

**MOHHoldings**  
MOH Holdings Pte Ltd



## Sharing of MOHH Approach to EA

Dang Minh Duc

# First Up, Organization Context - Singapore ...



➤ 4.99 million people on 710.3 sq km (7,025/km<sup>2</sup>)

➤ Ethnically diverse:

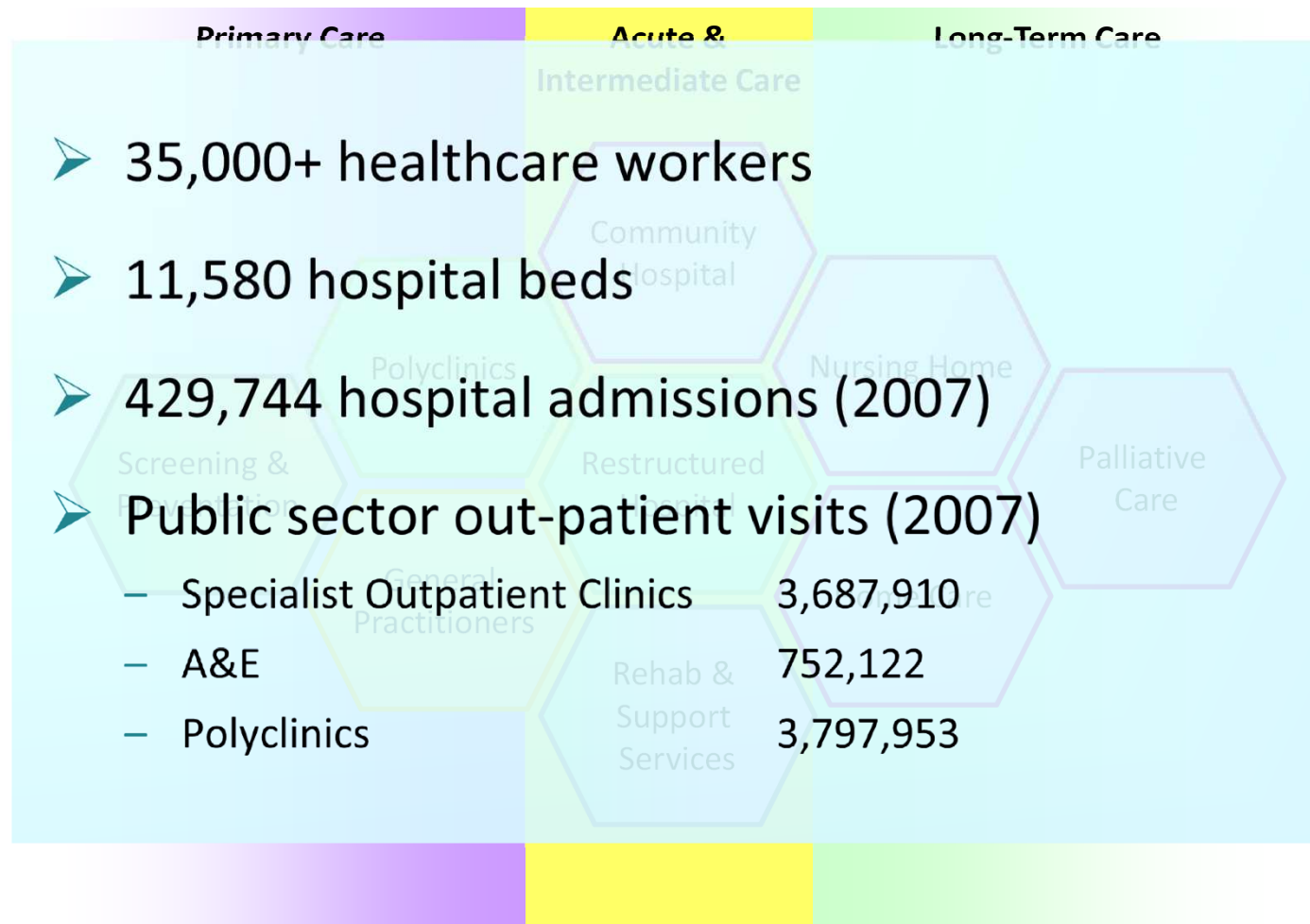
■ Chinese:	75 per cent
■ Malays:	14 per cent
■ Indians:	9 per cent

➤ It's Characters:

- A city state
- Rich technology foundations
- Support of the government
- Will of the people
- Less legal constraints
- 'It will be done'

