



Medium- to Long-Term Business Vision of the Kobe Steel Group

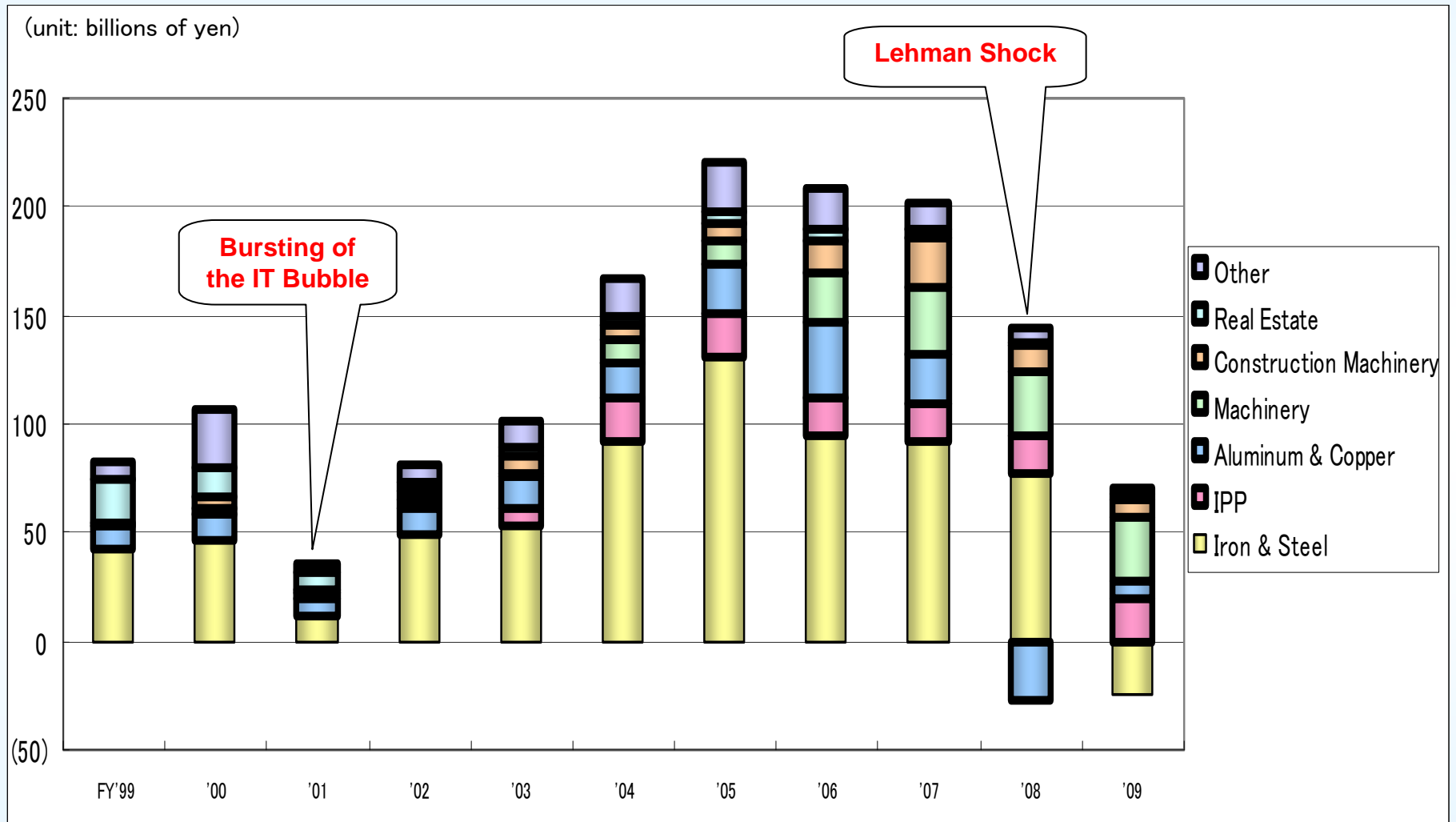
「 KOBELCO VISION “ G ” 」

— Creating New Value, Aiming for Global Growth —

April 14, 2010

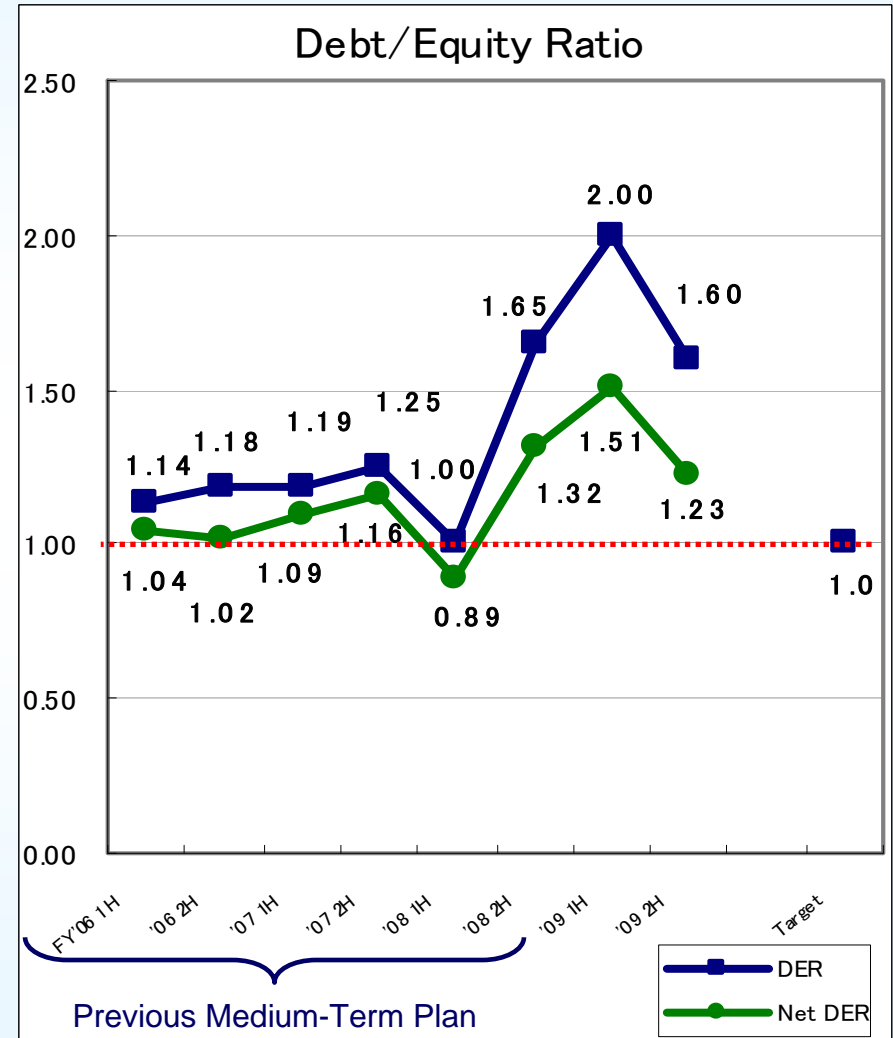
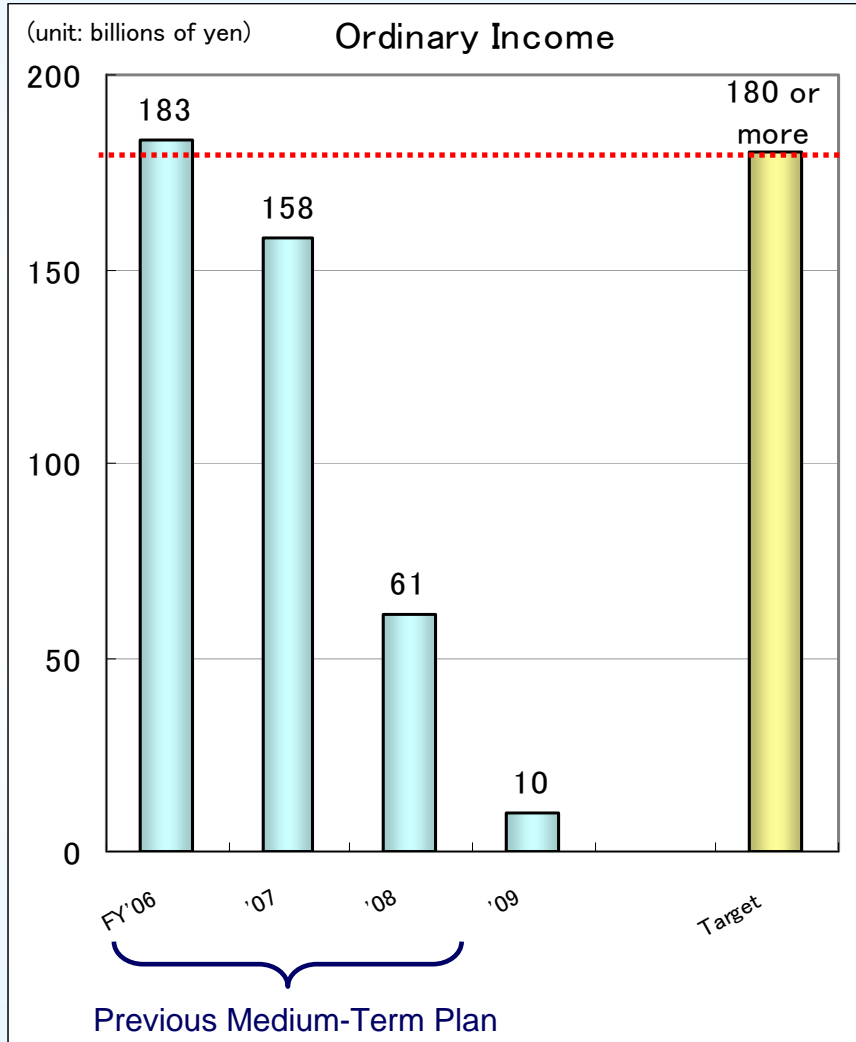
Looking Back at the Past Decade ①

