INSTITUTIONALIZING USE OF ICT FOR BETTER HEALTHCARE

D R   P A N K A J   G U P T A

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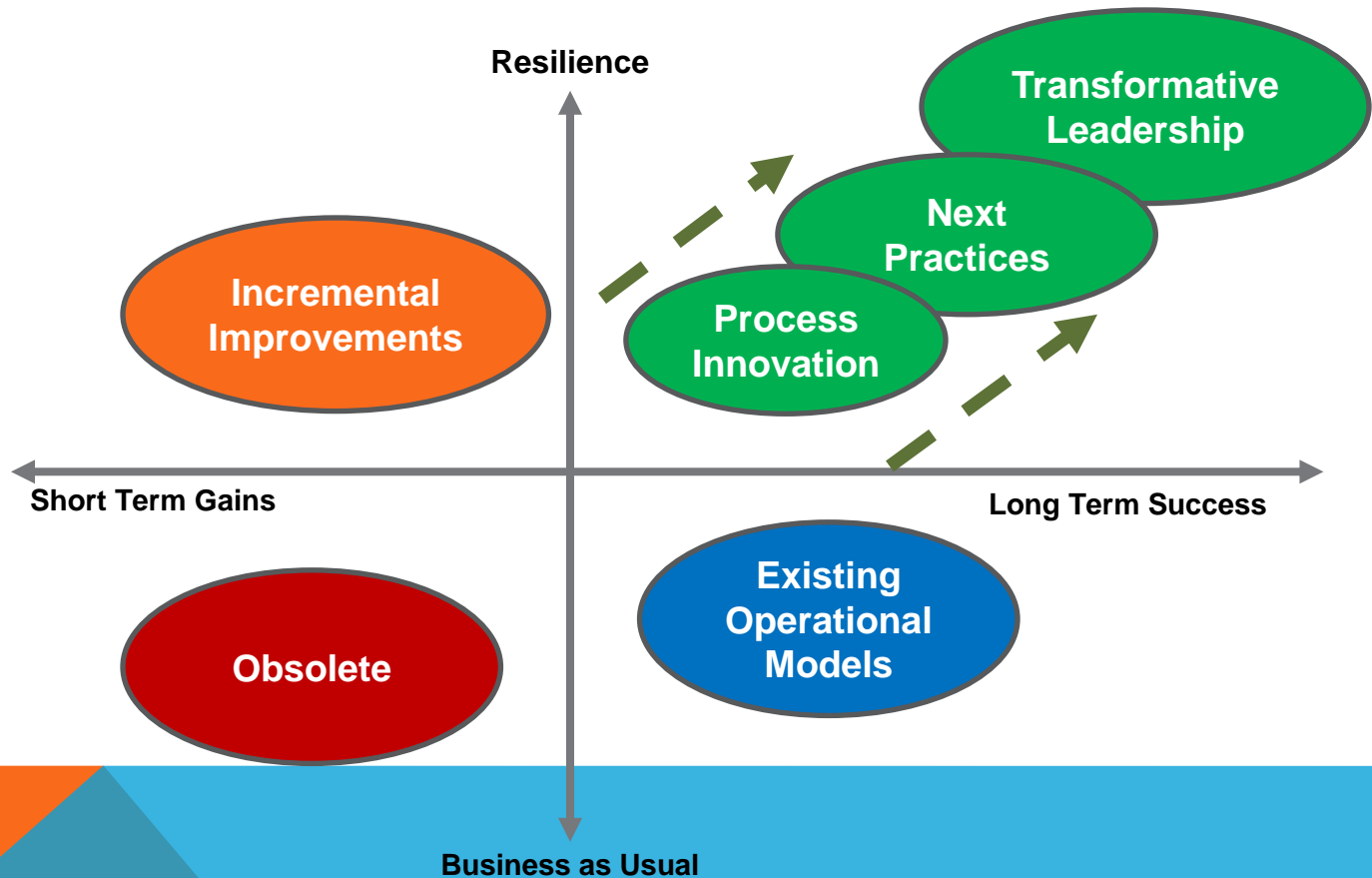LinkedIn: http://www.linkedin.com/in/drpankajgupta

2010-2020 DECLARED AS DECADE OF INNOVATION

- India has been very ingenious in finding workarounds but we have lost it along the way to modernization

- Organizations not designed 'ground up' for innovation will not be creative. Innovation can be extraordinarily disruptive.

- Culture of innovation has to be nurtured in the country.