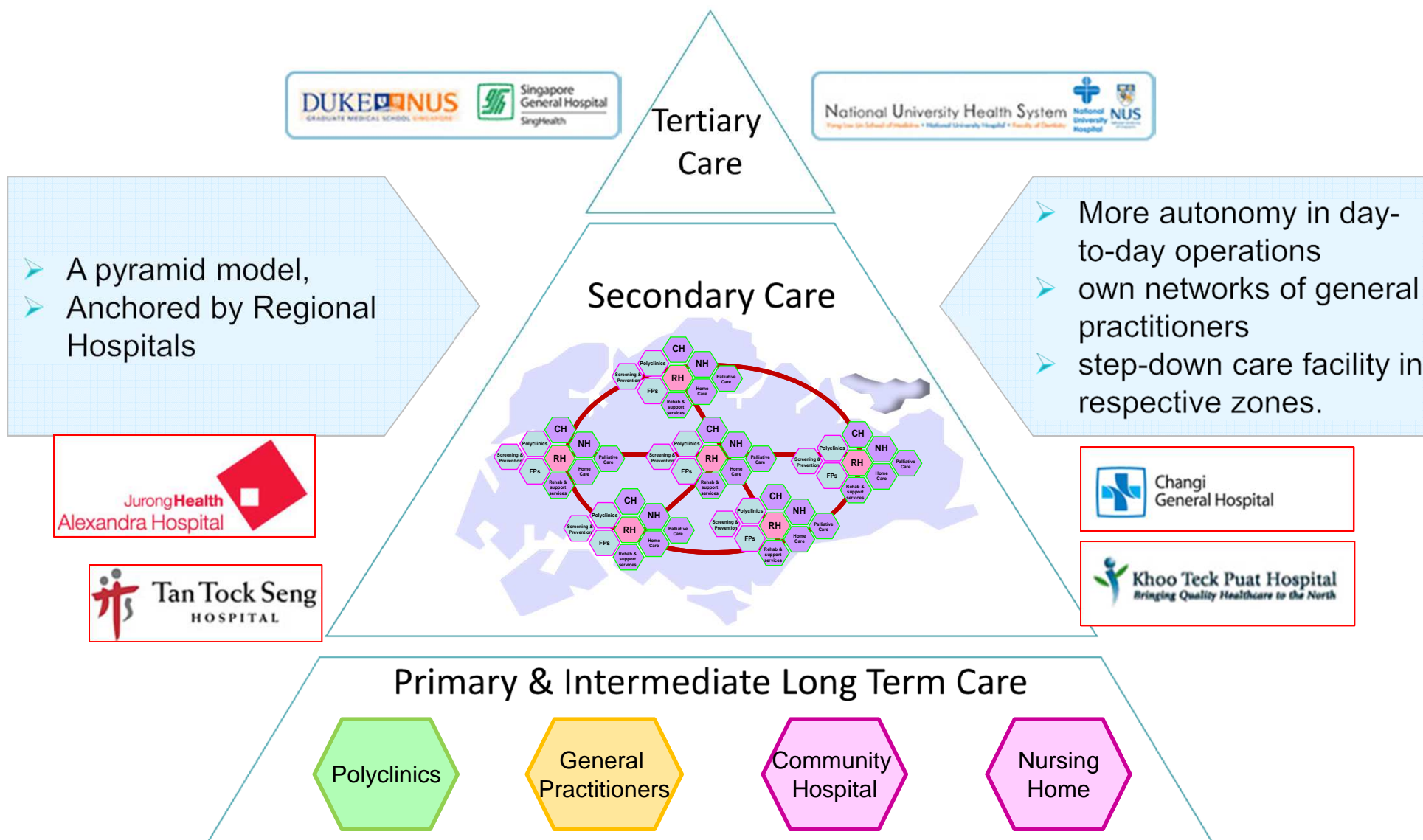


# The Healthcare Services

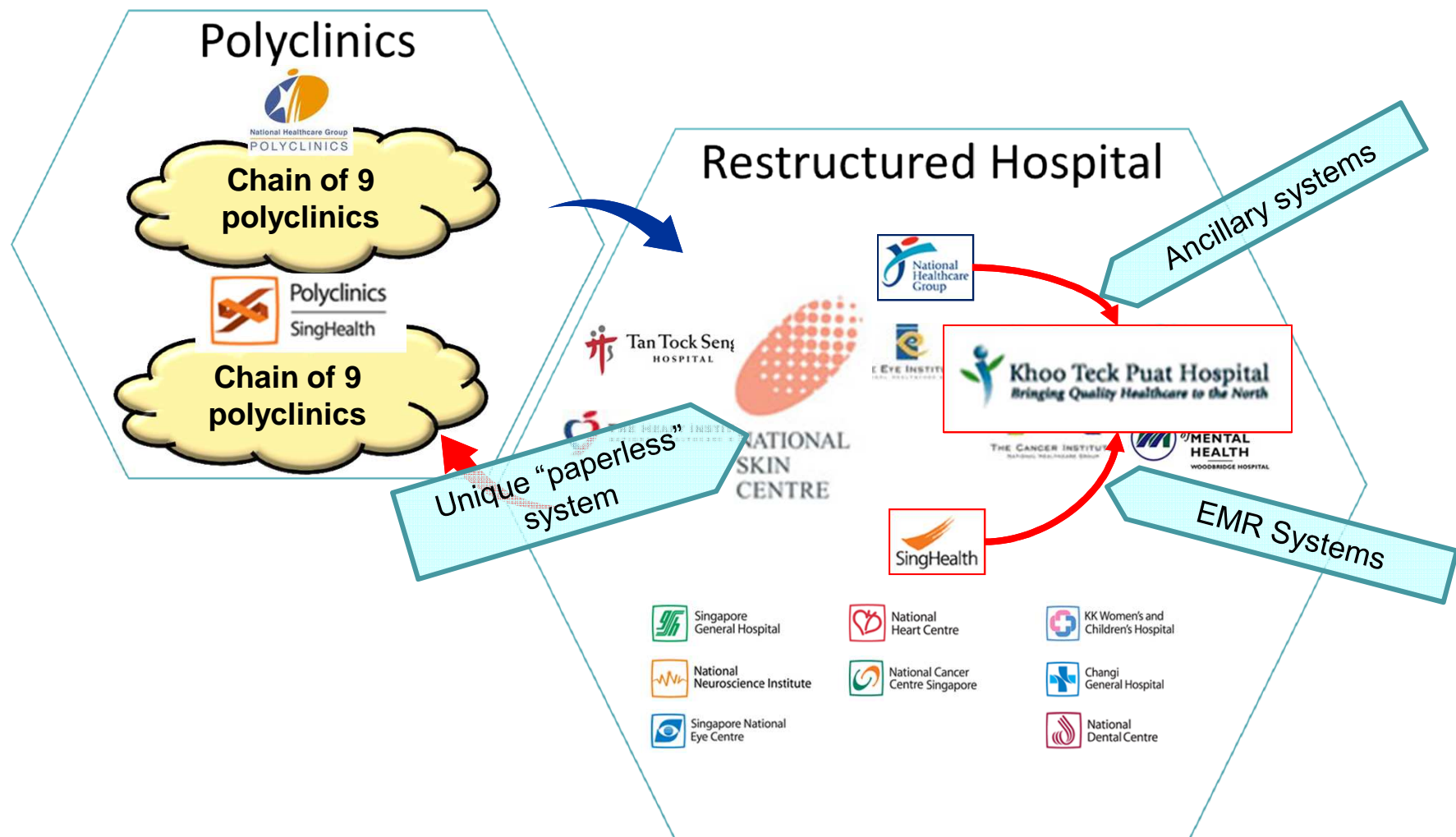


Public sector
  Private sector
  People sector

# At The 30,000 Feet...



# Fun & Challenges For EA

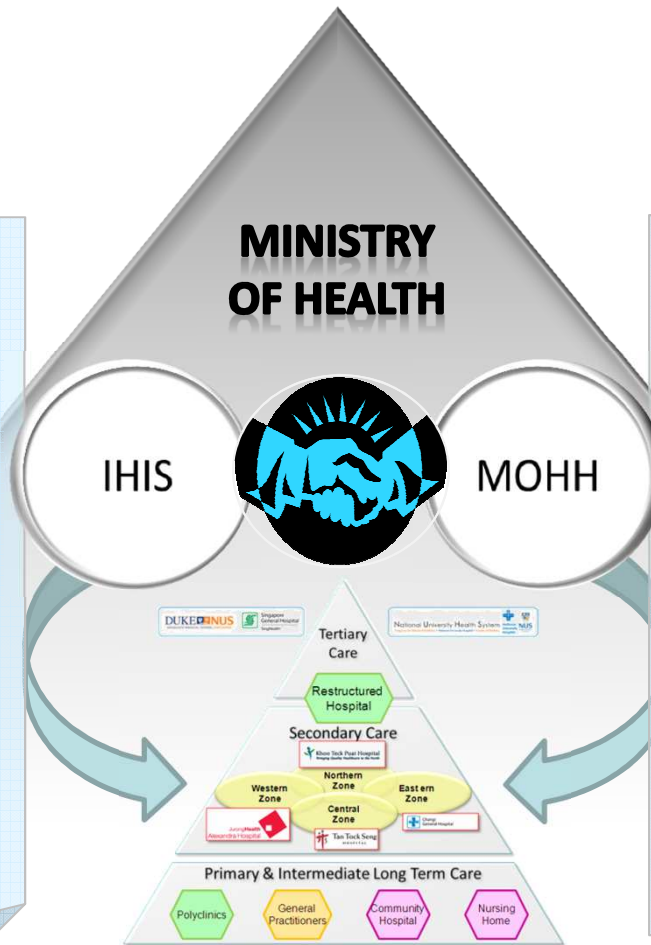




# Organization Structure



- Lead and Coordinating changes at clusters/healthcare institutions level
  - Chronic disease Management
  - Integrated Care
  - JGH



Health Eco System

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- Coordinate and facilitates collaboration across clusters/healthcare institutions
  - National Electronic Health Records
  - Integrated cares
  - Information exchange/standards
- And it's not just "across", we also have Community care, covering GP and ILTC, and PHM

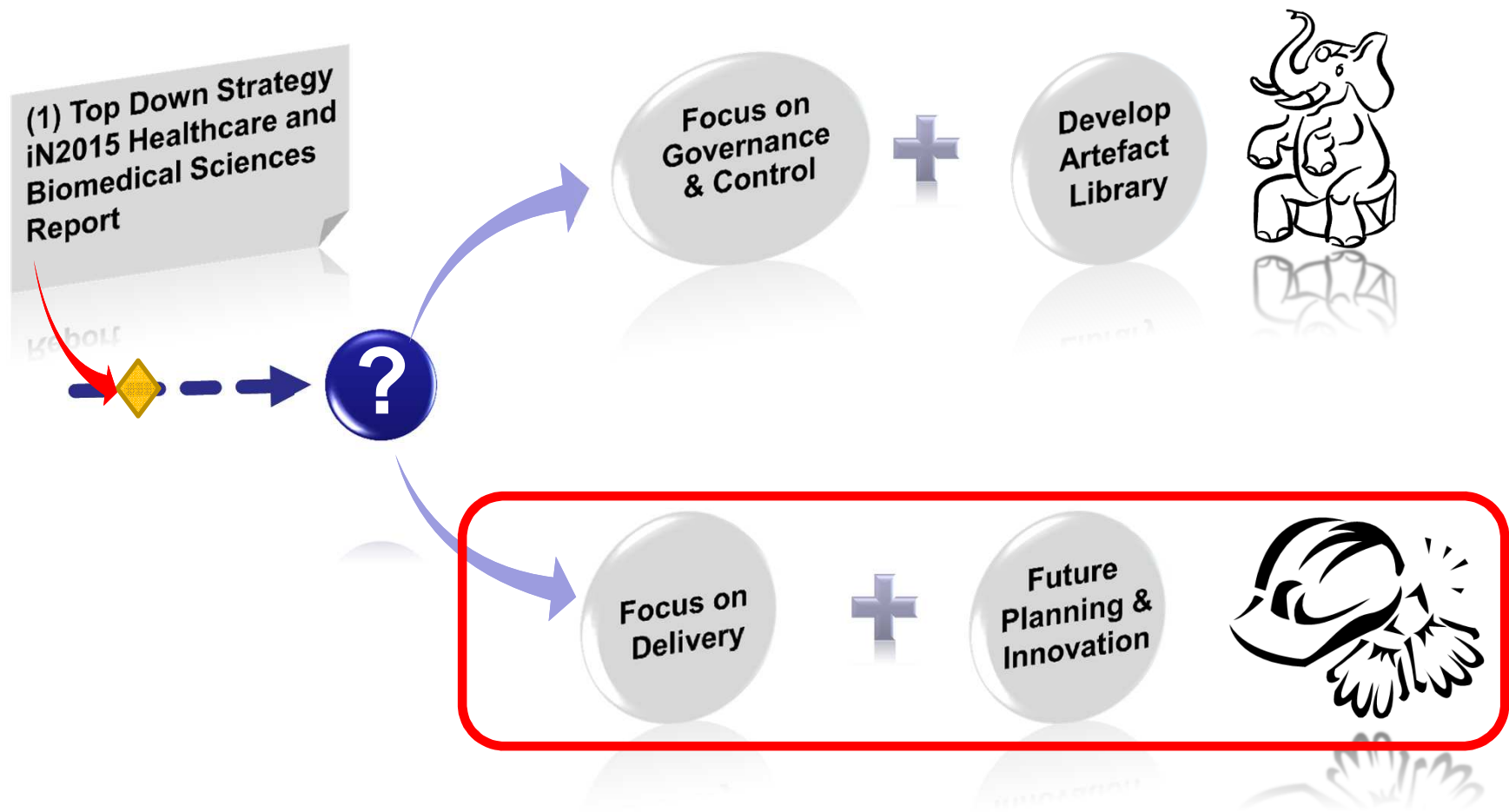
# Driving An Ambitious National IT Strategy

(1) Top Down Strategy  
iN2015 Healthcare and Biomedical  
Sciences Report



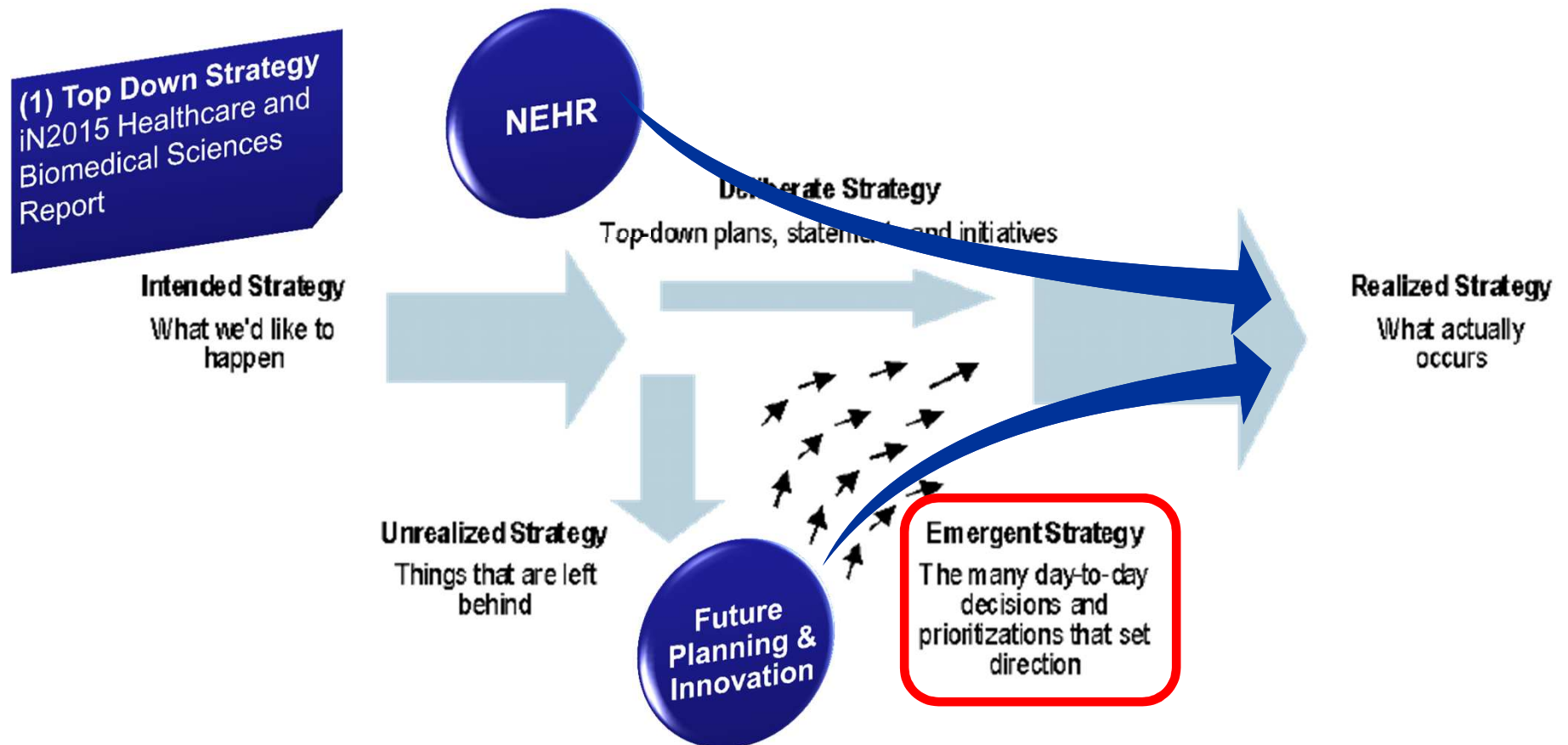
<b>Goal</b>	To accelerate sectoral transformation through an Infocomm-enabled personalised healthcare delivery system to achieve high quality clinical care, service excellence, cost-effectiveness and strong clinical research			
<b>Outcomes</b>	Well-Integrated Quality Healthcare	Cost-effective Healthcare Services	Greater ability of public to manage their health	Strong clinical and health services research
<b>Strategic Thrusts</b>	Enable integrated healthcare services		Enable integration between healthcare and advances in biomedical science	
<b>Strategies</b>	Health Information Exchange - e-Enable seamless and secured information exchange in the healthcare value chain	Integrated Healthcare Continuum - e-Enable processes and linkages across the healthcare value chain		Translating Biomedical Research to Healthcare Delivery - integrate clinical and biomedical research data

# At MOHH, The Alternative paths for Architecture





# Reflecting back...



Gartner Research, 10 Feb, 2010

Case Study: Understanding the Impact of Emergent Strategy on Enterprise Architecture

