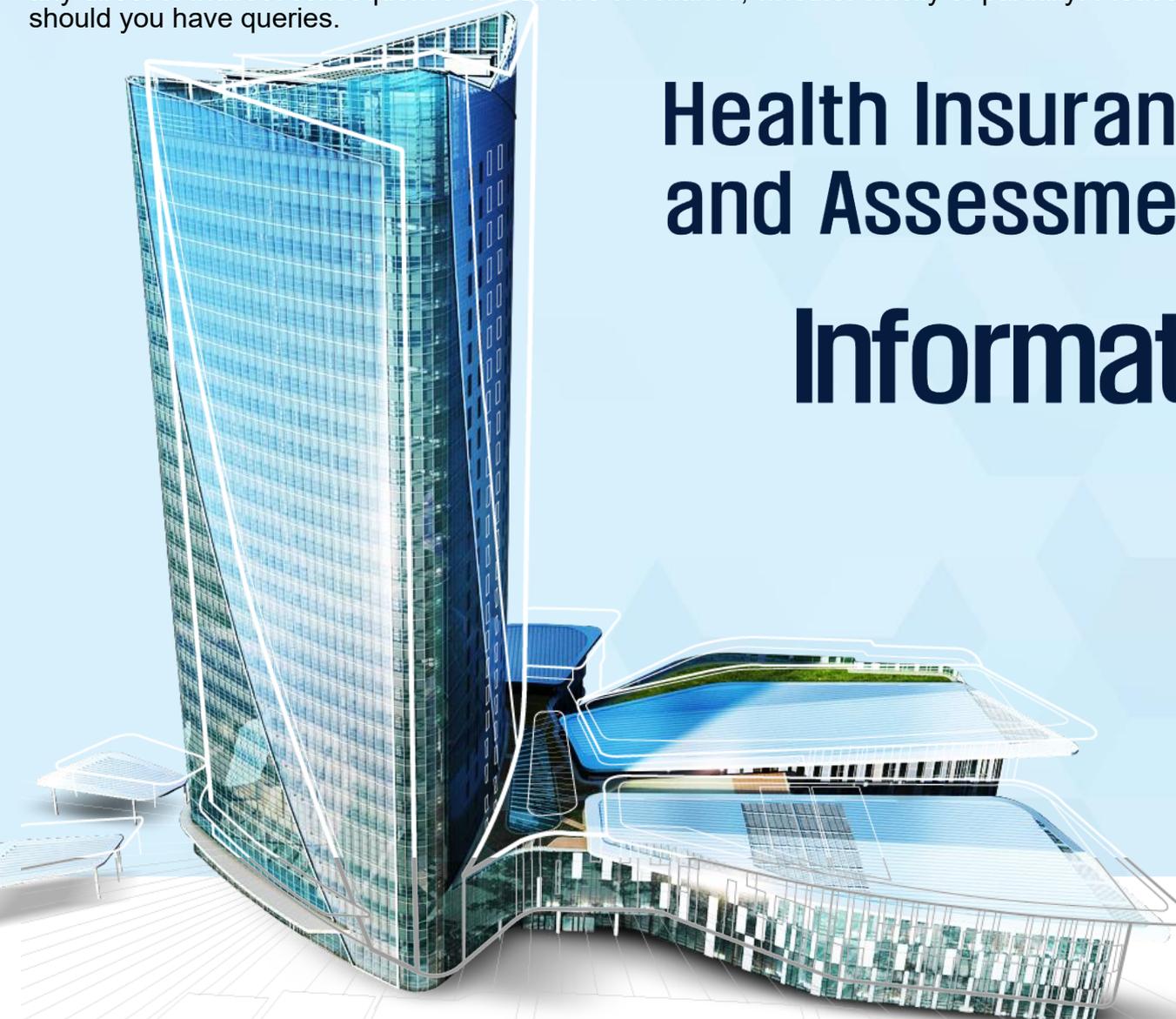


This is not an ADB material. The views expressed in this document are the views of the author/s and or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the government they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.