- Must work with all stakeholders to select and deploy innovative improvements that measurably improve service quality and provides truly 'out of the box' thinking to the country.
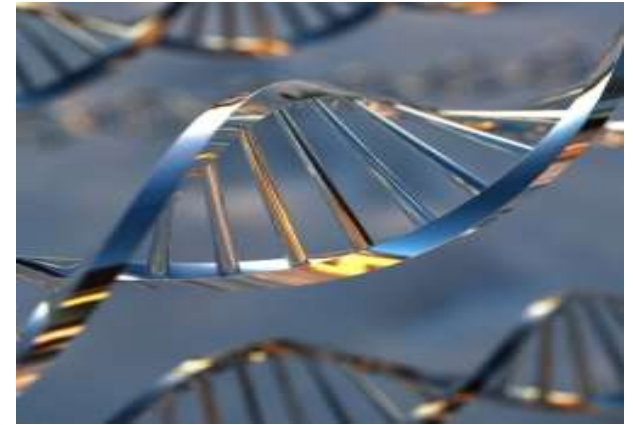
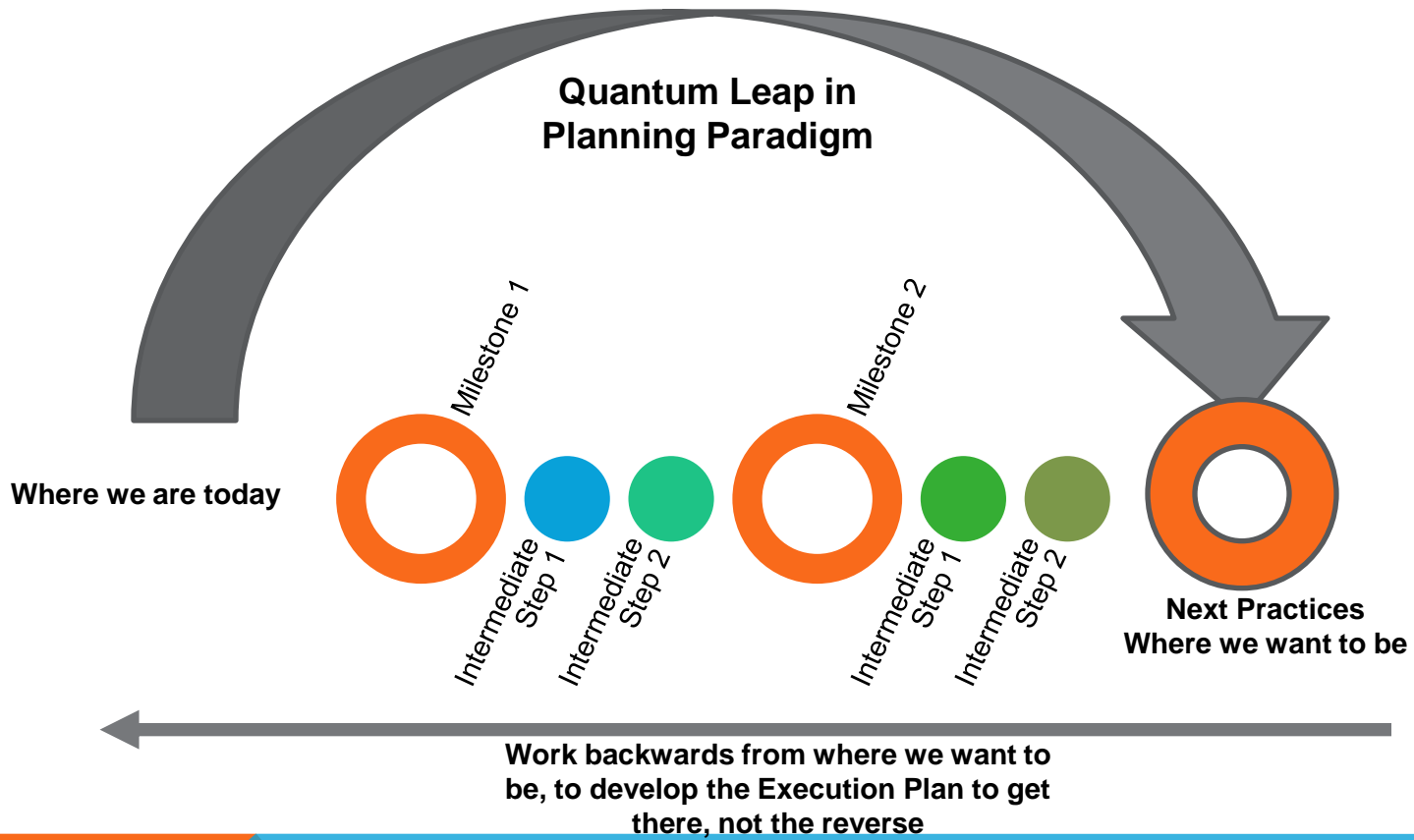INNOVATION IS A CULTURE NOT A STRATEGY