<Operating Profit>

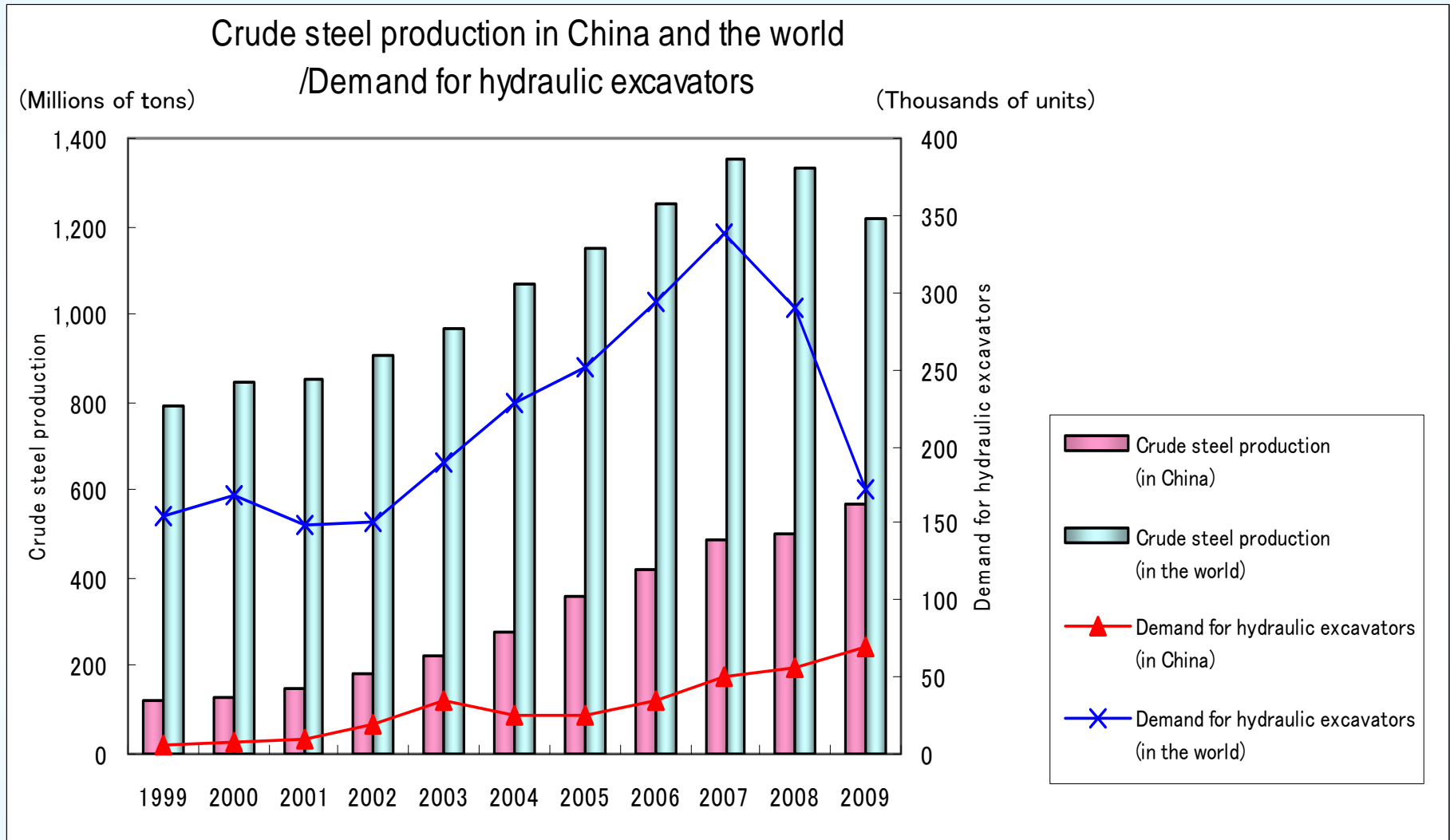


Looking Back at the Past Decade ②

Previous Medium-Term Business Plan (FY2006 to FY2008)



Looking Back at the Past Decade ③



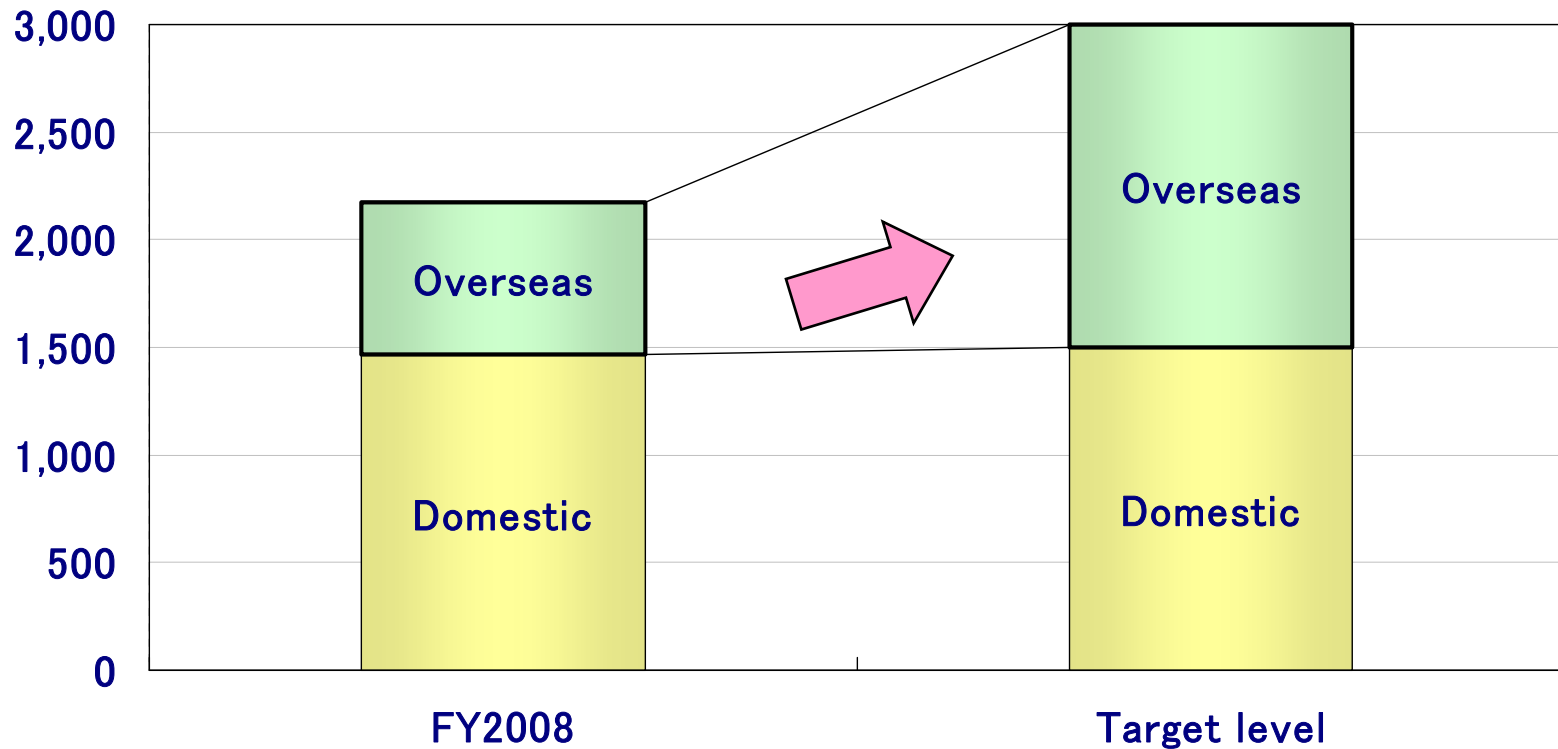
Medium- to Long-Term Outlook for Business Conditions

- Against the backdrop of Japan's aging population and production shift overseas, it is expected that domestic demand will generally decrease.
- Foreign demand, mainly from emerging economies, will increase.
- Moving to a lower-carbon society will rapidly change the demand structure.
 - Manufacturing operations will be limited.
 - Nuclear power generation will expand and hybrid and electric automobiles will be used more widely.

