

# Hong Kong Hospital Authority Targets World Class eHealth: The role of ERP Systems in Efficient Hospital Supply Chains

Raymond Wong  
Chief Manager (Business Support Services)  
Hospital Authority, Hong Kong  
9 November 2010





**A journey to enhance patient care through collaborative risk management**

# Agenda

- Overview of Healthcare Services in Hong Kong Special Administrative Region
- Supply Chain Systems Development in Hospital Authority
- Traceability Capacity in Hospital Authority

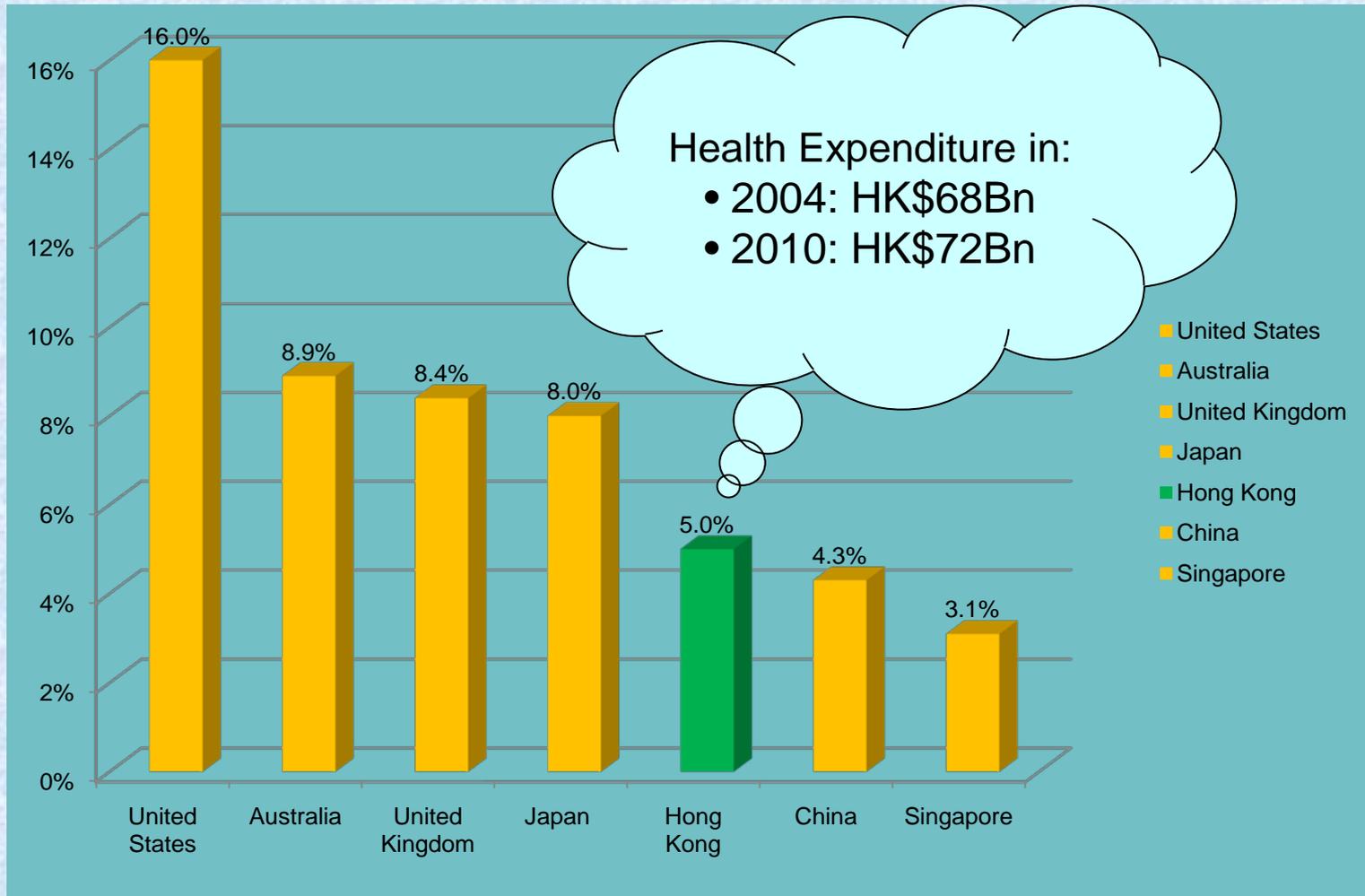




# Overview of Healthcare Services in Hong Kong Special Administrative Region

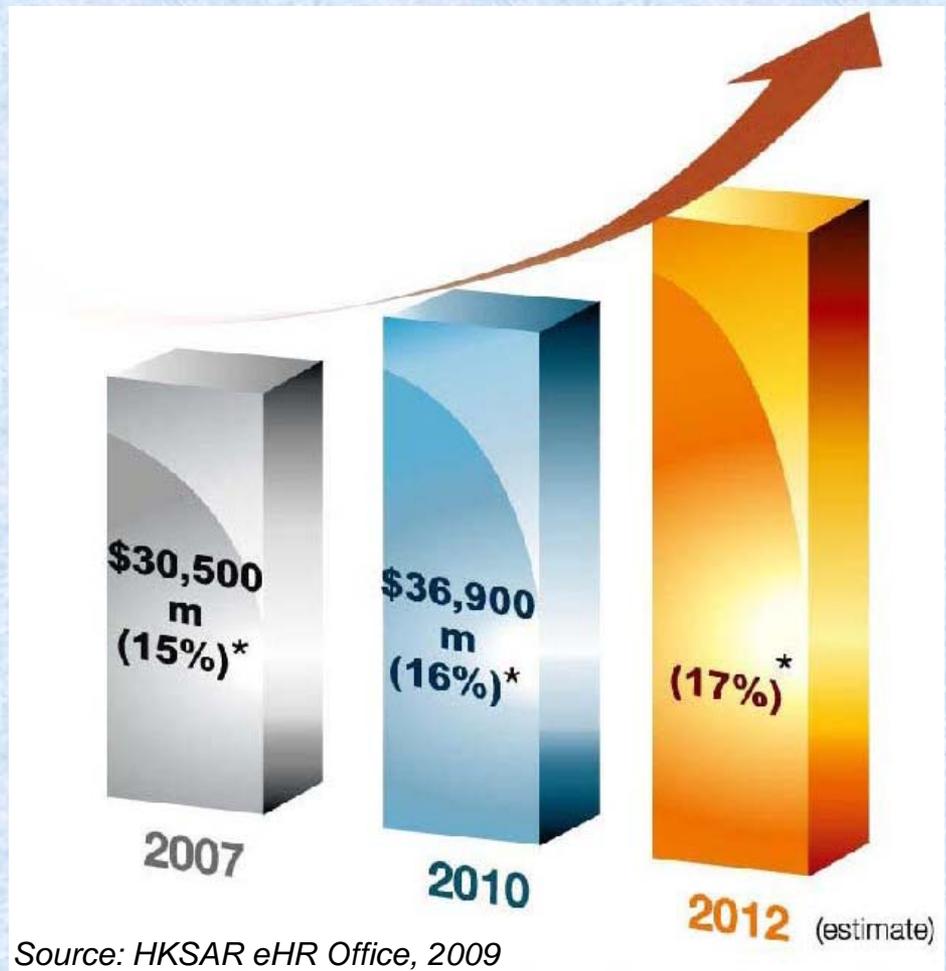


# Health Expenditure as % of GDP



# Public Healthcare Expenditure

(as a share of HKSAR government's total expenditure)



