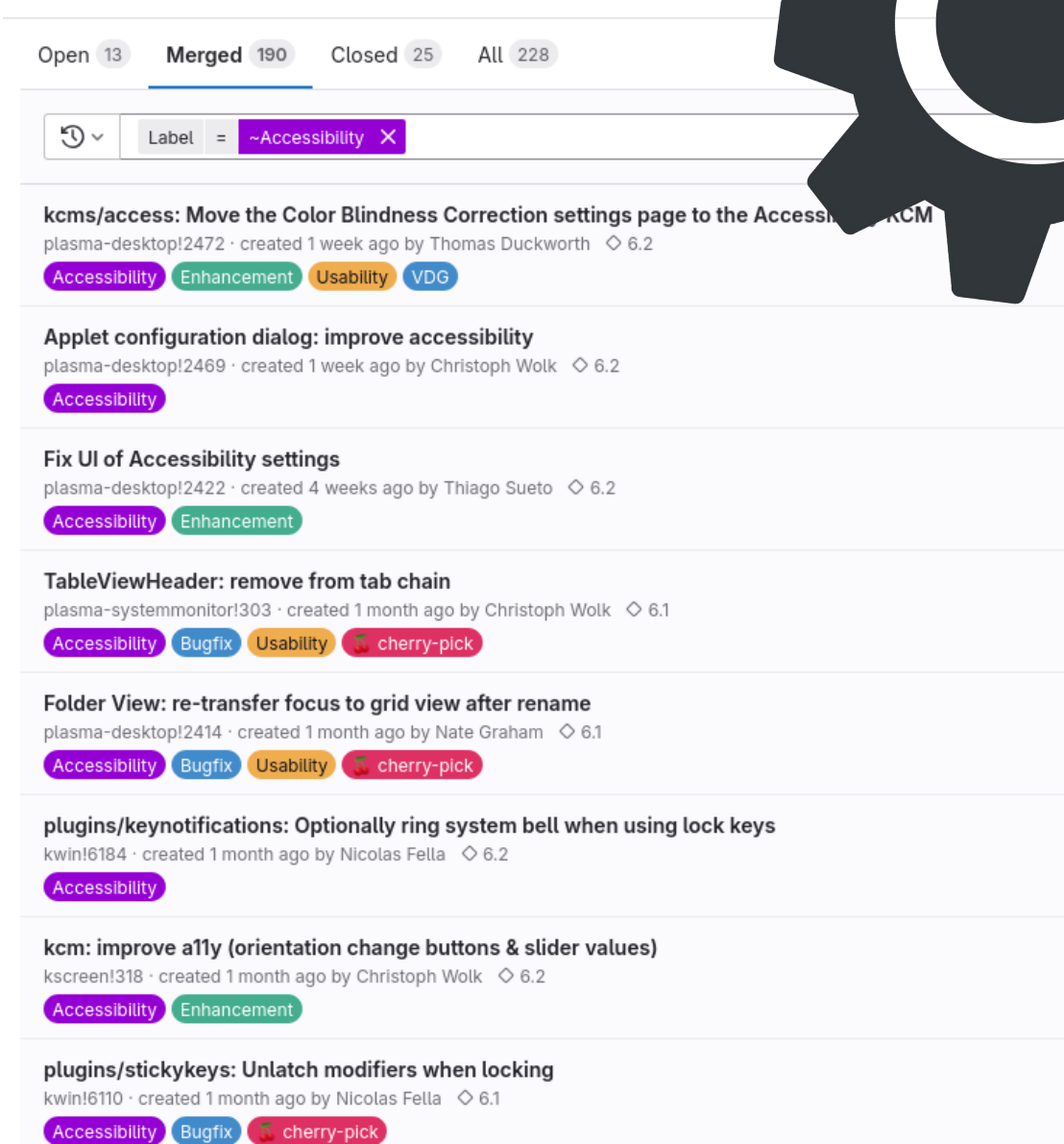
Carl Schwan <carl@carlschwan.eu>

Why

- It’s INCLUSIVE AND gives EQUAL ACCESS to all
- It promotes usability
- It’s the right thing to do
- It’s the law

