



# An Independent Consultant's Perspective on Health Technology Life Cycle Management in the Public Sector

**HEALTHCARE TECHNOLOGY LIFECYCLE  
MANAGEMENT CONFERENCE**

**30 MAY 2019**

Riaan van der Watt





# Contents

1. Introduction
2. Consulting...Why...?
3. Fundamentals of Asset Management
4. Health Technology Examples
5. Conclusion



# 1 Introduction

- Life Cycle Management means different things to different people.
- Public Sector –some South African-ism
- View of an Consultant / *Outsider*



## 2 Consulting

- Apply Knowledge and Skill
- On a contracted basis
- When is using consultants appropriate?
  - Not permanently required
  - **Occurrence not frequent enough....**
  - Independent Professional  
**Registration/Qualification** required



## 3 Fundamentals

- Life Cycle Management
- HT Life Cycle Management(LCM)
- How does HT LCM fit into the bigger picture.
- Some public Sector SA-ism



# Variations in Description of Asset Life Cycle Stages

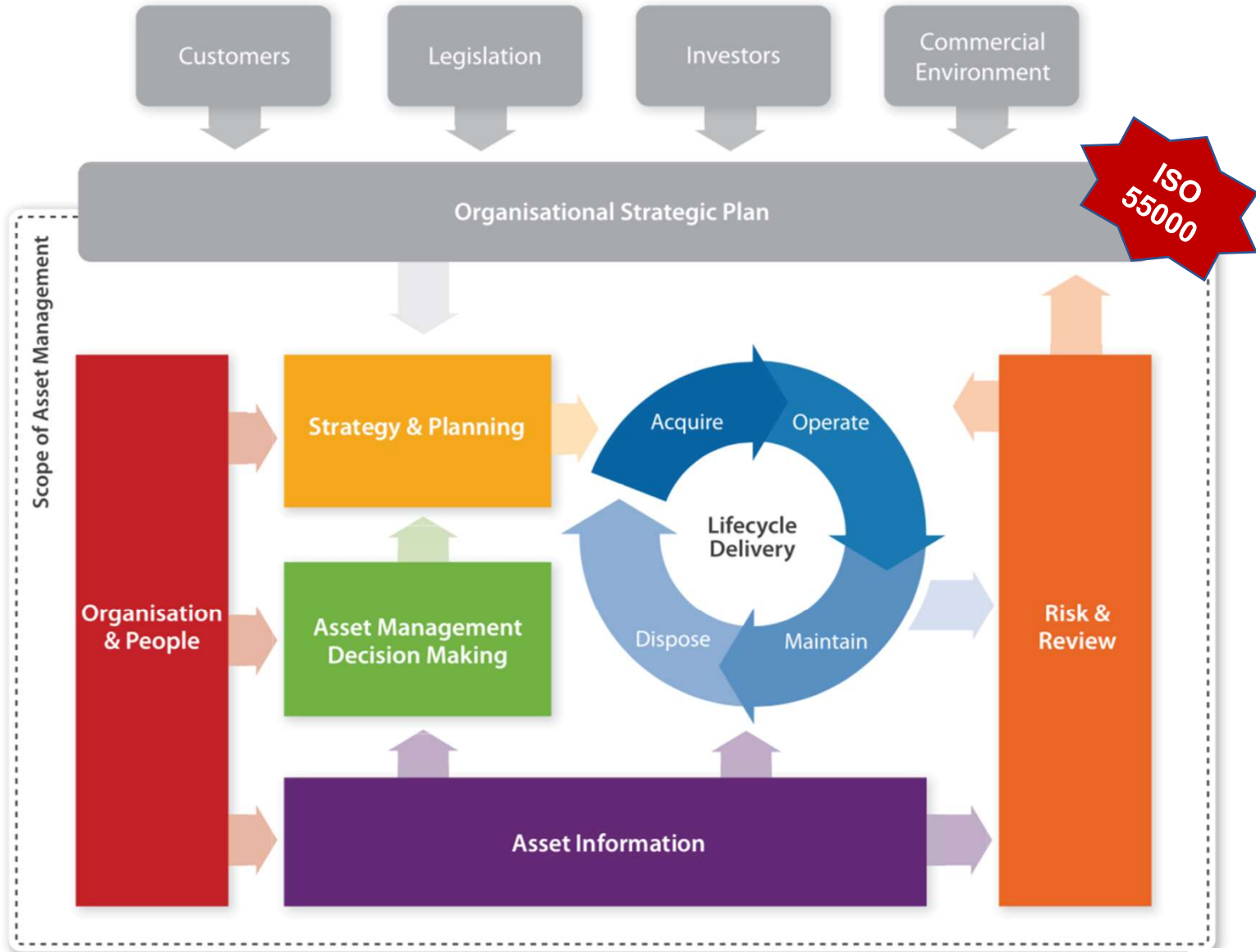


Typical HT Process



Typical Building Process

# IAM Conceptual Asset Management Model



# Asset Management Landscape Subjects

## Group 1 - Strategy & Planning

1. Asset Management Policy
2. Asset Management Strategy & Objectives
3. Demand Analysis
4. Strategic Planning
5. Asset Management Planning

## Group 2 - Asset Management Decision-Making

6. Capital Investment Decision-Making
7. Operations & Maintenance Decision-Making
8. Lifecycle Value Realisation
9. Resourcing Strategy
10. Shutdowns & Outage Strategy

## Group 3 - Life Cycle Delivery

11. Technical Standards & Legislation
12. Asset Creation & Acquisition
13. Systems Engineering
14. Configuration Management
15. Maintenance Delivery
16. Reliability Engineering
17. Asset Operations
18. Resource Management
19. Shutdown & Outage Management
20. Fault & Incident Response
21. Asset Decommissioning & Disposal

## Group 4 - Asset Information

22. Asset Information Strategy
23. Asset Information Standards
24. Asset Information Systems
25. Data & Information Management

## Group 5 - Organisation & People

26. Procurement & Supply Chain Management
27. Asset Management Leadership
28. Organisational Structure
29. Organisational Culture
30. Competence Management

## Group 6 - Risk & Review

31. Risk Assessment & Management
32. Contingency Planning & Resilience Analysis
33. Sustainable Development
34. Management of Change
35. Asset Performance & Health Monitoring
36. Asset Management System Monitoring
37. Management Review, Audit & Assurance
38. Asset Costing & Valuation
39. Stakeholder Engagement

