Metrics for OSS Event Organizers

CHAOSS App Ecosystem Working Group

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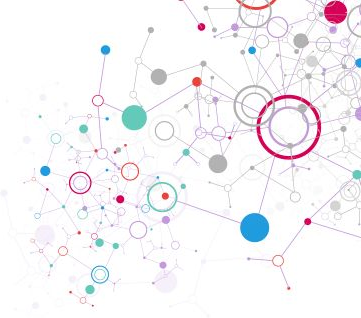
Introduction

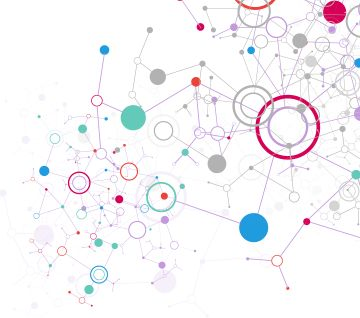


Open source communities often depend on events like hackathons, meetups, conferences, and user group meetings to grow their communities and work on important project updates.

The set of metrics presented in this slide deck is meant to help communities, and particularly **event organizers**, understand more about their events and participants.

Developing metrics strategies will help event organizers prioritize resources and improve their event's offerings, while contributing to the health of their community.

Introduction



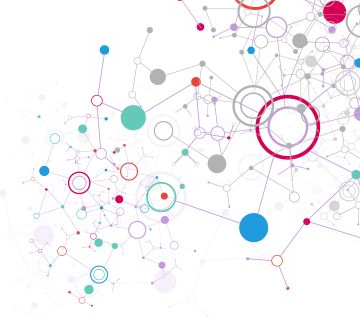
To ensure the usefulness of what we measure in making informed decisions, we used the Goal-Question-Metric (GQM) approach to gathering data.

- Goals represent the community's strategic objectives.
- Questions help determine whether we are achieving the goal.
- Metrics provide quantitative information that helps answer the questions.

The goals were collected and curated from community members' experience in major open source projects like GNOME and KDE.

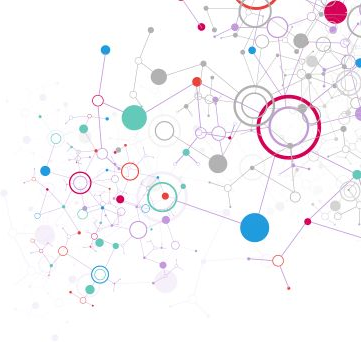
Although each community is different, we think most of these goals are relevant to and will help a wide variety of open source projects.

Overview of this slide deck



On the following slides, we list metrics to support OSS Event Organizers with the following goals:

- Goal 1: Retaining and Attracting Contributors
- Goal 2: Have Engaging Events
- Goal 3: Understanding Company Contributions to Event
- Goal 4: Ensure Events Contribute Towards Diversity and Skill Gaps in the Community



Goal 1: Retaining and Attracting Contributors

OSS Event Organizers create events in service of an OSS project or ecosystem community. Events bring together the community members, offer a space to collaborate more directly, create stronger ties by knowing each other, and provide an inroad for new contributors to get started with the project. The first goal therefore is to retain existing contributors of the project and to attract new contributors to the project.

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Question 1.1: How long do new people who attend events stay with the community?

- **Metric 1.1.1:** Length of time of attendee's membership
  - Data: Correlate registrations with existing data on participation, e.g. for GNOME, Foundation membership renewal.
  - Data: Compare membership length for attendees vs. non-attendees.
- **Metric 1.1.2:** Time since first contribution for event attendees
  - Data: Cross-reference GitLab or GitHub contribution data with event attendees to see when someone attending an event first contributed.
- **Metric 1.1.3:** Time since event to last contribution (retrospective metric)
  - Data: Cross-reference GitLab or GitHub contribution data with event attendees to see when someone attending an event last contributed.

Question 1.2: Given a person who is new to the project and attends an event, how likely are they to become more involved and stay longer in the project?

- **Metric 1.2.1:** Statistical test for comparing two groups (maybe T-Test?)
  - Data: (1) baseline of how long people stay in the community if they didn't attend an event. (2) how long do people stay in the community if they attended an event. Data might come from surveying community members or asking for community handles during event registration.
  - Survival Analysis: After how many weeks of first contribution, how many people continue to be active in the community?
- **Metric 1.2.2:** Number of people who contribute for the first time during an event.
  - Data: Ask in a post-conference survey or maybe ask BoFs to record newcomers.
  - Data: Ask in a community survey how they made their first contribution.
  - Data: Applications for membership filled in after events.

Question 1.3: What role do events have in engaging contributors?