NATIONAL INNOVATION COUNCIL [NINC] CREATED TO PROMOTE INNOVATION IN THE COUNTRY

ICT SUBGROUP OF HEALTH SECTOR INNOVATION COUNCIL IS PART OF NINC

NEXT PRACTICES - INNOVATION

Quantum Leap in Planning Paradigm

Milestone 1

Milestone 2

Where we are today

Intermediate Step 1

Intermediate Step 2

Intermediate Step 1

Intermediate Step 2

Next Practices
Where we want to be

Work backwards from where we want to be, to develop the Execution Plan to get there, not the reverse
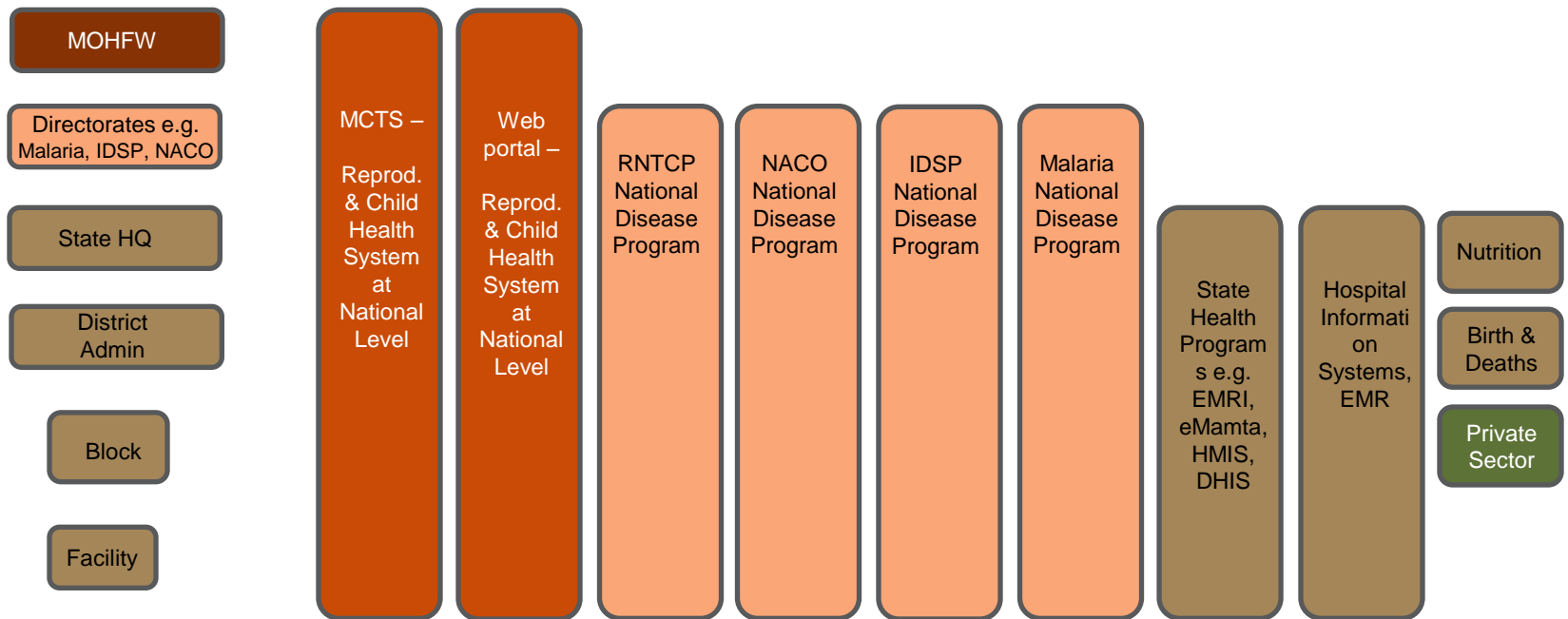
CURRENT INNOVATION IN HEALTH ICT

o **Process:**

o Consultation with program officers

o Review of the literature on Public Health ICT

o Study of innovations in Health care ICT

- o Functional Specifications of Public Health IT Systems
- o Study of IT systems for Tele-medicine
- o Study of Hospital Information Systems

o **Mandate:**

o To document various ICT innovations in healthcare

o To identify drivers of innovation

o To understand failures & successes and reasons associated

o Prepare & promote sustainable 'eco system' for ICT innovations in healthcare

Systems Studied	
NRHM-RCH	**National Program Specific innovations**
National HMIS Web Portal	NACO- Strategic Information Management System
DHIS 2.0	Integrated Disease Surveillance Project (IDSP)
MCTS- Tracking System	National Malaria Control Program -NAMMIS
State Specific innovations	**Other Innovations**
Gujarat- eMAMTA,	Tripura Tele-ophthalmology application
Tamil Nadu- State HMIS (TCS)	Kerala Tele-oncology application
Andhra Pradesh – Historical HMIS Development	

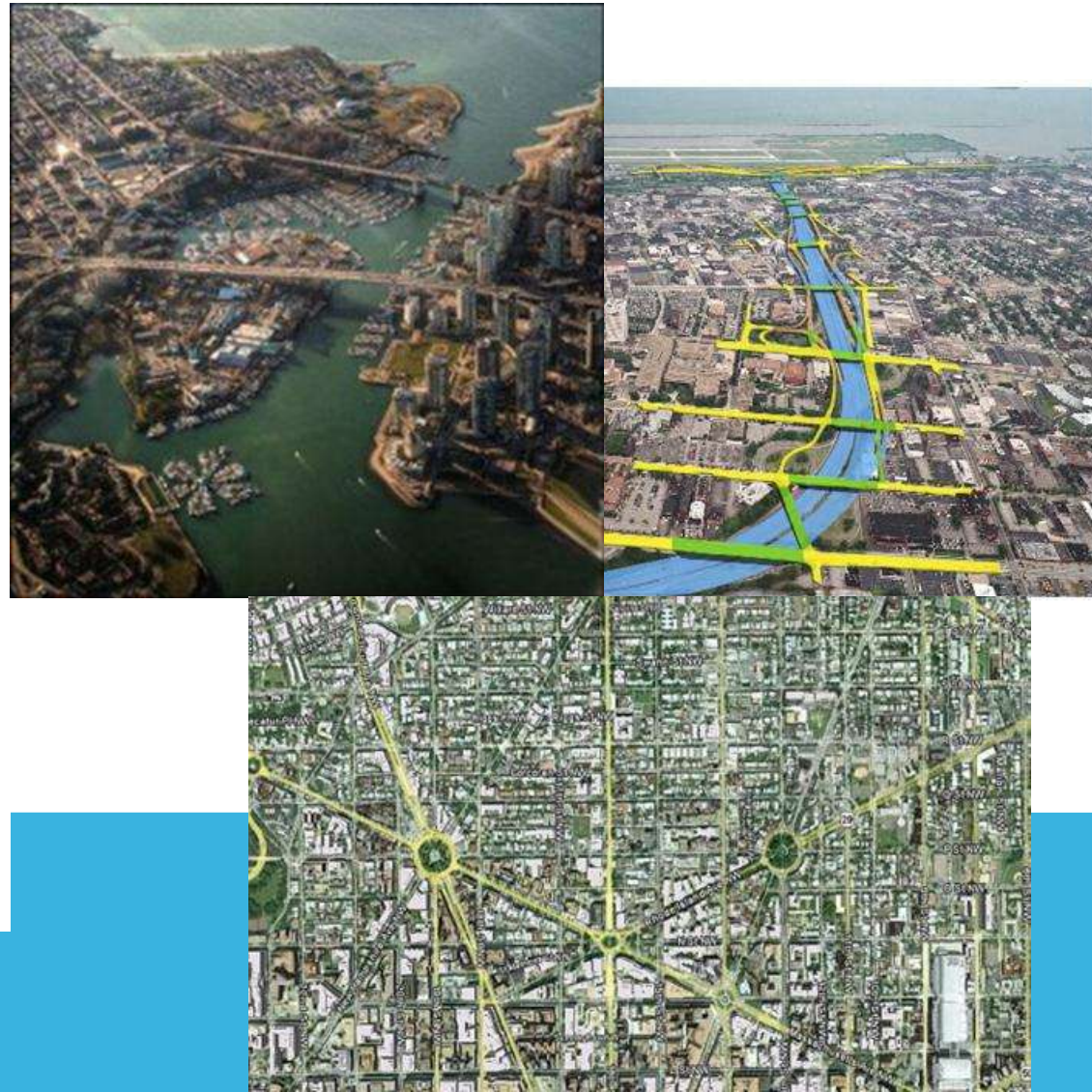# ALL PUBLIC HEALTH IT SYSTEMS ARE IN SILOS