Vision for Future Business Performance

(unit: billions of yen)

Sales



Ordinary income

60.8 billion yen

200 billion yen or more
(100 billion yen or more
if there is an economic slowdown)

Debt/equity ratio

1.65

Aiming at 1.0

$$P = (a - c) \times d \times s$$

P ... Profit

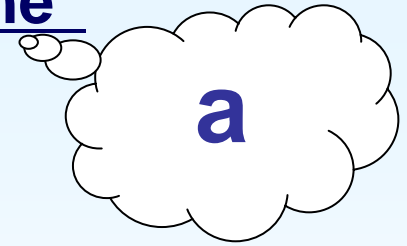
a ... @

c ... Cost

d ... Delivery Quantity

s ... Synergy, Social Responsibility,
Safety, Shareholder Relations,
Customer Satisfaction, Service

Thorough Pursuit of High-End “Only One” Products, Technologies & Services



Materials & Machinery

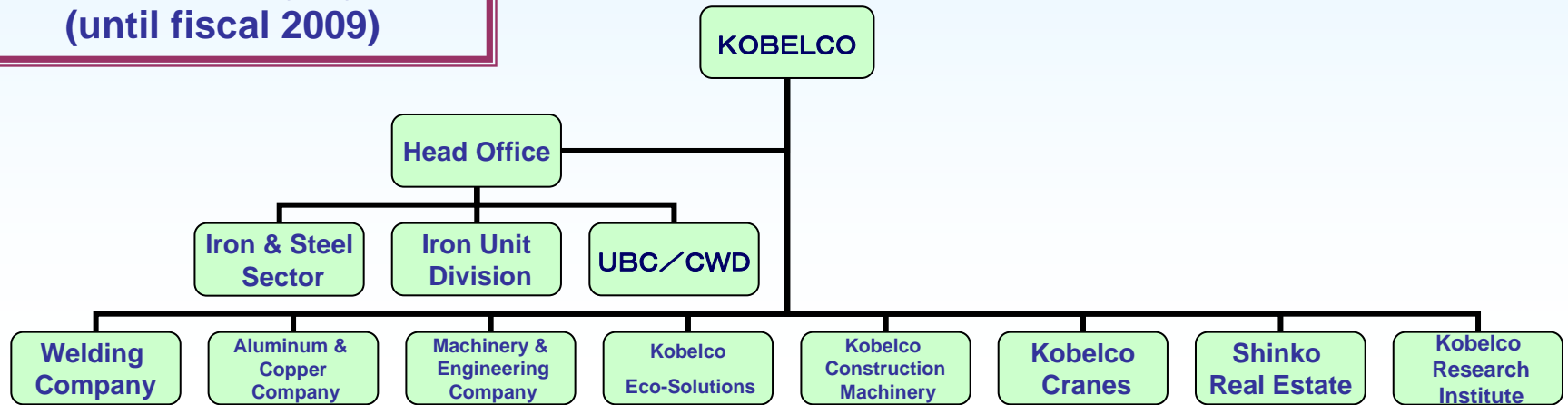
Integrating technologies, human resources and know-how

Adding to strengthening current Only One products and technologies

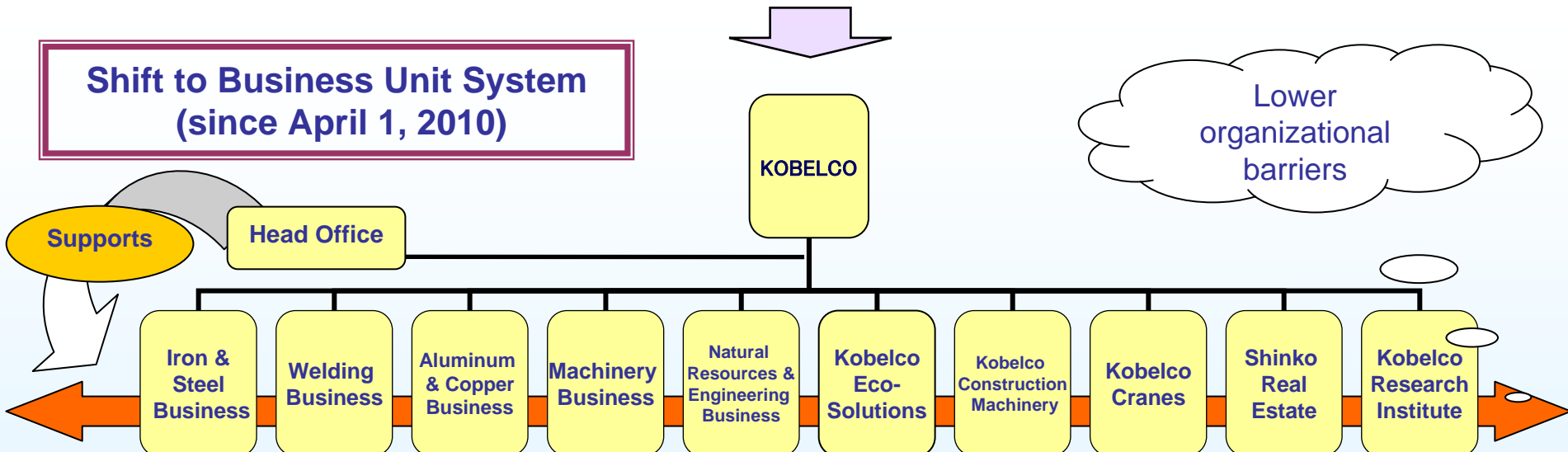
Creating new Only One products that only
the Kobe Steel Group can provide

Demonstrating the Comprehensive Capabilities of the Kobe Steel Group ②

**Internal Company System
(until fiscal 2009)**



**Shift to Business Unit System
(since April 1, 2010)**





Segment Classification

Previous Business Segments

Iron & Steel	Steel Products
	Steel Castings & Forgings
	Titanium
	Steel Powder
	Welding Consumables

Wholesale Power Supply [Shinko Kobe Power Inc.]

Aluminum & Copper

Machinery	Machinery (Hardware)	(Compressors, Industrial Machinery)
	Engineering	(Ironmaking Engineering, Heavy-Wall Pressure Vessels, etc.)
	Iron Unit Division	
	Environment	[Kobelco Eco-Solutions Co., Ltd.]

Construction Machinery	Excavators	[Kobelco Construction Machinery Co., Ltd.]
	Cranes	[Kobelco Cranes Co., Ltd.]

Real Estate [Shinko Real Estate Co., Ltd.]

Electronic Materials & Other Businesses

Business Segments from Fiscal 2010

Iron & Steel	Steel Products
	Steel Castings & Forgings
	Titanium
	Steel Powder
	Wholesale Power Supply

Welding

Aluminum & Copper

Machinery	Machinery (Hardware & a Portion from Engineering)	(Compressors, Industrial Machinery, Heavy-Wall Pressure Vessels, etc.)

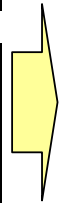
Natural Resources & Engineering	Engineering	(Ironmaking Engineering, etc.)
	Iron Unit Division	

Kobelco Eco-Solutions Environment [Kobelco Eco-Solutions Co., Ltd.]

Kobelco Construction Machinery	Excavators	[Kobelco Construction Machinery Co., Ltd.]
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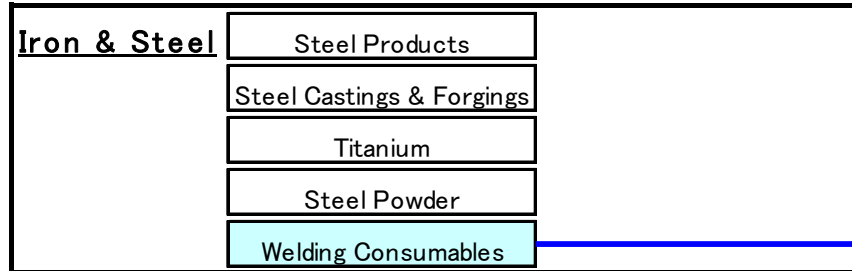
Kobelco Cranes Cranes [Kobelco Cranes Co., Ltd.]