Health Insurance Review and Assessment Service Information (ICT) System



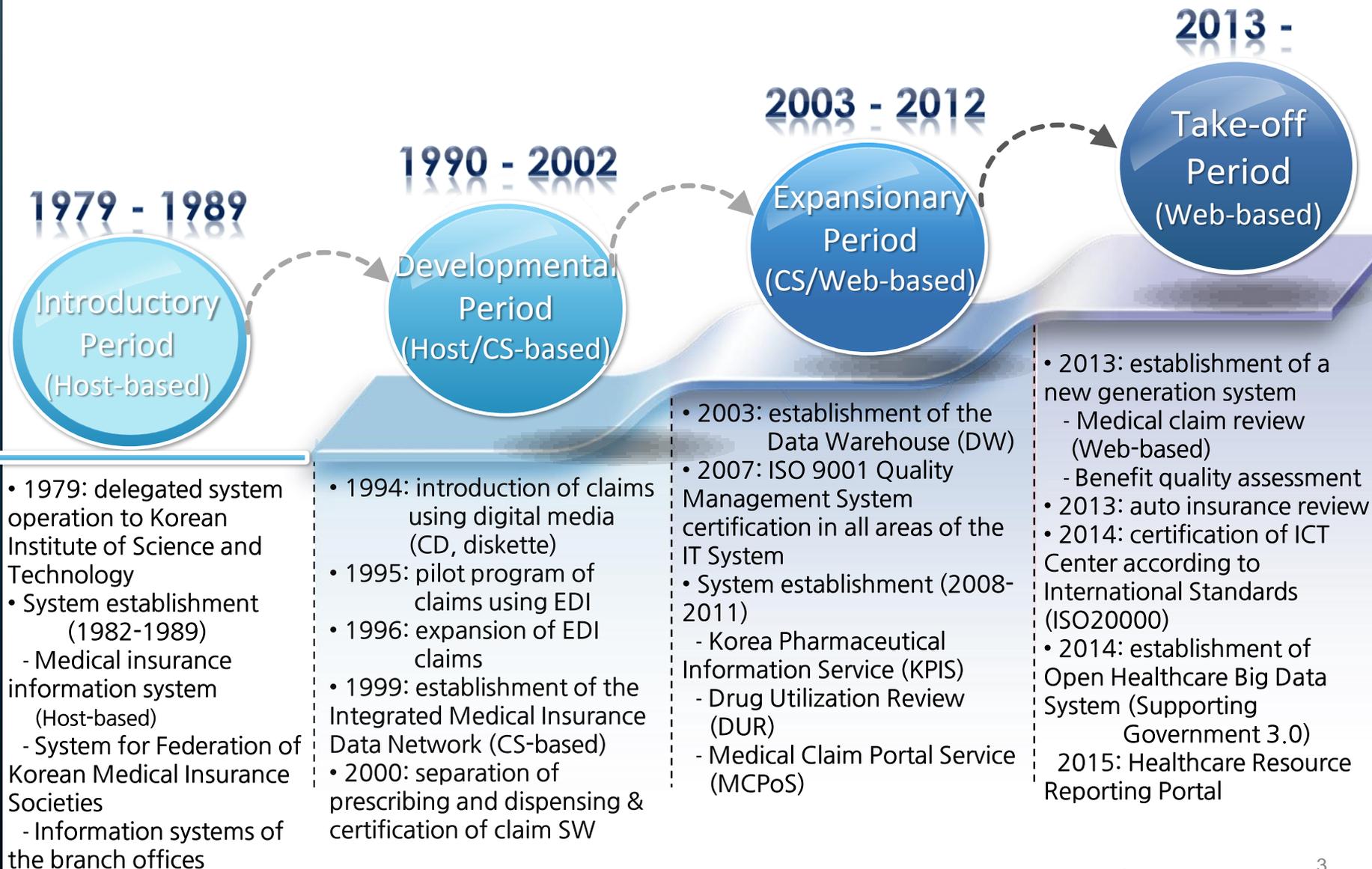


CONTENTS

- 01 Development(History) of HIRA ICT
- 02 Business Environment
- 03 Major systems
- 04 Security and operation
- 05 Certifications and Patient