# Asset Management Landscape Subjects

## Group 1 - Strategic Planning

1. Asset Management
2. Asset Management & Objectives
3. Demand Analysis
4. Strategic Planning
5. Asset Management

## Group 2 - Asset Management Decision-Making

6. Capital Investment
7. Operations & Maintenance Decision-Making
8. Lifecycle Value Realisation
9. Resourcing Strategy
10. Shutdowns & Outage Management

## Group 3 - Life Cycle Delivery

11. Technical Standards & Legislation
12. Asset Creation & Acquisition
13. Systems Engineering
14. Configuration Management
15. Maintenance Delivery
16. Reliability Engineering
17. Asset Operations
18. Resource Management
19. Shutdown & Outage Management
20. Fault & Incident Response
21. Asset Decommissioning & Disposal

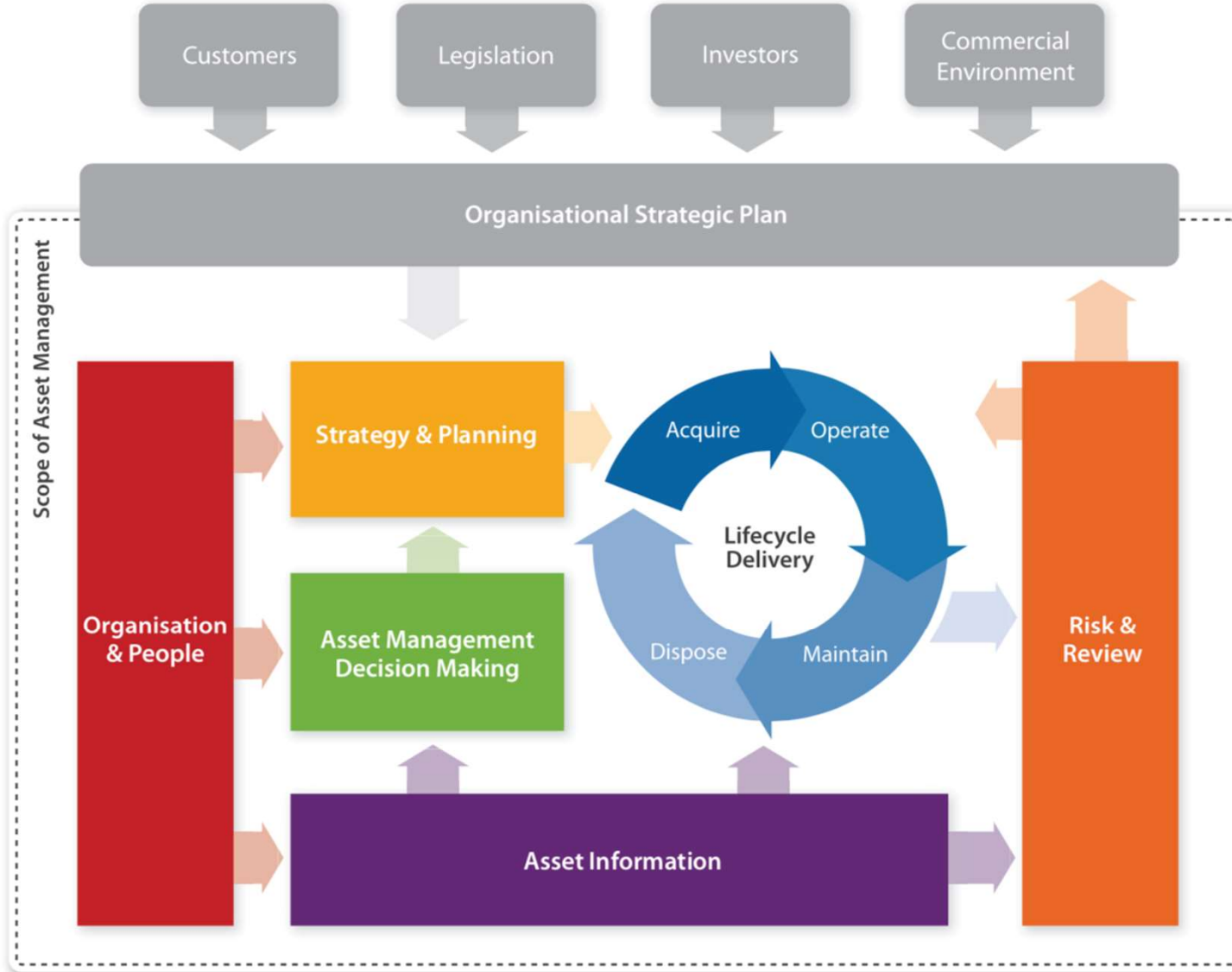
## Group 4 - Organisation & Management

- & Supply Chain
- Management Leadership
- Structural Structure
- Culture
- Management