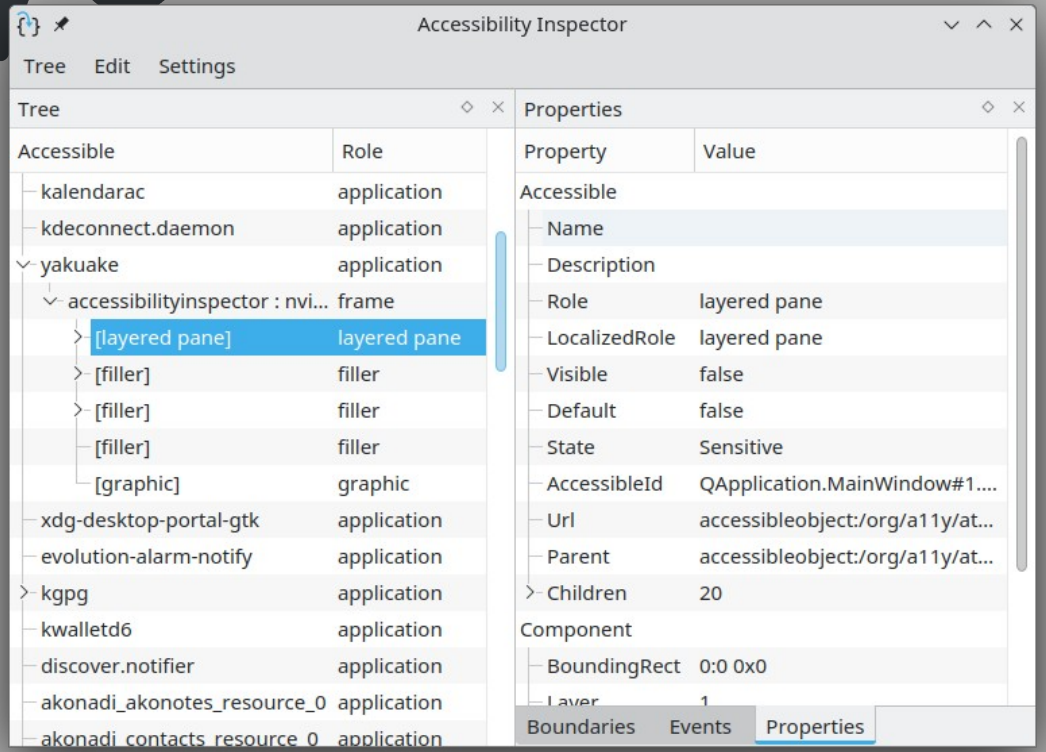
Accessibility improvements

- Plasma
- Applications
- Frameworks
- Qt



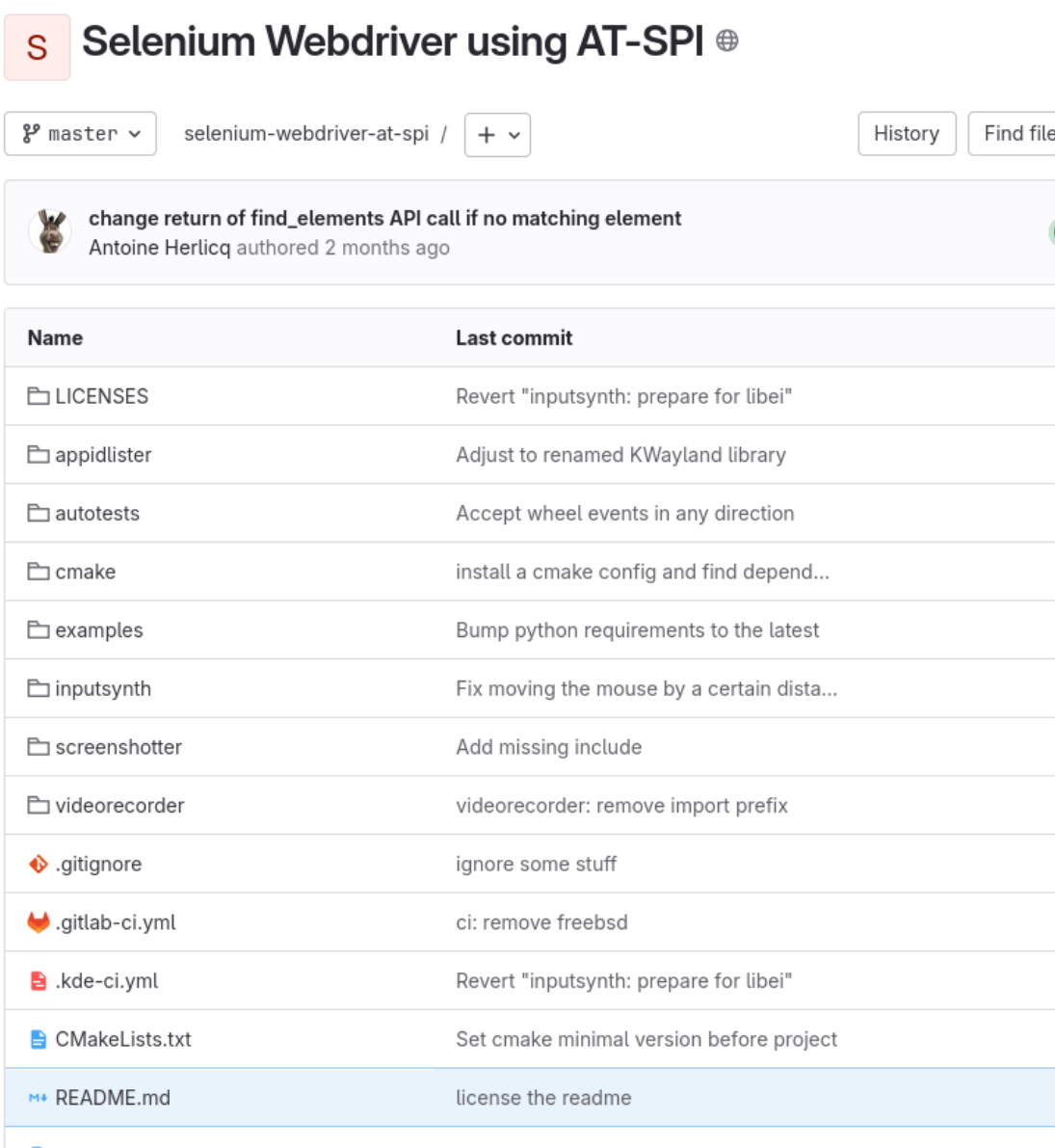
Accessibility Inspector

- Developer tool



Selenium Driver

- Integration tests suite
- Powered by AT-SPI



Appium automation testing

Learn how to run Appium tests for applications on Linux

Introduction

KDE uses manually triggered unit tests as well as autotests to prevent code changes to o
issues. Oftentimes, this is not enough for graphical applications, so testing the user inter
this, KDE uses Appium tests.

Appium is an open source tool based on Selenium for automating applications on variou

Selenium itself is used to automate testing web applications. Appium derives from it to a
platforms and in multiple languages.

Appium does this leverage of multiple platforms and languages by using a *driver*. A drive
a bridge between your test scripts and the application you want to automate. With it, dev
interface tests for manipulating the user interface, test accessibility, and measure power

The Linux Driver: Selenium AT-SPI

Appium has the ability to automate Linux apps by using the Linux accessibility API AT-SPI
Selenium AT-SPI, a WebDriver server for Linux apps that runs the application in a localho
environments (such as CI jobs), while also being able to run locally in a Wayland composi
manually and see the results.

