

PASOLINK

Competitive “MONOZUKURI”

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Outline of NEC Wireless Networks

Organization

Corporate Name	NEC Wireless Networks, Ltd.
Established	December 1973 (NEC 100%)
President	Motoo Mizumura
Number of Employees	526 (as of December 2007)
Major Operations	Production of Mobile & wireless telecommunication equipment (Carrier Network BU) Control system terminals, etc. (Social Infrastructure BU)
Certificates Acquired	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>■ Quality management</p> <p>ISO:9001</p> <p>In October 1992</p> </div> <div style="width: 15%; text-align: center;">  </div> <div style="width: 30%;"> <p>■ Environmental management</p> <p>ISO:14001</p> <p>In October 1997</p> </div> <div style="width: 15%; text-align: center;">  </div> <div style="width: 30%;"> <p>■ Information security management</p> <p>ISO:27001</p> <p>In October 2006</p> </div> <div style="width: 15%; text-align: center;">  </div> </div>

Major Products

Wireless communication equipment



PASOLINK series

PasoWings (WiMAX)



IDU



ODU



5000S

Backbone microwave
communication
equipment
for overseas markets

Factory computers



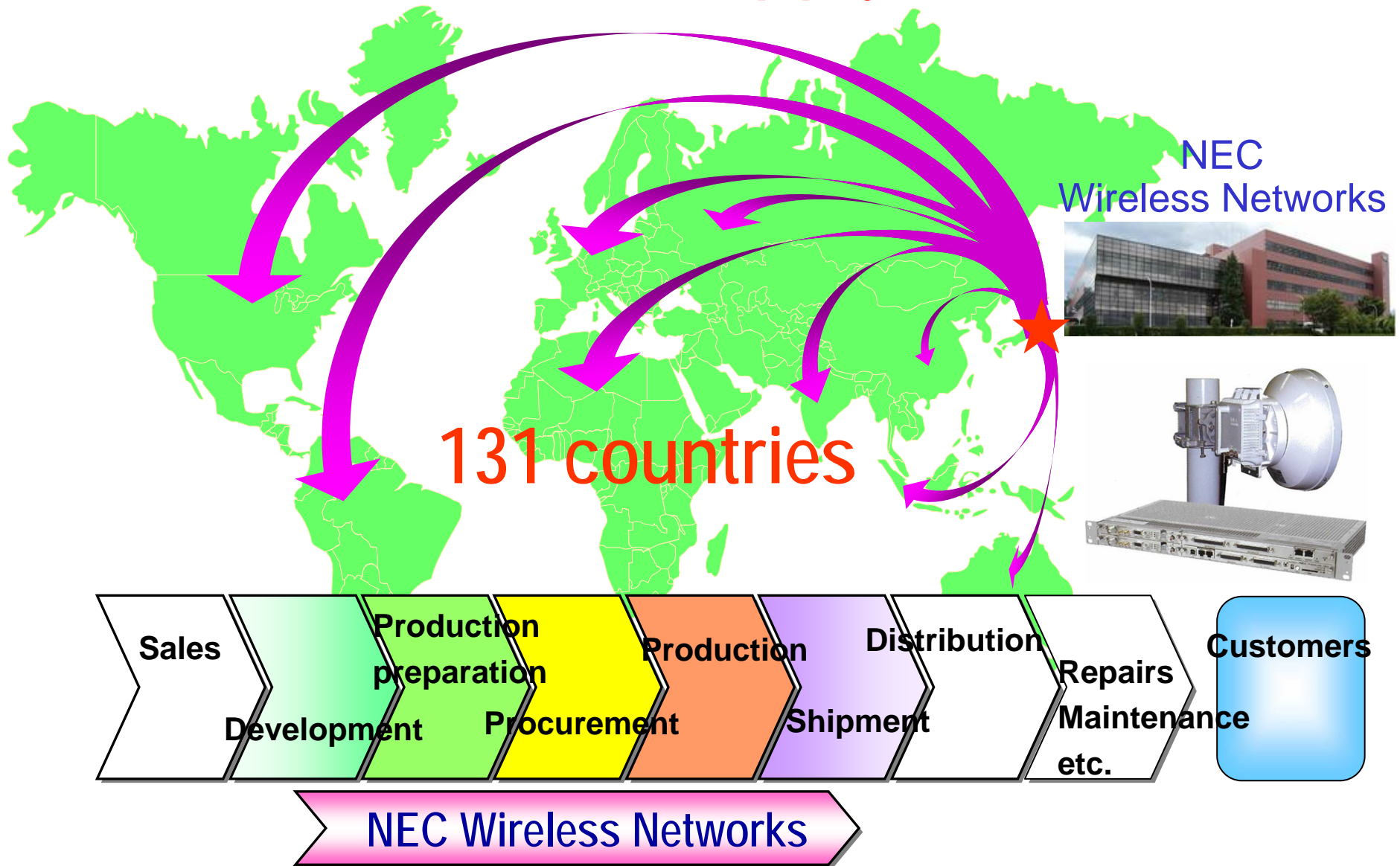
Small-footprint
Model FC-E21A



ShieldPRO
(Robust PC)

Competitive “MONOZUKURI”

PASOLINK Supply Chain



Characteristics of PASOLINK Production

~Flexible production based on orders reflecting various customer needs~

Characteristics of Wireless Telecommunication Equipment

- Designed for various radio frequency policies in any country or region
- High reliability as network infrastructure

System needs of each customer

Lineup of over 1,000 product types !



PASOLINK series



Radio frequency



Transmission capacity Interface



Market Requests

Shorter lead times

Asia : 2~4W
Europe : 2~3W
Latin America : 4W
Others : 4W

Urgent demand

Customer needs in
emergencies 2W

Strengthen competitiveness

Uncover new customers

High-Speed & Flexible Shipping

High Reliability
High Quality

Broad Lineup

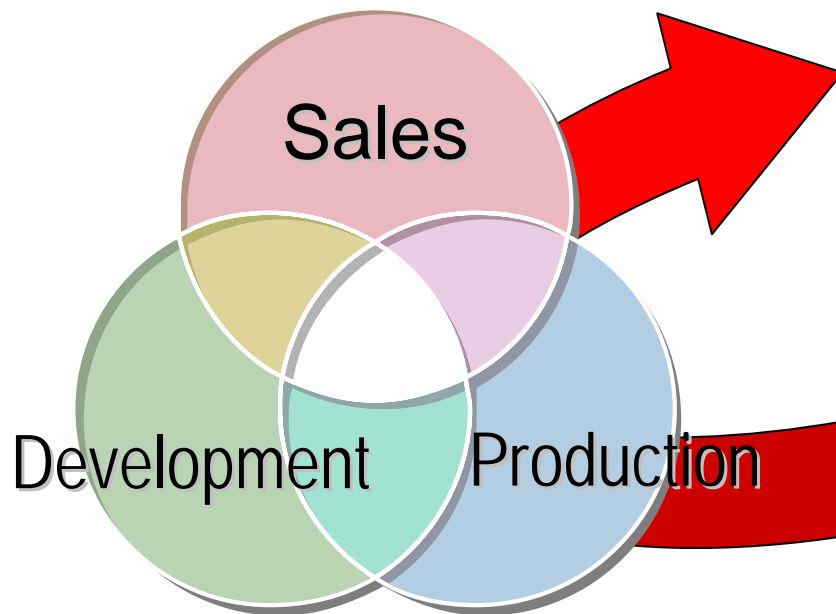
Cost Reduction

Strength of PASOLINK Business

Cope with needs through flexible production based on orders

PASOLINK's advantages

Sales/Development/Production
"Trinity" management



Quality: Outstanding quality
Cost: Cost reduction exceed falling prices
Delivery : Quick & flexible

