# Global Logistics Information Synchronization technology for QoS

*High reliability based Synchronization technology for RFID infrastructure*

2012. 4. 25
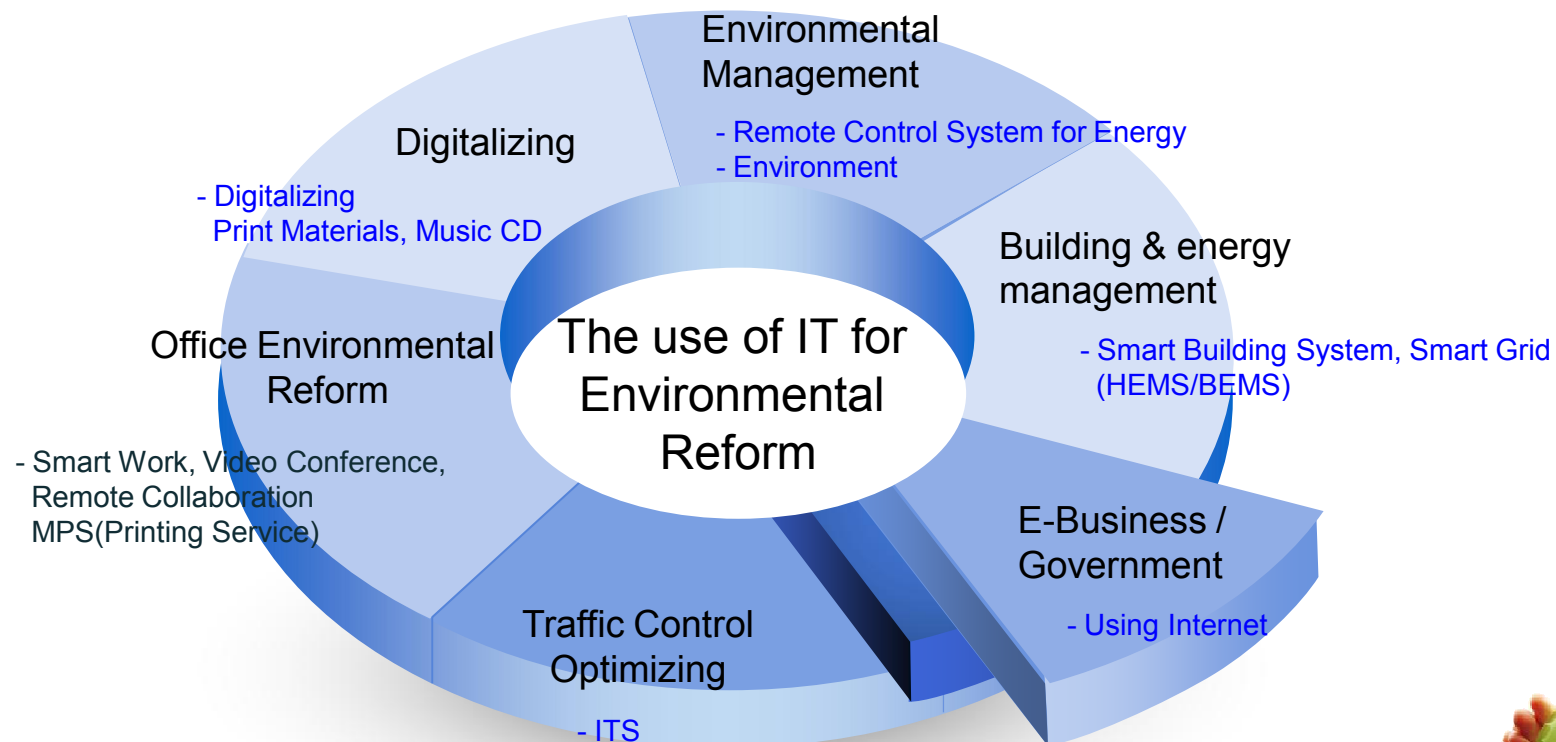
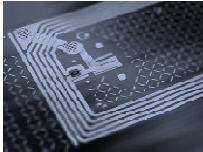## IT Applications for Environmental Reform

**Develop innovative energy-saving technologies …**

**Improvement of Society, Economy, Public Service, Enterprise Environmental Sustainability**



Environmental Management
- Remote Control System for Energy
- Environment

Digitalizing
- Digitalizing Print Materials, Music CD

Building & energy management
- Smart Building System, Smart Grid (HEMS/BEMS)