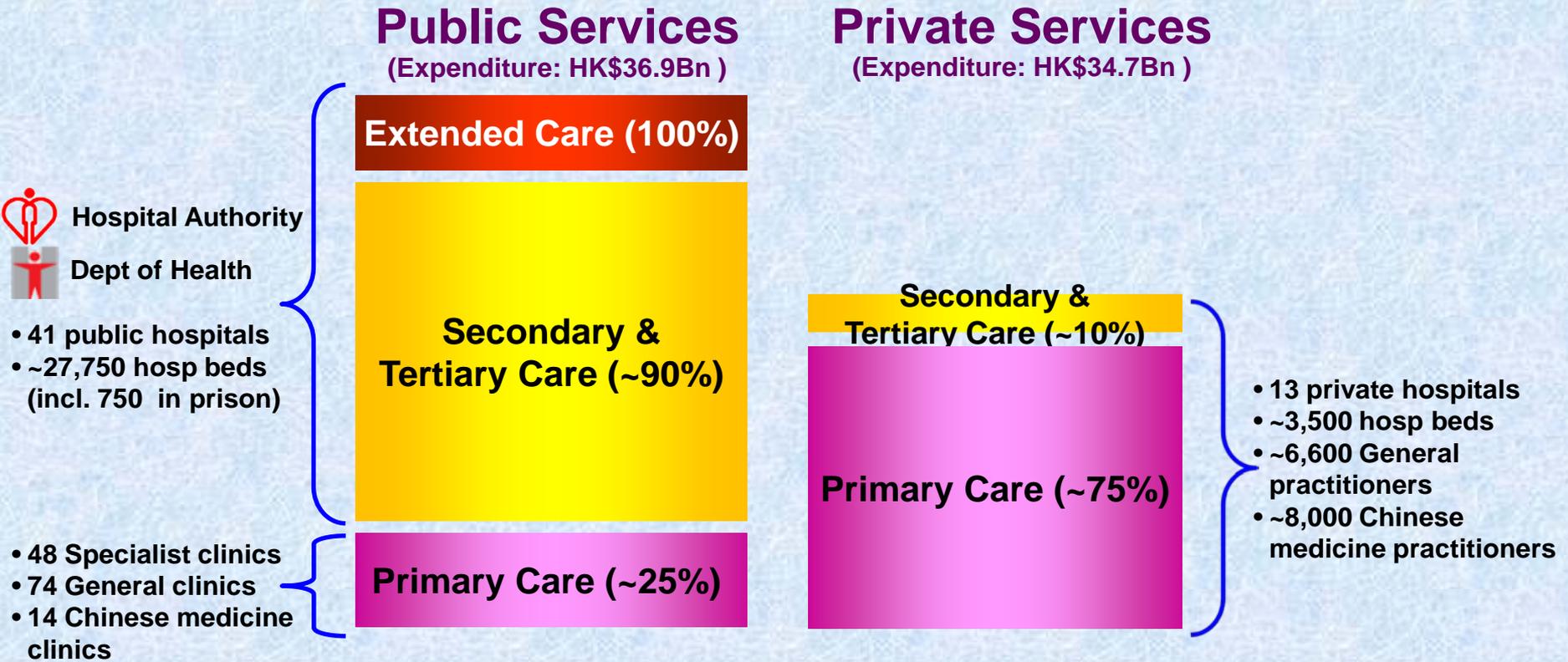
**Public Recurrent Expenditure by Policy Area Group**  
(source: HK Year Book 2009)

1	Education (21.7%)
2	Social Welfare (16.8%)
3	Health (15%)
4	Support (12.1%)
5	Security (11.4%)
6	Infrastructure (6.4%)
7	Economic (4.6%)
8	Housing (4.3%)
9	Environment and food (4.2%)
10	Community and external affairs (3.4%)

Source: HKSAR eHR Office, 2009



# Landscape of Healthcare Services



Source: Hong Kong's Domestic Health Accounts 2006/07, Health Facts of Hong Kong, Development and Financing of Hong Kong's Future Health Care 2007



# Landscape of Healthcare Services

## Public Services (Expenditure: HK\$36.9Bn)

## Private Services (Expenditure: HK\$34.7Bn)

 **Hospital Authority**  
 **Dept of Health**

- 41 public hospitals
- ~27,750 hosp beds (incl. 750 in prison)

- 48 Specialist clinics
- 74 General clinics
- 14 Chinese medicine clinics



- 13 private hospitals
- ~3,500 hosp beds
- ~6,600 General practitioners
- ~8,000 Chinese medicine practitioners



Source: Hong Kong's Domestic Health Accounts 2006/07, Health Facts of Hong Kong, Development and Financing of Hong Kong's Future Health Care 2007

# Changing Landscape

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**Extended Care (100%)**

**Secondary & Tertiary Care (~90%)**

**Primary Care (~25%)**

**Secondary & Tertiary Care (~10%)**

**Primary Care (~75%)**

- 13 private hospitals
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**4 Public-Private-Partnership Projects**

Healthcare Financing

eHealth Record

Filmless HA Project



Source: Hong Kong's Domestic Health Accounts 2006/07, Health Facts of Hong Kong, Development and Financing of Hong Kong's Future Health Care 2007

# Locations of The 4 New Hospitals



# Changing Landscape

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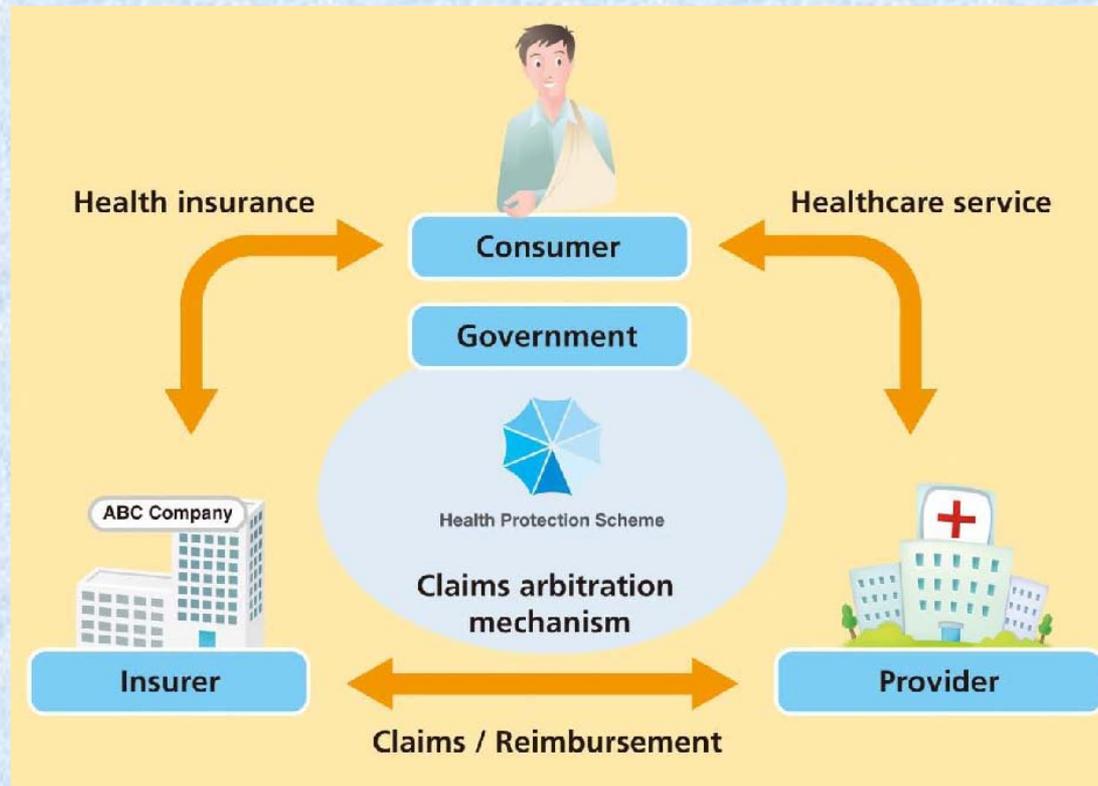
**4 Public-Private-Partnership Projects**  
**Healthcare Financing**  
**eHealth Record**  
**Filmless HA Project**



