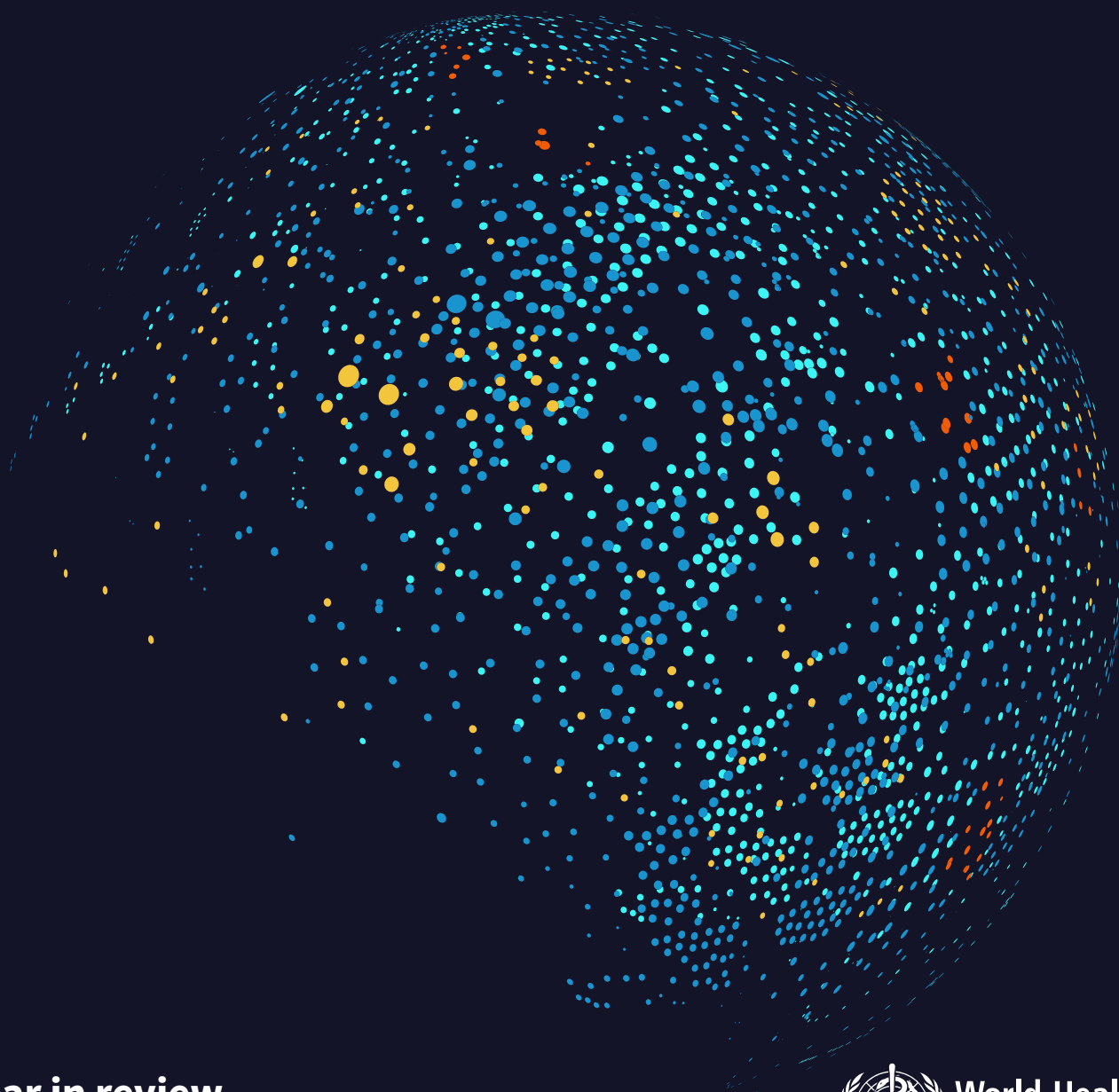


# **The WHO Hub for Pandemic and Epidemic Intelligence starts up:** Building trust and strengthening the world's readiness to respond to health threats



**Year in review**

1 January 2022 – 31 December 2022



**World Health  
Organization**



# Contents

Introduction .....	1
Key portfolio highlights 2022 .....	3
2022 at a Glance .....	4
Operationalization of the WHO Hub .....	7
The WHO Hub 2022 portfolio overview .....	11
Connecting data, solutions and communities of practice .....	13
Innovating solutions and processes .....	15
Strengthening capabilities across stakeholders .....	18
Learning lessons and looking ahead to 2023 .....	20

# Introduction

The WHO Hub for Pandemic and Epidemic Intelligence (WHO Hub) was established in Berlin with the foundational investment of the Government of the Federal Republic of Germany in September 2021 to support countries, regions and global actors to avert and manage public health threats more efficiently. Throughout 2022 the WHO Hub has shown itself to be a centre of innovation and excellence in public health surveillance and is filling an important niche for public health actors, as demonstrated by active engagement in its projects and external programmes.

The COVID-19 pandemic exposed marked weaknesses in public health intelligence worldwide. Pandemic and epidemic intelligence has normally been gathered by institutions responsible for surveillance and early warning systems under the broader goal of pandemic preparedness and response. Despite progress in individual countries and rapidly evolving public health surveillance systems, current surveillance approaches often remain limited to health data. Relevant information from outside health systems, as well as contextual information, is often missing. Where they exist, data systems are developed and evolve in relative isolation, which limits their use as well their utility in informing decision-making.