Office Environmental Reform
- Smart Work, Video Conference, Remote Collaboration MPS(Printing Service)

The use of IT for Environmental Reform

E-Business / Government
- Using Internet

Traffic Control Optimizing
- ITS

| Criteria | | Application | Contents |
|---|---|---|---|
| Asset Tracking |  | Supply Management | Smart logistics |
| | | Baggage Management | Baggage Tracing system |
| | | Plant Automation | Factory Automatic system |
| | | Real-Time location System | Global position tracking |
| | | On-Demand Management | Book, DVD, Cloth etc. rental |
| Security |  | Access Control & Security | Access card system |
| | | Car security | Antitheft device & Start engine by ID |
| Transportation |  | Automatic Toll | Automatic Identification |
| | | Transportation card | Automatic transport fare |

:: Barcode System

:: RFID System

**Systems Layer**

**ERP Systems**

"Data" Flow
- Low esolution
- Latent
- Operator Based
- Error Prone

Customer Value Creation

**ERP Systems**

"Information" Flow
- High Resolution
- Real-time
- Process Based
- High Accuracy

**Data Layer**

Data Collection

Application Innovation

RFID System

RFID Data Collection

Bar Code

RFID

Speed of Process

**Physical Layer**
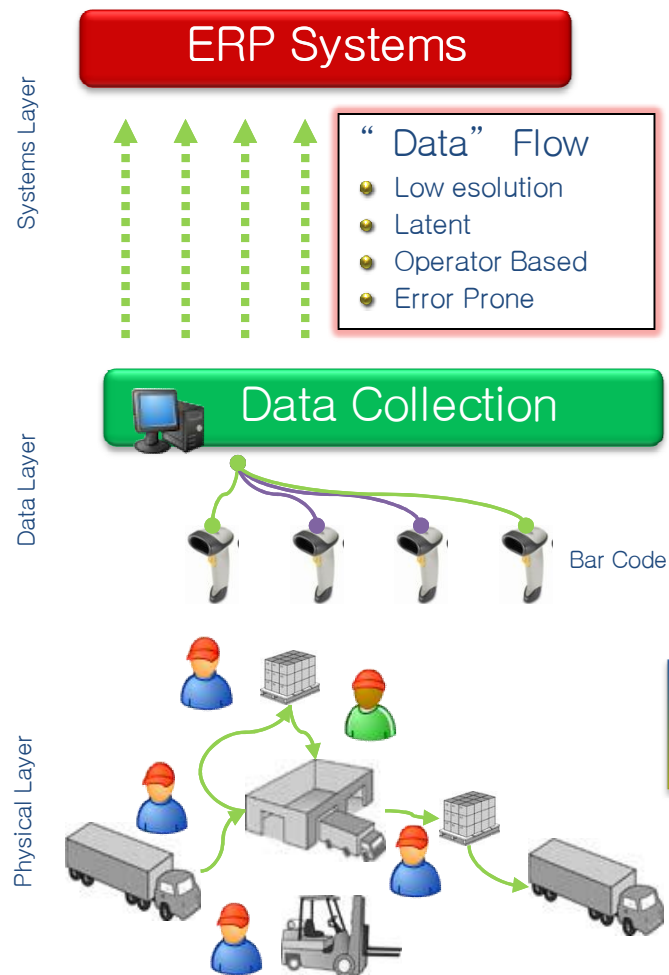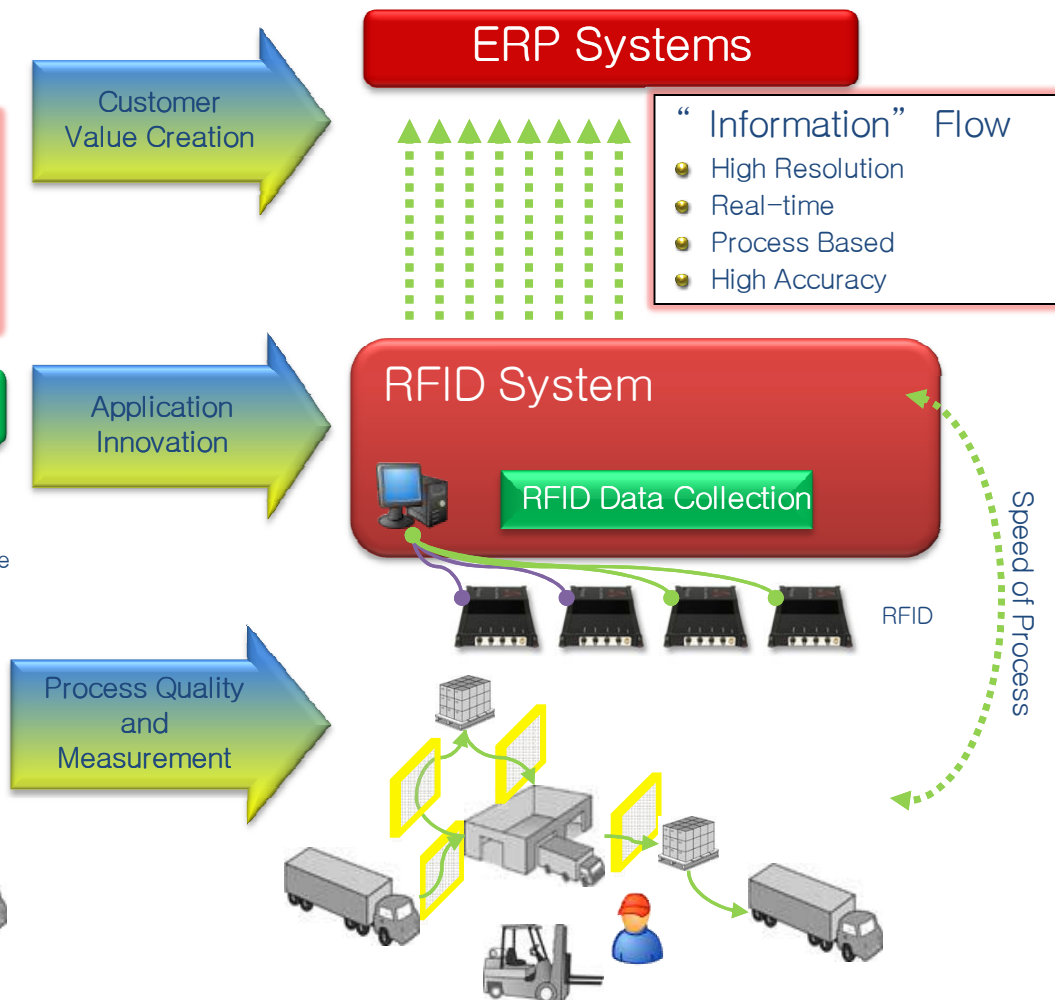
Process Quality and Measurement
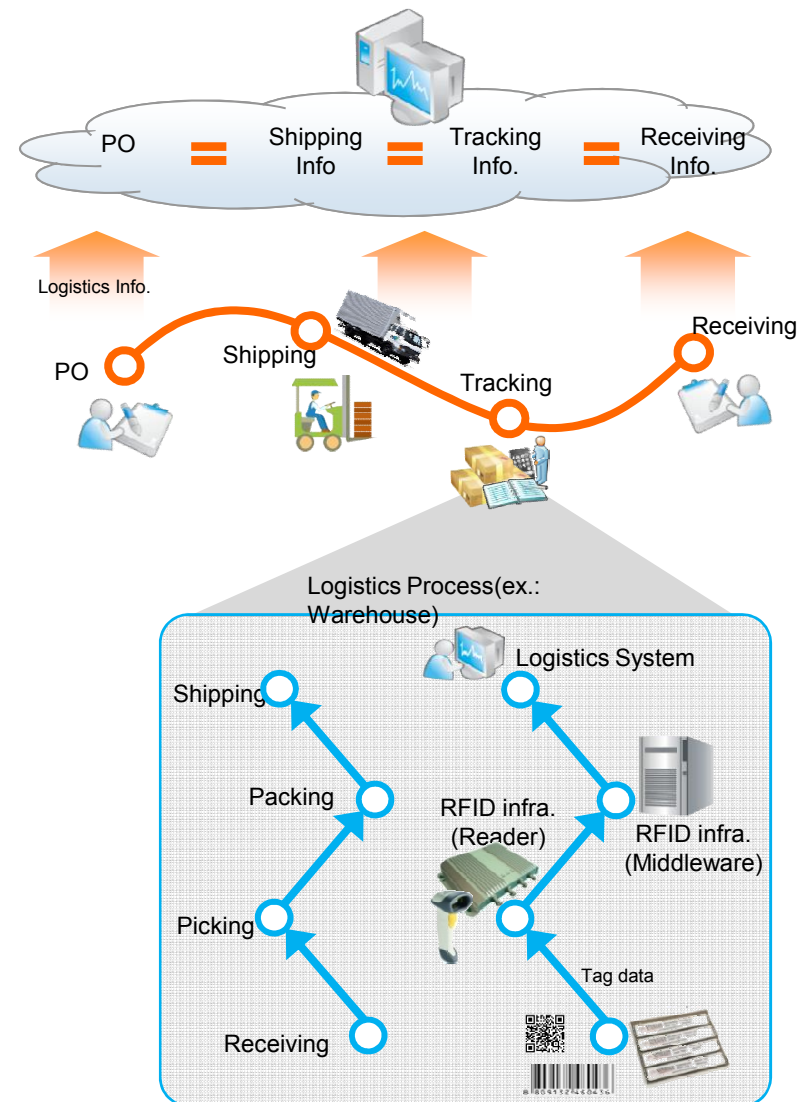
Reduction 23% of $CO_2$ emission in the **Transportation.**
Efficient Logistics of Smart Logistics by Telematics and GPS implementation



