

Digital Data and Exploratory Spaces for Strengthening Infectious Disease Research in the One Health nexus (DiDEX)

DiDEX Mission

The era of digital transformation has opened up remarkable opportunities for advancing global health action by embracing **digital data practices** and **computer-assisted approaches**. The fusion of **diverse data resources**, typically scattered across different silos, empowers us to **delve deeper into understanding infectious diseases**, from unraveling the intricacies of pathogenic mechanisms to deciphering the complexities of disease transmission within the purview of **One Health**.

Our mission is to foster **collaboration across disciplines and sectors** by creating a **user-centric Data Hub**, providing stakeholders with a powerful tool for data-driven scholarly discourse and knowledge exchange.

DiDEX's core feature is an **innovative Geographic Information System**, designed to streamline the **integration, standardization, and analytical processing of health and socio-ecological context data** geared towards enhancing infectious disease research, preparedness, and response:

Project Focus

Research for Global Health

Target Audience

Stakeholders from research and public health (and beyond)

Hosting Research Institution

Bernhard Nocht Institute for Tropical Medicine (Department of Infectious Disease Epidemiology)

Project Duration

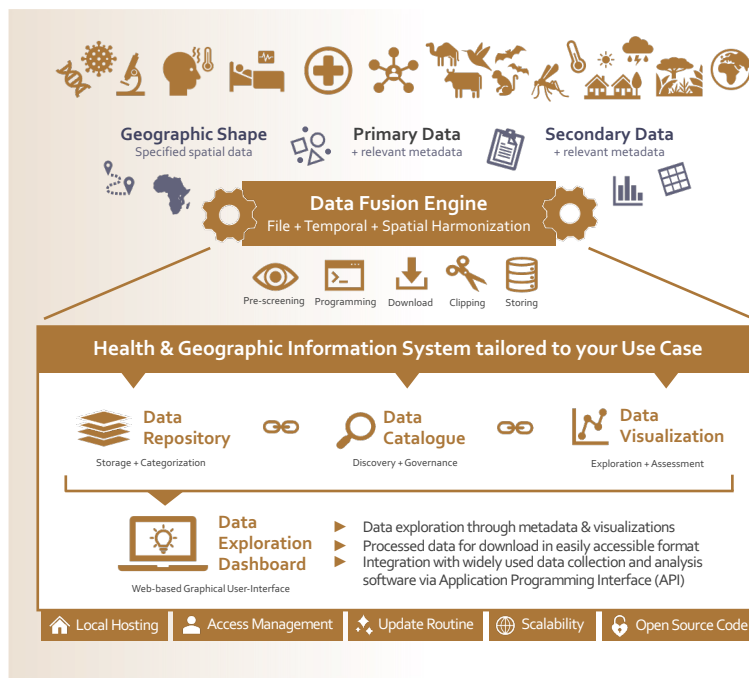
10/2023 – 09/2025

Project Funding

Joachim Herz Foundation (Innovation academy for applied-oriented research on infectious diseases)

Data Hub Framework

Potential Use Cases



- **Research & Scientific Exchange**
- **Public Health & Risk Assessment**
- **Training & Capacity Strengthening**

1. Design & Planning of Research Studies

- Access to comprehensive datasets across silos to support interdisciplinary discourse and studies
- Exploration of data to understand patterns, trends, and relationships, e.g., to inform study site selection

2. Informing Analytical Frameworks

- Rule-based/knowledge-driven frameworks, e.g., indicator-based outbreak risk assessment
- Data-driven frameworks, e.g., epidemiological modeling and computer simulations

3. Enabling Collaborative Ecosystems

- Empowering collaborative data practices and harnessing innovative technologies
- Strategies for sharing (research) outputs, usage and contribution to open-source tools and software

DiDEX Vision



Alongside stakeholders from **research and public health**, we aim to **enhance our Data Hub** framework, jointly explore **new features** and **interoperability** with commonly used software, and thereby provide a **trustworthy tool** tailored to the needs of our target audience. Additionally, we want to foster interest in modern **digital approaches and technologies** and **explore them together** (e.g., artificial intelligence, computer simulations, gamification). In doing so, we prioritize **interdisciplinary exchange** and **open solutions**.

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