



# GTIN Implementation in Thailand

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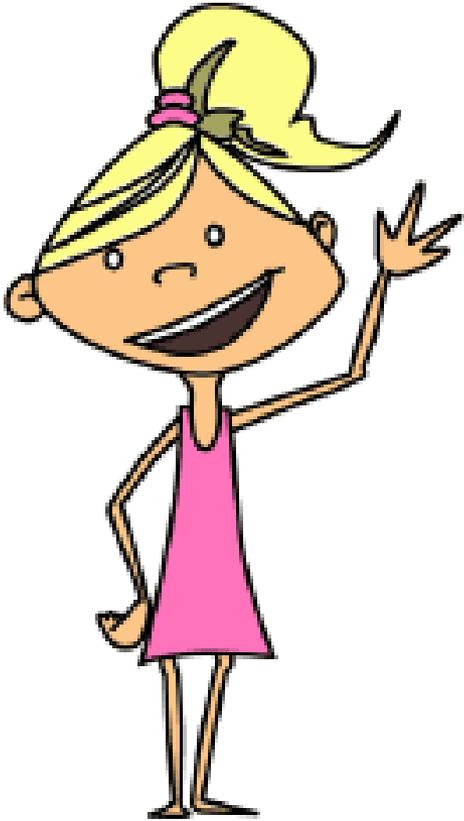
**Thailand Healthcare Cluster, Mahidol University, THAILAND**

# Faculty of Medicine Ramathibodi Hospital

Following the Second National Economic and Social Development Plan (1964-1966), the Thai Government aimed to increase the number of doctors and nurses in order to meet the needs of the country. In August 1964, the Cabinet approved the plan of setting up a new medical school.

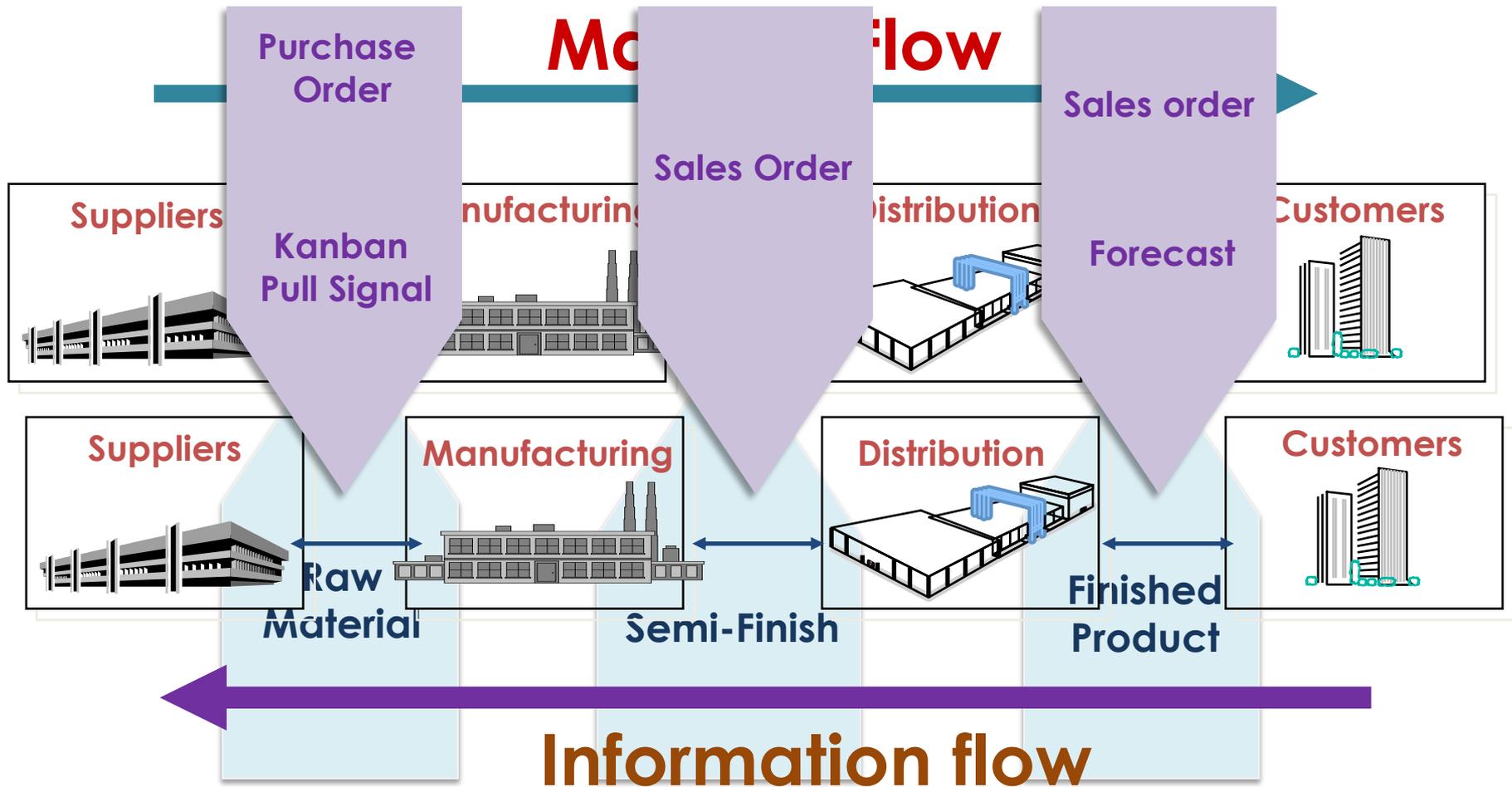
The Faculty of Medicine Ramathibodi Hospital has two principal buildings to serve 5,000 out-patients per day; first building, **Main Building**, mainly provides more than 1,000 beds for the tertiary care of complicated and severely ill patients in various specializing departments and units. The second building, the **Sirikit Medical Center**, serves as a center for modern research projects, namely, bone marrow transplantation project, the project of Advanced Diagnostic Imaging and Imaging-guided Minimal Invasive Therapy Center (AIMC). It also houses modern operating rooms and intensive care units.