Development(History) of ICT System



Business Environment

Indicators



91,545 providers



1.5 billion claims annually



USD 72 billion in medical fees annually

Requirements

Quick and accurate processing of large amounts of data

Expansion of real-time services such as DUR

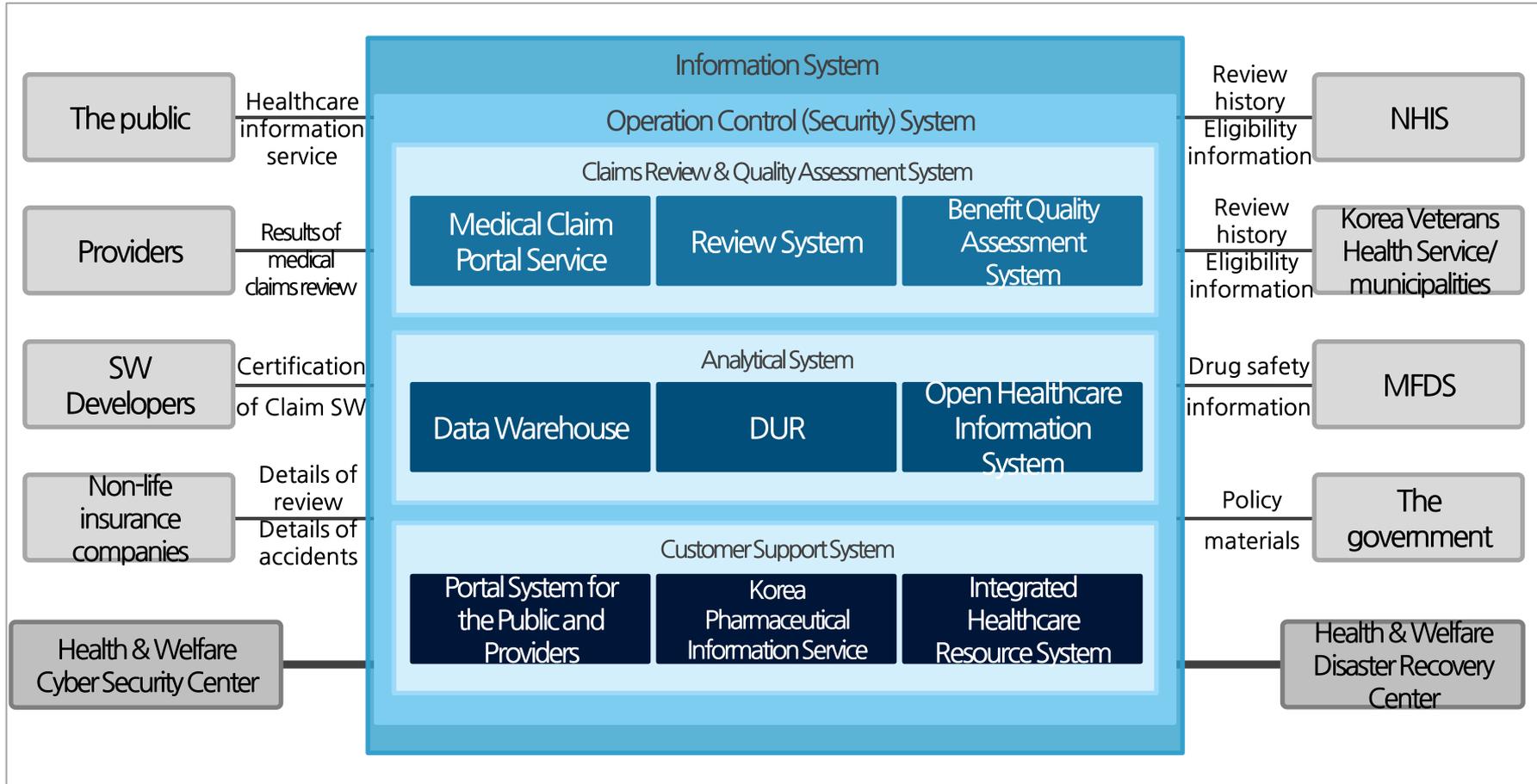
Better protection of privacy and a more stable IT system

Scale of the ICT System

Servers	187 UNIX servers (329 small- to medium-sized servers)
Disk storage size	3.4PB
No. of programs	69,000 copies
No. of personnel	264