- o Programs/ directorates/ states have their own IT solutions for program reporting needs.
- o Silos - All systems functioning in silos and doesn't help in integrated decision making.
- o Standards lacking – Architecture, I/O Data standards, Disease and Service codes, Interoperability standards.
- o Design issues- Developed as Application for single purpose not as products
- o Capacity building - change management is limited
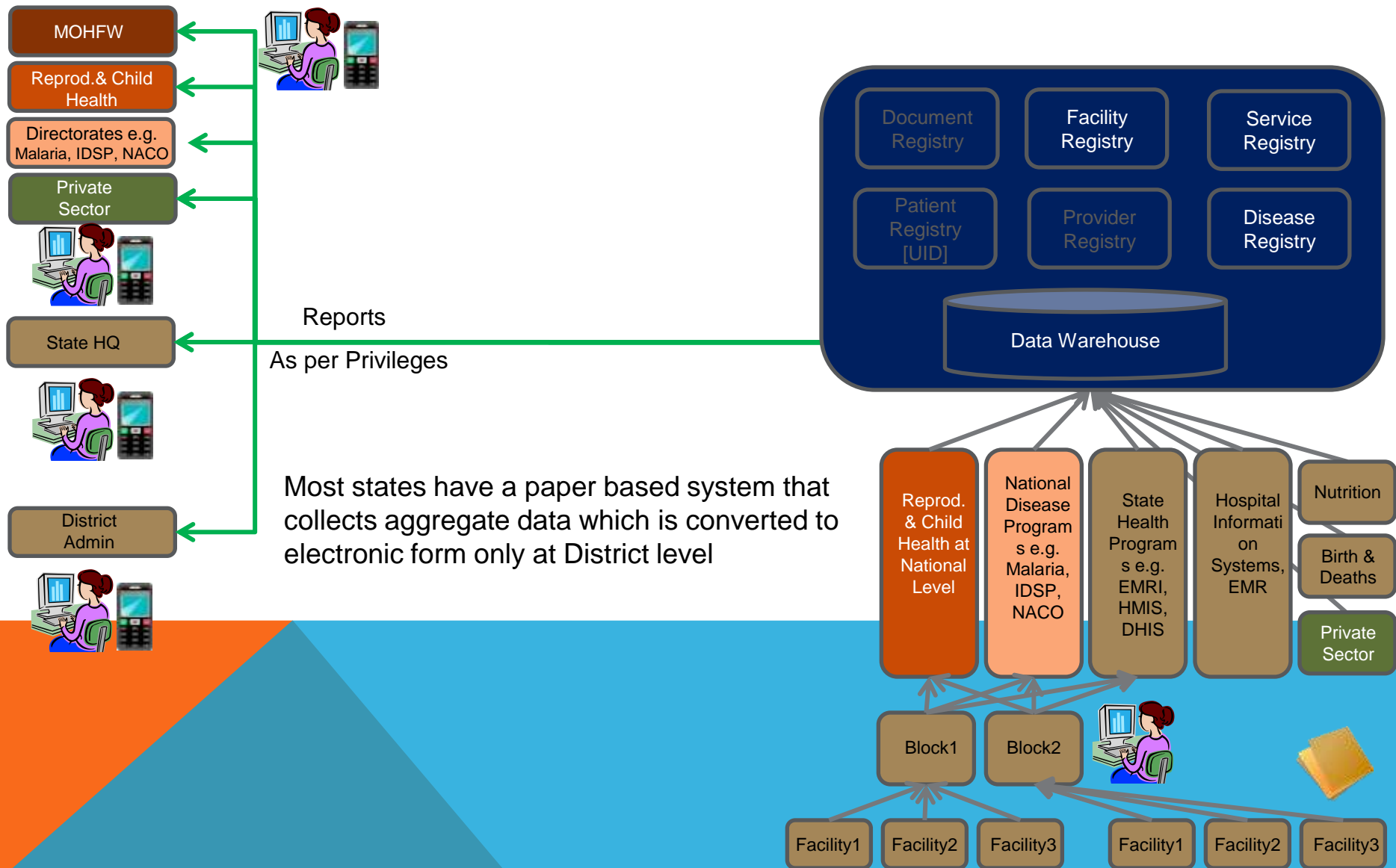- o Process transformation - business process reengineering not done

