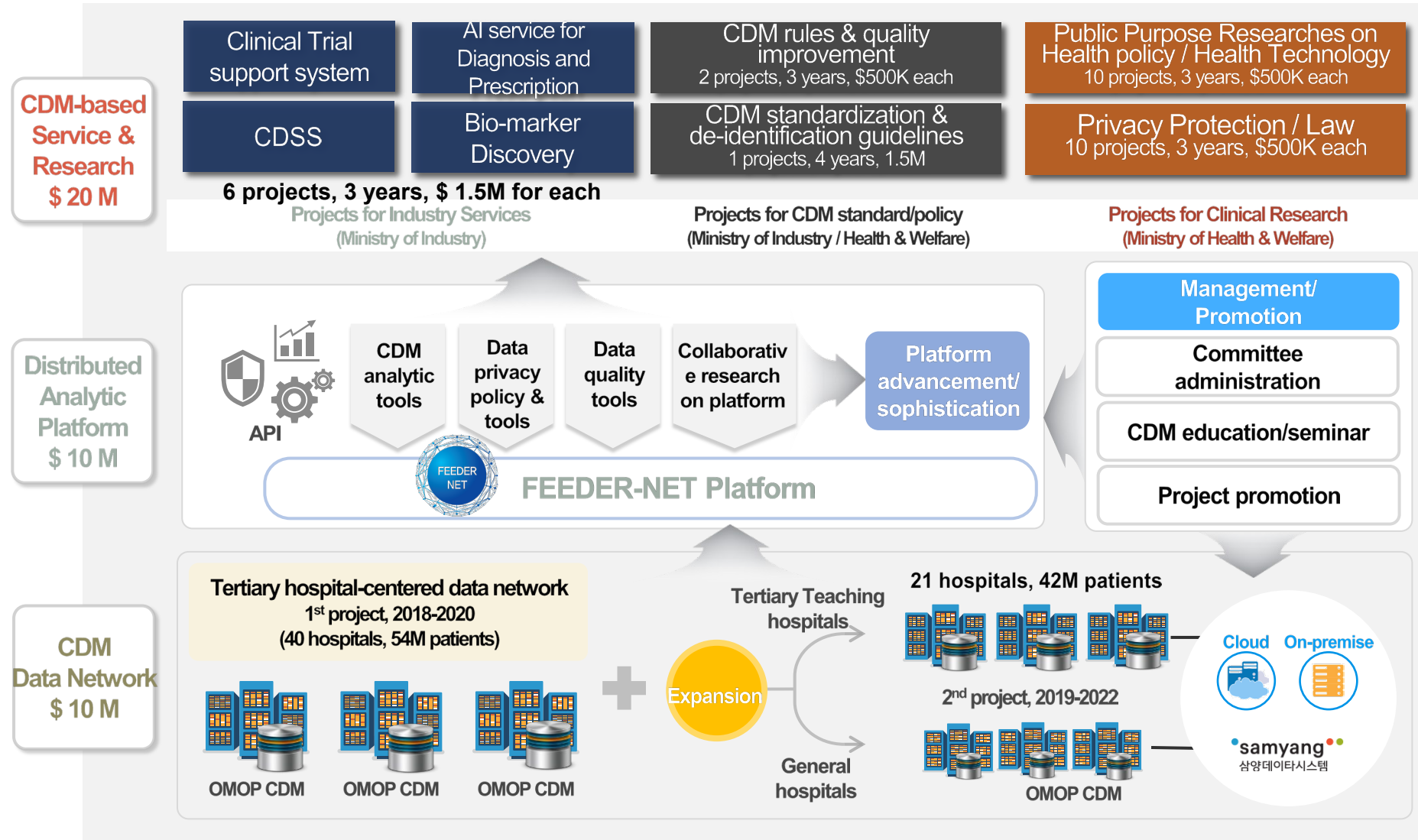# OHDSI Korea Update

Park, Rae Woong, MD, PhD

Dept. of Biomedical Informatics, Ajou University School of Medicine, South Korea

National CDM Projects in Korea
2018-2022

FEEDER-NET: FEderated E-health big Data for Evidence Renovation NETwork

Data Governace Leadership Meeting

- A total of **21 Leadership Meetings** have been held since 2017 - 2022

- At this meeting, **ethical, technical, privacy, conflicts, governance issues** were discussed to establish CDM network and promote collaborative research

