Healthcare and Telecommunication

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Health System Sri Lanka

Location : Island nation in South East Asia

Area : 65,610 km²

Population : 21.67

Population density : 342 persons per sq. km

Health care expenditure : 3.5% GDP (USD 369)

Provide **free healthcare at the point of delivery** to every Sri Lankan

1085 State health care institutions providing ~ 90% inward care and ~50% out-patient care

Health System Sri Lanka : Achievements

- **Life expectancy at birth (years)**
  - **Female :** 78.6
  - **Male :** 72
- **Neonatal mortality rate (per 1,000 live births) :** 6.5
- **Infant mortality rate (per 1,000 live births) :** 9.1
- **Maternal Mortality Rate (100,000 live births) :** 39.3
- **Institutional deliveries :** 99.9 %
- **Diseases eliminated :** Malaria. Filariasis, Polio, Rubella, Measles

Health Goals

OUR VISION

A healthier nation that contributes to its economic, social, mental and spiritual development.

OUR MISSION

To contribute to social and economic development of Sri Lanka by achieving the highest attainable health status through promotive, preventive, curative and rehabilitative services of high quality made available and accessible to people of Sri Lanka. Objectives are;

To empower community for maintaining, promoting their health

To improve comprehensive health services delivery actions

To strengthen stewardship management functions

To improve the management of human resources

Current health system challenges