A number of initiatives are being developed to address these deficiencies in countries, academic institutions and the private sector. In order to align global efforts for innovative solutions, the WHO Hub was established. The WHO Hub for Pandemic and Epidemic Intelligence is firmly embedded in the governance and organizational structure of the WHO Health Emergencies Programme. All WHO Hub 2022 initiatives were facilitated through the significant financial contribution of the German Government, complemented by other donors.



Inauguration of the WHO Hub in September 2021 with Angela Merkel, former Chancellor of Germany, and Dr Tedros Adhanom Ghebreyesus, Director-General of WHO © Steffen Kugler

One and a half years since inauguration, the WHO Hub for Pandemic and Epidemic Intelligence is at the centre of the global effort to strengthen pandemic and epidemic intelligence. Building on expertise across disciplines, sectors and regions, we leverage WHO's convening power to foster global solutions built on an architecture of global trust. We use an interlinking three-part framework to guide our strategy: *connect – innovate – strengthen*. This strategy posits that collaborative problem solving, together with better data and analytics, has the potential to achieve optimal public health decisions.



A panel discussion at the opening of the WHO Hub for Pandemic and Epidemic Intelligence in September 2021 in Berlin © WHO

## What is pandemic and epidemic intelligence?

“This is an approach that combines information from traditional surveillance, event-based surveillance, participatory or community surveillance, and on-the-ground investigations with contextual information, to generate an assessment of public health risk. [...] This approach leverages all available information, including data from non-health sectors and social media and other community-generated data. Innovations in data science enable the analysis of ever-larger quantities of data. Pandemic and epidemic intelligence is also useful for understanding how public health risks change over time and how they are modified by the use of medical countermeasures, the implementation of community-based control measures, the genetic evolution of pathogens and by other factors that vary over time.”

Morgan OW, Abdelmalik P, Perez-Gutierrez E, et al. How better pandemic and epidemic intelligence will prepare the world for future threats. *Nat Med.* 2022;28:1526–28.

Through our *connect* role, we convene a multidisciplinary collaborative intelligence community, including national public health institutes, and regional and country level public health actors, both within and outside WHO. We work to build a global system to improve the detection, assessment and management of pandemic and epidemic risks.

In our *innovate* capacity, we develop robust analytic tools and processes that facilitate experimentation, testing and scaling of innovations in data analytics and modelling. These tools enable communities at local, national, regional and global levels to make data-driven decisions. We are also driving a global agenda for responsible research and development (R&D) in pandemic and epidemic intelligence.

Through our *strengthen* role, we offer technical guidance and training that supports countries’ pandemic and epidemic intelligence capacities. This includes guidance on data collection and quality and harmonization of key public health standards. Through collaborative problem solving, we support timely, effective public health policies and decisions.

This report outlines the progress made in 2022 towards our programme of work, highlights key 2022 milestones and describes project-level achievements as they relate to our *connect – innovate – strengthen* framework of implementation. In addition, we share key lessons learned from 2022 and preview the expansion of the programme of work planned for 2023.

# Key portfolio highlights 2022

## CONNECT

The **Epidemic Intelligence from Open Sources Initiative (EIOS)** expanded the number of its Member State users from 31 to 50, further strengthening public health intelligence capacity at the subnational, national, regional and global levels.

The **Pandemic and Epidemic Intelligence Innovation Forum** community tripled in size and currently comprises 186 experts from public institutions, academia, the private sector and philanthropic foundations to convene around technical issues relevant to decision-makers in public health emergencies.

## INNOVATE

**International Pathogen Surveillance Network (IPSN)** will address the key barriers to improved pathogen genomics related to financing, coordination, country scale-up and innovating fit-for-purpose public health systems. The initiative includes a Community of Practice for Genomic Data, a Country Scale-Up Accelerator, and a Funders Forum. The initiative currently has 28 partners across sectors and regions.

**Knowledge Representation and Reasoning (KR2)** is exploring a cutting-edge method that incorporates innovative and alternative approaches to linking information and datasets from disparate systems for the early discovery and assessment of public health threats, using advanced analytic methods and leveraging key partnerships with Fraunhofer-Gesellschaft and Neo4j.

## STRENGTHEN

The WHO Hub established the first **Open Source Programme Office (OSPO)** within the UN system to support WHO, Member States, partners and academia to collaboratively develop sustainable and innovative open source solutions for pandemic and epidemic intelligence.

**It initiated five strategic projects, including** the Health Security Partnership to Strengthen Surveillance in Africa; Integrated Genomic Surveillance; and Public Health Intelligence

Competencies. These projects incorporate partnerships and collaboration of global public health actors such as Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET), US Centers for Disease Control and Prevention (CDC), the Robert Koch Institute, the Global Outbreak Alert and Response Network (GOARN), and the Global Partnership against the Spread of Weapons and Materials of Mass Destruction (the Global Partnership).

## 2022 at a Glance: Gaining global recognition and sustaining momentum for collaborative surveillance

The WHO Hub for Pandemic and Epidemic Intelligence convened a broad network of global health partners in 2022, with 382 external interactions with 245 global institutions. Four areas of strategic relationships were prioritized in this inaugural year: 1. Building partnerships and cultivating the ecosystem; 2. Working with Member States to build a common understanding and trust; 3. Expanding capacity development in epidemic intelligence; and 4. Engaging in and driving the high-level agenda on collaborative surveillance.