Major systems

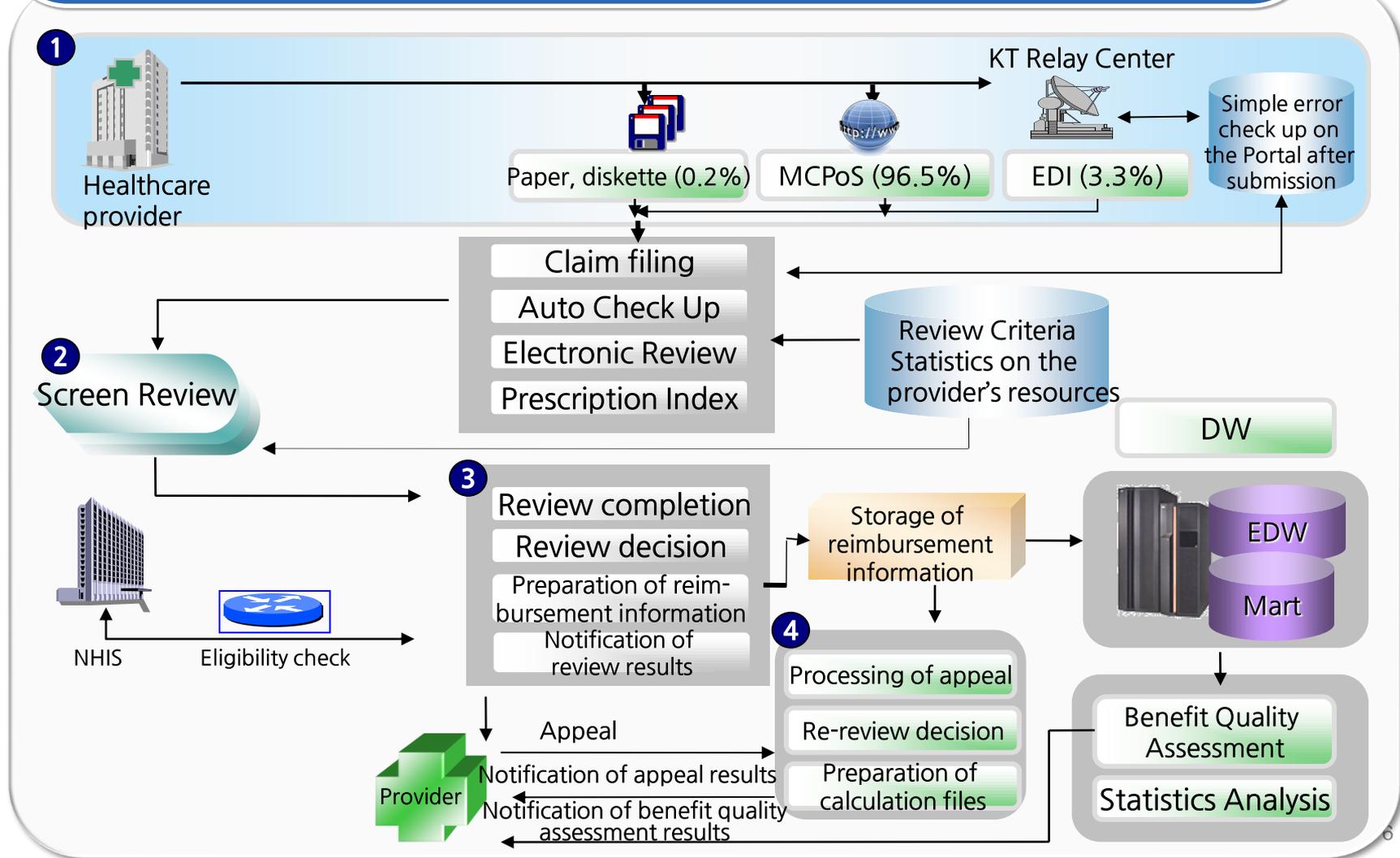
– organization of information system



Major systems

– Medical claims review system

Receipt of claims (automatic check Up) → (Screen) Review → Decision → Post-Factum Management/Monitoring



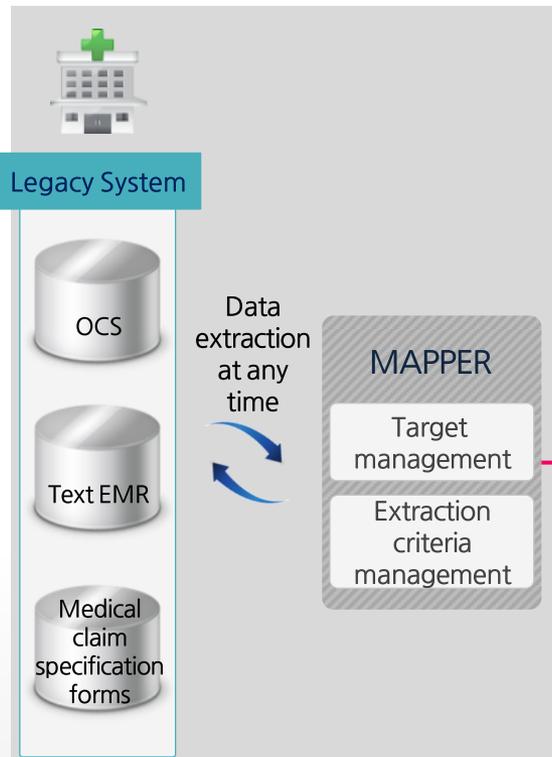
Major systems

- Benefit quality assessment system

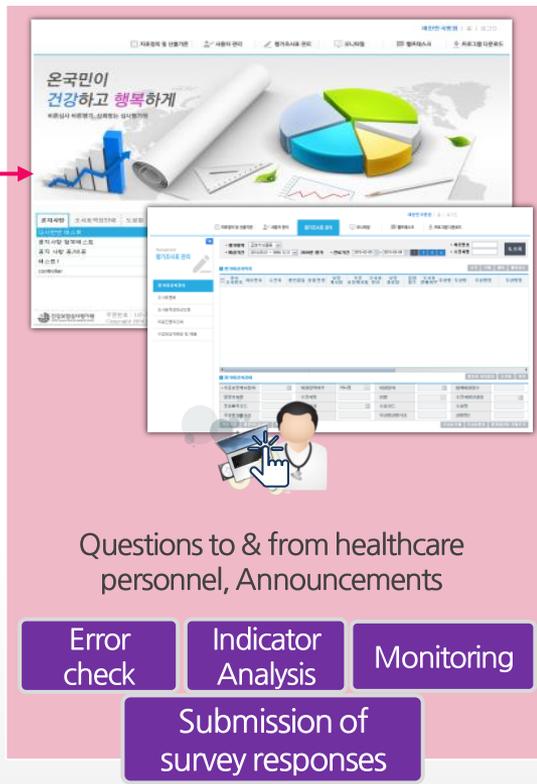
Overview

- A system that links EMR with assessment survey tables in real-time for efficient collection of responses, reducing providers' administrative burden and supporting their autonomous healthcare quality management