◦ Increased healthcare demand

◦ Ensuring Universal Health Coverage

◦ inadequate capacity, limited access to specialist care

◦ Inconsistent service standards

◦ Disparity in care between rural and urban areas

◦ Primary focus on curative

◦ High healthcare expenditure
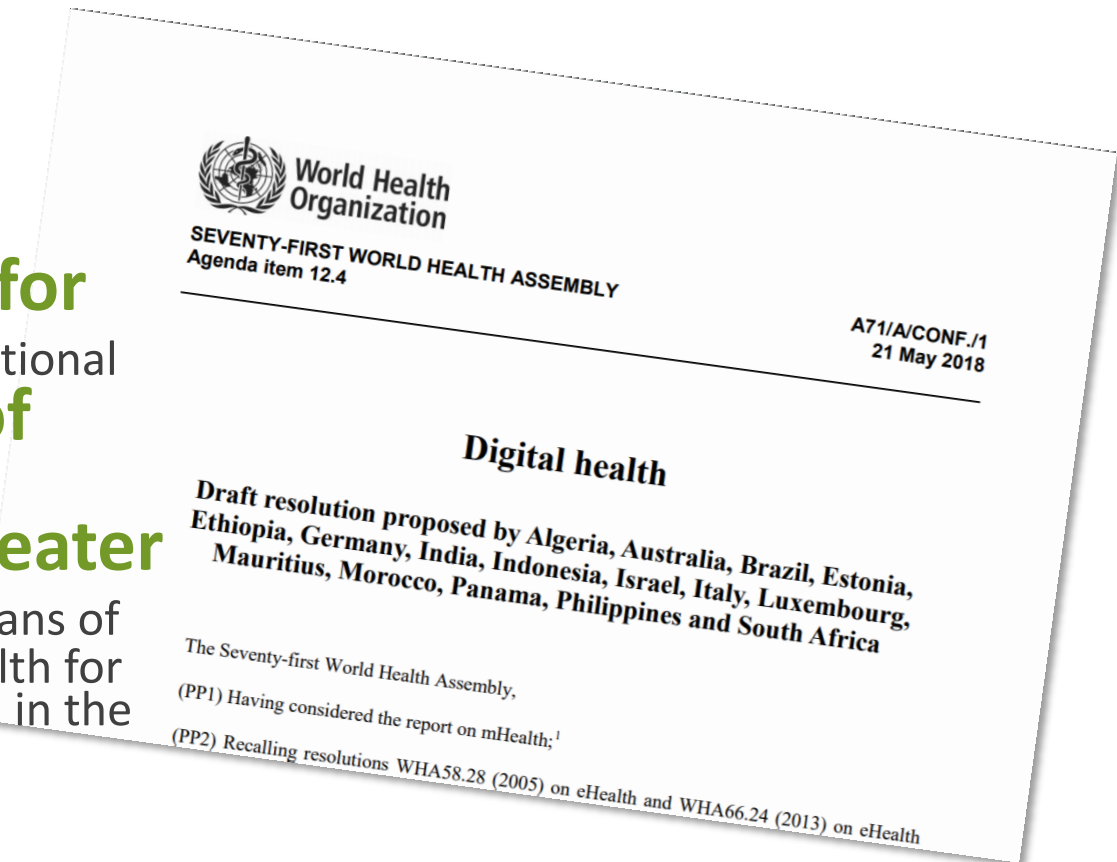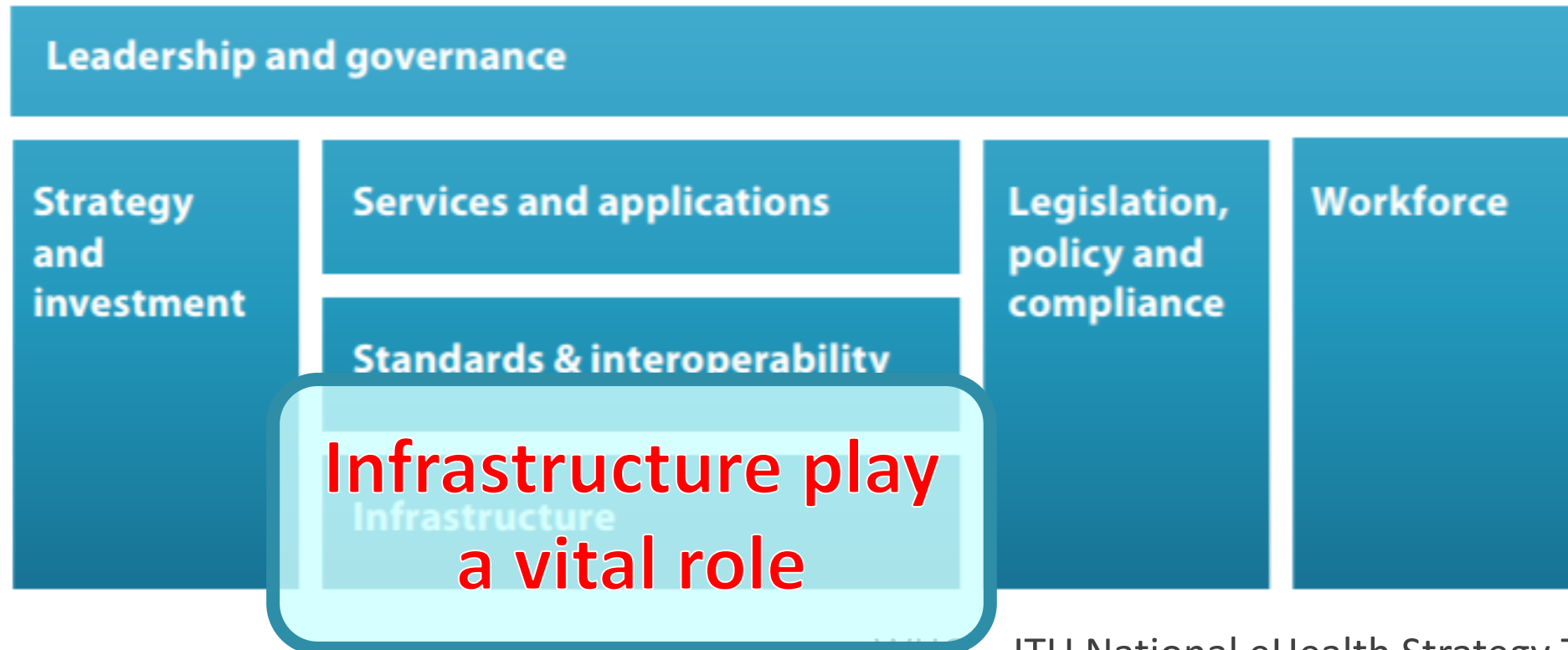
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Digital Health Potential

FIGURE 1 LAYERS OF UHC ACHIEVEMENT AFFECTED BY HEALTH SYSTEM PERFORMANCE

HEALTH SYSTEM CHALLENGES LIMITING UHC FOR TARGET POPULATION

AFFORDABILITY — **FINANCIAL COVERAGE** *The proportion of patients protected from impoverishment due to health-related costs*

QUALITY — **EFFECTIVE COVERAGE** *The proportion of individuals receiving satisfactory health services among the target population*

DEMAND — **CONTINUOUS COVERAGE** *The extent to which clients receive the full course of intervention required to be effective*

CONTACT COVERAGE *Proportion of clients who have contact with relevant facilities, providers and services among the target population*

AVAILABILITY OF COMMODITIES AND EQUIPMENT *Ensuring availability of commodities and equipment*

SUPPLY — **AVAILABILITY OF HUMAN RESOURCES** *Ensuring availability of human resources*

ACCESSIBILITY OF HEALTH FACILITIES *Ensuring access to health facilities*

ACCOUNTABILITY — **ACCOUNTABILITY COVERAGE** *The proportion of those in the target population registered into the health system*

TARGET POPULATION

Source: adapted from Tanahashi, 1978.

