The Eclipse Foundation

Enabling Industry Collaboration and Open Innovation

eclipse.org
April 2020
Agenda

> Why Open Source?
> Why Participate?
> About the Eclipse Foundation
> Our Services
> Working Groups
> Research Programs
> The Opportunity
Open source participation is surging
80-90% Open source makes up 80-90% of applications

100M GitHub hosts 100M repositories

40M GitHub users

Sources: Forrester, GitHub
55%  
% companies leverage open source in production

65%  
% firms contributing to open source projects

100%  
% productivity improvement seen by firms contributing to open source

Sources: Black Duck, Harvard Business School
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Demonstrate good corporate citizenship
Accelerate innovation
Participate in open collaboration
Safeguard investments
Mitigate business risk
Retain and recruit top talent
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Community driven.
Code first.
Commercial grade.
## Our Unique Approach

<table>
<thead>
<tr>
<th>Feature</th>
<th>GitHub</th>
<th>Single-Vendor Open Source</th>
<th>Eclipse Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thriving developer community</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td><strong>High quality code</strong> that solves complex problems</td>
<td>✔️</td>
<td>?</td>
<td>✔️</td>
</tr>
<tr>
<td>Ecosystem development and marketing services to drive adoption and monetization</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td><strong>Predictable processes and guidance</strong> to deliver large-scale innovation on a regular cadence</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td><strong>Vendor-neutral governance</strong> model to support industry-wide collaboration</td>
<td>✔️</td>
<td>✔️</td>
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<td><strong>Business-friendly IP and licensing</strong> services to enable commercialization</td>
<td>✔️</td>
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<td>✔️</td>
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</table>
### Strategic Focus Areas

<table>
<thead>
<tr>
<th>Cloud Native Java</th>
<th>IoT &amp; Edge</th>
<th>Automotive</th>
<th>Tools</th>
</tr>
</thead>
</table>

### Eclipse Foundation Services

<table>
<thead>
<tr>
<th>Governance &amp; Processes</th>
<th>Ecosystem Development &amp; Marketing</th>
<th>IP Management &amp; Licensing</th>
<th>Infrastructure</th>
</tr>
</thead>
</table>

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We provide a collaborative environment for the world's leading Java ecosystem players to advance open source enterprise Java technologies for the cloud.

We enable industry leaders to collaborate on an end-to-end IoT architecture that is secure, flexible, and fully based on open source and open standards.

We provide leading automotive OEMs, their suppliers, and partners with a sustainable, transparent, and vendor-neutral platform to collaborate on open technologies and standards.

The Eclipse IDE is the critical development environment for more than 6 million active users. Our community is innovating on the next generation of cloud native developer tools.
Eclipse Foundation Core Services

- Governance & Processes
- Ecosystem Development & Marketing
- IP Management & Licensing
- Infrastructure
### The Eclipse Foundation - By the Numbers

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects</td>
<td>375+</td>
</tr>
<tr>
<td>Members</td>
<td>300+</td>
</tr>
<tr>
<td>Committers</td>
<td>1600+</td>
</tr>
<tr>
<td>Lines of Code</td>
<td>195M+</td>
</tr>
<tr>
<td>Staff Members</td>
<td>30</td>
</tr>
<tr>
<td>Working Groups</td>
<td>14</td>
</tr>
</tbody>
</table>
The Growing Eclipse Foundation Member Community
Home to the Eclipse IDE

The Leading Open Platform for Professional Developers

- Polyglot language support
- Improved performance
- Proven extensibility
- Latest Java™ versions
- Language Server support
- Quarterly releases
Governance & Processes

> Community of Practices: Eclipse Development Process

> Vendor-neutral governance structure
  • Legal entity, bylaws, member agreement, anti-trust policies

> Well defined project lifecycle

> Technical decisions made by project leadership
Infrastructure

> Professionally managed open source forge
  
  • Git, Gerrit, Jenkins, download servers, website hosting
  
  • Scalable and repeatable build service
  
  • SLA for 99.98% uptime

> Flexibility to use Github
IP Management & Licensing

- Management of Committer Agreement and CLA
  - Provenance and License Compatibility (no GPL or AGPL)
- Trademark stewardship for projects, working groups, and industry initiatives
Ecosystem Development & Marketing

> Business development staff to assist with recruitment
> Professional marketing staff
> Event planners
Our Impact: Open Innovation at Industrial Scale

**Governance Layer**
*The Eclipse Foundation* provides an open, vendor-neutral development platform to enable collaboration

**Collaboration Layer**
*Technology Producers* jointly define roadmap and build core capabilities

**Competition Layer**
*Commercial Adopters* focus resources on rapidly building differentiating features

$10 billion of shared investment to date
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A Sustainable, Business-Friendly Ecosystem

Projects & Working Groups

Value Creation

Business Models
Eclipse Foundation Working Groups

> Provide an open and vendor-neutral governance framework for collaborative development
> Enable industry collaboration and coordination across many open source projects
> Extend the best practices of the Eclipse Development Process
> Support the shared development of requirements, specifications, marketing strategy, test environments, security policies, etc.
Key Functions of Working Groups

> Requirements gathering across open source projects and organizations
> Creating and committing to long term multi-project roadmaps
> Architectural discussions and collaboration across open source projects
> Testing and certification of industry platforms
> Funding of joint development
> Ecosystem and community development
Working Groups at a Glance
Eclipse Cloud Development Tools Working Group

The Eclipse Cloud Development (ECD) Tools Working Group will drive the evolution and broad adoption of de facto standards for cloud development tools, including language support, extensions, developer workspace definition and more.