Other Businesses Real Estate

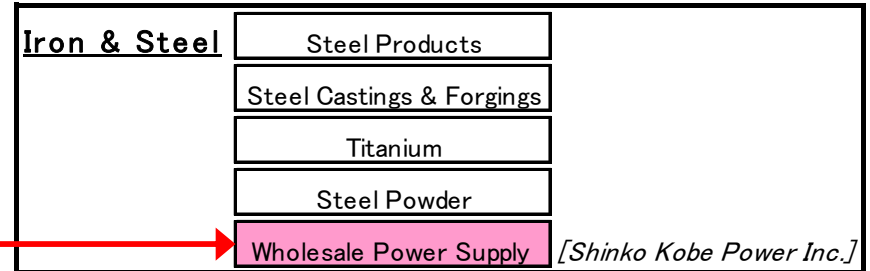


Iron & Steel ①

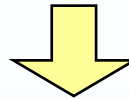
Previous Business Segments



Business Segments from Fiscal 2010



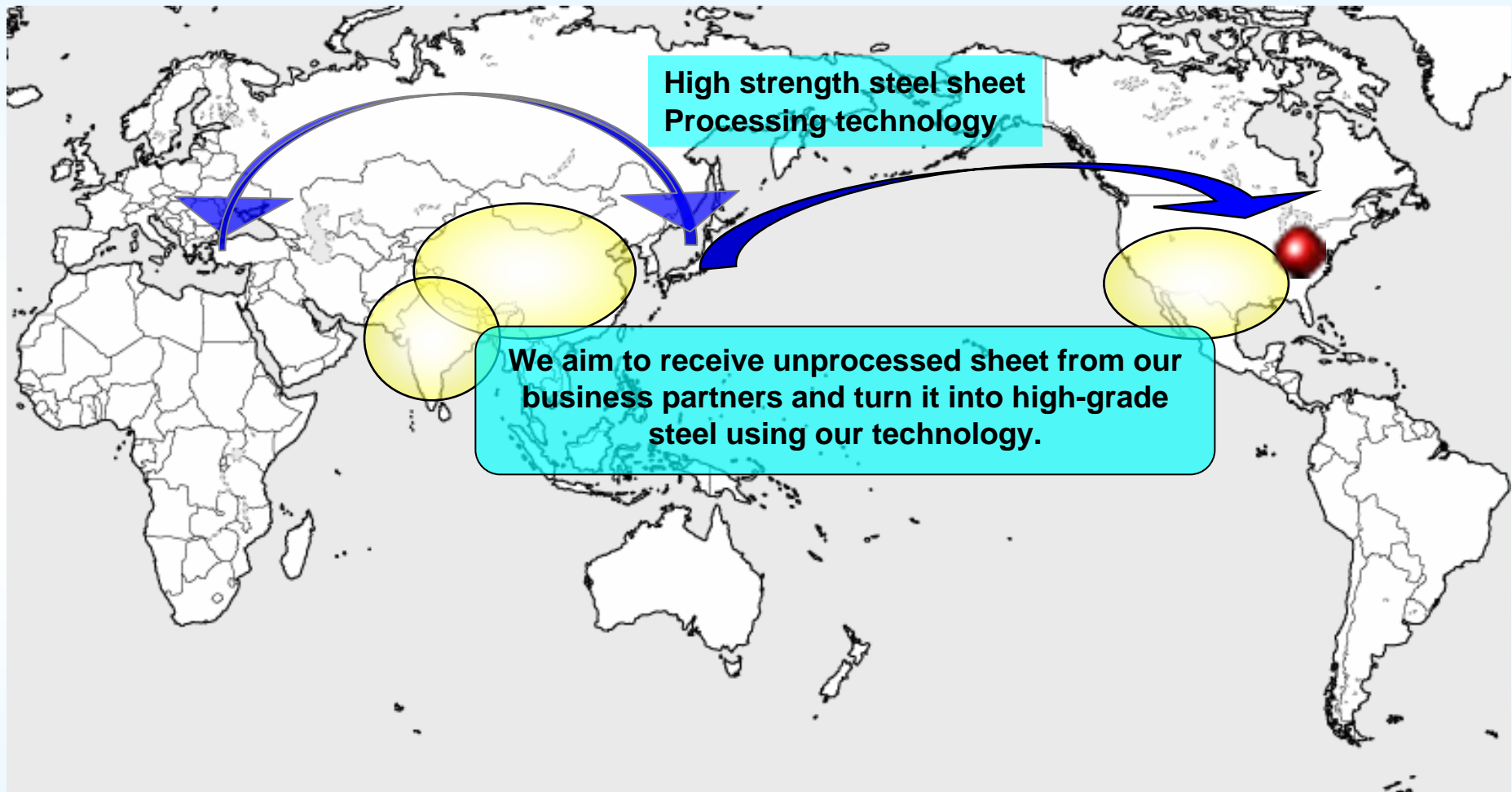
**Growing markets are mainly overseas.
We're not aiming to expand by volume alone.**