Healthcare Provider



Relay Server



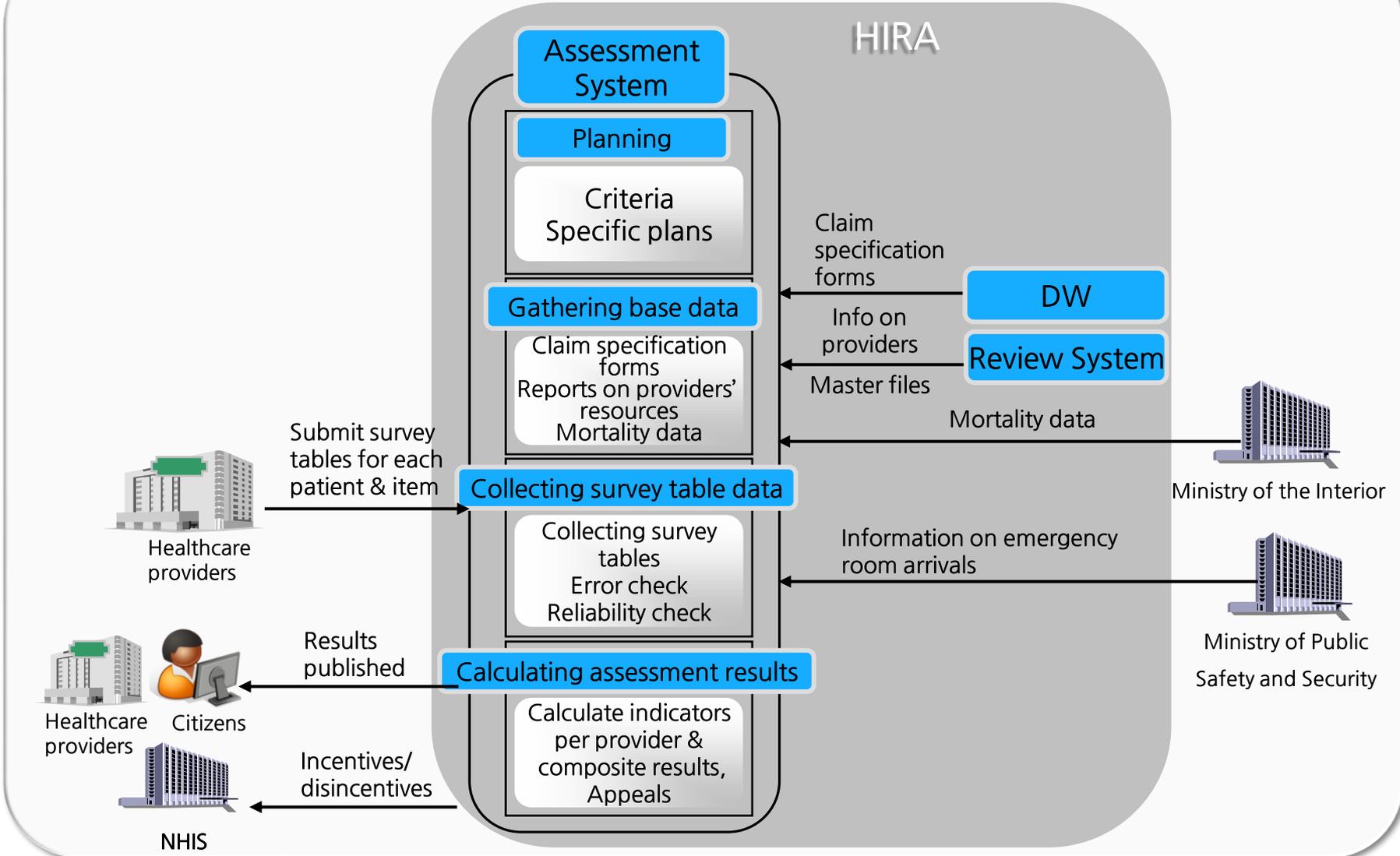
HIRA



Major systems

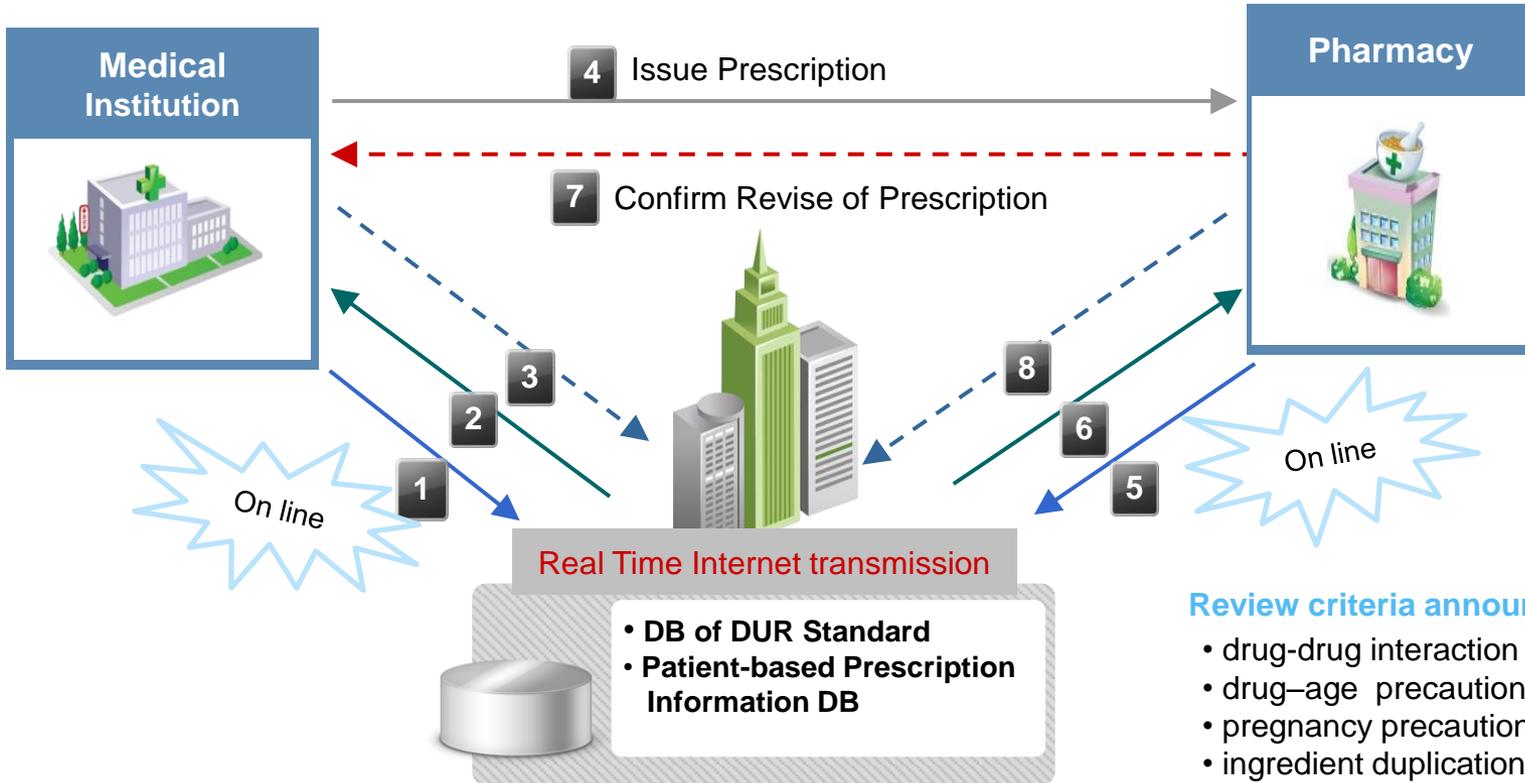
– Benefit quality assessment system

Planning → Gathering base data → Collecting survey responses
→ Calculating assessment results