MONOZUKURI Strength

Production Line Reforms

<PASOLINK ODU line>

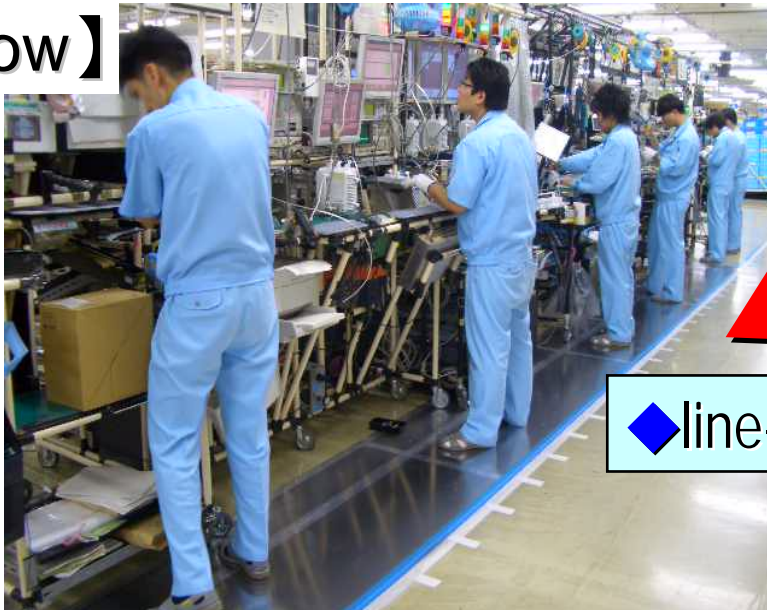
【As of July 2001】



【As of January 2002】



【Now】

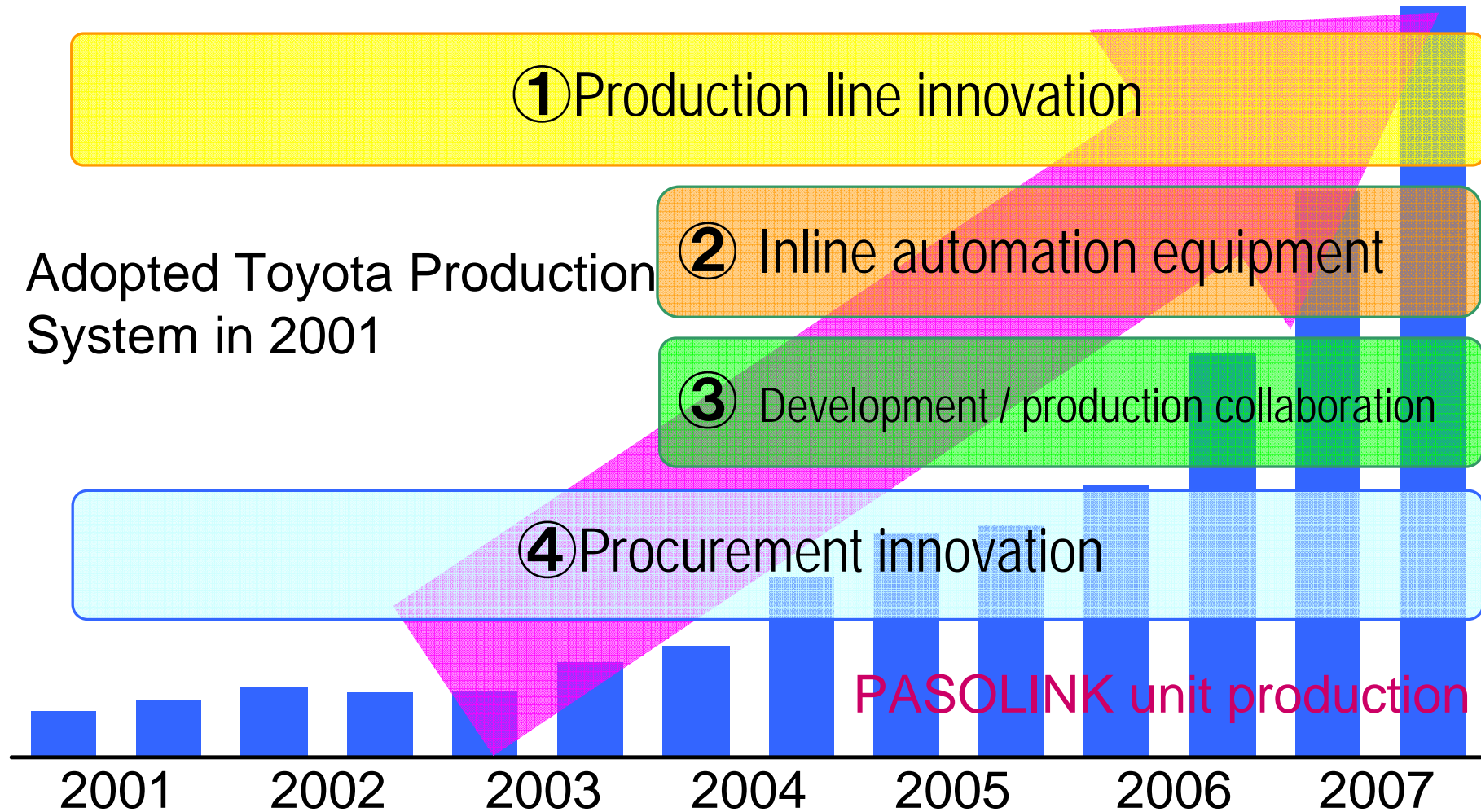


◆ line-length 25m

◆ line-length 8m

History of Improvement of 「MONOZUKURI Strength」

Expand business improving together with MONOZUKURI Strength