고대안암병원 2017.11.09

고대구로병원 2018.01.25

아주대학교병원 2018.03.29

원주세브란스기독병원 2018.06.28

부산대병원 2018.08.31

전북대병원 2018.11.22

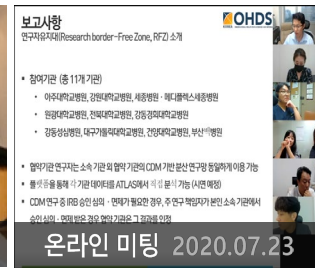아주대학교병원 2019.01.31

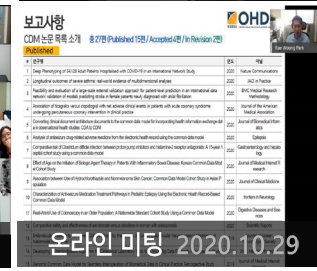민건강보험 일산병원 2019.03.2

아주대학교병원 2019.05.30

분당서울대병원 2019.07.25
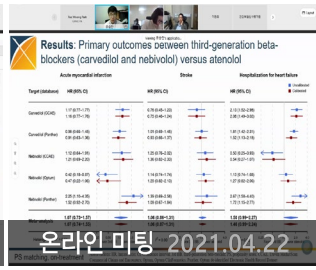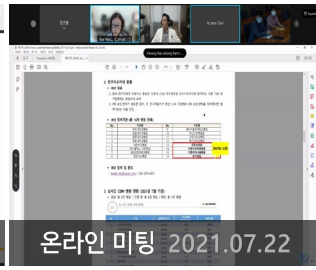
삼성서울병원 2019.09.26

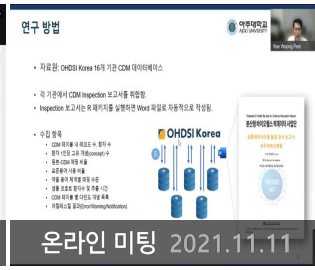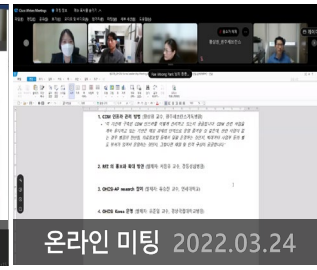곤지암리조트 2019.12.12

온라인 미팅 2020.07.23

온라인 미팅 2020.10.29

온라인 미팅 2021.01.21

온라인 미팅 2021.04.22

온라인 미팅 2021.07.22

온라인 미팅 2021.11.11

온라인 미팅 2022.03.24
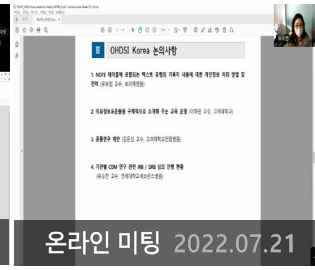
온라인 미팅 2022.07.21

온라인 미팅 2022.11.10

Activity in Korea
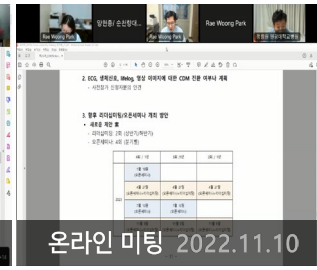
DB Engineer Meeting

- **Biweekly, TC**
- **EHR engineers from participating hospitals**
- **Discuss all the technical issues during CDM conversion**

Open Forum

- **Monthly, 1-3 hour lecture**
- **Agenda**
  - Introduction to OHDSI and CDM
  - OMOP CDM Structure
  - OMOP CDM Vocabulary/ vocabulary mapping
  - Tools for OMOP CDM
  - ETL process
  - Research Experience using OHDSI Network

Health Insurance Review Agency (HIRA) CDM

Health Claim data for whole persons in Korea into CDM (>50M)