Major systems

– DUR (Drug Utilization Review)



Review criteria announce by MFDS

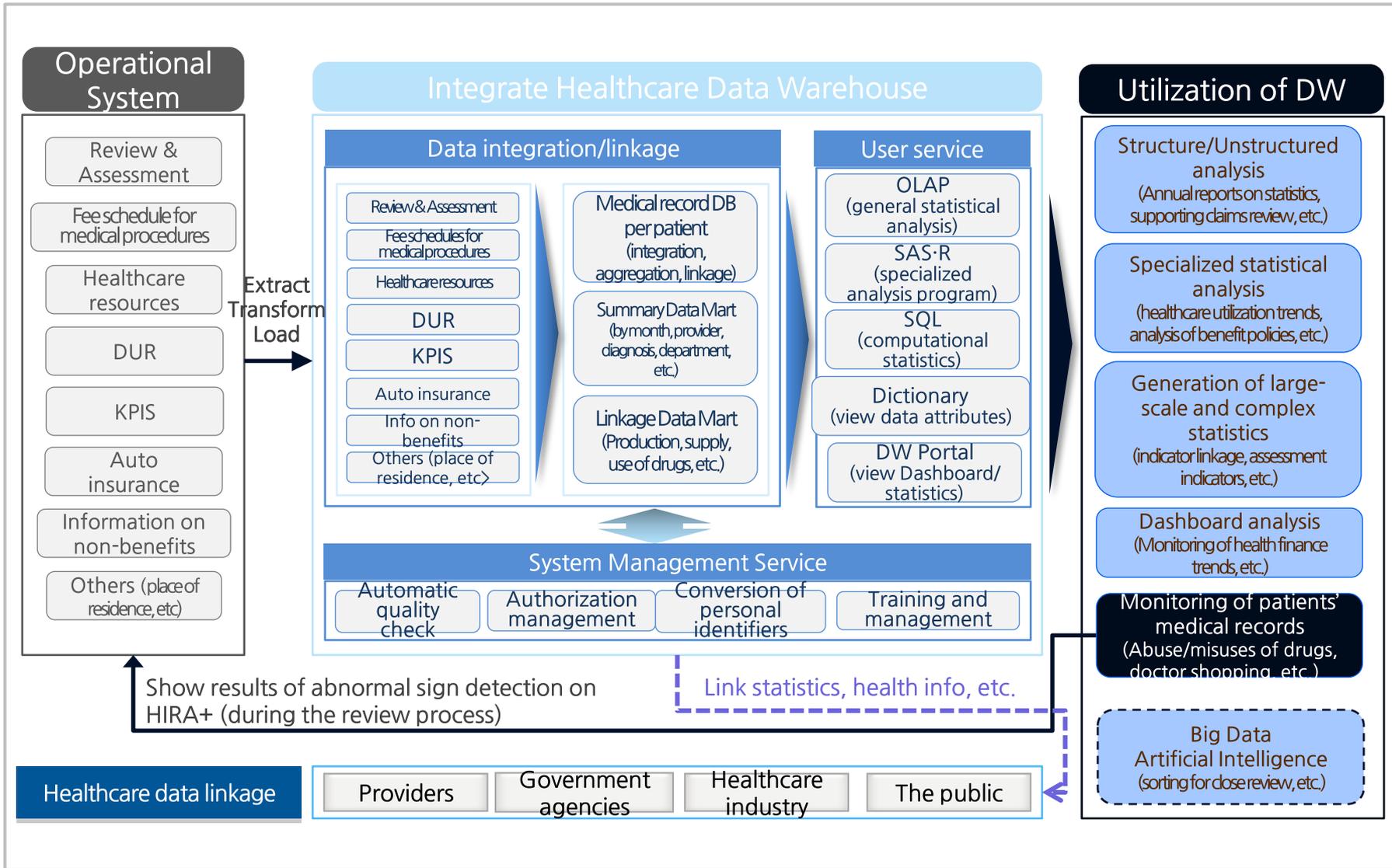
- drug-drug interaction
- drug-age precaution
- pregnancy precaution
- ingredient duplication
- therapeutic duplication
- Suspended drugs for safety reasons ext.

