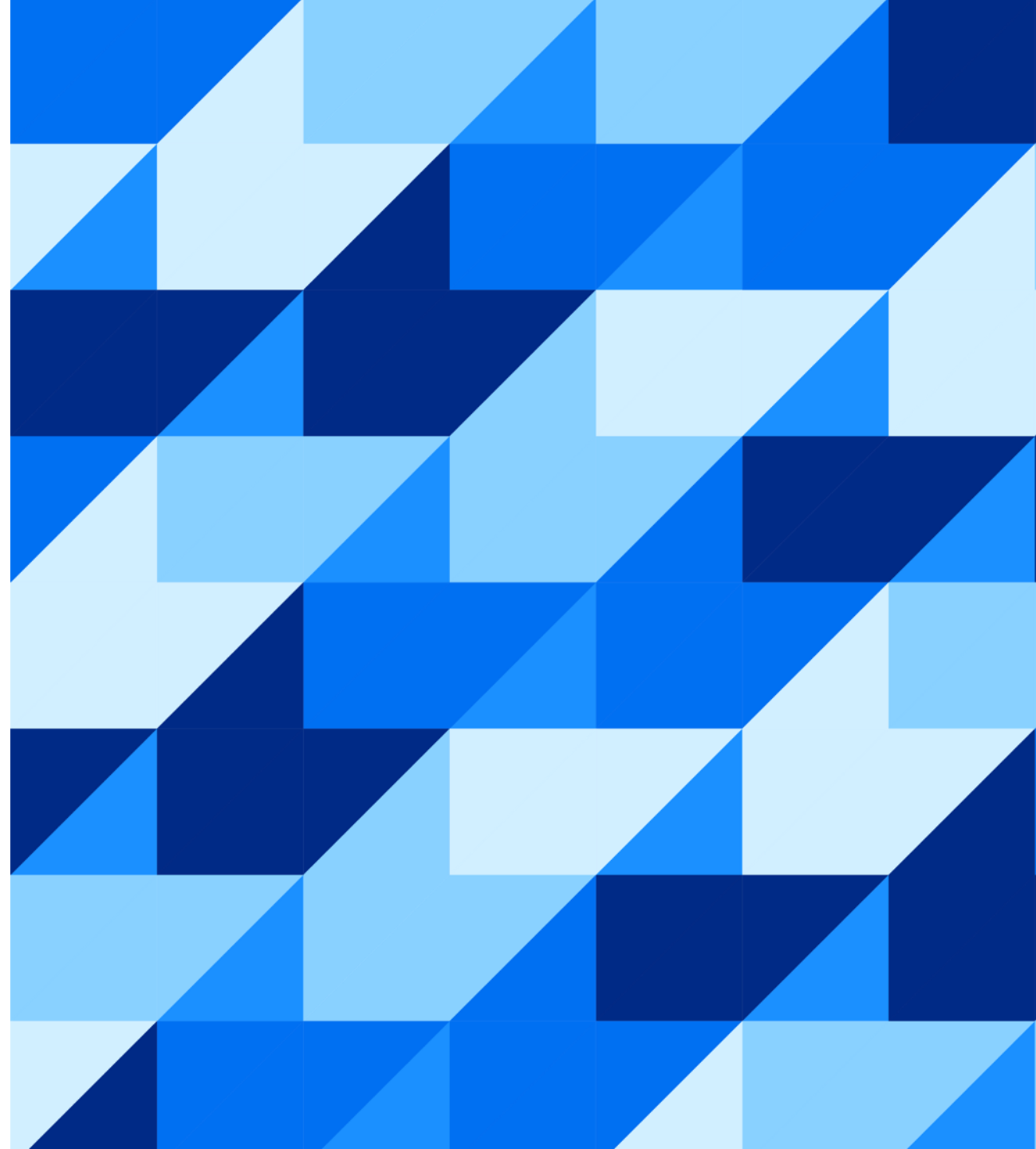




Open Source as strategic company task

Sebastian Wolf, SAP
April 7, 2025

Public



Why is Open Source important?

“Software is eating the world”

Marc Andreessen, VC



Author: JD Lasica, Source: [Flickr](#), Licensed under CC-BY 2.0

“Open Source is eating software”

Unknown

- Cloud-native Computing
- Operating Systems
- Programming Languages
- Development Tools/Libraries
- Artificial Intelligence
- User Interfaces
- Version Control Systems
- Blockchain & Crypto
- Etc.