Researches > 2,396

The process of constructing HIRA CDM
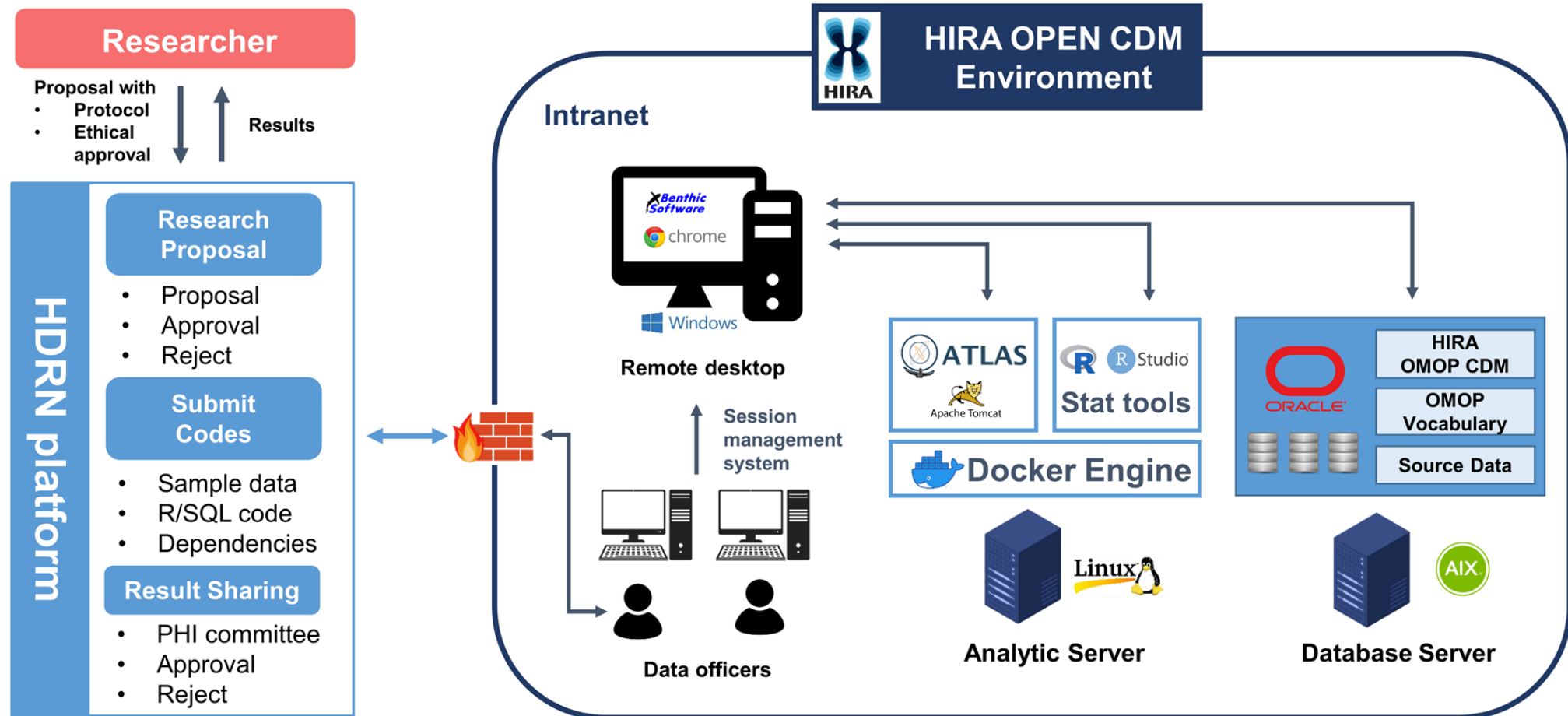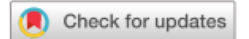
Kim JW, et al. Scalable Infrastructure Supporting Reproducible Nationwide Healthcare Data Analysis toward FAIR Stewardship. Sci Data. 2023 Oct 4;10(1):674