Potential for Digital Health Interventions

Digital health focus

World Health Organization WHA71.7 (2018)

OP1. URGES Member States:

(1) to assess their **use of digital technologies for health**, including in health information systems at the national and subnational levels, in order **to identify areas of improvement**, and to prioritize, as appropriate, the development, evaluation, implementation, scale-up and **greater utilization of digital technologies**, as a means of promoting equitable, affordable and universal access to health for all, including the special needs of groups that are vulnerable in the context of digital health;

World Health Organization

SEVENTY-FIRST WORLD HEALTH ASSEMBLY
Agenda item 12.4

A71/A/CONF./1
21 May 2018

Digital health

Draft resolution proposed by Algeria, Australia, Brazil, Estonia, Ethiopia, Germany, India, Indonesia, Israel, Italy, Luxembourg, Mauritius, Morocco, Panama, Philippines and South Africa

The Seventy-first World Health Assembly,

(PP1) Having considered the report on mHealth;[1]

(PP2) Recalling resolutions WHA58.28 (2005) on eHealth and WHA66.24 (2013) on eHealth

Digital Health Building Blocks

Leadership and governance

Strategy and investment

Services and applications

Standards & interoperability

Infrastructure

Infrastructure play a vital role

Legislation, policy and compliance

Workforce

-WHO – ITU National eHealth Strategy Toolkit

WHO – ITU Categorization of Digital Health Interventions

Enabled through telecommunication
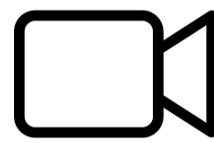
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Voice / Video / Data

Clients

- **Citizen based reporting**
  - Dengue tracking app
- **On-demand information services to clients**
  - Weekly Epidemiology Reports
  - Public health websites and social media for information dissemination
- **Client financial transactions**
  - Planned implementation of open source Insurance Management Information System
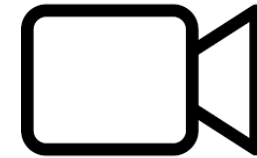
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Healthcare providers

◦ **Client Identification and Registration** – Personal Health Number for every Sri Lanka

◦ **Client Heath Record** – National electronic health record planned under the primary health care reorganization

◦ **Health worker Decision Support** – State HIS systems planned to be upgraded with Clinical Decision Support to enable CVD Risk assessment, Drug interactions, Allergies alerts, Rational antibiotic prescribing, etc.

◦ **Telemedicine** – Suwasariya 1990, Healthnet (Health Promotion Bureau) 0710 107107,

Voice / Video / Data

Healthcare providers

◦ **Health worker communication** – Emergency SMS system for Accident Service, NHSL

◦ **Referral coordination** – To be implemented for primary healthcare reorganization

◦ **Health worker activity planning and communication**

◦ **Health worker training** – Digital Health Academy

◦ **Prescription of medication and management** – Computerized Physician Ordering Modules in HIMS and HHIMS systems

◦ **Laboratory and Diagnostic Image Management** – LIMS and PACS/RIS modules in HIMS and HHIMS systems
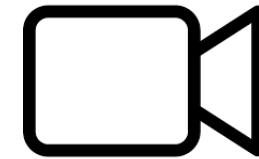
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Healthcare Managers

◦ **Human resource Management** – Human Resource Management Information System (HRIS) and Human Resource Management Information System(HRMIS) for Doctors

◦ **Supply chain management** – Medical Supplies Information System (MSIS)

◦ **Public health event notification** – FluSys, DenSys, WebIIS, e-Surveillance, e-AEFI

◦ **Civil registration and vital statistics** – Verbal Autops (SmartVA)