Open Source in [~97% of all codebases](#)

Advantages and Challenges with Open Source

Advantages

- Lower Costs
- Higher Developer Efficiency
- Innovation
- Competitiveness
- Easier Talent Acquisition
- ...

Challenges

- Legal (e.g. license compliance)
- Security (e.g. faster reaction necessary)
- Operational (Employee trainings, handing of open source consumption and contributions)
- Reputational damage in case of license violations
- ...

Advantages usually outweigh the challenges

Challenges need to be managed properly, risks need to be mitigated

Long-term: Don't only handle compliance aspects, also use open source as revenue stream

The Value of Open Source: Facts and Figures

Open Source at SAP

- Almost all products/services use OSS or depend on it
- Hundreds of own projects, including SapMachine (OpenJDK), Gardener, OpenUI5, but also new initiatives such as ApeiroRA/NeoNephos

Value of Contributions is underestimated

- Polls in the context of Corona-Warn-App: 200% ROI
- Same figure in [study by the World Bank](#)

Value of Open Source overall underestimated

- [Study](#) calculates value of OSS to US-\$ 8.8 trillion
- Companies needed to spend 3,5x more on software without OSS

→ **Organizations of all sizes need to manage OSS efficiently!**

Working Paper 24-038

The Value of Open Source Software

Manuel Hoffmann

Frank Nagle

Yanuo Zhou

How to organize Open Source?

The Open Source Program Office (OSPO) as One-Stop-Shop in the Organization

Center of Competency for an Organization ([TODO Group](#))

- Defines and implements strategy and guidelines for Open Source
- Ensures compliance
- Responsible for internal and external communication, trainings etc.
- Coordinates memberships in OSS Foundations, manages Open Source Community

Setup and Roles

- Virtual setup (Community of Practice) or as dedicated unit reporting to CTO
- Important: Compliance responsibilities must be clear
- Roles: Enabling, consulting, gardening, evangelism/advocacy

Depending on Company Strategy: Different „Maturity Levels“

- Minimum: License compliance, processes for using OSS
- Developed: Own OSS contributions and projects, directed use of OSS
- Strategic: Open Source as business model and ecosystem for own products

The SAP Open Source Program Office (OSPO)

- Founded in 2018
- ~10 employees, part of the Office of the Chief Technology Officer



Strategy and Guidelines

Defines, develops and drives the Open Source Strategy



Compliance & Risk Management

Mitigates risks, manages compliance aspects and challenges with respect to Open Source



Enablement & Support

Trains and supports teams to benefit from Open Source and to be able to contribute



Processes & Tools

Continuously improves SAP's Open Source management, processes and tools



InnerSource

Promotes and simplifies InnerSource and code reuse at SAP



What are SAP's Focus Areas?

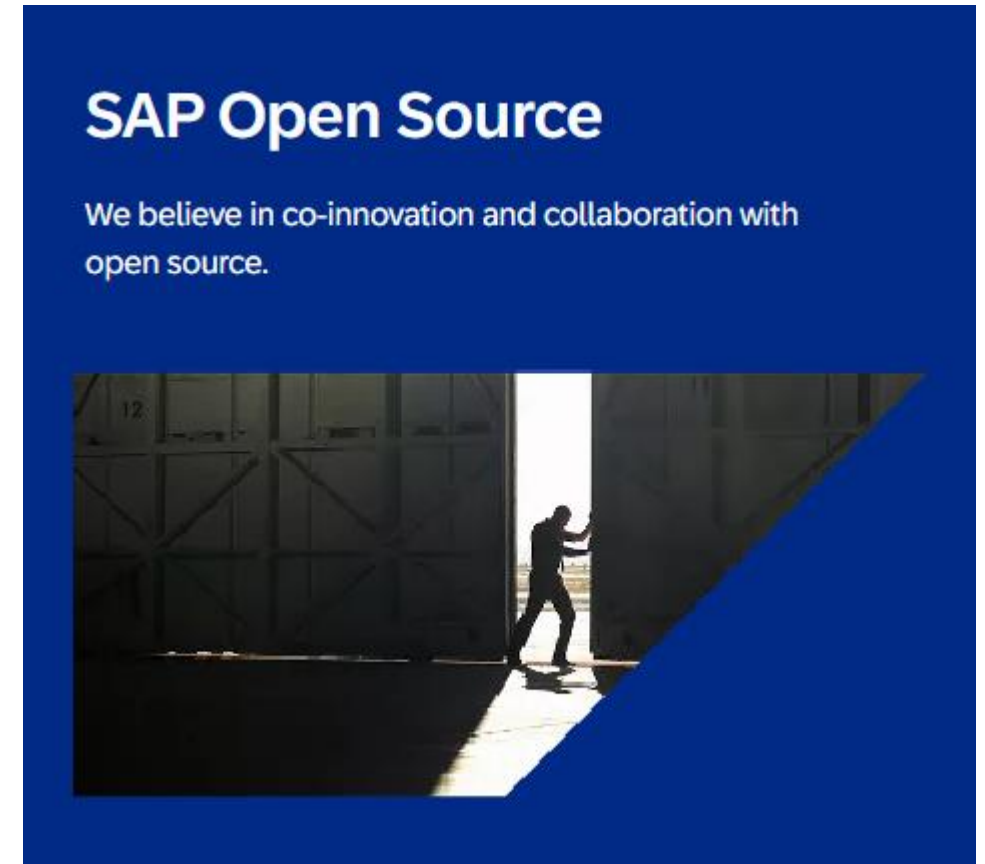
Content Focus: Open Source Projects, Webinars, Podcasts etc.