# Enterprise Architecture – Value Approach



Work Collaboratively



Become part of natural process



Add value early on



It's always about Delivery



Pragmatic approach

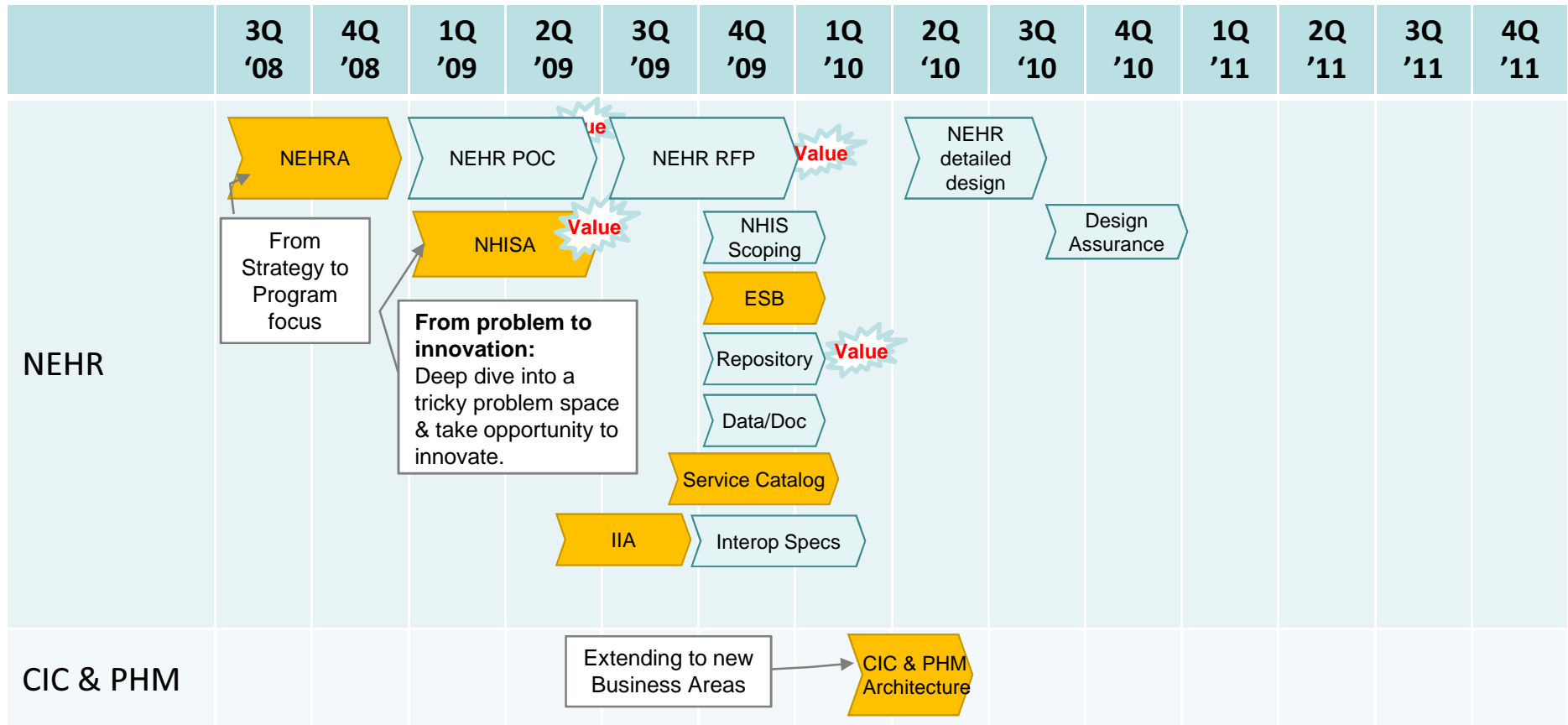


Be supportive



Value breeds demand.

# And Some of The Architecture Work



# Developing The Maturity Model to Assess The current state of CIC / PHM

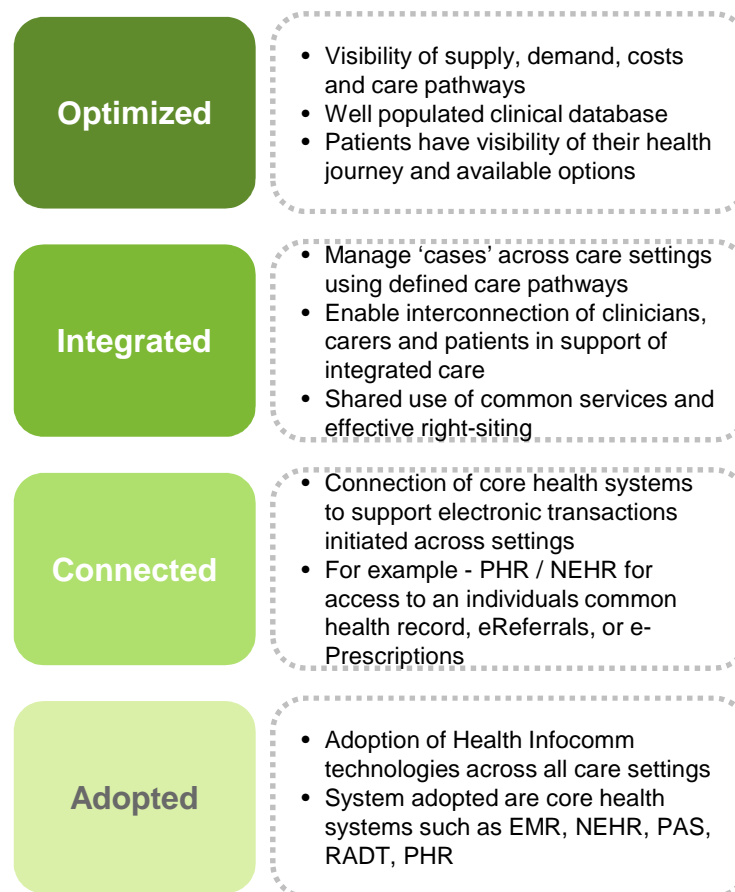
## iN2015 Strategic Framework

From iN2015 Healthcare and  
Biomedical Sciences Report

Goal	To accelerate sectoral transformation through an Infocomm-enabled personalised healthcare delivery system to achieve high quality clinical care, service excellence, cost-effectiveness and strong clinical research			
Outcomes	Well-Integrated Quality Healthcare	Cost-effective Healthcare Services	Greater ability of public to manage their health	Strong clinical and health services research
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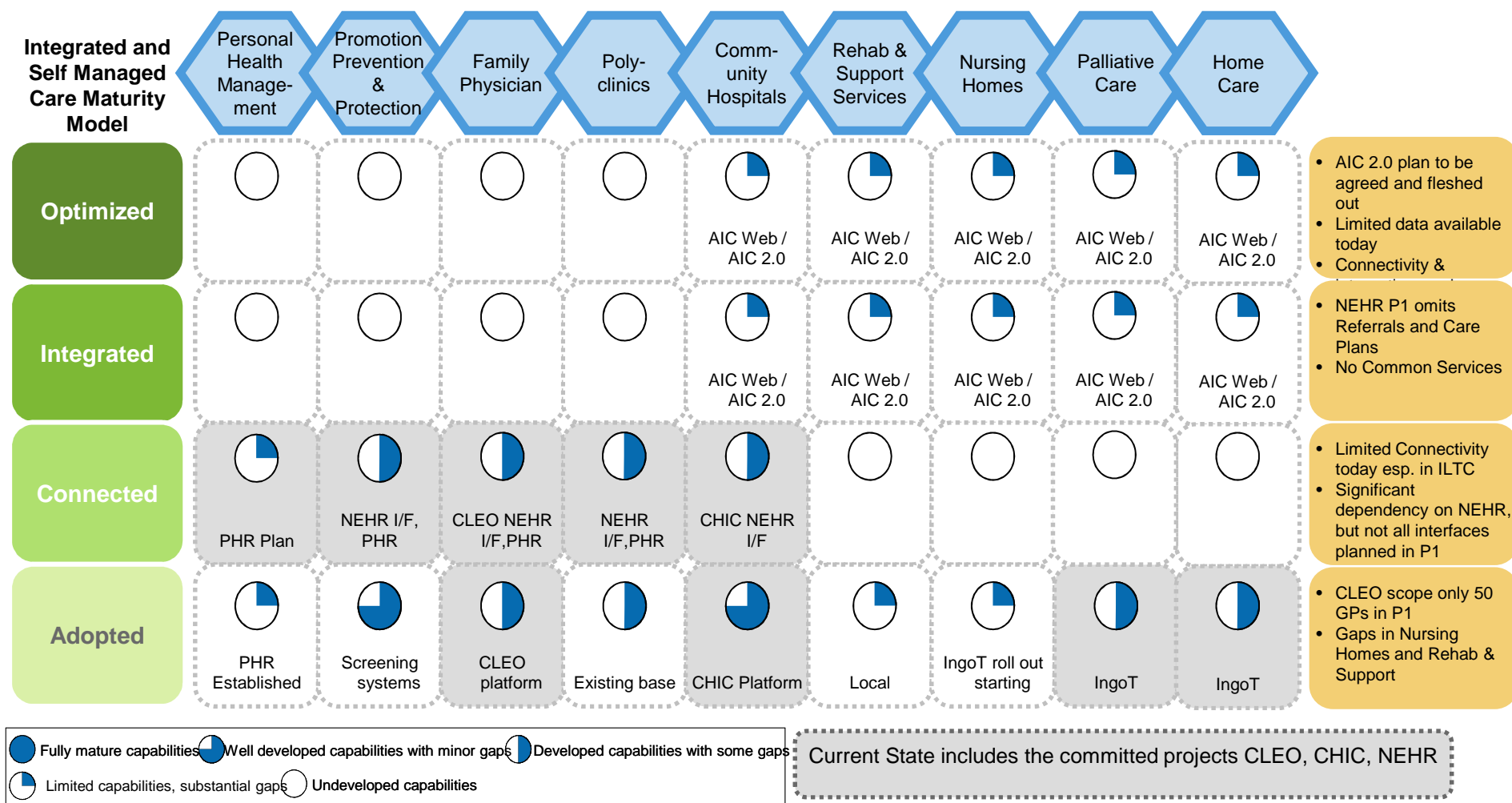
... suggests a journey summarised by ...