### Building partnerships and cultivating the ecosystem (in Germany and globally)

#### **Leveraging capacities and partnerships**

**across Germany:** Through a close collaboration with the Robert Koch Institute, one of the WHO Hub's founding partners, the following four programmes were established in 2022 to engage with national public health institutes: 1. Collaboration on Antimicrobial Resistance (AMR) and Healthcare-Associated Infections (HAIs); 2. Strengthen Integrated Genomic Surveillance through Greater Capacities in National Public Health Institutes; 3. Public Health Intelligence collaboration; and 4. The Global Outbreak Alert and Response Network (GOARN) Berlin Fellowship Programme. Additionally, the hybrid WHO Hub for Pandemic and Epidemic Intelligence Speaker Series, co-hosted with another of the WHO Hub's founding partners, Charité – Universitätsmedizin Berlin, provides a platform for multidisciplinary exchange with global partners.



Simulation exercise at G7 Health Ministers Meeting in May 2022 facilitated by the WHO Hub  
© Photothek/BMG

#### **Showcasing the WHO Hub at the World Health Summit (WHS) 2022:**

This year, the WHO Hub organized keynote and panel discussion sessions from 16 to 18 October 2022, respectively titled – Game changer: Architecture for pandemic preparedness; and, Outsmarting pandemics: Collaborative surveillance and National Public Health Institutes (NPHIs). On the margins of these meetings, the WHO Hub's senior leadership met with official delegations from five Member States and five nongovernmental partners. In addition

to participating in the G7 Health Deputies' Meeting, the WHO Hub delegation joined the German–Japanese dialogue for Global Health and the Global Research Collaboration for Infectious Disease Preparedness (GloPID-R) General Assembly.

**Selected for exposition at the Paris Peace Forum:** The Epidemic Intelligence from Open Sources Initiative (EIOS) was showcased at the Paris Peace Forum, held on 11–12 November 2022. At the Forum, world leaders and heads of international organizations, civil society, the private sector and thousands of individuals gathered to share ideas and build new forms of collective action. As a convention on global governance, the Paris Peace Forum is a useful forum in which the WHO Hub can push for partnerships that transcend the traditional health sector, which is key to good epidemic intelligence. Delegates from the WHO Hub's EIOS Core Team showcased and presented the initiative to several high-level authorities, including the President of Switzerland.

technology, academia and philanthropy from more than 60 WHO Member States, came together to share experiences, engage in workshops and panel discussions, and explore PHI topics. The strength of the EIOS initiative grows with its community of practice. Its ongoing expansion is developing an ever-stronger global network of experts that is connected and supported through the EIOS system. This enhances communication and information sharing and bridges gaps across countries, continents and disciplines.

## Working with Member States to build a common understanding and trust

**Building country-level trust and support:** Trust between countries and experts across the world is key to enable data sharing and the co-development of tools. An important part of the first year of work has been to engage with WHO Member States and establish a foundation for our collaborative approach. Of 382 external WHO Hub for Pandemic and Epidemic Intelligence engagements in 2022, approximately 45% were with stakeholders from Member State governments and public institutes, such as the Robert Koch Institute, the Africa Centres for Disease Control and Prevention (Africa CDC), and the US Centers for Disease Control and Prevention.



Keynote session at the World Health Summit 2022 (WHS), chaired by the WHO Hub on behalf of WHO

**Fostering global communities for cross-sectoral exchange:** The WHO Hub co-hosted the EIOS Global Technical Meeting in Luxor, Egypt, in collaboration with the WHO Regional Office for the Eastern Mediterranean, from 27 to 29 November 2022. Approximately 170 participants, including specialists in the field of Public Health Intelligence (PHI), as well as multidisciplinary collaborators from

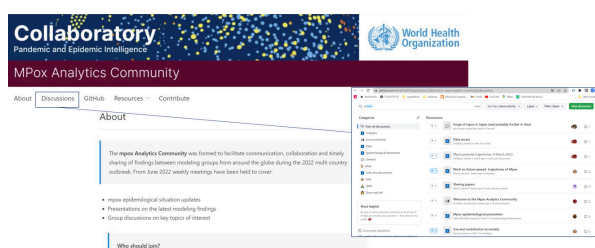


Bilateral meeting during WHS 2022 with Dr Rochelle Walensky, Director of the US Centers for Disease Control and Prevention © WHO

## Expanding capacity development in epidemic intelligence

### **Supporting WHO's Health Emergencies Programme response through data and analytics:**

In 2022 the WHO Hub contributed to WHO's response to the multicountry outbreak of monkeypox (mpox). We built the data pipelines and analytic scripts for an online mpox Global Trends Report, which provided up-to-date information about the outbreak. In addition, the WHO Hub convened a weekly meeting on mpox data and analytics that facilitated the exchange of information and experience among a global community of practice working on the outbreak.



Screenshot of the WHO Hub MPOX Analytics Community on the Collaboratory Initiative Portal

### **Responding to country and regional demands for data and analytics:**

In 2022 the WHO Hub accelerated successful projects in surveillance that strengthen country capacities in forecasting, detection and assessment of risks. We also sought out and listened to countries' and regions' needs for improving surveillance systems. As a result of this productive exchange and relationship strengthening, projects such as the Health Security Partnership to Strengthen Surveillance in Africa were co-created with Africa CDC, the Robert Koch Institute and the Global Partnership to directly respond to country and regional priorities. In 2023 the project will be piloted in six countries across Africa and will adapt its delivery model based on early results and feedback from pilot countries and implementing partners.

