Expanding Siemens Open Source Engagement

Zephyr Project Meetup

November 20, 2025

Garching, Munich, Germany

SIEMENS

Welcome to Siemens Technology Center in Garching

Marion Deveaud
Research Group Manager
Open Source Embedded Systems

Dominik Tacke
Principal Key Expert
Smart Field Devices

SIEMENS

We create technology to transform the everyday, for everyone

Industry

Infrastructure

Mobility

Healthcare

We are a leading **technology company** focused on industry, infrastructure, mobility, and healthcare. Our purpose is to create technology to transform the everyday, for everyone.

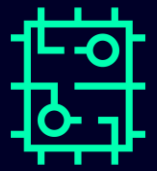
By **combining the real and the digital worlds**, we empower customers to accelerate their digital and sustainability transformations, making factories more efficient, cities more livable, and transportation more sustainable.

A leader in **industrial AI**, we leverage our deep domain know-how to apply AI – including generative AI – to real-world applications, making AI accessible and impactful for customers across diverse industries.

SIEMENS

Siemens Research & Pre-Development

Cybersecurity & Trust



Integrated Circuits & Electronics

Software Systems & Processes

Advanced Manufacturing & Circularity

Data Analytics & Artificial Intelligence

Power Electronics

Sustainable Energy & Infrastructure

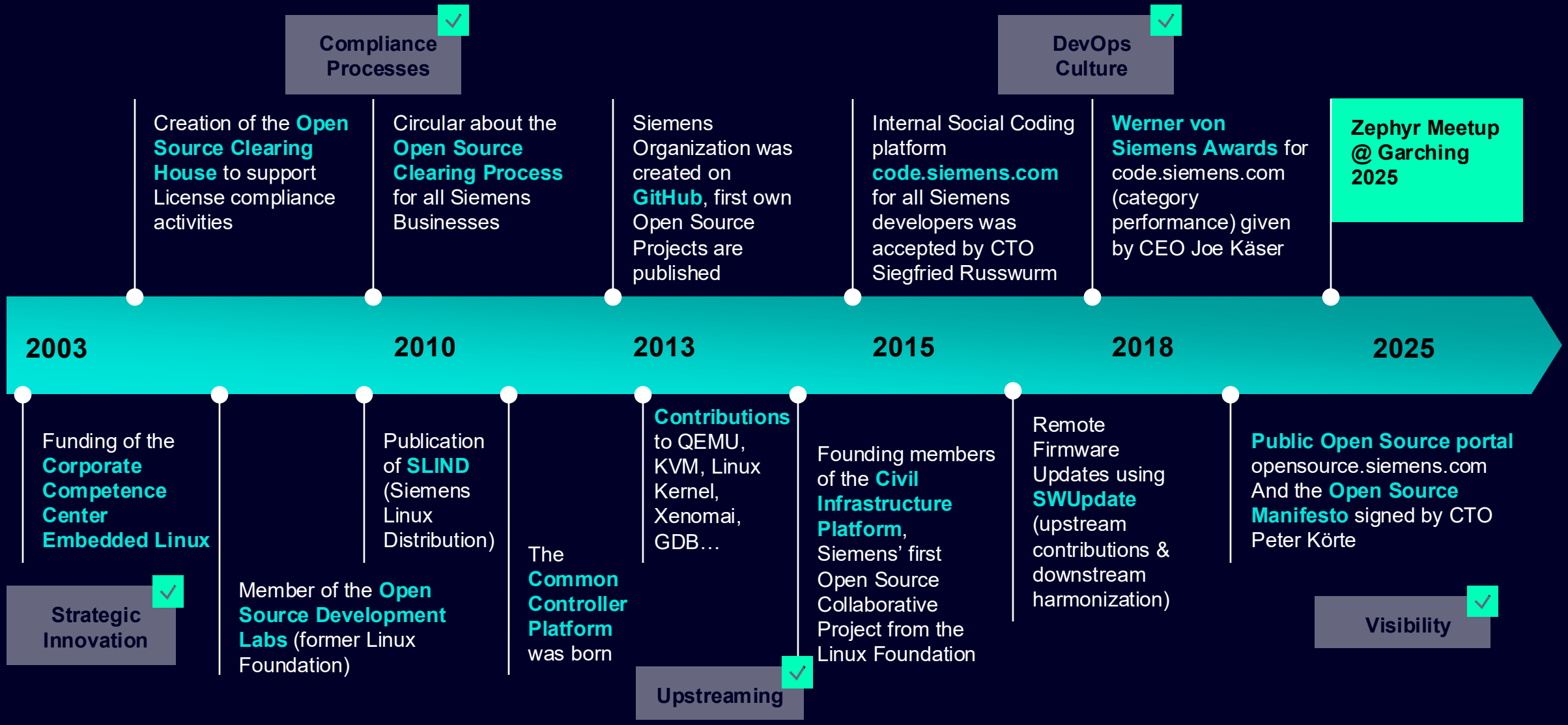
Connectivity & Edge

Future of Automation

Simulation & Digital Twin

SIEMENS

Siemens Open Source History



SIEMENS

Building an Open Source backbone for industrial compute platforms

yocto PROJECT · margo · CIVIL INFRASTRUCTURE PLATFORM · Real-Time LINUX · XENOMAI

UPSTREAM

Support Open Source development through:

- Sponsoring of communities
- Maintenance of OSS projects for Siemens
- Contributions to many Linux projects: (RT-)Linux Kernels, Xenomai, build systems, Debian Linux distribution…

DOWNSTREAM

Harmonize industrial operating system and device management landscape by selecting, evolving and sustaining critical Open Source components.

SIEMENS

Zephyr RTOS at Siemens

Why?