Source: Hong Kong's Domestic Health Accounts 2006/07, Health Facts of Hong Kong, Development and Financing of Hong Kong's Future Health Care 2007

# Healthcare Financing

(as at October 2010)



## 2nd Stage Public Consultation of Voluntary Health Protection Scheme (HPS)

- Standardise and regulate voluntary private health insurance
- Formulate HPS core requirements to address shortcomings of existing private health insurance
- Consider subsidizing \$50Bn to HPS subscribers



# Changing Landscape

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4 Public-Private-Partnership Projects

Healthcare Financing

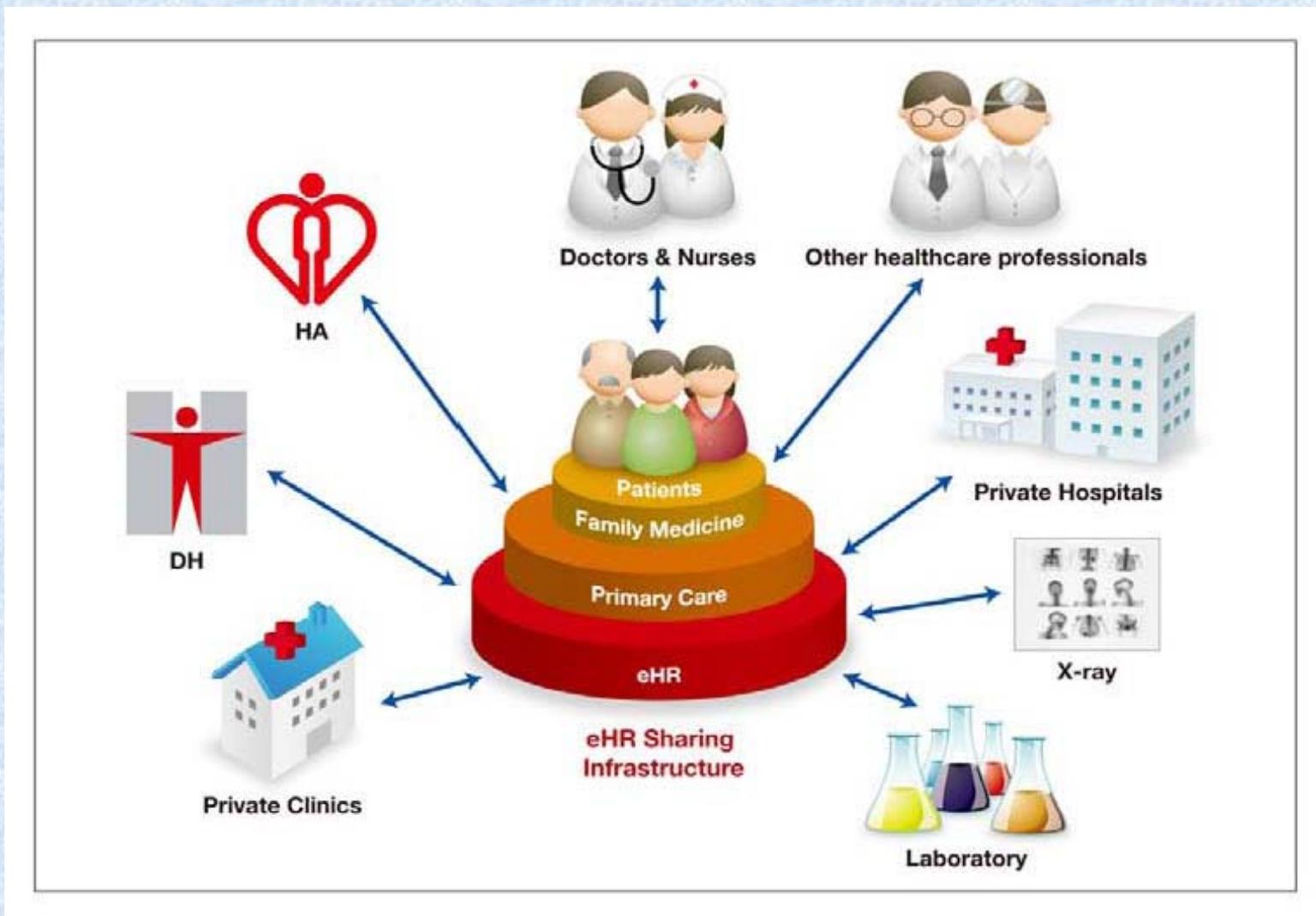
eHealth Record

Filmless HA Project



Source: Hong Kong's Domestic Health Accounts 2006/07, Health Facts of Hong Kong, Development and Financing of Hong Kong's Future Health Care 2007

# eHealth Record Vision in HK



# eHealth Record Development Targets (till 2013/14)

- Filmless project in Hospital Authority
- Radiological image sharing with private hospitals
- Pilot use of SmartID for patient authentication
- Laboratory results sharing
- Clinical Management System (CMS) adaptation basic modules and on-ramp
- Medical records sharing in Doctor Portal through CMSIII system



# What is “eHealth”?

**eHealth =**

**Electronic Health Record?**

**Telemedicine?**

**Consumer Health Informatics?**

**Mobile Health?**





# Supply Chain Systems Development in Hospital Authority



# What have been achieved through ERP...

## Connectivity with the Market???

- Enhanced internal and external communications
- Strengthened spend analysis



- Better product safety and recall management
- Improved supplier quality

- Automated process control
- Fortified data accuracy and security



# Development of ERP<sup>s</sup> in Hospital Authority

Product Classification & Codification Harmonization  
Technology Protocol Standardization