PROPOSED NATIONAL E-HEALTH AUTHORITY TO DEFINE THE NATIONAL E-HEALTH ARCHITECTURE
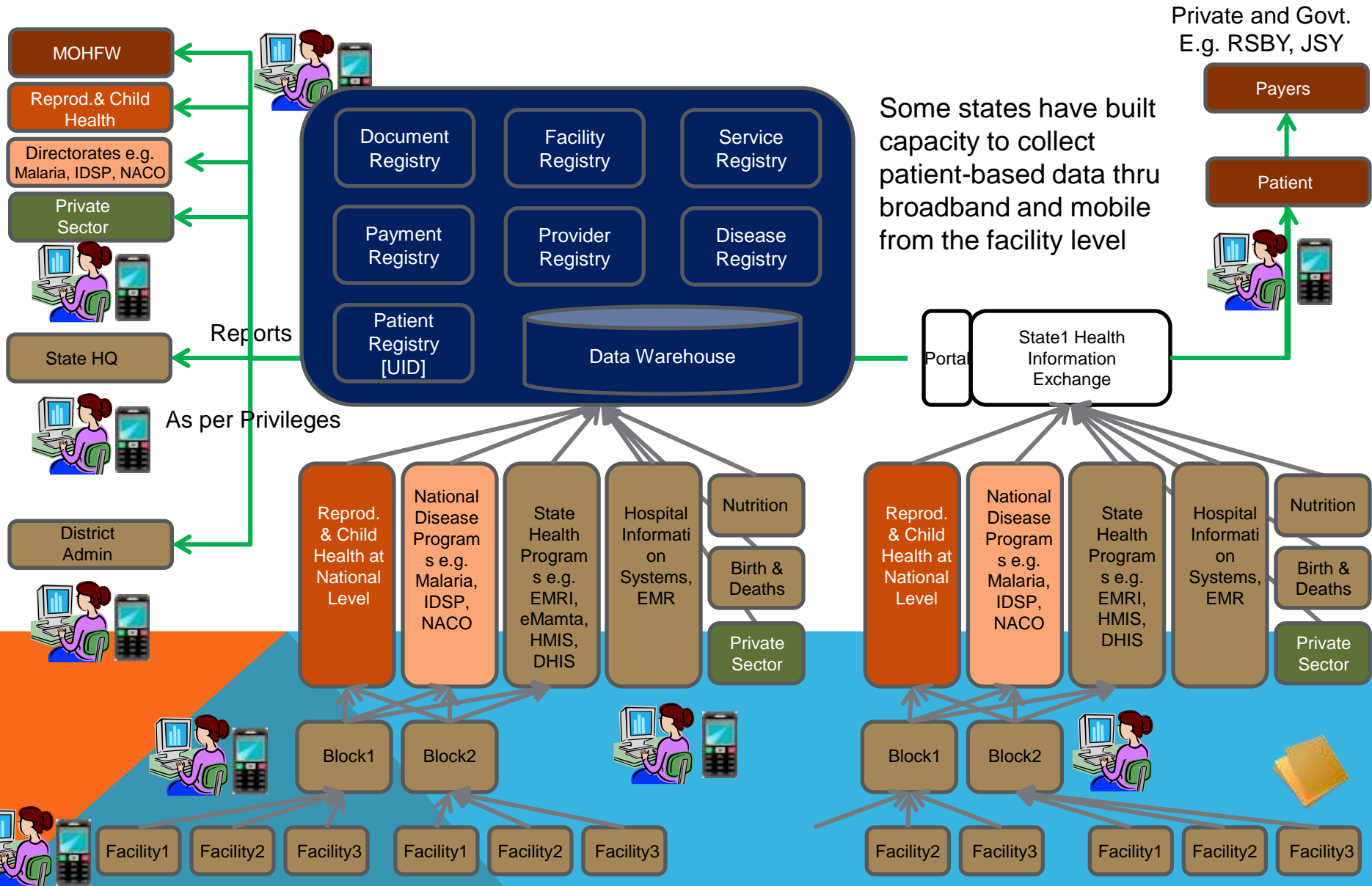
E-Health Architecture: Key features

