

“How to advance logistics center improvement”

It aims at the top of a mountain of Logistics.

Mt Fuji

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Logistics Center

purpose

- ① Low Cost
- ② Exactly
- ③ Sooner
- ④ Customer Service
- ⑤ The stock is minimum.
- ⑥ The opportunity loss is minimum of sales.
- ⑦ The commodity as the property is protected.

Function

- ① Transportation
- ② Loading and unloading
- ③ Storage
- ④ Package
- ⑤ Value added Service
- ⑥ Information & Communication

Logistics is an integrated science

Necessary knowledge for Logistics Center construction

- Economics
- Distribution
- Traffic
- Labor Issue
- Trade
- Information
- Communication
- Electronics
- Construction
- Industrial Engineering
- Ergonomics
- Activity Based Costing
- Environment
- Regulations system
- Safety

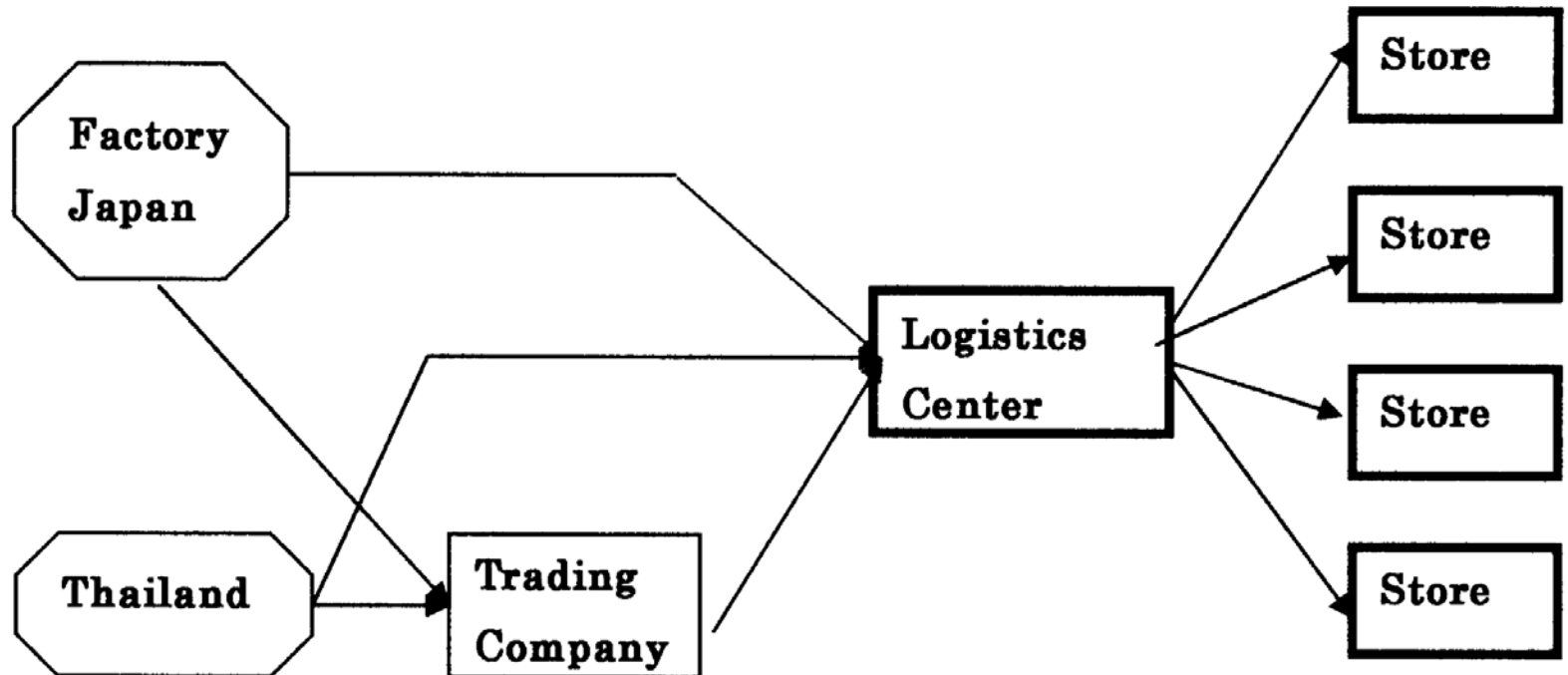
The improvement of Logistics center :
from the recognition of the problem.

“**Visibility**”

- It is made to understand **looking**.
- It expresses it by the **figure**.
- It makes it to the **graph**.
- It makes it to the **flow chart**