Documentation

https://develop.kde.org/

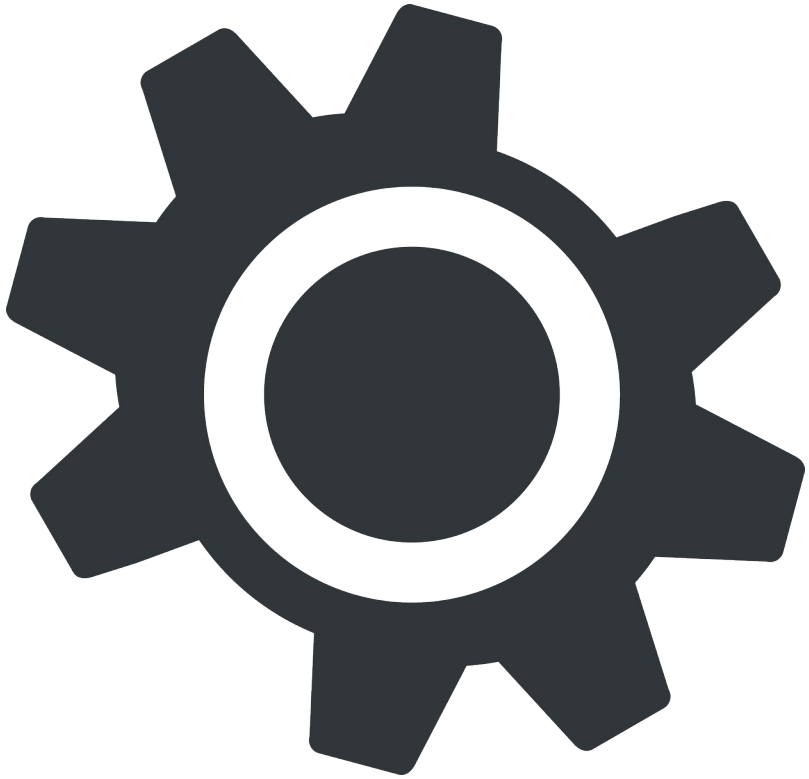
docs/apps/tests/appium/

Sprint

Joint KDE Goal sprint in April 2024 in Berlin

Future

- Text to Speech with Spiel: https://project-spiel.org/
- Replacement for AT-SPI: Newton
- More accessibility improvements



Lesson learned
As goal keeper

Special Thanks

- Harald Sitter
- Fusan Wen
- Christoph Wolk
- Volker Krause
- Ingo Klöcker
- Felix Ernst
- And every one else who worked on accessibility

Automation & Systematization wrap-up

Nate Graham

One simple dream

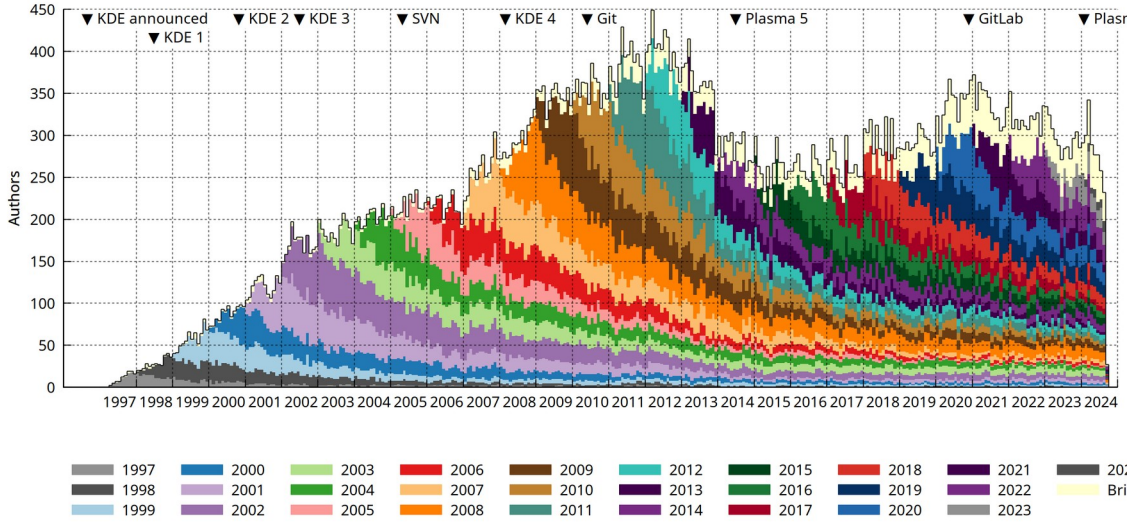
Be lazier

Three simple principles

- Automation > manual labor
- Policies > opinions
- Teams > working alone

Why bother?

- Lots of turnover
- People take their knowledge and labor with them
- Preserve it in KDE!



Benefits

More:

- Quality
- Consistency
- Free time

Less:

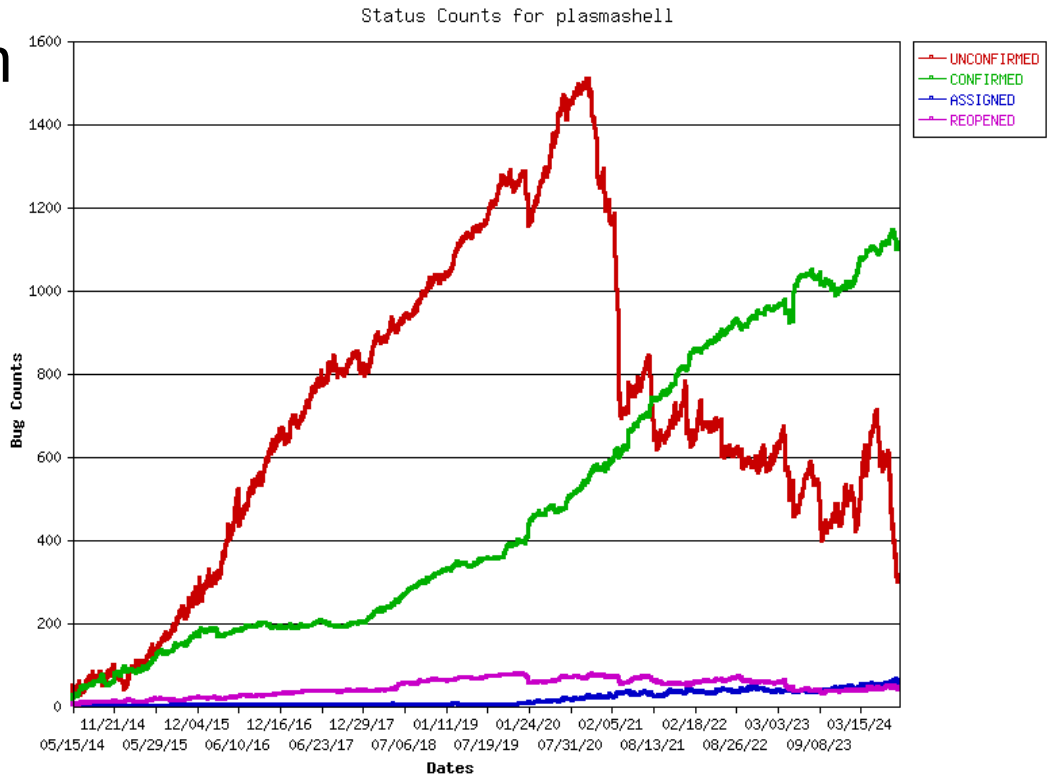
- Grunt work
- Regressions
- Style nitpicks and arguments