## Integrated and Self Managed Care Maturity Model

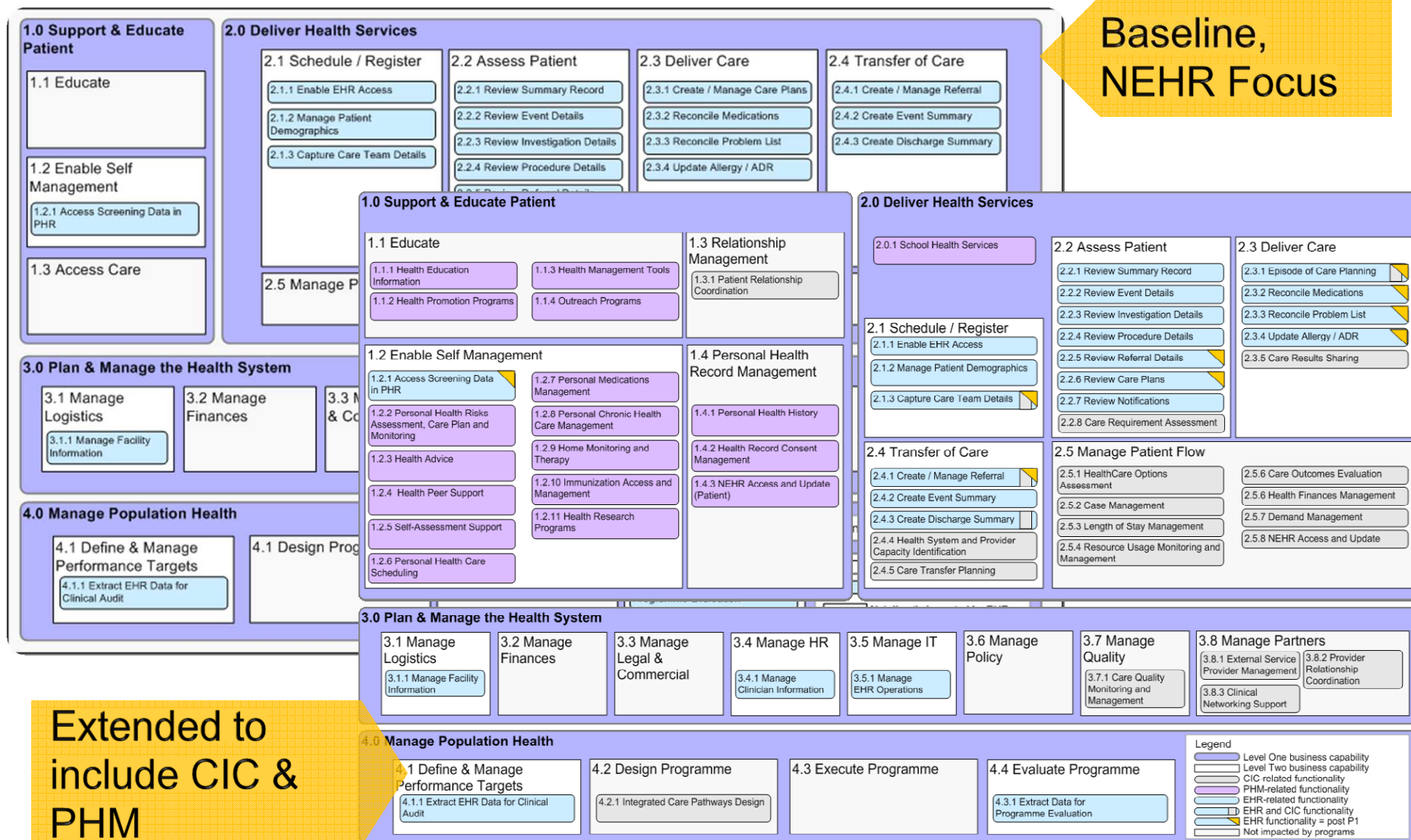


# A current State Assessment

## Assessment on the functionality provided and coverage within and across care settings

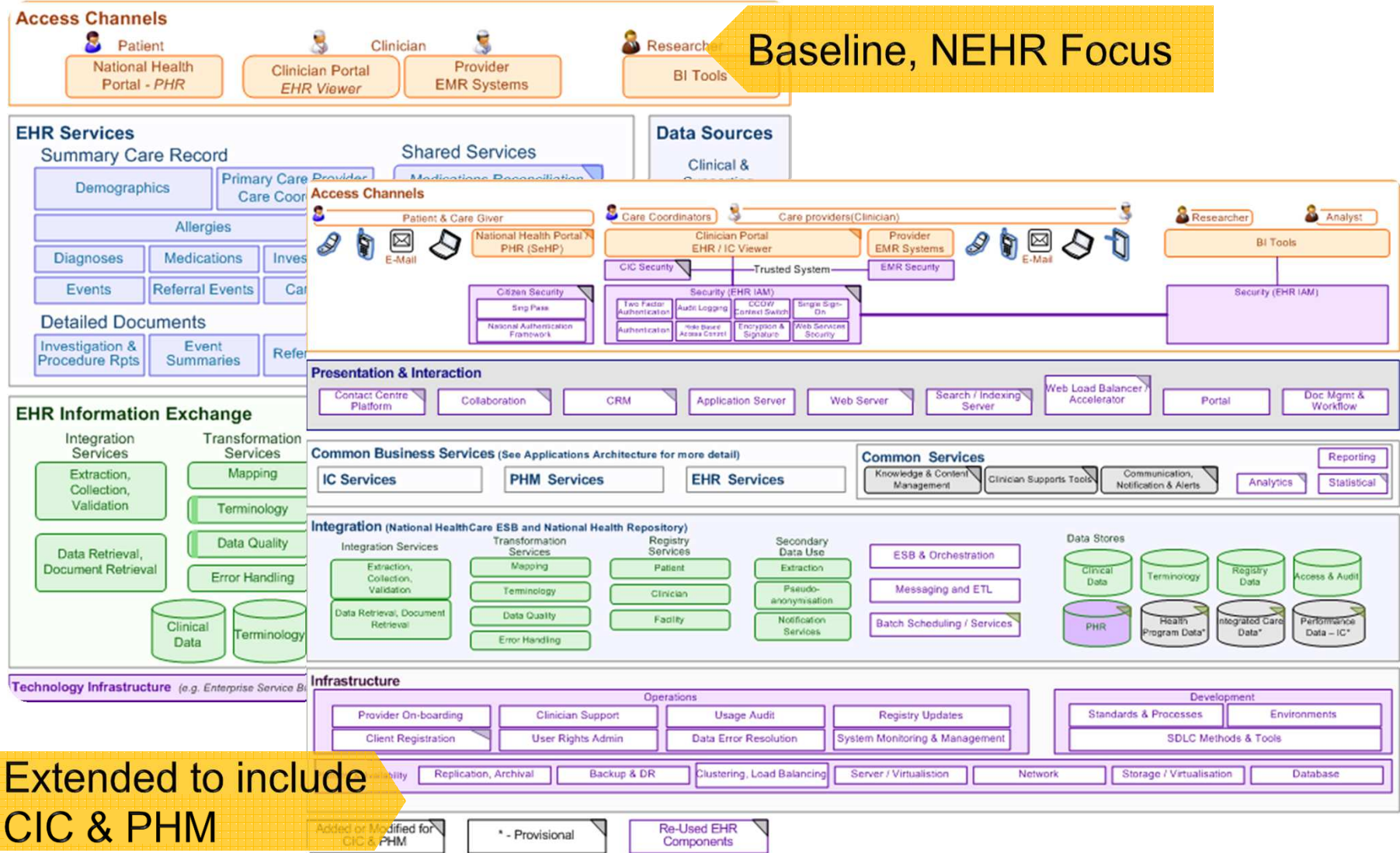


# Extending The Business Capability Map

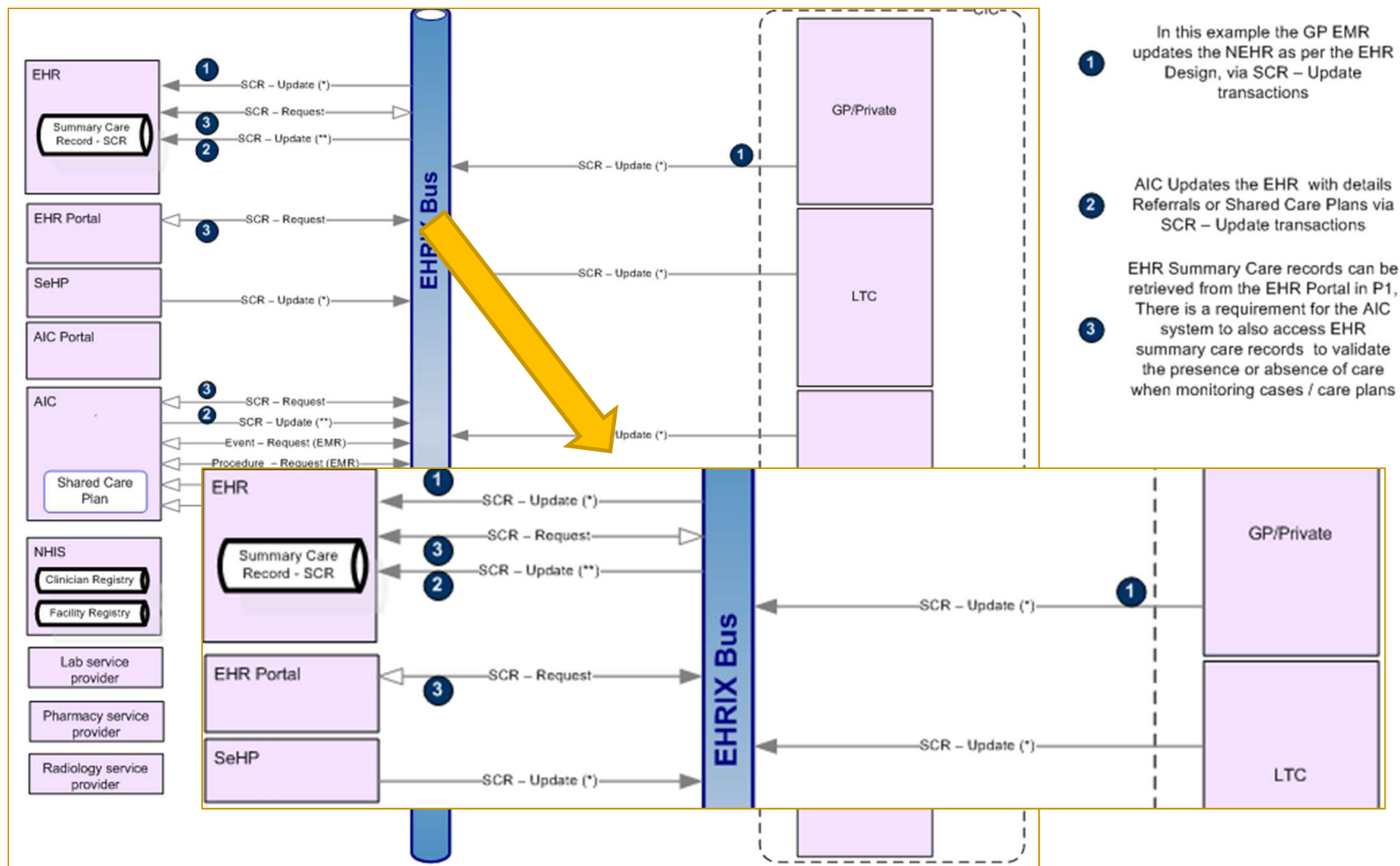




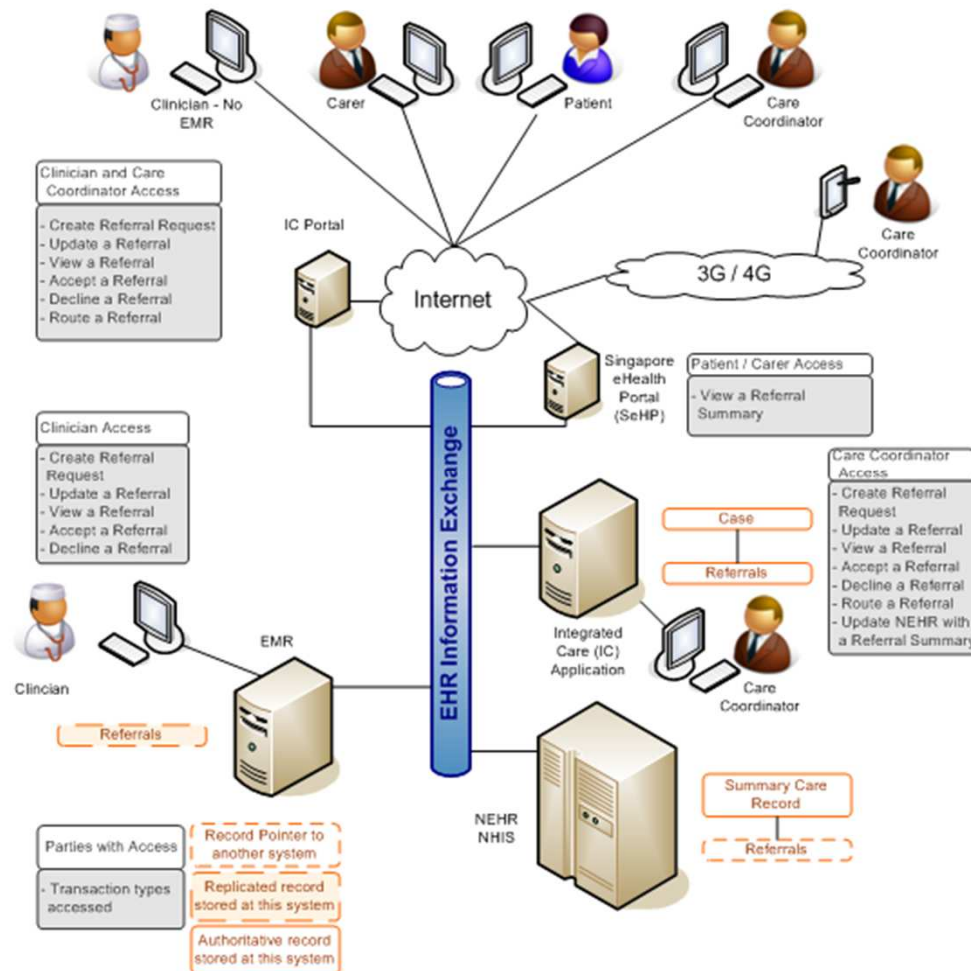
# Extending The Architecture Framework



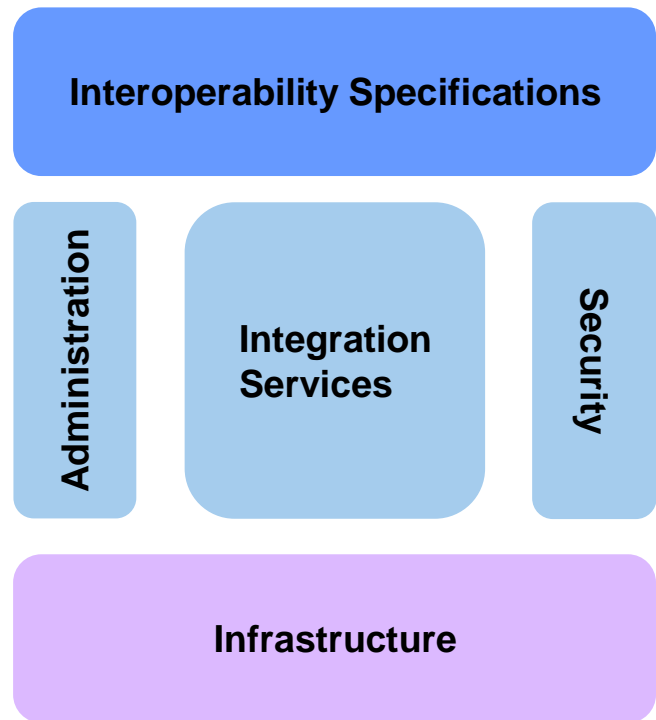
# Updating The Information Exchange Requirements



# Updating The Info Exchanges Access Patterns



# Benefits From Earlier Works.



e.g.

