

The World Health Organization - Open Source Programme Office (OSPO)

CERN OSPO Launch November 2023



The WHO OSPO defined

- What? A center of competency for Open Source¹ related efforts.
- Why? To promote collaboration and open innovation through practices that make it easier to grow contributor communities that include experts in software development, data science and Artificial Intelligence.
- **How?** By defining and implementing Open Source **strategies, policies, and best practices** as well as providing **advice and hands on support.**
- Who? For project teams and partners who want to develop, release, and scale Open Source solutions for pandemic and epidemic intelligence.



¹ Open Source refers to software, including digital health solutions, designed to be **publicly accessible** by anyone to **study**, **use**, **modify** and **distribute**.

Open Source Programme Office





Collaboration

Contributions from public and private sectors and across disciplines.

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Sustainability Models for scaling and sustaining Open Source software solutions, including governance and maintenance through communities.



Innovation

Open and accelerated innovation leveraging expert communities of contributors.



OSPO alignment to the Organization strategy

The OSPO was established at the WHO Hub for Pandemic and Epidemic Intelligence to catalyze the adoption of novel approaches to open innovation and collaboration through Open Source models.

Hub's Role

- **Radically improve collaboration**, trust in data sharing and cocreation within surveillance systems.
- **Catalyzing new solutions** through communities of practice.
- **Transform academic research** into pioneering new tools and approaches that fit country and regional contexts.

OSPO Alignment

- Lead on the strategy to collaborate with partners to develop Open Source solutions for better pandemic and epidemic intelligence.
- Accelerate and enhance the building of contributor communities and communities of practice for Open Source projects.
- Facilitate the transformation of nascent Open Source solutions into mature Open Source products that are supported by multiple contributors.



WHO OSPO Journey

InnerSource

- Code management platform (GitHub)
- Internal transparency
- Code documentation & reuse
- Cross team collaboration

Licensing

- License charts
- Policy
- Compliance
- Awareness sessions

Procurement

- Recommendations for existing OSS
 - Vendor onboarding & management
- Copyright

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Community Engagement

- Member States and Public Health Institutes
- private sector for 'social good'
- Academic and research institutions

Community Governance

- Community collaboration techniques
- Value demonstration



InnerSource

428 repositories on GitHub



227 private

611 collaborators on GitHub

152 WHO members

459 outside collaborators



Licensing

Open Source definition from the Open Source Initiative (OSI)

License charts that make it easier to digest available licenses

Internal policy to guide selection and use of licenses

Compliance with inbound Open Source software



Open Source License Charts

The Open Source license charts provide a summary of <u>rights</u>, <u>obligations</u> (for internal use and for distribution), and additional <u>comments</u> for some of the commonly available Open Source licenses.

They are intended as internal guidance for teams at WHO.

In case of any questions, or if you need further guidance on Open Source licensing, please contact the OSPO team.

Apache-2.0

MIT

Apache-2.0 License	MIT License
Review date: October 27 th , 2023	Review date: October 27th, 2023
SPDX ID: Apache-2.0 (https://spdx.org/licenses/Apache-2.0.html)	SPDX ID: MIT (<u>https://spdx.org/licenses/MIT.html</u>)
License type: Open Source, OSI approved	License type: Open Source, OSI approved



The Collaboratory Initiative

The Collaboratory is a pragmatic shift in the way we, as a global pandemic and epidemic intelligence community connect, cultivate and co-design in the domain of data, analytics, and evidence-based decision-making for the prevention and response to public health threats.

A global epidemiological ecosystem that enhances the way the pandemic and epidemic intelligence community interact, collaborate, integrate data and solutions, make data and analytics discoverable, develop best practices flow and scale analytical strategies.

Working together we will achieve more effective collaborative intelligence and harness strong analytical capacities across a wide range of stakeholders with greater speed to insights.



A Platform for Communities

Digital Environment

A digital environment facilitating exchange of data, analysis, and insights





Communities of Practice

Using the convening power of WHO to connect, build and strengthen communities

The Collaboratory in Action



Analysis with better data

Generalizing analytics pipelines and dashboards into reusable blueprints for future epidemics.



Analysis improved

Centralized, standardized, communitydriven repository of epidemiological parameters estimates



Analysis used for decisions

Community of modelers, analysts, epidemiologists, public health experts convened by the Collaboratory



Epidemic Intelligence from Open Sources (EIOS)

A unique collaboration between various public health stakeholders around the globe.

EIOS responds to the need for a strong global PHI community that is supported by robust, harmonized and standardized PHI systems and frameworks across organizations and jurisdictions.

The community of practice is supported by an evolving EIOS system, which not only connects other systems and actors but also promotes and catalyzes new and innovative collaborative development.

The system technology builds on a long-standing collaboration between WHO and the Joint Research Centre (JRC) of the European Commission (EC).



WHO Public Health Intelligence Activity

Monthly Activity Level

~9,000,000 pieces of information retrieved

~60,000 signals scanned

~1,000 signals of relevance identified

40 events highlighted

35 new events verified



World Health Organization WHO HQ + 6 Regional Offices + 146 Country Offices



5 Rapid risk assessments

5 Disease Outbreak News 10 EIS bulletins for countries

x Situational reports

Better Data | Better Analytics | Better Decisions

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Community layer Connected, multi-disciplinary and cross-sectoral network; enhanced information sharing; collaboration

Application layer

End-to-end software component model; modular architecture such as microservices & serverless

Information layer

Graph-accelerated AI; data modelling frameworks; knowledge representation & federated learning

Technology layer High-availability and performance, vertical and horizontal scalability Communities of Practice, Collaborators, Partners, General Public

Global Public Health Intelligence MARKETPLACE

Shared data management Semantic web of data Big data architecture

Hybrid cloud computing



EPI·WiN

Open Data & Open AI Models?

Collaborative exploration into open data

- Open data policy
- Licensing

Open AI guidance and policy

- Open AI models 'for good' collaborations
- sharing and reuse platforms and communities



Open Source Practitioner Communities

Digital Public Goods Alliance	multi-stakeholder initiative that accelerates the attainment of the sustainable development goals by facilitating the discovery, development, use of, and investment in digital public goods.
OSPO++ (OSPO plus plus)	community of Open Source Program Offices in universities, governments, and civic institutions.
TODO Group	open community of practitioners who aim to create and share knowledge, collaborate on practices, tools, and other ways to run successful and effective Open Source Program Offices and similar Open Source initiatives.
CHAOSS	Open Source software project focused on creating analytics and metrics to help define OSS community health.



Thank you!

