



# GUIDELINES FOR HEALTH ICT IMPLEMENTATION IN MALAYSIA

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# Key Content

- Background of ICT project in healthcare
- The Checklist
- Standard

**Is ICT  
Implementation in  
Healthcare different  
than other sectors?**

# Healthcare is Complex

- Multidisciplinary
- Services cut across many disciplines
- Multi-resources
- Lots of medical equipment and new technology
- New research and findings
- Many types of facilities
- Variations of policies and standard practice guidelines / operating procedure
- Millions of data / terms used
- Variations of forms (in data entry)

# Search for MONEY...




money

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**958,000,000**

# Search for SEX...



sex

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**573,000,000**

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health

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# 8,350,000,000

# Search Analysis in Google (10.10.10)

Keyword	Return
Money	958,000,000
Sex	573,000,000
Health	8,350,000,000

Health - the most  
popular, yet the most  
complicated

# Emergence of Health Informatics Field

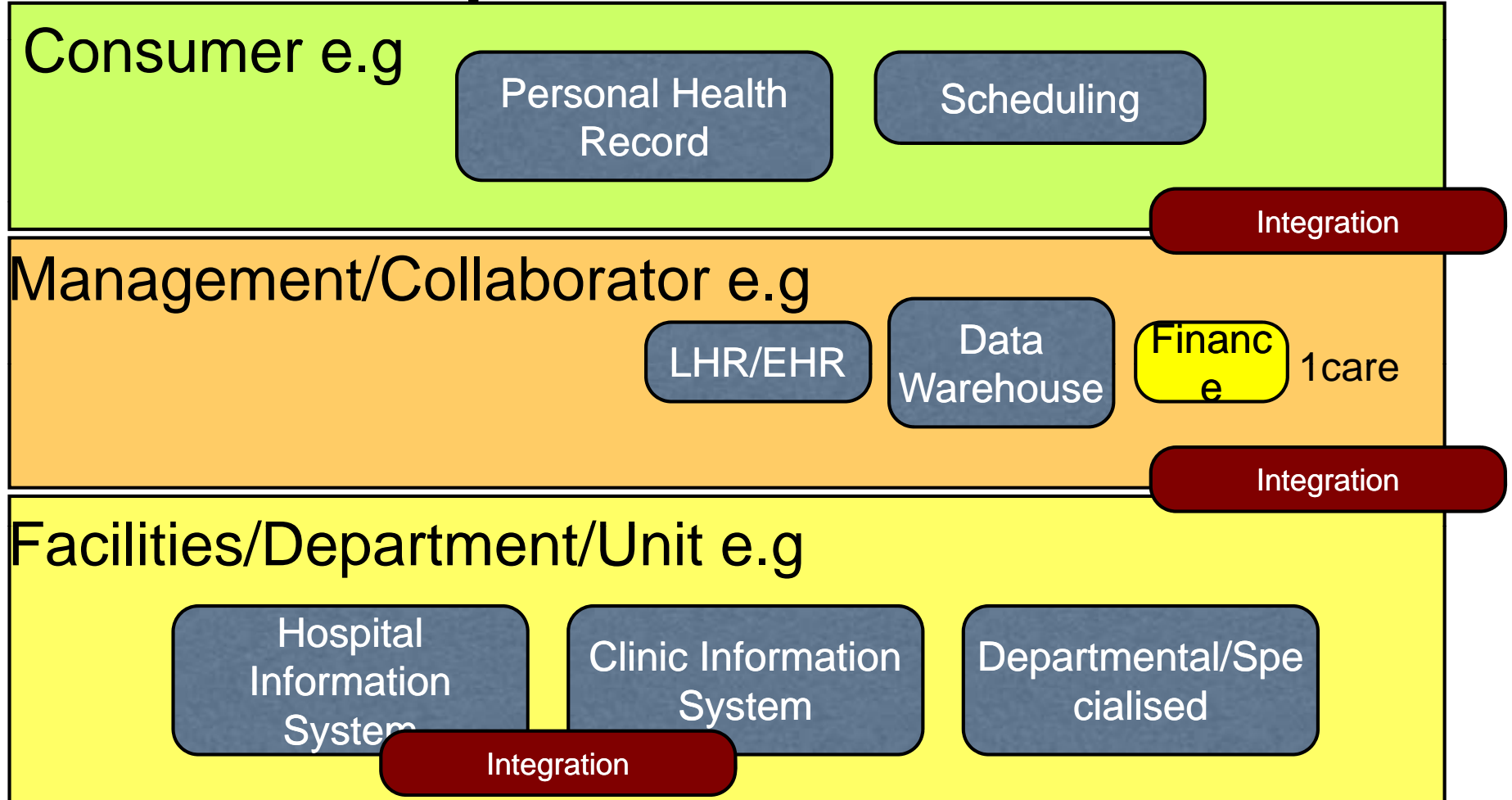
# Types of ICT Implementation

Consumer

Management/Collaborator

Facilities/Department/Unit

# Types of ICT Implementation



# Types of ICT Implementation

- Software
  - applications
- Services
  - change management, business process reengineering
- Infrastructure
  - Hardware
  - Network

# Types of ICT Implementation

Types	Software	Services	Infrastructure
Facilities	?	?	?
Collaborative	?	?	?
Consumer	?	?	?

# Guideline of ICT Implementation

# Phases of ICT Implementation

Initiation

Planning

Execution

Closure

Operation &  
Maintenance

Improvement

# Initiation

Checklist	Output
Strategic Information System Plan (SISP)	Identify ICT project (3 to 5 years), its justification, alignment to mission, vision, goals, prioritization
Enterprise Architecture (EA)	Detail out the SISP - Business , Technology and Implementation Framework
Budgeting	As part of SISP and EA