Areas of focus

- Automatic testing
- Automatic bug triage
- Documentation

Successes

- More tests in Plasma and KWin
- Made test passing mandatory in many projects
- CI jobs to build Flatpaks and Windows binaries
- Bugzilla bot automation
- Updated docs
- New HIG



Challenges

- Need is not urgent
- Writing tests is still hard
- It’s boring
- Lack of leadership from me

Lessons learned

- Goal champions need to:
  - Be proactive
  - Lead by example
- Big wins inspire more action than small ones
- Big episodic communication better than a small trickle
- Changing a “good enough” status quo is really hard

KDE‘s Sustainable Software Goal
A two-year Overview

Akademy, 7 September 2024

Cornelius Schumacher <schumacher@kde.org>

KDE can deliver software
in a way which
preserves environment and society
for us and future generations.

KDE can deliver **Sustainable Software**.

Goal: Promote **Sustainable Software** in KDE by

Alignment

(i) aligning existing activities,

Visibility

(ii) highlighting where our software is already sustainably designed

Initiatives

(iii) stimulating actions to increase sustainability, and
(iv) creating standards/tools to quantify software sustainability.

Alignment

Joint KDE Goals Sprint in Berlin April 2024

KDE Eco Community

Umbrella for Sustainability Activities

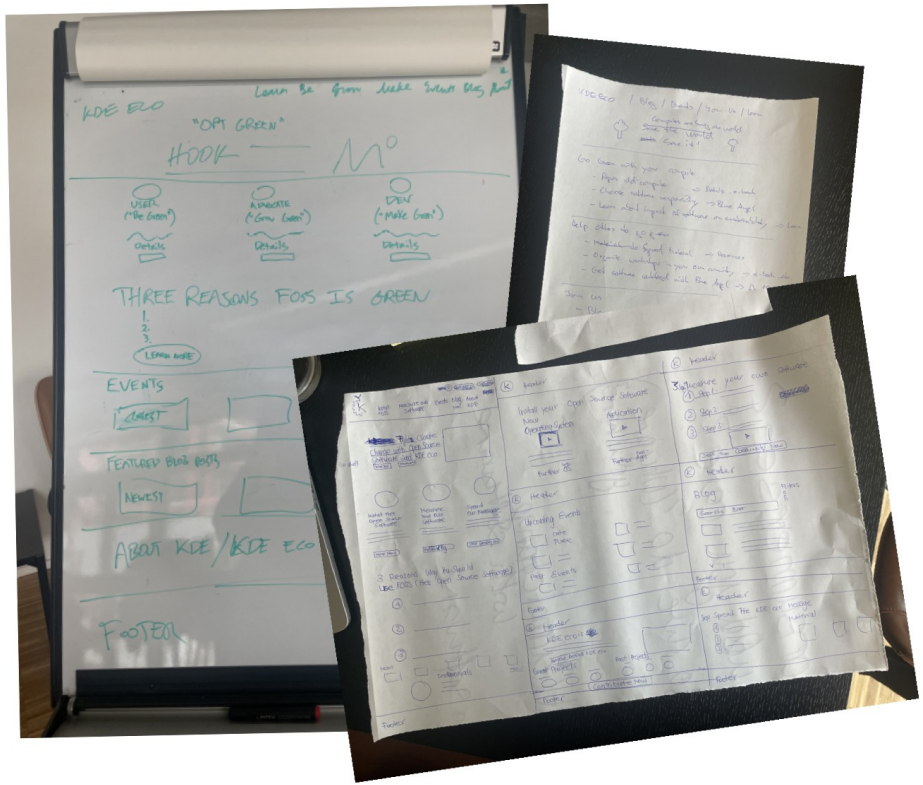
Blue Angel

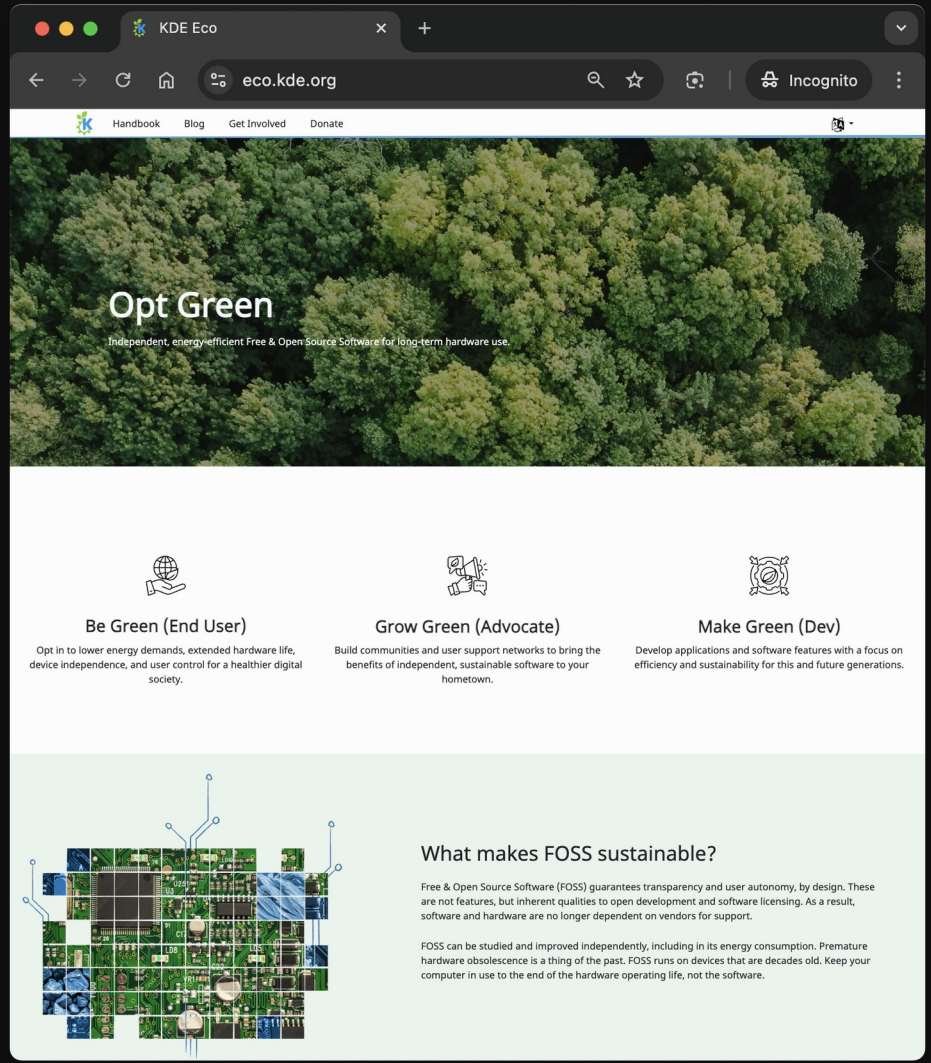