## Engaging in and driving the high-level agenda on collaborative surveillance

### **Leading the HEPR vertical workstream on collaborative surveillance:**

The WHO Hub supported the drafting and refinement of the collaborative surveillance strategy and vertical workstream of the WHO Director-General's *10 proposals to build a safer world together – Strengthening the Global Architecture for Health Emergency Preparedness, Response and Resilience (HEPR)*. Dialogue and formal consultations with Member States and key partners on the governance, systems and financing elements of the proposals will continue up to and throughout the meeting of the Executive Board in January 2023, the World Health Assembly in May 2023, and other multilateral mechanisms such as the G7 and G20.

### **Facilitating high-level support for collaborative surveillance:**

The WHO Hub supported the 2022 G7 Germany Presidency, which led to substantial alignment in pandemic preparedness and response and fed into the strategic HEPR framework. WHO organized a simulation exercise at the G7 Health Ministers Meeting on 19 May 2022. The WHO Hub also supported the G7 technical meetings and contributed to the *Roadmap for practical cooperation to advance the G7 Pact for Pandemic Readiness*. Support will continue with the transition to the Japan G7 Presidency in 2023. Further work to define and strengthen the functional areas that comprise the essential systems of national, regional and global HEPR, and to clearly demarcate WHO's role within those systems, will require the continued support of the WHO Hub on the collaborative surveillance workstream.

# Operationalization of the WHO Hub

During 2022 the WHO Hub for Pandemic and Epidemic Intelligence was transformed from an architectural plan to a construction zone, and finally to a state-of-the-art multifunctional space. The WHO Hub was designed to create an inclusive workspace for pandemic and epidemic intelligence by offering a physical space for WHO personnel and partners to collaborate. In 2022 we established the WHO Hub leadership infrastructure and ramped up our team from two to 34 onsite personnel and also 20 remote workers. Workforce expansion allowed us to deliver successfully on our 2022 portfolio of work, while scaling up operations in parallel.

The multifunctional WHO Hub for Pandemic and Epidemic Intelligence is comprised of a 5-floor building in Kreuzberg, Berlin, at 17–18 Prinzessinnenstraße. The structure has been designed to foster a collaborative and agile work environment, adapted to the ever-evolving ways of hybrid working. WHO has planned for a total of 120 workstations in the Berlin office, of which 60 are planned for core WHO staff. The remaining 60 workstations will be occupied by collaborators and secondees from partner institutions and Member States. The building's security measures were established in coordination with the Premises Security Team, Geneva, and are in compliance with the recommendations of the UN Department of Safety and Security and local building codes. Aligned with the WHO Hub's mission to connect diverse stakeholders, the main hall on the ground floor will integrate a premier audiovisual infrastructure that can adapt to various configurations for seamlessly integrated hybrid global events.



The WHO Hub building in Kreuzberg, Berlin © WHO

The year 2022 was also important for building the WHO Hub's most precious asset – its workforce. We started the year with two onsite WHO staff and a few consultants. Recruitment accelerated significantly in 2022. As of 31 December 2022, the WHO Hub has 34 onsite personnel, including 27 WHO staff (including confirmed recruitments) and seven consultants. In addition, about 20 personnel are working for the WHO Hub remotely. In 2022 we successfully established our leadership infrastructure, having filled or confirmed most leadership positions (assistant director-general,

two directors, as well as seven out of nine unit head/executive positions). In line with the WHO corporate priority in relation to Preventing and Responding to Sexual Exploitation, Abuse and Harassment (PRSEAH), all of the WHO Hub workforce have been through mandatory internal PRSEAH training and seminars for awareness-raising.



WHO delegation to the WHS 2022 visits the WHO Hub with Dr Tedros Adhanom Ghebreyesus, WHO Director-General © WHO

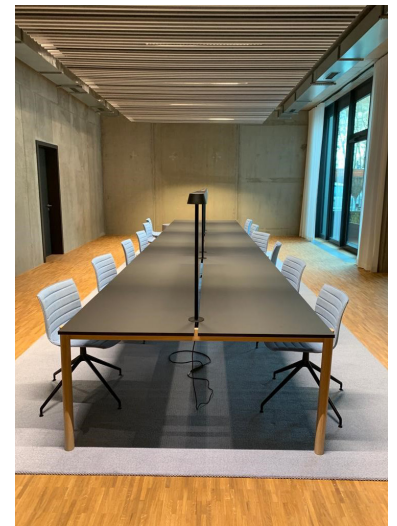
The WHO Hub for Pandemic and Epidemic Intelligence aims to foster multidisciplinary collaborations that will require expertise and contributions from a variety of sources and partnerships. This will require personnel engagements that go beyond WHO staff contractual arrangements. In 2022 the WHO Hub brought on board a government secondment from the Republic of Korea. The WHO Hub has already made significant progress in exploring new modalities for engaging experts, such as co-location with Robert Koch Institute experts and secondment and pro bono arrangements, laying the foundation for diverse collaborations.

With the vision of the WHO Hub as a convening centre, we welcomed high level visitors and organized events in 2022, even before the building fit-out was completed. This included welcoming the WHO Director-General and Regional Directors for the Eastern Mediterranean and African Regions for high-level visits during the WHS in October 2022. WHO has also established collaborative networks in Berlin and across Germany to align on strategic priorities. Relationships have been established with the Berlin offices of UN organizations based in Germany, such as the International Organization for Migration, the World Food Programme and UNICEF, as well as the Bonn UN office. We will continue to foster relationships in the German ecosystem and hope to finalize the draft seat agreement with the German Government in 2023.