Combining Contributions with Own Projects

- ~300 Projects on github.com/SAP (z.B. OpenUI5, Styleguides, Luigi etc.)
- Own OpenJDK distribution SapMachine
- Additional large projects like Gardener, Kyma, OCM → ApeiroRA/NeoNephos

Community Commitment

- Member of various [Open Source Foundations](#) (e.g. Eclipse, Linux, CNCF)
- Regular [„The Open Source Way“ Podcasts](#)
- Regular [Webinars around the topic of Open Source](#)
- etc.



Focus on Behavior and Action: The SAP Open Source Manifesto

- [Published](#) in summer 2024
- Represents our guiding principles, ideals and visions for Open Source
- Inspired by the [Mercedes-Benz FOSS Manifesto](#)

Innovation through Collaboration

- Open Source as catalyst for innovation

Empowerment through Openness

- Essential parts of our platform are released as Open Source

Trust and Transparency

- Commitment to contribute to Open Source

Community Engagement

- Respect, open communication, recognition of contributions from anybody



Focus on Innovation: Contributions with Gen AI (e.g. GitHub CoPilot)

OSS Contributions using GenAI were prohibited until recently

- Volatile legal situation (ToU for CoPilot, copyright etc.)
- Ban was applicable for both own projects and contributions to third-party projects
- Considerable negative impact on development teams

Since Summer 2024: GenAI allowed for OSS contributions

- New guidelines for development teams
- No limitations for SAP OSS projects
- Third-party projects need to be analyzed and approved upfront (CLAs, contribution guidelines)
- [Extension of our contribution guidelines](#) for external contributions



Focus on Collaboration: Our contribution to Europe's Digital Sovereignty

- New Open Source Foundation NeoNephos under the umbrella of the Linux Foundation Europe
- Mission: Create a sovereign cloud to edge continuum for Europe
- NeoNephos emerged from the Important Project of Common European Interest for Next Generation Cloud Infrastructure and Services (IPCEI-CIS) initiated by the EU.
- SAP donates several of our flagship open source projects to this foundation

Members

Premier



General



Associate



NeoNephos

Projects



Gardener is a standard Kubernetes extension that implements automated Kubernetes as a Service at scale.



CobaltCore is a reimagined and opinionated OpenStack distribution fully utilizing IronCore. It ensures backward compatibility for heritage workloads.



Katalis bridges Telco and Cloud Provider APIs utilizing Kubernetes to drive orchestration and federation principles.



IronCore provides a reference architecture for compounded software layers for inventorying, managing, and maintaining Baremetal using Kubernetes' cloud-native principles.



Open Component Model (OCM) provides a standard for describing delivery artifacts that can be accessed from many types of component repositories.



Greenhouse is a cloud operations platform designed to streamline and simplify the management of a large-scale, distributed infrastructure.



Open Micro Frontend Platform enables the dynamic integration of services into a unified common interface experience via micro services.



Open Resource Discovery (ORD) is a protocol that allows applications and services to self-describe their exposed resources and capabilities.

Summary

Open Source in Organizations: Here Be Dragons?

Don't be afraid of Open Source!

- First steps might be difficult and costly
- As always: Start small, be pragmatic and learn from others!
- Continuously improve and adapt processes and guidelines

Understand Open Source as holistic Approach

- Using OSS should be accompanied by contributions
- Both usage and contributions require long-term investments

Investments pay off!

- Estimates calculate 200% ROI, our polls confirm that
- Benefits for own organization, customers and other stakeholders



Dragon Bridge, Ljubljana, Own Picture

Thank you.

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