Assets Management

Drugs

ERP Implementation

Medical Consumables and Equipment  
+  
Non-Medical items



2004 2005 2006 2007 2008 2009 2010 2011 2012 Beyond

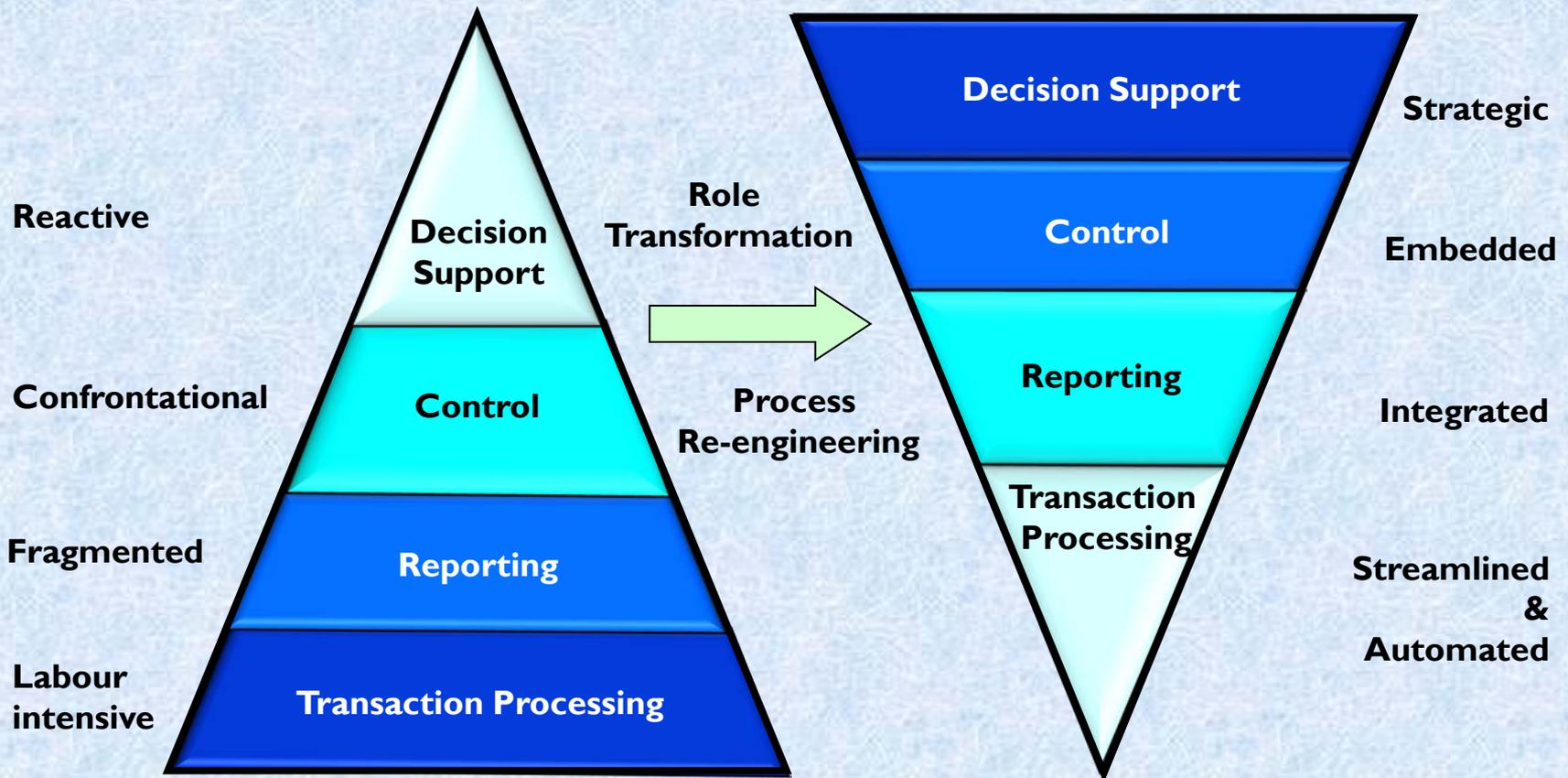


# ERPS Implementation (since 2008)

## Enhanced Decision Support

**Past Focus**

**New Focus**



Integrated "Procure-to-Pay" Process