**We aim to meet demand in growing markets
through our high-end Only One products,
technologies and services.**

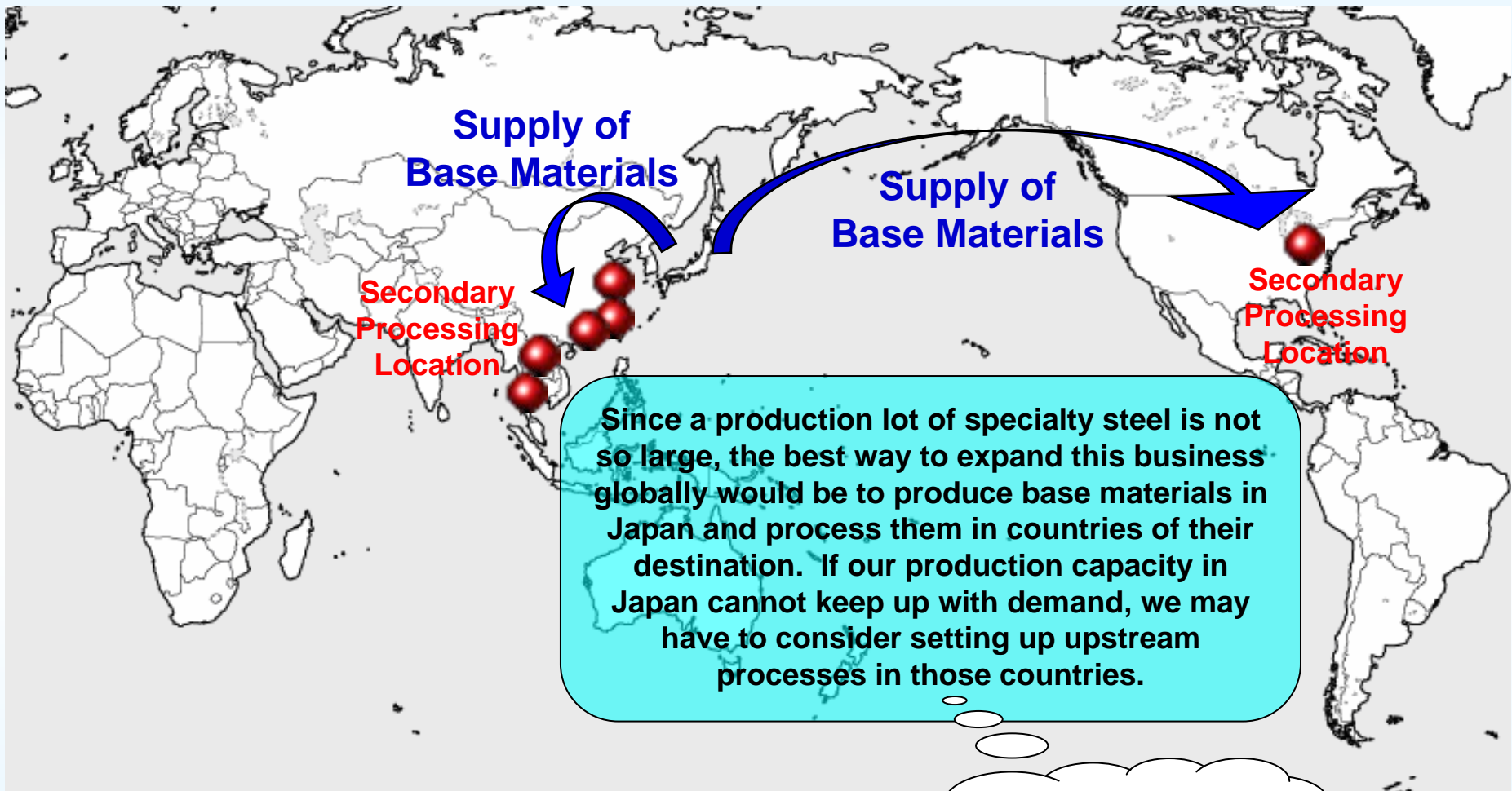
Iron & Steel ②

High Strength Steel Sheet

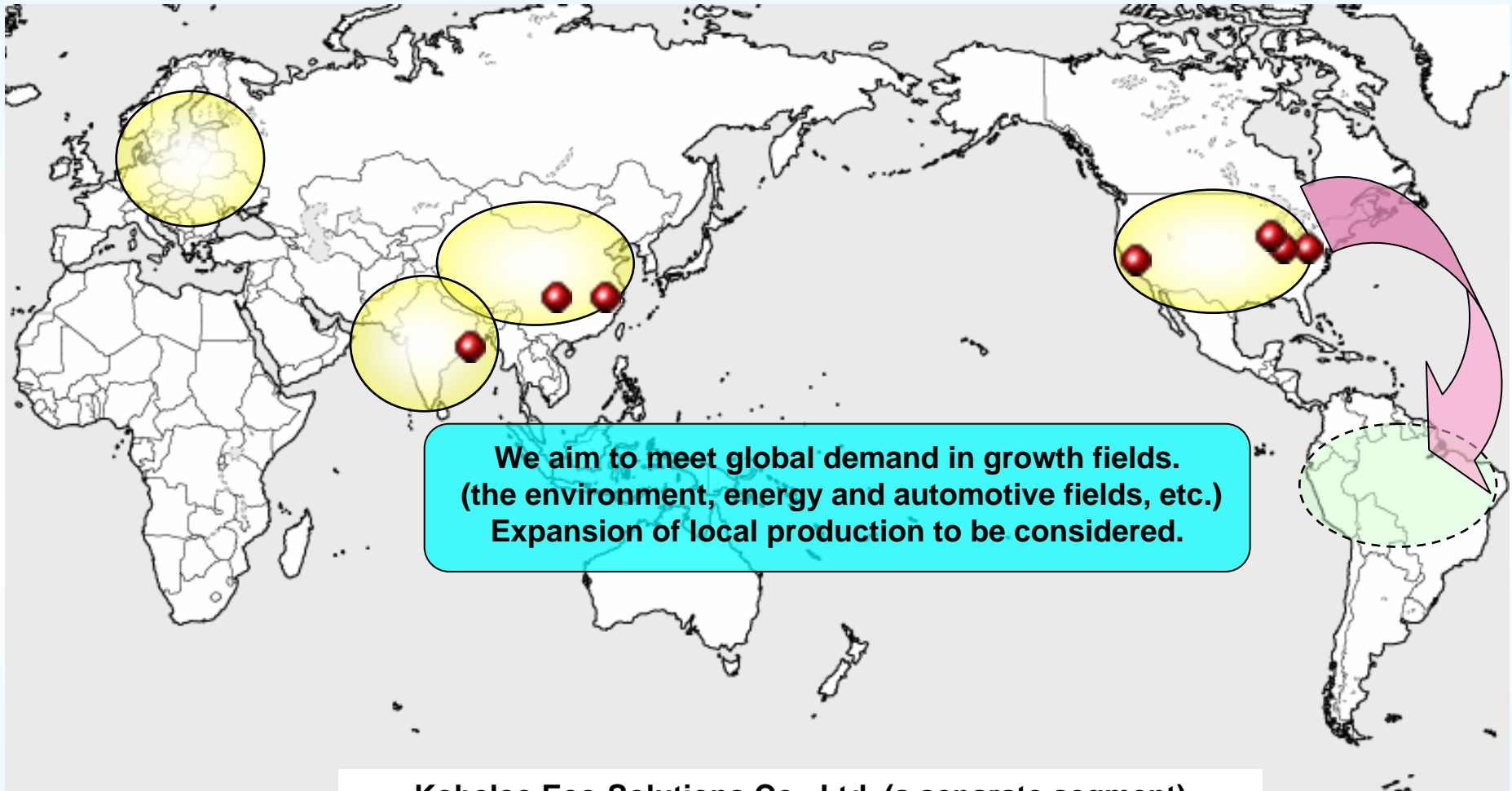


Iron & Steel ③

Specialty Steel Wire Rod & Bar



Machinery



**We aim to meet global demand in growth fields.
(the environment, energy and automotive fields, etc.)
Expansion of local production to be considered.**

**Kobelco Eco-Solutions Co., Ltd. (a separate segment)
is also looking into global expansion.**

Natural Resources & Engineering ①

Innovative Ironmaking Processes (MIDREX, ITmk3)

PROCESS	REDUCTANT	REDUCTION TEMPERATURE	REDUCTION TIME	PRODUCT USE	OPTIMUM SITING
Blast furnace	Coking Coal	1,550°C	8 hours	Basic oxygen furnace steelmaking	Coastal areas
MIDREX	Natural gas	900°C	6 hours	Electric arc furnace steelmaking	Natural gas-producing areas
FASTMET	Non-coking coal	1,350°C	10 min.	Dust recycling	Dust treatment
FASTMELT	Non-coking coal	1,350°C~1,550°C	1 hour	Basic oxygen furnace steelmaking	Alternative or supplement to blast furnace / electric arc furnace steelmaking
ITmk3	Non-coking coal	1,450°C	10 min.	Electric arc furnace steelmaking	Iron ore and coal mines

Features of ITmk3

- **Makes effective use of untapped resources**

(Produces iron nuggets of the same quality as blast-furnace pig iron from low-grade iron ore and non-coking coal.)

- **Reduces CO₂ emissions by roughly 20%**

(In comparison to cold pig iron made in mini blast furnaces in developing countries and at mining sites.)

Status of Mesabi Nugget ITmk3 Plant

- World's first commercial ITmk3 Plant began production in January 2010.



Natural Resources & Engineering ②

Innovative Ironmaking Processes (MIDREX, ITmk3)

Business Development in the Future

**Plant
Engineering**

Licensing
(By project and
production volume)

**MIDREX
ITmk3**

Establish marketing
structure utilizing
construction licensees

Started detailed F/S for
iron nugget production and
marketing in Vietnam

**Manufacturing and Sales
of Iron Units**
(Focusing mainly on ITmk3)

**Globalization of
Steel Business**

Natural Resources & Engineering ③

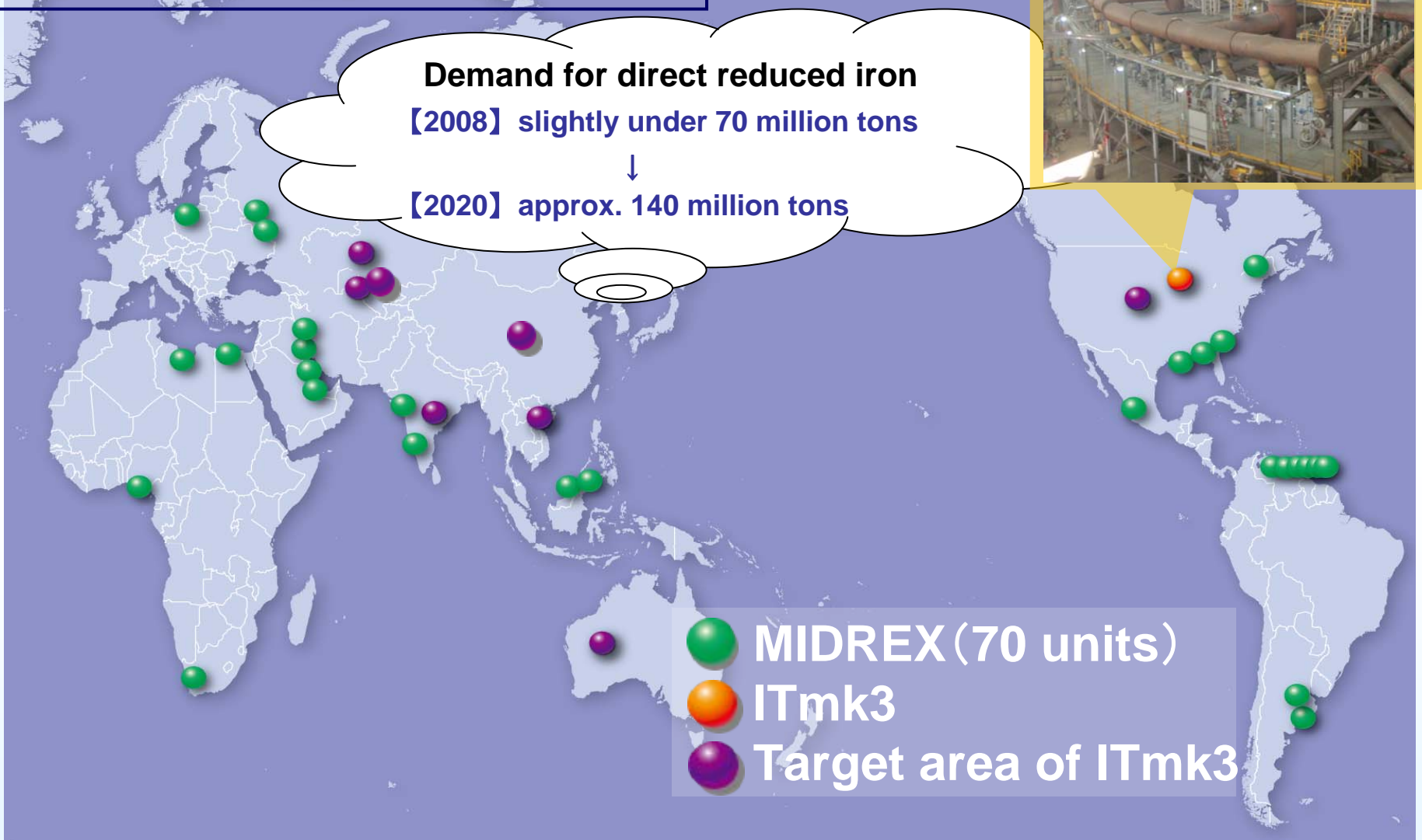
Innovative Ironmaking Processes (MIDREX, ITmk3)



