Introduction of RFID/USN based
Logistics Technology for Improving Logistics Productivity

CJ GLS

Kwon, Koo Po,
CJ GLS

NeLT 미래물류기술포럼
Forum for
Next Logistics Technology

Contents

Introduction of RFID/USN based
Logistics Technology for Improving Logistics Productivity

Global Logistics Innovator

1. About CJ GLS

"Global Logistics Innovator, CJ GLS"

- **Subsidiary**
- **Office/Partner**
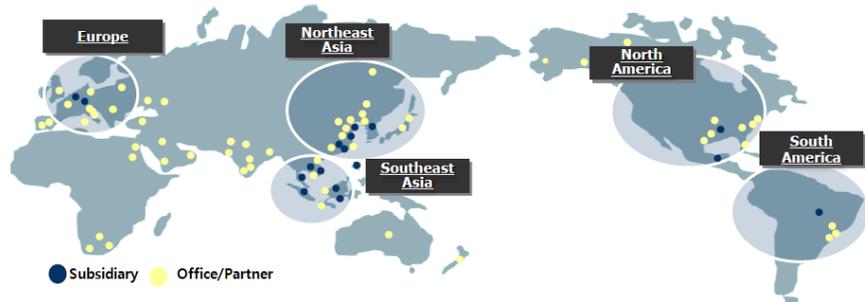
Europe	Southeast Asia	Northeast Asia	North America	South America
Germany (Expect)	Indonesia	China (4)	Mexico	Brazil (Expect)
Netherlands	Malaysia (2)	Hong Kong	U.S.A.	
	Philippines	Korea		
	Singapore			
	Thailand			
	Vietnam			

- ▪ Head quarter ：Korea
- ▪ Global OHQ ：Singapore
- ▪ Revenue ：US$ 1.4billion (FY'10)
- ▪ Employees ：3,500
- ▪ Global N/W ：24 own offices in 12 Countries, More than 100 partners in 72 Countries
- ▪ CAGR ：27%

1.4 [B$]

- Global
- Domestic

Foundation of CJ GLS

Announcement of CJ GLS's Global Busine...
March 7, 2006

Acquisition of Samsung HTH
Acquisition of AEH

Year	Domestic	Global	Total
1998			0.06
1999			0.1
2002			0.3
2006			0.8
2008	0.7	0.3	1.0
2009	0.8	0.3	1.1
2010	0.95	0.45	1.4
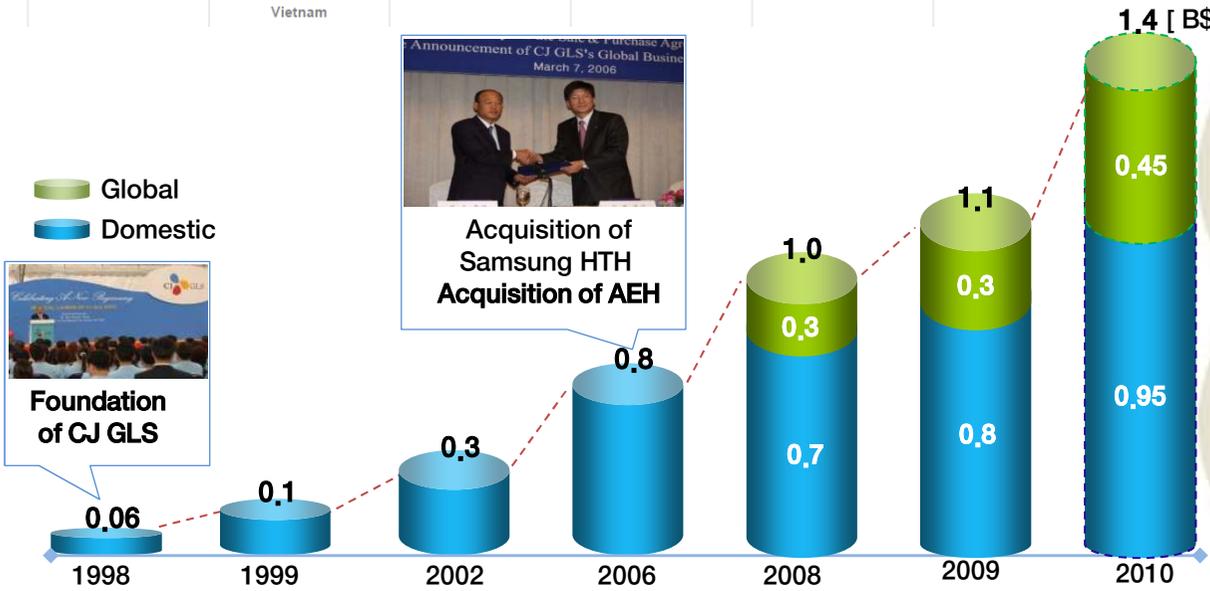
Vision Asia's No 1. Global Logistics company in 2013