- **Interoperability Specifications**
  - Understand EHR information in a consistent manner.
- **Integration Services**
  - Reuses & Refine capabilities EHR needs to provide
- **Security**
  - Apply information classification and ensure and conformance
- **Administration**
  - Adapts/adopts administration and operations

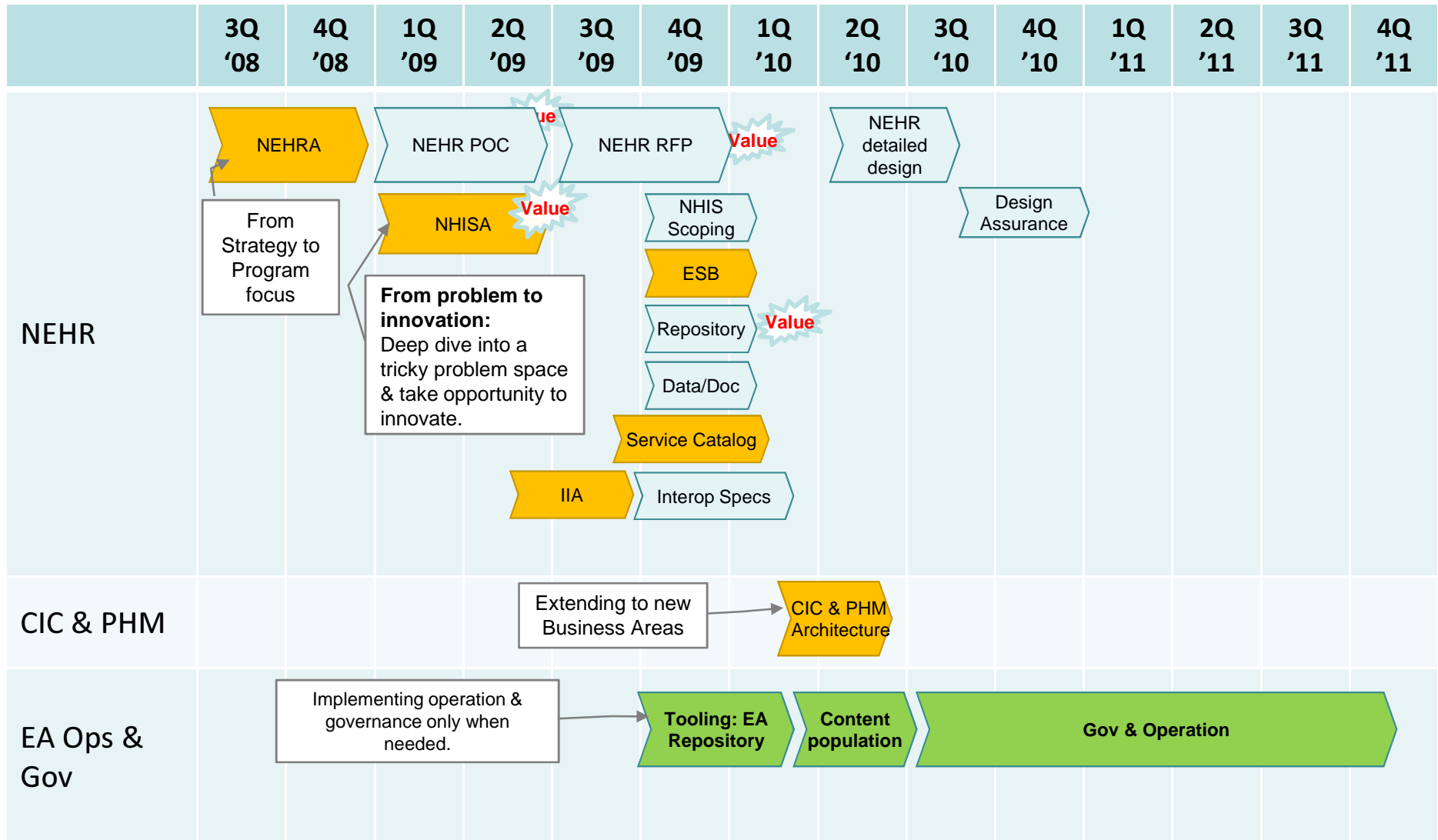
# Our Building Blocks Through Opportunities

- ❑ Services catalog
- ❑ Inter-operability & Integration
- ❑ National Service Bus Architecture
- ❑ Data & Data repository Architecture
- ❑ National Health Identity Service
- ❑ Capabilities Catalog



