The power of technology partnership

The Global Fund is committed to the use of digital technologies that aid data-driven decision-making out in the field. This is why we partner with technology providers who can bring innovation and cohesion to the many fragmented health-information systems around the world.

In 2018, we joined forces with Zenysis Technologies to advance the use of data in 10 countries fighting AIDS, Tuberculosis and Malaria. The partnership illustrates the power of working with technology startups that have solutions aimed at improving health outcomes.

Today there is no shortage of data available to the global health community. The challenge is to make sense of it all.

Governments, health agencies and other actors in the field are faced with a web of technology vendors and systems. Data is generated in multiple formats and stored in different siloes, with quality standards that vary widely. It all adds up to a complex and fragmented data ecosystem that's tough for decision-makers to navigate.

The Global Fund partners with technology providers – many of them startups – that develop solutions aimed at organizing, simplifying and scaling the use of this health data. These partnerships often begin with pilot projects that bring us insights into a solution's viability in the field, as well as highlight any gaps in tech funding or expertise.

One such successful partnership is our 2018 agreement with Zenysis Technologies.

Headquartered in San Francisco and Cape Town, the company has developed a software platform that integrates and harmonizes data from multiple sources into a single point of access and analysis. The platform is designed to enable robust analyses and effective decision-making, specifically to support governments and institutions in achieving their health and development goals.

Under the terms of the partnership agreement, Zenysis committed to deliver self-funded pilots of its technology in 10 countries: **Bangladesh, India, Benin, Kenya, Liberia, Togo, Rwanda, South Africa, Zambia,** and **Mozambique.** The Global Fund agreed to facilitate the pilots within our country portfolio.

A Zenysis demonstration at the Rwanda Biomedical Centre's Health Research & Policy Symposium in Kigali, Rwanda, 27 May 2022.

Integrating data on HIV/AIDS, Malaria and Tuberculosis

The data landscape in the AIDS, Malaria and Tuberculosis space is vast and varied.

Population data, health surveys and other public-sector information is captured in a variety of ways, including through Health Management Information Systems (HMIS), District Health Information Systems (DHIS2), Electronic Logistics Management Information Systems (eLMIS), Excel spreadsheets, and on paper. Private-sector entities or other public agencies may also provide weather, manufacturing, financial and transport data that is useful to health officials.

The challenge is to harness all this information – contained in different formats and systems – so that it can be used to inform health interventions.

This is exactly what Zenysis was designed for.

How does the Zenysis platform work?

The power of the Zenysis platform[1] lies in its ability to assimilate data from a wide variety of systems and sources. In addition to supporting common health-management systems, the platform can also integrate data from office and database tools such as Microsoft Excel and Microsoft Access. Even SMS text messages are supported.

Once the data is imported, the Zenysis platform cleans and harmonizes it. The integrated data can then be queried and analyzed to generate insights that are brought to life in automated dashboards and visualizations. Unlike rigid data systems that only produce certain metrics, the Zenysis platform can produce indicators on-demand without the need for engineering work.

The platform has a friendly user interface too, with news feeds and pop-up messages that encourage engagement with and exploration of data. These features lower the barriers to using the platform.

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Why partnering with technology startups makes sense

The Global Fund aims to build a culture of data-driven decision-making at the country level through innovations in data interoperability, integration and traceability. Partnering with companies like Zenysis brings us closer to this goal.

As one of the world's largest funders of global health – and with strong partnerships across both the public and private sectors in more than 150 countries – The Global Fund can offer promising tech startups a platform to expand their services. The partnership with Zenysis has allowed the company to demonstrate its solution to decision makers around the world. Zenysis is now ready for rapid expansion into new geographies, while deepening engagement with current partners.