CDM Data Network in Korea

FeederNet
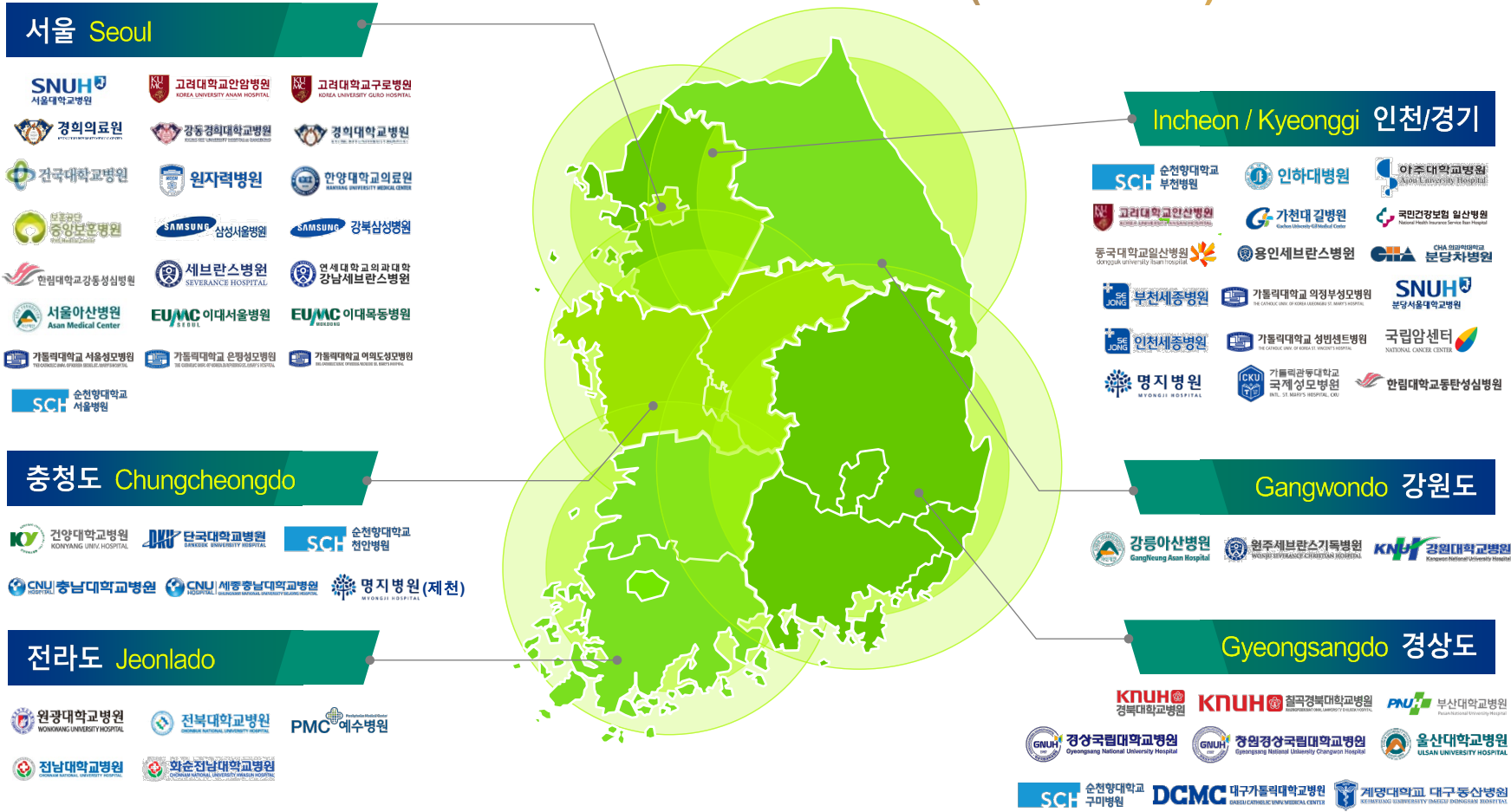
HOME

🏠 **Dashboard**

⛓ Network

RESEARCH

📂 Project

ATLAS

🌐 Search `New`

SUPPORT

ℹ️ Resources

📢 Announcement

↗ Forum

↗ Evidnet

ADMIN

📖 OrgAdmin

　아주대학교병원

Total Patients	👥	Research Execution	📊	Integrated Organizations	🏢	Data Conversions	🗄
70,277,551		**51,360**		**48**		**52**	