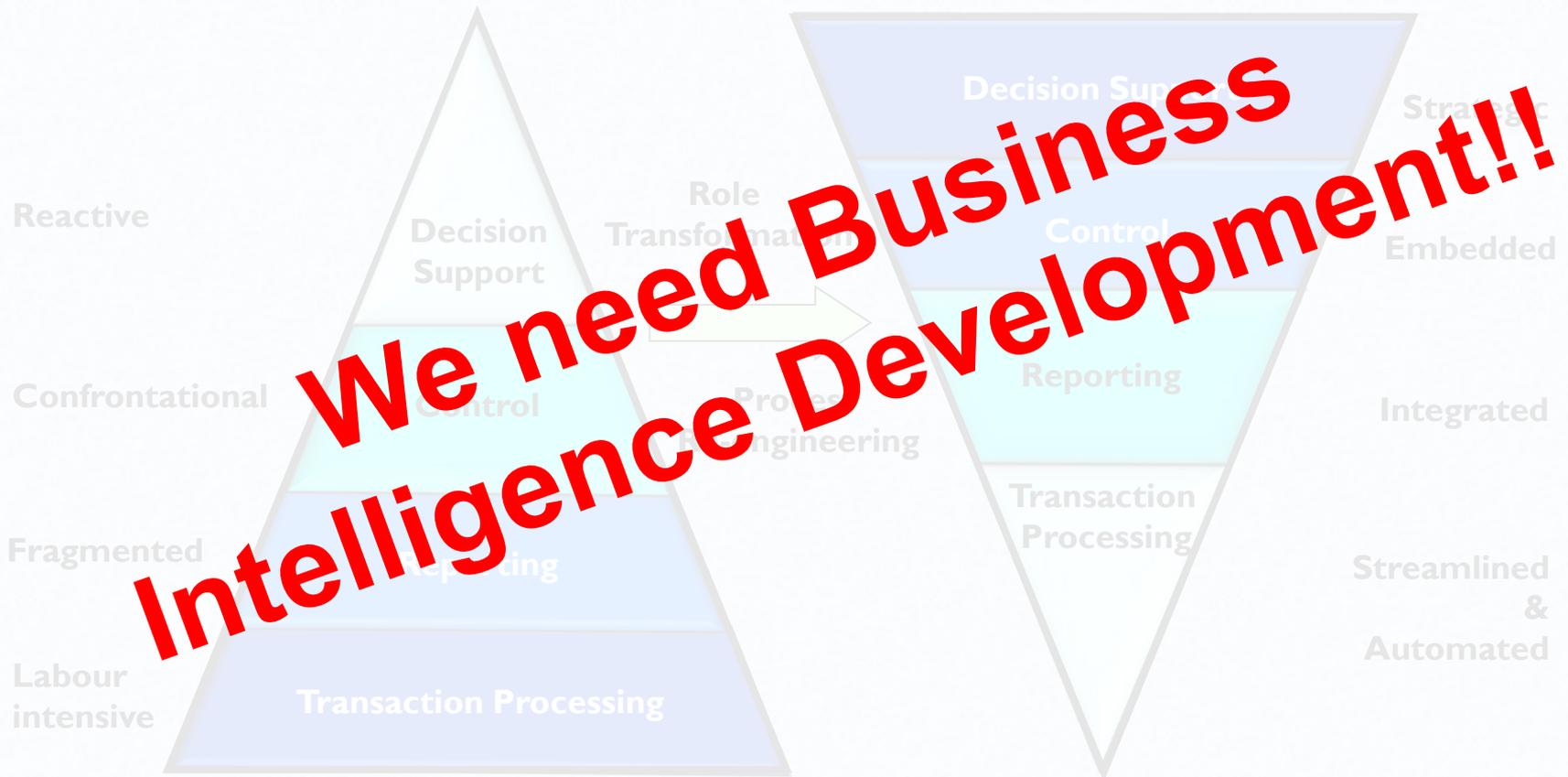


# ERPS Implementation (since 2008)

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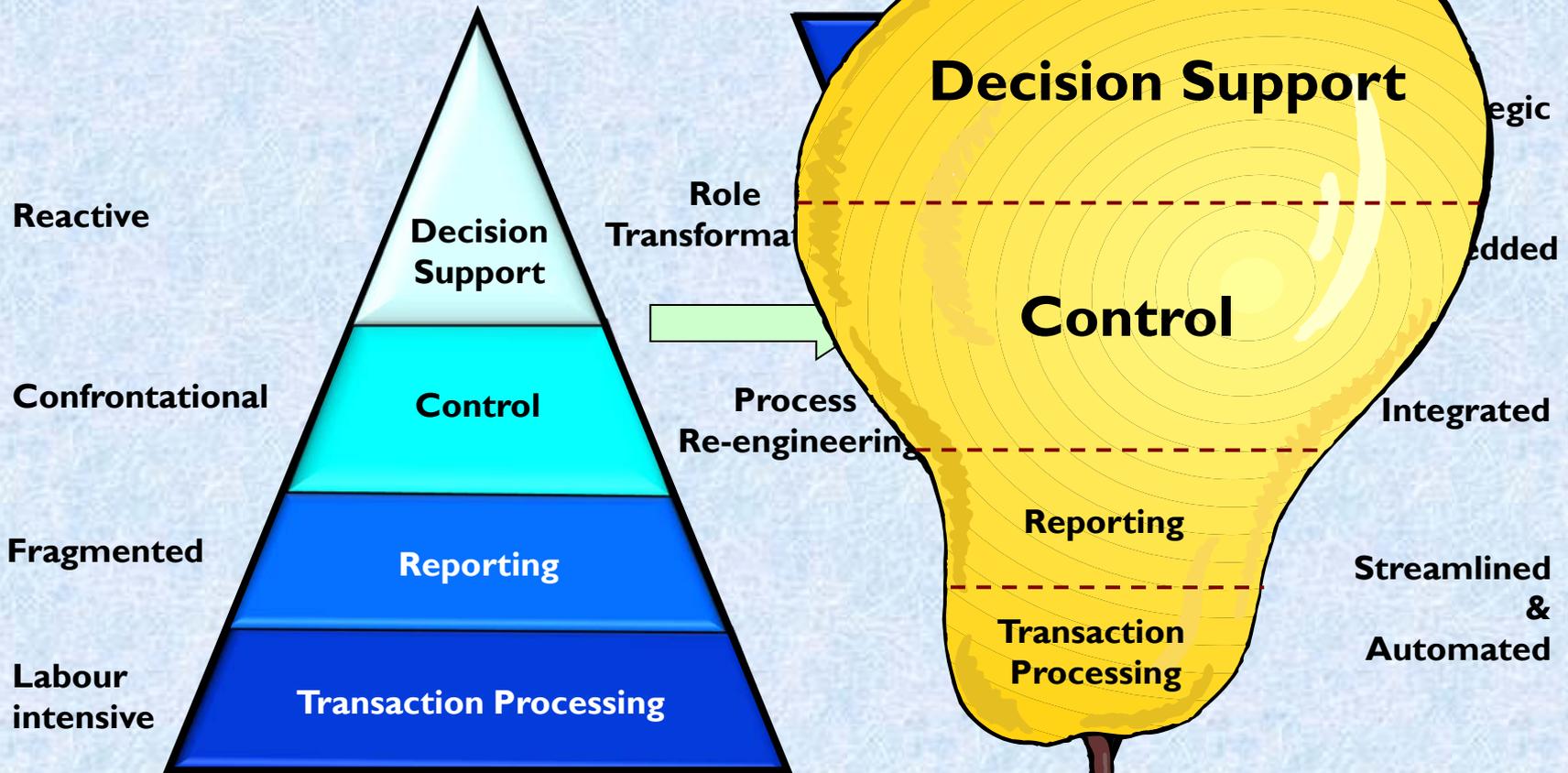
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# ERPS Implementation (since 2008)

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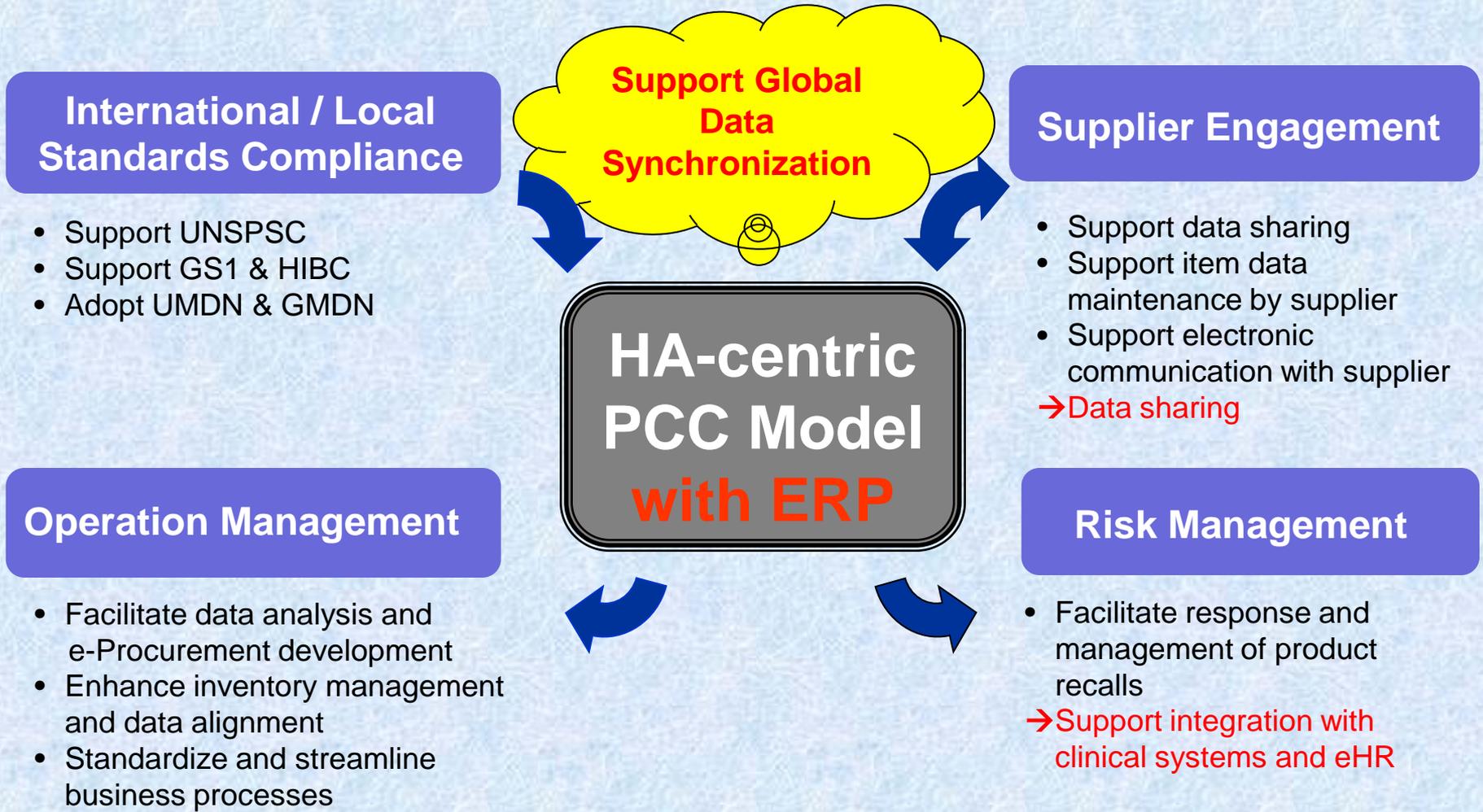


