

The NTN logo is displayed in a bold, blue, sans-serif font. The letters are slightly shadowed, giving them a three-dimensional appearance as if they are floating above the background. The background is a bright blue sky with scattered white clouds, and a large, faint, light-blue globe is visible in the upper left corner.

# NTN

**New Medium-term management plan**

**Global Advance**

**2013**

**April.2011 ▶ March.2014**

**Beginning Year**

**August 1<sup>st</sup>, 2011**

**NTN Corporation**



## **New Medium-term management plan “Global Advance 2013”**

- 1. Results of “NTN 2010 for The Next Step”**
- 2. Target and Business Strategy of “Global Advance 2013”**

# Results of "NTN 2010 for The Next Step"

- Achieved a V-shaped recovery that exceeded initial plans, and expanded business in China, Americas and Europe

	FY2010 (Results)	FY2010 (Plan)	Comparison with Plan
Net sales (100 million yen)	5,301	4,900	+401
Operating Income (100 million yen)	246	190	+56
Operating income margin	4.6%	3.9%	+0.7 point
Ordinary income (100 million yen)	211	130	+81
Net income (100 million yen)	144	65	+79
Inventory (100 million yen)	1,370	1,035	+335
Inventory turnover ratio (times)	3.9	4.7	-0.8
Property, plant and equipment (100 million yen)	2,461	2,340	+121
Property, plant and equipment turnover ratio (times)	2.2	2.1	+0.1
Interest-bearing debt (100 million yen)	2,233	2,560	-327
D/E ratio	1.12	1.3	-0.18 improvement
NTN-ROI	4.2%	3.7%	+0.5 point

# Results of "NTN 2010 for The Next Step"

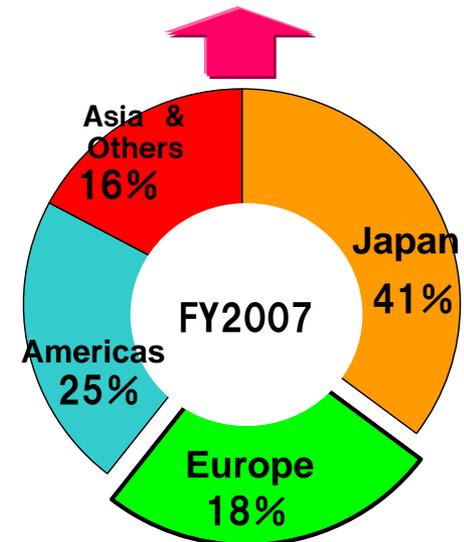
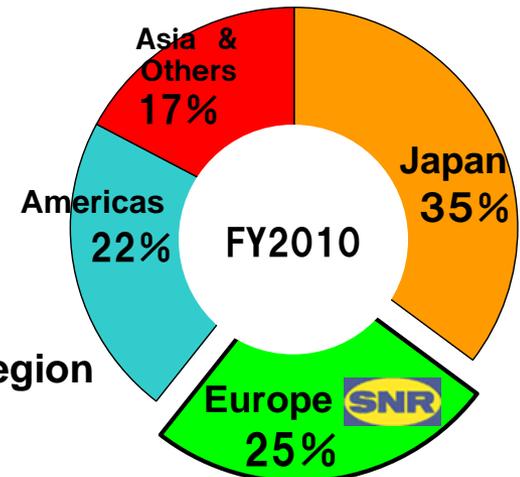
## Expanded business in Europe through synergy with SNR



Basic preparation of NTN-SNR

Ratio of European sales increased as part of overall consolidated net sales

- Expansion of production and sales sites
  - Production start of CVJ in Romania plant (December, 2009)
  - Establishment of sales site in Poland (December, 2009), Russia (November, 2010)
  - Integrated sales companies and bases within the European region
- Business expansion for Industrial machinery market
  - Increase of mutual sales of needle, tapered roller bearing, etc
  - Increased new orders for rolling stock around the world
  - Increased new orders for the four major airplane engine manufacturers in the world
- Expansion of business for auto parts of Automotive
- Increase of new business development for Automotive
- Acceleration of R&D for cutting-edge technology and commercialization
  - high-resolution rotary sensor, multi axis load sensor, etc
- Corporate name change to NTN-SNR ROULEMENTS (July 2010), Increase share of capital to 80% (April 2010)



# Results of "NTN 2010 for The Next Step"

## Reinforcement business base in China and Americas

- Reinforcement of production, sales and technological operations in China
  - Production capacity increase for bearings and CVJs on local site
  - Opening of Nanjing Branch (October, 2010)
  - Establishment of joint venture company in the Bearing Business with Luoyang LYC. (February, 2011)
  - Construction of the NTN China Technical Center Completed (May, 2011)
- Production capacity increase in Americas
  - Established CVJ production subsidiary in Brazil (Established in June, 2010)
  - Established joint venture company for pre-processing (Established in December, 2010)
  - Production increase of hub bearings

NTN-LYC (image)