즐겨찾기 ⚙️

| 전체 | 소속 | 협력 | RFZ | Open-DB |

Atlas Version
`2.7.6 ▼`   🔍 `Keyword Search`

PNU 부산대학교병원 Pusan National University Hospital	강동성심병원 Kangdong Sacred Heart Hospital	EUMC 이화여자대학교 의료원 EWHA WOMANS UNIVERSITY MEDICAL CENTER	KNUH 경북대학교병원 KYUNGPOOK NATIONAL UNIVERSITY HOSPITAL
부산대학교병원	**강동성심병원**	**이화의료원(목동,서울)**	**경북대학교병원 본원/칠곡**
PNUH_5.3.0_02	KDH_5.3.1_monthly	EUMC_5.3.1_weekly	KBNUH_5.3.1_weekly
RFZ: 🟢E 🟡V 🔴D	RFZ: 🟢E 🟡V 🔴D	RFZ: 🟢E 🟡V 🔴D	RFZ: 해당 없음
Patients: 1,753,001	Patients: 1,209,068	Patients: 1,816,808	Patients: 1,451,641
OMOP CDM: v5.3.0	OMOP CDM: v5.3.0	OMOP CDM: v5.3.0	OMOP CDM: v5.3.1
Period: 2011/02 ~ 2019/08	Period: 1986/11 ~ Monthly Update	Period: 2001/01 ~ Weekly Update	Period: 2006/01 ~ Weekly Update
Running Execution: 0	Running Execution: 0	Running Execution: 0	Running Execution: 0
Waiting Execution: 0	Waiting Execution: 0	Waiting Execution: 0	Waiting Execution: 0

04 Research border-Free Zone: RFZ

Promote collaborative researches btn hospitals and academia by using data from multiple hospitals

Act1: Reciprocal Unlimited Access

Act2: Single IRB

34 hospitals joined

CDM RFZ MOU

Korea, Dec 13, 2019
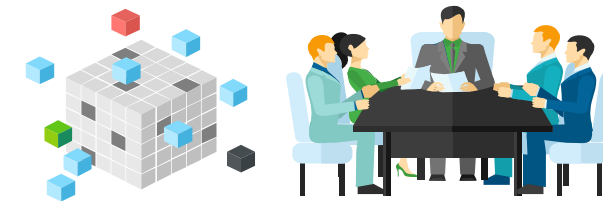
Counts of analyses using the FeederNet

- Hospitals in the RFZ shows high CDM-based analysis activity.