Visit of leaders from the German Federal Ministry of Health in October 2022: Dr Thomas Steffen, State Secretary; Paul Zubeil, Deputy Director-General for European and International Health Politics; and Dr Christophe Bayer, Head of Division Health Security, International Crisis Management © WHO

# The collaborative work environment at the WHO Hub: Our building and physical office space



During 2022 the WHO Hub established a Project Management Office (PMO), which is a cross-cutting function that supports the new division in the strategic and standardized selection, prioritization, design and execution of all projects to maximize value and increase the likelihood of success. The aim is to facilitate a matrix approach to project delivery, which requires the allocation of resources across internal teams and with external partners. The PMO is essential for ensuring that diverse collaboration is at the heart of everything we do. It supports the WHO Hub to:

**Select the right projects** – Through governance mechanisms and criteria needed for screening and prioritizing projects that are aligned with the WHO Hub’s strategy

**Execute and deliver value** – By establishing methodologies, standards, tools and procedures for delivering value through projects

**Ensure continuous learning** – By supporting project teams with capacity development, coaching, resourcing and monitoring and evaluation, as well as quality assurance. With the PMO support, the WHO Hub has established a programme of work that is strategically aligned and technically sound.



WHO Hub colleagues collaborating © WHO



Assistant Director-General Dr Chikwe Ihekweazu delivers keynote speech at the European Emergency Medicine Congress 2022 in Berlin in October 2022 © Maarten Schuth

# The WHO Hub 2022 portfolio overview



## Breadth of our portfolio

All WHO Hub projects are aligned with our vision of a world where collaborative surveillance empowers countries and communities to minimize the impacts of pandemic and epidemic threats. We catalyze transformation in collaborative surveillance and serve countries by connecting, innovating and strengthening capabilities to produce better data, analytics and decisions.



Colleagues from the WHO Hub for Pandemic and Epidemic Intelligence collaborate with WHO Health Emergencies Programme leadership © WHO

Projects in our portfolio span a diverse geographic and technical landscape, focusing on key areas of intervention, such as norms and standards development, capacity-strengthening, strategy, policy and services. The **2022 at a Glance** section has synthesized a few high-level project successes from 2022, but this section will provide an overview of progress to date throughout the full portfolio, project by project, according to the WHO Hub's three key roles: *connect – innovate – strengthen*.

Although projects have been placed under one of the three roles to highlight key achievements in 2022, the nature of interdisciplinary and collaborative work is to interweave approaches and innovate processes along the implementation pathway. All projects in the WHO Hub's portfolio contribute to more than one of the three key roles; in future years we may showcase the same project, highlighting contributions in a new area of the three-part framework.

# Connecting data, solutions and communities of practice

The WHO Hub for Pandemic and Epidemic Intelligence is a first-of-its-kind initiative to push for a paradigm shift towards collaborative surveillance by working closely across WHO with Member States, regional offices and diverse partners. Radically improving collaboration, trust and co-creation within surveillance systems can strengthen capacity to detect an emerging outbreak, communicate information and initiate an appropriate response faster.

## **Building Partnerships, Advocacy and Trust –**

The WHO Hub has worked throughout 2022 to build relationships based on trust and equity to facilitate knowledge-sharing, and to collaboratively build community-centred systems for health resilience during crises. During 2022 the WHO Hub had many engagements with regions, national public health institutions and ministries of health. A country engagement plan was drafted, and more than 250 stakeholders were engaged across 45 countries.

**The WHO Hub for Pandemic and Epidemic Intelligence Speaker Series** highlights the complex multidisciplinary landscape of preventing, predicting, preparing for and responding to epidemics and pandemics. This public event takes place quarterly, usually in Berlin, and is live-streamed for global participation. In 2022 three sessions were held, with 450 on-site guests and 7500 online viewers from a variety of disciplines, regions and sectors.



The WHO Hub for Pandemic and Epidemic Intelligence visits Oswaldo Cruz Foundation (Fiocruz) in Brazil in August 2022 © Peter Illiciev

**The Pandemic and Epidemic Intelligence Innovation Forum** was created as an organically growing, multistakeholder and multidisciplinary platform of exchange around technical issues relevant to decision-makers in public health emergencies. In 2022, 42 organizations from 15 Member States in five WHO regions participated in the quarterly meetings of the Innovation Forum

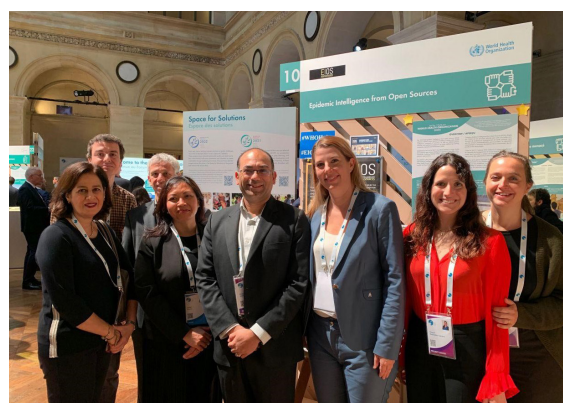
to exchange information on innovations in the pandemic and epidemic intelligence field. Over the year, the Innovation Forum community tripled in size and is currently comprised of 186 members from public institutions, academia, the private sector and philanthropic foundations.