Construction of the NTN China Technical Center Completed



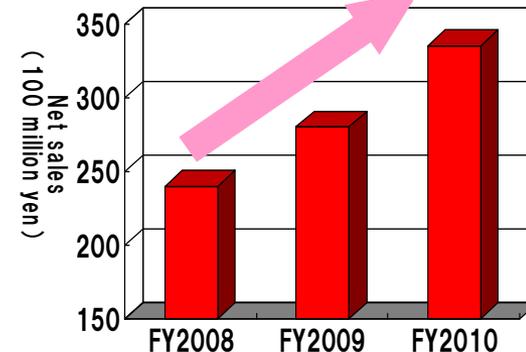
NTA Precision Axle Corp



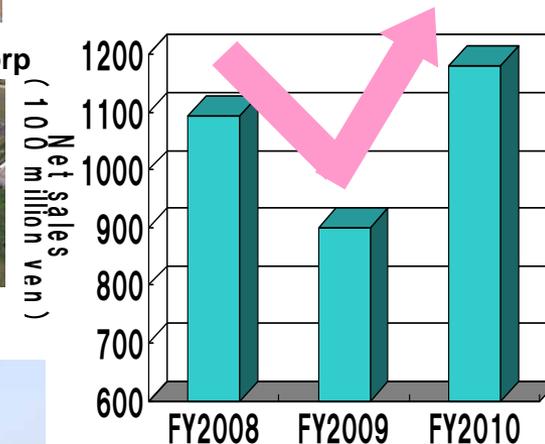
NTN HOUDATSU SHIMIZU CORPORATION



Sales trends in China



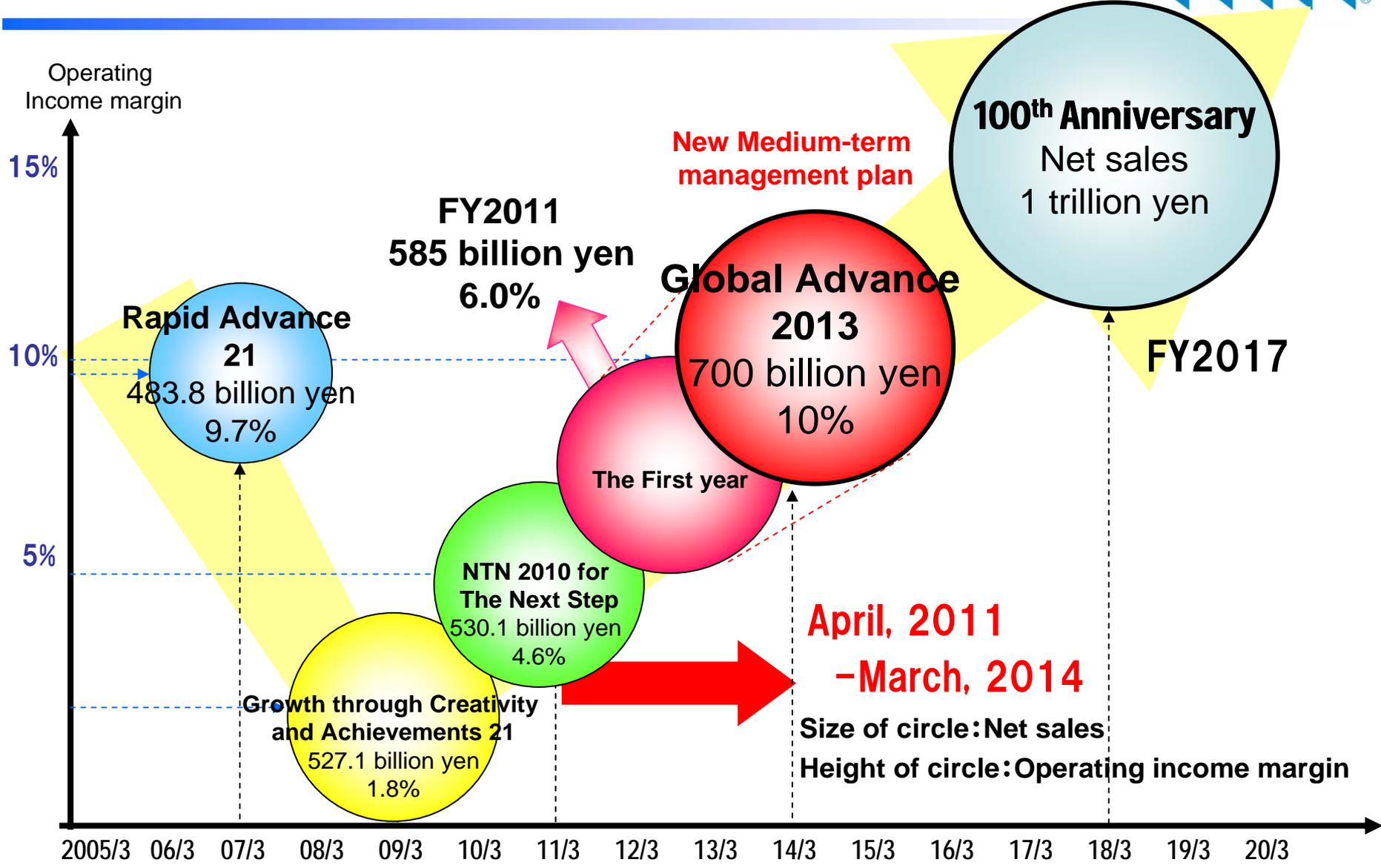
Sale trends in Americas



## Reorganized production of Industrial machinery bearings

- Production capacity increase of Noto region in Ishikawa Pref
  - Operation of NTN HOUDATSU SHIMIZU CORPORATION (October, 2009)
  - Operation of NTN SHIKA CORPORATION (January, 2010)
  - Establishment of NTN NOTO Corporation (December, 2010)

# Towards the company's 100th anniversary in the FY2017



# New Medium-term management plan

## "Global Advance 2013"

For New Technology Network

**NTN**<sup>®</sup>

the company's 100th anniversary  
Toward 1 trillion yen

Acceleration of globalization  
by "On local site  
with local materials  
by local personnel"

- Expand business globally with a focus on growth markets
- Establish world's No.1 business segments
- Establish new business segments such as EV systems

