

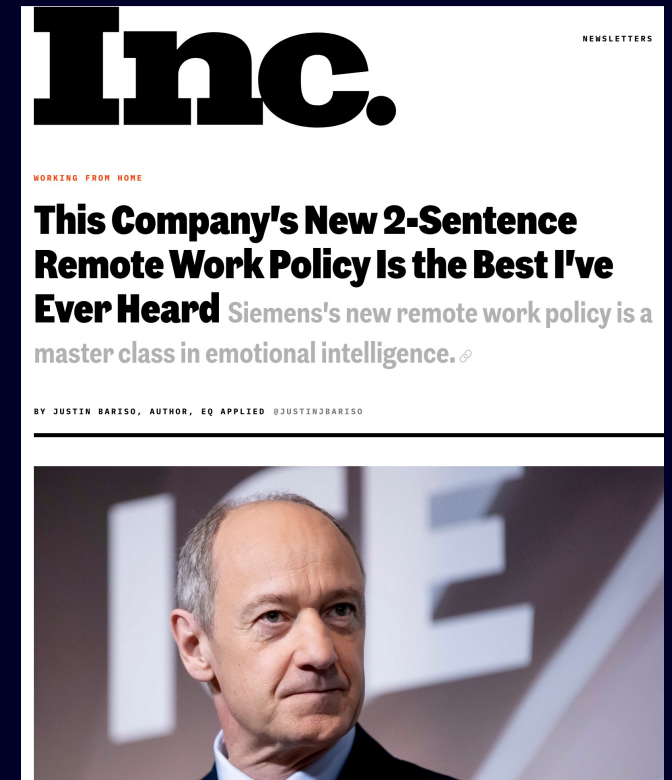
| Open Source @ Siemens 2022

Welcome to the 9th event, great to have you here!

**1st time as
hybrid conference
+ full public**

hybrid mode = new normal

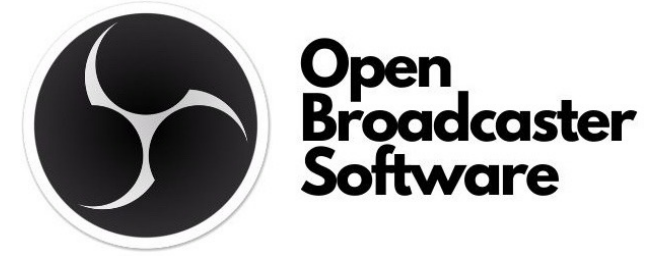
- Mobile working two to three days a week as worldwide standard
- Managing Board approves new model for working independently of fixed locations
- Model based on transformation of leadership and corporate culture
- Siemens among first large companies to adjust working models permanently



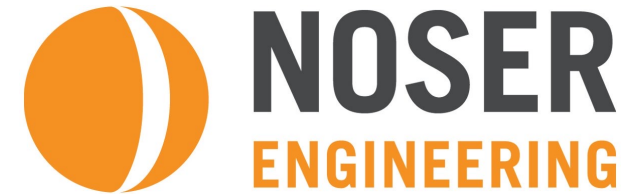
open source @ Siemens



bitkom



Thanks!



