Digitalizing Inventory Management of Medical Supplies in Lower-Tier Health Facilities in Uganda

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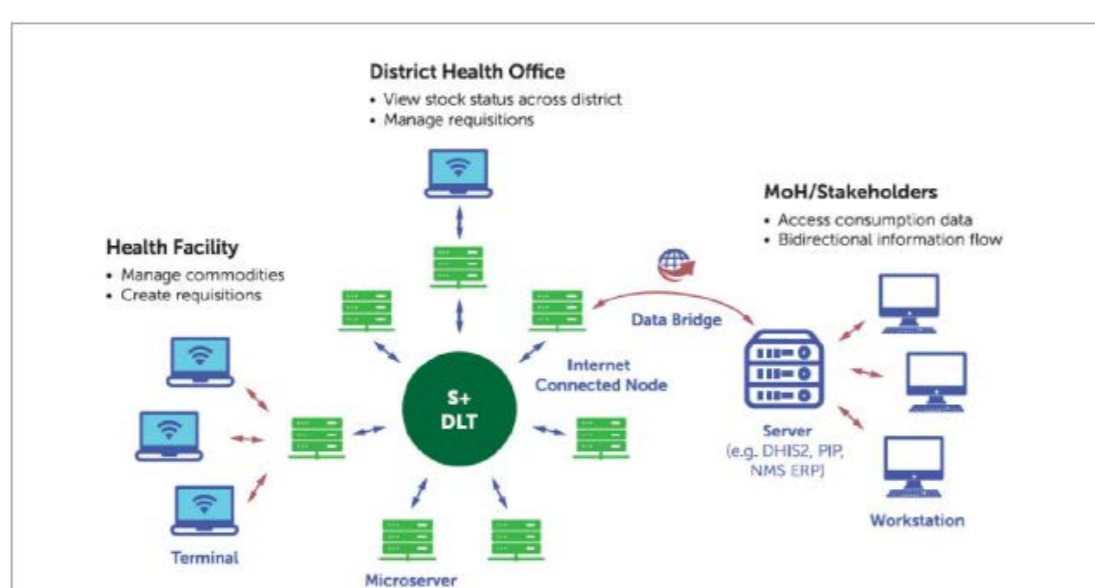
Background

- Lower-tier health facilities account for a large proportion of outpatient department visits and demand for Essential Medicines and Health Supplies in Uganda.

- However, lower-tier health facilities face chronic drug stockouts due to several reasons, including continued use of manual stock and inventory management systems that are paper-based and prone to human error, dependence on reports that are deficient of effective data quality checks, inadequate infrastructure to support digitization and procurement delays.

- Digitalizing inventory management processes can enhance supply chain efficiency and alleviate the burden on frontline health workers.

Methods

- To address the above challenge, UNCDF, Medical Access and Signalytic, in collaboration with Uganda's Ministry of Health, developed the *S+ Platform.*

- This innovative digital solution combined solar power, robust connectivity, durable hardware and distributed ledger technology to link remote health facilities and health providers to a common decentralized network.

- The *S+ platform* supported health facility quantification, ordering, reporting, stock management and redistribution of medicines to enable efficient forecasting and seamless procurement planning.
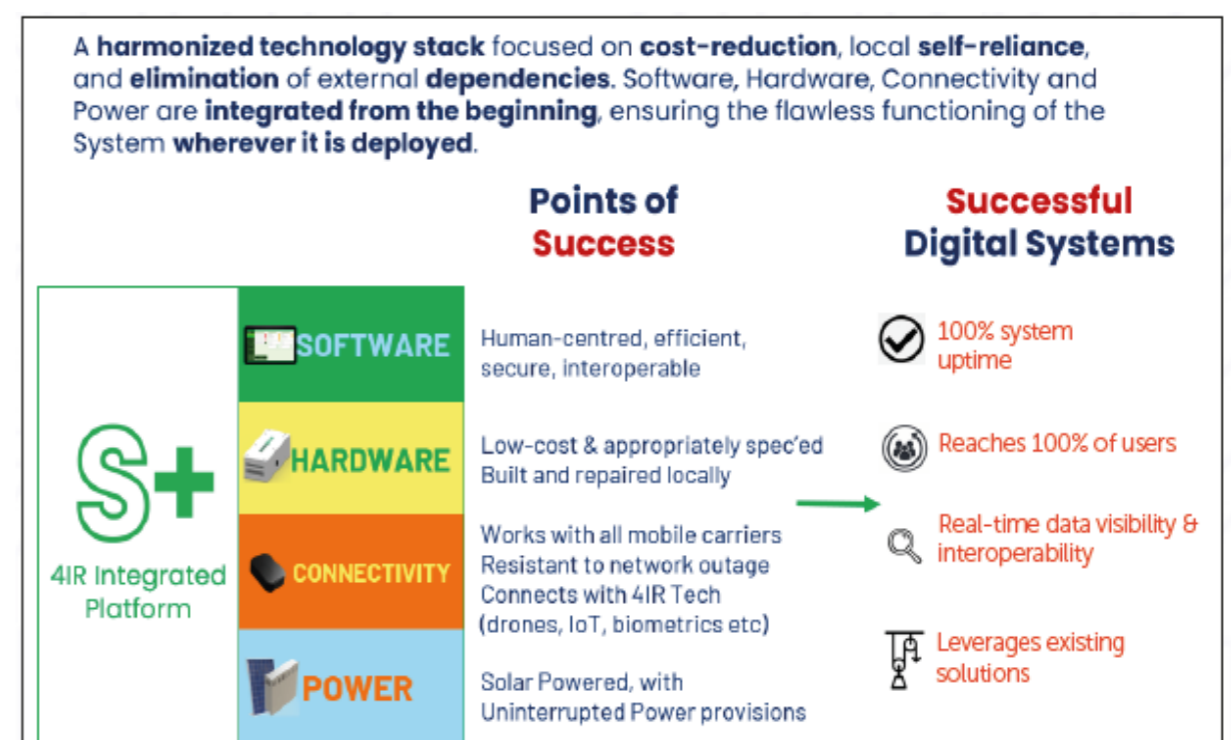
Figure 1: How the S+ Platform Works

Results

- The S+ platform achieved **100% uptime, seamless data synchronization between facilities, and strong network connectivity** across the 25 piloted lower-tier facilities in Uganda.

- The platform provided a more cost-effective, simpler, faster and reliable solution for supply chain visibility.

- Stock management improved from 20% to 60% among the 25 registered facilities by the end of the project, contributing to uninterrupted healthcare delivery and prevention of stock outs.

- These system-wide efficiencies created a more digitally inclusive and robust health system, resulting in savings and efficiencies.

Figure 2: Advantages of the S+ Platform

Impact

By leveraging technology to digitalize inventory management processes, the project has improved the efficiency and effectiveness of healthcare delivery (realized through better availability of essential medicines) at lower-level health centres in Uganda, ultimately enhancing patient care.

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