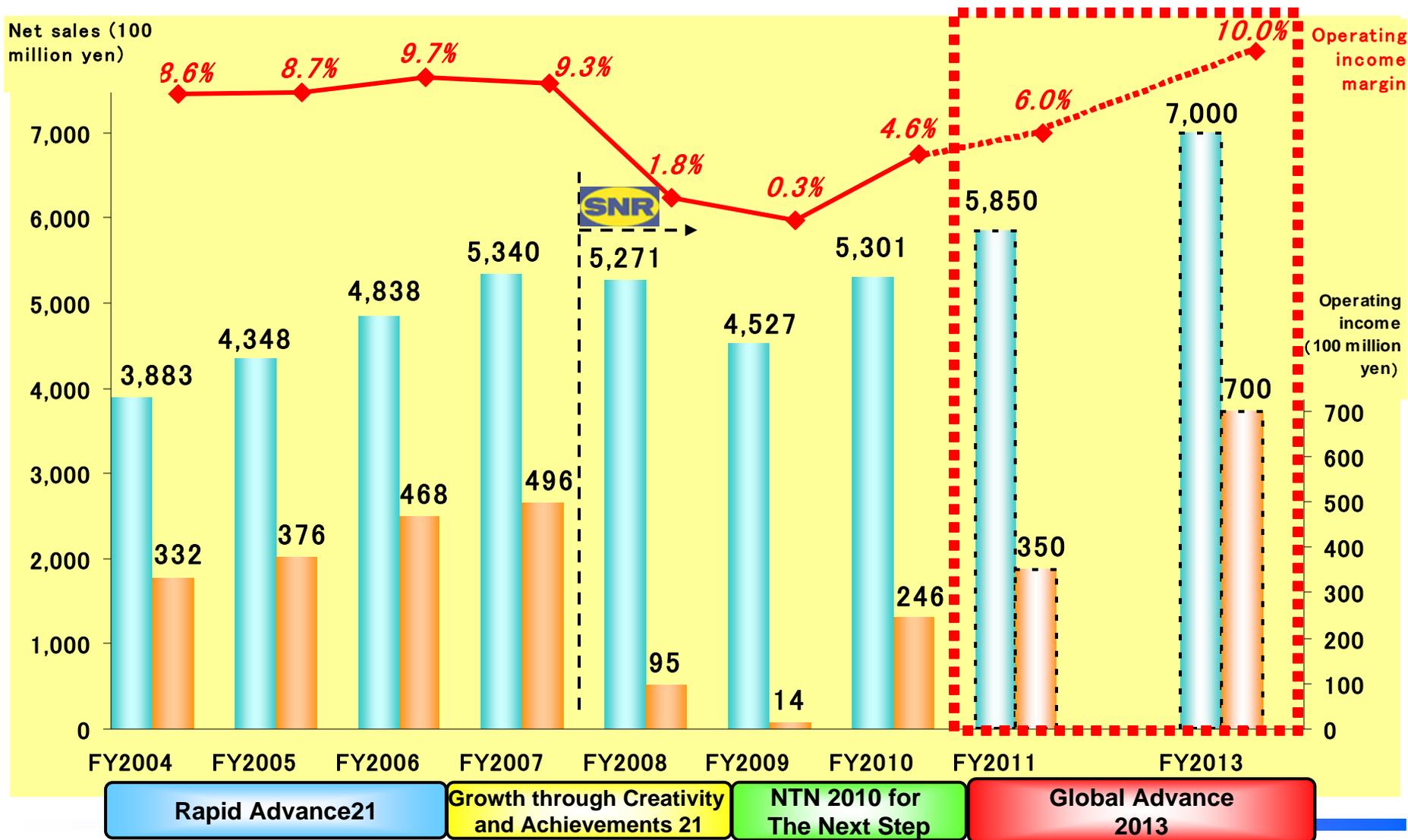
FY2013  
Net sales: 700 billion yen  
Operating income margin  
: 10%

- Expand sales for Industrial machinery, Aftermarket & Distributor
- Expand sales in growth market
- Expand local production and procurement

# "Global Advance 2013"

## Trends on Net sales and Operating income

- 32% increase in net sales over a 3-year period, with a 2.8-fold increase in operating income



# Main fact of "Global Advance 2013"

For New Technology Network

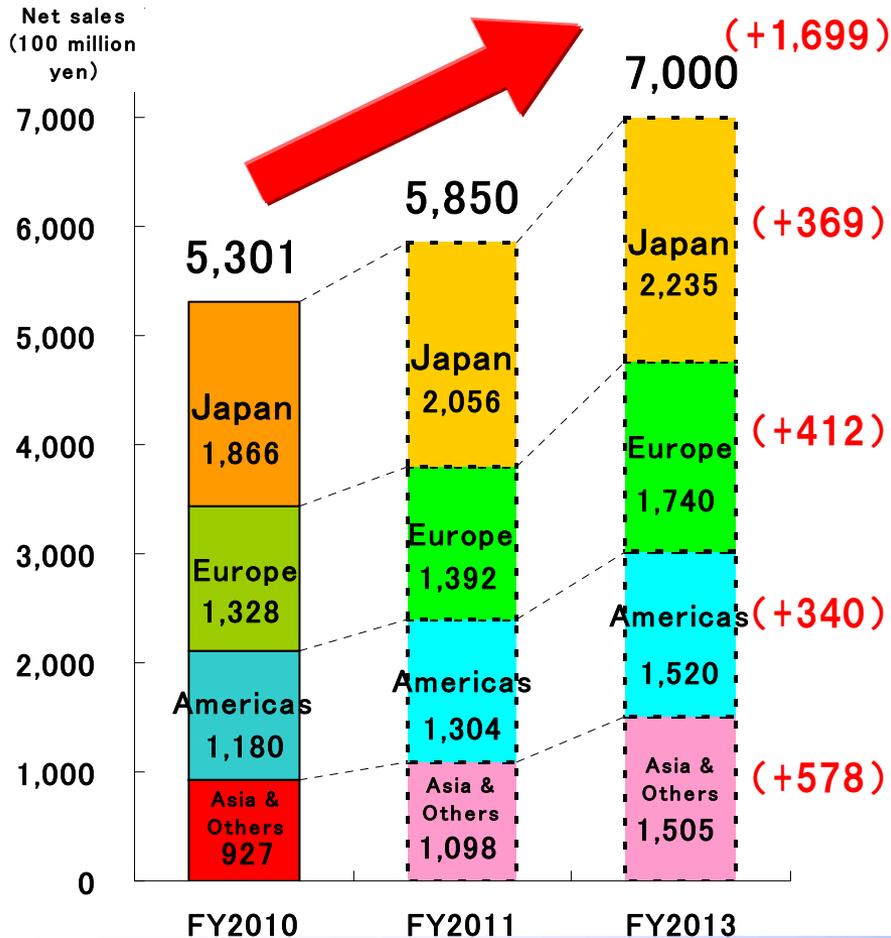


	NTN 2010 for The Next Step	Global Advance 2013		Increase & Decrease ②-①
	FY2010 ①	FY2011	FY2013 ②	
Net sales (100 million yen)	5,301	5,850	7,000	+1,699
Operating Income (100 million yen)	246	350	700	+454
Operating income margin	4.6%	6.0%	10%	+5.4 point
Net income	144	175	425	+281
Inventory (100 million yen)	1,370	1,300	1,400	+30
Inventory turnover ratio (times)	3.9	4.5	5.0	+1.1
ROA	2.3%	2.7%	6.1%	+3.8 point
ROE	7.2%	8.5%	17.0%	+9.8 point
D/E ratio	1.12	1.07	0.75	0.37 improvement
NTN-ROI(※)	4.2%	6.0%	11.1%	+6.9 point
Exchange rate	\$:¥85.7 €:¥113.1	\$:¥80.4 €:¥111.9	\$:¥80 €:¥110	-

