Fostering an Open Source Culture

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Is open source your strategy or culture?
Open source in an enterprise needs to be tied to the core business, otherwise it is not sustainable.
Open Source Culture

- Business Case
- OSPO
- Inner Source
- Advocacy
- OSS Foundations
- Internal Events
- CW^2
Open Source Culture

- Business Case
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- OSPO
- Advocacy
- Inner Source
- OSS Foundations
- Internal Events
Business case

- Red Hat
- Couchbase
- Amazon
- Fruit company
- Intel
Couchbase

- Open core allows **wider developer outreach as opposed to closed-source RBDMS**
- Sustainable business model by offering **HA/DR, RBAC, etc. in enterprise version**
- Developers can add functionality on a pluggable framework
- **Intellectual knowledge (IK)** vs Intellectual Property (IP)

developer.couchbase.com/open-source-projects
Amazon

- **Customer obsession**: Make open source pragmatic for an OSS project
- **Innovation**: Enable seamless integration with AWS in OSS
- Healthy communities: Code, foundations, events, etc.
- **Reduce maintenance overhead**: No internal forks
- Better quality and security: given enough eyeballs, all bugs are shallow

opensource.amazon.com
Fruit company

- **Focus**: Undifferentiated heavy lifting using the best software
- **Choice**: Application/infrastructure portability
- **Influence**: Steer the communities we rely upon
- **Enable**: Address the growing needs of engineering
- **Lead**: Attain and retain best talent in the industry

opensource.<fruitcompany>.com
Intel

- Customer-obsession: Distribute platform value through OSS
- Product portfolio is built on the promise of extensible, ubiquitous choice
- Provides an innovation platform, opening new markets, and driving technology forward
- 20+ years of community work in OSS - "chop wood, carry water"

open.intel.com
Open Source Culture

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Open Source Program Office (OSPO)

- Foster an open source culture in an organization
- Define and implement open source consume and produce policies
- Open source license compliance reviews and oversight
- Guide the organization to work with upstream communities
- Streamline process and provide tools to eliminate friction for OSS
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https://www.linuxfoundation.org/research/a-deep-dive-into-open-source-program-offices
OSPO at Intel

- Part of horizontal Software/OCTO group
- Center of expertise for open source operations and best practices
  - Provide training and resources to understand benefits of OSS
  - Evangelize community expectations and norms
  - Educate business leaders on strategic value of open source
- Influence and innovate on adjacent processes (e.g., security policies) that enable developers to fully participate in open ecosystem
What is InnerSource?

Apply open source principles and best practices to closed source software
Why Adopt an InnerSource Strategy?

**Discovery**

By maximizing visibility of software across the company, we can discover solutions that meet our needs rather than re-inventing in siloed departments.

**Collaboration**

Using open-source methodologies and GitHub features, individuals from far-flung teams can provide code improvements (by PR) for any project in the company.

**Improved Quality**

Projects that survive and thrive in the open are ones that not only solve problems, but do so with high quality, best testing and security practices, and excellent documentation.

**Foundation**

InnerSource establishes a cultural and infrastructural foundation for “how we do code at Intel” enabling us to build new corporate-wide capabilities (like CI and DevOps).

https://about.gitlab.com/topics/version-control/what-is-innersource
Intel’s Developer Platform Journey

**FUTURE**

**Developer Velocity in future**
Moving to a unification of CI principles, CI/CD processes and pipeline components through innerSource collaborations

**PRESENT**

**Possibilities Expanded present**
With a single Source Control System, we could better manage governance, security and collaboration while improving repository health and reuse

**PAST**

Migrated tens of thousands of repos from dozens of different SCM to a single source control architecture

The Beginnings of the IDP
Through unified software and hardware solution around CI/CD, we envision the beginnings of an Internal Development Platform across Intel