# Planning

Checklist	Output
Project Implementation Plan	Detail out the scope, timeline, cost and how are we going to manage and execute the project
Change Management Plan	Detail out the change management activities - to get buy in and changing the mindset
To Be Workflow	Know & Understand what you want early. Achieved through business process reengineering (BPR)
Technical Plan	Infrastructure (including building, furniture) and interoperability

# Execution/Implementation

Checklist	Output
Make the Purchase	Solicitation exercise (tender etc)
Contract and Service Level Agreement	Define - contract management and agreed on service level expectation
Project Management Standard	Agreed on project management standard i.e. communication, documentation etc
Project Charter	Establish Dream Team followed by Team Contract
Benefit Realization	Identify target benefits, its KPI and parameters. Include patient safety and conformance to practice standard i.e. JCI

# Execution/Implementation

Checklist	Output
Change Management	Execute change management activities - transition from manual to electronic, empower users to lead
Workflow	Detail out BPR. Current to 'To Be' . Do not forget patient's role
Data and Information	entry and retrieval (identified from BPR), standardisation and harmonisation, data migration
Policy	Establish relevant policy and harmonisation of policies across departments.

# Execution/Implementati on

Checklist	Output
Vendor's Methodology	Understand vendor's approach for the implementation. ? new software development ? customised off the shelf - know your role and responsibility
Testing	Establish test script matching with to be workflow. Establish criteria. Request Test Plan
Go Live	Prepare Go Live Plan, Prepare Business Continuity Plan

# Closure

- More of a project closure
- Finalised documentation and handing over items (license, manual etc)
- Claim, payment and warranty

# Operation and Maintenance

- Establish Service Level Agreement (to be done early in the project)
- report monthly/quarterly
  - solve issues
- penalty calculation
- update and upgrade (testing)