# Target sales by region and business sector

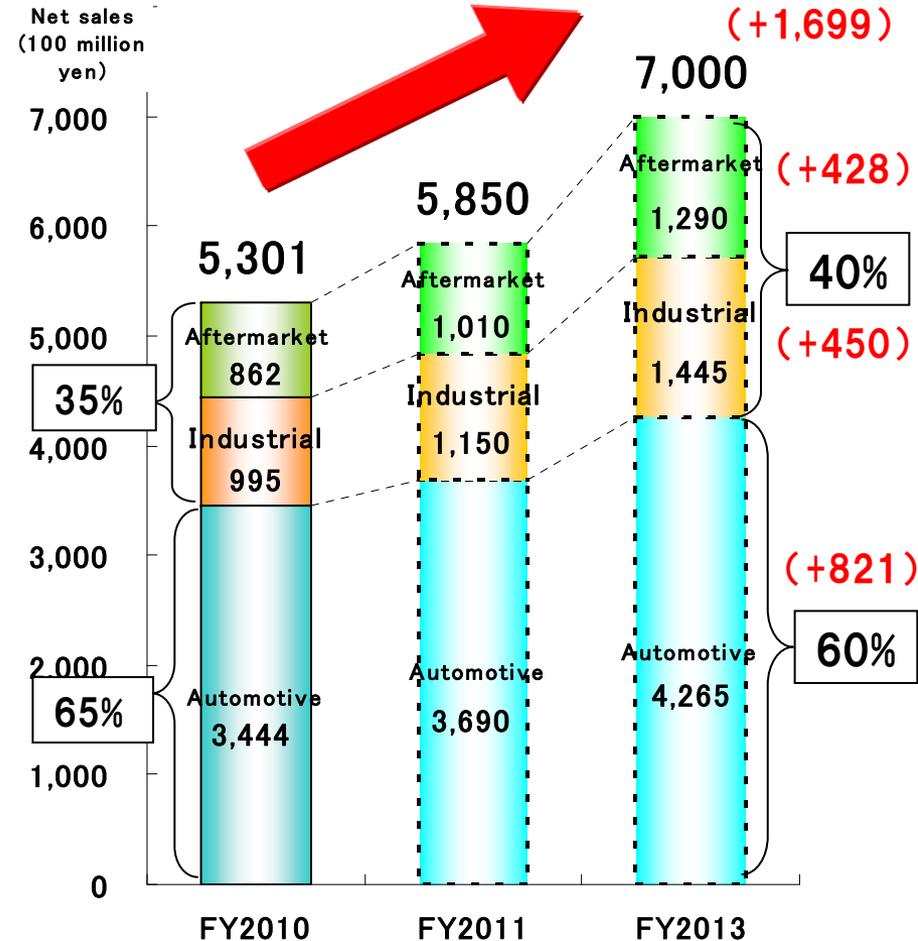
## <Target sales by region>

- Major increase in Asian markets such as China and India
- Acceleration of sales expansion in favorable markets such as Europe and Americas



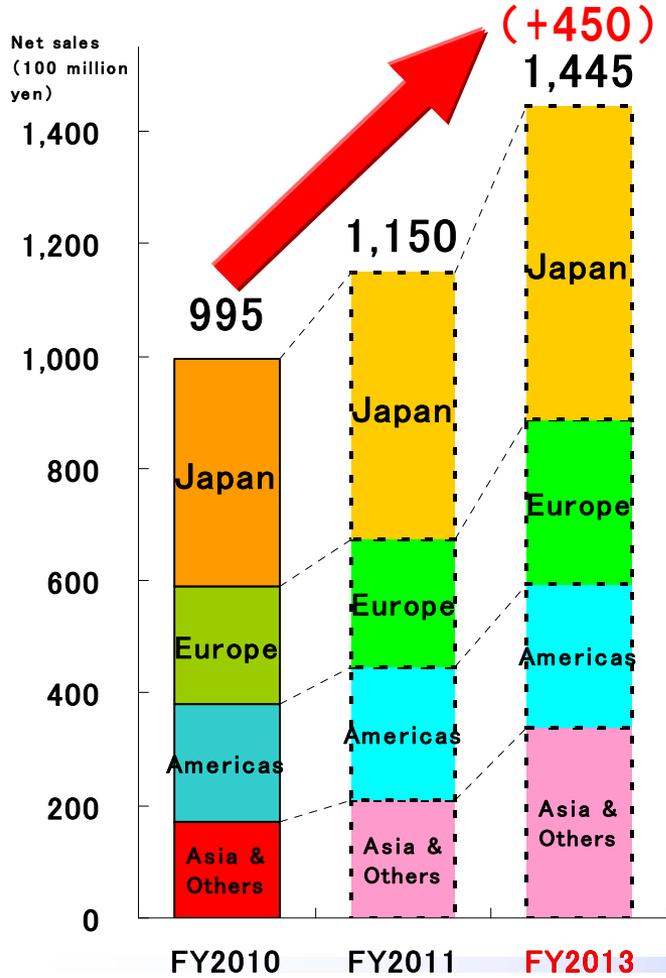
## <Target sales by business sector>

- Expansion for Industrial machinery and Aftermarket & Distributor market
- Shift to a 60:40 ratio for automotive/non-automotive product