Energy Measurement

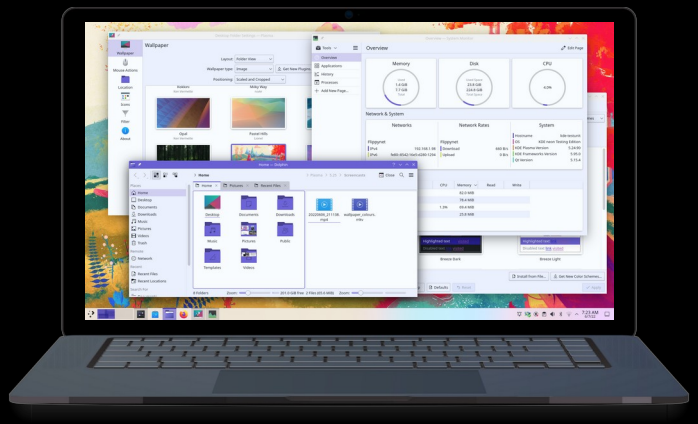
Funded projects

Activism

`https://eco.kde.org`


KDE ECO
"OPT GREEN"
HOOK
THREE REASONS FOSS IS GREEN
EVENTS
FEATURED BLOG POSTS
NEWEST
ABOUT KDE/KDE ECO
FOOTER


KDE Eco
eco.kde.org
Incognito
Handbook
Blog
Get Involved
Donate
Opt Green
Independent, energy-efficient Free & Open Source Software for long-term hardware use.
Be Green (End User)
Opt in to lower energy demands, extended hardware life, device independence, and user control for a healthier digital society.
Grow Green (Advocate)
Build communities and user support networks to bring the benefits of independent, sustainable software to your hometown.
Make Green (Dev)
Develop applications and software features with a focus on efficiency and sustainability for this and future generations.
What makes FOSS sustainable?
Free & Open Source Software (FOSS) guarantees transparency and user autonomy, by design. These are not features, but inherent qualities to open development and software licensing. As a result, software and hardware are no longer dependent on vendors for support.
FOSS can be studied and improved independently, including in its energy consumption. Premature hardware obsolescence is a thing of the past. FOSS runs on devices that are decades old. Keep your computer in use to the end of the hardware operating life, not the software.