1 5	Prescription Information Transmission	2 6	Review Results Transmission	3 8	Completed Prescription Transmission
-----	---------------------------------------	-----	-----------------------------	-----	-------------------------------------

• DB of DUR Standard less than 0.5 sec / transaction

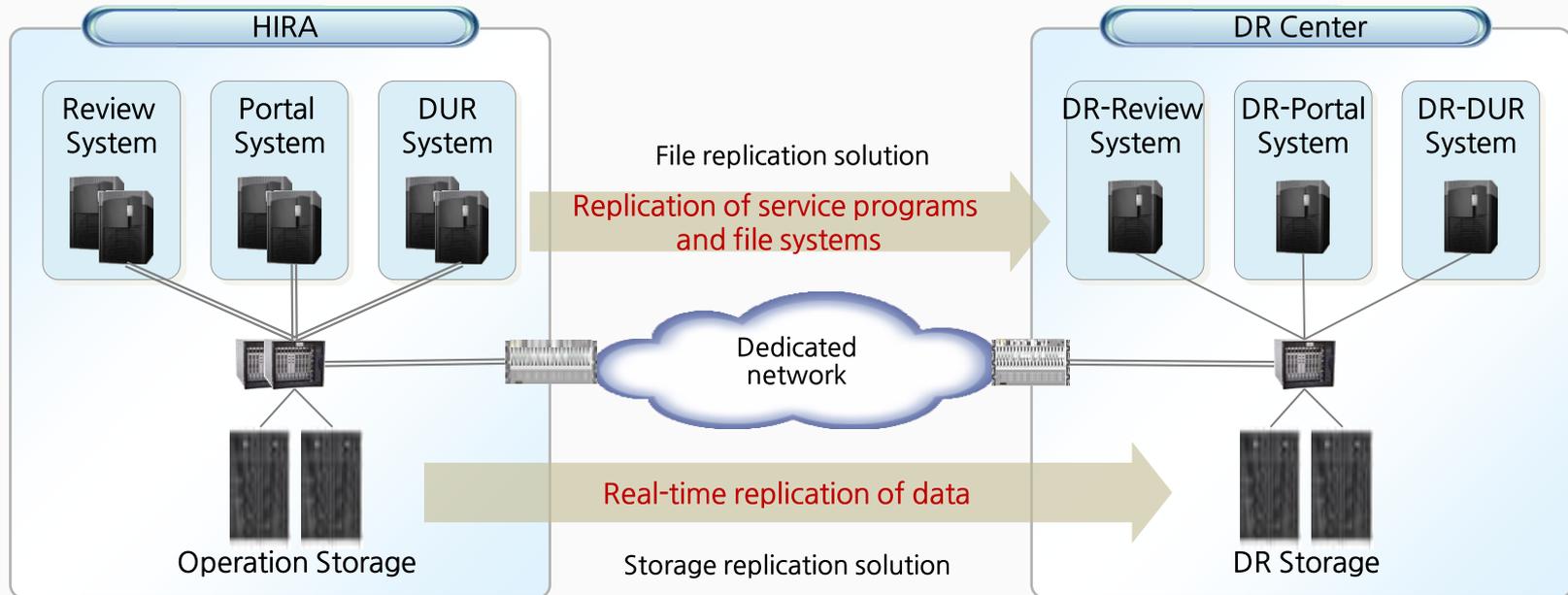
Major systems

- DW (Data Warehouse)