Other technology providers The Global Fund partners with include:

- **Dimagi** – a social enterprise and developer of a technology platform for frontline health workers. The Global Fund supports Dimagi in designing national electronic community health information systems (eCHIS) in Benin, Burkina Faso, Ethiopia, Mozambique, Madagascar and South Africa

- **Medic** – an open-source platform for advanced community-health systems. The Global Fund supports Medic as the national platform of choice for Ministries of Health in lower-middle-income countries

- **Qure.ai** – artificial intelligence to enable chest X-ray screening for tuberculosis and to reduce diagnosis time. The Global Fund supports Qure.ai in the Philippines and India

Impact in the field

Rwanda

Staff at the Rwanda Biomedical Centre (RBC) use the Zenysis platform to monitor their supplies of malaria commodities. The platform combines data on stock levels, average consumption, expiry dates and more for diagnostic tests, medicines and other commodities – helping staff to keep all key supplies in balance.

Through automated data analysis and triangulations, the Zenysis platform has increased the productivity and efficiency of RBC staff. Analyses that had previously taken the RBC malaria team two days of manual effort can now be done in a matter of minutes with Zenysis. The team also uses the platform to identify and remedy data-collection issues at the source, including eliminating outdated indicators and double-reporting that would have skewed data. Analytics are automated and click-to-configure, revealing insights that are easy to interpret and feed into the decision-making process.

With the help of Zenysis, health-program teams in Rwanda have reduced wastage of HIV test kits by scrutinizing tests performed against test results reported. The platform also triangulates TB drugs consumed against TB cases notified, so the team can monitor and improve patient compliance. RBC uses Zenysis for field visits too, identifying data abnormalities in advance so that visits are more productive.

Zambia

Analysts at Zambia's National Malaria Elimination Centre (NMEC) use the Zenysis platform to provide a complete picture of the country's malaria situation at both the facility and community levels.

By integrating surveillance data and health consumption data, NMEC staff use the platform to monitor malaria commodities, campaigns,

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cases, interventions and more. This enables decision-makers to uncover and remedy service-provision gaps, forecast more accurately and make adjustments when needed.

For example, by comparing bed-net distribution data to routine health data, the NMEC team identified the need to conduct more targeted interventions at the last mile to increase bed-net usage. NMEC has also used the continuous-monitoring data available in the platform to adjust the timing of indoor-spraying interventions in certain locations.

Togo

The Togolese Ministry of Health and Social Protection partnered with Zenysis to help its National Malaria Program (PNLP) better understand malaria transmission patterns, target interventions to reduce disease burden, and identify supply-chain inefficiencies.

By integrating seven previously separate health and malaria-specific data sources into the Zenysis platform, PNLP was able to better assess and optimize its malaria prevention campaigns. Using the

platform to analyze malaria incidence, morbidity and mortality, the team decided to align its seasonal malaria interventions based on actual district-by-district transmission patterns, instead of all at once in every district. Adjusting the start of anti-malaria campaigns in this way made more efficient use of PNLP resources.

PNLP also used the Zenysis platform to identify supply-chain inefficiencies. The team discovered that in one district, the Central Medical Store distributed 33% more artemisinin-based combination therapy (ACT) drugs than required. In another district, the Central Medical Store distributed 45% fewer ACTs than required, resulting in an average of 13 stock-out days for each health facility in that district. Triangulating data in this way to manage supply chains and prevent stock-outs is a common use case for the Zenysis platform.