Mission Offer customers the most optimal SCM Based on Operation Excellence

NeLT 미래물류기술포럼
Forum for Next Logistics Technology

Global Logistics Innovator CJ GLS

2. Technology Overview –Cont.

- RFID/USN based logistics communication device
- 100% wireless configuration
- Real-Time data (Any time, Any place)
- Replace typical DPS, DAS system

Typical DPS·DAS
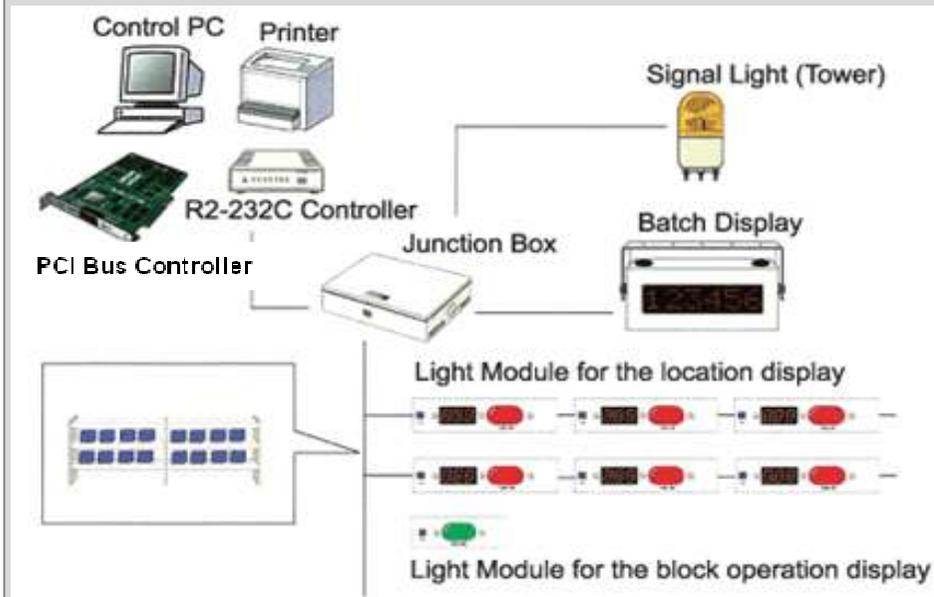
USN Node (MPS) System
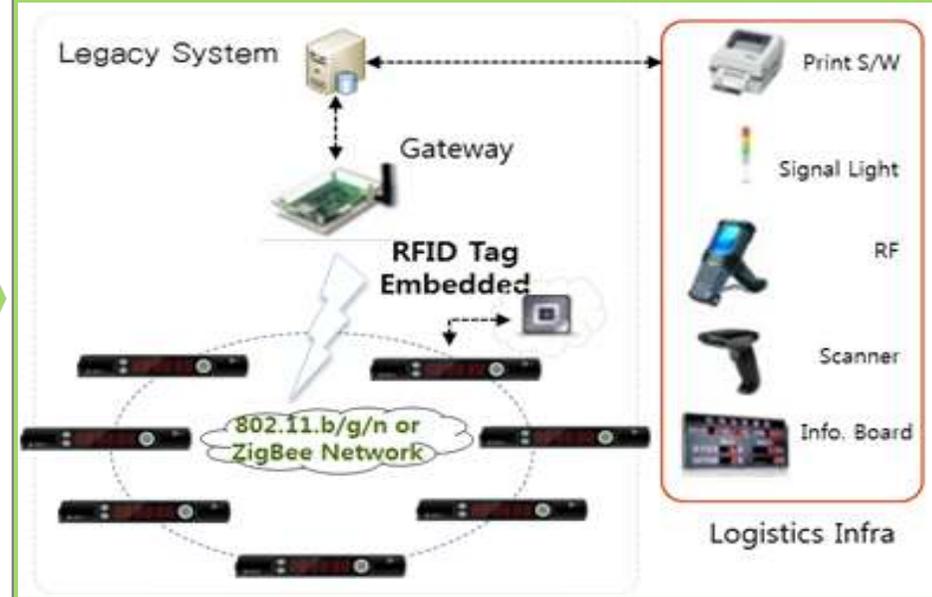
1)MPS: Multi Purpose System