SIEMENS

Bridging the gap between digital and physical world

Monitor

Control

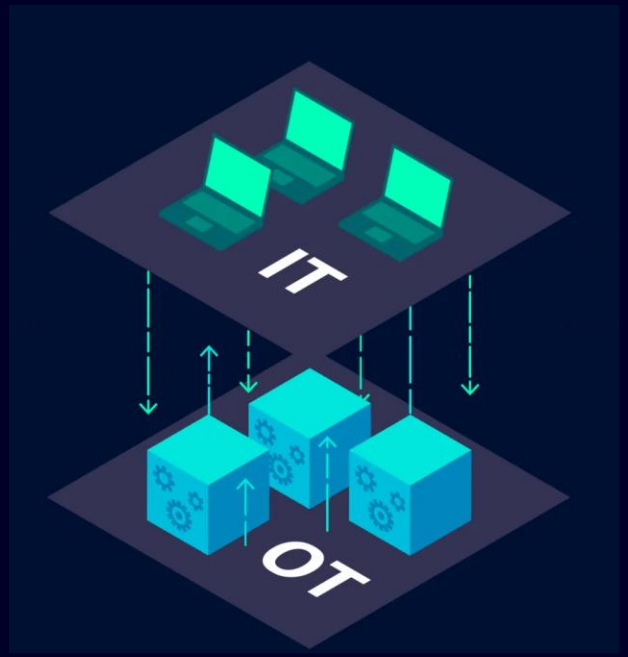
Supervise

Protect

Example of applicable device classes

SIEMENS

Challenges for industrial IoT devices



IoT Networks

Short paced innovation

CySec Focus

…

versus

Automation Pyramid

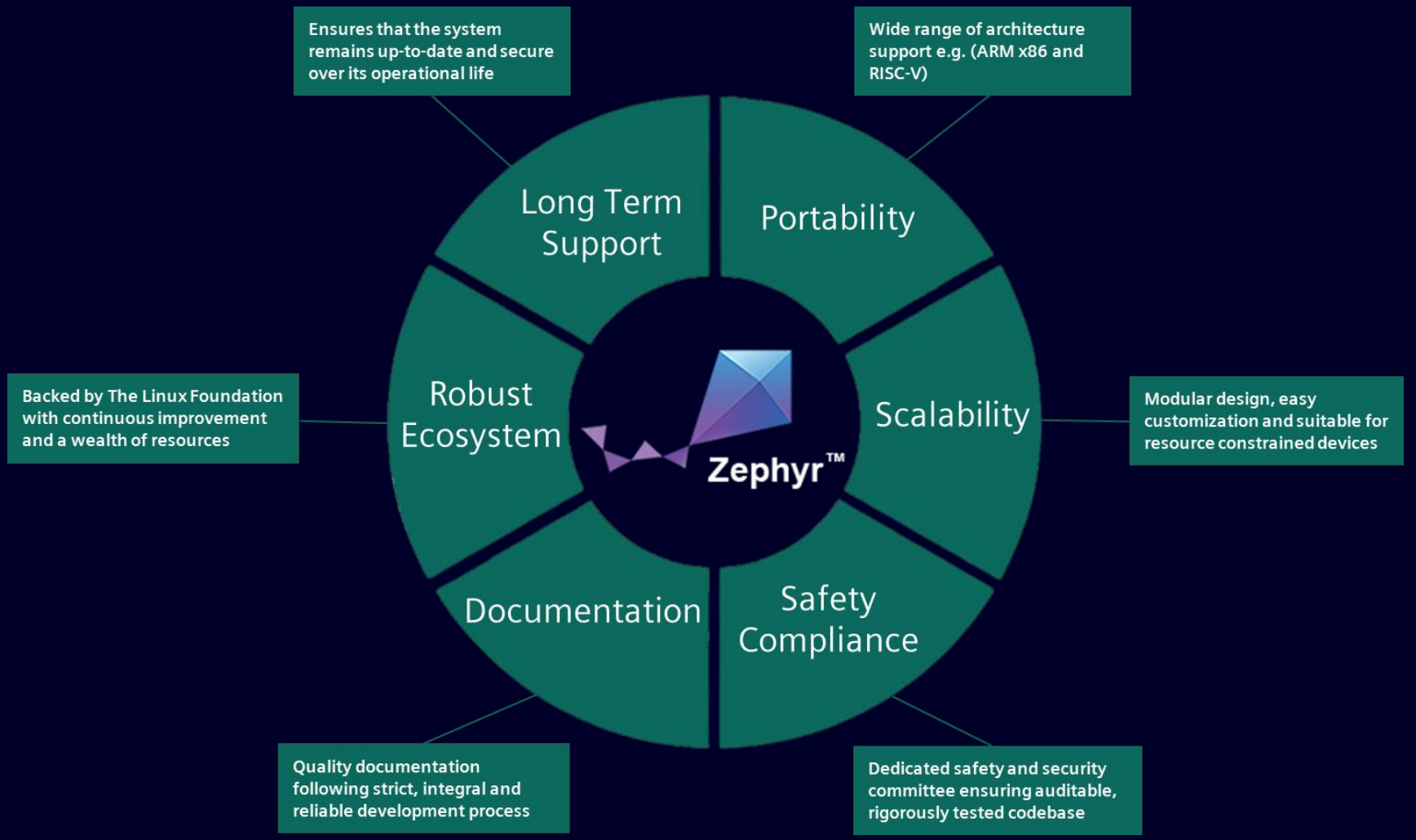
Longevity

Safety & Reliability focus

…

SIEMENS

Advantages having Zephyr as a common base for smart field devices



SIEMENS

Research look on it

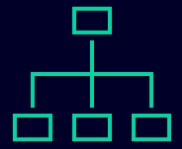
Research and Pre-Development

Portability: Make use of latest SoCs

Impact by academia: Newest tech stacks first on zephyr

Security

Connectivity



Management

AI

SIEMENS

Join us

We are looking constantly for applicants:

- **Interns**
- **Working students**
- **Bachelor / Master thesis**
- **PhD Thesis**

Reach out

Working Student (f/m/d) Distributed Systems

Multiple Locations • Job ID: 484750 • Internal Services

Share

Mandatory Internship - Wireless Networks

Garching, Bavaria, Germany • Job ID: 473288 • Internal Services

Share

Master Thesis: Site-Specific SNR Distribution Estimation Using Gaussian Mixture Models

Garching, Bavaria, Germany • Job ID: 483501 • Internal Services

Share

SIEMENS

Thank You

SIEMENS