CANONICAL



establish an open source culture @ Siemens

we started with



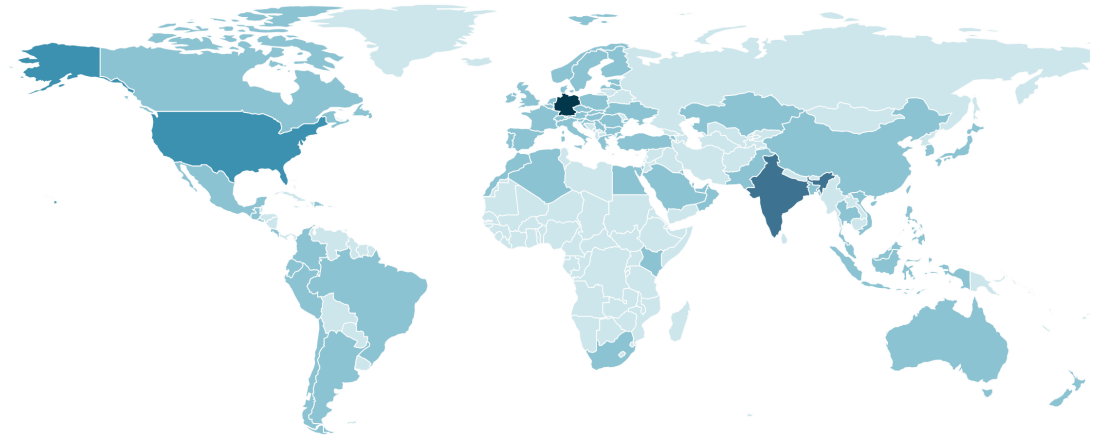
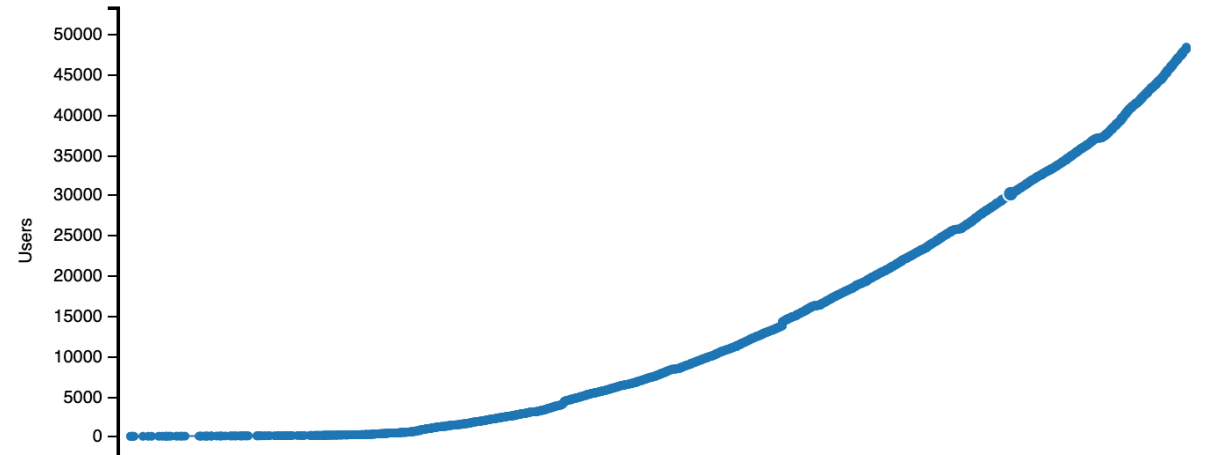
**code.siemens.com
and walk the talk!**

code.siemens.com - DevOps at scale

Social coding platform to collaborate on code within minutes.

- > **250k** builds/day
- > **47k** users, > **73** countries
- > **16M** API requests/day
- > **3800** hosted websites
- **0 €** license fees → Open Source
- **No classic** help desk → **community**

Thousands of **our** products and solutions are developed and deployed using code.siemens.com.



For developers, from developers

**what's the
foundation?**

people!

**you must build an
environment
of trust!**

Team Charter of code.siemens.com

- Strong collaborative mindset, **cross silo thinkers**
- **Full Stack Engineers** (Architecture, Development, etc.)
- Experience as **open-source contributor or maintainer**
- The platform itself is used to build the platform

