

December 2023

Smart Health Facilities

The United Nations Development Programme (UNDP) works with countries, communities and partners to bring technology-enabled green infrastructure solutions for resilient and sustainable systems for health.

Evolving health landscape

Globally, more than half the world’s population still lacks access to essential health services, revealing gaps in primary healthcare and Universal Health Coverageⁱ. As multidimensional crises become more complex and interlinked, progress toward achieving the SDGs requires new insight and innovative solutions. This is especially true of SDG 3 on healthy lives and well-being for all, where health sits at the nexus of multiple facets of development status and at the forefront of the pledge to leave no one behind. The emerging and prevailing trends shaping the health landscape cut across natural and human systems:

- Concurrent **pandemics**, increased antimicrobial resistance, increased risk of zoonotic spillover and co-morbidities
- Threats to health, health security and health systems spurred by **conflicts** and **climate change**, leading to migration and further precarity
- Need for increase in **health financing**, including pandemic financing, along with sustainable financing solutions
- Ensuring **equity and access** to accelerating medical innovation as well as increased demand for clean, reliable energy, **data**, **digital** and other innovative solutions

Clean, reliable energy and other technologies can influence equity, and health and well-being and

hold significant promise for our ability to navigate complex health system challenges.

From digital health solutions to support reliable tracking of healthcare waste and delivery of critical medical supplies, to clean, reliable energy for central medical storage facilities, national laboratories, and primary health clinics, strategic technology-based solutions can ease the climate, finance, disease, and other burdens on health systems while strengthening them in the process.

Innovative solution: Smart Health Facilities

In response to these trends, UNDP has defined key priorities for its work on health:

- Supporting countries to strengthen systems at the nexus of **climate, environment and health**
- **SDG acceleration and reaching furthest behind**, powered by SDG Insights, data & digital health and institutional moonshots on poverty and energy
- Developing solutions for **sustainability of pandemic responses and sustainable financing** for HIV and health
- **Pandemic prevention, preparedness and response**, including partnership with Center for Global Development on Pandemic, accreditation as Pandemic Fund implementing entity

Guided by these priorities, UNDP develops and deploys resilient and sustainable health system solutions. These **Smart Health Facilities (SHFs)** unlock the transformative potential of clean, reliable energy and digital technologies at scale to address chronic infrastructure gaps with smart solar solutions, better equip health systems to respond to and recover from pandemics and other shocks, improve the delivery of services through the last mile to ensure no one is left behind, and reduce health system costs from wastage, spoilage, energy, poverty and operational inefficiencies.

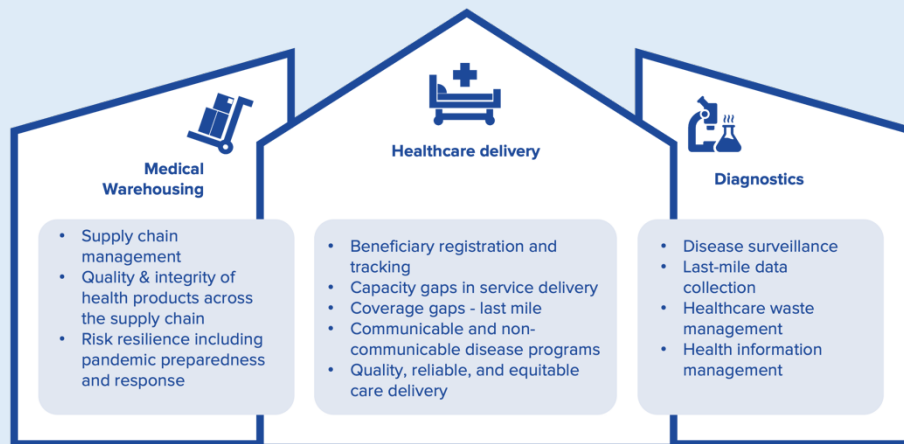
The SHF model aims to support countries to better meet the essential needs of their people at the scale required to leave no one behind. The SHF model involves:

- Bringing a **suite of smart technologies** tailored to a facility's needs that addresses key infrastructure gaps
- **Deploying technology through people**, re-situating healthcare workers as drivers of climate-forward system strengthening

- Equipping people with the **tools and systems they need to drive quality service delivery**
- Establishing a **mindset and momentum for progressive transformation** across all levels of a health system
- Setting countries on a path of **continuous system strengthening**

