Panel discussion

Digital Technology for Aging Society

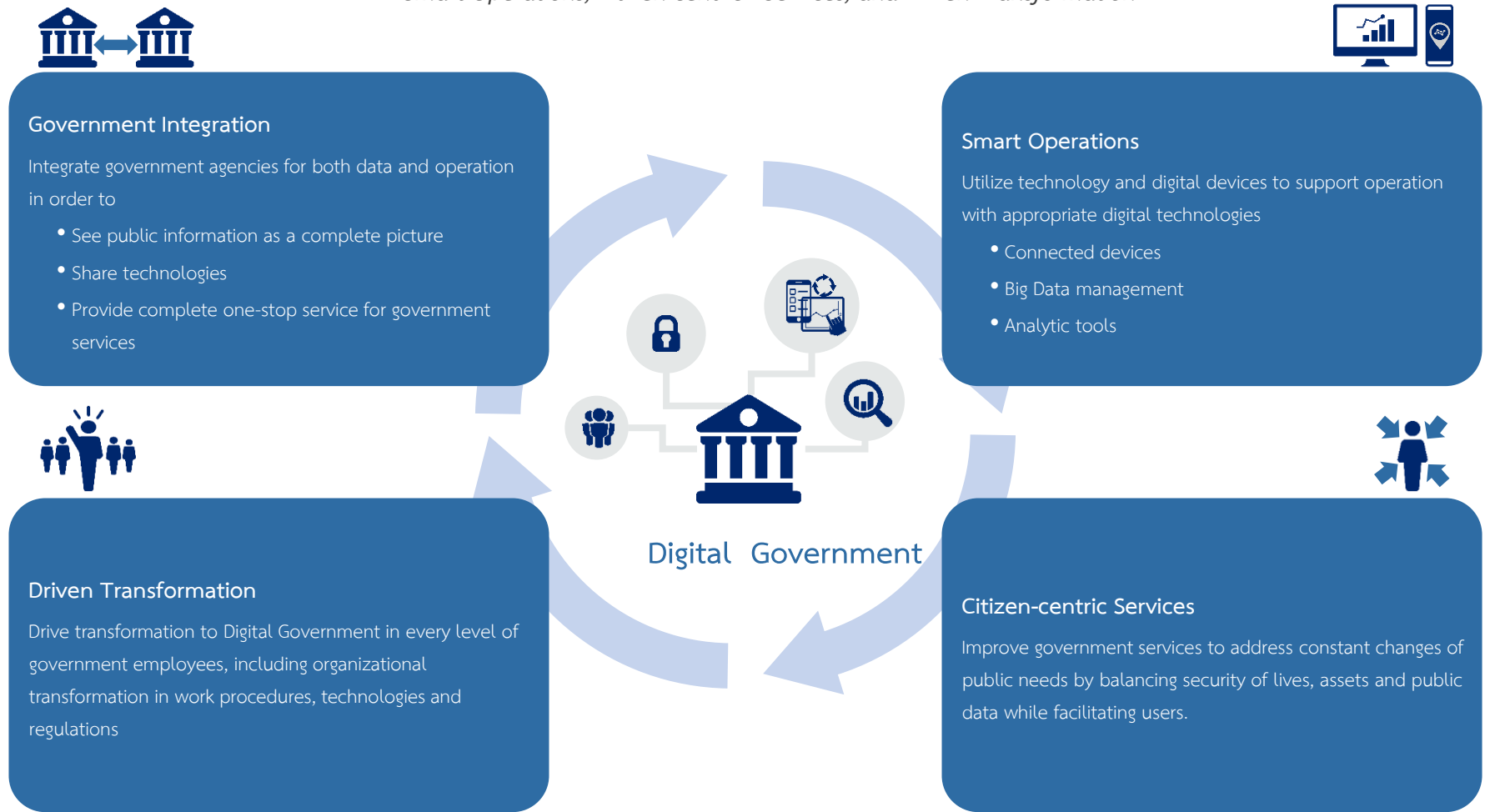## AI & Policy for Healthcare

Mr. Sak Segkhoonthod

President of Digital Government Development Agency
(Public Organization) (DGA)