Material flow of Distribution

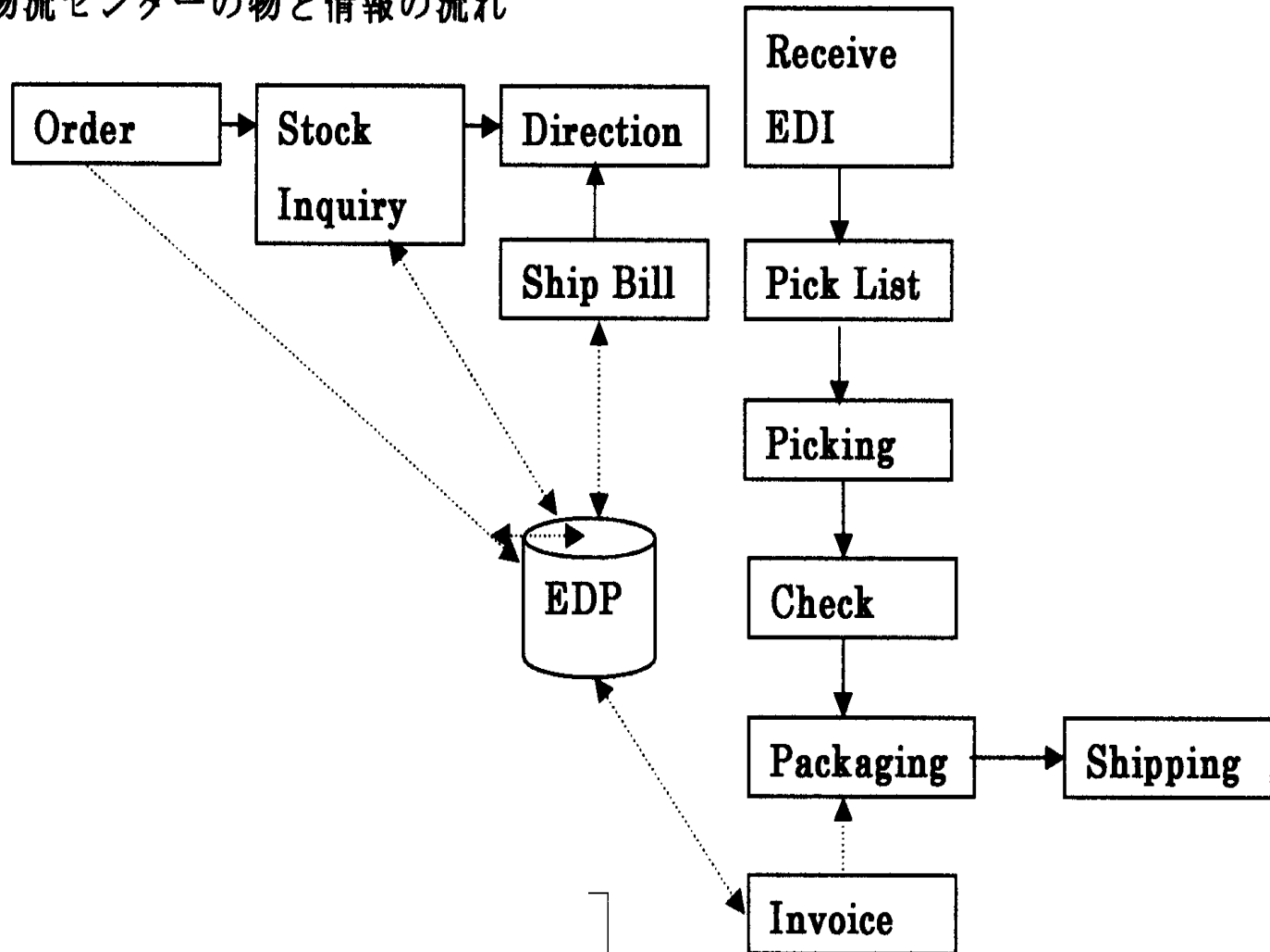
図表— 2 物流の経路



Time, the cost, and the place, etc.
are written and added.