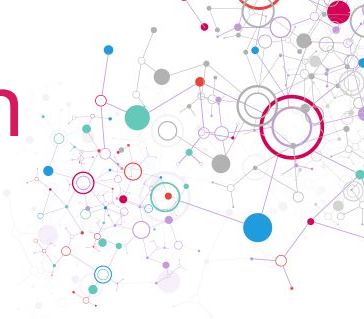
Operationalized as: What is the level of contribution of people over time before or after attending an event? Do we see a spike of contributions from attendee members after an event? OR Did contributions as a whole spike after an event? (Keep in mind other factors for spikes, e.g., release schedule)

- **Metric 1.3.1:** Number of contributions of attendees
  - Data: Cross-reference the list of attendees with project contributors. Requires a metric platform that tracks contributions.
  - NOTE: Need to make sure that we capture all types of contributions, not just software development contributions.
- **Metric 1.3.2:** Contributions to a particular segment of a project, for example during hackathons and BoFs (e.g. Docs hackathon. Were there more Docs contributions after the event?)
  - Data: Have project leads measure contributions before and after the event.

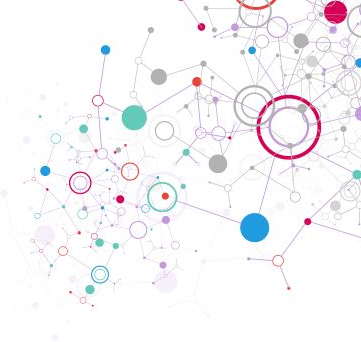
Question 1.4: How many attendees are also contributors to the project?

- **Metric 1.4.1:** Number of attendees who contributed to the project before the event
  - Data: Ask in registration form if they are contributors.
  - Data: Cross-reference the list of attendees with project contributors. Requires a metric platform that tracks contributions.

Question 1.5: How do the people at an event feel about the project?



- **Metric 1.5.1:** Count emojis (positive and negative) as a way to gauge sentiment.
  - Data: Ask participants to submit an emoji response to the question how they felt about the project.
- **Metric 1.5.2:** Sentiment analysis around event hashtags on social media
  - Data: Social media feed for the event hashtag



Goal 2: Have Engaging Events

Events bring together community members and a measure of their success is how much the participants engage with each other. Event engagements can take a variety of shapes, depending on the format of the event. The extent to which the audience are engaged determines the degree of success of that event, hence, a set of metrics has been put together in this section to measure engagement success.

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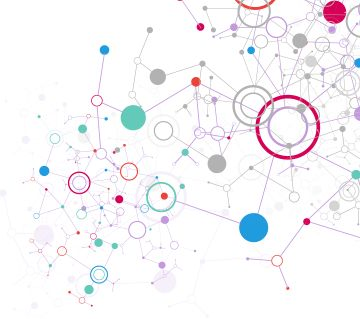
Question 2.1: How engaged was the audience during talks?

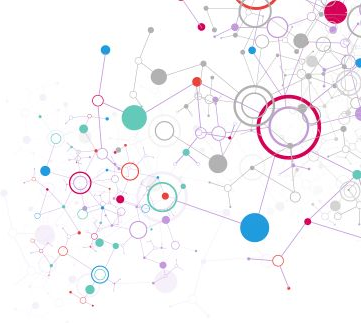


- **Metric 2.1.1:** Number of messages on conference specific messaging platform
  - Data: Conference specific messages platform, e.g., Slack, Matrix.
- **Metric 2.1.2:** How many people do you kick out of the room because they were still engaged from the previous talk?
- **Metric 2.1.3:** How many extra people are there beyond seating capacity?

Question 2.2: Social media activity around the event?

- **Metric 2.2.1:** Views on YouTube or other social video platform
- **Metric 2.2.2:** Number of messages on social media (e.g., Twitter, LinkedIn, Facebook) with event conference hashtag
  - Data: Social media feed for the event hashtag.
- **Metric 2.2.3:** Reach of conference social media account during event
  - Data: proprietary tool: Keyhole https://keyhole.co/blog/how-are-impressions-calculated/ or https://alternativeto.net/software/keyhole/ (variety of options listed, currently only https://analisa.io/ is an open source solution)

Question 2.3: Interactions between attendees?



- **Metric 2.3.1:** Chat interactions during talks and outside of talks (virtual)
- **Metric 2.3.2:** Hallway chatter as observed? (in-person)
- **Metric 2.3.3:** Survey question: How engaging was the conference [Likert scale 1-5]?

Question 2.4: Booth Interactions?

- **Metric 2.4.1:** Stickers taken
- **Metric 2.4.2:** Number of people who attend booth virtually
- **Metric 2.4.3:** Scanned badges at booths
- **Metric 2.4.4:** Give-away downloads?(virtual)
- **Metric 2.4.5:** Number of visits (non-virtual)

Question 2.5: How many people sat in on each talk or session?