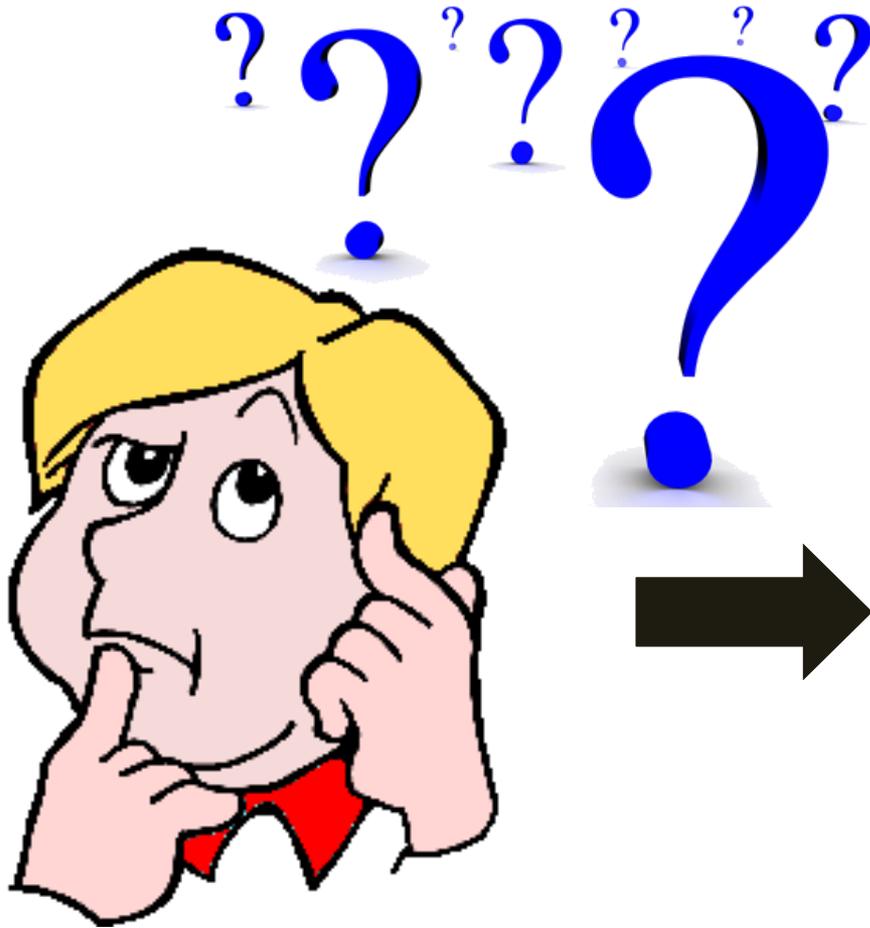


- Healthcare Supply Chain
- Academic perspective :  
Research for Change
- Challenges
- A Journey to the  
Implementation

# Logistics and Supply Chain Management



# Successful Cases in Retail Business BUT..



Never  
Happened in  
Health Sector

# What we have?

Originators	Description	Digit Length	Lowest Level
National Health Security office (NHSO)	Drug type, generic name, strength, dosage form, manufacturer code	24	Generic name
Food and Drug Administration (FDA)	Tax identifier, manufacturer code, class, group and GTIN code	30	Trade name
The Comptroller General's Department	Class, category, and running number	22	Class
GPO	GTIN 13 of GS1 standards	13	Trade Name
The Comptroller General's Department	Running number	-	Trade name
Department of Medical Sciences	Source, manufacturer code, active ingredients	11	Generic name
Customs Facilitation	Class, subclass, and statistical information	16	Class

Source: Muangchoo & Kritchanai (2011)