Looking to the future
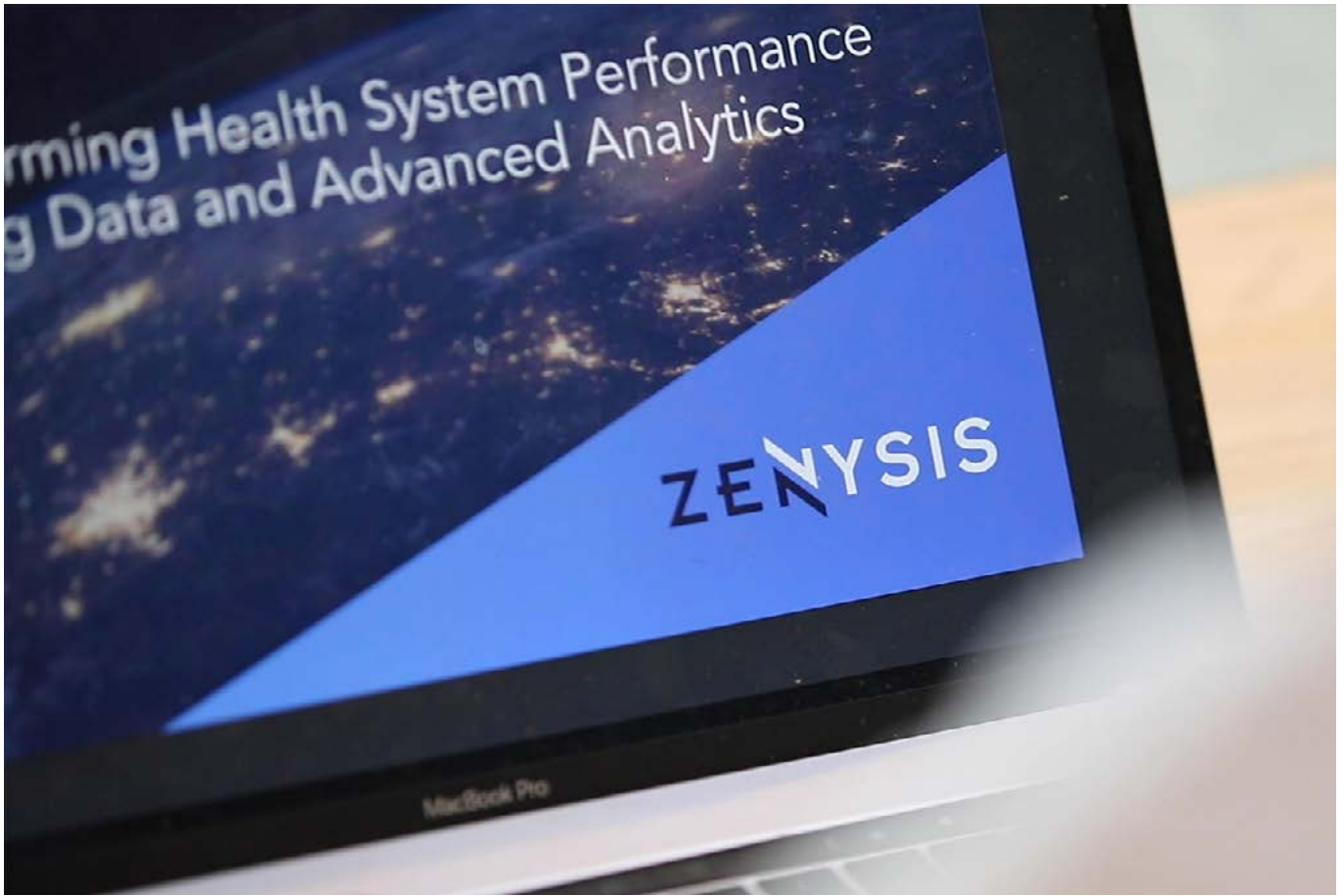
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Zenysis and the Global Fund share the same vision of a world free of AIDS, Tuberculosis and Malaria. Zenysis will support the achievement of the Global Fund's Strategy for 2023 -2028 through a number of initiatives:

- **Integration of new sources of health and non-health data into national data platforms**

- **Improved access to data at the community level to enable effective decision-making**

- **New analytical tools to assess gender- and human-rights barriers**

- **Powerful data analytics to unlock new insights**

- **Integration of private-sector service delivery data**

The Global Fund will continue to invest in supporting innovative digital-health approaches, including through funds like the Data Science Catalytic Fund (DSCF). With the support of a USD 15 million grant from The Rockefeller Foundation and an additional USD 10 million committed by the Global Fund, the DSCF aims to improve the collection and use of community health data in Rwanda, Uganda, Ethiopia and Burkina Faso.

We believe catalytic funds are a highly effective way of mobilizing the right expertise and capabilities from within the private sector, particularly in the area of data-driven health. The Global Fund is always open to discussions with technology providers, and we welcome funding and investment to support innovative public-private partnerships.