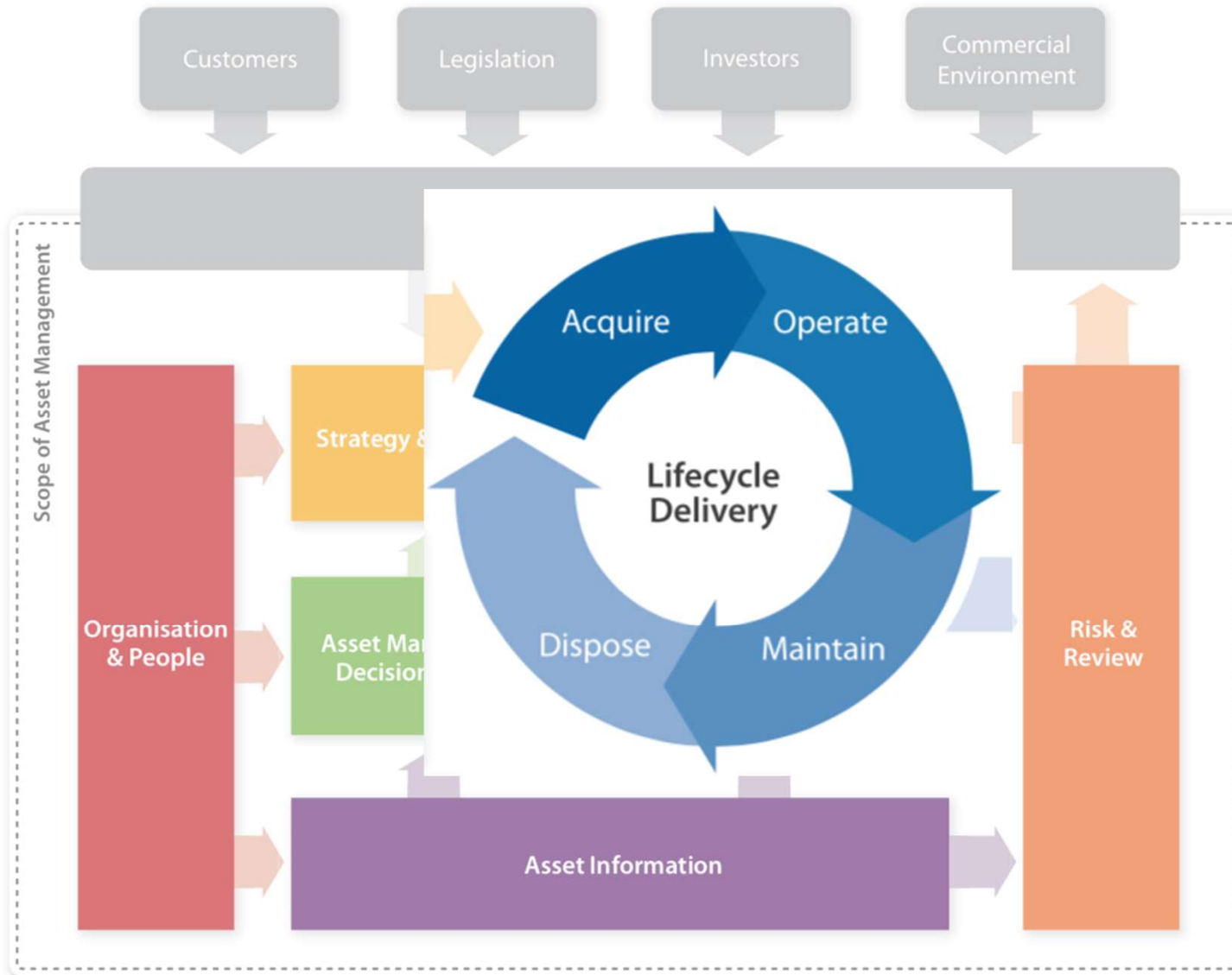
## Group 5 - Risk & Review

- Ident & Management
- Planning & Resilience
- Development
- of Change
- Performance & Health
- Management System
- Review, Audit
- Engagement