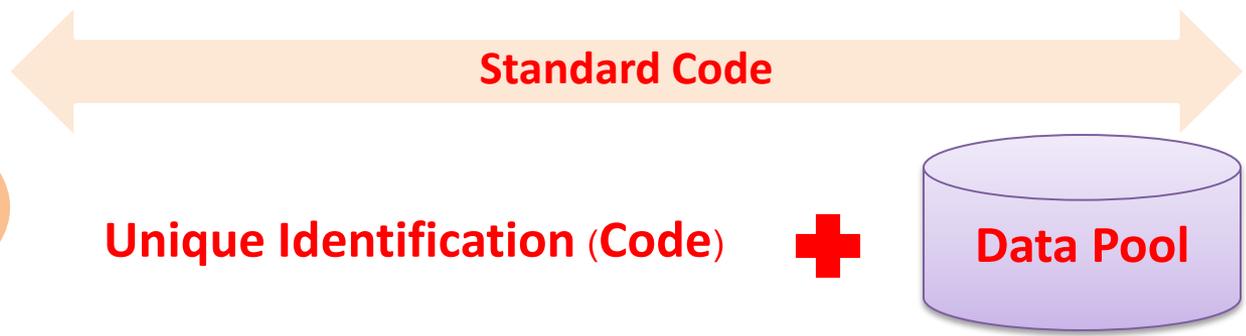
# Present



# User

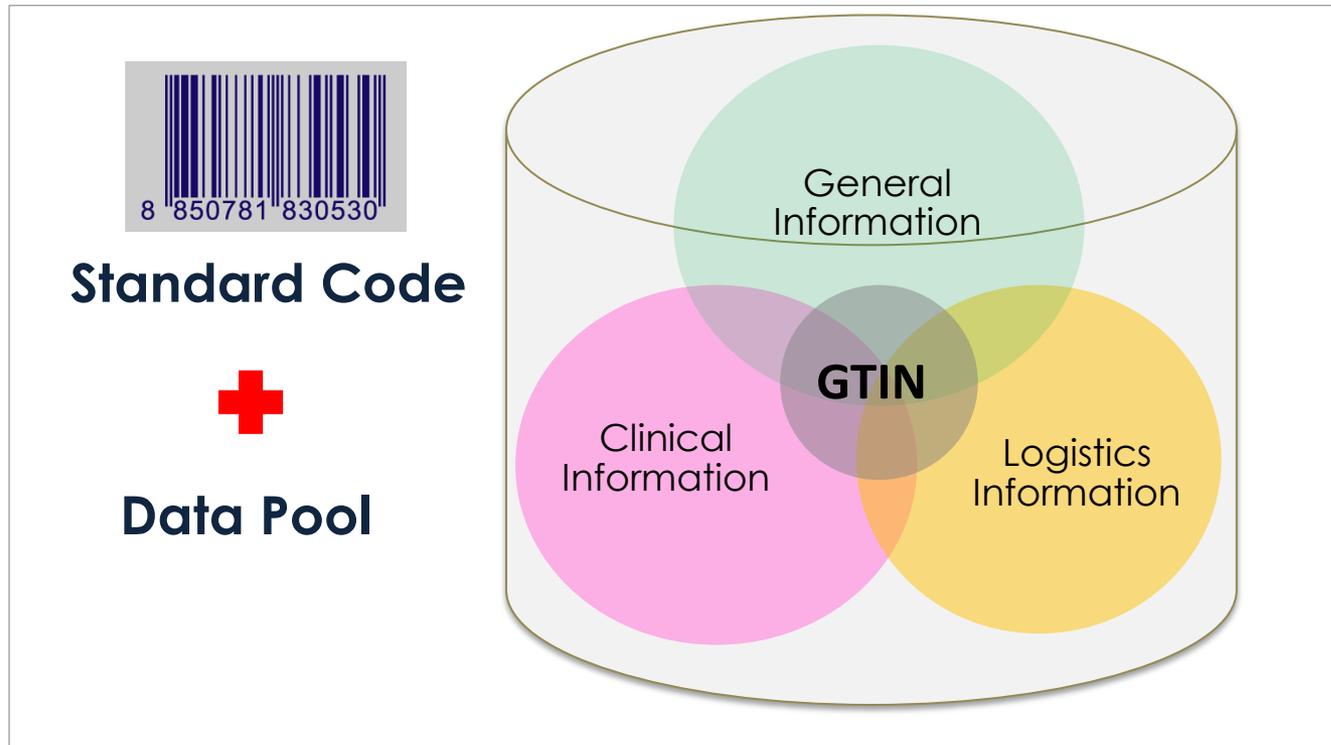


# Future



# Foundation is NEEDED

Data Pool; DRUG Information with code



UNIQUENESS

GLOBALIZATION

MACHINE READABLE

# Attributes

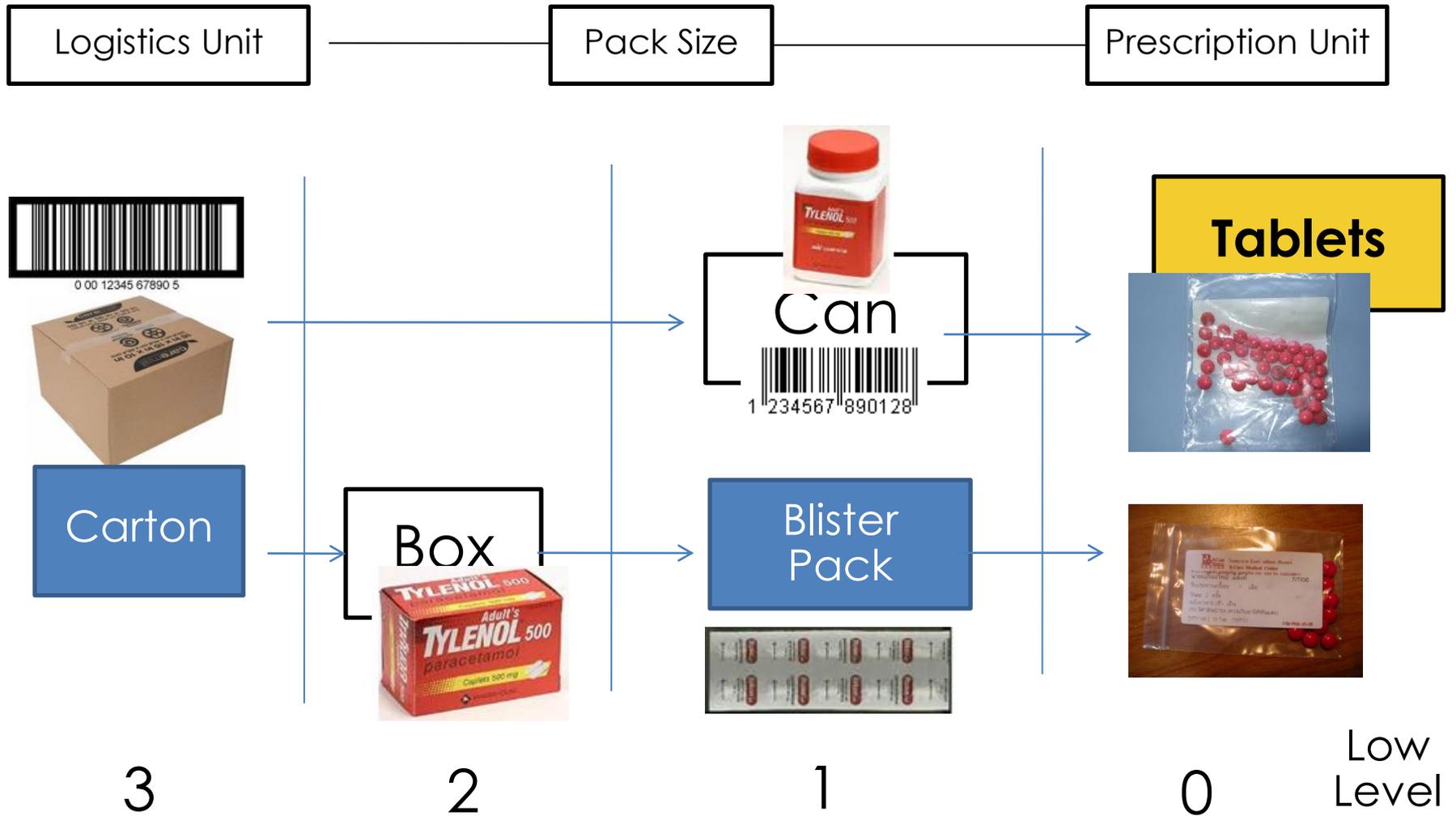
General Information is total 15 Attributes as  
Productndc, productypename,proprietaryname,  
nonproprietaryname,content,  
dosageformname,routename,  
endmarketingdate,marketingcategoryname,  
applicationnumber, labelername,  
substancename, strengthnumber, strengthunit,  
pharm\_classes

Clinical Information is total 14 Attributes as  
indications(EN/TH), contraindications(EN/TH),  
dosage(EN/TH), overdose(EN/TH),  
administration(EN/TH), precautions(EN/TH),  
special\_precautions(EN/TH),  
adverse\_drug\_reactions(EN/TH),  
drug\_interactions(EN/TH),  
storage\_condition(EN/TH),  
pregnancy\_category,mechanism\_of\_action,  
atc\_classification, thai\_fda\_category