Demand for direct reduced iron
[2008] slightly under 70 million tons

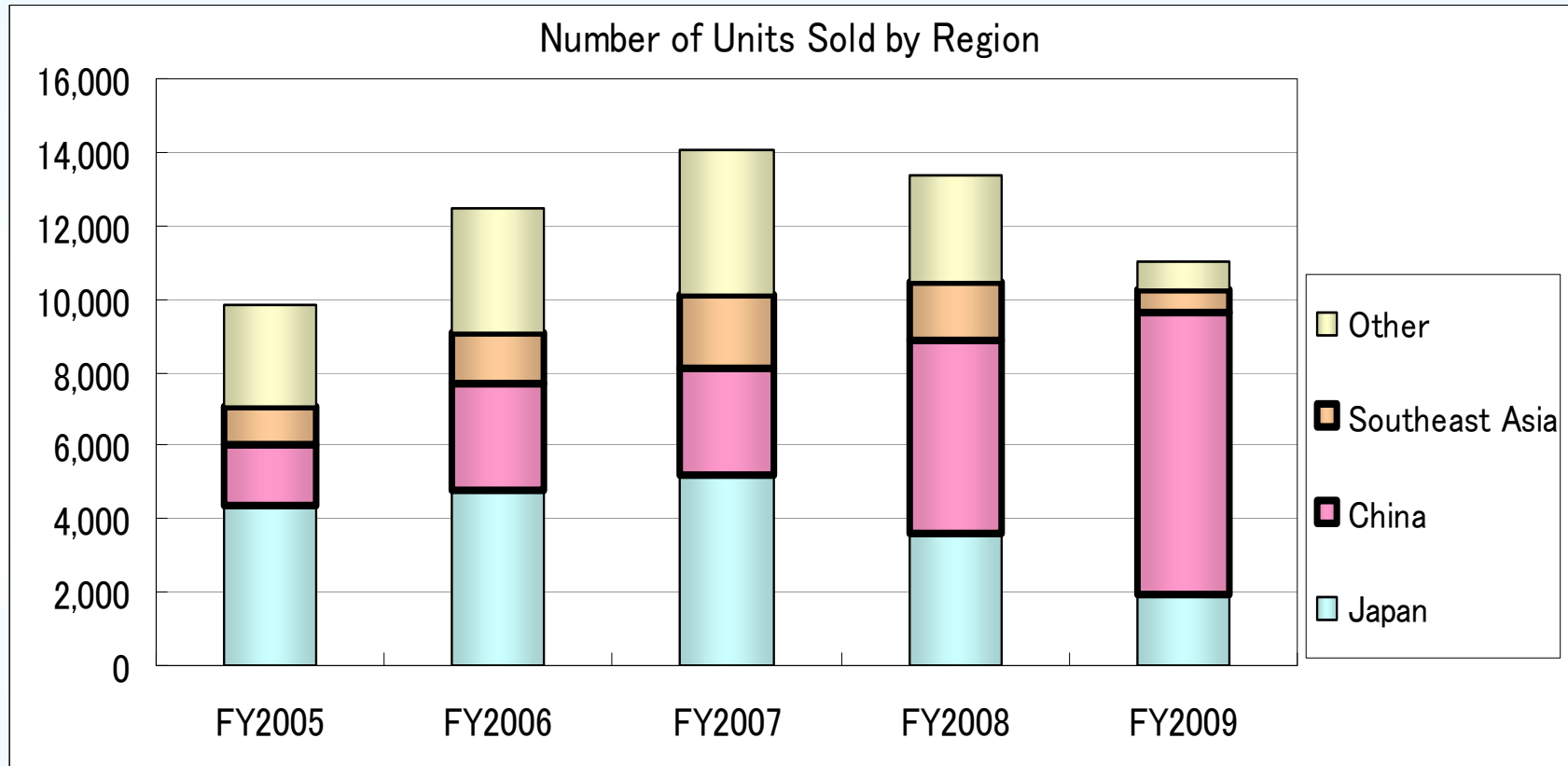


[2020] approx. 140 million tons



Kobelco Construction Machinery ①

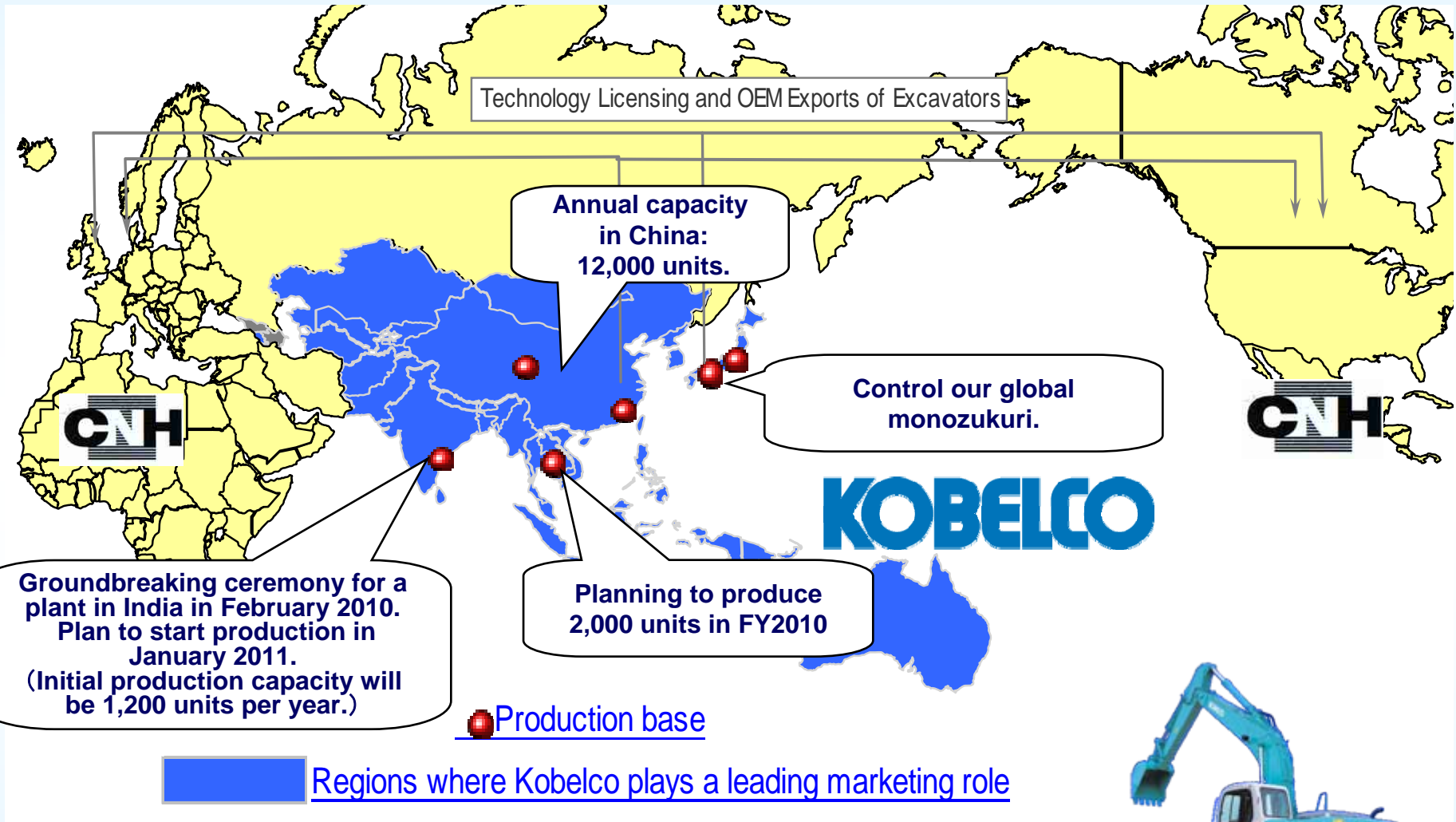
Tackling Growth Markets: China, India and Southeast Asia