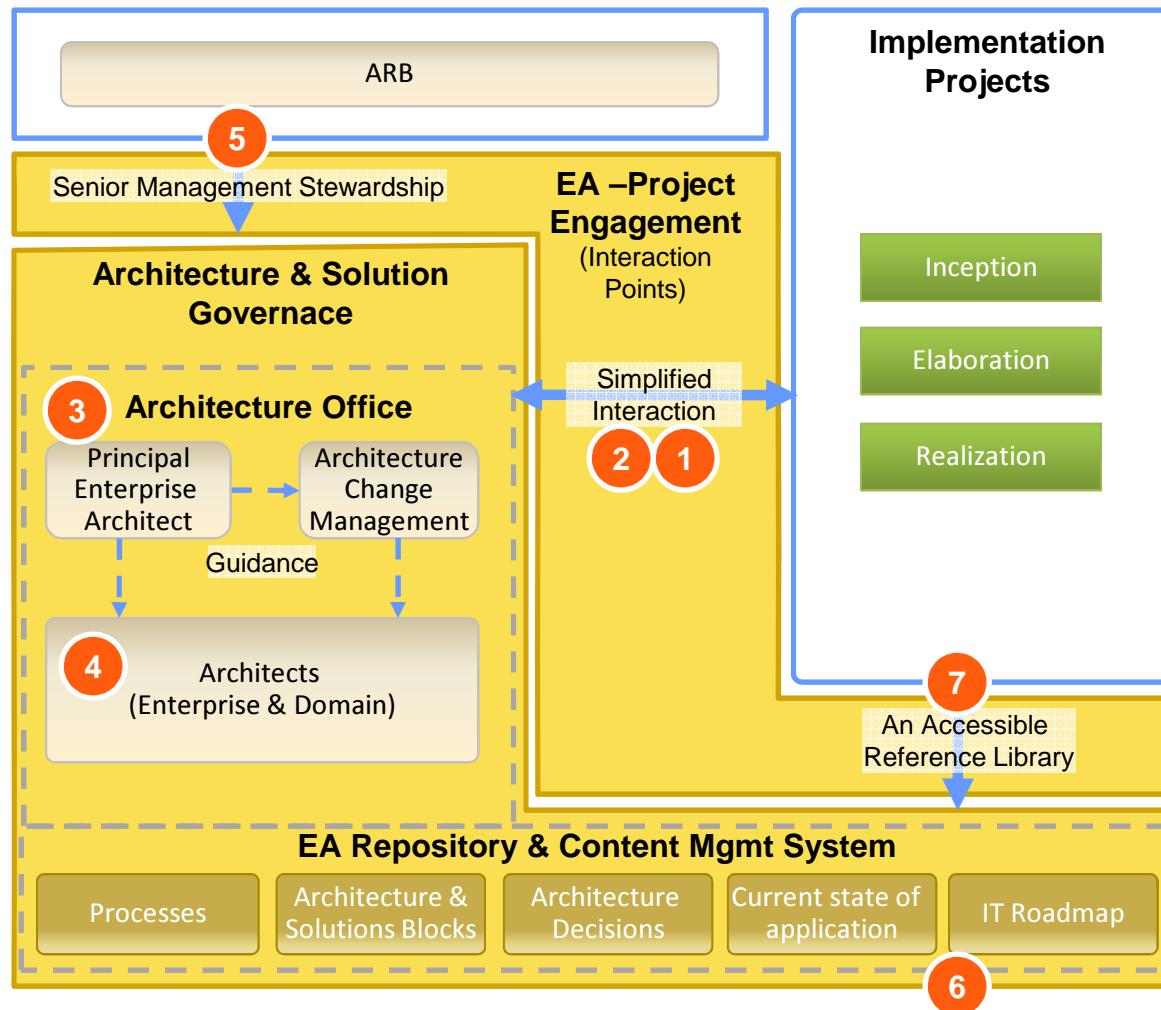


# “Operationalise” the EA practice

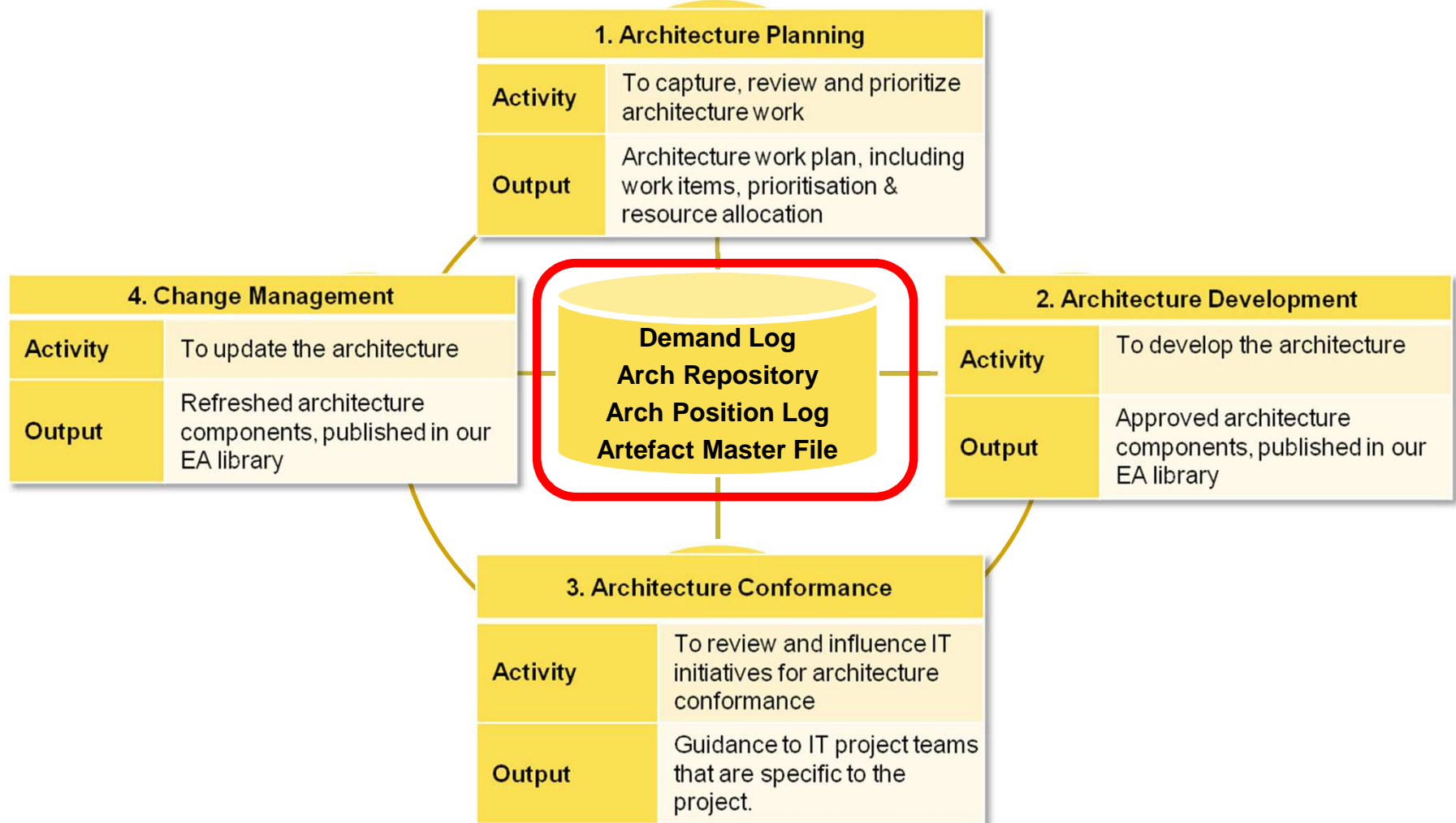




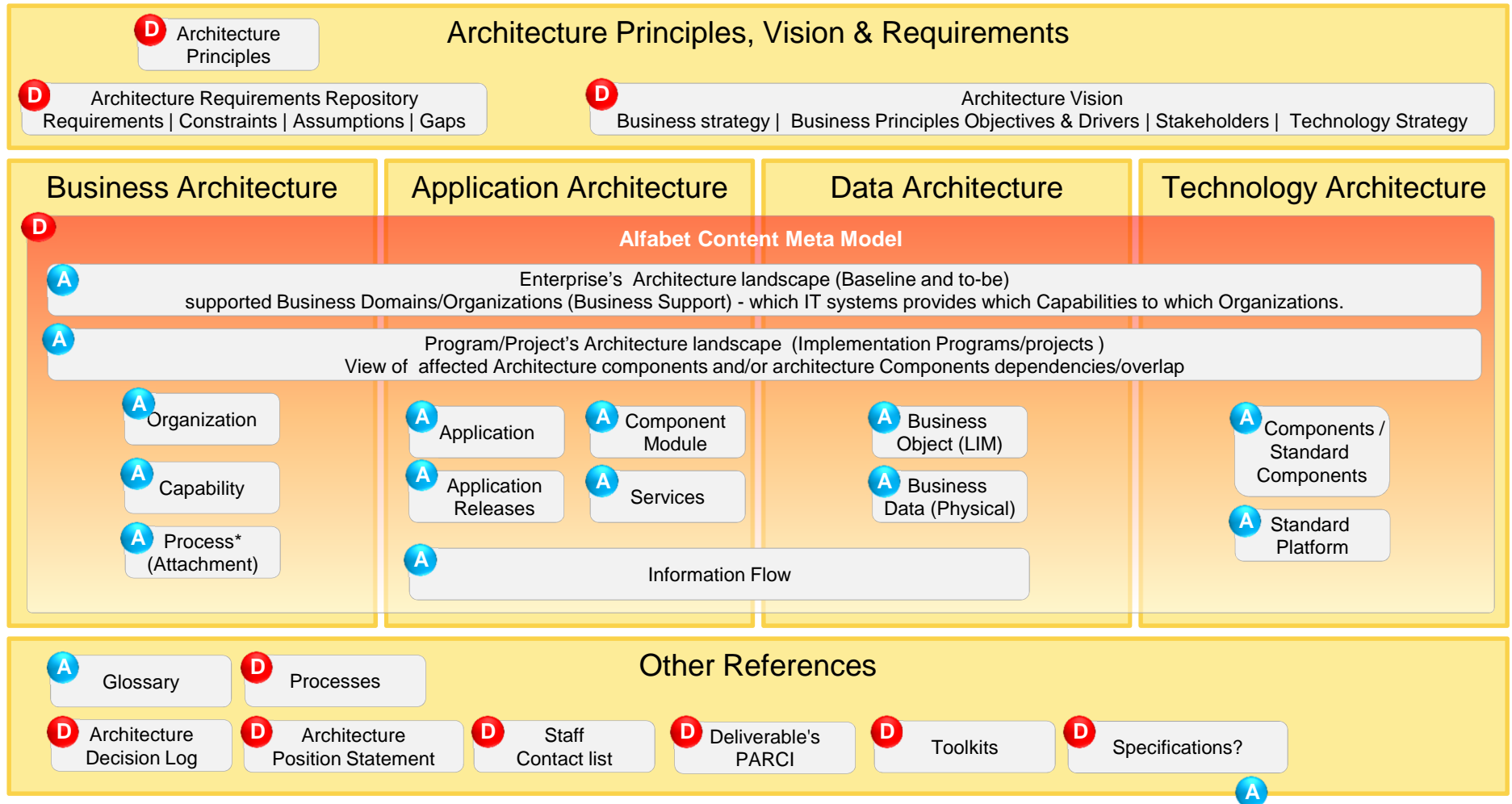
# Collaborative EA Governance



# Processes, Tool & Repository



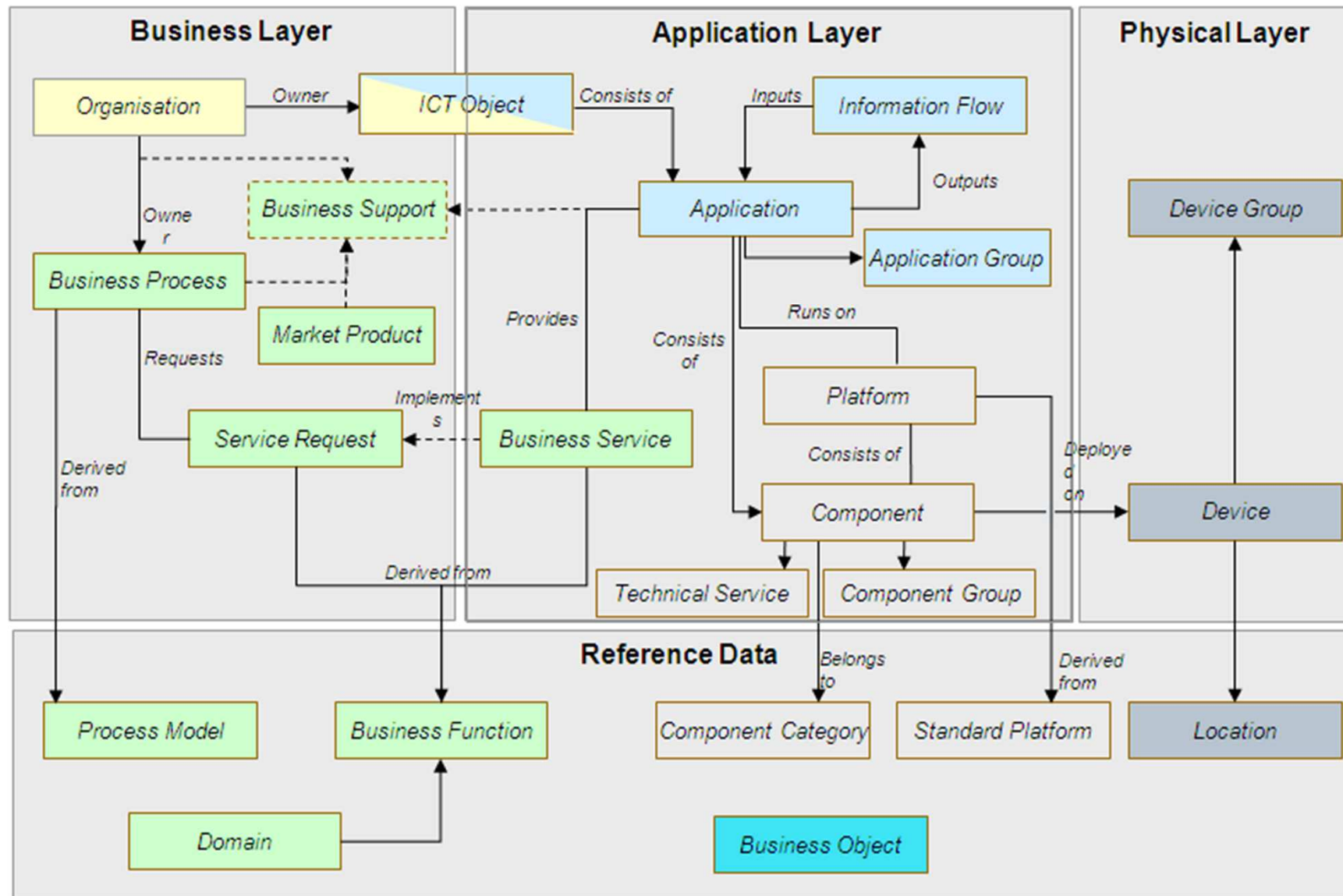
# EA Repository Meta Model



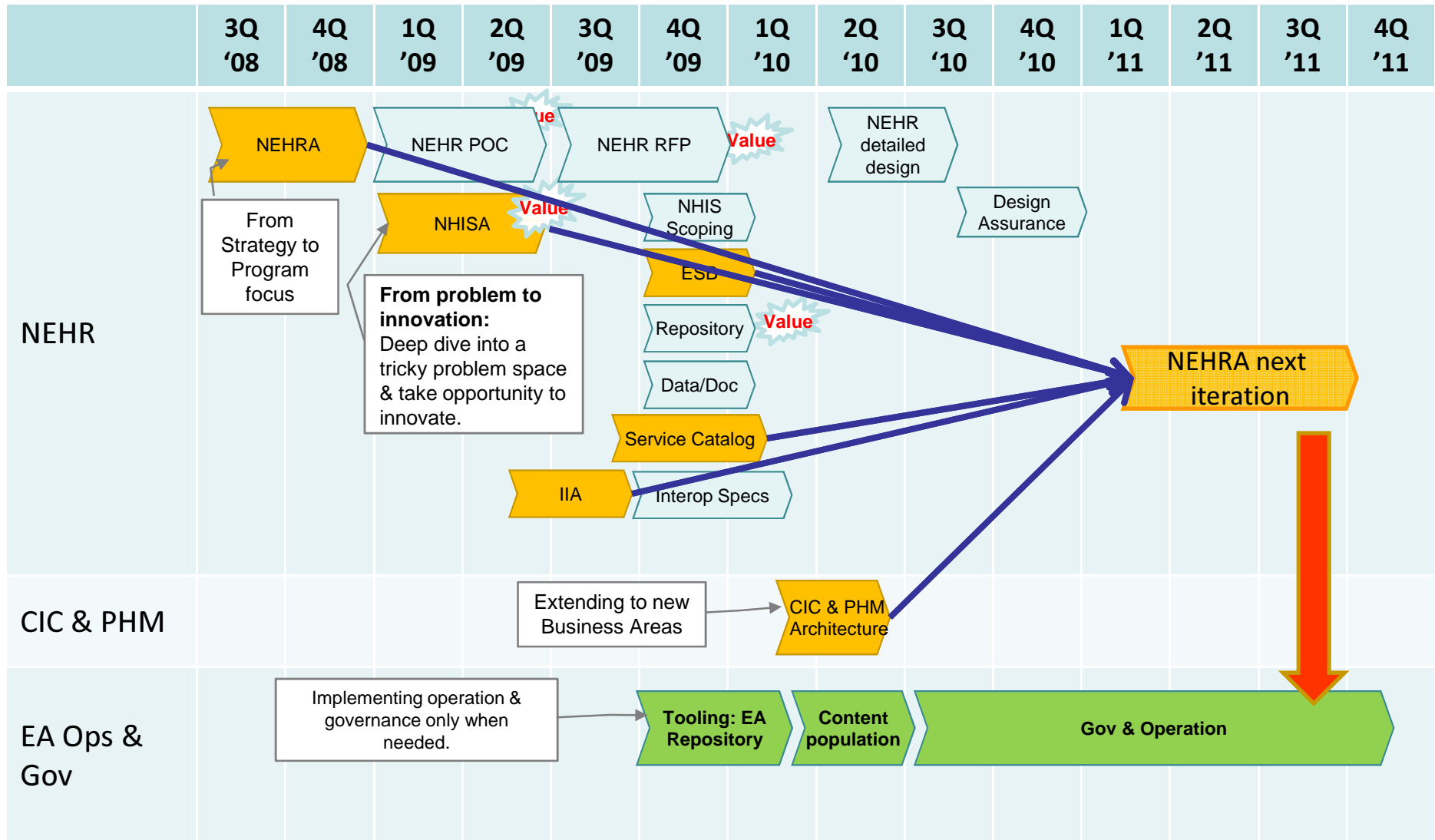
A Managed in Alfabet repository
D Managed in a Directory repository