# Business strategy for Industrial machinery market

- Reinforcement of global production capacity for products such as large bearings and precision bearings, and increase market share
- Create products that stand out through the use of cutting-edge sensor technology, and provide a comprehensive level of service



**Japan**  
 Reinforcement of production capacity to suit increased global demand  
 Increase the number of new projects, including those for renewable energy

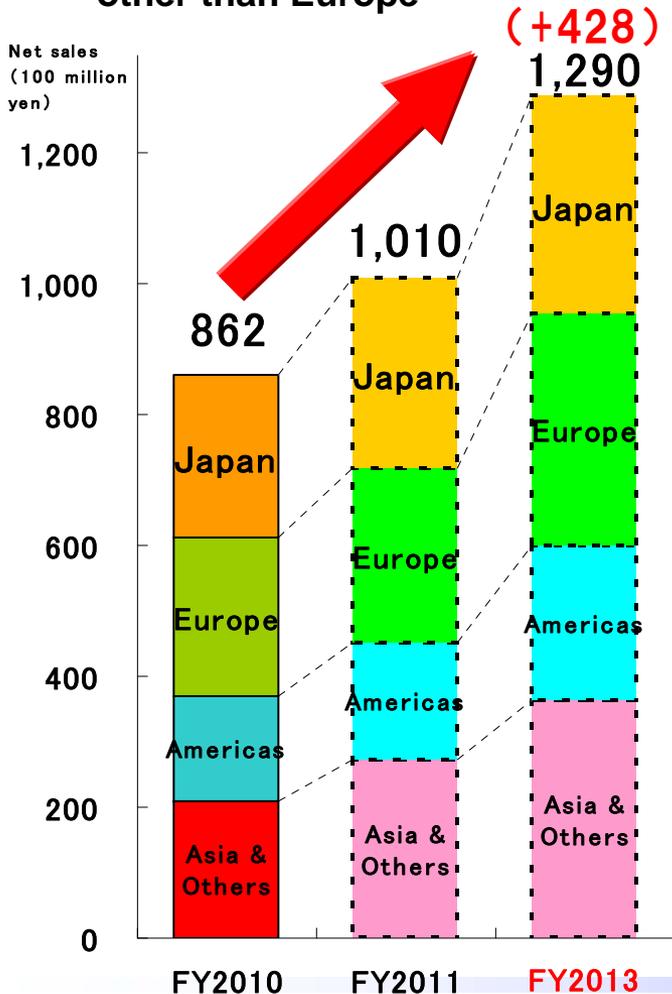
**Europe**  
 Business expansion for large/precision bearings for wind power generation, construction machinery and airplane

**Americas**  
 Expand sales and production to become a leading supplier of construction machinery and agricultural machinery

**Asia**  
 Acquire new orders for wind power generation, construction machinery and rolling stock and expand production of bearings in China

# Business strategy for Aftermarket & Distributor market

- Reinforcement machinery distribution network throughout Europe/Americas, China and Asia
- Expand automotive parts business into regions other than Europe



Maintenance service



Auto parts kit



Training seminar with exclusive van

## Japan

Create new demand for renewable energy related business, and expand sales to users with low market share

## Europe

Expand regions for the auto- parts business  
Expand equipment repair services

## Americas

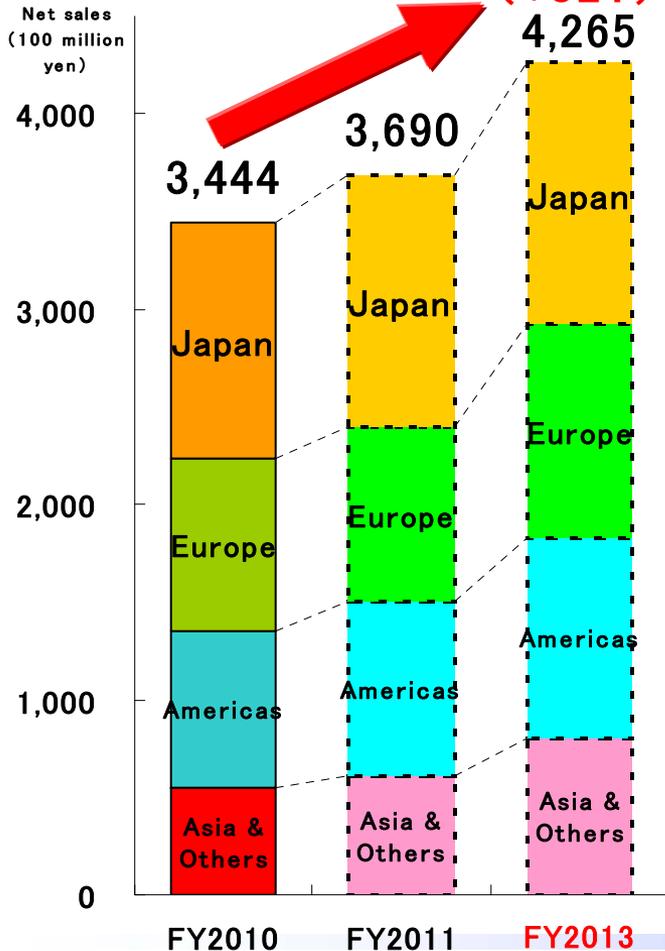
Focus on Aftermarket/ Distributor market  
Further expansion of sales in the auto-parts business

## Asia

Expand distribution network in India, ASEAN and China  
Expand sales to key distributors in China

# Business strategy for Automotive market

- Acceleration of business expansion of Axle bearing (World's No.1), CVJ(World's No.2)
- Design review and material change for more compact vehicles and global platforms
- Faster development speed of products that meet environmental and fuel efficiency regulations (+821)



Low torque deep groove ball bearing (without seal)



Drive Shaft Exclusively for Rear Wheel Drive Cars



Multi Axis Load Sensor Integrated Hub Bearing

Japan	Product and market development separated into environmentally friendly vehicles and low cost vehicles
Europe	Acquire new projects in Western Europe and expand sales in new markets such as Eastern Europe and Russia
Americas	Respond to increased demand from American and Japanese manufacturers, and expand sales through new projects
Asia	Expand local production in China, India and ASEAN that are experiencing increased demand, and expand sales to local manufacturers