Vision of Digital Government

Enhance Thai Government to become Digital   Government with Government Integration,
Smart Operations, Citizen-centric   Services, and Driven Transformation

Government Integration

Integrate government agencies for both data and operation in order to
- See public information as a complete picture
- Share technologies
- Provide complete one-stop service for government services

Smart Operations

Utilize technology and digital devices to support operation with appropriate digital technologies
- Connected devices
- Big Data management
- Analytic tools

Digital Government

Driven Transformation

Drive transformation to Digital Government in every level of government employees, including organizational transformation in work procedures, technologies and regulations

Citizen-centric Services

Improve government services to address constant changes of public needs by balancing security of lives, assets and public data while facilitating users.

(Draft) Thailand Digital Government Development Plan 2017-2021

Government Integration
Integrating data and operation among agencies

Smart Operations
Using technology and digital devices to support operation with suitable technology usage

Citizen-centric Services
Improving Government services to serve changing public demand

Driven Transformation
Driving transformation to Digital Government in every level of Government officers

Elevating Citizen's Quality of Life

- Public Welfare
- Labour
- Education
- Health

Enhancing the Capacity of the Business Sector's Competitiveness

- Agriculture
- Tourism
- Investment
- Trade (Imports & Exports)
- SMEs
- Tax and Revenue
- Transportation
- Public Utility