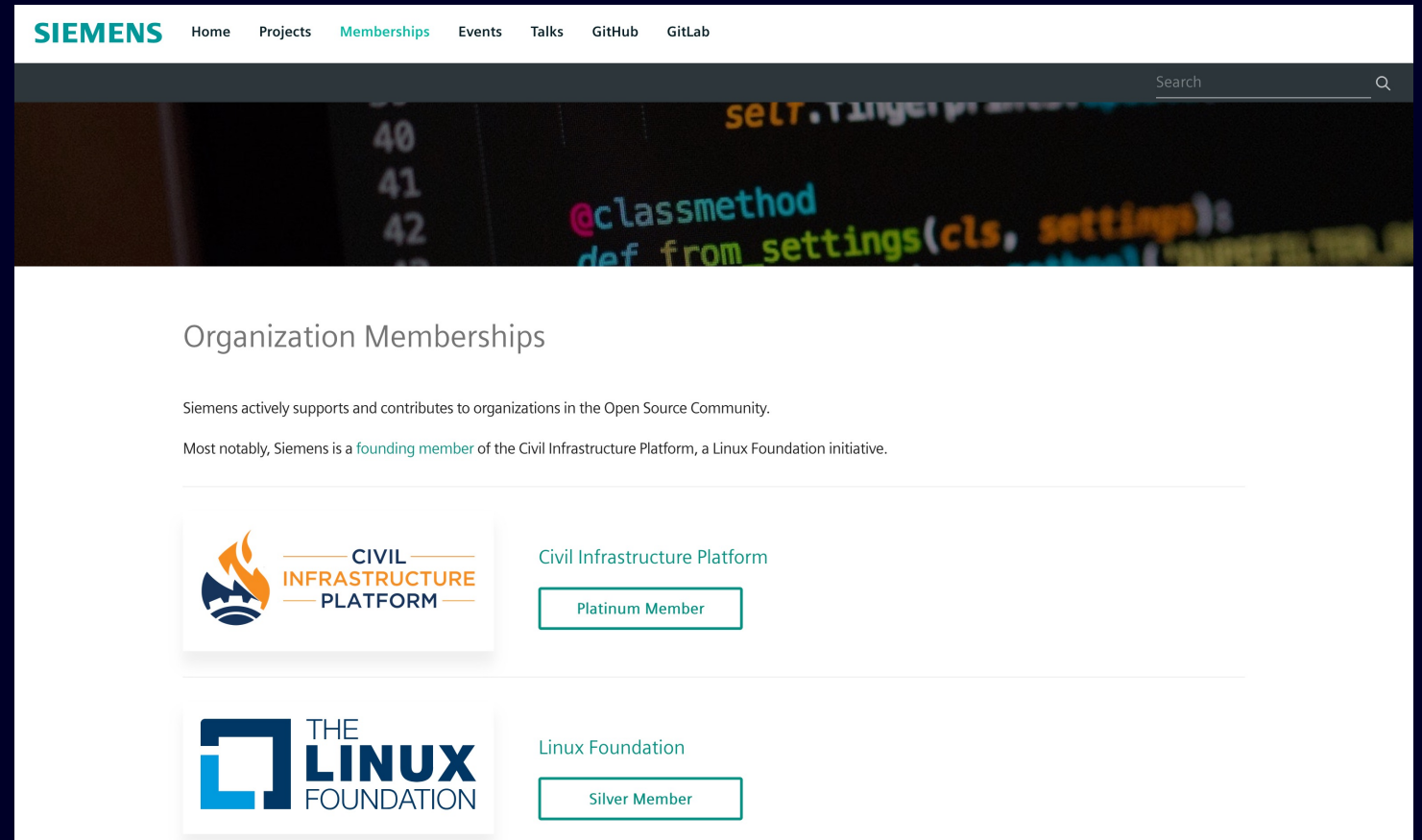
open source

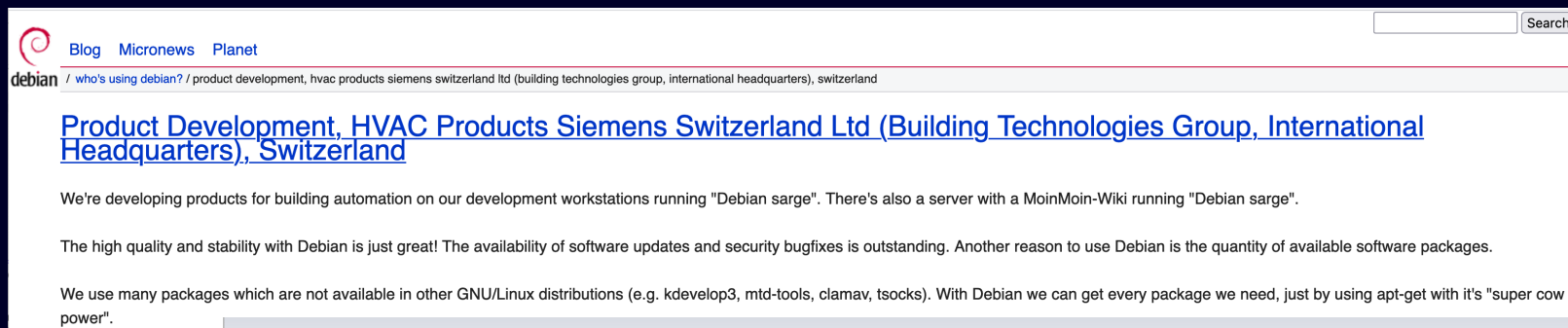
From opensource.siemens.io to opensource.siemens.com

Last year we just had a very basic event web site, now we have:

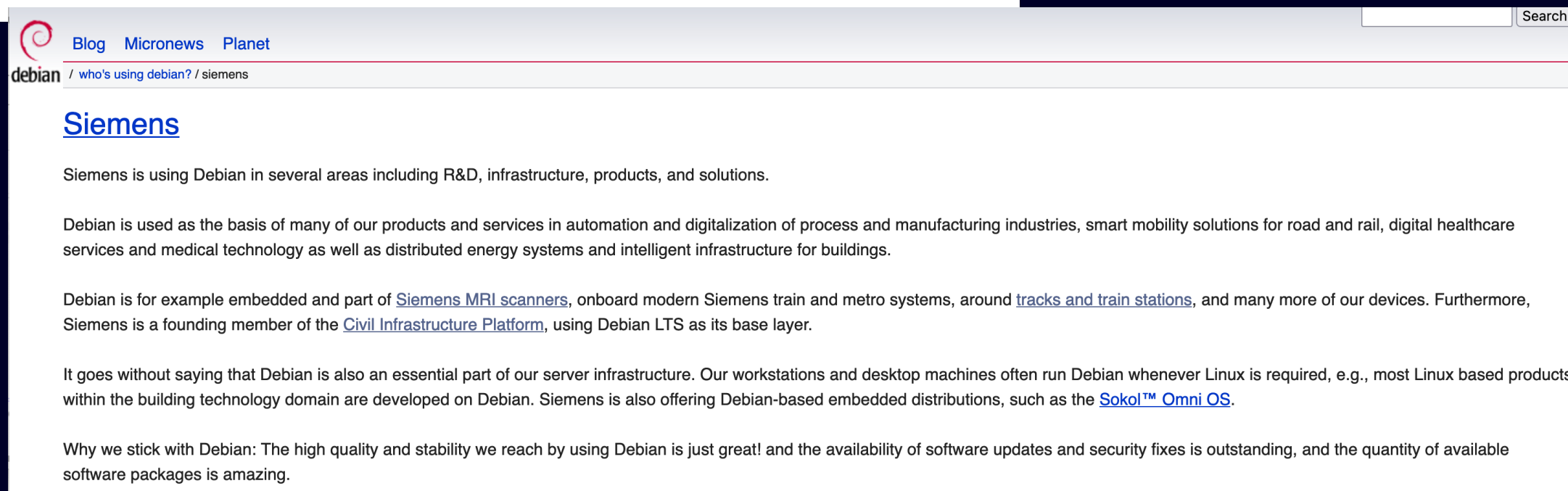
- A site listing projects, memberships, talks and more!
- People across Siemens contributing content.
- Links to other Siemens GitHub groups

We already started the conversation internally about an **Open Source or FOSS Manifesto** similar to what Mercedes-Benz published recently.





This screenshot shows a Debian blog post. The breadcrumb trail is: [debian](#) / [who's using debian?](#) / [product development, hvac products siemens switzerland ltd \(building technologies group, international headquarters\), switzerland](#). The title of the post is [Product Development, HVAC Products Siemens Switzerland Ltd \(Building Technologies Group, International Headquarters\), Switzerland](#). The text of the post includes: "We're developing products for building automation on our development workstations running 'Debian sarge'. There's also a server with a MoinMoin-Wiki running 'Debian sarge'." "The high quality and stability with Debian is just great! The availability of software updates and security bugfixes is outstanding. Another reason to use Debian is the quantity of available software packages." "We use many packages which are not available in other GNU/Linux distributions (e.g. kdevelop3, mtd-tools, clamav, tsocks). With Debian we can get every package we need, just by using apt-get with it's 'super cow power'."



This screenshot shows a Debian blog post. The breadcrumb trail is: [debian](#) / [who's using debian?](#) / [siemens](#). The title of the post is [Siemens](#). The text of the post includes: "Siemens is using Debian in several areas including R&D, infrastructure, products, and solutions." "Debian is used as the basis of many of our products and services in automation and digitalization of process and manufacturing industries, smart mobility solutions for road and rail, digital healthcare services and medical technology as well as distributed energy systems and intelligent infrastructure for buildings." "Debian is for example embedded and part of [Siemens MRI scanners](#), onboard modern Siemens train and metro systems, around [tracks and train stations](#), and many more of our devices. Furthermore, Siemens is a founding member of the [Civil Infrastructure Platform](#), using Debian LTS as its base layer." "It goes without saying that Debian is also an essential part of our server infrastructure. Our workstations and desktop machines often run Debian whenever Linux is required, e.g., most Linux based products within the building technology domain are developed on Debian. Siemens is also offering Debian-based embedded distributions, such as the [Sokol™ Omni OS](#)." "Why we stick with Debian: The high quality and stability we reach by using Debian is just great! and the availability of software updates and security fixes is outstanding, and the quantity of available software packages is amazing."