**GTIN**

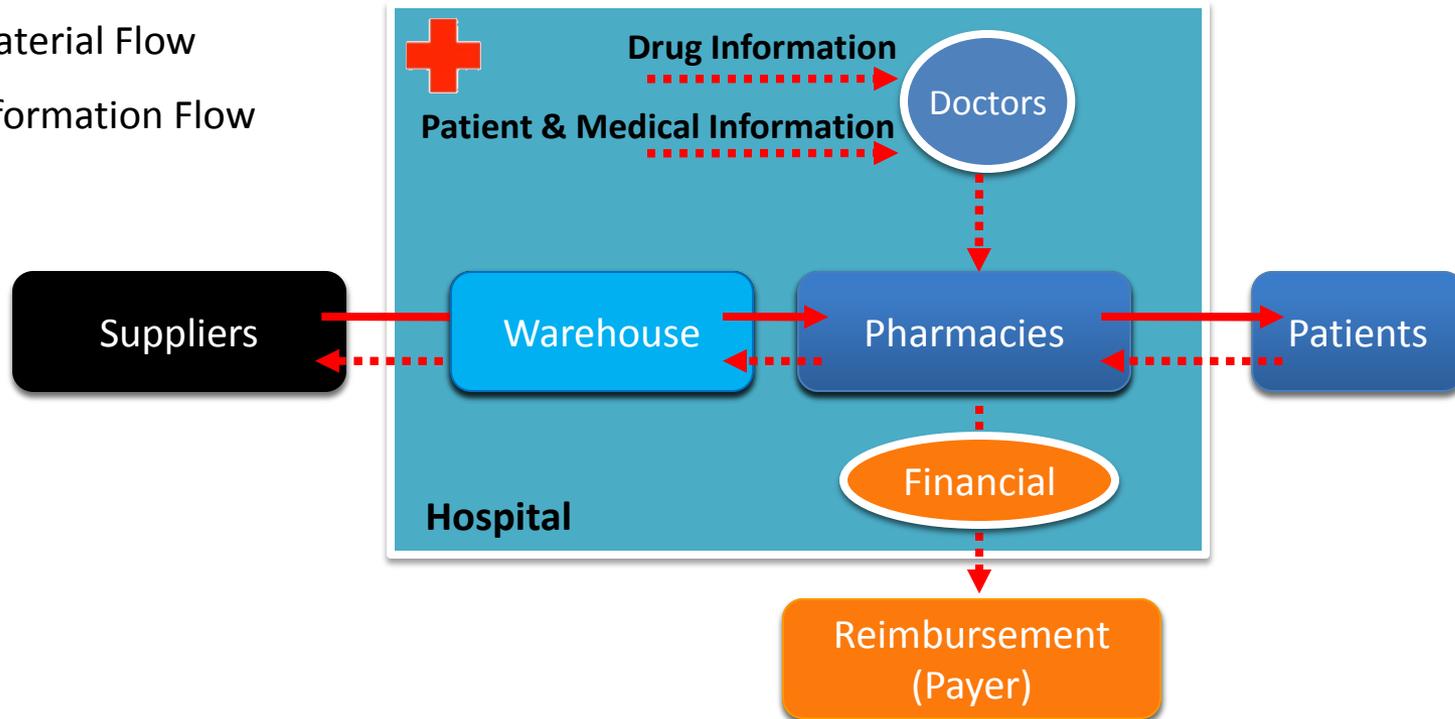
Logistics Information is total 14  
Attributes as globaltradeitemnumber,  
Presentation Unit, Pill Unit, Conversion,  
Orderable Unit, Barcode  
Marked,barcodetype, width, depth ,  
height,height\_width\_dept\_uom  
,grossweight ,  
grossweight\_uom,storage\_condition\_th