- **Metric 2.5.1:** Average of attendees per session
  - Note: Can be compared by different types of sessions.
  - Note: That way you can compare registrations to average attendance.
  - Data (virtual): Views of talk.
  - Data (in-person): Count of people at each session.

Goal 3: Understanding Company Contributions to Event

Companies are often involved in OSS events in many ways, such as financial sponsorship, sponsoring employees to help organize, or simply sending employees to the event. Understanding these contributions can help retain corporate interest. A challenge is balancing company contributions with community contributions to not alienate one or the other. This goal is about understanding company contributions (and conversely community contributions) to an event.

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Question 3.1: How many event attendees come from companies vs. volunteer contributors.

- **Metric 3.1.1:** Ratio of attendees that have an organizational affiliation versus those that are volunteers
  - Data: Event registration form
    - Question on registration: Is a company sponsoring in some way (e.g. flight/accomodation/ticket/time-off) your attendance?
    - Question on registration: Which company would you like to recognize for supporting your attendance?
  - Data: If an event has different levels of tickets, we can use that data to know who is a “hobbyist” or “academic” or “sponsored by company” -- it’s an honor system.

Question 3.2: What companies are attending our event?

- **Metric 3.2.1:** List of organizations attendees affiliate with [target org]
  - Data: Event registration form

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Question 3.3: What companies are involved in the event beyond sending employees?

- **Metric 3.3.1:** List of companies represented by speakers
  - Data: The schedule of the event.
- **Metric 3.3.2:** List of companies who directly sponsor the event
  - Data: Ask the event organizers.
  - Data: Event website.
- **Metric 3.3.3:** List of companies who are in other ways involved in the event
  - Data: Ask the organizers.
    - Note: This may include companies contracted in executing the event.
    - Note: This may include side-events that are not officially part of your event.

Question 3.4: How many companies are repeat sponsors? How many only sponsored once?

- **Metric 3.4.1:** List of sponsors with their number of times sponsoring
  - Data: Event organizers.
  - Data: Event website from past events.
- **Metric 3.4.2:** Amount sponsored by organizations and by year
  - Data: Event organizers.
  - Data: Event website with list of sponsors + Sponsor prospectus to know how much different levels are.
- **Metric 3.4.3:** List of sponsors with the last time they sponsored an event
  - Data: Event organizers.
  - Data: Event website from past events.

Question 3.5: How competitive is it to get sponsorship for our event?

- **Metric 3.5.1:** List of similar events that are looking for sponsorship
  - Data: Search the internet
  - Data: Ask others in the ecosystem

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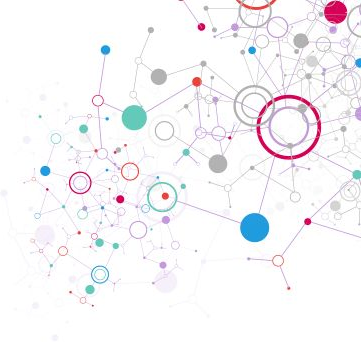

Goal 4: Ensure Events Contribute Towards Diversity and Skill Gaps in the Community

In distributed tech communities, the exchange of multicultural ideas and approaches sets the foundations for healthy environments that enable innovation, creativity, and growth. Events where communities get together to meet and collaborate, provide valuable opportunities to nurture diversity and inclusion, and highlight relevant impactful efforts. This goal is about ensuring that events contribute toward eliminating the diversity and skills gap in our communities.

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Question 4.1: What skill programs do we have at our events?

- **Metric 4.1.1:** List of skill programs
  - Data: Event organizer provides this overview (might also be available on event website).
    - Note: Skill programs can be: tutorials, classes, workshops, hackathons, certification events, speed mentoring

Question 4.2: What is the diversity of initiatives we have at our events?

- **Metric 4.2.1:** # of tracks
  - Data: The conference schedule: How many tracks are being held at the conference? (for different industries, for different roles, for different skill levels, etc.)
- **Metric 4.2.2:** # of different activities
  - Data: The conference schedule: How many other activities besides talks are planned? (hackathons, coding for good, charity work, specialized workshops, etc.)

Question 4.3: What are the different skills we have represented in our events?

- **Metric 4.3.1:** List of skills (maybe word cloud)
  - Data: Survey, possibly during registration for event.

Question 4.4: Do we represent at the event the skills we need in the project/community?

- **Metric 4.4.1:** List of skills that we need in the project community
  - Data: Project leads.
  - Data: Onboarding team.
- **Metric 4.4.2:** List of skills covered by talks, programs, initiatives, etc. at the event
  - Data: Event schedule.

Credits

The goals-question-metrics were first published in 2020 and announced on the opensource.com blog. During 2021, the suggestions were improved based on feedback from event organizers.

https://github.com/chaoss/wg-app-ecosystem

https://opensource.com/article/20/11/chaoss-open-source-events

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