1. Line Innovation Activity(1)

<PASOLINK ODU Line>

【As of July 2001】



Flowing

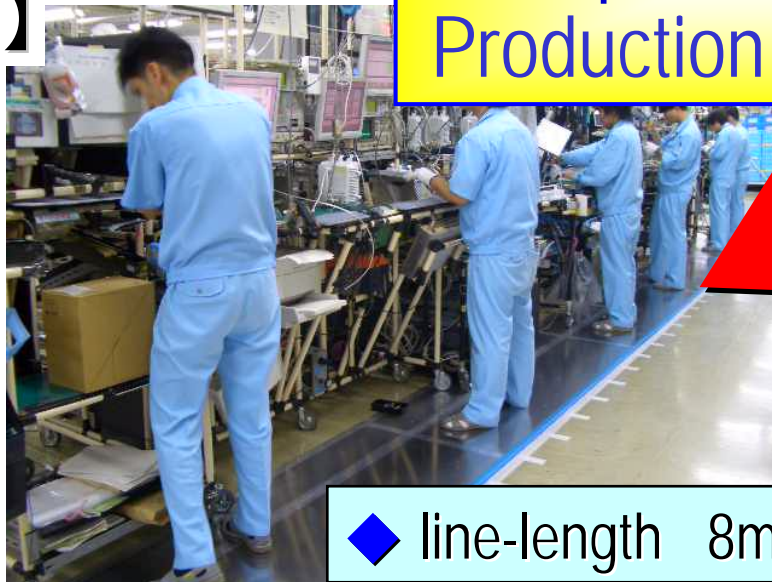


【As of January 2002】



General Productivity Improvement by Production Innovation

【Now】



◆ line-length 25m

◆ line-length 8m

Evolve autonomously everyday

1.Line Innovation Activity(2)