◦ **Health Financing** -

◦ **Equipment and assist management** -

◦ **Facility management** -
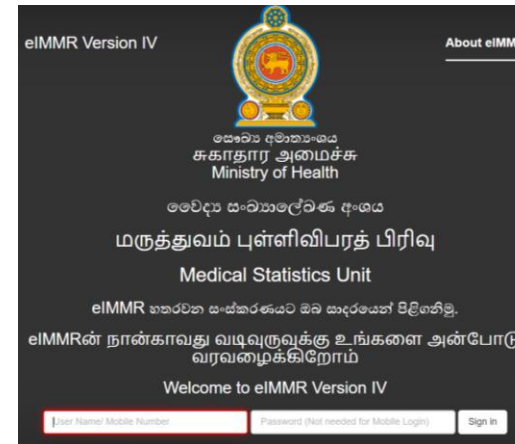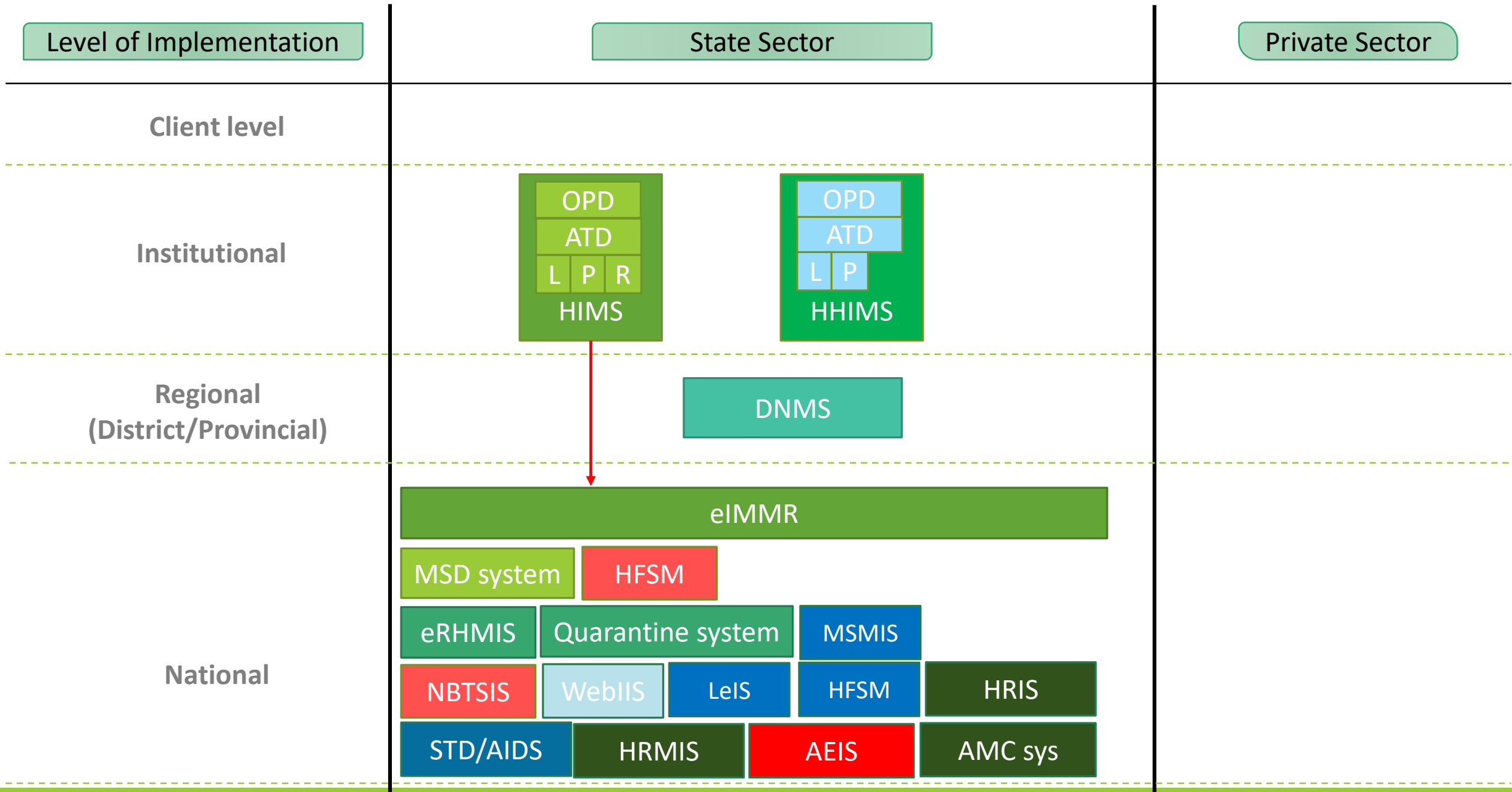
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Data services

◦ **Data Collection Management and Use** – Aggregate data management systems based in District Health Information Management System 2 (DHIS2)

◦ **Data coding** – ICPC 2, ICD 10 coding systems for statistical analysis

◦ **Location management** – National Spatial Data Initiative

◦ **Data exchange and interoperability** -

Level of Implementation	State Sector	Private Sector

Client level

Institutional

OPD
ATD
L | P | R
HIMS

OPD
ATD
L | P
HHIMS

Regional (District/Provincial)

DNMS

National

eIMMR

MSD system | HFSM

eRHMIS | Quarantine system | MSMIS

NBTSIS | WebIIS | LeIS | HFSM | HRIS

STD/AIDS | HRMIS | AEIS | AMC sys

ATD – Admission, Transfer & Discharge, DNMS – District Nutrition Monitoring System, eIMMR – Electronic IMMR, eRHMIS – Electronic Reproductive Health Info system, WebIIS – Web based Immunization Info system, L – Laboratory, P – Pharmacy, R – Radiology

Future potential

5G Telecommunication

- Shifting of more Health Information Systems (HIS) to cloud based platforms due to higher bandwidth and reliability.

- Realtime applications such as remote surgery could be introduced when an economic justification can be made.

- Remote patient monitoring applications in appropriate settings

- Better telemedicine interventions

- Video conferencing to streamline healthcare administration

Thank you.

MINISTRY OF HEALTH, NUTRITION AND INDIGENOUS MEDICINE, SRI LANKA