**growing number of
upstream
contributions all over
Siemens!**

e.g., SIMATIC drivers within Linux Kernel

Compact industrial PCs from Siemens – for installation close to the process

Our rugged, compact SIMATIC Box PCs offer you high performance in a small space. They are rugged and designed for an extended temperature range, allowing them to be installed directly in the control cabinet – the ideal solution for process and machine-level data processing or visualization.

- > [SIMATIC Box PCs at a glance](#)
- > [SIMATIC IPC 6/8 E series at a glance](#)

Age	Commit message (Expand)	Author	Files	Lines
2021-12-23	platform/x86: pmc_atom: improve critclk_systems matching for Siemens PCs	Henning Schild	1	-21/+33
2021-12-23	watchdog: simatic-ipc-wdt: add new driver for Siemens Industrial PCs	Henning Schild	3	-0/+240
2021-12-23	leds: simatic-ipc-leds: add new driver for Siemens Industrial PCs	Henning Schild	5	-0/+221
2021-12-23	platform/x86: simatic-ipc: add main driver for Siemens devices	Henning Schild	5	-0/+292
2021-07-01	igc: Fix use-after-free error during reset	Vinicius Costa Gomes	1	-0/+2
2021-04-26	Merge tag 'arm-dt-5.13' of git://git.kernel.org/pub/scm/linux/kernel/git/soc/soc	Linus Torvalds	513	-3328/+26470
2021-04-07	Merge tag 'ti-k3-dt-for-v5.13' of git://git.kernel.org/pub/scm/linux/kernel/g...	Arnd Bergmann	23	-11/+3501
2021-03-11	arm64: dts: ti: Add support for Siemens IOT2050 boards	Jan Kiszka	4	-0/+778
2019-09-24	Merge tag 'platform-drivers-x86-v5.4-2' of git://git.infradead.org/linux-plat...	Linus Torvalds	7	-16/+222
2019-09-20	platform/x86: pmc_atom: Add Siemens SIMATIC IPC277E to critclk_systems DMI table	Srikanth Krishnakar	1	-0/+7
2019-09-07	platform/x86: pmc_atom: Add Siemens SIMATIC IPC227E to critclk_systems DMI table	Jan Kiszka	1	-0/+7
2019-05-14	mfd: intel_quark_i2c_gpio: Adjust IOT2000 matching	Su Bao Cheng	1	-10/+0
2019-04-25	serial: 8250_exar: Adjust IOT2000 matching	Su Bao Cheng	1	-2/+5
2019-04-18	stmmac: pci: Adjust IOT2000 matching	Su Bao Cheng	1	-2/+6
2017-07-07	Merge (most of) tag 'mfd-next-4.13' of git://git.kernel.org/pub/scm/linux/ker...	Linus Torvalds	37	-183/+985
2017-07-06	mfd: intel_quark_i2c_gpio: Add support for SIMATIC IOT2000 platform	Jan Kiszka	1	-0/+16
2017-07-03	gpio-exar/8250-exar: Make set of exported GPIOs configurable	Jan Kiszka	2	-26/+45
2017-05-21	iiio: adc: Add support for TI ADC108S102 and ADC128S102	Jan Kiszka	4	-0/+379
2017-05-02	Merge git://git.kernel.org/pub/scm/linux/kernel/git/davem/net-next	Linus Torvalds	1690	-45253/+107963
2017-05-02	stmmac: Add support for SIMATIC IOT2000 platform	Jan Kiszka	1	-1/+25