Build the cost price and quality in line

1. Flowing

- No-backset smooth work
- Thoroughly eliminate inefficiencies

2. Mixing

- Achieve flexible, mixed production

3. Standard Operation

- Same rhythm, same outcome by everybody

4. Abnormal Stop

- Stop operation in case of any problem
 - prevent defects from spreading on

**Self-directive
evolution
everyday**

2. Introduction of In-line Automated Facilities

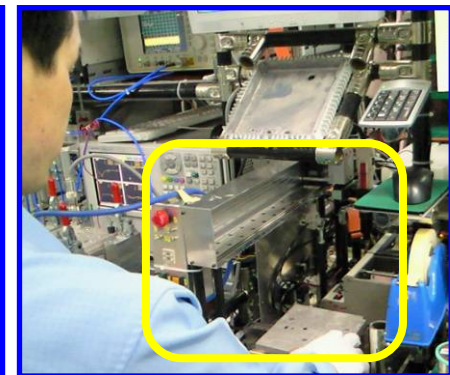
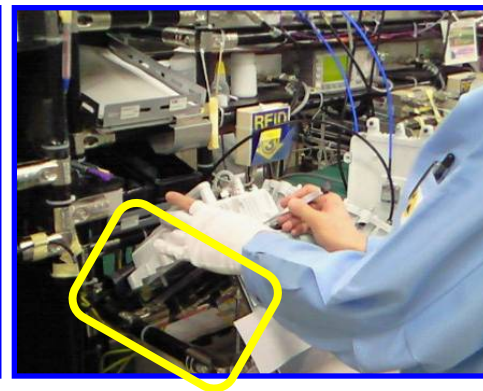
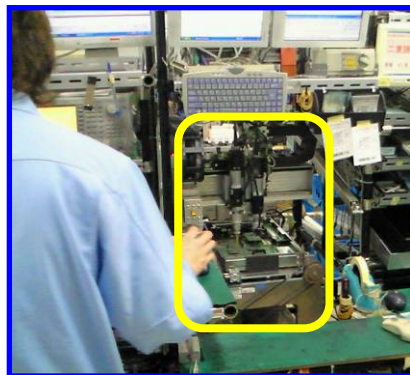
~ Hands-on activities of manufacturing & PE sections ~

Standardized operations
Clocklike stream



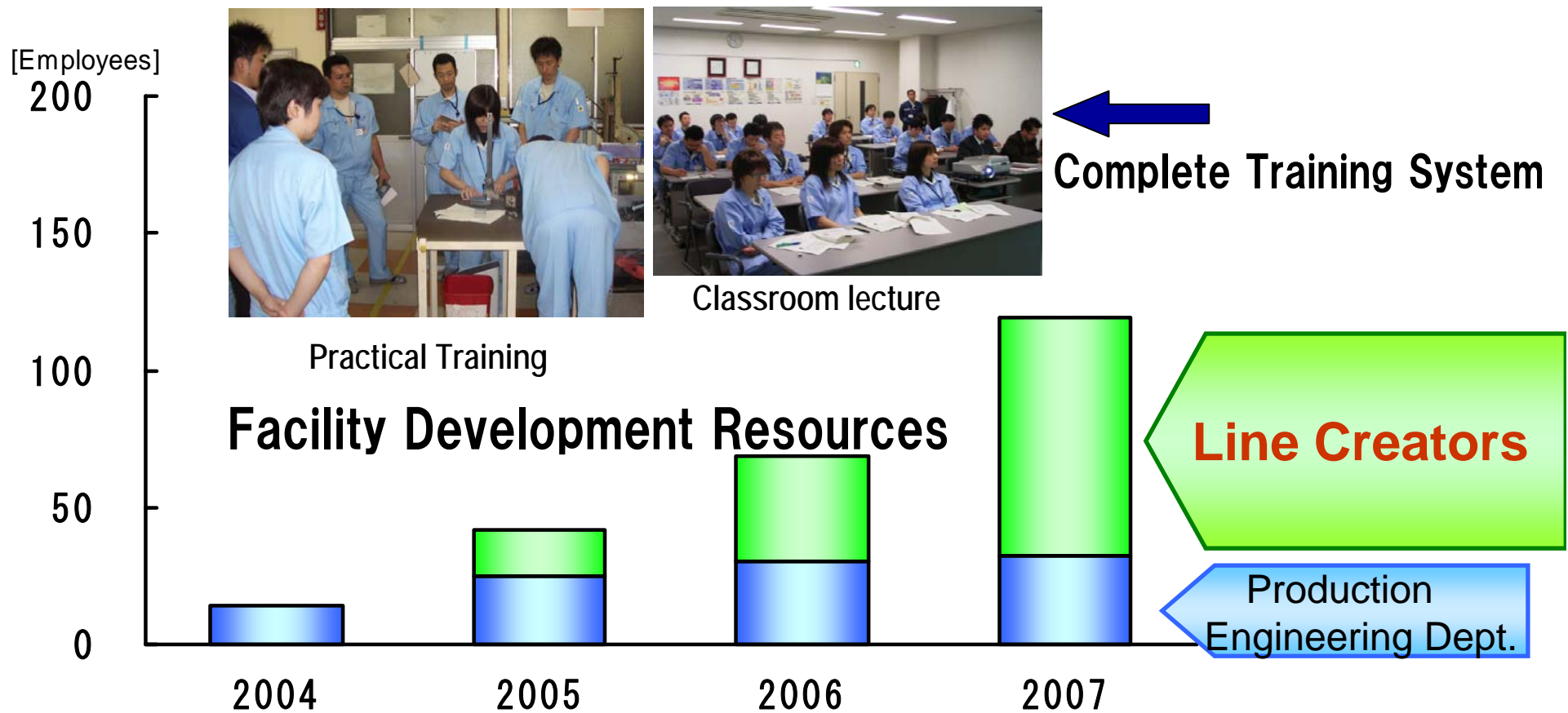
Small automated facilities
for manufacturing & testing