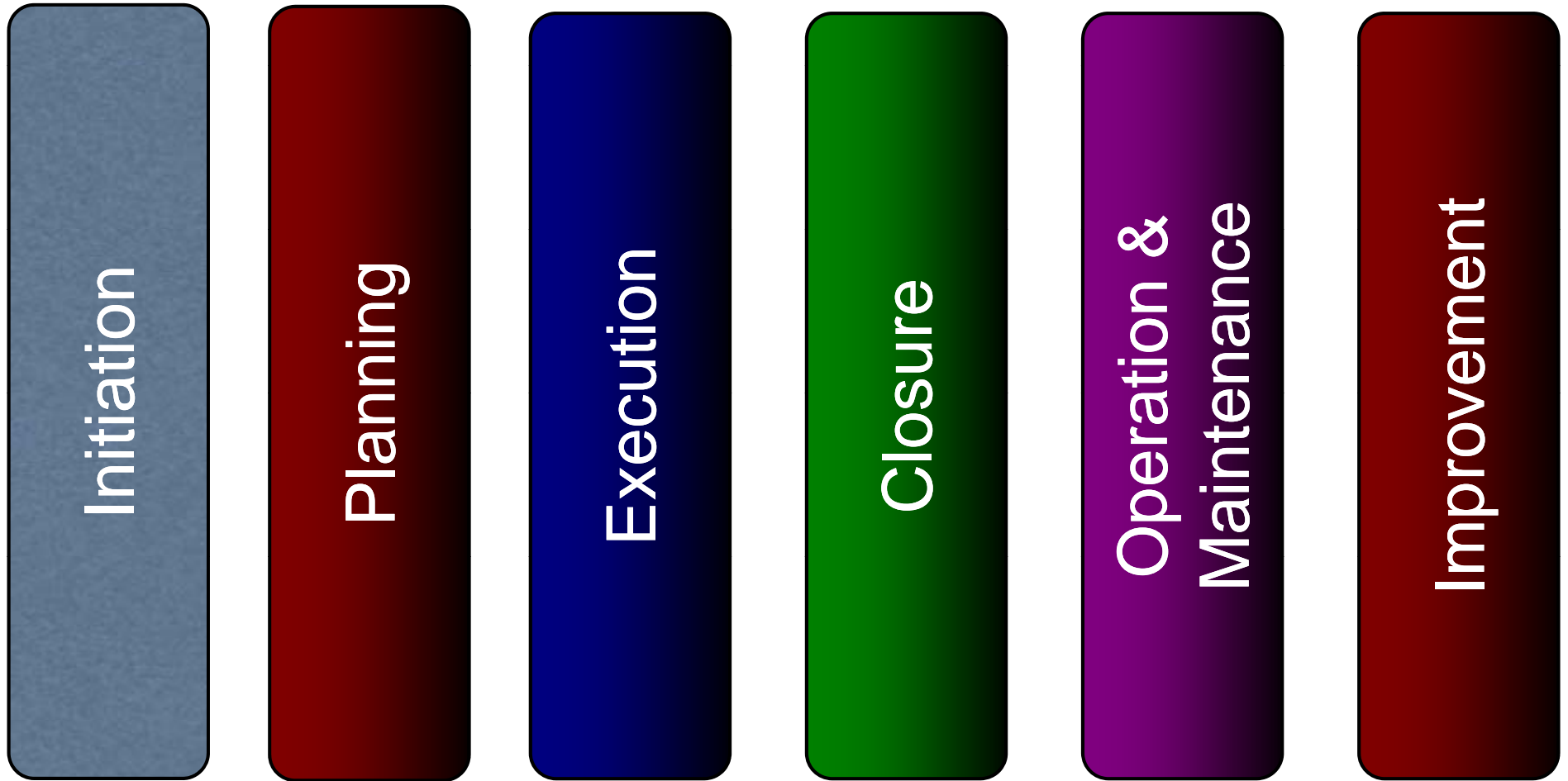
# Improvement

- Sometime missed
- Plan for improvement
  - revised SISP

# Standard Requirement in Malaysia

Types	Standard
Data	Public Sector Data Dictionary, National Health Data Dictionary (NHDD). SMRP Dataset, ICD10, ICD9 CM, Malaysia Drug Code. Future: LOINC, SNOMED CT
Integration	HL7 and Malaysia Health Integration Profiles (adopted from IHE)
Other Standard	DICOM

# Conclusion



↑  
many  
start here

# Thank You

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