Flow of material & Information

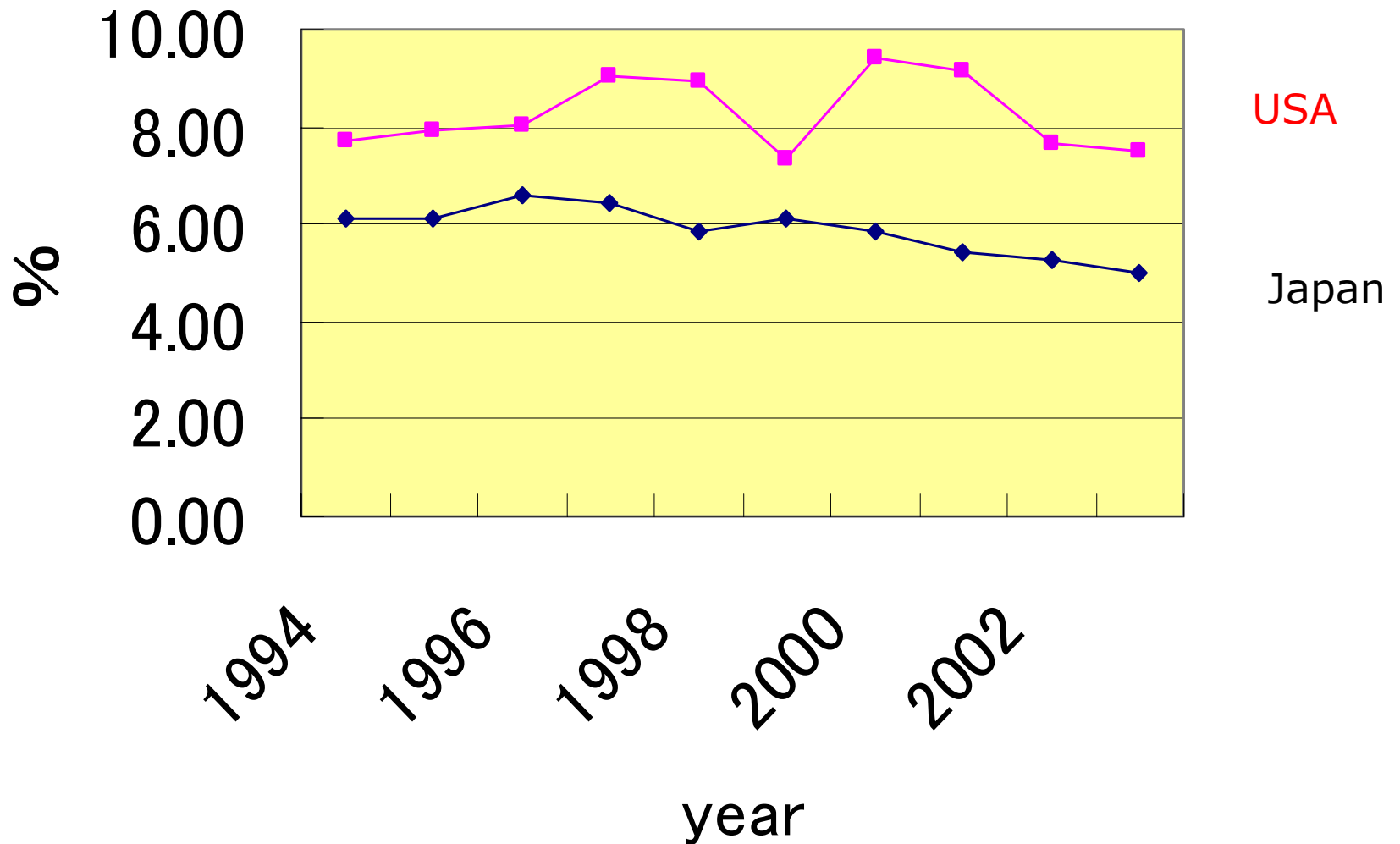
図表—3 物流センターの物と情報の流れ



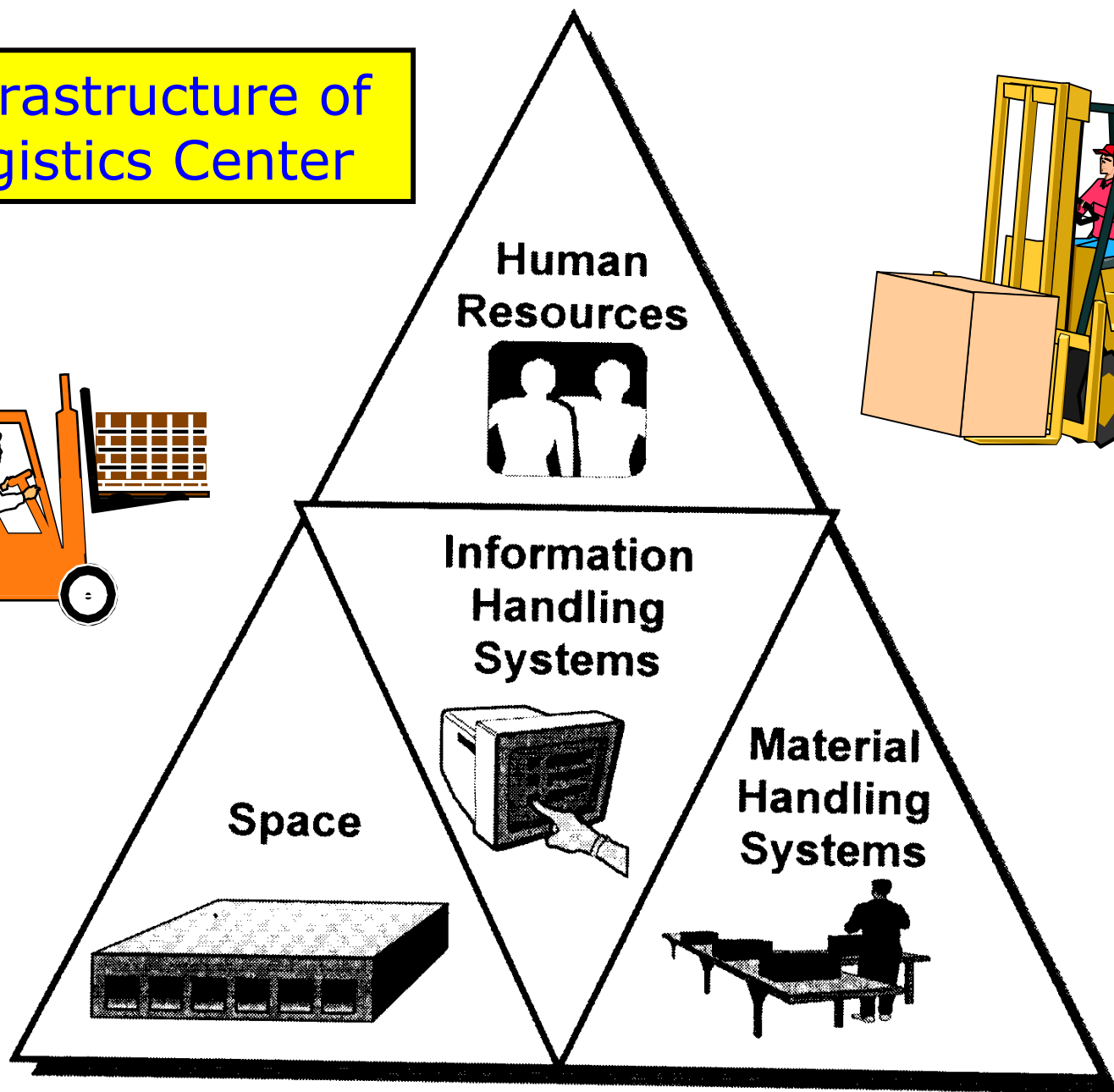
Logistics Cost of Retailer & Whole seller

Industry	Cost %	Composition ratio		
		Transport	Storage	Others
All Commerce	5.33	51.2	15.8	33.0
Foods & Drink W/S	5.56	49.0	17.8	33.2
Drug & Cosmetic W/S	4.66	41.4	24.3	34.3
Utensil W/S	7.73	41.2	14.7	44.1
Apparel W/S	5.85	30.5	21.4	48.1
Machine Tools W.S	3.48	47.2	41.5	11.3
Other W/S	7.16	45.8	21.0	33.2
Department Store	2.26	71.6	5.6	22.8
Super Market	2.57	70.4	5.0	24.6
Convenience Store	9.85	84.0	2.9	13.1
Mail Order	12.4	65.6	9.4	25.0
Other Retailer	5.43	38.1	9.7	52.2

Japan-USA logistics cost comparison



Infrastructure of Logistics Center



Key word of improvement

- ❑ It doesn't do.
 1. Idle Time or Waiting Time
 2. The person carries.
 3. Shortening of walking distance
 4. Skill is lost.
 5. It is not allowed to look for
 6. Paperless