# Business expansion in growth market

- Reinforcement local development, production and sales in the automotive market to suit increased demand in each region
- Increase production capacity for the industrial machinery market in fast-growing China in addition to Japan and Europe

## North America

- Sales expansion for aftermarket/distributor
- Production reinforcement of NTN-BOWER
- Production reinforcement of automotive product

Americas:  
+30%

## Brazil

- Production reinforcement of hub bearing
- Mass production start of CVJ
- Sales expansion for Industrial machinery aftermarket

Europe:  
+30%

## Eastern Europe (Romania, Turkey, Russia, etc)

- Production reinforcement of automotive product

## Western Europe (France, Germany)

- Production reinforcement of large and precision bearing of NTN-SNR

## Thailand

- Production reinforcement of automotive product (pre-process)

## India

- Mass production start of hub bearing
- Sales expansion for Industrial machinery aftermarket

## Japan

- Production reinforcement of large bearing and precision bearing for industrial machinery

Japan:  
+20%

Asia:  
+60%

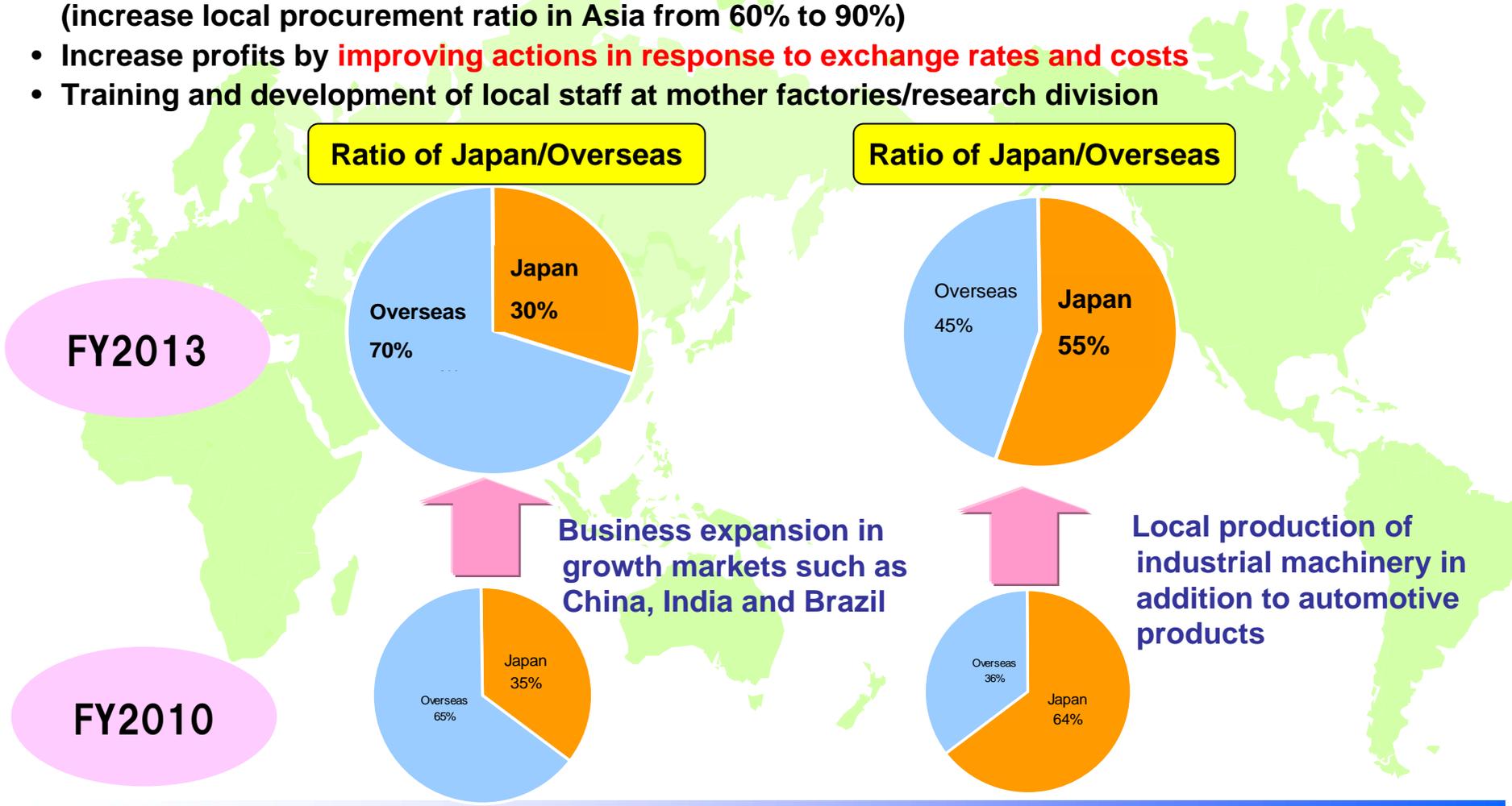
## China

- Increase utilization of the NTN China Technical Center
- Production reinforcement of industrial machinery bearing (rolling stock, large bearing, etc)
- Increase the number of sales office and expand distributors
- Mass production start for local maker

The circle and number represent the growth rate in each region during the three year "Global Advance 2013" period

# Acceleration of "On local site with local materials by local personnel"

- Expand ratio of overseas sales/ production
- Supply products from overseas plants to global markets, **especially in Japan**
- Reinforce utilization of local materials, parts and equipment (increase local procurement ratio in Asia from 60% to 90%)
- Increase profits by **improving actions in response to exchange rates and costs**
- Training and development of local staff at mother factories/research division