- Information exchanges [HIE], State & National.
- Registries and UID
- Set of Standards
- Flexible Data Input
- Flexible Data Output
- Online and offline modes
- Integration across systems
- Single System for field workers
- Multi modal connectivity
- Data privacy and security
- ICT for quality of care
- Capacity Building
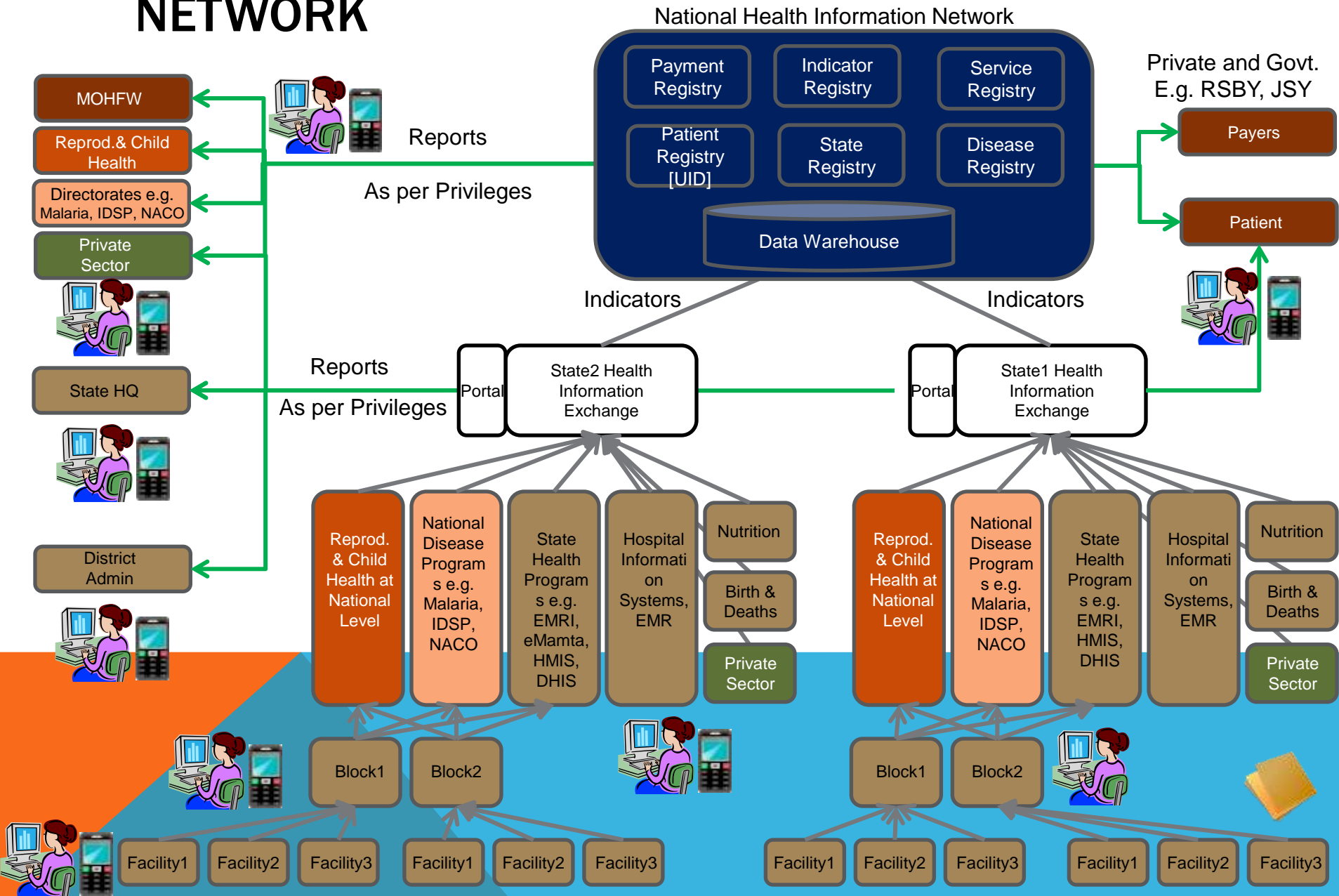- Procurement standardization