Global Logistics Innovator

2. Technology Overview

- No restriction to install, It can be mounted any place in any logistics field

- Embedded RFID also can be used as Dynamic RTLS edge coordinate tag

- As single model, DPS & DAS process can be operated with simple S/W change

Paperless Work

Reusable RFID Tag replace Typical paper label

- 60,000 Page /year can be reduced
- Process L/T 64% reduced

Real Time Comm.

No need to carry Mobile device in the field

- Logistics Information Can transmitted to field directly and prompt feedback is also available

Easy Implementation

100% Wireless Design, Minimized Installation task

- Typical DPS & DAS used in restricted place (Wiring task is extremely expensive & complex)

Global Logistics Innovator

3. Implementation Case – Site Overview(1)

● Customer : ebay Gmarket (Leader of e-market place company)

● Product : BOOK

  - SKU : 15,000 EA (Running SKU 4,000 EA)

  - Daily Issued Invoices : 12,000

    . Single SKU Invoices : 7,000 EA

    . More than 2 SKU Invoice : 5,000 EA

    . Customer want to operate as daily 3 batch processing

   → 1 Batch Picking SKU : 1,800 ~ 2,000 EA, Issued Invoice : 1,700 EA
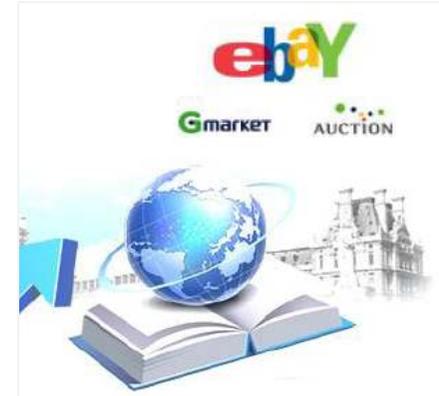
DPS/DAS Case	VS	USN/Node(MPS) Case
● Productivity : 600 Invoices / hour		● Productivity : 1,100 Invoices / hour
● Commitment Resource		● Commitment Resource
- Cell : Over 2,000 Cells		- Cell : Fixed 900 Cells
- Labor : 22 workers		- Labor : 10 workers

3. Implementation Case – Site Overview(2)
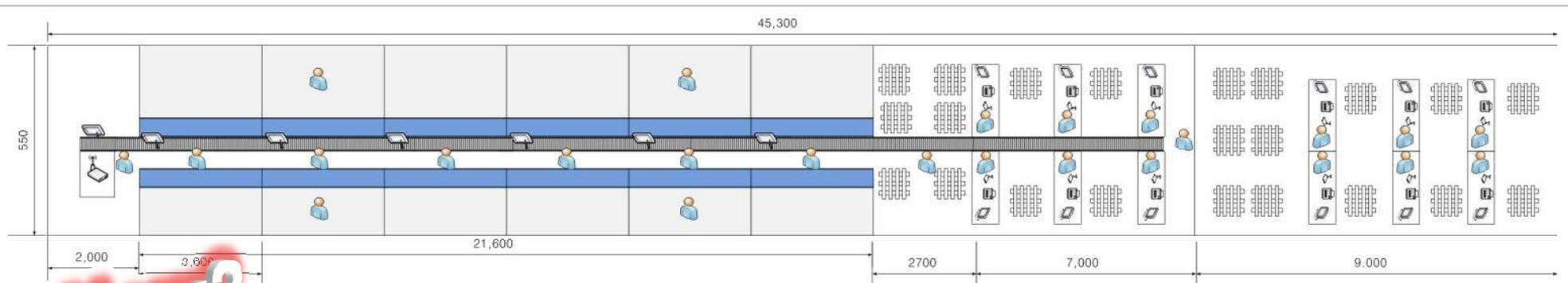
Innovative ADPS Process & Q-Logic Algorithm

- MPS Cell is no more fixed location. Worker can select desired cell.
- Cell can be replenished by any SKU and once it has been empty,
   it can be re-replenished by another SKU.
- Q-Logic generate fulfilled orders by current replenished stock in real time.
   ➔ Replenishment & Picking can be started simultaneously.