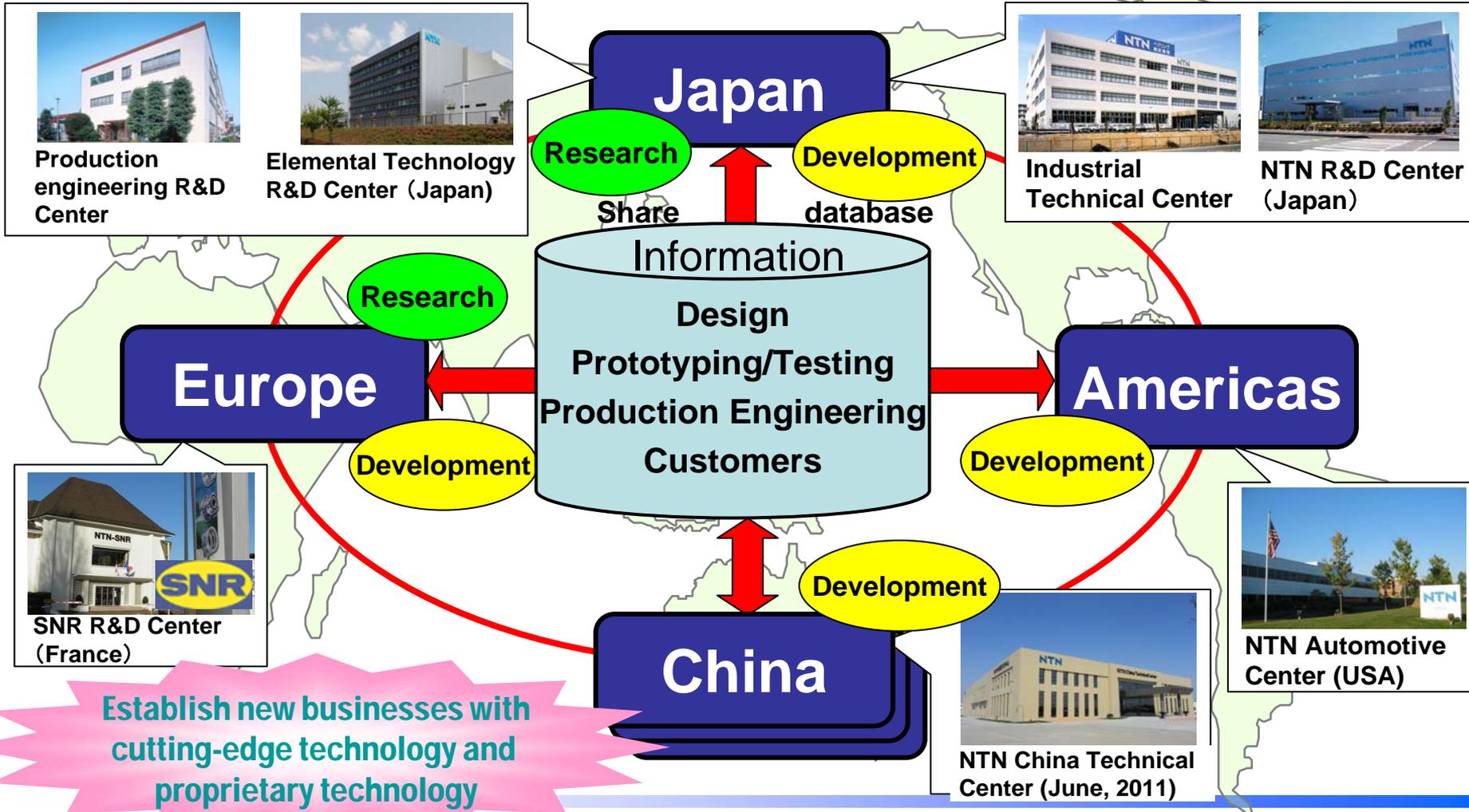


# Reinforcement of Global Research Development System

- Reinforcement the role and functionality of Japan and France for research
- Reinforcement systems in each region around the world for development