Point of Logistics Center improvement

Center : executive

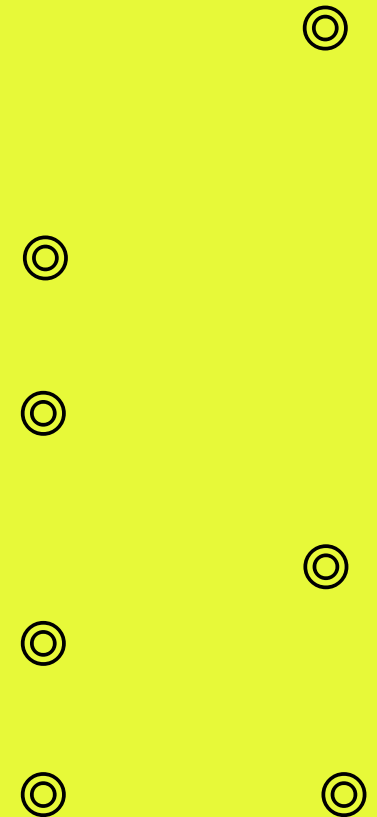
- Reduction in amount of stock
- Consolidating of distribution base
- Outsourcing
- Making to cooperation
- Standardization of Logistics Operation
- Carrier Reviewer



Point of Logistics Center improvement

- ▣ Improvement of loading rate
- ▣ Review of transportation route
- ▣ Modal Shift
- ▣ SKU is reduced.
- ▣ It continuously improves it.
- ▣ Mechanization, automation,

Center : executive



Point of Logistics Center improvement

- ❑ Labor saving
- ❑ Labor scheduling
- ❑ Review of transportation route
- ❑ Leveling of load
- ❑ Standardization of Working
- ❑ Reduction of expenditure
- ❑ Small group activity (QC Circle)

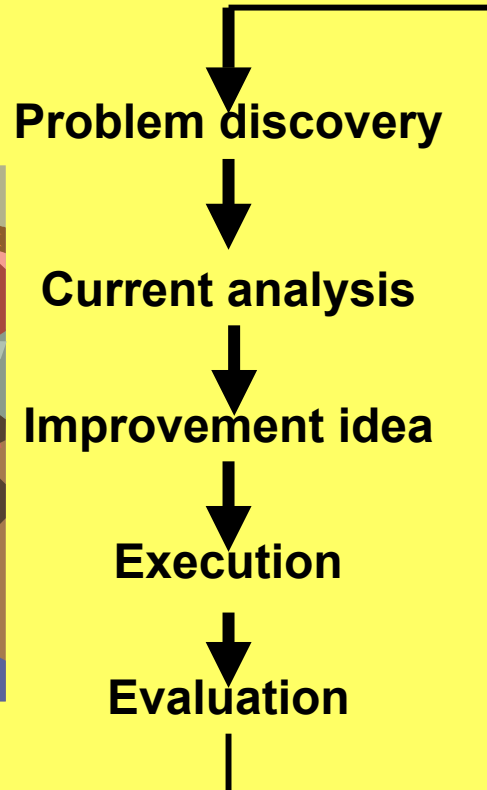
Center : executive



Outline of approach

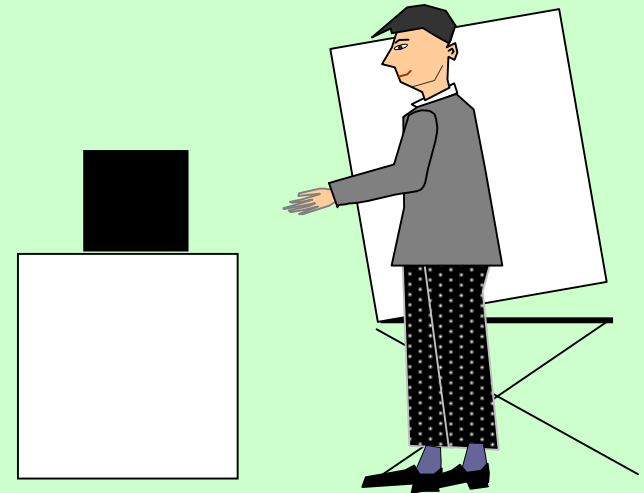
The improvement does through all eternity
and is infinity.

Plan Do Check



The improvement of Logistics center : with Industrial Engineering.

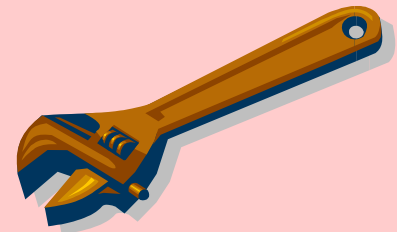
- Process Study
- Work Sampling
- Operation Analysis
- Time Study
- Motion Study



IE, F. W. Taylor USA 1856~1915

5 W 1 H

- When 何時やるのか
- Who 誰がやるのか
- Where 何処でやるのか
- What 何をやるのか
- How どのようにやるのか
- Why 何故やるのか



ECRSの原則

- ❑ **E**liminate It doesn't work for not needing
- ❑ **C**ombine The combination of work is changed.
- ❑ **R**earrange The work order is changed.
- ❑ **S**implify
- ❑ **S**tandardization



Key word of improvement

1. Don't Idle Time or Waiting Time
2. Nothing、 person carries.
3. Shortening of walking distance
4. Skill is lost.
5. It is not allowed to look for
6. Paperless

Logistics Center is improved by using Information technology.