# IAM Conceptual Asset Management Model



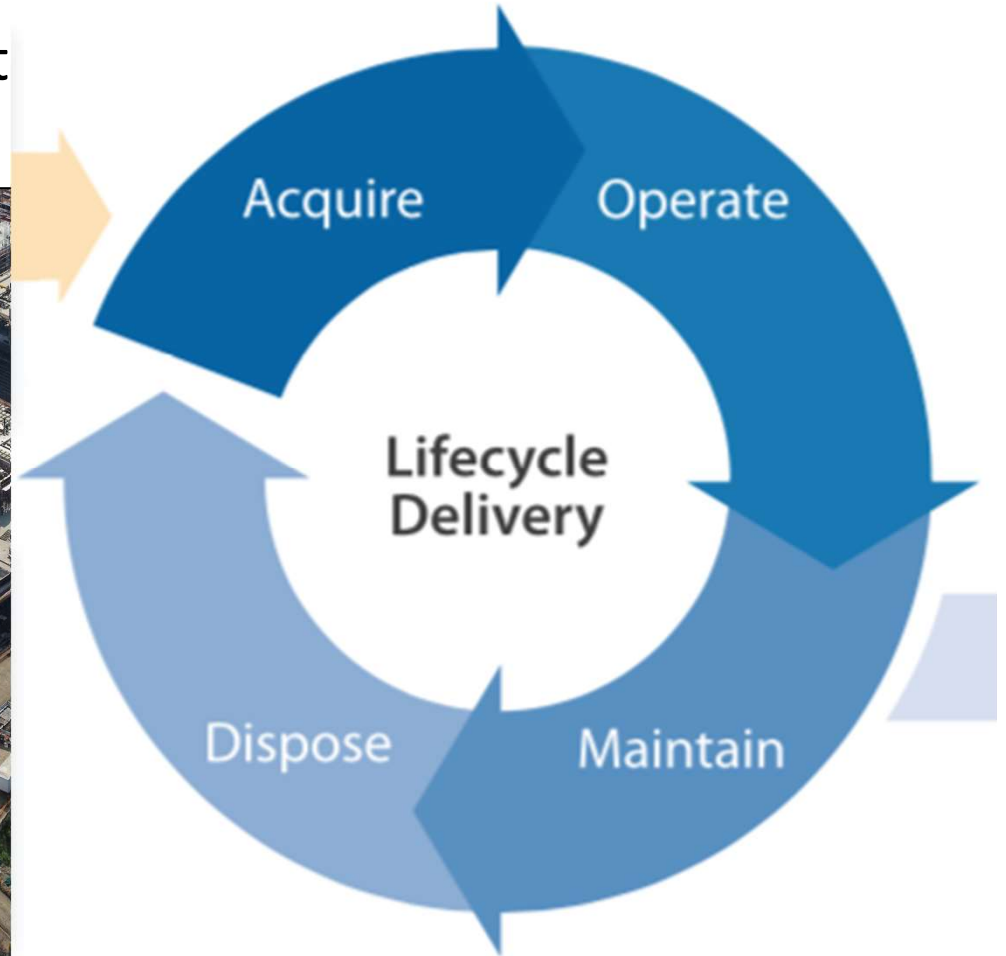
# IAM Conceptual Asset Management Model

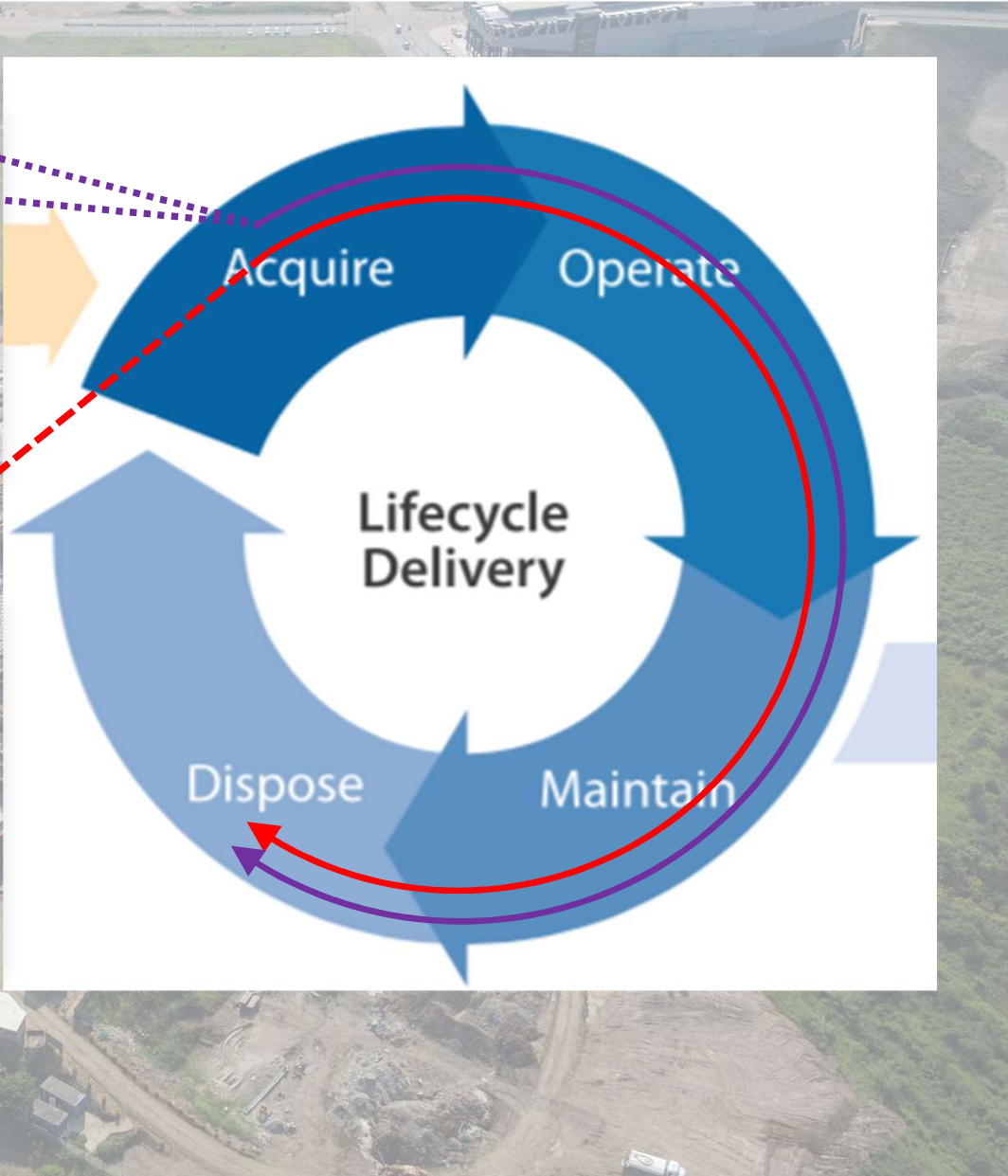
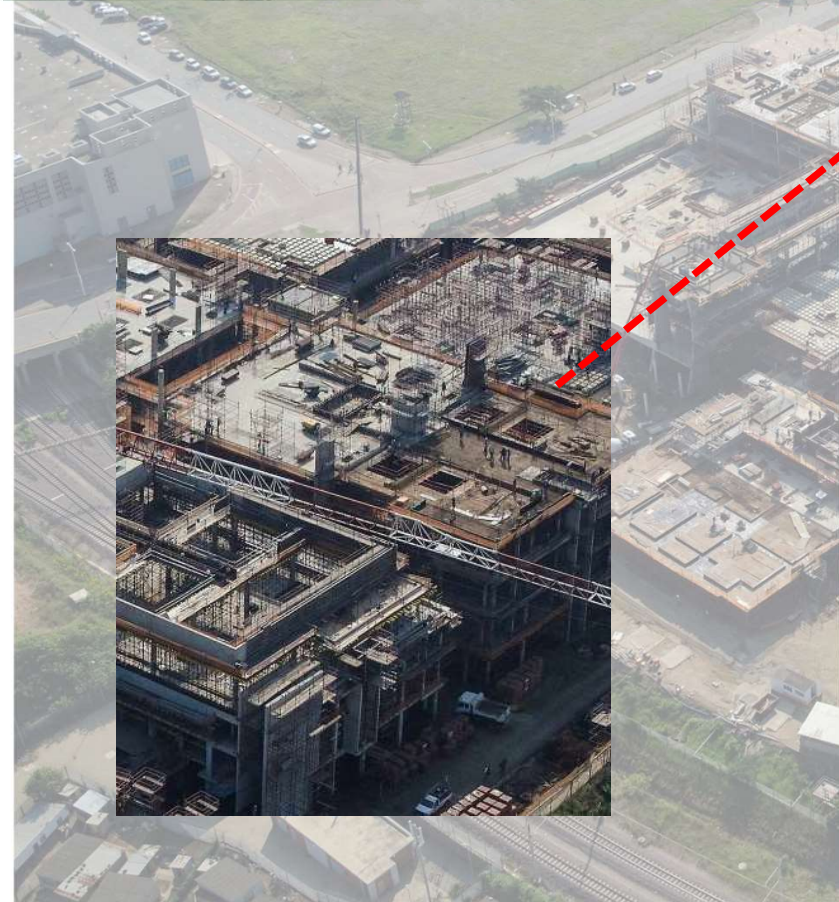