# Pill Level

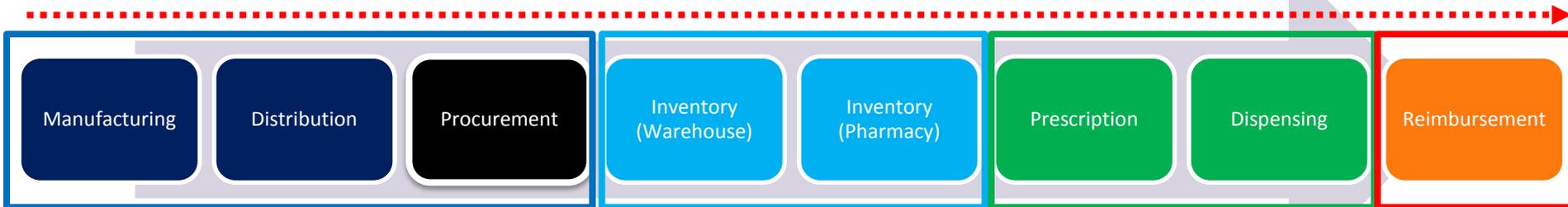


# Drug Flow in Supply Chain

→ Material Flow  
 ..... Information Flow

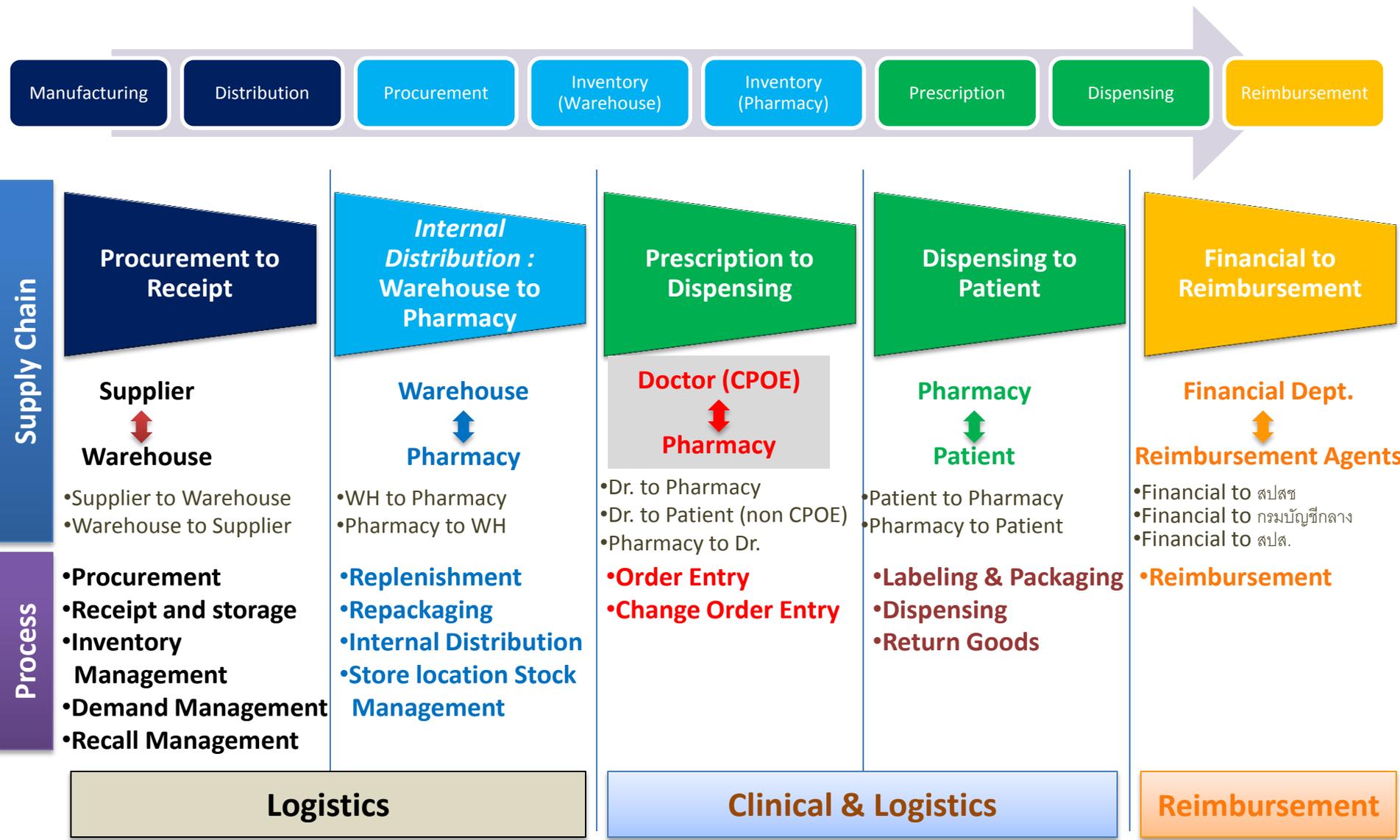


## Drug Information



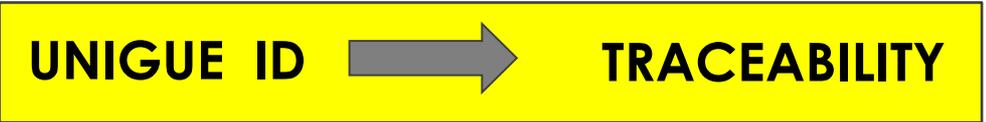
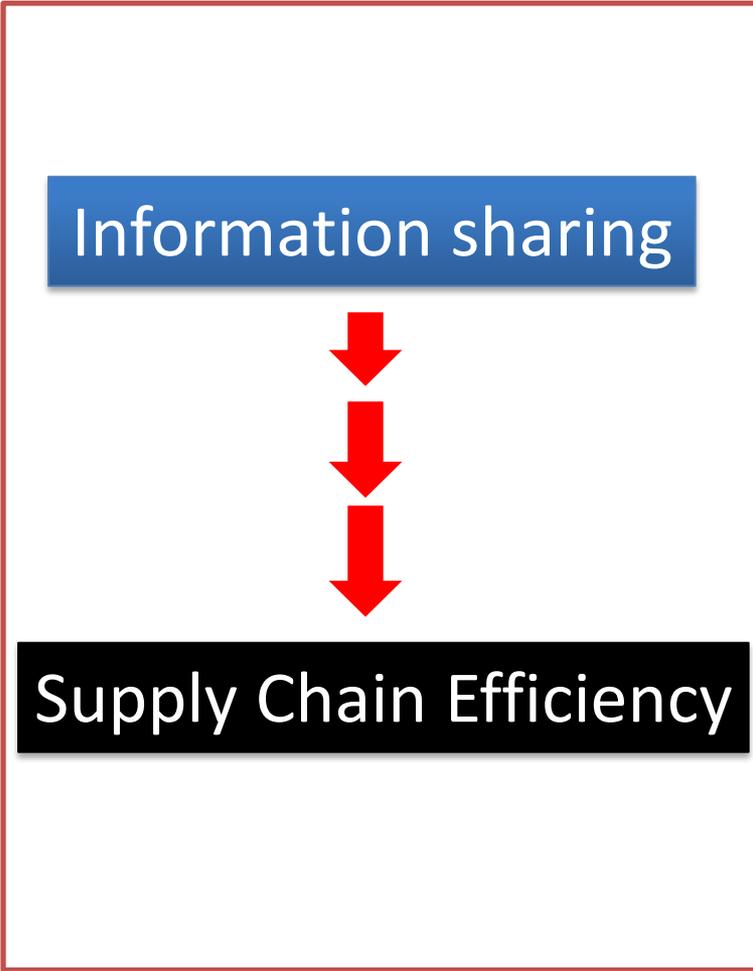
Source: In-depth Data Collection

# Drug Flow in Supply Chain



# Critical Success Factors (CSFs) in Supply Chain Management

Source	Supply chain management
Kim (2005)	The most important critical success factor of SCM is the efficient and effective information sharing in the supply chain
Tan (2001)	The direct transfer of information between retailers and vendors aids in improving logistics efficiency and supporting increased customer service levels
White et al (1999); Narasimhan and Carter (1998); Trent and Monczka (1998)	A well integrated supply chain involves coordinating the flows of materials and information between suppliers, manufacturers and customers
Grieco (1989)	Effective supply chain management rests on the twin pillars of trust and communication



# The Journey just begins....



# ???

- Prescription Unit (Pill Level)
- Regulator (Top down), then FUND
- Resistance from suppliers (H/O?)
- +++
- Team work
- GS1 Thailand as facilitator

**Thank you  
and hope to see you with our  
success story next time**

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