WHO Hub for Pandemic and Epidemic Intelligence Speaker Series – Complexity of Pandemics: Securing human, animal and planetary health, at Museum für Naturkunde Berlin in July 2022  
© Thomas Rafalzyk

The **Epidemic Intelligence from Open Sources Initiative (EIOS)** is a global initiative led by WHO to strengthen public health intelligence. EIOS offers integrated services to Member States and organizations, including networking, collaboration, capacity-building and innovative solutions. In 2022 the EIOS community continued to grow rapidly. By end of year, there were 74 active EIOS communities and more than 3800 unique EIOS users. In 2022 the EIOS Initiative expanded the number of its Member State users from 31 to 50, surpassing its 2022 goal of 49. The project team led a training of trainers' five-day workshop in September 2022 with approximately 40 trainees, which will become an annual event.

**One Health Intelligence Scoping Study (OHISS)** worked to identify opportunities for improved technical harmonization of the Quadripartite and other prioritized systems to strengthen One Health intelligence. In 2022 the project completed an extensive literature review, engaged with international experts and diverse stakeholders, and managed two advisory groups in addition to individual key stakeholder interviews. The project conducted a hazard identification exercise with the Quadripartite to define One Health scope and priorities. The project resulted in a final recommendation that a Global One Health Intelligence System be developed.



Members of EIOS Initiative present at Paris Peace Forum in November 2022 © WHO

# Innovating solutions and processes

The WHO Hub is committed to catalyzing innovations needed to build a safer world, with current initiatives focused on strengthening integrated disease and threat surveillance; increasing laboratory capacity for pathogen and genomic surveillance; and innovative approaches to risk assessment, event detection and response monitoring.

**Knowledge Representation and Reasoning (KR<sup>2</sup>)** will establish and grow a global network of information from different systems and datasets, developing systems and capabilities for the early discovery and assessment of public health threats using advanced analytic methods. In 2022 the project scope was finalized, and partnerships were established that facilitated a successful project launch. The project team designed and built a proof of concept in 2022, which will be evaluated in early 2023.



Visit of Professor Tulio de Oliveira and Dr Sikhulile Moyo, recipients of the German Africa Award 2022 for discovering the omicron variant of SARS-CoV-2, to the WHO Hub in November 2022 © WHO



College students from the United States of America visit the WHO Hub in August 2022 © WHO

**International Pathogen Surveillance Network (IPSN)** is a WHO-led initiative designed to address the needs in local-to-global genomic surveillance for timely and appropriate public health actions for pathogens with pandemic potential. The IPSN involves a Technical Connector for networks and laboratories, a Partners Forum for advocacy and resourcing, as well as a Steering Committee. In 2022 the project conceptual approach was finalized, and the project governance established. IPSN also held the first meetings of the community of practice and the country scale-up accelerator, which had active participation from stakeholders.

**Collaboratory** is a global interactive digital laboratory for collaborative intelligence to provide community-driven solutions to address challenges and needs for data, analytics and evidence-based decision-making. In 2022 the project governance was established, a consultation was held with users, and domain experts mapped existing platforms to define needs. A suitable digital platform was identified, which is currently being piloted and further developed. When operational, the Collaboratory will serve as a platform for the epidemic and pandemic intelligence community to communicate, collaborate and cultivate ideas, as well as to rapidly generate, improve and share actionable insights to respond to public health risks.



Delegation from the Kingdom of the Netherlands Ministry of Health and the Kingdom of the Netherlands National Institute for Public Health and the Environment visits the WHO Hub in December 2022 © WHO



Joint Robert Koch Institute–WHO project management workshop, at WHO Hub in June 2022 © WHO

**The Research & Development (R&D) Agenda** works to establish global research priorities for pandemic and epidemic intelligence. In 2022, the concept note was finalized, which outlined how the WHO Hub aims to collaborate with partners to increase strategic coherence and alignment around topic areas of importance for researchers, funders and implementers, so that better investment decisions can be made and greater impact achieved.

**Collaboration on Antimicrobial Resistance (AMR) and Healthcare-Associated Infections (HAIs)** is a partnership with the Robert Koch Institute that aims to promote expert exchange and to conduct assessments and pilot studies to improve AMR/HAI surveillance standards and tools. It will work toward three key objectives: 1. Promoting molecular surveillance for AMR and reporting of emerging AMR threats in the context of the WHO Global AMR Surveillance System (GLASS); 2. Promoting integrated surveillance of AMR, antimicrobial consumption and HAIs; and 3. Improving joint analysis of global AMR burden, including between regions and countries. In 2022 the project concept note was approved and the project team recruitment advanced. Kick-off meetings for two workstreams were held.

# CONFERENCE ON PUBLIC HEALTH IN AFRICA

13–15 DECEMBER 2022  
KIGALI RWANDA



Assistant Director-General Dr Chikwe Ihekweazu presents at 2nd Annual International Conference on Public Health in Africa in December 2022 © CPHIA

# Strengthening capabilities across stakeholders

The COVID-19 pandemic revealed the need to redesign public health surveillance systems on national, regional and global levels to do better surveillance, gather better data that results in better analysis, and use collaborative intelligence to help leaders in political, public policy and scientific and civil society organizations make better decisions.

**Health-Security Partnership to Strengthen Surveillance in Africa** is an initiative that will support an initial pilot group of countries to strengthen all-hazards surveillance and early detection through strengthening several interventions: 1. Integrated Disease Surveillance and Response (IDSR) subnational implementation; 2. Event-based surveillance; 3. Genomic sequencing; 4. Epidemic intelligence capacity-building; and 5. Strengthening political will for biosafety and biosurveillance. In 2022 the proposal was finalized and the project governing bodies and project team were assembled.