2021 참여기관별 연구건수

※ Red box : hospitals in RFZ
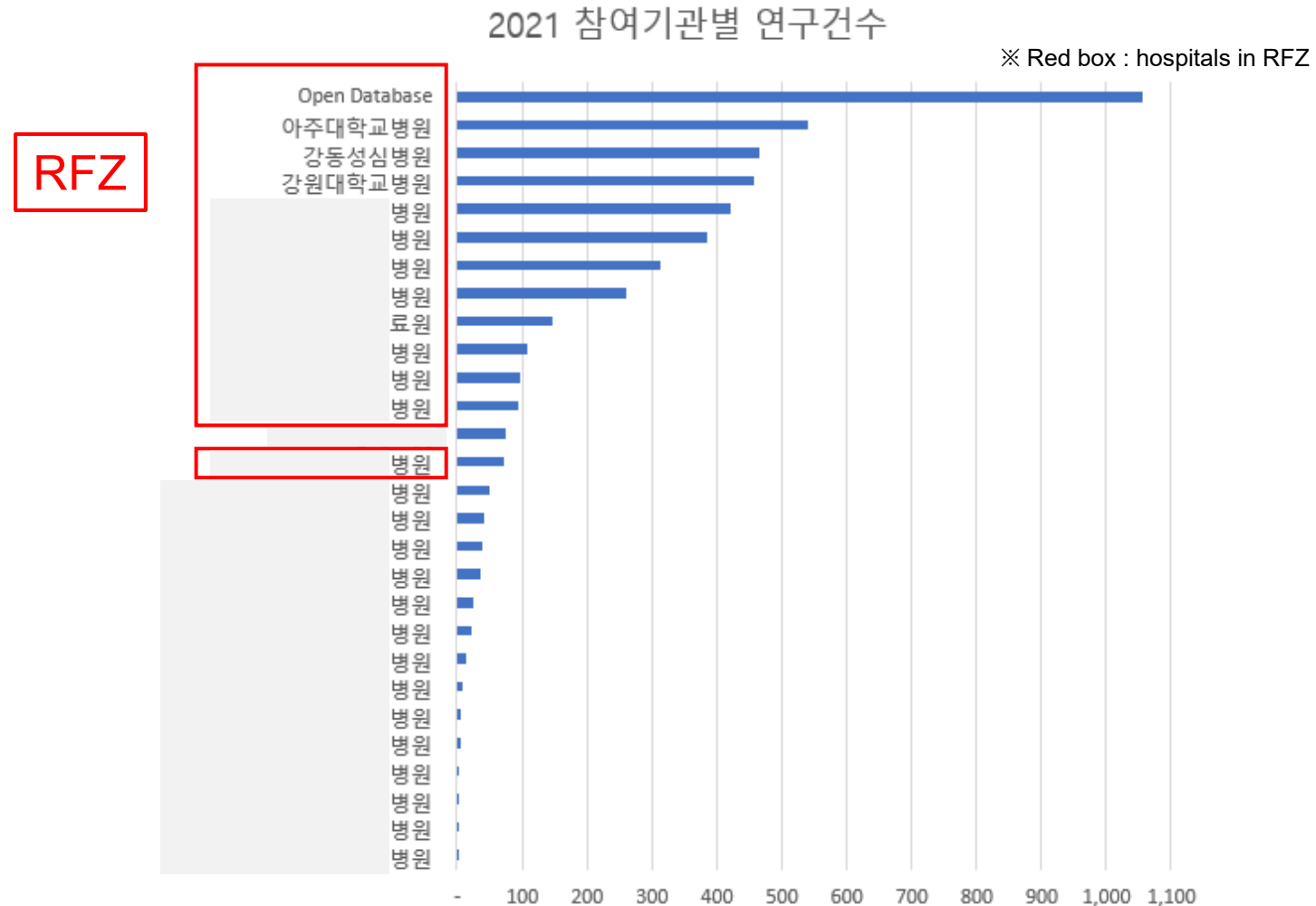
PHAROS - Integrated infectious disease clinical information management system using real-time OMOP-CDM