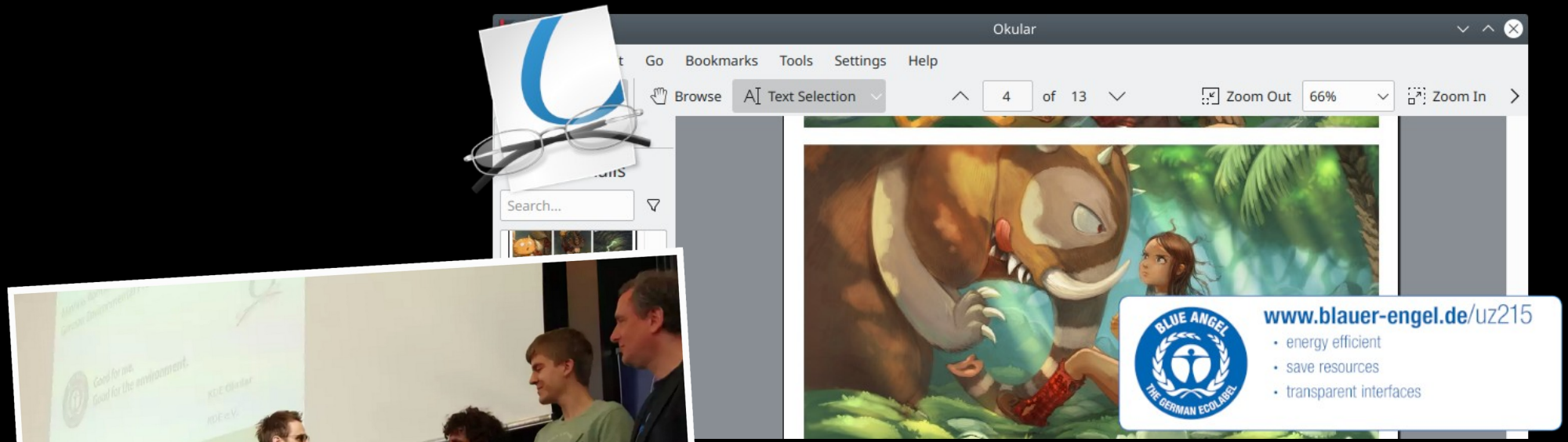


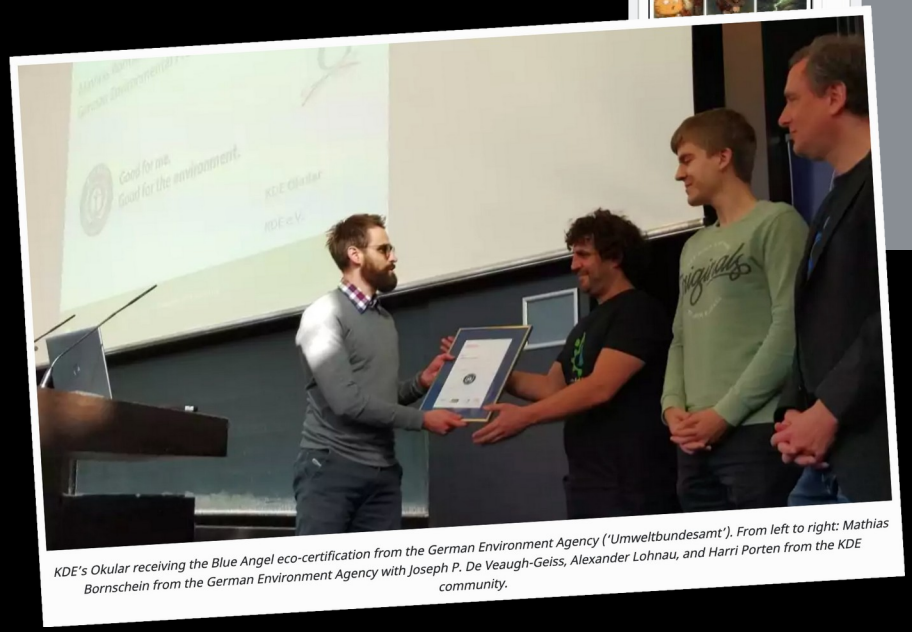
KDE‘s vision:

**"A world in which
everyone has control over their digital life
and enjoys freedom and privacy."**

https://community.kde.org/KDE/Vision

Visibility





KDE's Okular receiving the Blue Angel eco-certification from the German Environment Agency ('Umweltbundesamt'). From left to right: Mathias Bornschein from the German Environment Agency with Joseph P. De Veaugh-Geiss, Alexander Lohnau, and Harri Porten from the KDE community.

Okular is first software with Blue Angel eco-label certification

https://eco.kde.org/blog/2022-03-16-press-release-okular-blue-angel/

Revised Blue Angel Criteria

Version 4 published in August 2024

- Extended scope: Desktop, Server, Mobile
- More flexible energy measuments
- Ongoing assessment of energy and resource efficiency

KDE was involved in revision

Okular certification will continue

Do we want to certify more KDE applications?

https://eco.kde.org/blog/2024-08-26-revised-blue-angel-criteria/

10
Mär 2023

Konferenz

Nachhaltig by design – für eine klimaneutrale digitale Zukunft

Digitalpolitik & Netzpolitik

Die digitale Transformation birgt großes Potenzial für die Gestaltung eines zukunftsgerichteten Staatswesens, für wissenschaftlichen Fortschritt und gesellschaftlichen Wohlstand. Mit Vertreter*innen aus Politik, Wirtschaft und Zivilgesellschaft sowie 400 Gäst*innen hat die grüne Bundestagsfraktion am 10. März 2023 auf einer hybriden Konferenz über den Handlungsbedarf an der Schnittstelle zwischen Nachhaltigkeit und Digitalisierung debattiert.

© Grüne Bundestagsfraktion / Aya Schamoni

KDE is seen as expert for sustainable software

Invited to conference about digital sustainability in German parliament

https://eco.kde.org/blog/2023-04-26-sustainable-by-design/

https://www.sueddeutsche.de/wirtschaft/blauer-engel-software-open-source-okular-1.5700118

KDE's vision:

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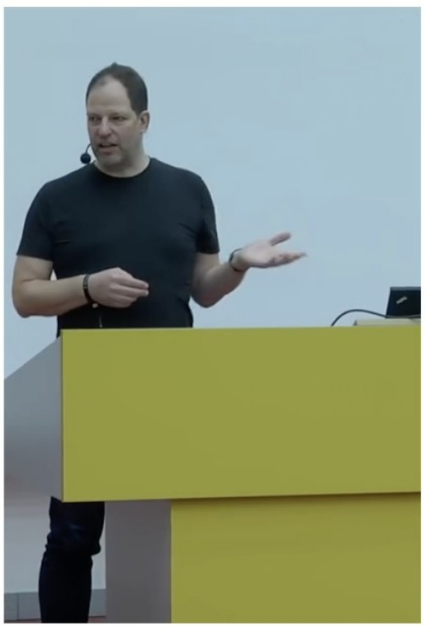
Es geht um mehr als nur Technik...

Bits & Bäume



https://media.ccc.de/v/bitsundbaeume-20160-was-wir-durch-den-blauen-engel-ber-nachhaltiges-software-design-gelernt-haben

Bring it Back to Life!

Friday 28 June 2024
18:00–21:00

Moos Moosdorfstr. 7-9 (S Treptower Park)

Revive your old **laptop** and reduce toxic e-waste with Free & Open Source Software at this drop-in workshop with the KDE Eco community (eco.kde.org). Free of charge!

Download me:

https://invent.kde.org/teams/eco/opt-green/-/raw/master/workshops/2024-06-28_flyer_moos_berlin_workshop-bring-it-back-EN.pdf

The most environmentally-friendly device is the one you already own!

Beginner friendly, no technical knowledge is necessary.