Unified CI/CD

- Build
- Scan
- Test
- SBOM
- Coverage
- Artifacts
- Deploy
- Metrics

InnerSource

- Discovery
- Reusability
- Collaboration
- Maintainability
- Security

1Source - Foundation

Intel's Developer Platform Journey

People driven
Process oriented
Tool supported

Intel's Developer Platform Journey

Intel's Developer Platform Journey
Benefits of InnerSource at Intel

- Make it easy to find and reuse code across teams
  - Consolidate repositories into a single source control system across all of Intel
  - Remove org silos, provide global read access to all software engineers across all repos
- Establish governance and consistent naming conventions across the company
- Improve corporate-wide security posture
- Develop synergies and improve repository and project health
Open Source Culture
External OSS Events

**WHY?**
- Visible presence
- Hallway track
- Participate in community/project leadership
- Showcase partners and customers
- Expand industry connections
- Leadership around DEI
- Recruiting

**WHAT?**
- Speakers
- Booths
- Demos
- Sponsorships
- Ancillary events
Benefits of Internal Events

- Improve discovery of efforts within the company
- Enable collaboration of similar engineering efforts
- Foster interpersonal relationship
- Internal promotion of your engineering talent/hiring
- Help curate external speakers
Internal Event Examples

- Kubernetes Summit
- Inner Source Summit
- Open Ecosystem Summit
Celebrating Intel’s Open Ecosystem and worldwide open development work.

Executive Keynote & Panel

Technical Talks
- AI & Machine Learning
- Security
- Cloud Native
- Top of Stack
- IoT/Edge
- RISC-V
- OS, FW, & Tools
- Sustainability
- Open Source Web Technologies

2023 OPEN ECOSYSTEM SUMMIT

28 February (Americas)
1 March (EMEA)
2 March (Asia)

Register Now
Internal Hackathons

- Increase contributors to your project
- Community-powered innovation
- Get creative solutions to your problems
- Employees get to learn a new skill/language
- Leverage specialized skill sets in the company
- Pick a day, identify repos, create a hashtag, build a dashboard
Open Source Culture
Open Source Foundations

- Advance open ecosystems
- Be part of defining and maintaining technologies and standards
- Participate in shaping future of technology
- Engage and collaborate with industry peers
- Contribute critical projects to a vendor-agnostic body
- Leadership positions bring more credibility to your organization
- Amplify your brand and people across the industry
OSS Foundations and Standards at Intel

700+ foundations and standard bodies
Open Source Advocates/Champions

- Internal evangelists in different Business Units (BU)
- Help ensure BU needs are met by the policies
- Raise awareness and educate OSS policies within the BU
- Policies roll out and provide diverse feedback
- Prepare better business case from BU -> OSPO
Before enlightenment, chop wood, carry water. After enlightenment, chop wood, carry water.

-Zen proverb
CW^2 Work

- Non-glorified work
- Help behind the scene
- Countless hours
- For example:
  - Code reviews and debugging
  - SIG lead
  - Hosting and building community meetups
  - Onboard new members
  - Reviewing conference talks
Intel contributes to foundations & standard bodies
Select examples* of foundations & standard bodies, and Intel leadership positions:

Cathy Zhang
Technical Oversight Committee, Cloud Native Computing Foundation (CNCF)

Dan Middleton
Technical Advisory Council Chair, Confidential Computing Consortium

Dan Williams
Technical Advisory Board Chair, Linux Foundation

Christopher “CRob” Robinson
Technical Advisory Committee Open Source Security Foundation (OpenSSF)

Bruce Richardson
Technical Board, Data Plane Development Kit

Ron Perez
Governing Board Vice-Chair, Confidential Computing Consortium

Melissa Evers
Board of Directors, and Research Advisory Board

Linux Foundation

Al Elizondo
Technical Advisory Council, LF Edge

Alexander “Sasha” Kanevskiy
CNCF Technical Advisory Group Runtime Tech Lead

Marlow Weston
CNCF Technical Advisory Group Environmental Sustainability Co-Chair

Asim Hussain
Chairperson & Executive Director, Green Software Foundation

Arun Gupta
CNCF Governing Board Chair, OpenSSF Governing Board Member

*This is not a complete list
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