- ❑ Biometrics : Pupil, Voice, Fingerprint
- ❑ Barcode : UPC, EAN, ITF, Code 128
- ❑ Two dimension code: Maxi, QR, PDF417
- ❑ RFID(IC Tag) :
- ❑ Voice Recognizing



バーコード



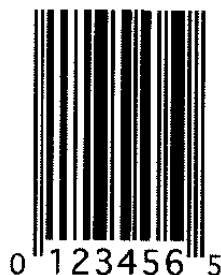
JAN-13



JAN-8



UPC-A



UPC-E



Code39



Codabar(NW-7)



ITF14 (Interleaved 2of5)



Code128



RSS14

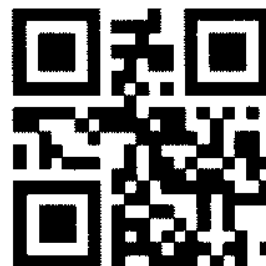
二次元コード



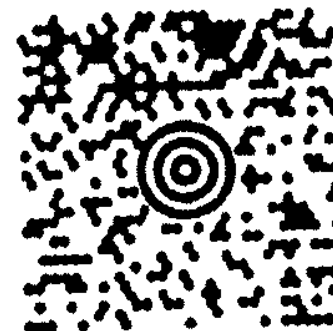
VeriCode



DataMatrix



QRCode



MaxiCode



Code49



MicroPDF417

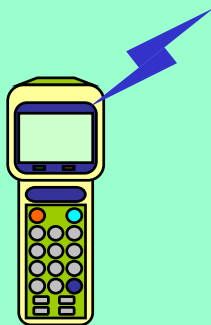
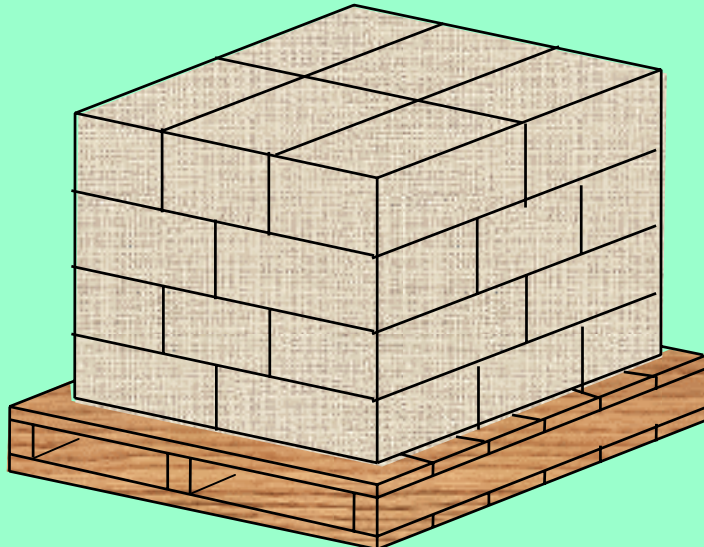


PDF417



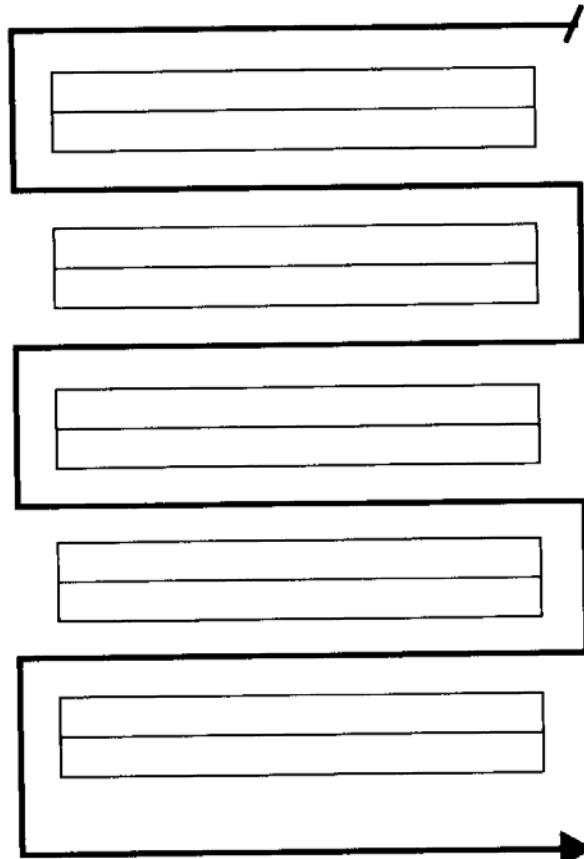
RSS Composite

The bar code of ITF is scanned and the received.