Integrated "Procure-to-Pay" Process





# HA-Centric Product Codification & Classification (PCC) Model



Product Codification & Classification is Central to All Integration



# Traceability Capacity in Hospital Authority



# What do we expect ... ?

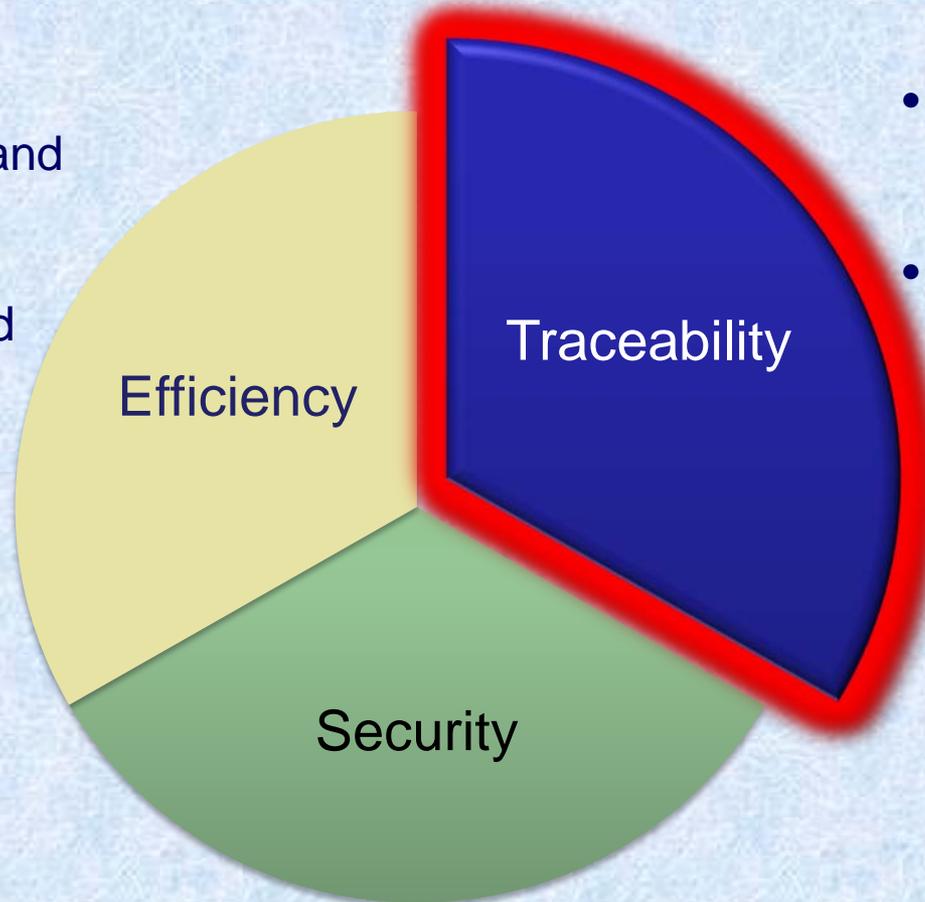


Doctor,  
where does this  
come from ?  
Tell me please !!



# Our Current Focus...

- Enhanced internal and external communications
- Strengthened spend analysis



- Better product safety and recall management
- Improved supplier quality

- Automated process control
- Fortified data accuracy and security



# Where we are...

## Classification – United Nations Standard Products and Services Code (UNSPSC)

Drugs	Medical Devices / Consumables	Non-Medical Devices / Consumables
International Non-proprietary Name (INN)	Primary - Universal Medical Device Nomenclature (UMDN) Secondary – Global Medical Device Nomenclature (GMDN)	AUSLANG/In-house



Item Nomenclature
<b>Item: 3,300</b> <b>INN: 1,300</b> <b>(100%)</b>



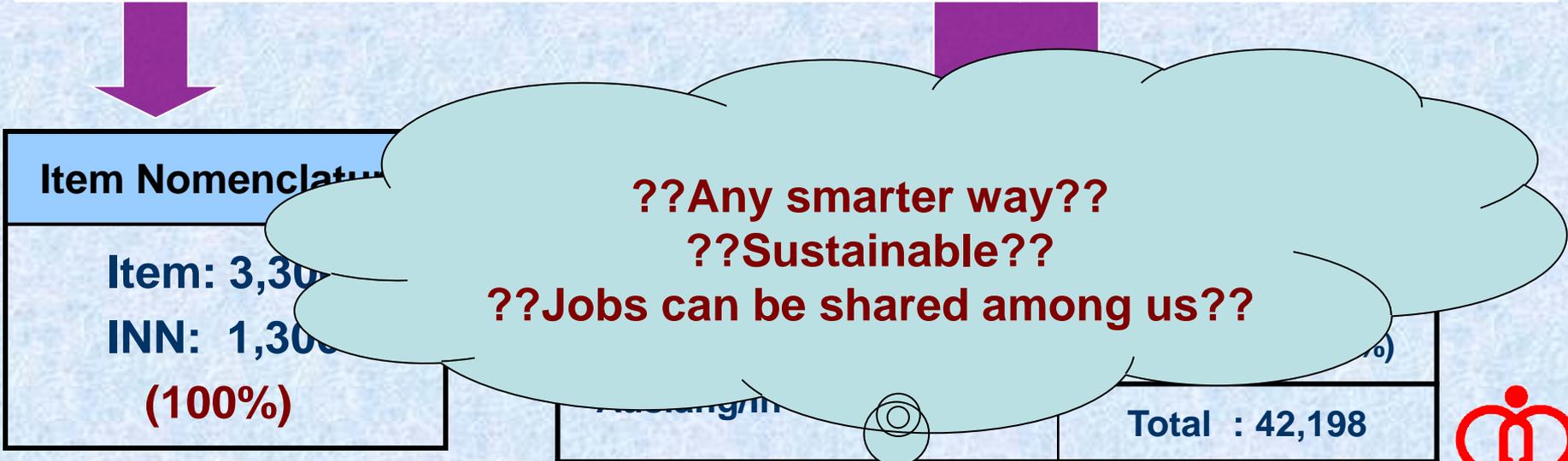
Item Nomenclature	Item Codification
Item: 58,248	GS1 : 21,787 (52%)
UMDN/GMDN: 606 (40%)	HIBC : 20,411 (48%)
Auslang/In-house: 1,621	<b>Total : 42,198</b>