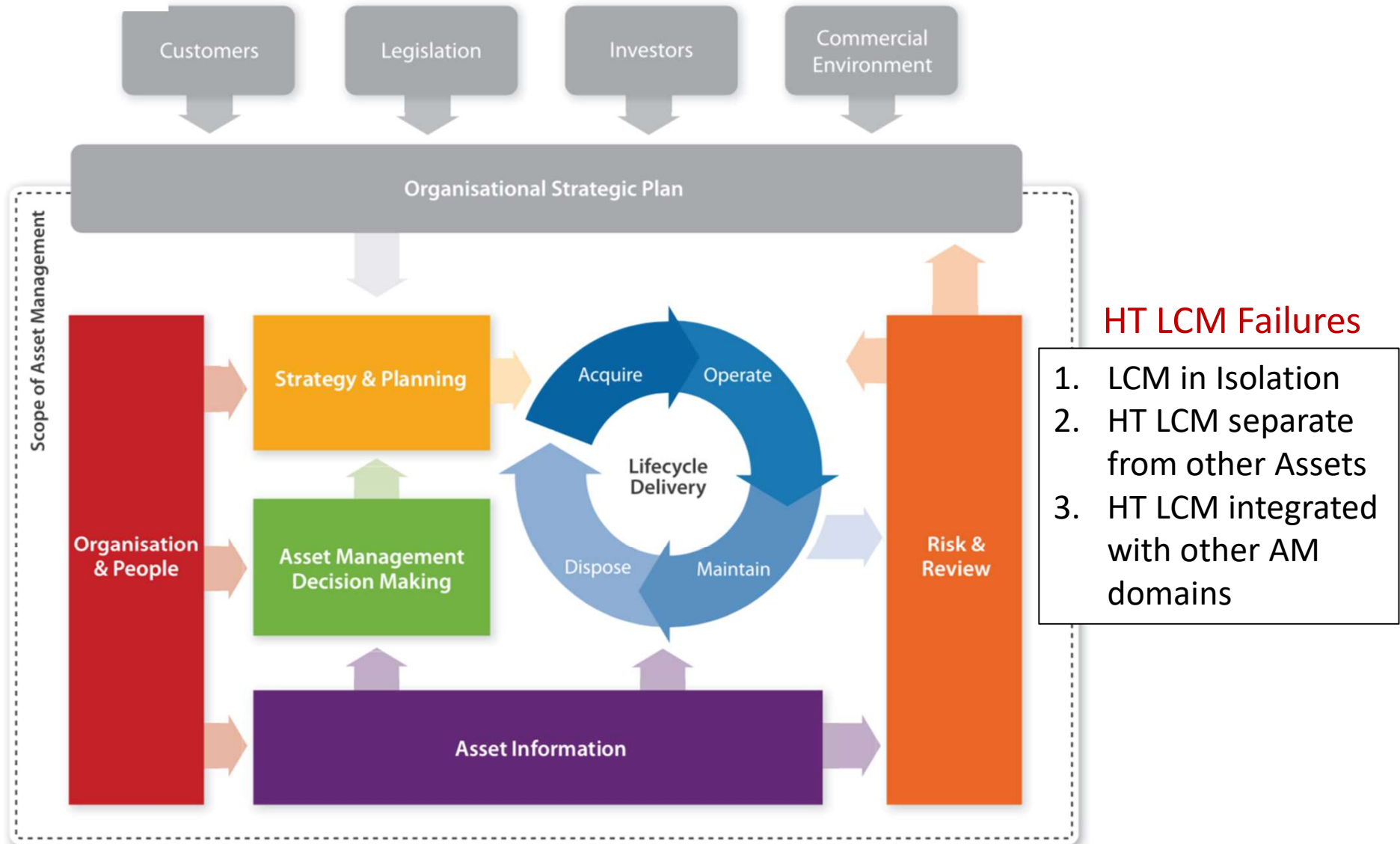
## Public Hospital in Urban SA

- 530 bed Regional
- 6 years planning and design
- 4 year construction
- 2 years equipment procurement
- 1 year Commissioning