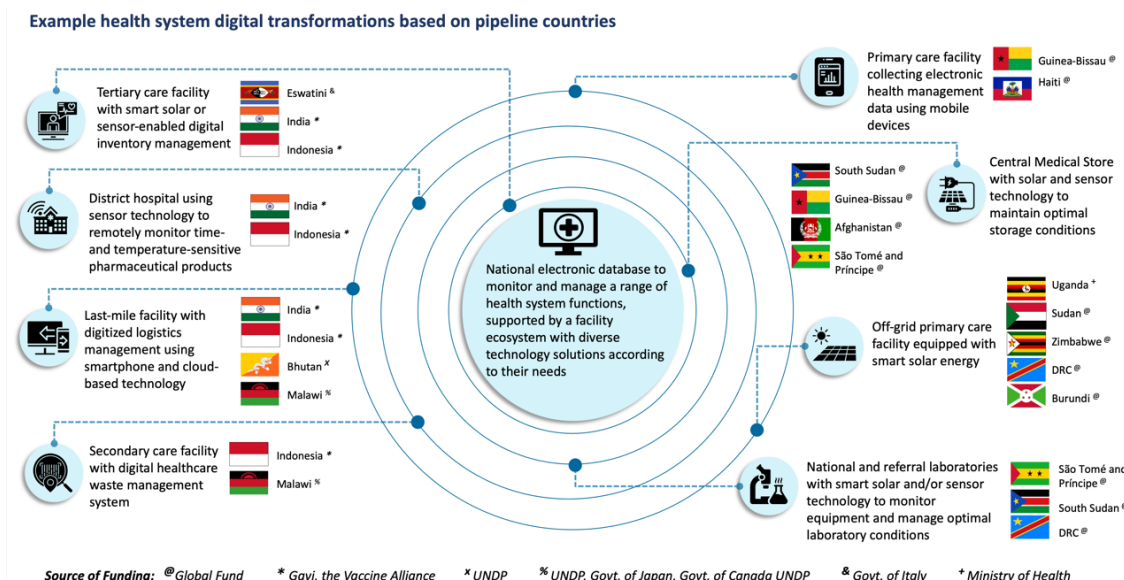
UNDP deploys these innovative solutions across different healthcare environments to address weaknesses in mission critical health system infrastructure.

UNDP's SHF work is guided by the [Strategic Plan 2022-25](#), [Digital Strategy 2022-25](#) and [HIV & Health Strategy 2022-25](#). The Global Fund for AIDS, TB and Malaria as well as Gavi, the Vaccine Alliance, have contributed to the platforms for some of the initial development of these solutions.



Track record

Ultimately, Smart Health Facilities are the building blocks of a Smart health system:



To date these solutions have resulted in:



Reliable tracking and delivery of **over 2.7 billion** routine immunization and COVID vaccine doses



Over 45,000 Smart Health Facilities operating across **13 countries**



Over \$50m investedⁱⁱ



Over 80,000 healthcare workers trained



\$3 in estimated savings to health systems for every \$1 investedⁱⁱⁱ



Recognition by SDG Digital as a “**game-changing solution**” to achieve the SDGs

They are further anticipated to^{iv}:



Mitigate **5,250 tonnes** of carbon



Produce **9.1 GWh** of green energy



Reduce energy costs to the health sector

This work is the culmination of several years of health system strengthening experience and incorporates multiple iterations from lessons learned across 1,000+ healthcare solarization sites and delivering technology-enabled solutions at scale, for example:

- [India \(Improving Vaccination Systems\)](#)
- [Indonesia \(Logistics Monitoring System\)](#)
- [Malawi \(Electronic Health Information Network\)](#)
- [Bhutan \(Digital Vaccine System\)](#)

UNDP's role

As the SDG integrator, UNDP has been well-placed to advance multi-benefit solutions like SHFs that draw upon innovations from varied technical domains, supported by dedicated global teams with expertise in:

- [Health systems](#)
- [Green energy solutions](#)
- [Digital health](#)
- [Digital Public Goods](#)
- [Innovative financing](#)

UNDP is well positioned in a range of contexts at both local and global levels in order to spearhead this work and expand learning. UNDP maintains long-standing, established relationships with key government ministries which are supported by a footprint in over 140 countries. We are also contributors in critical policy spaces such as the WHO-managed Global Initiative on Digital Health, UN-Energy and SEforALL, Health and Energy Platform of Action (HEPA).

Looking forward

In order to further develop robust solutions for health systems, the next phase of SHF work will continue to scale across and within countries. This will enable continued accumulation of knowledge and experience of the unique challenges and opportunities of technology-based health system solutions present. These efforts will enable us to continue to shape the agenda on clean energy, data and digital, innovation-based solutions for health systems and health equity.

ⁱWorld Health Organization and International Bank for Reconstruction and Development / The World Bank. 2023. Tracking Universal Health Coverage: 2023 Global monitoring report. Geneva. <https://www.who.int/publications/i/item/9789240080379>

ⁱⁱFor the first 3 years, including startup costs

ⁱⁱⁱBased on econometric analysis of Smart Health Facilities in India

^{iv}On an annual basis once all currently slated projects are online

Get in touch

If you are interested in knowing more, or to partner with us, please contact us at:

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