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If you use these materials, we’d love if you’d collaborate with us to improve this (and other) resources.

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Session learning objectives

At the conclusion of this experience, participants will be able to:

▸ Define a "healthy" open source software project
▸ Explain various dimensions of open source project health
▸ Identify numerous considerations they might make when determining the relative health of an open source project

Target delivery time: 45 minutes
Target audience persona

Intermediate learner

We’ve built this course for the intermediate learner, someone with prior experience working on open source projects. This learner has likely spent some time exploring open source communities and is seeking advice on how to select a project in which to invest more deeply.

This learner might be asking questions like:

- How can we tell if a project is going to "stick around"?
- How do we identify a project in which we should get involved?
- What makes open source projects sustainable?
- Why do some open source projects succeed when others don’t?

To answer questions like these, this course explores various considerations one might make when assessing the relative "health" of an open source project.
Assessing the health of an open source project

Key considerations

Dave Neary - Community Architect
Open Source Program Office - Red Hat
Why care about project health?

Assess risk

Evaluate sustainability
How have we measured project health?

**Project A**
- 5,000 downloads per week
- 25 active contributors
- 30 monthly social media posts
- 10 releases per year

Healthy?

**Project B**
- 50 merged code commits per month
- 30 issues closed each week
- 20 messages on mailing list per week
- 2,000 daily website views

Healthy?
More effective assessment of open source project health

- A standardized set of qualities and associated metrics
- Attention to project culture and dynamics (not just "outputs")
- Consideration of project's overall life cycle and ecosystem
Define a "healthy" open source project.

Explore key considerations you can make when determining the health of an open source project.
Defining project health
A healthy open source project is one that demonstrates open practices, uses open infrastructure, and cultivates an open culture with the goal of becoming more sustainable.
Dimensions of project health

1. Maturity
   - Project life cycle
   - Goals and roadmap
   - Ecosystem

2. Leadership & Governance
   - Governance
   - Project leaders
   - Release manager and process

3. Community Architecture
   - Infrastructure
   - Onboarding processes
   - Internal communication

4. Audience & Awareness
   - Target audience
   - Outreach
   - Awareness

Source: Measuring open source project health
Key considerations
Maturity
Project life cycle

Understanding the project’s place in that life cycle will help you contextualize your assessment. Monitoring contributor trends might reveal critical information about a project’s short-term or long-term future.

When was the project founded, and how old is it?

How often do new contributors join the project?

How frequently does the project accept new contributions?

Source: Measuring open source project health
Healthy open source projects have publicly shared goals and clear processes for reaching those goals. Goals are attainable and clear deadlines exist for tracking progress toward those goals.

**Goals and roadmap**

- Are project goals clear and public?
- Does the project have a clearly communicated process, and is it also public?
- Do project participants have a history of meeting project deadlines?

Source: Measuring open source project health
Ecosystem

Projects frequently depend on one another. In some cases, similar projects can be competing to reach the same target audiences. A community's interactions with other projects in its ecosystem reflect the project's health.

What are the project’s dependencies and what projects depend on it?

Is the community sufficiently integrated into the overall project ecosystem, target industry, and organizations that may use the project?

Do members of that ecosystem view this project favorably?

Source: Measuring open source project health
Leadership & Governance
Healthy software projects entail thoroughly documented (and continuously evolving) governance models.

What is the project’s governance model, and is it publicly documented?

Does the model account for both technical and business concerns?

How do project members make and enforce decisions?
In healthy projects, leaders are visible and easily identifiable. Leaders often coordinate project work and establish a project’s vision, and usually have extensive knowledge of project history.

Who are the project leaders and what are their motivations and intentions for maintaining the project?

What are the project leaders’ responsibilities, and are they focused more on engineering, marketing, or some combination of both?

Source: Measuring open source project health
In healthy projects, members have formally documented release processes and identified release managers to supervise those processes.

Source: Measuring open source project health
Community Architecture
The most successful projects are those that have the tools they need to do their work—and keep those tools in good working order.

Does the project have the necessary infrastructure?

Are infrastructural deficits producing bottlenecks for the project?

Who is responsible for maintaining project infrastructure?

Is the project missing useful infrastructural components, and if so, does the community plan to obtain these components?

Source: Measuring open source project health
New contributors are vital to project innovation and success. Healthy projects feature clear, welcoming onboarding materials that assist newcomers who wish to participate in the project.

Does documentation explain precisely what the project is and how to use it?

Does documentation help new contributors get involved in the project?

Does the project accept contributions of more than one type (e.g., development, marketing, project management, event planning)?

Source: Measuring open source project health
Internal communication

Issues affecting community health often emerge first in internal channels—such as mailing lists or chat platforms—where contributors and users interact.

Does the project have sufficient communication channels?

Can people find and use these channels effectively?

Are project communications and internal decision-making conversations public and transparent?

Do project members regularly respond to/engage with users in these channels?

Are channels regularly moderated?

Is channel communication governed by a code of conduct?

Source: Measuring open source project health
Awareness & Audience
Target audience

Well-run open source projects demonstrate a clear understanding of the users (and contributors) they hope to assist and engage.

Has the project clearly identified a target audience, and who is it?

Is the target audience the most appropriate one for this project?

Can the target audience adequately use, build, and contribute to the project?

Source: Measuring open source project health
Outreach

Outreach is the process of actively promoting a project and making others aware of it. Healthy projects have adequate energy and resources devoted to outreach.

Does the community use clear and consistent methods for outreach? If not, does it plan to establish a set of outreach methods?

Are people writing, talking about, and promoting this project and its technologies?

Source: Measuring open source project health
The project’s target audience must be aware of the project and understand the problems it solves.

Is the target audience aware of the project?

Can people in the target audience explain the project’s uses, features, and advantages over alternatives?

Do others working in an industry that would benefit from the project know the project exists?

Source: Measuring open source project health
A healthy open source project is one that demonstrates open practices, uses open infrastructure, and cultivates an open culture with the goal of becoming more sustainable.

Source: Measuring open source project health
Community Health Analytics Open Source Software
Creating analytics and metrics to help define community health

- **Common Metrics Focus**
  The what, when, and who of contributions

- **Diversity and Inclusion Areas**
  Events, governance, leadership, documentation, burnout

- **Evolution Areas**
  Code development in software lifecycle

- **Risk Areas**
  Business, code quality, licensing & security

- **Value Areas**
  Monetarily, job prospects, speed, trust

- **Learn more about CHA OSS**
Measuring open source project health

A healthy open source project is one that demonstrates open practices, uses open infrastructure, and cultivates an open culture with the goal of becoming more sustainable. This document outlines considerations you should make when assessing the health of an open source project.

**Project life cycle**
An open source project’s life cycle affects many other considerations about a project’s health. Understanding the project’s place in that life cycle will help you contextualize your assessment (e.g., single-person governance can be common when a project is young—but less effective when a project is more mature). Monitoring contributor trends might reveal critical information about a project’s short-term or long-term future.

- When was the project founded, and how old is it?
- How often do new contributors join the project?
- How frequently does the project accept new contributions?

**Target audience**
Well-run open source projects demonstrate a clear understanding of the users (and contributors) they hope to assist and engage.

- Has the project clearly identified a target audience, and who is it?
- Is the target audience the most appropriate one for this project?
- Does the target audience engage with competing or complementary projects?

**Governance**
Governance refers to the rules and customs that define who does what in an open source project and how they are supposed to do it. Healthy projects entail thoroughly documented (and continuously maintained) governance models.
Thank you

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