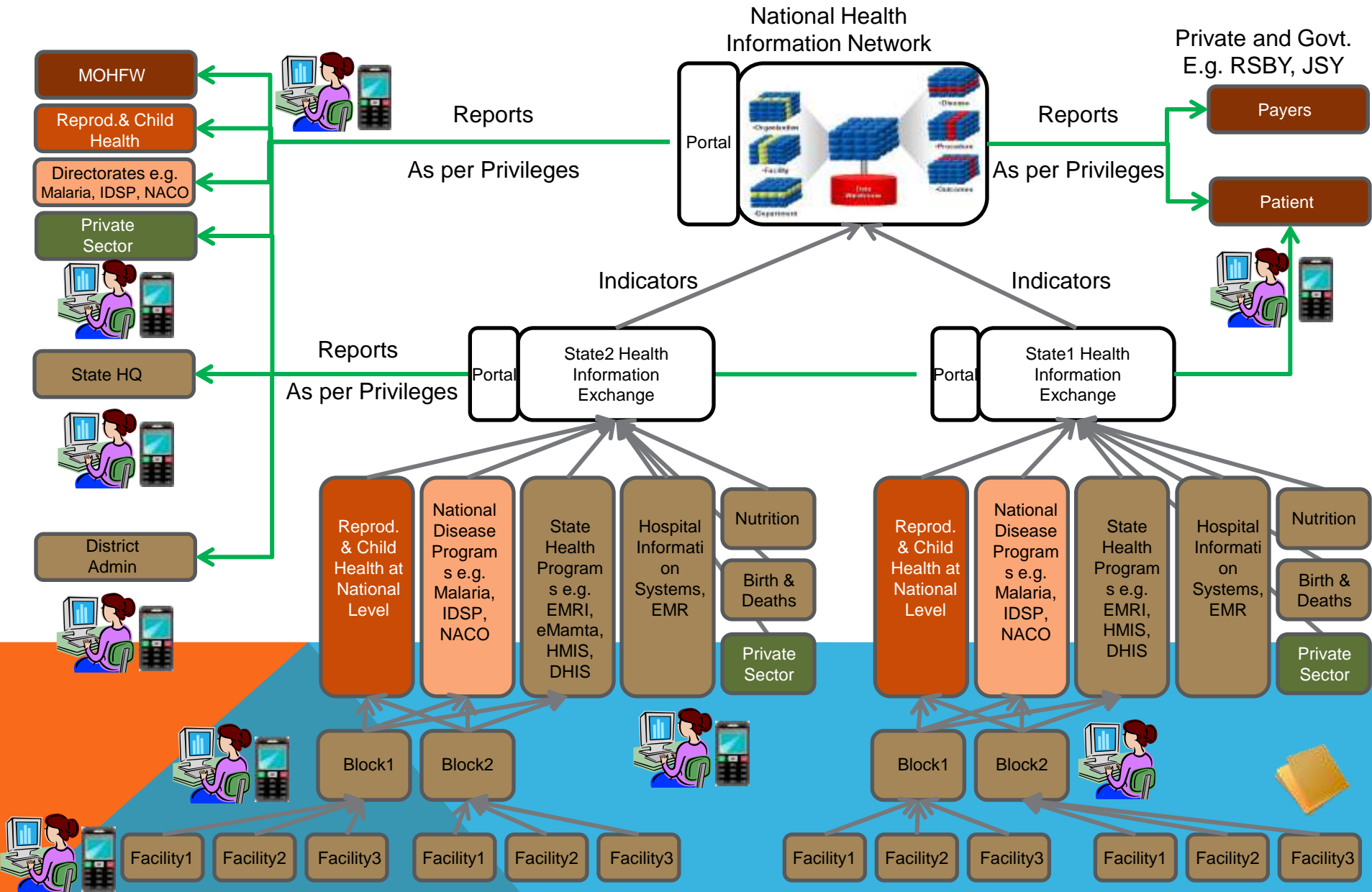# STATE HEALTH INFORMATION EXCHANGE – PROPOSED ARCHITECTURE

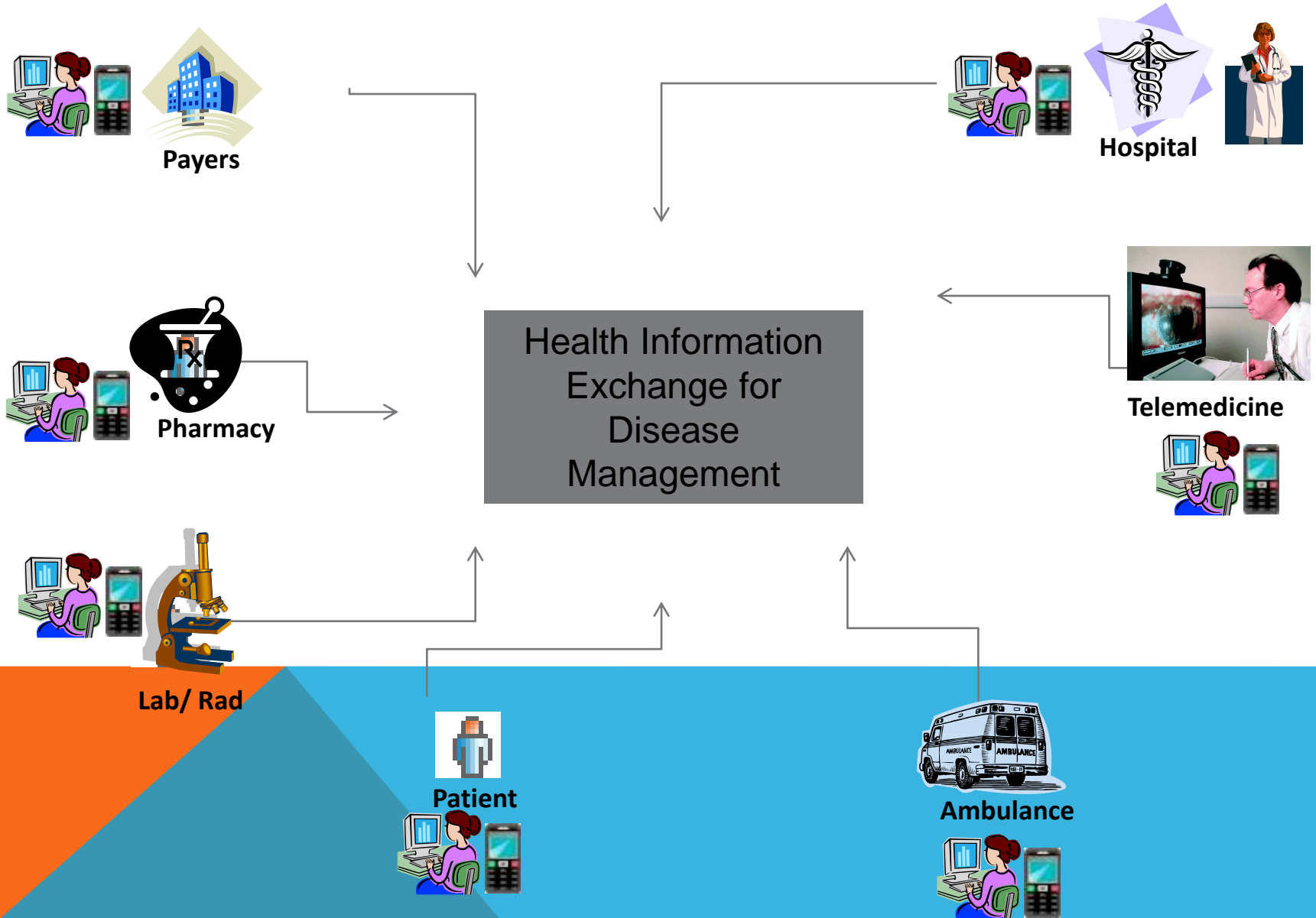# STATE HEALTH INFORMATION EXCHANGE – PROPOSED ARCHITECTURE
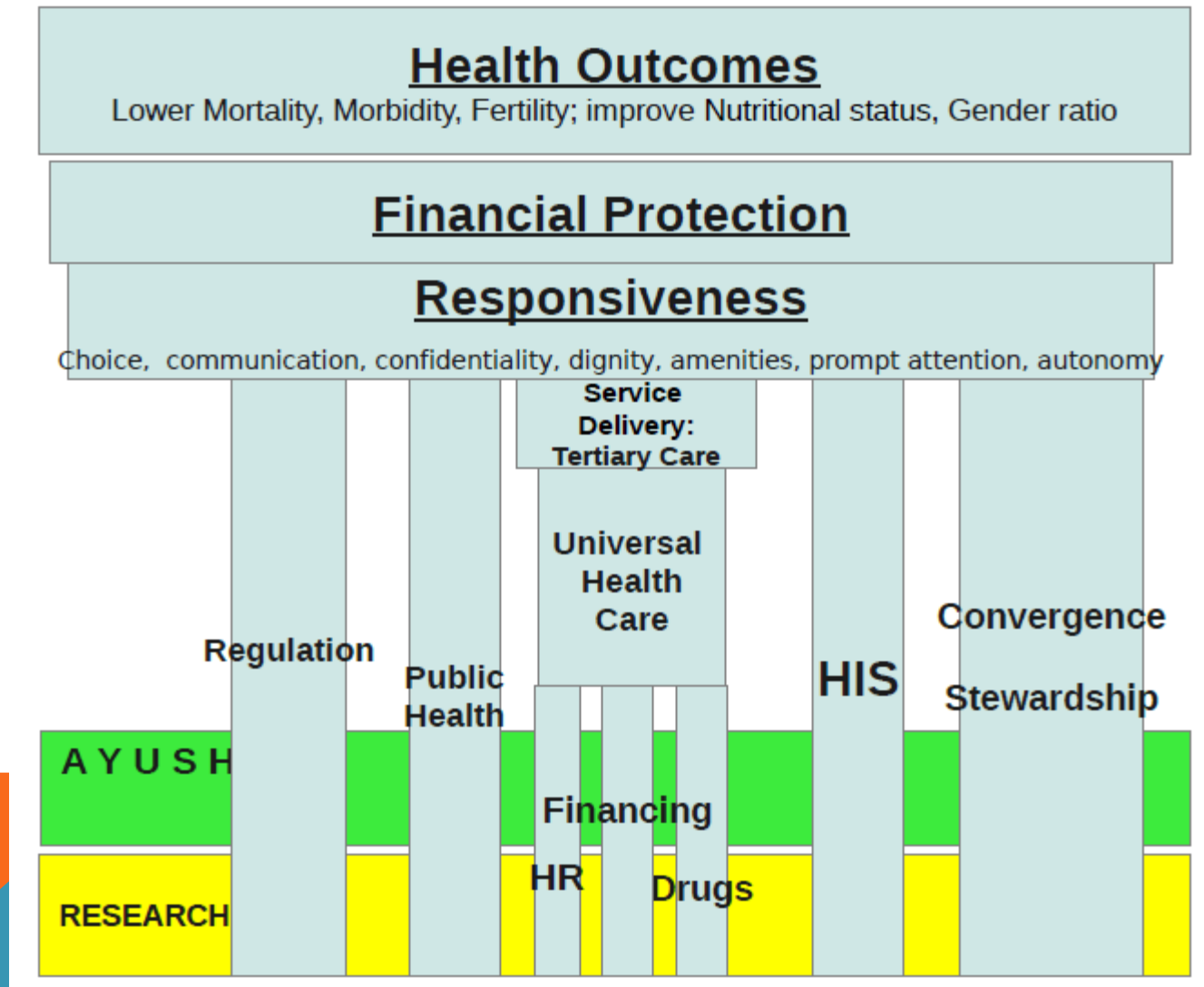
PROPOSED NATIONAL HEALTH INFORMATION NETWORK

PROPOSED NATIONAL E-HEALTH ARCHITECTURE

E-HEALTH ARCHITECTURE WILL ENABLE M-HEALTH AND TELEMEDICINE FOR DISEASE MANAGEMENT

Payers

Hospital

Pharmacy

Health Information Exchange for Disease Management

Telemedicine

Lab/ Rad

Patient

Ambulance

HEALTH INFORMATION SYSTEMS PILLAR SUPPORTS HEALTH OUTCOMES

Report of Planning Commission' Steering committee on Health has dedicated chapter 3 for HIS

THANKS

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