Adapted from TOGAF 9

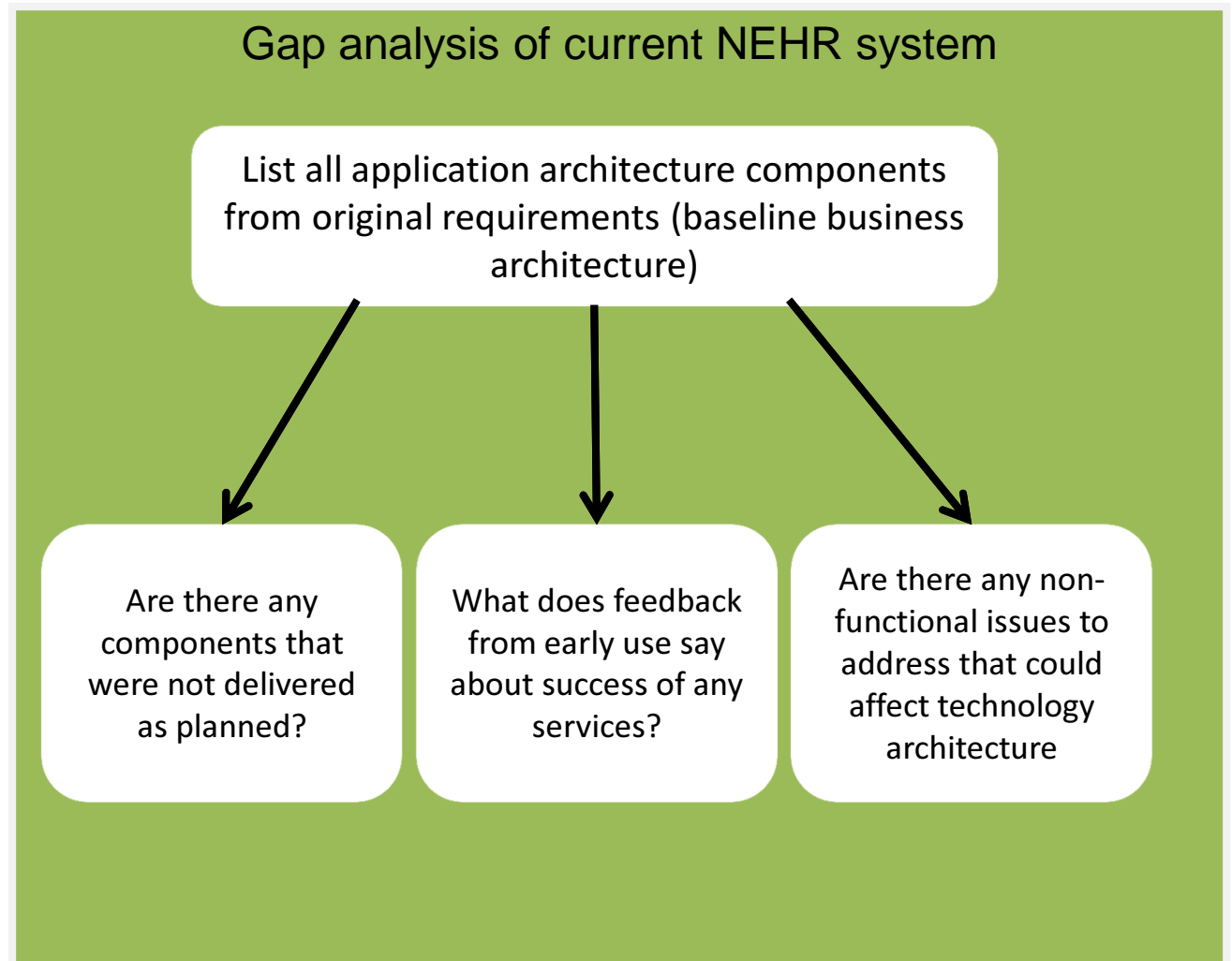
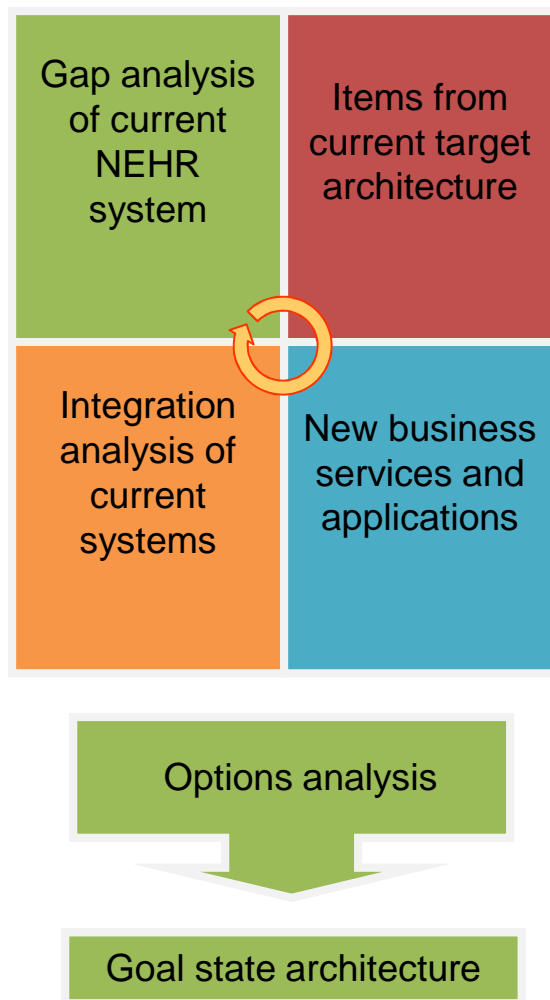
# Overview of EA Repository's Meta Model



# What's Cooking...

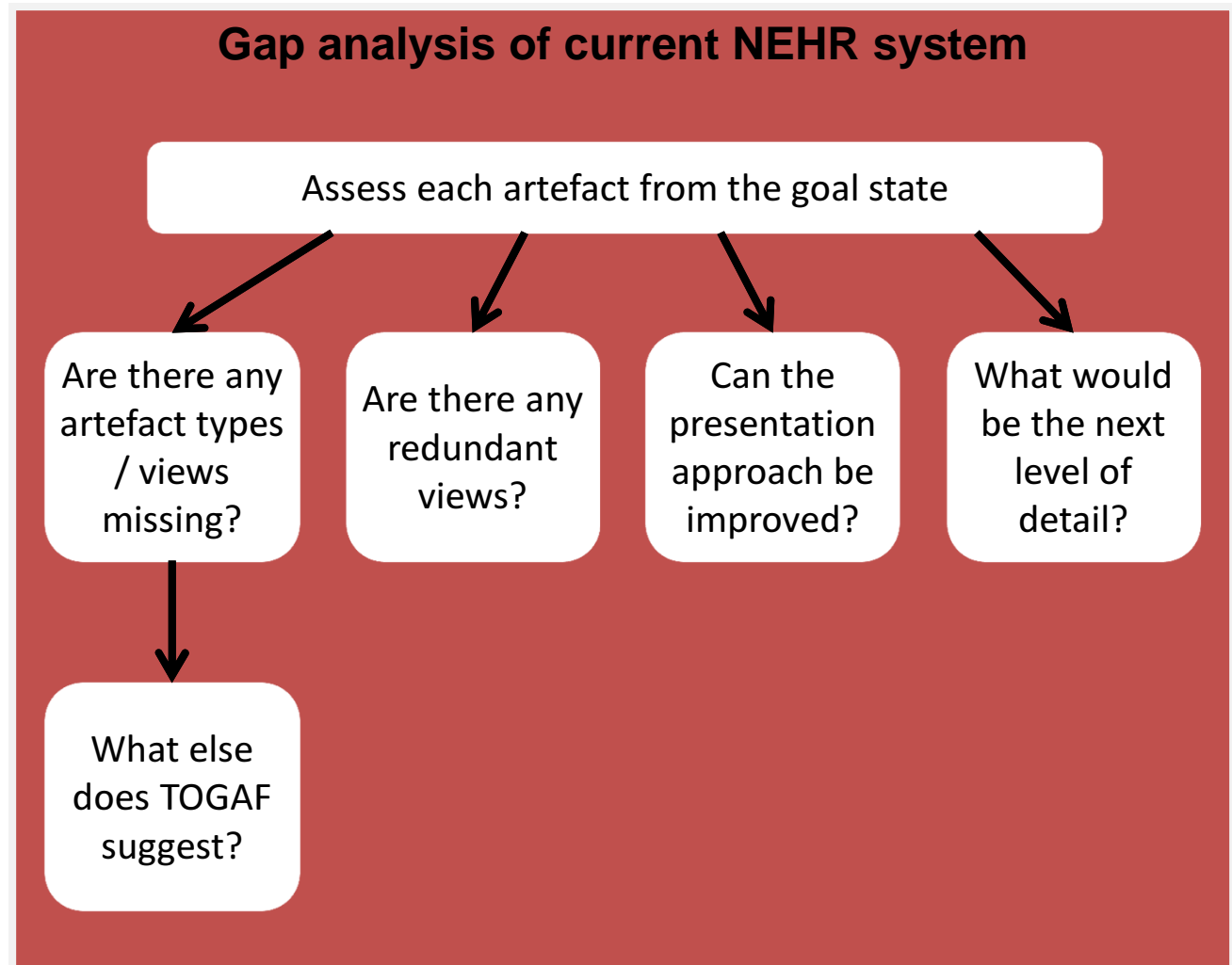
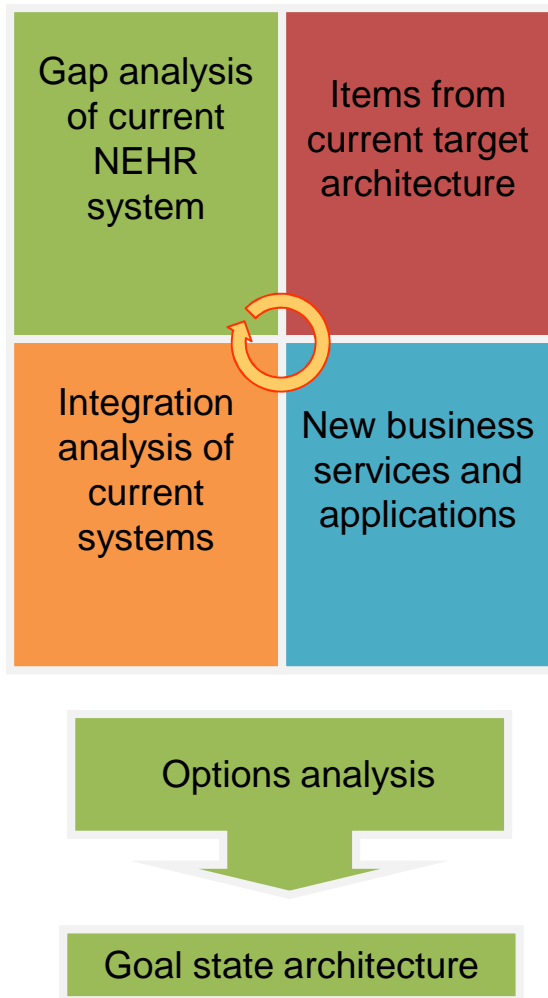