Increasing National Security and Public Safety

- Public Safety
- Border Management
- Natural Disaster
- Crisis Management

Improving Government Efficiency

- Finance
- Procurement
- Asset Management
- Human Resource and Payroll

Developing the Capacity to Support Government Services

- Data Integration
- Data Authentication and Verification
- Information
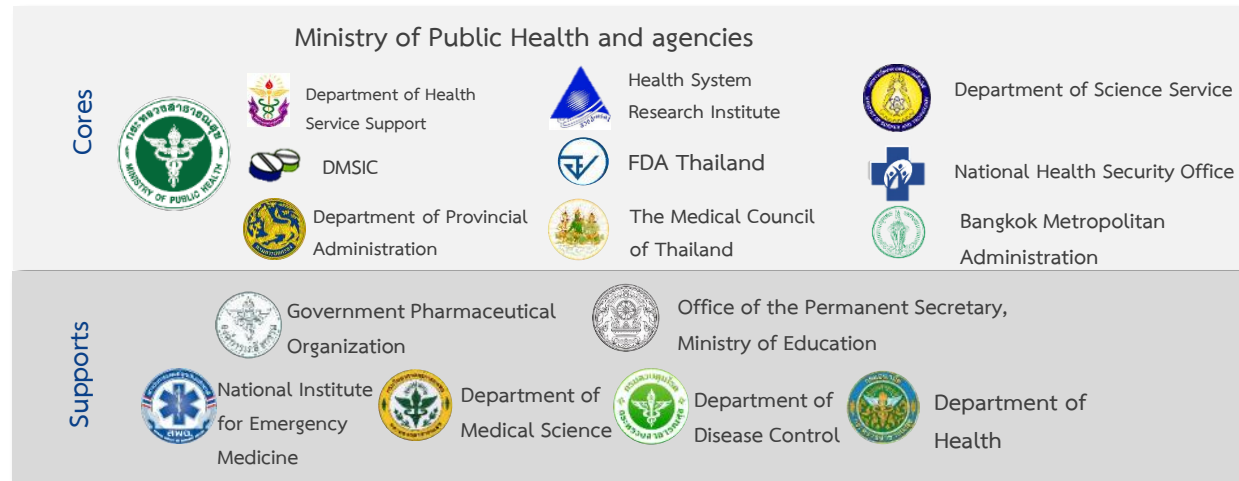- Feedback
- Digital Government Infrastructure
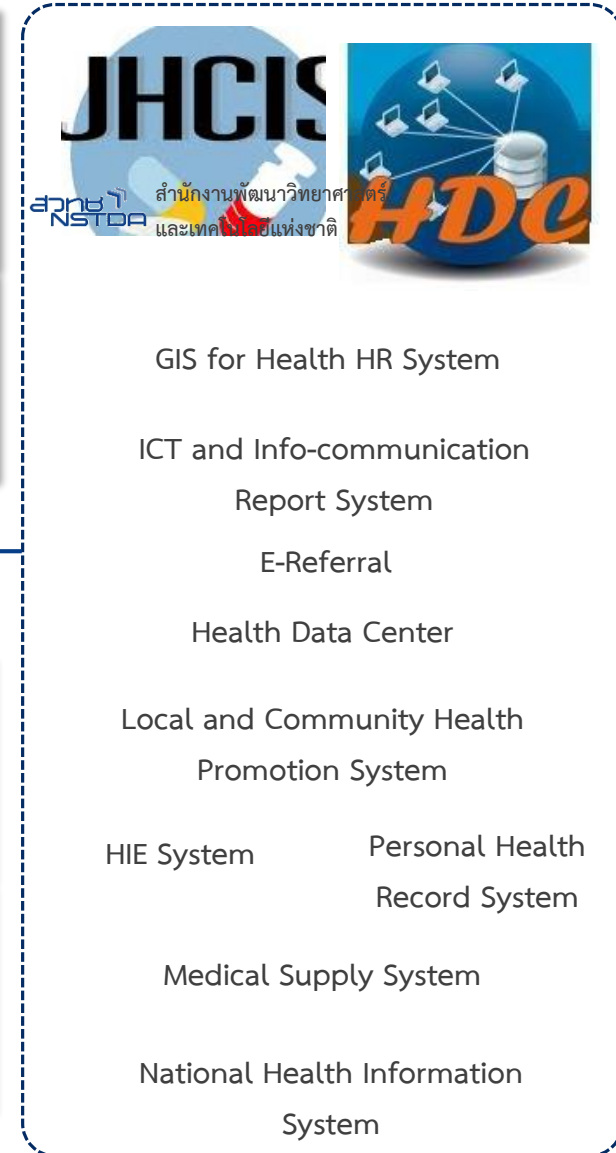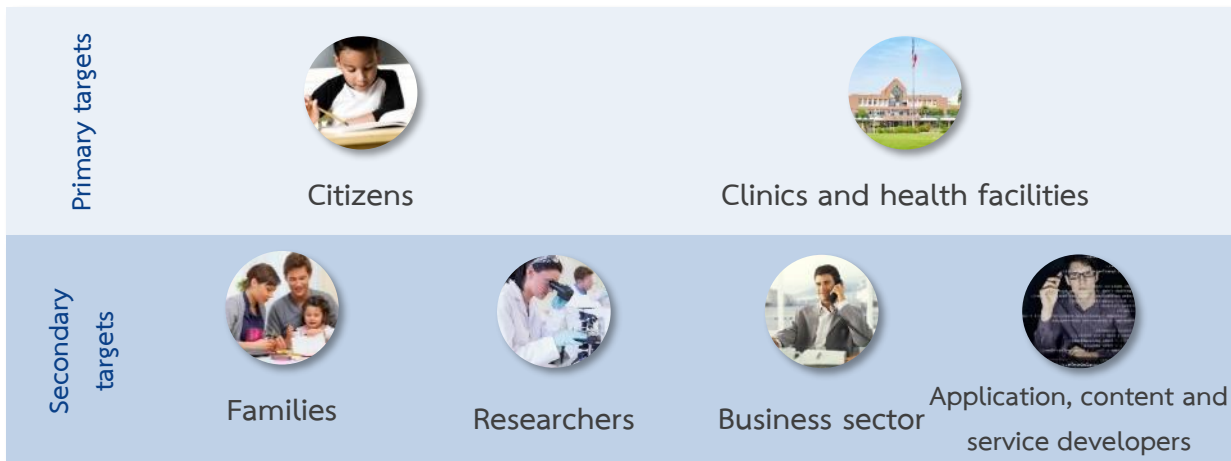- Digital Government Capacity Building