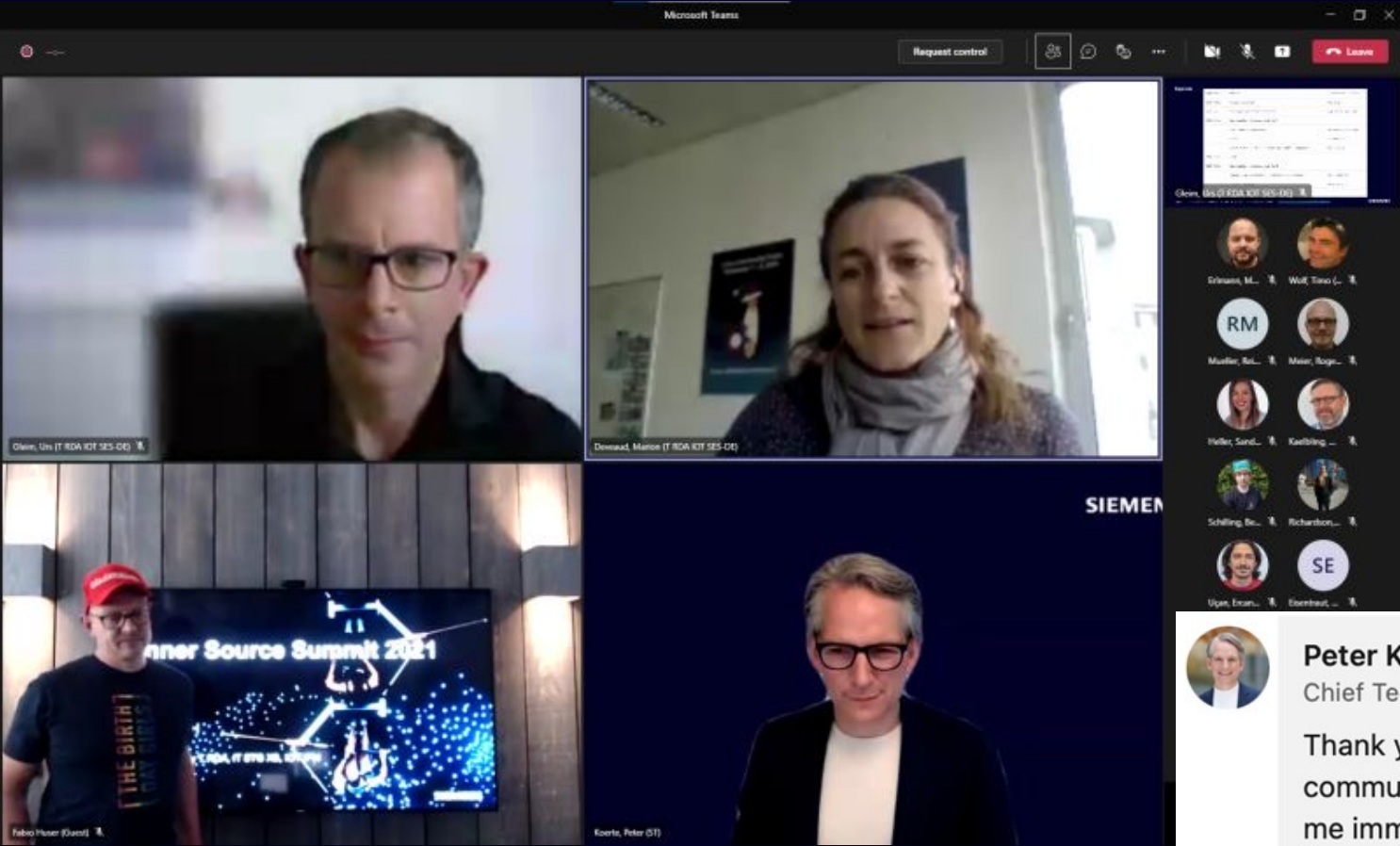
Debian kernel team > linux > Merge requests > !472

[Open](#) Created 6 days ago by Henning Schild


[x86]: Enable SIMATIC_IPC wdt and leds as module

inner source

First Inner Source Summit in November 2021



- Raised awareness and urgency of Collaborative Engineering culture
- Promote Inner Source projects
- Work towards digital independence by using Open Source and Inner Source

 **Peter Koerte** • 1st 5mo ...
Chief Technology & Strategy Officer at Siemens

Thank you for having me and a huge applause to the whole community! 🙌 Your mindset, your ambition and your drive impress me immensely and I can only encourage everyone to join this awesome network as it opens new opportunities for all of us in terms of innovation.

inner source — master thesis

initial situation



In 2021, **\$605 billion** worldwide were **spent on enterprise software**



Until **2014**, **collaboration** across departments and divisions within Siemens on **software code** was **difficult**



In **2015** foundation of the **social coding platform** code.siemens.com



This approach of open and collaborative software development within a corporation is called **inner source software development**



So far, there is **no central department** which drives the topic centrally within the company



To further develop and expand an open and collaborative way of software development within Siemens, it is necessary to **understand the Inner Source software approach of Siemens**

master thesis

What is needed to further develop and expand an open and collaborative way of software development within Siemens?