# NEHR Architecture Refresh Approach

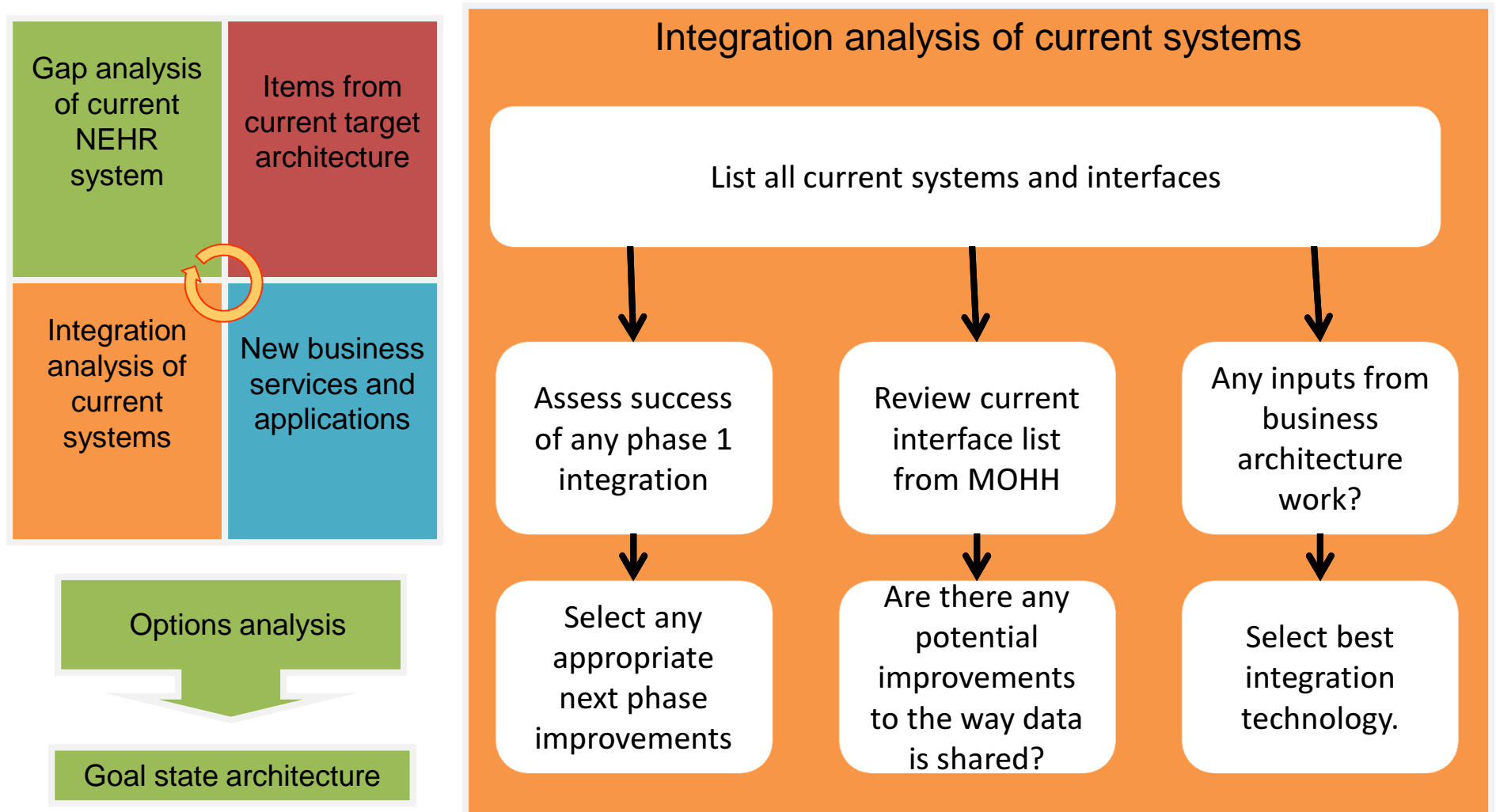




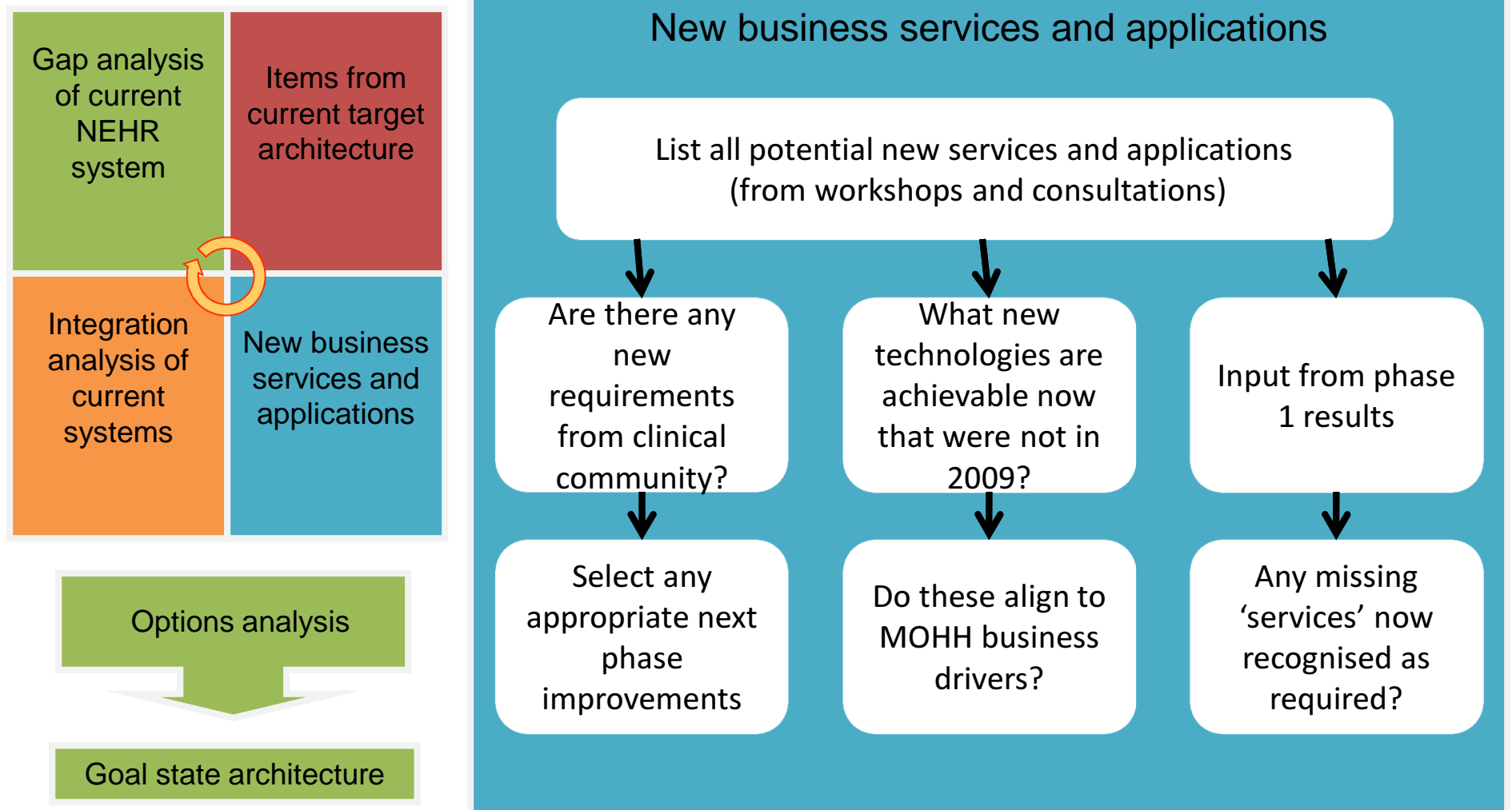
# NEHR Architecture Refresh Approach



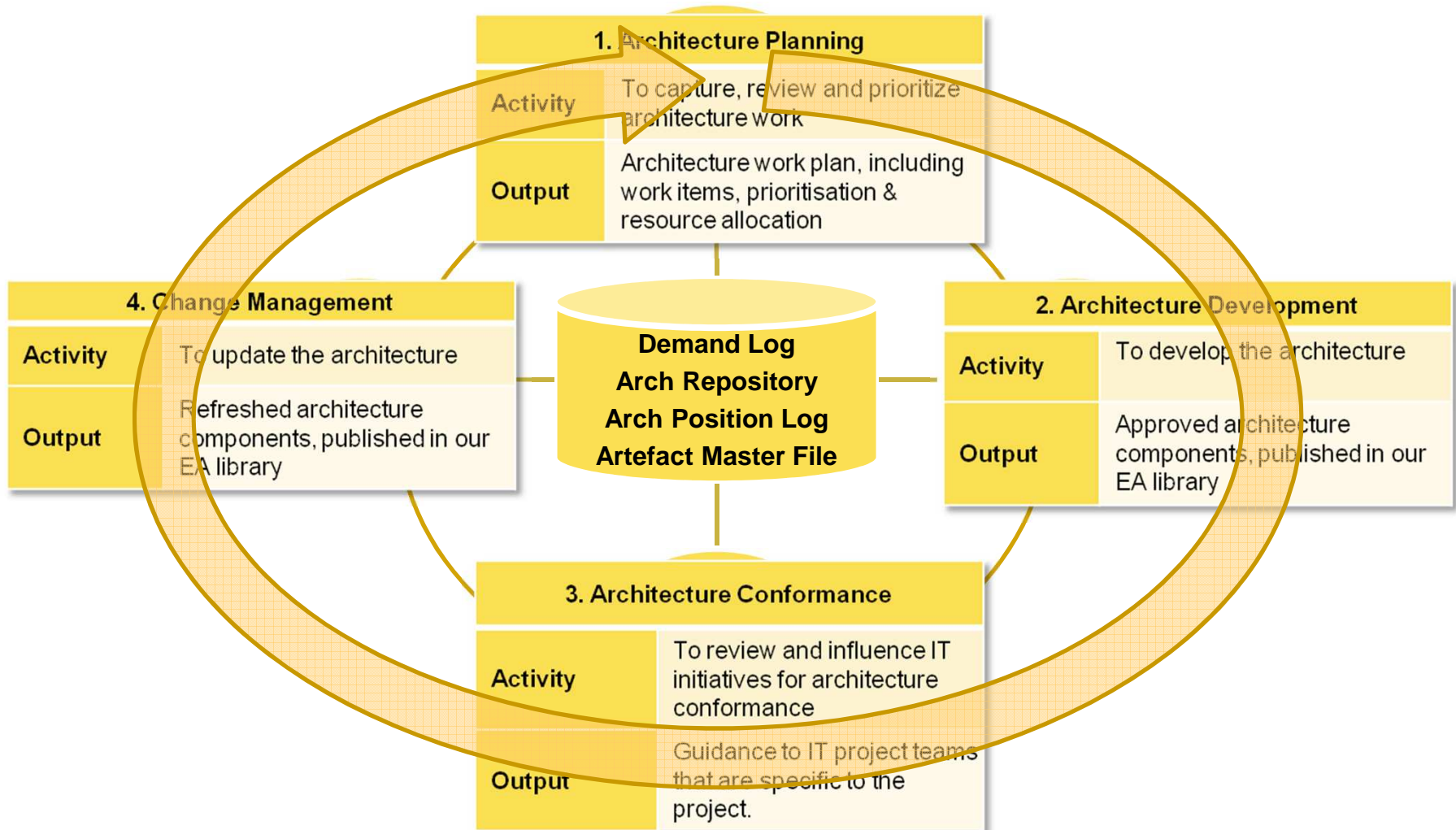
# NEHR Architecture Refresh Approach



# NEHR Architecture Refresh Approach



# Solidifying EA Process



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Thank you