PHAROS Platform for Harmonizing and Accessing data in Real-time On infectious disease Surveillance
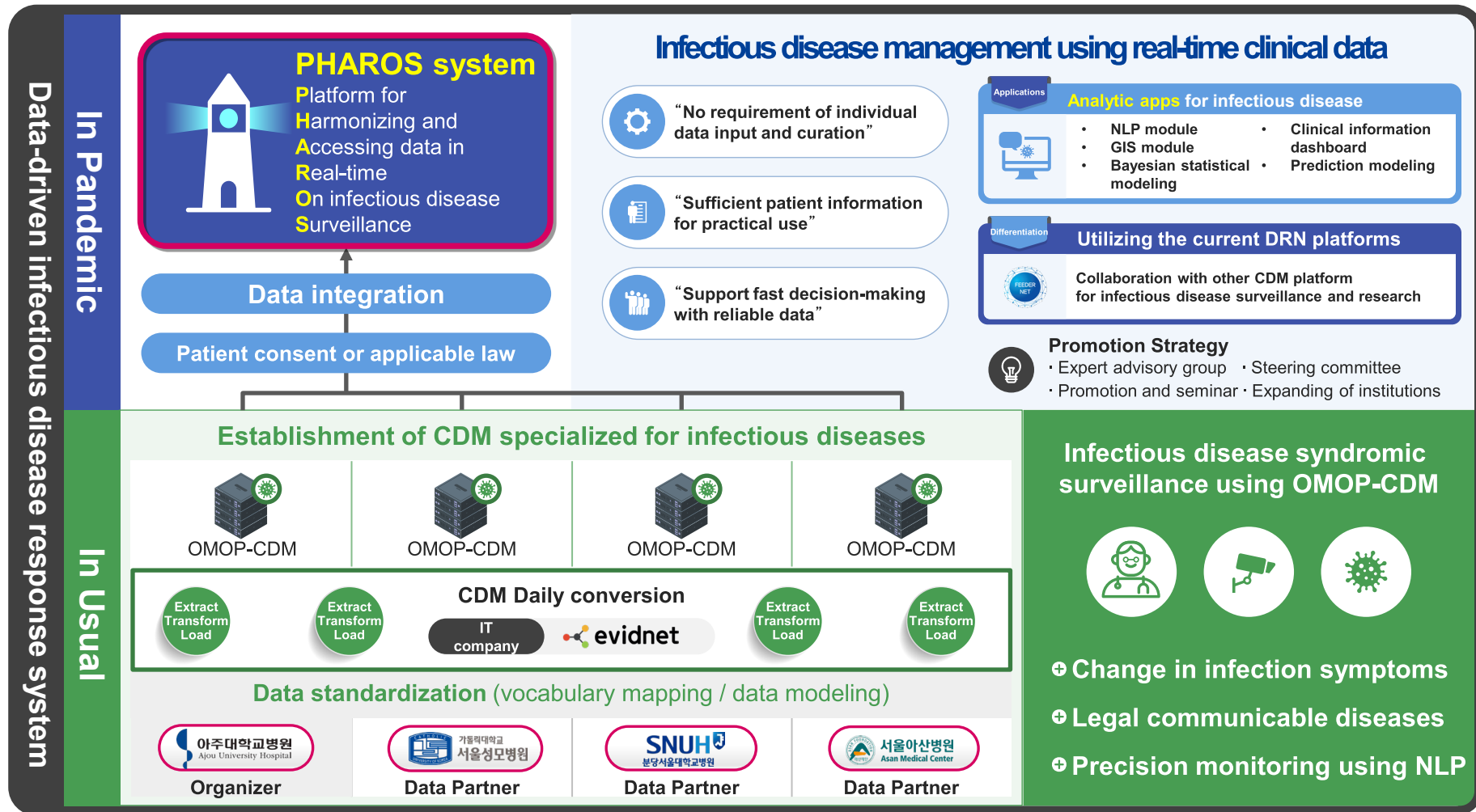
RoadMap for National Medical Device Surveillance System based on OMOP-CDM (KFDA)

2021-2023 — Pilot Phase / Policy tasks

2024 — Growth Phase / designation of institution

2025-2026 — Expansion Phase / Establishiment of Legal System

2027~2029 — Maturity Phase / Regulatory policy support for RWE

CDM 모델

2021-2023 (Pilot Phase)
- 시범사업 실시(4개 의료기관)
- 7개 품목 이상사례 분석 및 결과 도출
- CDM 포털 구축
- 협의체 구성
- 심포지엄 개최
- 국정사업 전환(`23년)

2024 (Growth Phase)
- 신규 구축(4개소)
- EDI, UDI 활용 부작용 분석(5개소, 3개 품목)
- 안전성정보, 실사용정보 연계 분석
  - ☞ 전 반기 대비 안전성정보 보고 급증 품목 CDM 분석(생체재질인공심장판막, 채내용지혈용품)
- 표준용어집 최신화