1. EVALUATION OF
THE AVAILABLE
LITERATURE



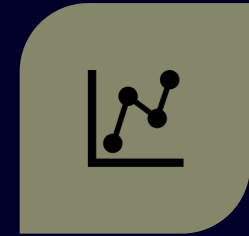
2. COMPARISON OF
THEORY AND
PRACTICE



3. FORMULATION OF
OPEN QUESTIONS



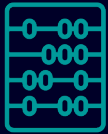
4. EXECUTION OF
A SURVEY WITHIN
SIEMENS



5. IDENTIFICATION OF
RECOMMENDATIONS
AND CONCEPT
PROPOSAL

master thesis

Results



State of Inner Source Adaption

- Attitude differs
- Mostly German users
- Management support



Motivational Aspects for Inner Source

- Benefits Siemens overall
- Innovation & knowledge sharing
- Working across organizational boundaries



Success Factors & Impediments

- Management buy-in
- Mindset change
- Resources & budget

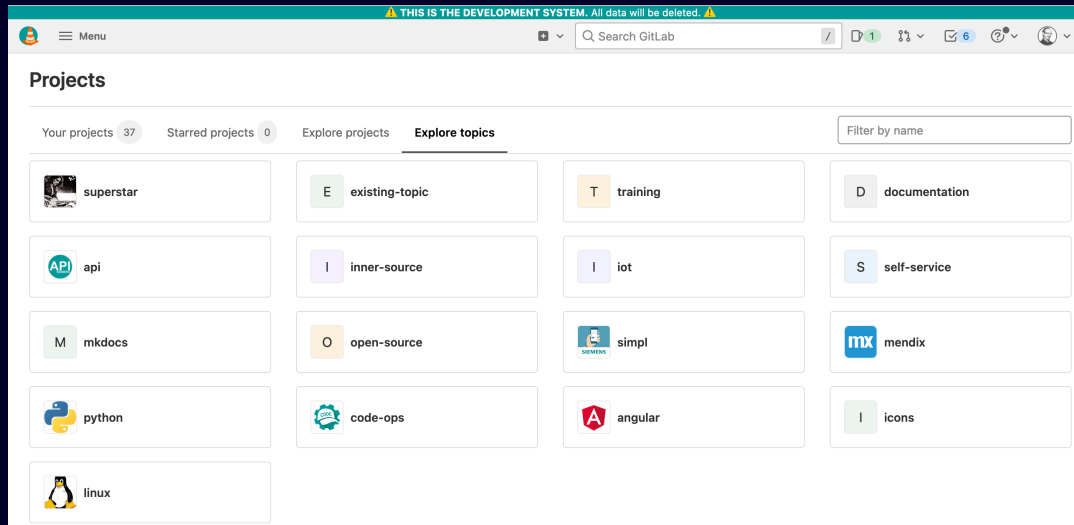


Recommendations

- Top-down strategy
- Marketplace
- Framework for collaboration
- Increasing visibility

Implement recommendations from Sandra's thesis and more

Topic Portal's (contributed to GitLab) will be Available on code.siemens.com next Month!



Inner Source rankings (“Bundesliga Tabelle”):

- Lists all registered reuses
- Sortable to get the top re-used inner source components

SIEMENS Code-Apps

Home Groups Inner Source Billing

Inner Source

All internal projects officially re-used in Siemens products or internal projects.

Name	Link (code.sie...)	Description	Ownership*	Cons...
simpl	simpl/simpl ↗	The home of the simpl.siemens.io documentation and SIMPL high-level planning.	Siemens AG (7092)	123
simpl-siemens-brand	simpl/simpl-siemens-brand ↗	The SIMPL implementation of the New Brand Experience Design based on Bootstrap and Angular.	Siemens Schweiz AG (5280)	33
reusable	siemens/reusable ↗	Reusable project	Siemens AG (7092)	3

< 1 >

Next Topic:

- Autodetect re-use based on BOM scanning on code.siemens.com

**help us to improve
and provide feedback!**



thank you!

**enjoy the conference
and have fun!**

| Contact



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