WHO Hub leadership visit to Africa CDC in Addis Ababa, Ethiopia, in March 2022 © Africa CDC



Visit of Mr José Luis Satdjian, Vice Minister of Health, Uruguay, to the WHO Hub in October 2022 © WHO

**Public Health Intelligence Competencies** is a project focusing on building capacity of a skilled workforce for better decision-making. PHI training modules will be developed with tailored curricula and made globally available. In 2022 the project collaboration agreement was signed with the Task Force for Global Health through TEPHINET and two suppliers were contracted. Stakeholder engagement was completed to inform the curricula, including a survey of more than 50 stakeholders and six focus group discussions. A diverse project team was built, including personnel from WHO, TEPHINET and the CDC. The PHI Competency Framework and Curricula are currently being drafted.

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### **GOARN Berlin Fellowship Programme**

provides an opportunity for senior experts in the field of epidemic intelligence, surveillance and rapid response to join the WHO Hub – hosted by the dedicated unit within the Robert Koch Institute. In December 2022 the project was reviewed by the GOARN Steering Committee. The call for applications will be published in January 2023 and shared widely through the GOARN network and through the WHO Hub’s networks.



Samuel Muthia highlights the WHO Hub-led initiative, Open Source Programme Office, during the keynote address at GitHub Universe 2022 in San Francisco in November 2022 © GitHub

**Integrated Genomic Surveillance** is a collaboration with the Robert Koch Institute that supports national actors (for example, national public health institutes in Namibia, Madagascar and Côte d’Ivoire) in diverse areas, including infrastructure needs, governance (norms and standards, data governance), analysis methods, capacity-building and training. Much of 2022 was spent defining the project scope and establishing the partnership. Dedicated personnel recruitment is underway and personnel from the Robert Koch Institute have been assigned to the project team.

**Open Source Programme Office (OSPO)** is an initiative within the WHO Hub to support WHO as well as stakeholders from Member States, partners and academia to collaboratively develop sustainable, innovative and effective



Visit of WHO Regional Directors: Dr Matshidiso Moeti, Regional Office for Africa; Dr Ahmed Al-Mandhari, Regional Office for the Eastern Mediterranean, and leadership teams to the WHO Hub, in October 2022 © WHO

open source solutions for pandemic and epidemic intelligence. In 2022 OSPO selected the WHO GitHub Enterprise Cloud platform to host all WHO code and related documentation. The platform offers fully secured private data repositories, public repositories for open source software and open data, and internally open repositories for intra-WHO collaboration.



WHO Hub leadership team visits the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) Head Office in Atlanta, Georgia, in July 2022 © WHO

# Learning lessons and looking ahead to 2023

During this first year, we have made significant progress toward our goals, learning both practical and technical lessons along the way. The most salient finding from 2022 is that global public health actors are eager to come together and collaborate. As the UN specialized agency that connects countries, partners and people to promote health for all, WHO has the global mandate to direct and coordinate the world's response to global pandemic and epidemic threats. WHO Member States and the broader public health ecosystem have welcomed our strategy of convening diverse stakeholders to collaboratively tackle the world's largest health challenges.

The complex challenges laid bare by the COVID-19 pandemic and other emergencies highlighted the need to rethink our approach to surveillance and led to the foundation of the WHO Hub for Pandemic and Epidemic Intelligence. Our ways of working have been intentionally designed with the goal of learning lessons and iteratively adapting our methods for maximum impact. The WHO Hub was designed as a “sandbox”, with a mandate to take risks, incubate new initiatives, and drive innovation by reaching out beyond WHO's traditional stakeholders. By convening global communities of practice, we nurture and enable the development of new solutions that are adapted to local contexts. The wider global health and donor community has demonstrated interest in the WHO Hub's mandate. Building on the strong investment of Germany, we have received initial support from a wider network of sovereign and philanthropic donors, demonstrating the world's readiness for our collaborative approach.



Attendees sign in at the second WHO Hub Speaker Series – Complexity of Pandemics: Exploring insights from the social sciences for collaborative intelligence, in Berlin in September 2022 © Thomas Rafalzyk

We have built the operational systems for the WHO Hub's success, and as the building was being constructed we continued to deliver programmatic results. Ramping up the workforce from two onsite staff to more than 27, with seven onsite consultants and 20 remote consultants, has enabled the WHO Hub to deliver successfully on its 2022 portfolio of work, while scaling up operations in parallel.

By building a hybrid workforce, we have been able to find the best talent, wherever it may be. We are planning team-building opportunities for 2023 to unite all colleagues around the WHO Hub's vision and mission and to increase team cohesion. Workforce expansion will continue throughout the end of 2023 as project delivery accelerates. Operationally and administratively, the WHO Hub for Pandemic and Epidemic Intelligence will continue to anchor itself within the WHO Health Emergencies Programme and WHO as a whole.

The WHO Hub is both globally facing and locally oriented. This year, we learned that genomic sequencing and genomic surveillance are areas of high priority for our stakeholders, particularly at the national and regional levels. The WHO Hub's IPSN project, among others, will respond directly to this need in 2023. Next year, the Assistant Director-General will expand discussions with WHO regional offices on potential mechanisms for the WHO Hub for Pandemic and Epidemic Intelligence to provide additional country-level support, and will continue to build the necessary trust with key public health partners at all levels.