A

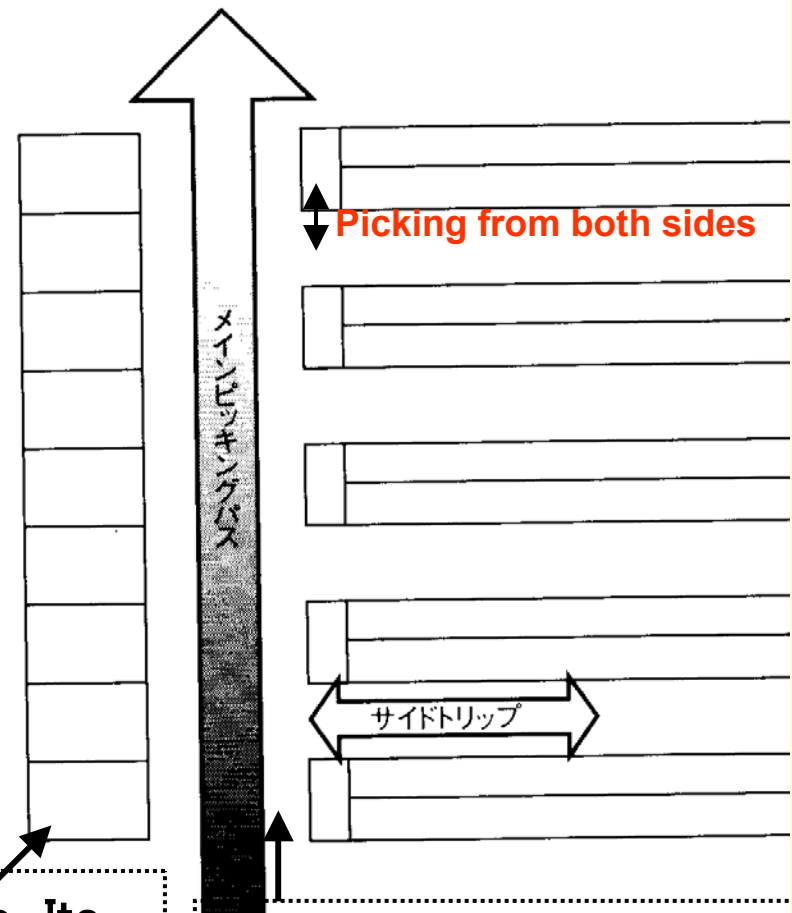
One Way Picking



Fast Move Large Item

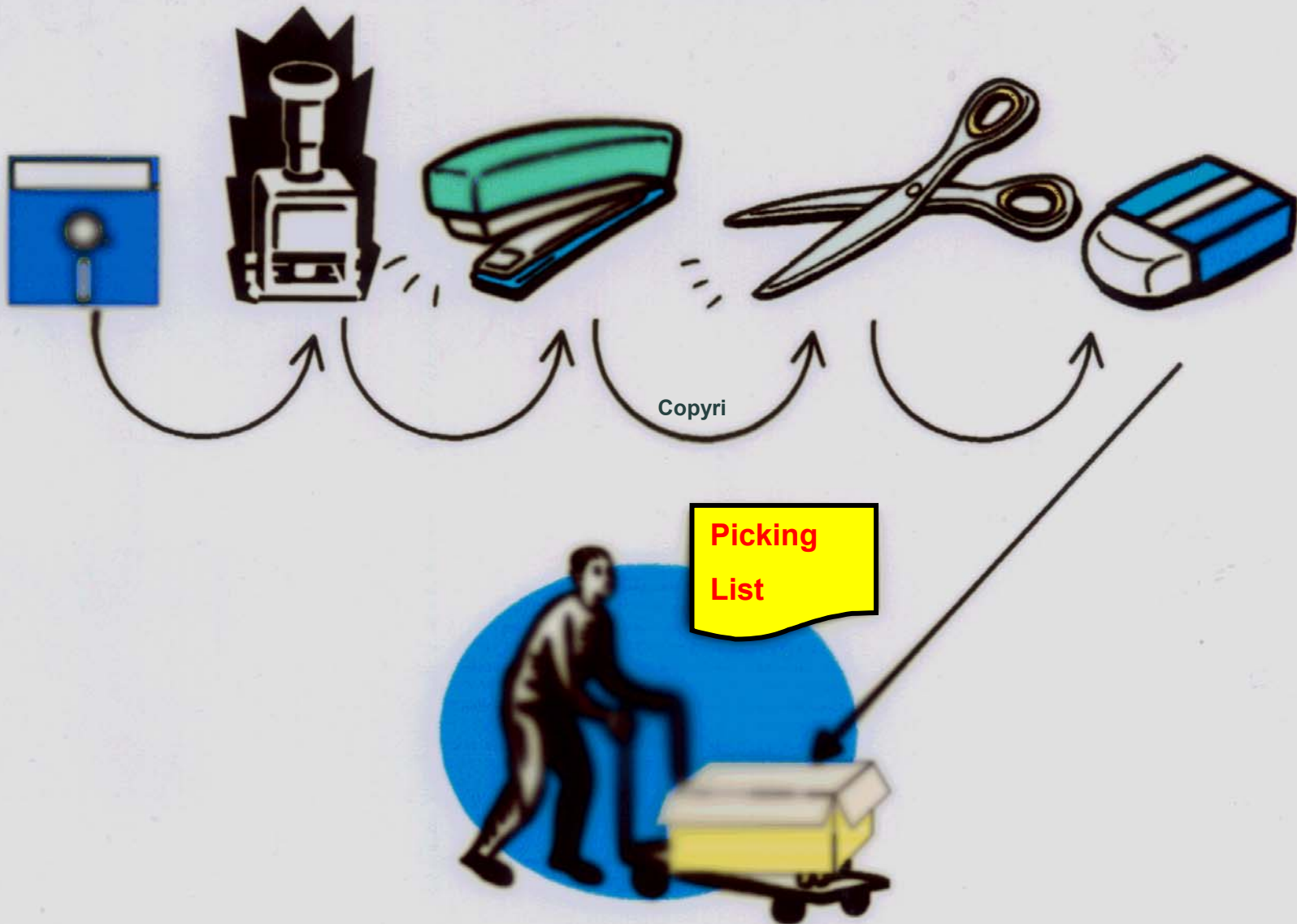
B

Efficient layout of picking



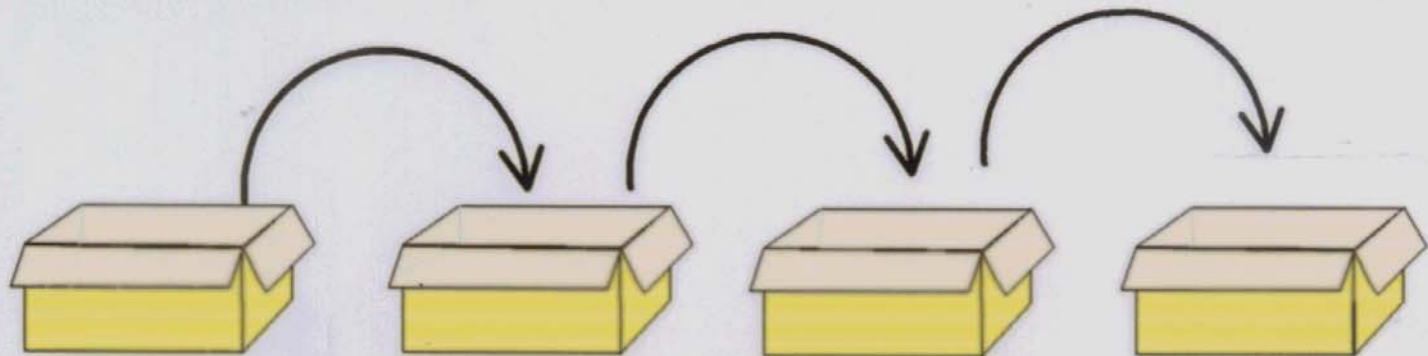
Fast Move Small Item

Single Order Picking



Butch Picking

Picking
List



Order Picking