- Improvement on the second time scale
- Creation by line operators themselves
- Cooperation with special technicians
- Low-cost & small facilities
- Quality enhancement



Line Creator

Line creators: production workers with facility development skills who can design production facilities by themselves



3. Development / Production Collaboration

- Close collaboration between design engineers and production operators
 - Feedback to designers from line workers
 - Upper design aims for easy manufacturing
- Standardization at design phase focusing on “MONOZUKURI”
 - Line standardization by common platform design
 - Reduction in electron element number etc.

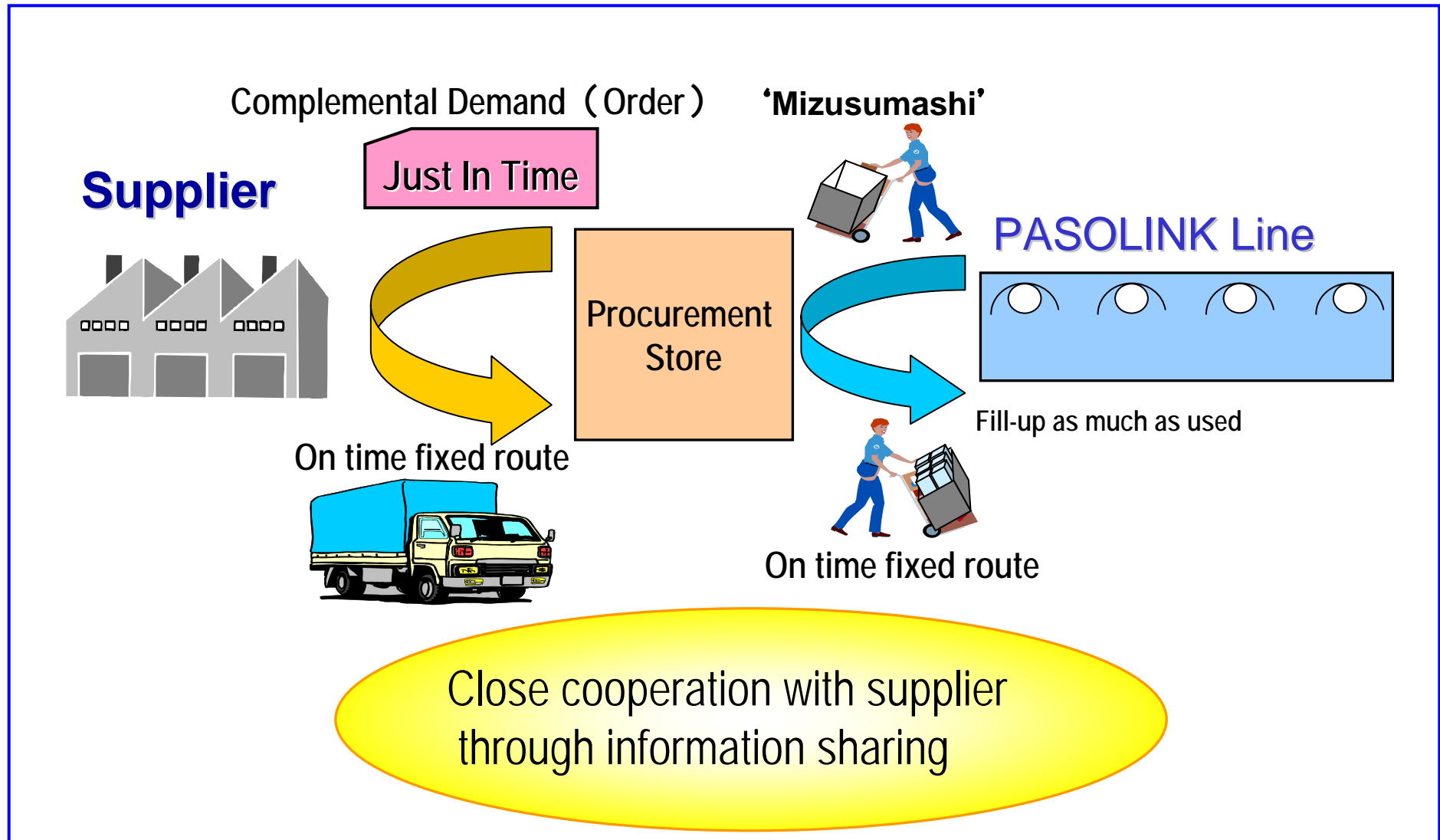
- Front Loading
- Quality enhancement
- Cost reductions exceeding price declines