18:00 Welcome / Introduction
19:00 Laptop upgrade workshop. Bring any laptop for step-by-step help. (Have an old Android smartphone†? Write us!)

eco.kde.org

Questions? Email:

alistair@reclaimed.systems or joseph@kde.org

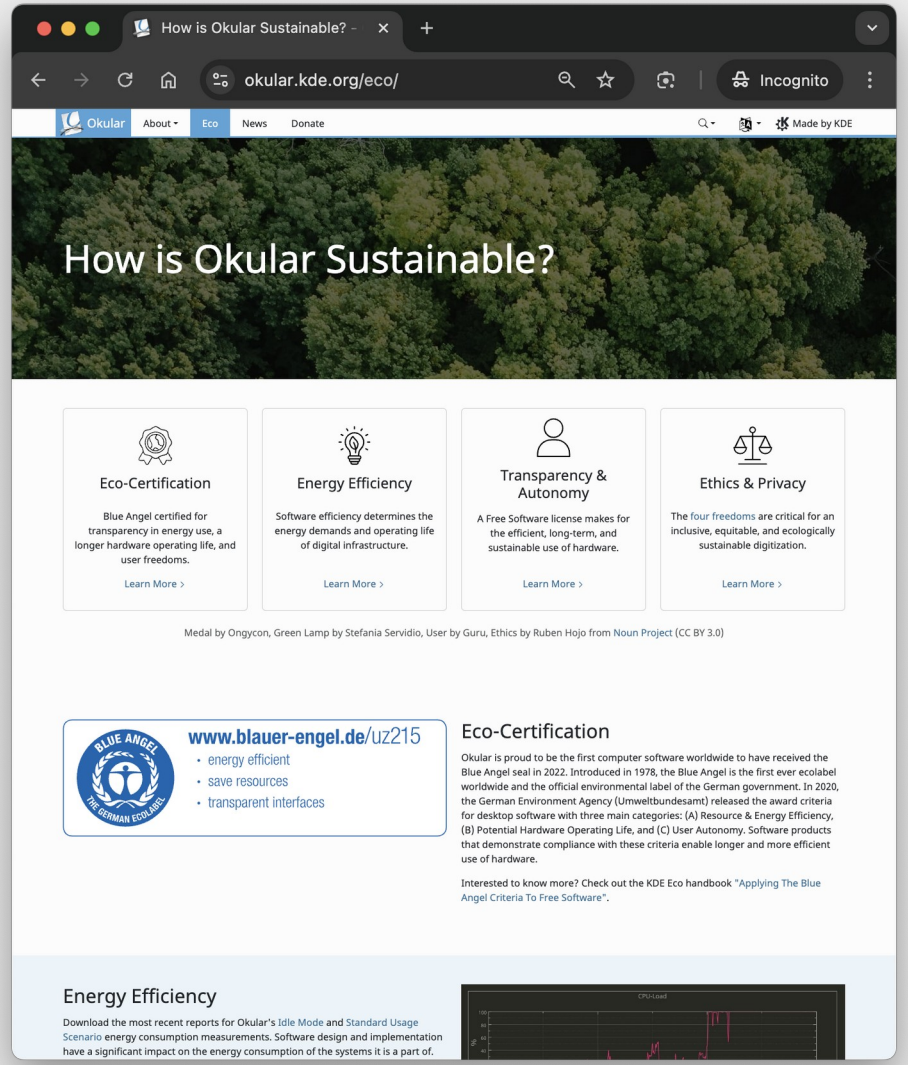
† Apple's policies mean iPhones will not work.

More presentations

Presence at events

Reaching out to related communities

More complete list:
https://community.kde.org/Goals/Sustainable_Software#Results



Eco Tab in Okular

Visibility for Sustainability in KDE Applications

https://okular.kde.org/eco/

Initiatives

Blue Angel for Free Software

https://invent.kde.org/teams/eco/be4foss

Funding Notice

This project was funded by the Federal Environment Agency and the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV[1]). The funds are made available by resolution of the German Bundestag.

Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

Umwelt Bundesamt

Figure : The "Think Global, Act Local" campaign urged people to consider global health while taking action in their local communities. This new project urges people to do the same, but with computing. (Image from Karanjot Singh published under a CC-BY-4.0 license.)

Opt-Green – Sustainable Software for Sustainable Hardware

`https://invent.kde.org/teams/eco/opt-green/`

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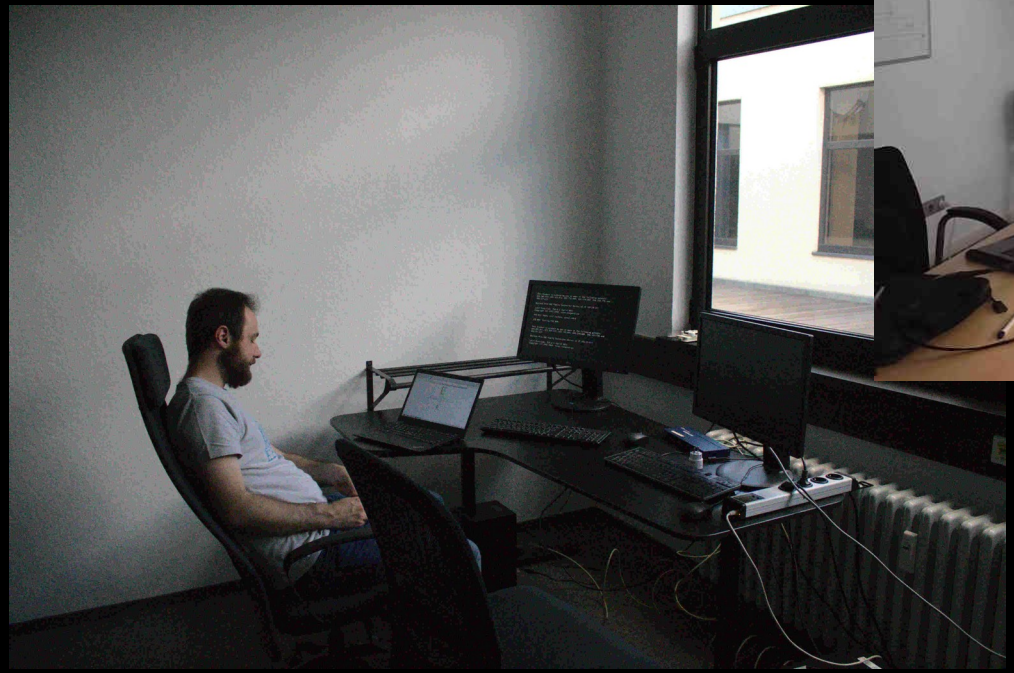
KEcoLab