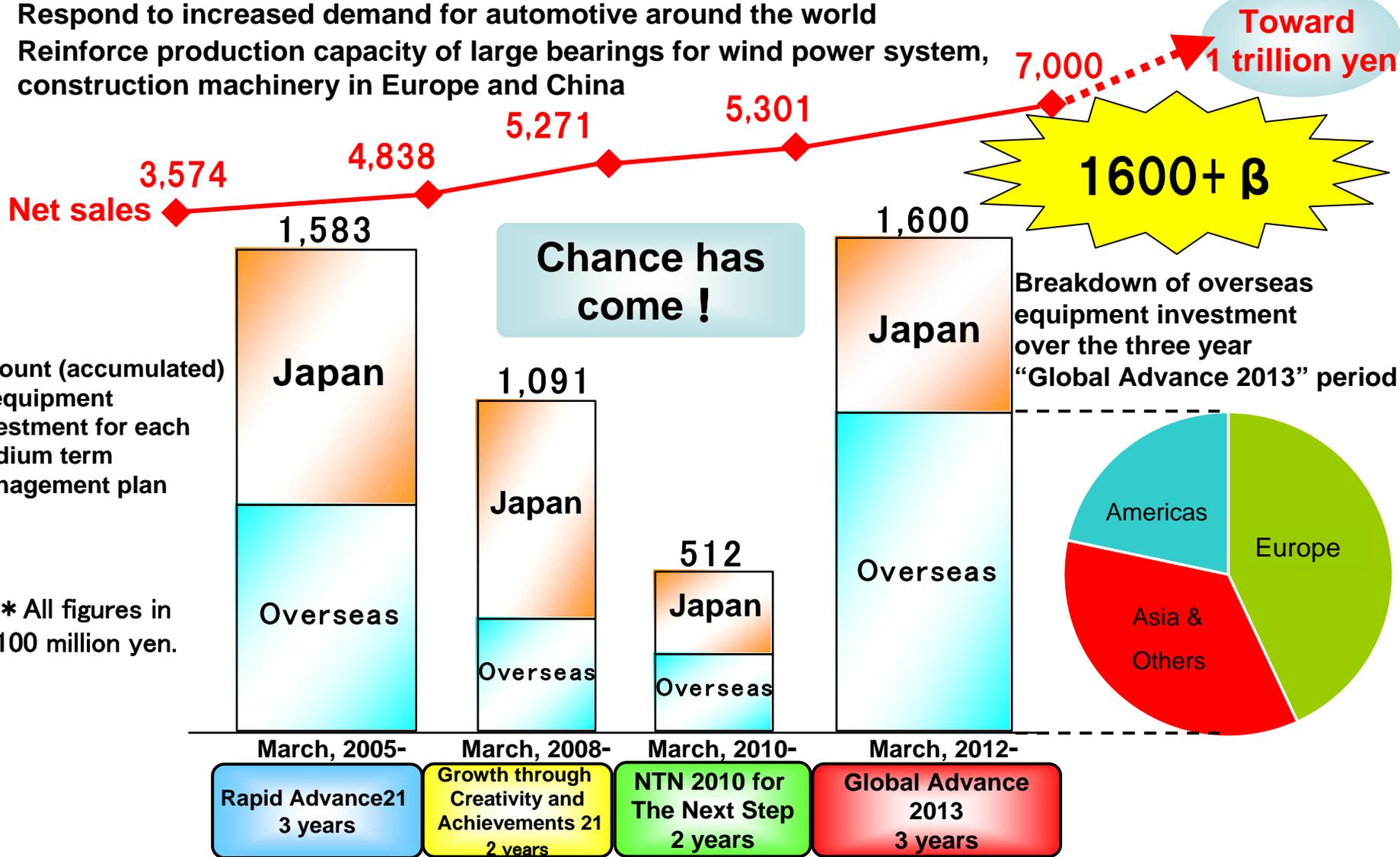
**2 bases + α**



Establish new businesses with cutting-edge technology and proprietary technology

# Three-year equipment investment plan

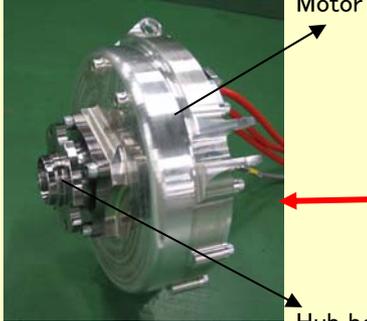
- Respond to increased demand for automotive around the world
- Reinforce production capacity of large bearings for wind power system, construction machinery in Europe and China



# Faster commercialization for next-generation EV systems

- Accelerate development of products for next-generation EV systems such as the In-Wheel Motor (EV System Division)
- Shift from R&D for practical applications to faster mass-production and commercialization
- Lead cost down and idea of new product by transferring new technology toward existing products

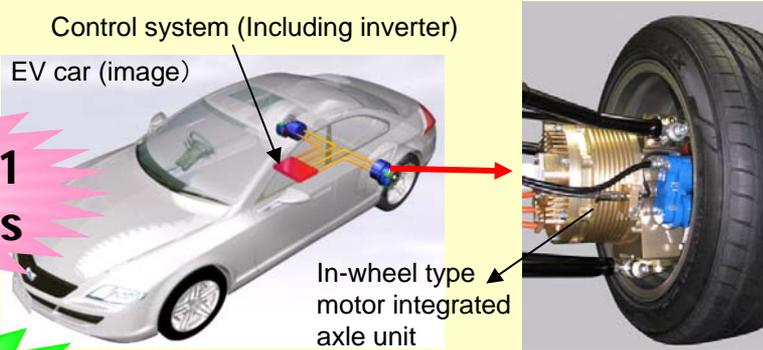
### In-wheel Motor System for Electric Commuters



Motor & Reducer

Hub bearing

### In-wheel Motor System for EV car



Control system (Including inverter)

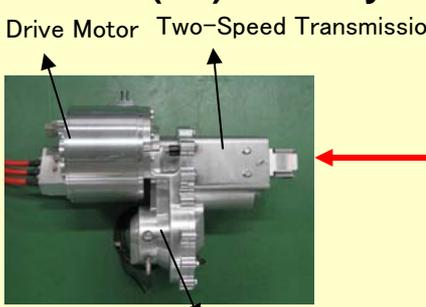
EV car (image)

In-wheel type motor integrated axle unit



**Create world's No.1 Business segments**

### One Motor Type Electric Vehicle (EV) Drive System

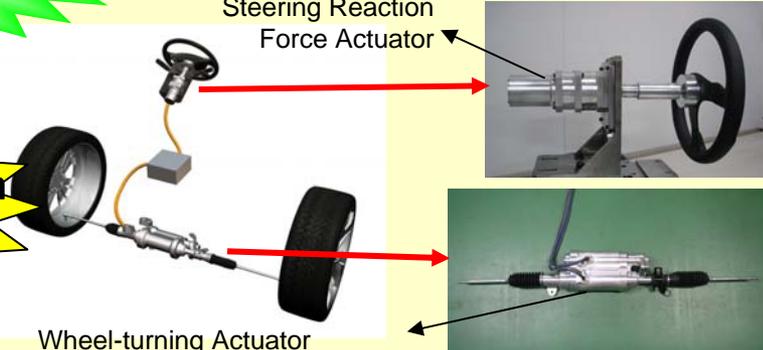


Drive Motor

Two-Speed Transmission

Differential

### Steering System for Steer-by-Wire



Steering Reaction Force Actuator

Wheel-turning Actuator



**Transfer new technology toward existing products**



**Commercialization + Y**

# For new growth and increased profits

“Global Advance 2013”

**FY2013:**

Net sales: 700 billion yen, Operating income margin: 10%

**FY2011:**

Net sales: 585 billion yen, Operating income margin: 6%

**“Decision” and “Execution” and “Accomplishment”**

**Business expansion  
in growth market**

**Improvement of  
operating income margin**

-Expand business in  
Europe and Americas

-Expansion for  
Aftermarket & Distributor

-Reinforcement of production  
capacity in local

-Acceleration of business  
expansion in Asia

-Faster commercialization  
for EV products

-Reinforcement of  
local management

-Share up for  
Industrial machinery

-Reduce costs  
for Automotive

-Expand local procurement

**“On local site with local materials by local personnel”**

**FY2010: Net sales: 530.1 billion yen, Operating income margin 4.6%**

We make  
Bearings.



For New Technology Network

**NTN**<sup>®</sup>

NTN株式会社  
[www.ntn.co.jp](http://www.ntn.co.jp)