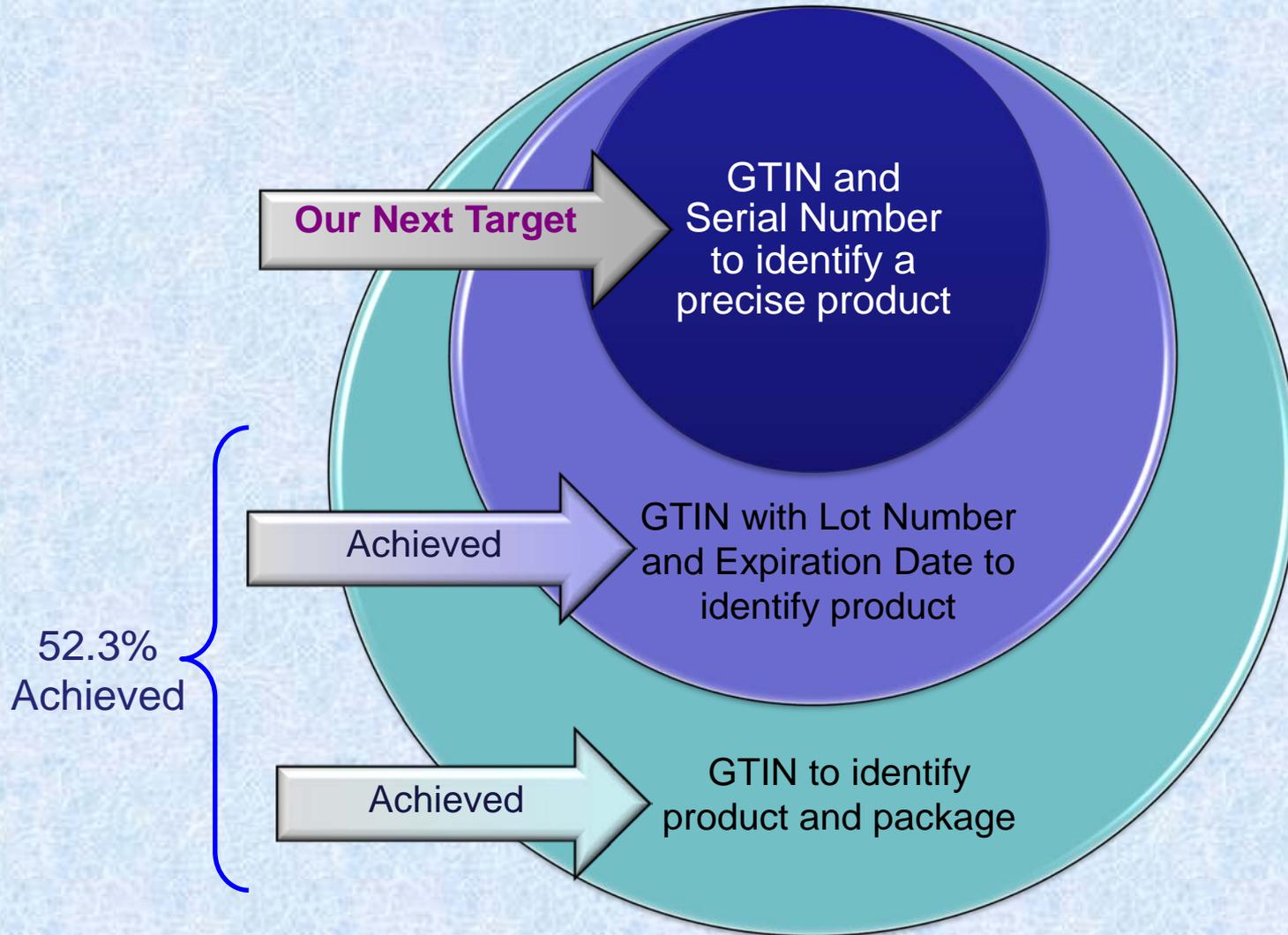
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# Traceability Compliance and Sustainability Excellence



# Products Tracked and Traced

(From 1 October 2009 to 30 September 2010)

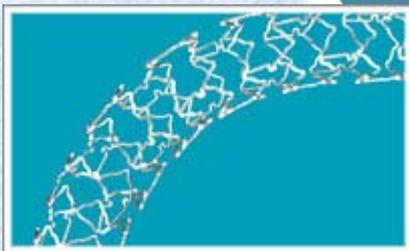
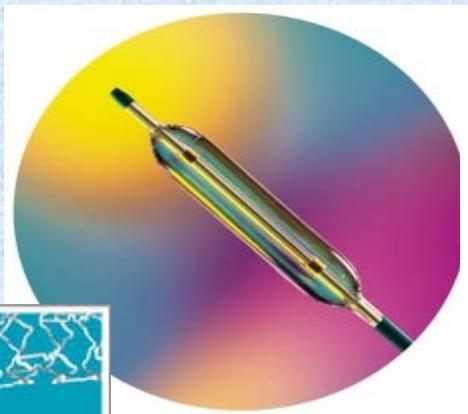
## Product Categories:

- Percutaneous Transluminal Coronary Angioplasty (PTCA)
- Orthopaedics and Traumatology (O&T) Implants

No. of Procedures: 12,592

No. of Products tracked: 84,343

Total Expenditure: HK\$266Mn

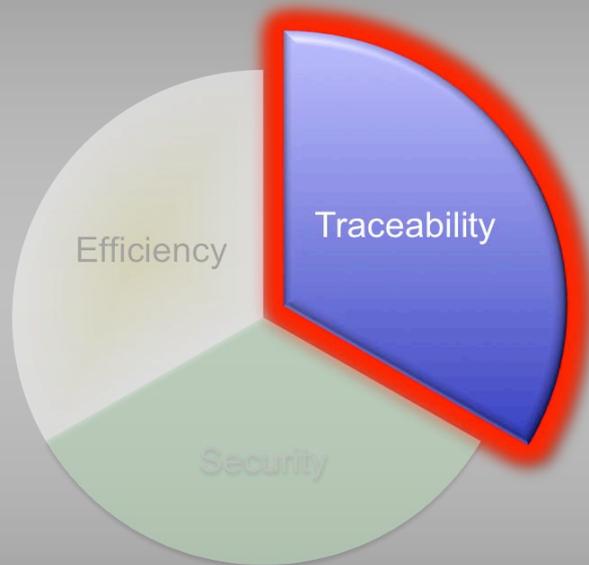


**Are we safe?**

**Half baked?**



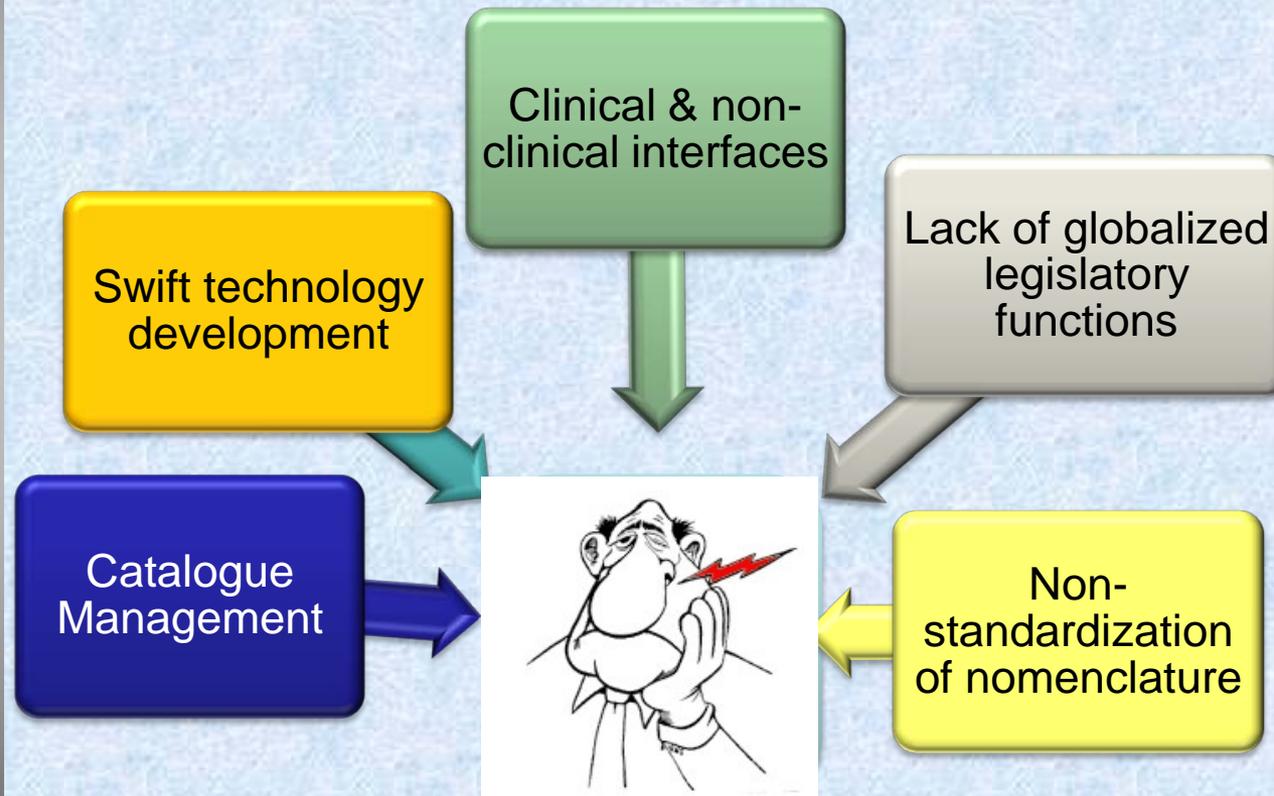
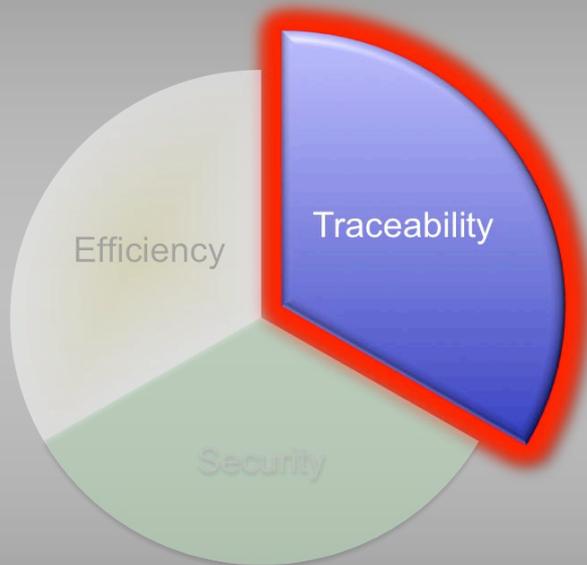
## Our Next Steps...