* Relevant laws, regulation and measure amendment is operated under Strategy 6 of Thailand Digital Economy and Society Development Plan

Stakeholders

Ministry of Public Health and agencies

Cores

- Department of Health Service Support
- DMSIC
- Department of Provincial Administration
- Health System Research Institute
- FDA Thailand
- The Medical Council of Thailand
- Department of Science Service
- National Health Security Office
- Bangkok Metropolitan Administration

Supports

- Government Pharmaceutical Organization
- National Institute for Emergency Medicine
- Department of Medical Science
- Office of the Permanent Secretary, Ministry of Education
- Department of Disease Control
- Department of Health

Current healthcare services

Primary targets

- Citizens
- Clinics and health facilities

Secondary targets

- Families
- Researchers
- Business sector
- Application, content and service developers

JHCIS

สวทช NSTDA สำนักงานพัฒนาวิทยาศาสตร์ และเทคโนโลยีแห่งชาติ

HDC

- GIS for Health HR System
- ICT and Info-communication Report System
- E-Referral
- Health Data Center
- Local and Community Health Promotion System
- HIE System
- Personal Health Record System
- Medical Supply System
- National Health Information System

# Strategic Technology Trends for Digital Government

Virtual Reality / Augmented Reality

Application of Virtual Reality (VR) and Augmented Reality (AR) technologies in simulating environment or situations for the purpose of public safety management, telemedicine, and new formats of education and tourism

Advanced Geographic Information System

Application of Advanced Geographic Information System technology in geographical data management, as well as its applications in management of agricultural resources, transportation system and other areas
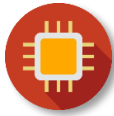
Big Data

Processing big data and make forecasts and estimations in business environment, using Internet of Things (IoT) and Smart Machine technologies to perform real time analysis and responses with users

Open Any Data

Disclose informative data to users through refurbishment of database and website to allow wider public access and promote linkage of those disclosed data with other entities

Smart Machine / Artificial Intelligence

Application of Smart Machine technology to enable management and responses of automated services - the Smart Machine system will gradually evolve and consequently be able to evaluate and address problems throughout the service supply chain

Cloud Computing

Application of Cloud Computing technology for data storage to reduce complication in system installation, reduce system maintenance cost, and save network establishment investment

Cyber Security

Addressing cyber security issues by setting cyber security standards, revising related regulations to make them more updated and flexible, as well as reforming the mindsets in handling cyber security issues

Internet of Things

Using the Internet of Things (IoT) technology to facilitate the transformation of government services into digital formats, and at the same time, the IoT technology can also support government's works in communication, utilization of mobile technology, analyzing big data, and cooperation with private business sector

Block Chain / Distributed Ledger Technology

Application of Block Chain technology in data storage and utilization of the network for the purpose of verification and reduction of intermediaries under reliable security environment