Satellite GPS

Telematics

Telematics technology

$CO_2$ emission reduction : 20 ~ 30%

Information of transportation, location, co-work etc.

Location server

DB server

Analysis & Forecast

Green logistics realizes efficient co-work
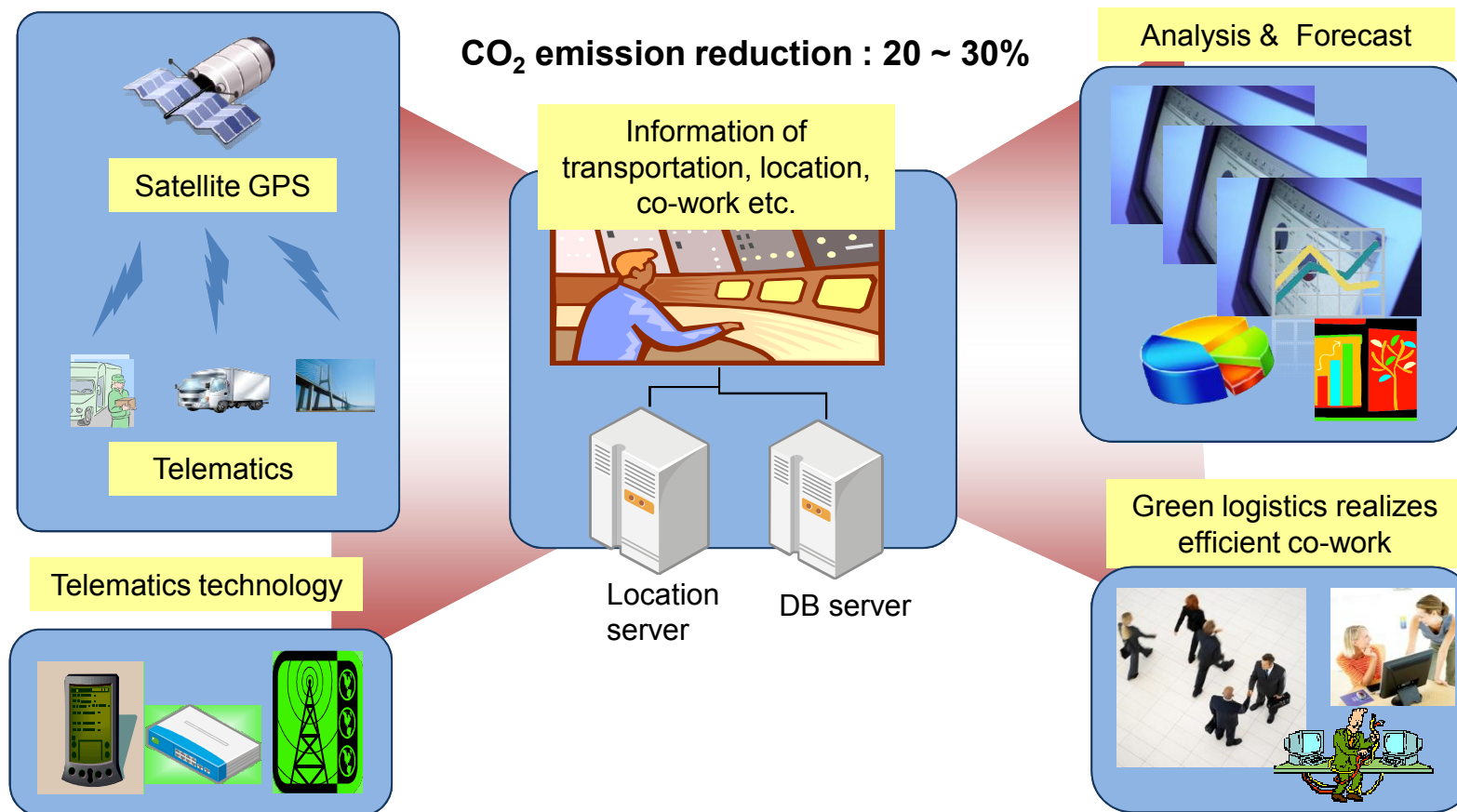
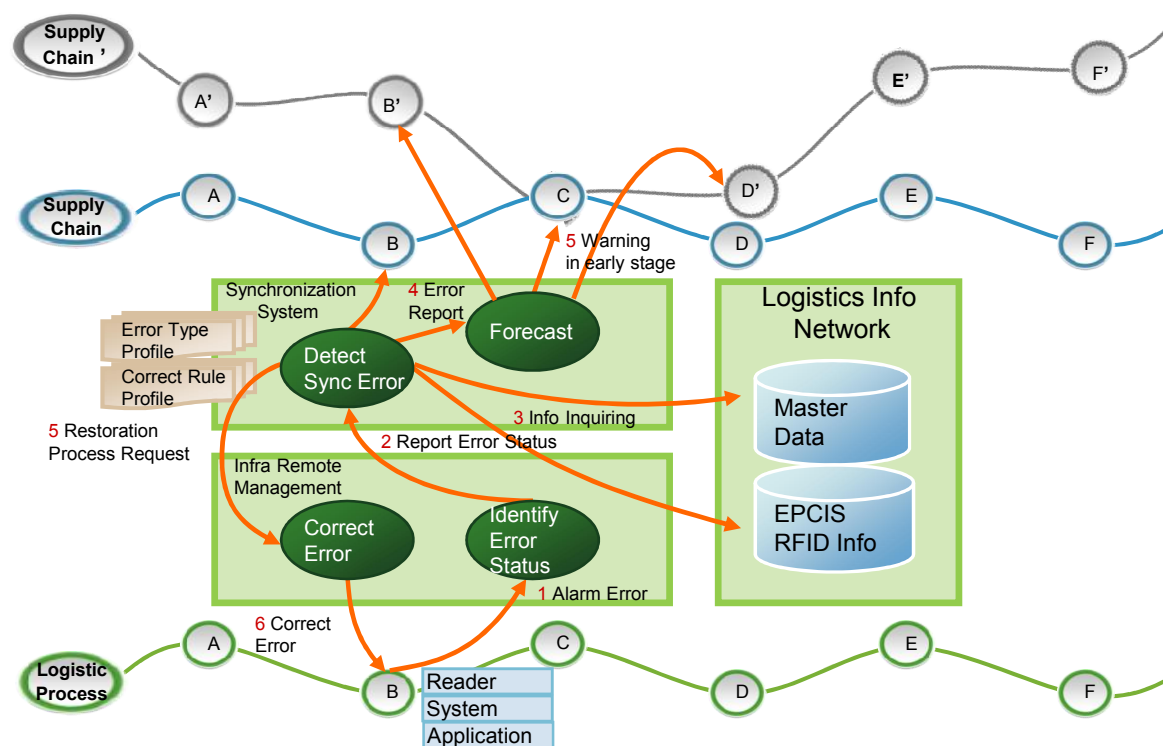## What is Logistics Information Synchronization Technology?

• Logistics Information Synchronization Technology synchronizes the current incorrect data with the correct data in previous logistics step by real time colleting, comparing, and analyzing logistics information occurs in each logistics step in full supply chain.

- synchronizes the logistics information by detecting and correcting the logistics information(item, Quantity, type of Packaging, Destination, Receiving date) from the purchase order, shipment information from the factory and warehouse, and tracking information from the shipment.

- synchronizes receiving and releasing logistics information(item, quantity) collected from RFID infra. in one logistics process.