In 2023 the WHO Hub for Pandemic and Epidemic Intelligence will continue to drive

the high-level agenda on collaborative surveillance. In 2022 we leveraged lessons learned from the COVID-19 pandemic and worked to consolidate and expand upon existing definitions of collaborative surveillance. The initial framework was refined through robust engagement with WHO regional offices and other HQ divisions. In preparation for the 76th World Health Assembly in May 2023, the Health Emergency Intelligence and Surveillance Systems (WSE) Division will publish and disseminate to Member States the collaborative surveillance concept. Further efforts will be made to socialize the method among key stakeholders and enable its implementation at country and regional levels. The collaborative surveillance concept will prove helpful to align investments made by the Pandemic Fund, starting in 2023.

While continuing to deliver on the WHO Hub's current portfolio of work with our WHO regional offices and partners, we will also launch new strategic projects in 2023. These projects will support our mission to catalyze transformation in collaborative surveillance across all levels and serve countries by connecting, innovating and strengthening capabilities to produce better data, analytics and decisions.



Conceptual model illustrating the convergence of collaborative surveillance objectives across four key dimensions to strengthen decision-making



## **Collaborative surveillance provides an opportunity to maximize investments in surveillance by:**

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Fully leveraging our collective capacities to better inform public health decision-making;

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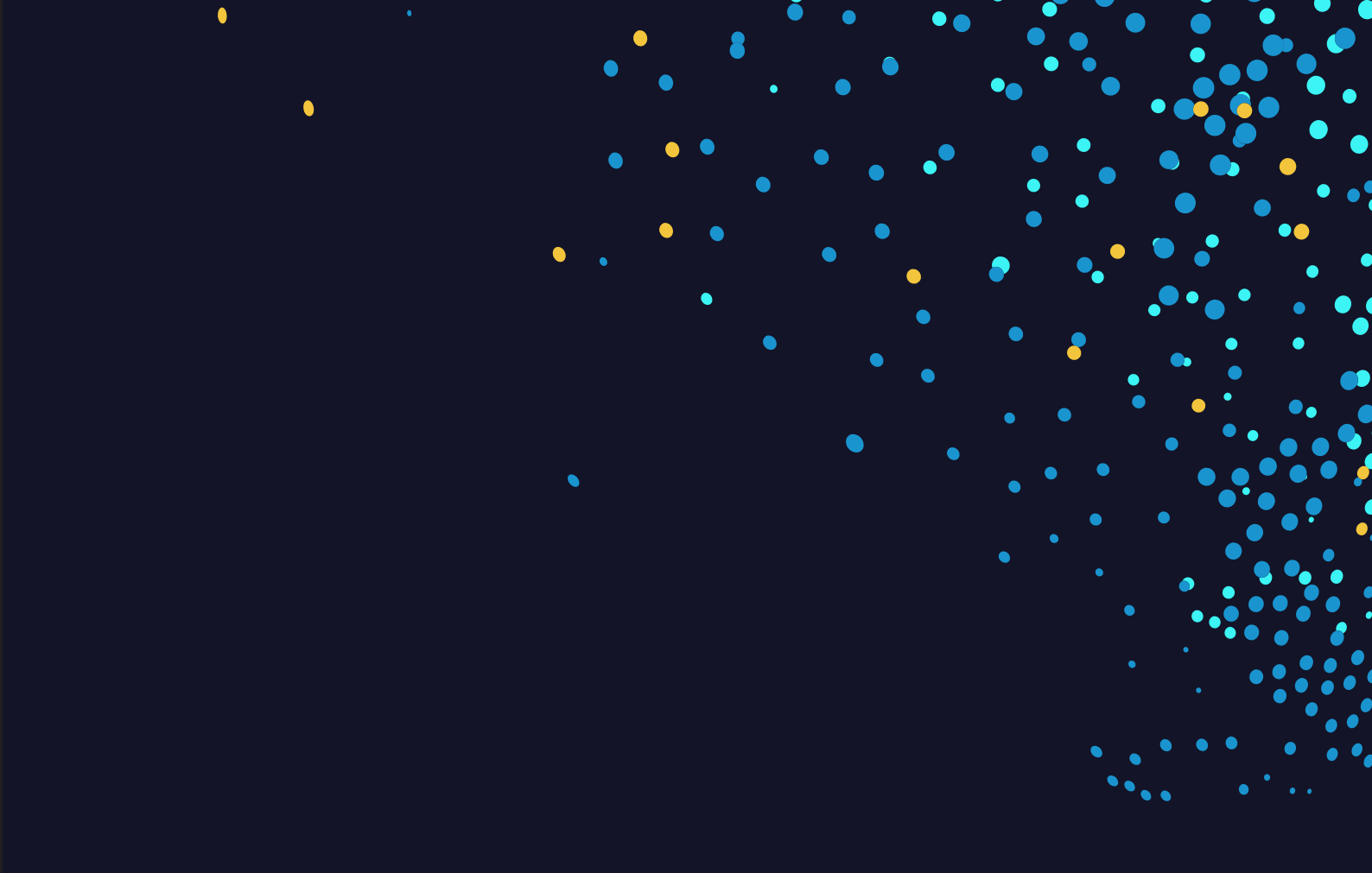
Building upon foundations of robust public health surveillance, health systems monitoring and laboratory surveillance;

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Harnessing and linking contemporary data sources and advanced data and analytical approaches to enable the generation of contextualized insights;

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Building collaboration across diseases and threats, sectors, geographies and emergency event lifecycles.



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