Health Data Center (HDC)
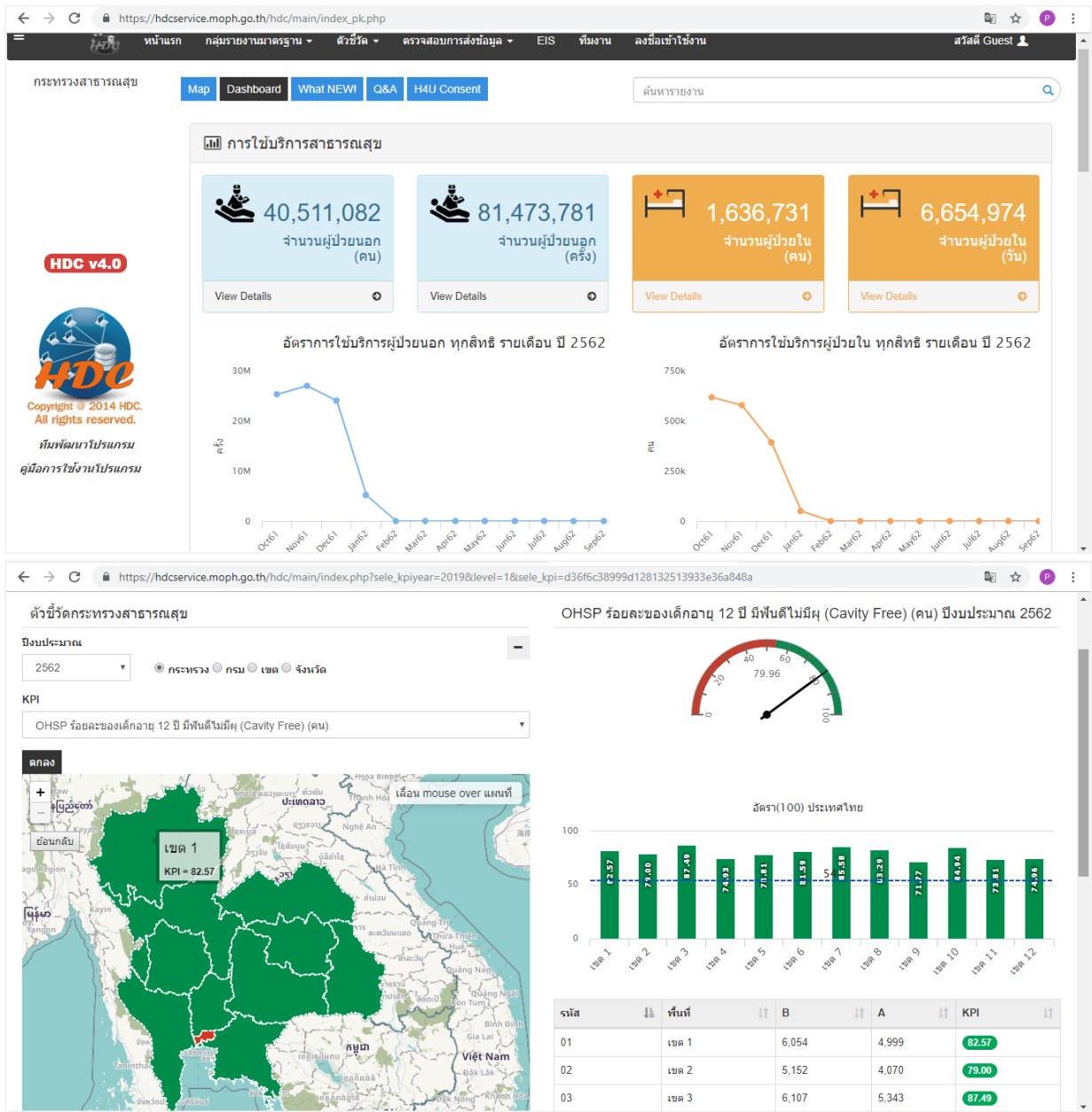
DoctorAsks

Research Institute for Languages and Cultures of Asia, in cooperation with DGA, developed a tool for promoting common understanding among ASEAN members and piloted "DoctorAsks", a medical communication application.