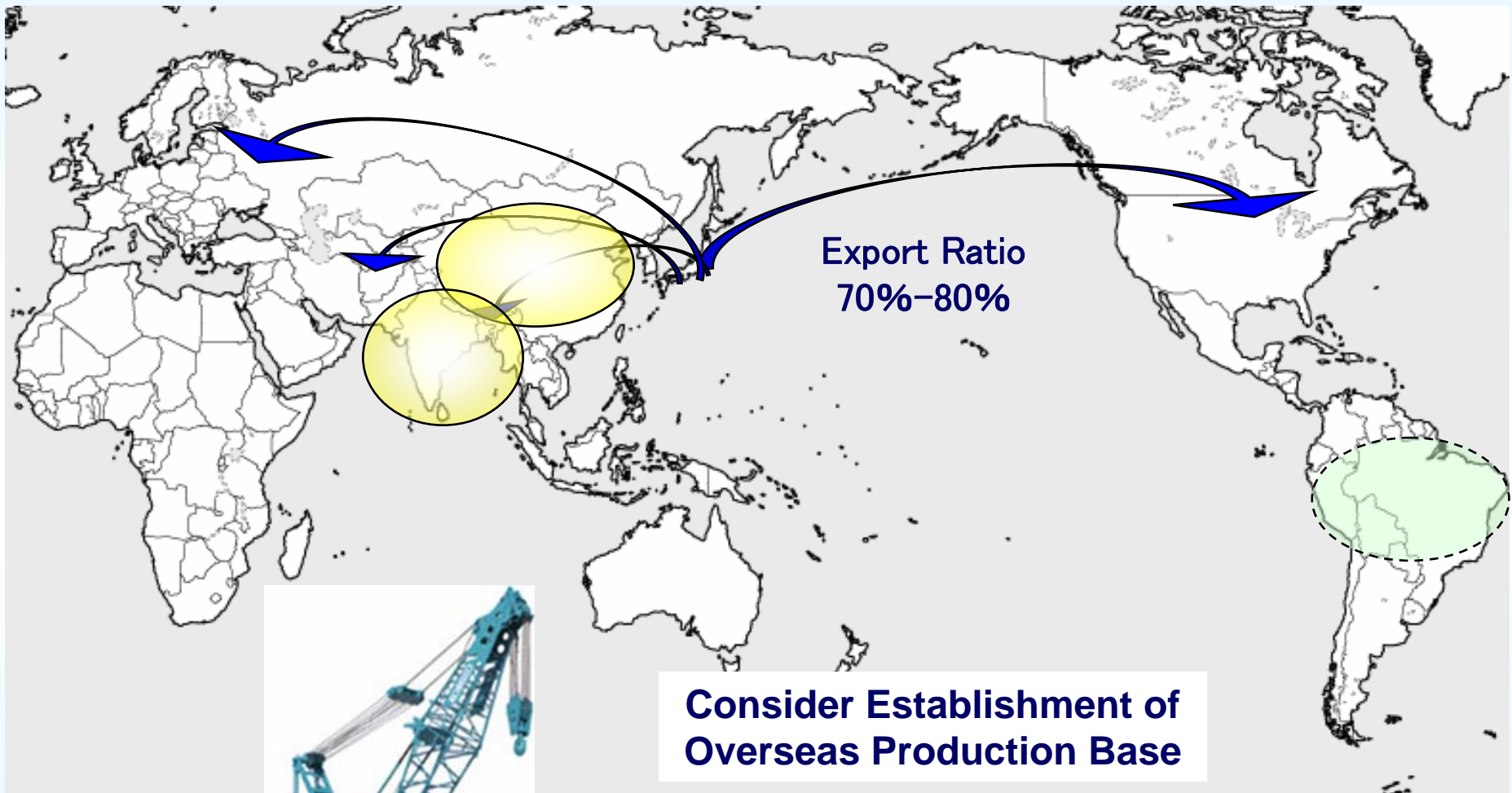
Notes:

China's figures are for years ended in December, and it include mini excavators.

Kobelco Construction Machinery ②



Kobelco Cranes



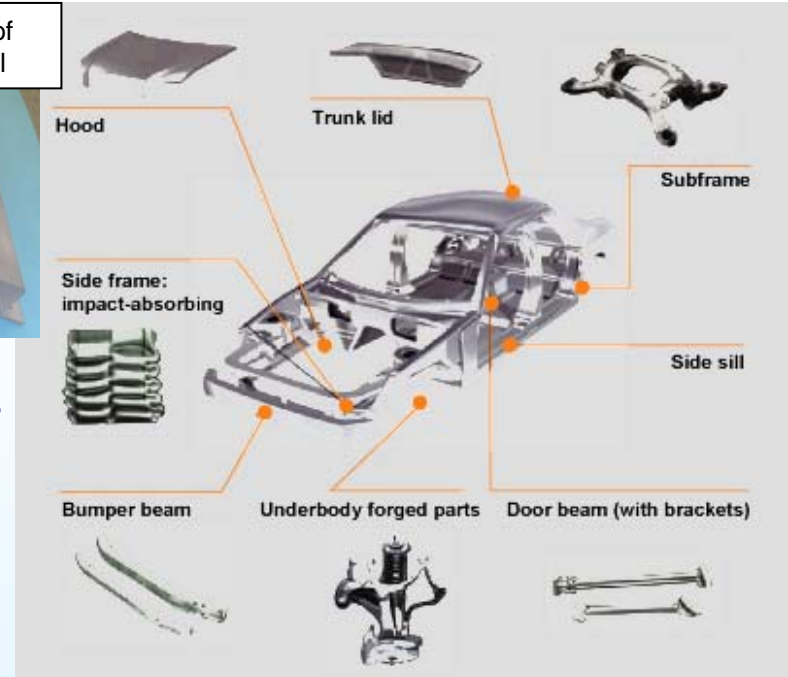
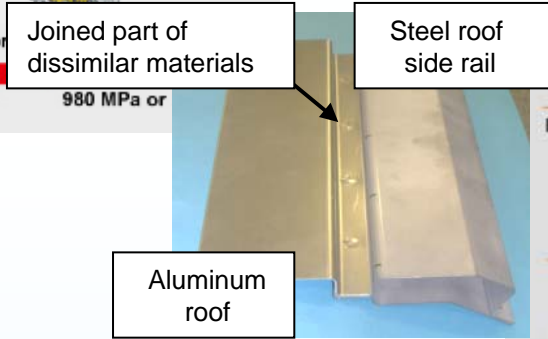
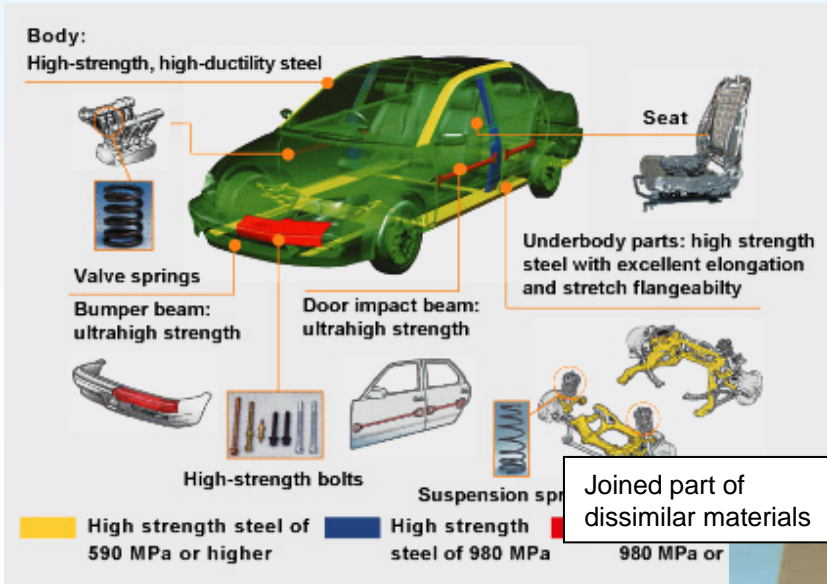
The Environment (Lightweighting and Energy Saving)

Iron & Steel

Kobe Steel pioneered R&D in high strength steel sheet to reduce the weight of cars and improve gas mileage. Early on, we began producing this material. In the wire rod and bar field, we developed the world's strongest steels for springs and bolts. Mass-producing these products, we are contributing to the environment.

High strength steel sheet

High strength steel sheet is a continuously evolving material utilizing know-how on chemical composition and structure control through heat treatment acquired from our long familiarity with specialty steels for wire rod and bar. Featuring high tensile strength combined with high formability, this steel is used widely in the auto industry, in vehicle bodies, functional components such as bumpers and door impact beams, and seat parts that require complex processing.



