Data entry
Register clients and record all patient visits, stock and inventory using Smart Paper Forms - 70% time saved for frontline health workers

Scanning
Scan Smart Paper Forms - fast process with the speed of 2 pages per second

Digitisation
Automatically digitise all handwritten text and data - skip manual digital data entry

Quality assurance
Verify recording errors and system generated flags from your mobile device - skip manual data quality checks at health centres

Data for action
Automatic data integration with DHIS2, eLMIS, EHR, CRVS and other systems - skip manual data entry to DHIS2. Focus on achieving performance targets faster through SmartActions - https://shifo.org/doc/rmnch/SmartActions.pdf
Shifo Foundation developed Smart Paper Technology from the ground up to be the most affordable and effective HMIS and LMIS solution to improve routine data collection, reporting and use. Countries and donors save 90% of annual running costs and can afford to sustain the system perpetually without any foreign assistance.

**Data entry**
Register clients and record all patient visits, stock and inventory using Smart Paper Forms

**Smart Paper Forms** - Replace existing bulky and heavy register books and reporting forms with streamlined A4 Standard Smart Paper Forms. It saves 70% of health workers time per client. Forms are designed to register clients with unique ID, record client medical history, stock dispensations, cold-chain inventory and other important information. Any data you need is already in Smart Paper Forms. Forms are printed in the country and integrated to the routine supply-chain system to prevent stock-outs. No electricity, connectivity or security is required at the point of care to use Smart Paper Forms.

**Smart Paper Forms End-User** - An authorised person (Community and Frontline Health Worker or Pharmacist) who uses Smart Paper Forms during service delivery and medicine dispensation. Smart Paper Forms does not bring any significant behaviour change, and end-users can quickly adopt the solution.

**Scanning**
Scanning Smart Paper Forms and automatic uploading to the server for data processing

**Scanner** - Put Smart Paper Forms to a mobile scanner and press Start Button - Done. Scanner reads 2 pages per second. Scanners are placed at selected Health Centres and District Health Office with reliable electricity, connectivity and security. Scanners can work up to 10 years and cost like a mobile device. Maintenance is easy and done by end-users, bi-annually. Scanned Smart Paper Forms are archived at a Health Centre or District Health Office and available as a back-up online.

**Scanner End-User** - Data Clerk or Biostatistician at a Health Centre or District Health Office. Requires Login and Password.

**Digitisation**
Automatically digitise all handwritten text and data

**Digitisation** - Use AI Machine to do all the boring jobs - review Smart Paper Forms, clean the forms from all the dust, recognise ticks, numbers and text in more than 150 languages, run through automatic quality checks, and prepare all data for humans to use. All based on the cutting edge image processing and machine-learning algorithms.

**Digitisation End-User** - AI Machine installed at the Ministry of Health dedicated server or in the Cloud Server. Works day and night and takes a break during the routine maintenance and updates.

**Quality assurance**
Ensuring that data is above 99% accurate, consistent, complete and timely

**Quality assurance system** - Data Clerk or Biostatistician can simply verify the flags using a mobile device. The flags are created automatically when AI Machine detects poor handwriting, recording errors, damaged documents. The system identifies Health Centres with high data recording errors and prioritises for supportive supervision, to improve data quality.

**Quality Assurance System End-User** - Data Clerk or Bio-Statistician to verify the flags and conduct supportive supervision with low-performing Health Centres. Requires Login and Password.

**Data for action**
Automatic data integration with DHIS2, ERP, eLMIS, EHR, CRVS and other systems

**Data for action** - The system automatically generates all HMIS and LMIS Reports, Electronic Health Records and Electronic Birth Registers and integrates all data to DHIS2 and other systems, depending on what is used already. You skip all the manual data entry to DHIS2 and other systems. And the system creates and prioritises tasks to be done by Health Centres and Districts to achieve performance targets faster.

Smart Paper Forms are used at the point of health service delivery to register individual clients (women, children), assign unique ID and record delivery of health services and stock management:

**Daily Stock Register or Stock Card** - used to record all movement of stock within the health facility.

**Order Forms and Dispatch Vouchers** - used to record replenishment requests and actual replenished quantities and vendors.

**Shifo Registration Form** - used to register personal information of women and men receiving primary healthcare services. This form has pre-printed unique ID numbers.

**Shifo Women’s Registration Form Update** - used to update personal information of a woman, such as a new phone number or address.

**Shifo Antenatal Form** - used to record woman’s ID number and health services during antenatal service delivery.

**Shifo Intrapartum Form** - used to record woman’s ID number and health services during intrapartum service delivery.

**Shifo Postnatal Form** - used to record woman’s ID number and services provided during postnatal service delivery.

**Shifo Family Planning Form** - used to record the ID number of male or female and services provided during family planning service delivery.

**Shifo Birth Records** - used to register newborns and children under 5. This form has pre-printed unique ID numbers.

**Shifo Birth Records Update** - used to update personal information of a child, such as a new phone number or address.

**Shifo Immunisation and Supplementation Form** - used to record child’s ID number and services provided during child health service delivery.

**Shifo Monthly Return** - filled in on a monthly basis, this form is used to report the vaccine stock status, cold-chain and inventory updates, temperature monitoring data and actions taken to improve performance targets per specific indicator.

Monthly special reports, indicators, and tailored feedback reports that are shared by email, SMS, mobile app, Excel file, pdf reports and available online.

Individual electronic birth registration and health records are generated/updated by the system and can be integrated with national information systems (such as DHIS2, EHR, CRVS and other systems)

**Updated electronic registries** for reproductive, antenatal, intrapartum, postnatal and child health services.

**Monthly integrated reports** - tally sheets, daily summaries, HMIS, LMIS reports.

**Stock management reports** - processing algorithms calculate individual daily consumption of essential medicines and supplies, wastage rate, stock balance at health facility, demand for medicines and supplies for the upcoming month for a specific health facility based on set algorithms for supply needs (consumption or target-based). The stock requisition note is automatically sent to the district store / warehouse, based on which, medicines and supplies are delivered to health centres.

**Gaps report** - reporting of needs/gaps which are related to resources required to provide essential services. The Gaps report is shared with district health team, INGOs, UN agencies working in the specific district, and those with a mandate to close the gaps in health services.

**Electronic Performance Dashboard** - a web-based, integrated dashboard providing data on each fixed and outreach session performance that shows if the health centre is delivering services on schedule, and how many women or children visited each session.

**Medical Errors and Policy Violations Report** - special reports where medical errors and policy violations are highlighted. These cases are further investigated and feedback is given to the health workers.

**SMS reminders** - women and caregivers are asked to provide their mobile phone numbers if they have one. This information is used to generate and send out SMS reminders one day before scheduled visits.

**Follow up lists** - a list of defaulters is automatically generated and shared with health care workers on a monthly basis. Cross-checking child registers to find women and children who missed scheduled visits has previously been done manually, a time consuming task that was often skipped due to lack of time and resources. Smart Paper Technology Solution provides this list in a simple way so that community and frontline health workers can easily track those who have missed health appointments.