

## Existing System Components – Appendix J

System	Category	Tech Components
<b>DHIS2</b>	Storage	Relational database, PostgreSQL. Cloud storage for scalability, local data caching for offline access
	Communications	APIs for data integration, SMS/USSD for low-bandwidth communication, Internet for synchronisation
	User Interface	Web-based interface for centralized access, responsive design for mobile use, customizable modular design
	Reporting	Customizable report generation, real-time data visualization dashboards, analytics for health indicators, export options (CSV, Excel, PDF)
	Data Entry	Web forms, mobile apps with offline data entry options, validation rules to prevent data entry errors
<b>HIV Management System</b>	Storage	SQL databases for structured data storage, encrypted local storage for sensitive patient data, cloud backup options
	Communications	Secure data exchange protocols (HTTPS, HL7), APIs for cross-system integration, SMS/email notification for patient follow-ups
	User Interface	Desktop and mobile interfaces with customizable workflows, simplified screens for rapid data entry, role-based access
	Reporting	Predefined and customizable patient and aggregate data reports, HIV indicator tracking dashboards, data export tools
	Data Entry	Structured data entry forms, real-time validation, batch data entry options, integration with barcode scanners for patient identification

<b>EMR (Electronic Medical Record)</b>	Storage	Relational databases (MySQL, SQL Server), encrypted storage for patient data, local storage with sync for offline scenarios
	Communications	Interoperability standards (e.g., HL7, FHIR) for external system integration, secure messaging protocols for patient data, notification systems
	User Interface	Web and desktop interfaces, customizable for different medical workflows, user-friendly design for clinicians
	Reporting	Standardized and customizable reporting tools for patient outcomes, interactive analytics dashboards, automated reporting for regulatory compliance
	Data Entry	Electronic forms with standardized fields, options for structured and unstructured data entry, error-checking and validation mechanisms