- Establishment of policy over policies on Product Tracking and Tracing
- Traceability on patients in the event of product recall



# Current Difficulties...





**How do we track and trace  
in a product recall?**

# A Recall of Hip Replacement System



- Field Safety Notices/Alerts from MHRA (UK), MDCO (HK), Supplier
- Direct alerts to clinicians concerned by Supplier
- Voluntary recall by Manufacturer (5 months later) **WHY???**
- 8 hospitals; <30 patients affected in Hong Kong
- Product and Patient tracking (2 weeks)

# A Recall of Hip Replacement System

- **Product and Patient tracking (2 weeks)**

- Sales record (supplier and ERPS, ~1 week)

- production code

- item description

- hospitals/location

- delivery date

- quantity

- PO/invoice no., surgery date/no.

- Procedure record (PTNT System and OT Information System, ~1 week)

- patient name

- surgery code

- history

- 
- Regulatory Bodies
  - Manufacturer
  - Distributor/Supplier
  - Hospital Authority
    - Procurement
    - Quality & Safety
    - Clinicians
    - OT Staff

# Lessons Learnt...

- 
- Regulatory Bodies
  - Manufacturer
  - Distributor/Supplier
  - Hospital Authority
    - Procurement
    - Quality & Safety
    - Clinicians
    - OT Staff

- Timely update from regulatory bodies
- Complete sales history from distributor/supplier
- Clear identification of items (i.e. model no./description)
- Data obtained from different sources and systems
- Cross verification of data
- A project with multiple stakeholders and information sources

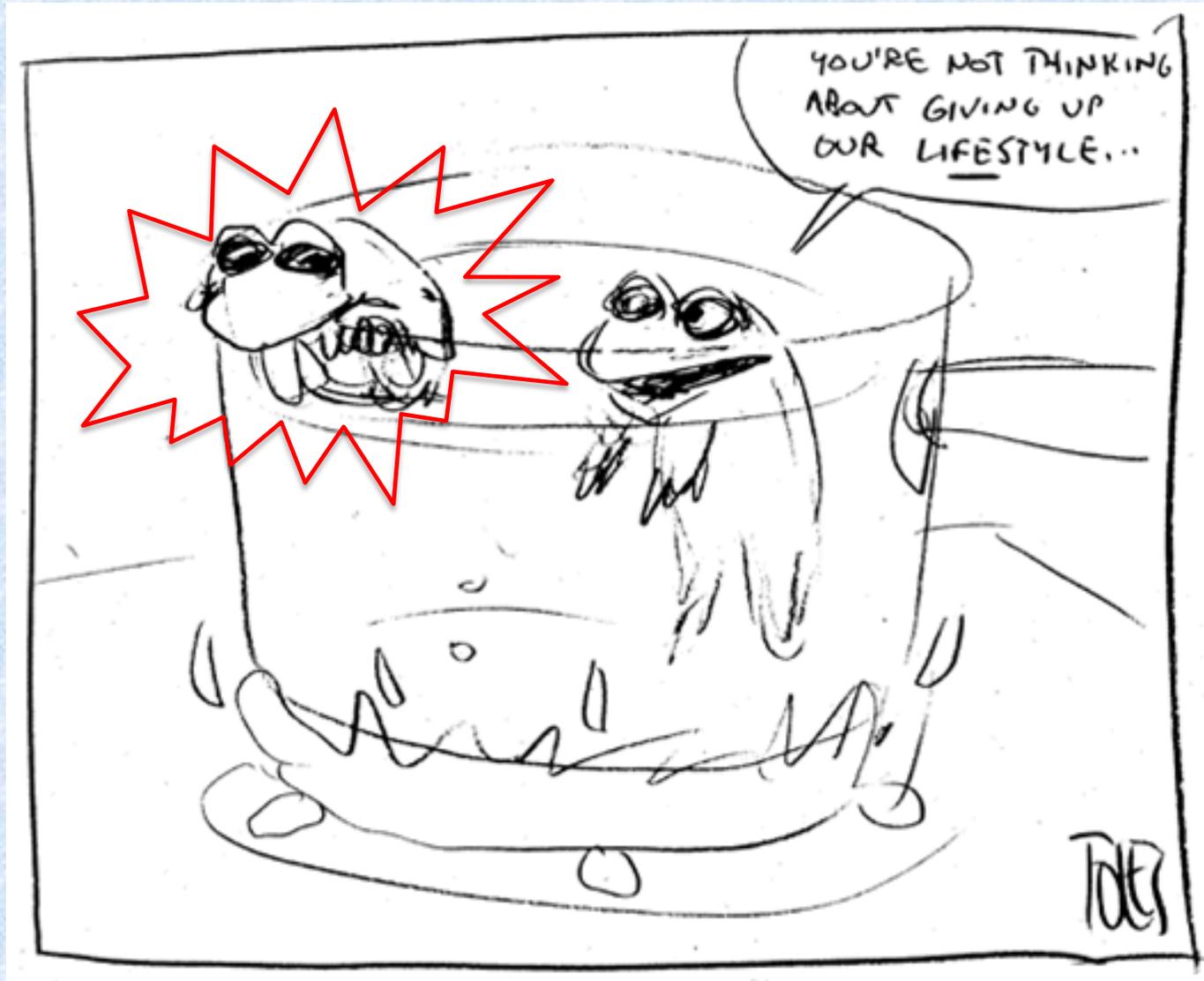
# Ideal World...



Can anyone help??



# Should we...



Should I follow him?

How far can I hit??



# Real Collaboration...



**Ask not what your country (partner)  
can do for you, ask what you can do  
for your country (partner)**

*John F. Kennedy*



Can we...