Rama Appointment

Rama Appointment is an assistive application used to access Ramathibodi Hospital's services, including appointment schedule and management. The application provides an reachable channel to customers, advances perception with the public and increases patient satisfactory
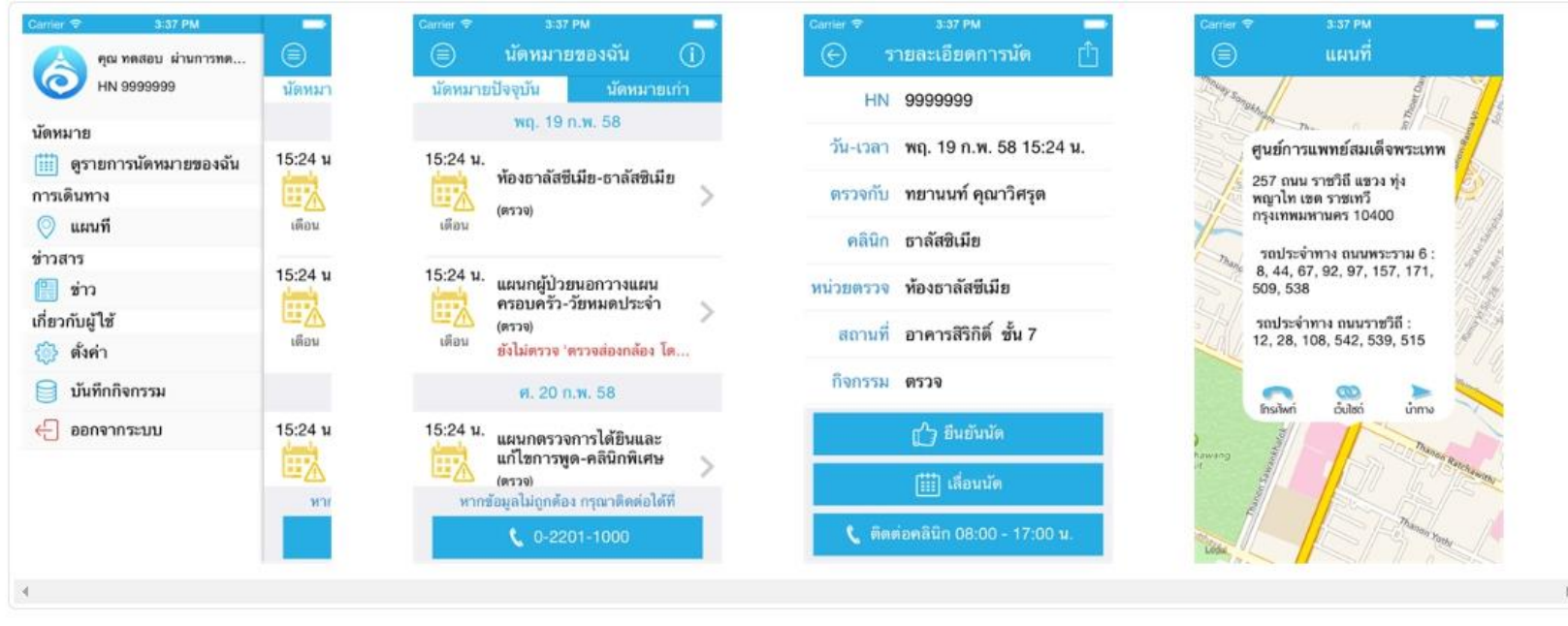
e-Referral and Blockchain

Architecture

- **Virtual Hospital #1** (Tertiary Care) + HIS
- **Virtual Hospital #2** (Secondary Care) + HIS
- **Virtual Hospital #3** (Primary Care) + HIS

V Node With document storage

V Node

V Node With document storage

V Node With document storage

HYPERLEDGER

- eRefer Portal
- Dashboard & Report

Using web-based eRefer with NHSO's document storage

Virtual NHSO

Patient

Process

Hospital A
1. refer to Hospital C

Referral

Refer

2. get patient historic data

3. Got Patient data

Hospital B
Collect

Hospital B

4. notify patient referral

5. accept/reject

Hospital C

BlockChain

for Government

Services

Download

https://www.dga.or.th/th/profile/2128/

GENOMICS THAILAND

2020 - 2024

Genomics Thailand = Future of Medicine

- Genomics knowledge and technology
- Whole genome sequencing

- **Shifting** medical paradigm
  - Diagnosis
  - Prevention
  - Treatment

Parenthood planning

- Congenital Anomaly detection
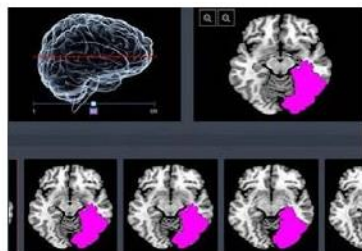- Genomic disease diagnosis and treatment

Diagnosis-Prevention-Treatment
- Infectious diseases
- Severe adverse reaction

Diagnosis-Prevention-Treatment
- Cancer
- Non-communicable diseases

Thank you

Contact Us

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