# IAM Conceptual Asset Management Model



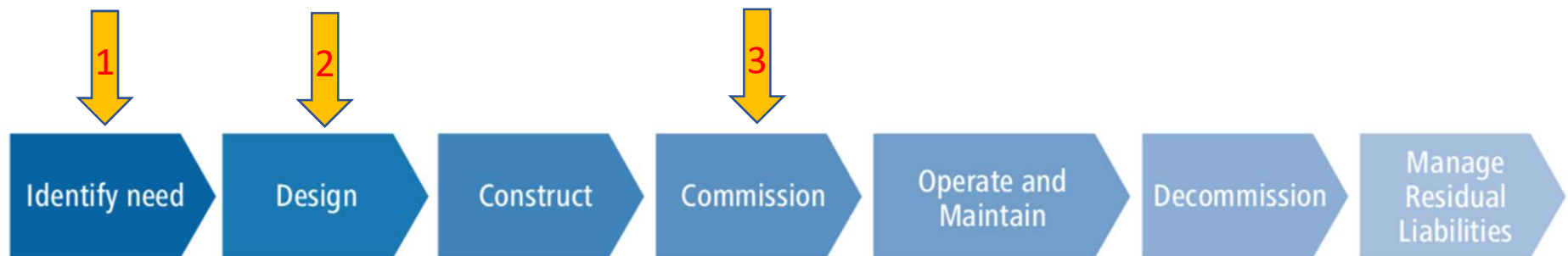
## HT LCM Failures

1. LCM in Isolation
2. HT LCM separate from other Assets
3. HT LCM integrated with other AM domains

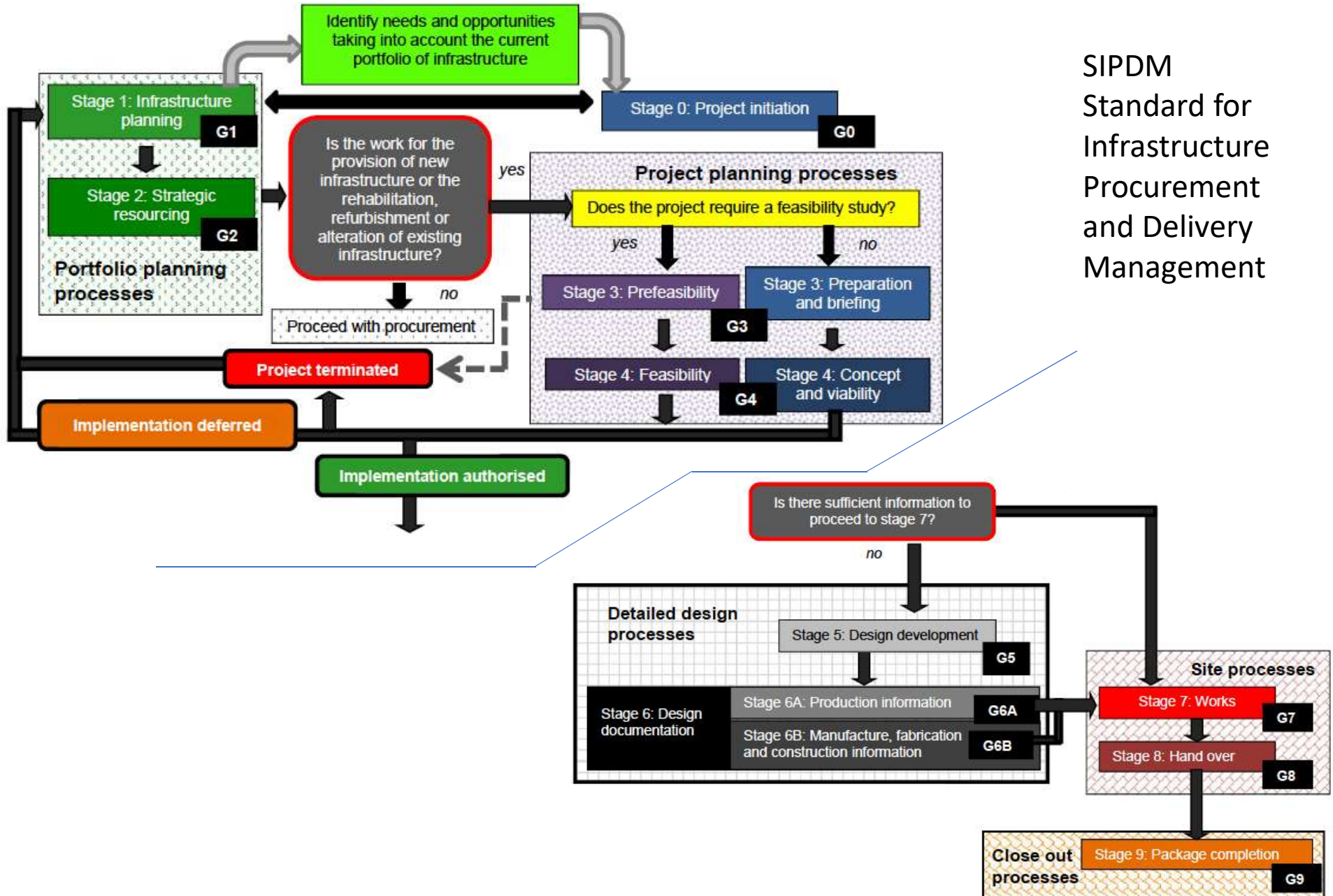


# Contents

1. Introduction
2. Consulting...Why...?
3. Fundamentals of Asset Management
4. **Health Technology Examples**
5. Conclusion



# HT LCM "Consultants view" Example : 1 Inception



SIPDM  
Standard for  
Infrastructure  
Procurement  
and Delivery  
Management

## HT LCM “Consultants view” Example : 1 Inception

3	Prefeasibility	A prefeasibility report which determines whether or not it is worthwhile to proceed to the feasibility stage
	Preparation and briefing	A strategic brief which defines project objectives, needs, acceptance criteria and client priorities and aspirations, and which sets out the basis for the development of the concept report for one or more packages
4	Feasibility	A feasibility report which presents sufficient information to determine whether or not the project should be implemented
	Concept and viability	A concept report which establishes the detailed brief, scope, scale, form and control budget, and sets out the integrated concept for one or more packages
5	Design development	A design development report which develops the concept to finalise the design and define the integrated developed design, and control the schedule for one or more packages

Demographics and catchment population \ Disease Profile \  
Up and down referrals network \ etc. ????

### HT LCM Failures

Processes are forced to go ahead while earlier gates have not been followed through – SIPDM not followed



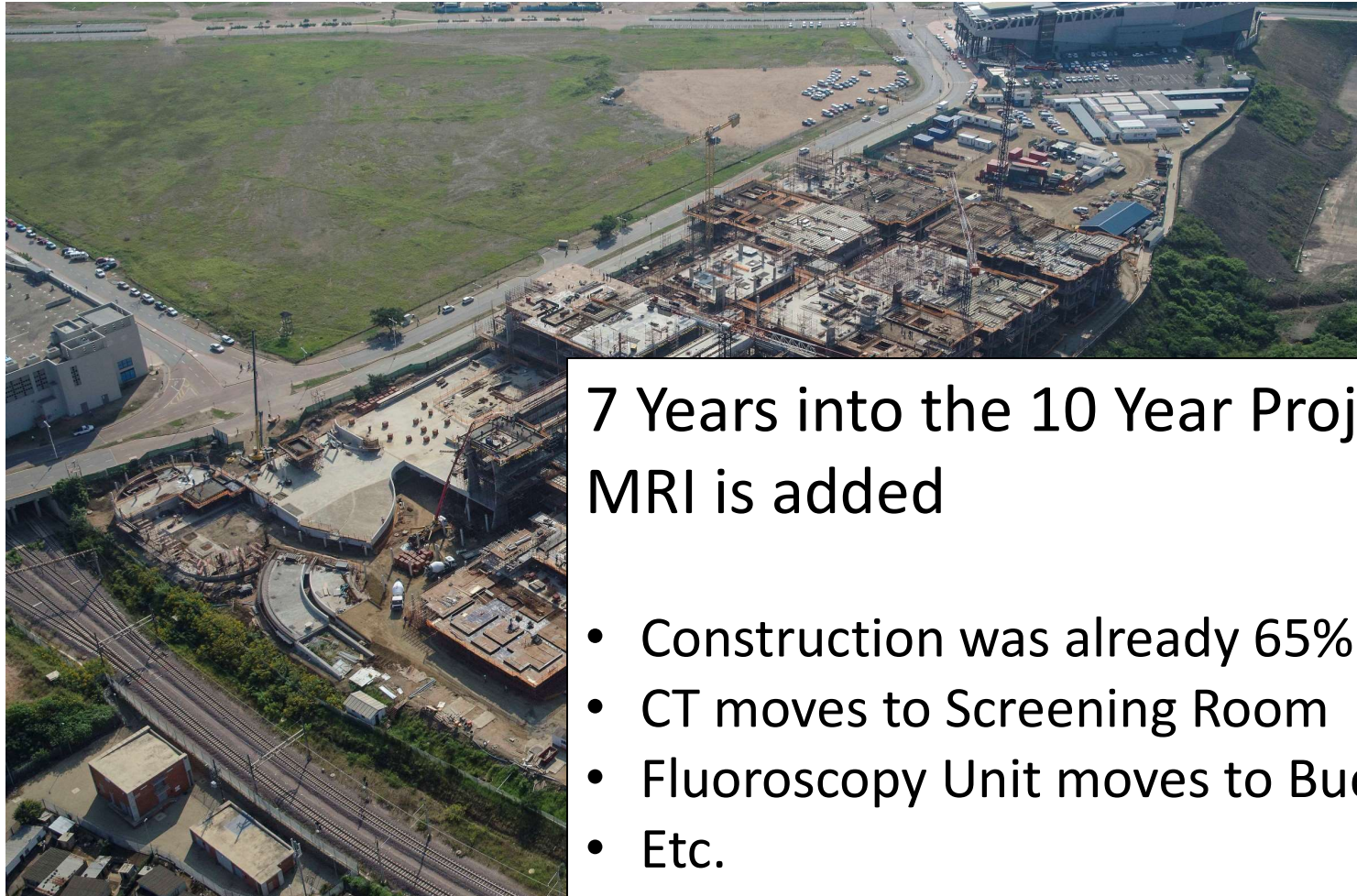
Copyright © 1997 United Feature Syndicate, Inc.  
Redistribution in whole or in part prohibited