4. Procurement Innovation

Stable procurement supporting highly mixed BTO production

- High flexibility through close cooperation with suppliers
- Reduction of parts variety
- Just-in time procurement fully utilizing
the "Kanban" system
- In-house production of core parts

「Just In Time」 Procurement System



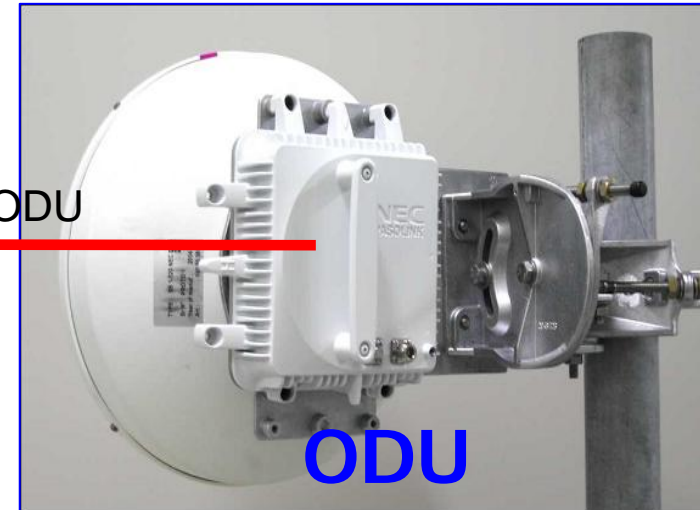
In-house Production of Core Parts

Core PASOLINK Part

MIC

Microwave Integrated Circuit

A part of ODU



- Core technological PASOLINK part
- Sophisticated manufacturing know-how with fine processing capability

Highly mixed In-house production & stable production

“MONOZUKURI Strength” Continuing Evolution

Sales/Development/Production “Trinity” Management
As Industry Frontrunner

- Outstanding Quality
- Cost Competitiveness
- High-Speed Shipping

Self-Directed
Evolution
Everyday

A Culture of Continuous Improvement is the strength of NEC Wireless Networks



Empowered by Innovation

NEC