Process Innovation based on u-IT technology (RFID, Zigbee, 3D Visibility)

- Embedded RFID Tag Bucket reduce disposable paper label, box issue cost.
- Order mapping and inspection L/T is extremely reduced.
- 3D Stock Visibility system increase stock replenishment & cell recycle efficiency.

Global Logistics Innovator

3. Implementation Case – Site Overview(3)

RFID Bucket Insert & Mapping

Global Logistics Innovator

3. Implementation Case – Site Overview(4)

Queue-Logic Stock Replenishment

Global Logistics Innovator CJ GLS

3. Implementation Case – Site Overview(5)

USN Node Picking & IPAD usage

Global Logistics Innovator

3. Implementation Case – Site Overview(6)

RFID Bucket Inspection

Global Logistics Innovator

1. Efficiency & Green logistics contribution of u-IT technology has been Verified

- 1 Cell picking capability has been doubled

  As-WAS : 1 SKU/Cell → AS-IS : 2.2 SKU/Cell

  Carbon emissions reduction : 21.5tCO$_2$/year
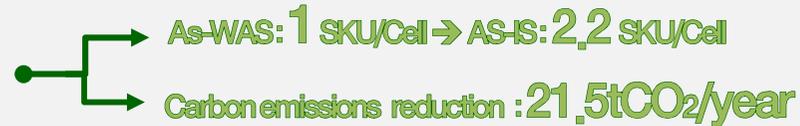
- Reduction single use disposal material with recycle RFID Tag → $10,643 / year

2. Logistics operational competitiveness has been upgraded

- Labor picking efficiency

  Manual : 150 order/men, DPS/DAS : 320~350 order/men

  MPS : 545 order/men

- Order processing L/T (1 Batch)

  Manual/DPS/DAS : 8~12 h , MPS : 4~5h

3. Best Solution for mass & complex B2C logistics for customer

- AS on-line book market is fast growing, logistics service requirement complexity is increasing.

→ u-IT technology based innovation can be a one of competitive edge

Global Logistics Innovator

4. Next Plan – Smart Cold Chain Management

- **Transportation Temperature & humidity Monitoring(TTM)**

    - Monitoring vehicle using temperature and humidity sensing technology

- **Storage Temperature & humidity Monitoring(STM)**

    - STM gives manager the "first to know" advantage, helping them make informed decisions about their logistics center management

- **Key Features**

    - Lean Cold Chain Management

    - Continuous trace of product from dock to destination

    - Summary reports for continuous improvement of cold chain performance

    - 3D Display, GPS, CDMA, Wi-Fi, Map

1) SCCM: Smart Cold Chain management

Global Logistics Innovator
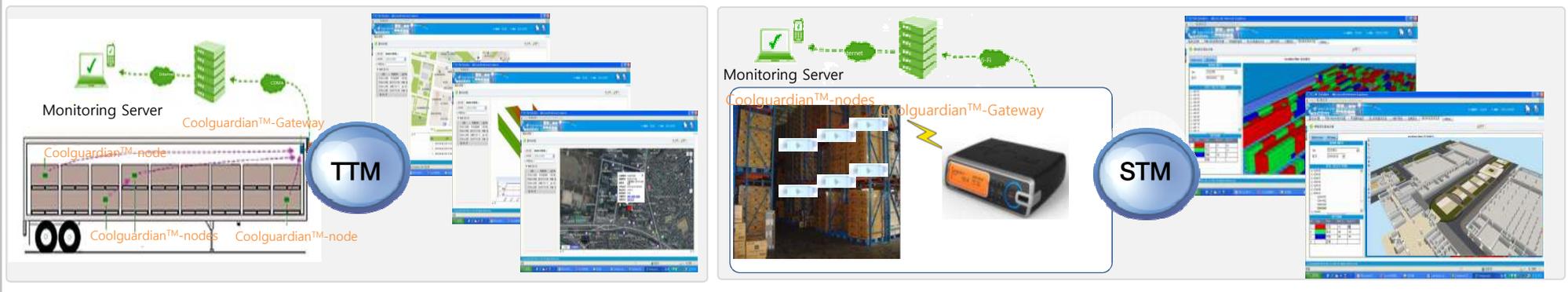
Thank You !

For Your Time & Attention