Digital Picking System



TV Monitor Picking



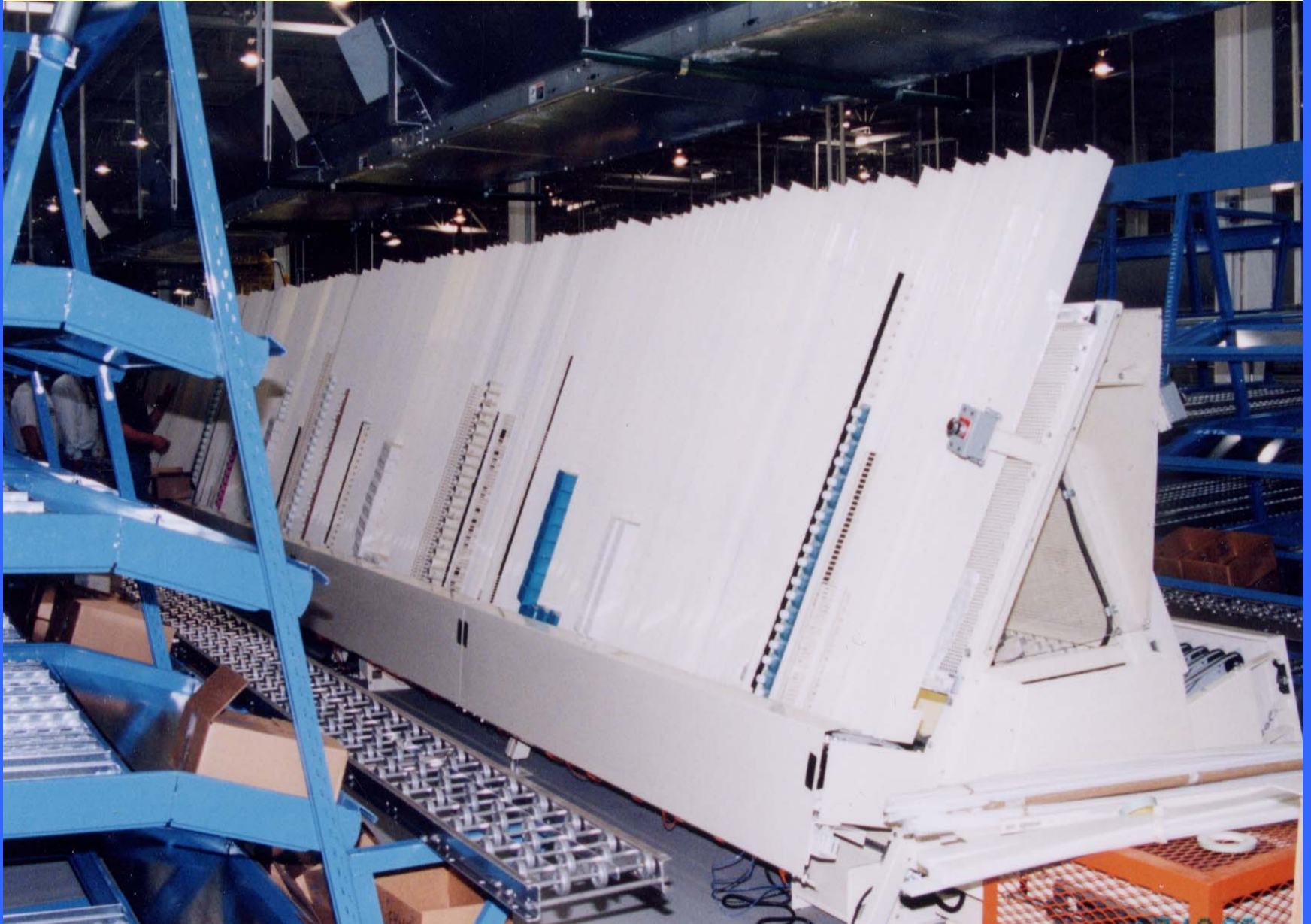
Picking Cart by on board computer



Picking Robot



A-Frame For small Item





For Hanger Apparel

Flat Apparel





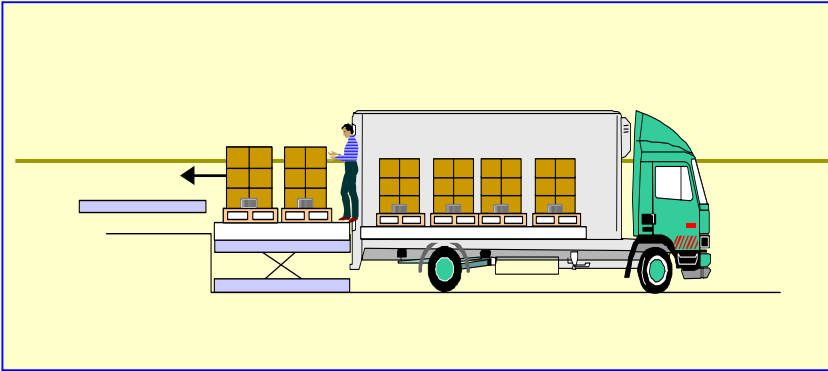
For Package

The bar code is scanned before
it ships it.