2025-2026 (Expansion Phase)
- 신규 구축 확대(15개소)
- EDI, UDI 활용 부작용 분석 (누적20개소)
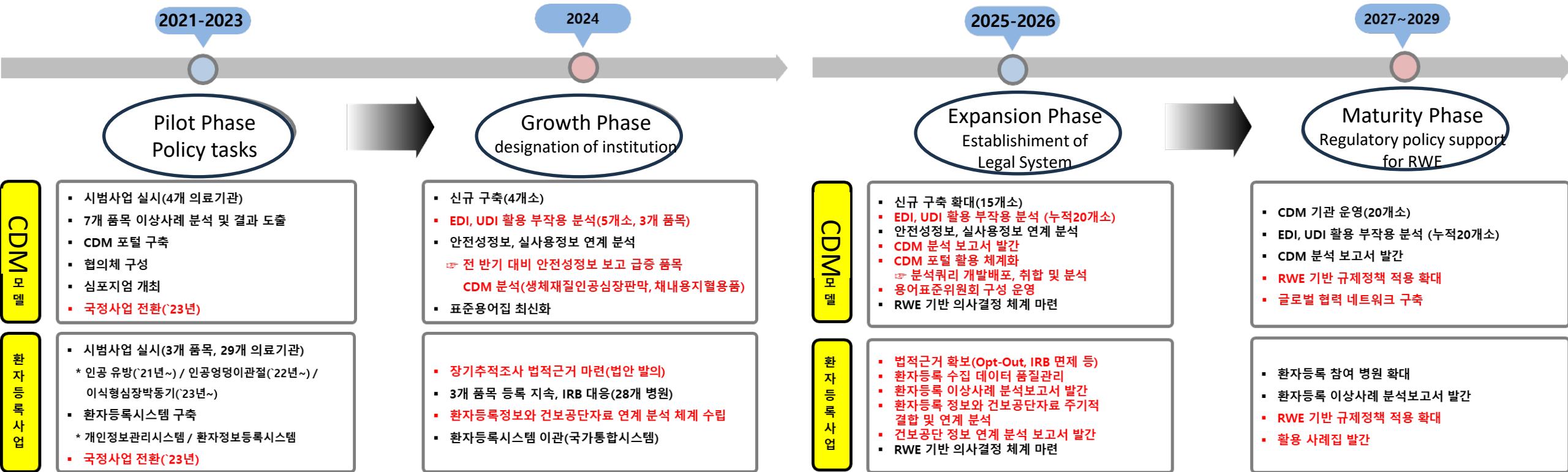- 안전성정보, 실사용정보 연계 분석
- CDM 분석 보고서 발간
- CDM 포털 활용 체계화
  - ☞ 분석쿼리 개발배포, 취합 및 분석
- 용어표준위원회 구성 운영
- RWE 기반 의사결정 체계 마련

2027~2029 (Maturity Phase)
- CDM 기관 운영(20개소)
- EDI, UDI 활용 부작용 분석 (누적20개소)
- CDM 분석 보고서 발간
- RWE 기반 규제정책 적용 확대
- 글로벌 협력 네트워크 구축

환자등록사업

2021-2023 (Pilot Phase)
- 시범사업 실시(3개 품목, 29개 의료기관)
  - * 인공 유방(`21년~) / 인공엉덩이관절(`22년~) / 이식형심장박동기(`23년~)
- 환자등록시스템 구축
  - * 개인정보관리시스템 / 환자정보등록시스템
- 국정사업 전환(`23년)

2024 (Growth Phase)
- 장기추적조사 법적근거 마련(법안 발의)
- 3개 품목 등록 지속, IRB 대응(28개 병원)
- 환자등록정보와 건보공단자료 연계 분석 체계 수립
- 환자등록시스템 이관(국가통합시스템)

2025-2026 (Expansion Phase)
- 법적근거 확보(Opt-Out, IRB 면제 등)
- 환자등록 수집 데이터 품질관리
- 환자등록 이상사례 분석보고서 발간
- 환자등록 정보와 건보공단자료 주기적 결합 및 연계 분석
- 건보공단 정보 연계 분석 보고서 발간
- RWE 기반 의사결정 체계 마련

2027~2029 (Maturity Phase)
- 환자등록 참여 병원 확대
- 환자등록 이상사례 분석보고서 발간
- RWE 기반 규제정책 적용 확대
- 활용 사례집 발간

Key takeaway messages

Strong government support is critical

Building trust and data governance among data partners

Establishment of open data consortiums (e.g., RFZ)

CDM can acts as infrastructure for public-private health systems (e.g., real-time surveillance)