# HT LCM "Consultants view" Example : 2 Design/Development



HT LCM “Consultants view” Example : 2 Design/Development

## Configuration Management



# HT LCM “Consultants view” Example : 3 Commissioning

## What happens in commissioning?

We convert a building into a hospital.



## HT LCM “Consultants view” Example : 3 Commissioning

# What happens in commissioning?

We convert a building into a hospital.

But sometimes....



# HT LCM “Consultants view” Example : 3 Commissioning

## What happens in commissioning?

We convert a building into a hospital.



### Inward

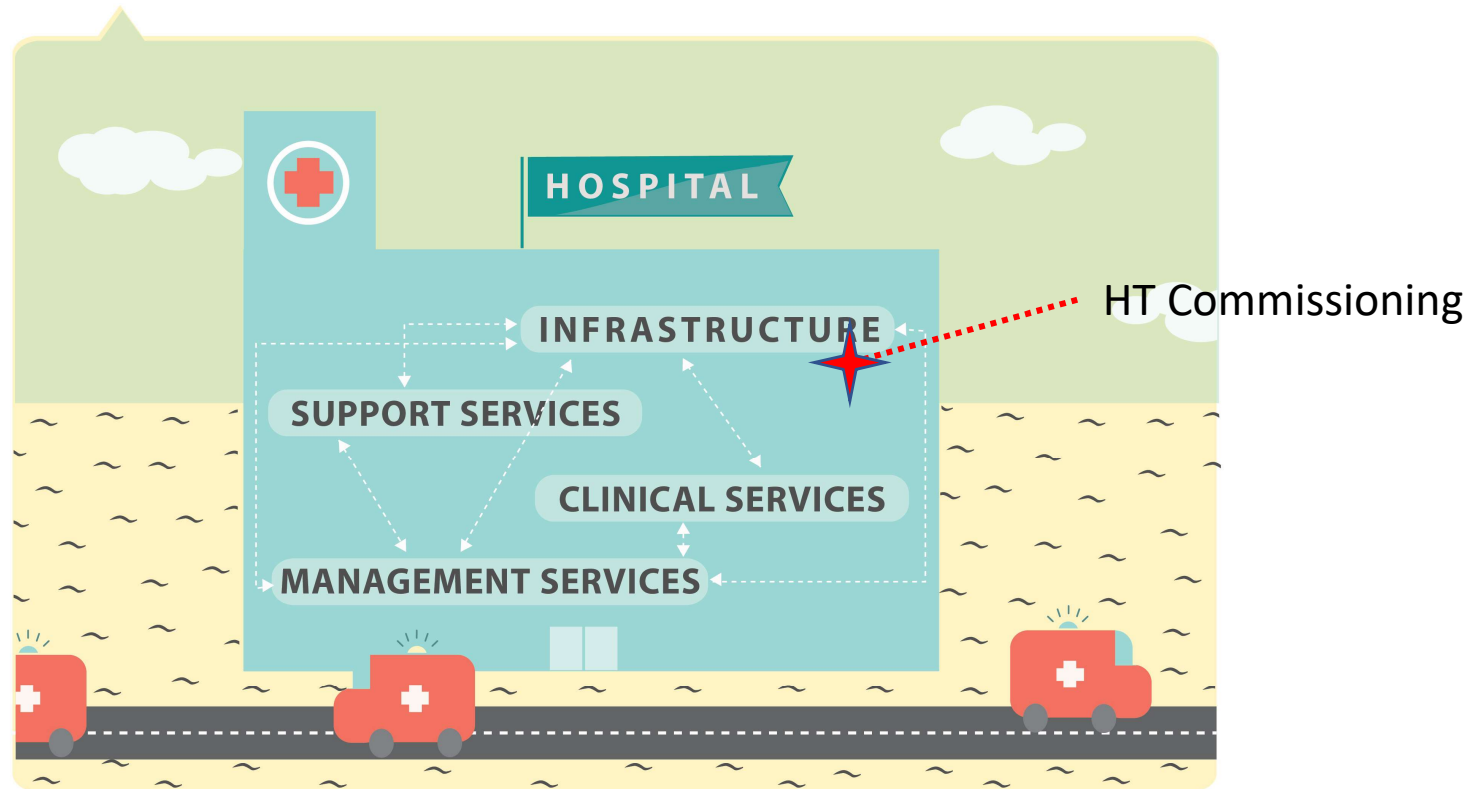
- Tangibles
  - Building
  - Equipment
  - Medication
- Intangibles
  - Management
  - Policies
  - skills