Eclipse Cloud Development Working Group Projects:
Edge Native Working Group

The Eclipse Edge Native Working Group drives the evolution and broad adoption of Edge Computing-related technologies.

Edge Native Working Group Projects:
Eclipse IoT Working Group

The Eclipse IoT Working Group provides the open technology needed to build IoT Devices, Edge Gateways and Cloud Platforms.

IoT Projects:
Jakarta EE Working Group

Powered by participation, Jakarta EE is focused on enabling community-driven collaboration and open innovation for the cloud.

- Builds the community
- Approves Specifications
- Drives the Jakarta EE brand
- Establishes the technical roadmap
- Ensures compatibility
OpenADx Working Group

The OpenADx Working Group is centered around the autonomous driving toolchain and aims to bring transparency and better integration capabilities into the autonomous driving tool space.

OpenADx Working Group Projects:

- Eclipse Cloe
- Eclipse Cyclone DDS
- icyryx
openGENESIS Working Group

The openGENESIS Working Group aims to foster, support and provide knowledge, methods, and tools for the assessment of AI used in autonomous driving applications.

OpenGENESIS Working Group Projects are to be determined.
**OpenHW Group**

The OpenHW Group fosters collaboration among global hardware and software designers in the development of open source cores, related IP, tools, and software.

**OpenHW Group Projects:**

| CORE-V-CORES | CORE-V-DOCS | CORE-V-VERIF | BTA RISC-V VM |
openMDM Working Group

The openMDM® Working Group fosters and supports an open ecosystem providing tools and systems, qualification kits and adapters for standardized and vendor-neutral management of measurement data.

openMDM Working Group Project:

MDM|BL
openMobility Working Group

The openMobility Working Group shapes and fosters the development of required software tools and frameworks based on validated mobility models in order to provide a common platform for industrial applications and academic research.

openMobility Working Group Project:

SUMO
openPASS Working Group

The Eclipse openPASS Working Group specifies and builds core frameworks and modules for the prospective evaluation of advanced driver assistance systems and partially automated driving functions with respect to traffic safety.

openPASS Working Group Project:

sim@openPASS
Science Working Group

The Eclipse Science Working Group works to solve the problems of making science software inter-operable and interchangeable.

Science Working Group Projects:

- Eclipse
- ChemClipse
- XACC
- ICE
- Apogy
- DAWN

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Sparkplug Working Group

The Eclipse Sparkplug Working Group seeks to drive the evolution and broad adoption of the Eclipse Sparkplug protocol and related technologies that enable the creation of open, collaborative, and interoperable Industrial IoT (IIoT) solutions.

Sparkplug Working Group Project:
Tangle EE Working Group

Tangle EE Working Group will drive the adoption of IOTA's underlying network, the Tangle, and explore key IOTA use case areas including decentralized identity, data integrity and feeless payments.

Tangle EE Working Group Projects are to be determined.
Structure of Eclipse Working Groups

Eclipse Foundation Members can join an Eclipse Working Group.

Eclipse Working Groups have at least two tiers of members:

- Steering Committee members
- Participant Members

Eclipse Working Group Steering Committee:

- Approve Working Group Charter
- Set Working Group Budget and Fees
- Establish Working Group Committees: Requirements, Architecture, etc.
Starting an Eclipse Working Group

- Define vision and scope
- Create a Working Group Charter
- Secure initial list of participants
- Establish initial budget and fees
Resources Required to Get Started

> Management and leadership

> IT Services to create and maintain website

> Community management services to assist with outreach and events

> Project management to assist with work group meetings, onboard new members, facilitate collaboration

> Ecosystem development to recruit new members

> Typical cost $200K-$300K/year but will grow depending on services required

> Funding driven by working group membership fees
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The Eclipse Foundation as a Research Catalyst

- **Products & Expertise**
  - Large Organization
  - SME

- **Open Source**
  - Inject Requirements
  - Industrialization
  - Prototypes

- **Technology Transfer**
  - Researchers

- **Innovation**
Research Projects: Funding Organizations
Research Projects

- Arrowhead Tools
- BaSys4
- BRAIN-IoT
- FABOS
- Panorama
- PDP4E
- RobMoSys
- SmartCLIDE
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Join Us!

- Become an Eclipse Foundation Member
- Join an Eclipse Foundation Working Group
- Participate in open collaboration and innovation
To learn more, or to participate visit:

eclipse.org

or connect with us at:

membership@eclipse.org
Thank you!