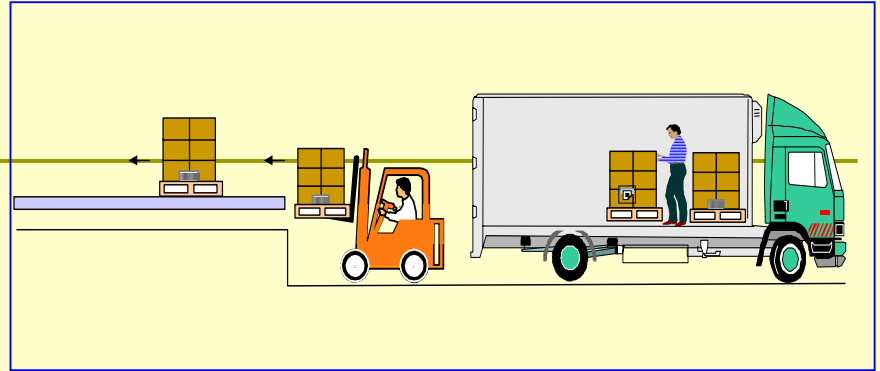


Loading

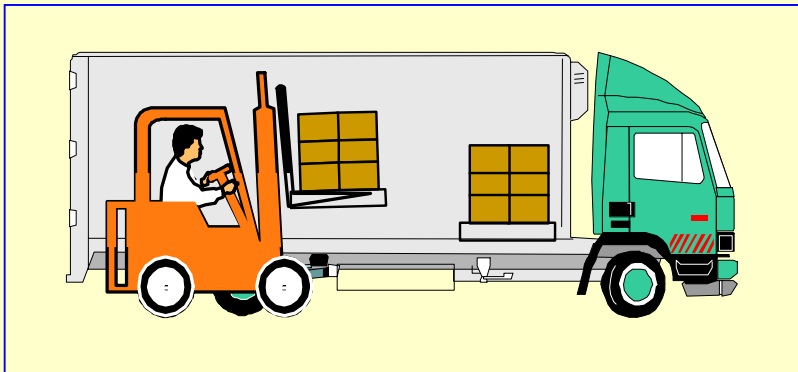
1



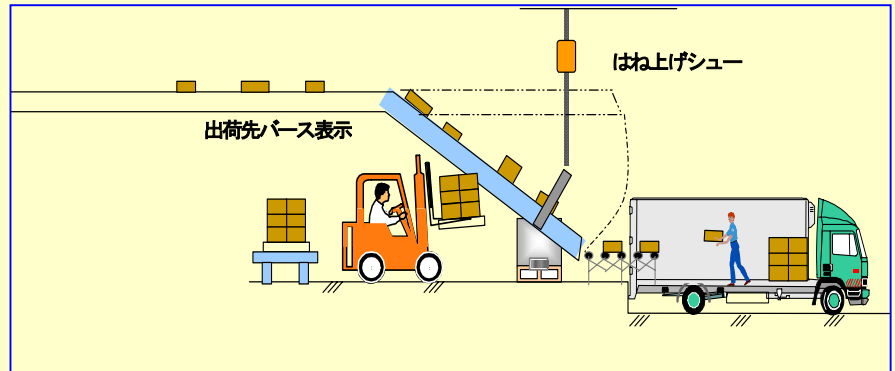
2



3



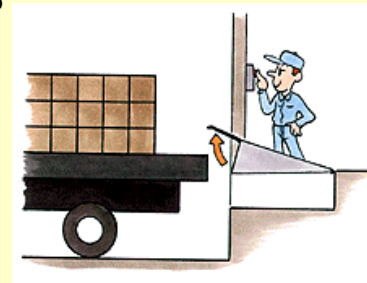
4



5

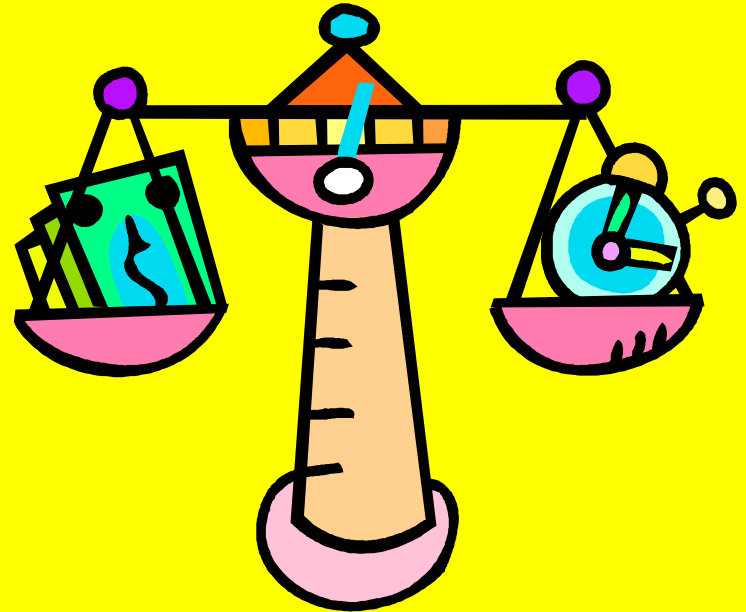


6



Whenever improving it, it evaluates it.

- ❑ It is not an improvement if there is no profit.

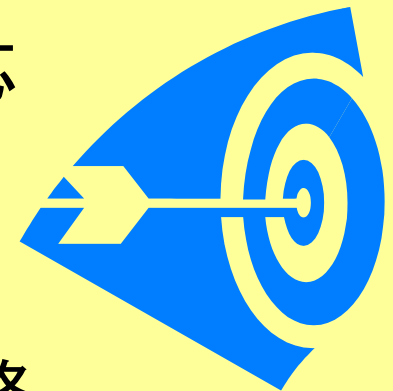


Bench Marking

- Comparison with the this industry other companies
- Comparison with the different type of business other companies
- Comparison between logistics center in its company
- Its company Logistics Center and third party logistics comparison

World Class Logistics Center

- Low Cost Operation : 安い物流コスト
- High Quality : 高い品質
- Quick Response : リードタイム短縮
- Flexibility : 変化に対応
- Integration : 協働
- Green : 環境保護
- Certification : 物流の資格



Thank you for listening.

My lecture is ended
praying for the
happiness of the
development of a
Thailand
and you who
attend.

JUN SUZUKI



- EXPO 2005 25 March~25 September