### Outward

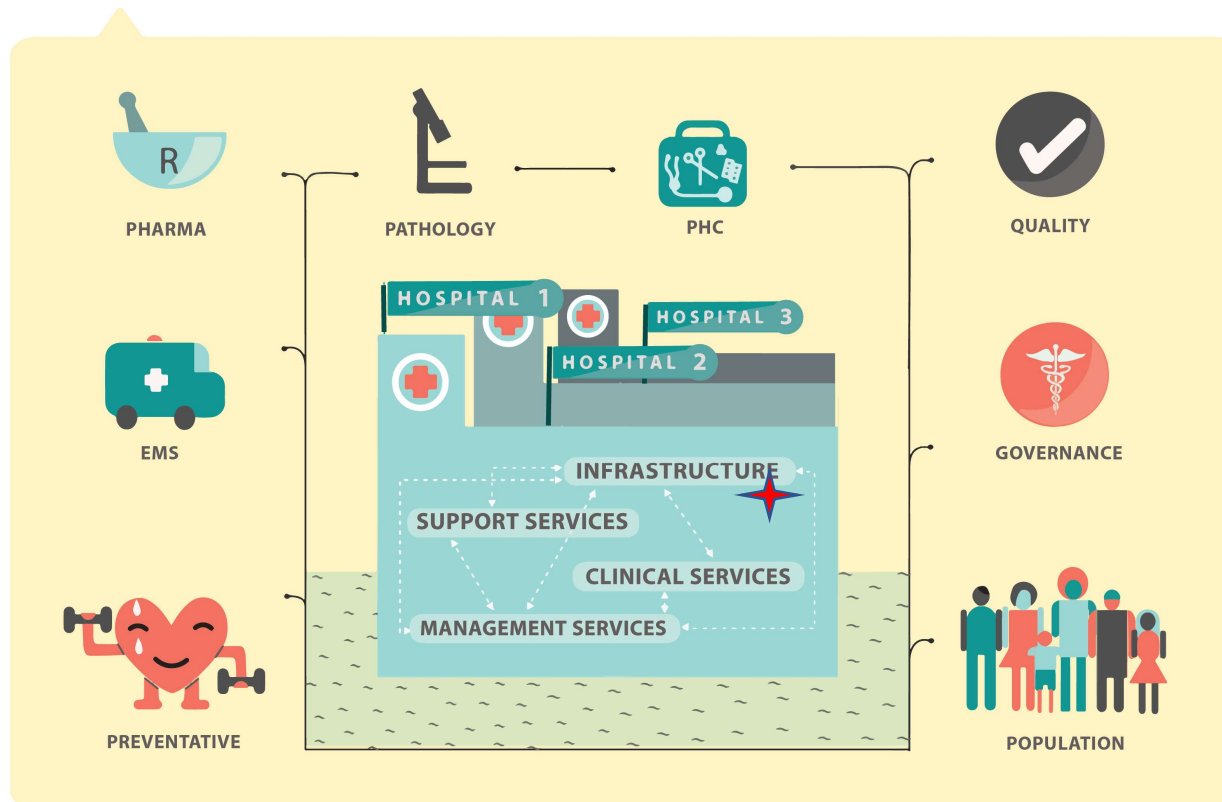
- In the Health System
  - EMS
  - Referral
  - Pathology service
- Outside the Health System
  - Financial System
  - Legal
  - Society

# Hospital System



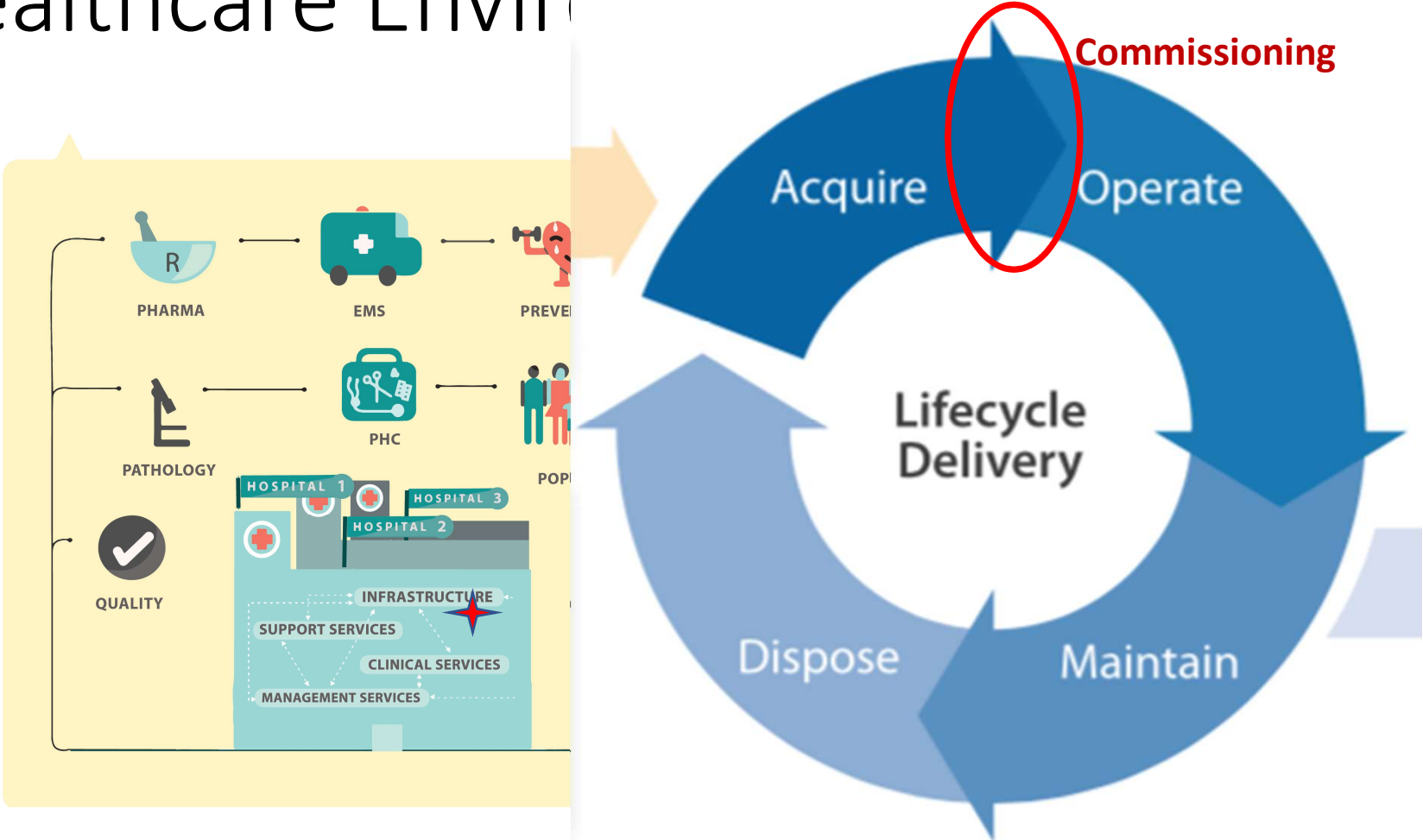
# HT LCM “Consultants view” Example : 3 Commissioning

## Healthcare System



HT LCM “Consultants view” Example : 3 Commissioning

# Healthcare Environment Systems





## 5 Conclusion

- LCM for HT and other Infrastructure Assets **are inter-dependent**
- LCM for HT can **benefit** from following **Asset Management protocols** like ISO 55 000
- Consulting Services has **particular role to play** in this domain



Thank You



[www.reafconsulting.com](http://www.reafconsulting.com)