• Logistics Information Synchronization Technology also prevents the logistics information error caused by RFID infra. by real time monitoring of RFID infra. malfunction.

PO = Shipping Info = Tracking Info. = Receiving Info.

Logistics Info.

PO    Shipping    Tracking    Receiving

Logistics Process(ex.: Warehouse)

Logistics System

Shipping

Packing

RFID infra. (Reader)    RFID infra. (Middleware)

Picking

Receiving    Tag data
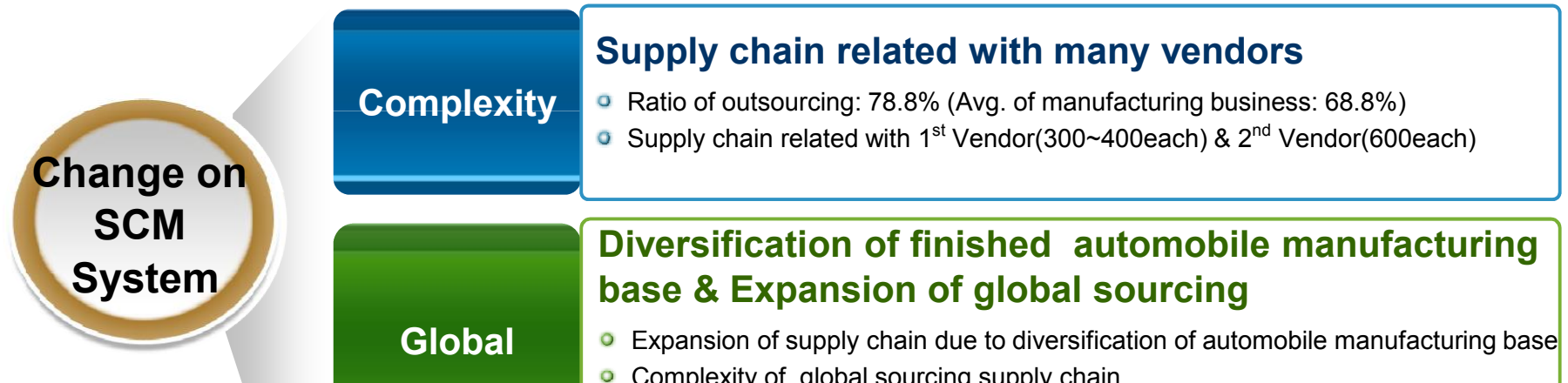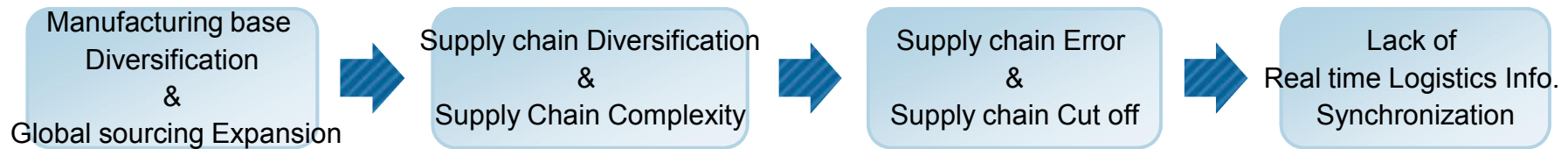
## Procedure of Logistics Information Synchronization

- By comparing logistics info. collected from logistics info. network and logistics info. collected from RFID infra., GLIS Takes action against the cause of logistics data error, and restores error

- By notifying the front and the rear supply chain, GLIS deals with other supply chain sharing with the corresponding logistics process

# 2. Background

## Need of Logistics Information Synchronization

| Manufacturing base Diversification & Global sourcing Expansion | ➡ | Supply chain Diversification & Supply Chain Complexity | ➡ | Supply chain Error & Supply chain Cut off | ➡ | Lack of Real time Logistics Info. Synchronization |

**Change on SCM System**

**Complexity**

### Supply chain related with many vendors

- Ratio of outsourcing: 78.8% (Avg. of manufacturing business: 68.8%)
- Supply chain related with 1st Vendor(300~400each) & 2nd Vendor(600each)

**Global**

### Diversification of finished automobile manufacturing base & Expansion of global sourcing

- Expansion of supply chain due to diversification of automobile manufacturing base
- Complexity of global sourcing supply chain

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_7648