Seasons of Code

SoK 2022	• Preparing Standard Usage Scenarios for Energy Consumption Measurements
SoK 2023	• Improve "KDE Eco Test" emulation tool • Measurement of energy consumption with Selenium • Preparation of KDE apps for Blue Angel eco-certification
GSoc 2023	• Measuring Energy Consumption Using Remote Lab
SoK 2024	• Improving KdeEcoTest's funcionalities and compatibility • Testing and development of KEcoLab • Selenium testing and user videos • Adding Windows support for KdeEcoTest • Sustainability 1: Testing and Developement of KEcoLab

Teaming up with others

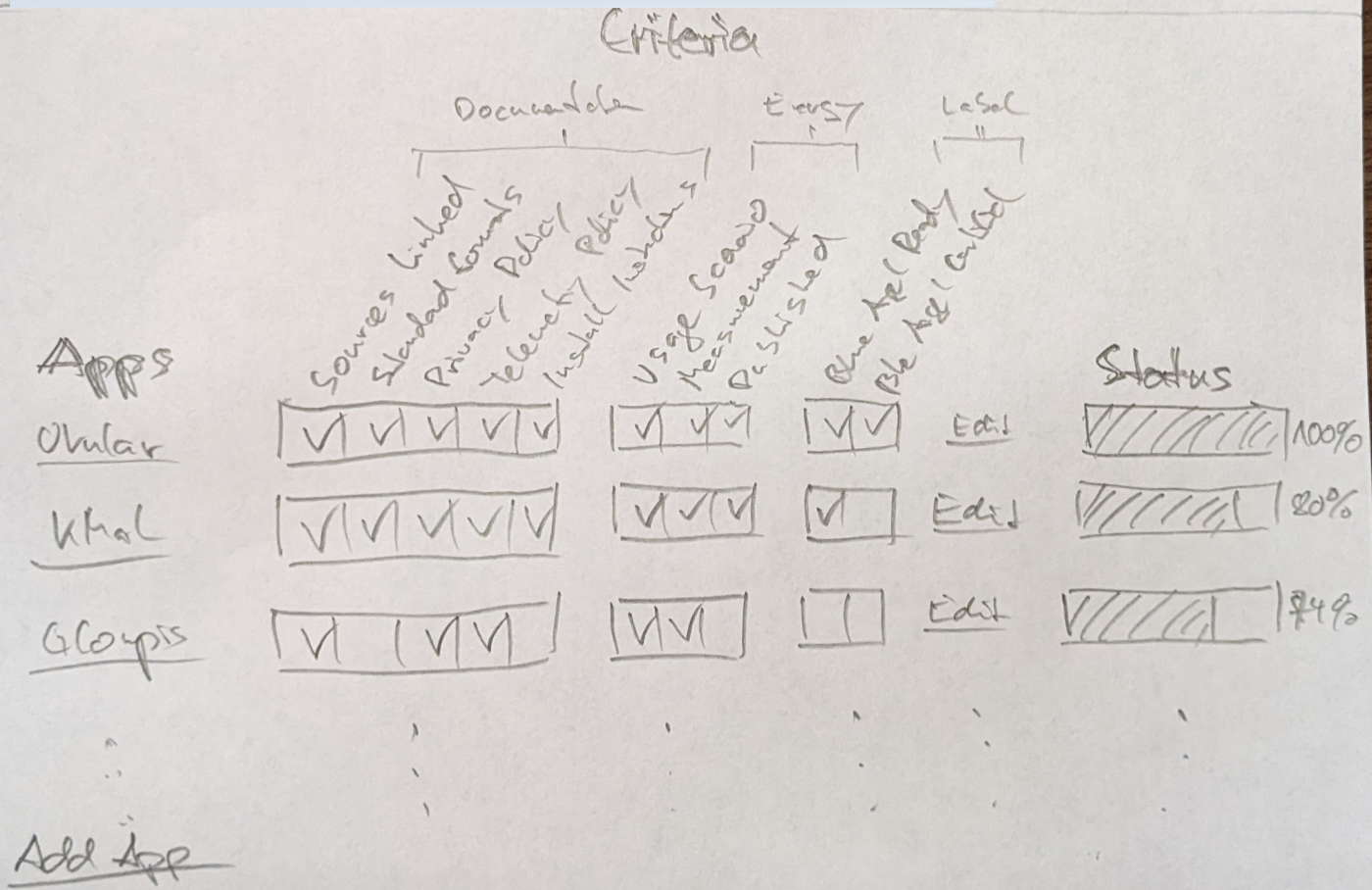
Measurement (technology)

Umweltcampus Birkenfeld
Sustainable Digital Infrastructure Alliance
Green Coding Berlin
Green Web Foundation
...

Community (culture)

What didn‘t work?

KDE Sustainable Software Dashboard



How can we get more of KDE involved?

How do we act as one community?

The goal lives on

Get involved

Mailing list:
kde-eco-discuss@kde.org

KDE-Eco Community (blog, chat, forum meetups, ...):
https://eco.kde.org

GitLab (progress board, code, data, docs):
https://invent.kde.org/teams/eco

Join the BoFs

Using KEcoLab To Measure Software's Energy Consumption

***When*:** Monday 9 September 10:00 CEST (UTC+2), Room 2

Opt Green / KDE Eco

***When*:** Monday 9 September 15:00 CEST (UTC+2), Room 2

Sustainable Software

We **have** to do something

We **can** do something

We **do** something

Let‘s do it together

KDE GOALS