Disaster Recovery System

Remote operation of the ICT Center (DR Center under MoHW)



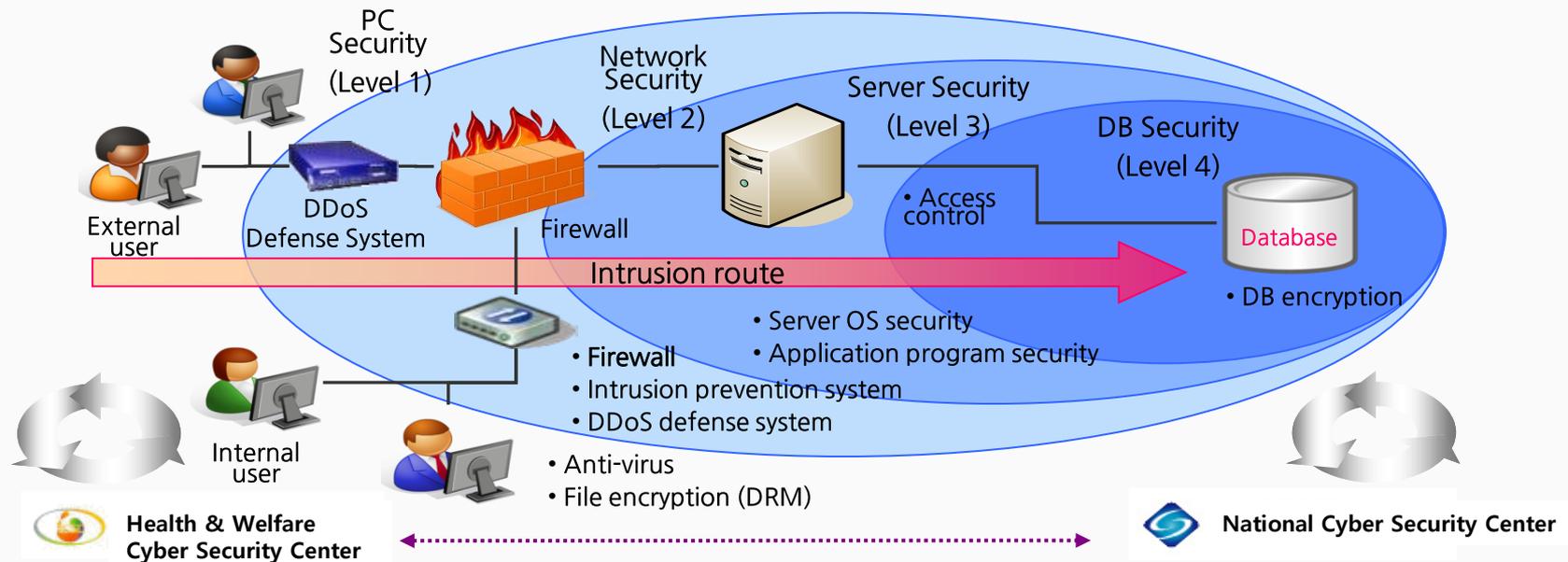
- Continuity of key information systems even in times of disasters
 - real-time data replication
 - regular mock disaster exercises every half year

Security and operation

- Security



4 levels of security



Level	내용
PC security (Level 1)	User authentication, central management of antivirus programs, digital rights management (DRM), flash memory access control, etc.
Network security (Level 2)	Network separation, intrusion blocking and prevention system, firewalls, DDoS defense system, VPN, etc.
Server security (Level 3)	Server security (SecureOS), access control, integrated access record management system, etc.
DB security (Level 4)	Encryption of DB with important info such as personal info, DB access control and access record management, etc.

Security and operation

- Operation control system



» Monitoring of HIRA's HQ and the 10 branches

» Monitoring and control system resources & troubleshooting



» Non-stop, real-time service of Operation Control System

Certifications and Patent

International Patent

『 Electronic Review of Medical Claims 』, Business Method

'07 Republic of South Africa

'08 Japan

'09 Singapore, Australia

'10 Vietnam

'12 U.S.

ISO9001 and ISO20000

'05 EDI review system

'06 DW and Mining system

'07 IT system (including web portal service)

'10 KPIS system

'12 DUR and VOC system

'14 ISO20000 (IT Service Management)

Database Quality Certification (Korea Data Agency)

'11 DQC-M(Management) Certification of agency-wide data management system

'11 - '17 DQC-V(Value) Certification of data quality (Review System, DW)

'14 - '16 DQC-S(Security) Certification of data security (Review System)

Q & A



Thank You