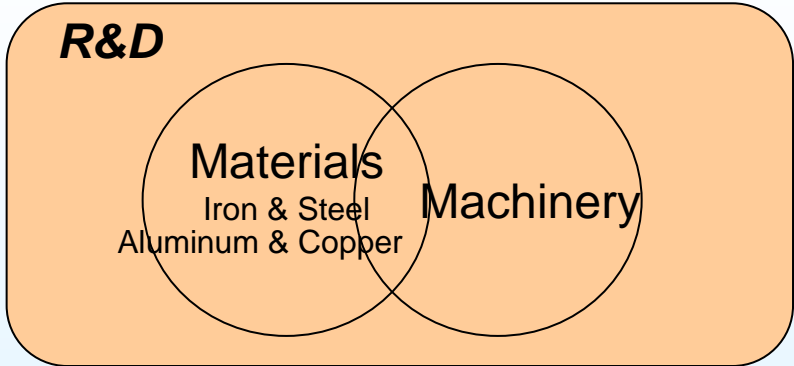
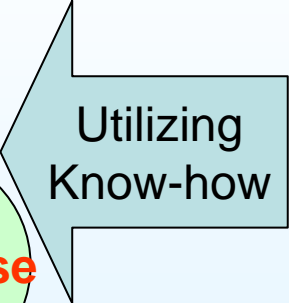
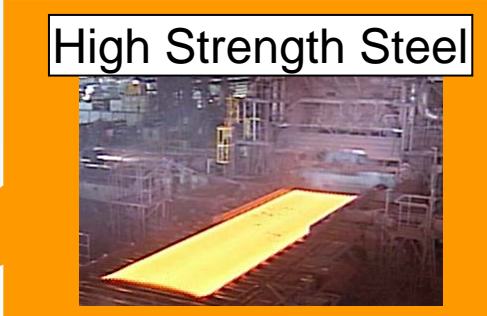
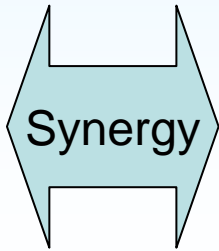
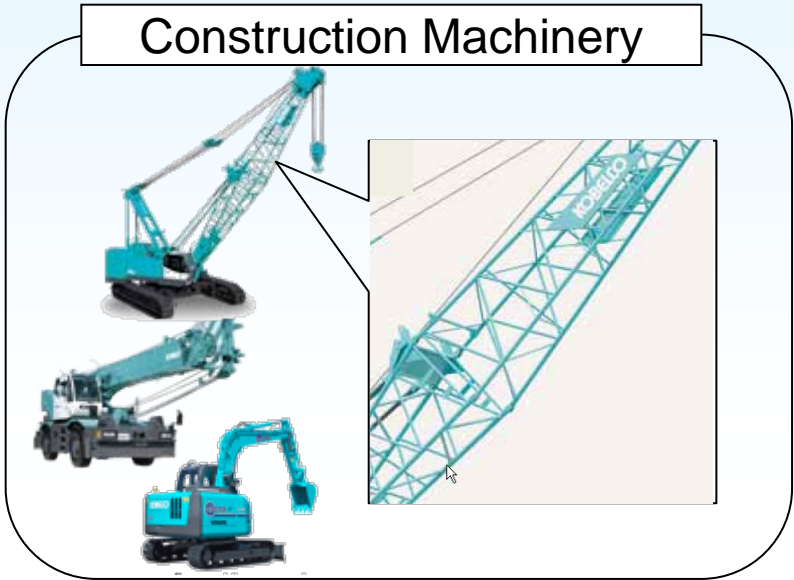
Aluminum

To help cut CO₂ emissions by reducing vehicle weight, Kobe Steel is exploring the use of aluminum for more and more auto parts. Aluminum is particularly effective as panel sheet used for hoods and doors; for extruded parts such as bumpers; and for forged underbody components such as suspensions, helping to make vehicles more fuel-efficient.

With the advantages of lightweight materials such as high strength steel and aluminum, Kobe Steel offers car makers comprehensive solutions for optimum materials for parts and auto bodies.



The Environment (Energy Saving)



The Environment (CO₂ Reduction)

SteamStar

The SteamStar is a screw-type generator that uses the surplus steam produced during the manufacturing process in factories to produce electricity. Even low-pressure steam can be used to efficiently generate electricity. This innovative product is noted for its energy savings and low CO₂ emissions.



Kobe Steel, Ltd. and Chubu Electric Power Co., Inc., along with Tokyo Electric Power Company, Inc. and Kansai Electric Power Co., Inc. have jointly developed the HEM-HR90, the industry's first high-efficiency heat pump able to simultaneously supply hot water at 90°C and cold water at 7°C. Kobe Steel began marketing the unit in April.

Heat Pump



Factories in the food and beverage, chemical, and electronic device industries employ processes that use hot water for disinfection and cleaning and cold water for refrigeration and cooling. They generally use boilers and refrigeration equipment to supply hot and cold water.

Conventional heat pumps that supply cold water at 7°C can only supply hot water at 70°C, limiting their use. The four companies saw demand for a heat pump that could supply both cold water and hot water at a higher temperature.

The HEM-HR90 uses a two-stage screw compressor for the first time in a hot water heat pump and a compressor motor designed for high-temperature operation. An optimum refrigerant was selected. As a result, the new heat pump is able to efficiently supply hot water of 70°-90°C and cold water of 5°-30°C at the same time. This means the unit can be used in heating processes that require hot water of 70°-90°C, such as heat sterilization and hot water cleaning.

The new unit dramatically reduces running costs, energy consumption and CO₂ emissions, compared with conventional systems that combine a boiler and refrigeration equipment.

The Environment (CO₂ Reduction)

Binary Power Generation Unit

The binary power generation unit uses a heating source to heat and evaporate a low-boiling point fluid, from which the steam drives a turbine to produce electricity. As the unit makes effective use of exhaust heat, Kobe Steel will consider developing the process.

Biogas Upgrading System



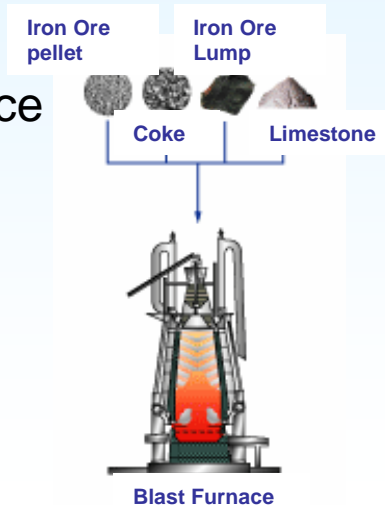
Sludge is generated from the treatment of wastewater from everyday living. The sludge is reduced in volume by digestion (fermentation) treatment, creating digestive gas in the process.

The effective application of digestive gas has been limited as the caloric value is low compared with city gas, equipment is easily damaged due to impurities, and there is a deterioration problem. However, Kobe Steel has been successful in refining the digestive gas into biogas that is nearly the same quality as city gas.

In comparison to city gas, the biogas, when used as a fuel, shows no significant difference in engine output characteristics and is cleaner than city gas.

Natural Resources, Energy & the Environment

Blast Furnace



- Requires high-quality iron ore and coking coal
- Needs pretreatment of iron ore and coal (sintering, pelletizing & coking)
- Reduction takes about 8 hours.

ITmk3



- Can use low-grade iron ore and non-coking coal – **effective use of untapped resources.**
- No pretreatment needed for iron ore and coal
- Reduction takes about 10 minutes.

ITmk3 omits the sintering and coking processes of pretreatment. Processing time is also short. Compared with blast furnaces that produce cold iron units of the same scale in developing countries and at mining sites, CO₂ emissions can be decreased by about 20%.



Production capacity of 500,000 metric tons per year. Reduces CO₂ by under 200,000 metric tons.

Notes:

The above estimation is a comparison with cold pig iron produced in developing countries and at mining sites.

A simple comparison cannot be made between the process used to make final steel products at an integrated steelworks and the ITmk3 process.

The Environment (Other)

Sound Absorption Panel

Optimal acoustic design is carried out, utilizing noise reduction technology and the characteristics of the sound source. Kobe Steel draws on its know-how in reducing compressor and construction equipment noise undertaken at its Mechanical Engineering Research Laboratory and decreasing noise in the Shinkansen train cars. This product emits low CO₂ throughout its life cycle from manufacturing to disposal and has outstanding recyclability.



KENI FINE

Kobe Steel developed a nickel-alloy coating with antibacterial properties called KENI FINE in 2001. It is 10 times faster at controlling microorganisms than conventional antibacterial coatings and 50 times more resistant to mildew. KENI FINE has found application in the food and beverage industries, medical field, appliance and air conditioner parts, and wire fish nets. For the general consumer, FENI FINE is used in kitchen and personal grooming products.

Upgraded Brown Coal (UBC)



Kobe Steel is operating a large-scale demonstration plant in Indonesia to upgrade low-quality brown coal and subbituminous coal for use in power generation. Although Indonesia has vast reserves, much of them are undeveloped. Many countries currently use high-grade bituminous coal as the main type of coal for power generation. Roughly half of the world's coal is low-grade coal. However, use of low-grade coal is limited, as it contains a high amount of water and when dry is prone to spontaneous combustion.

The demonstration plant project uses the “Tempura Principle,” an innovative technology in which the moisture in the low-grade coal is removed by using heated light oil. This project is demonstrating that low-grade coal can be upgraded into coal with a similar heat value as bituminous coal, that spontaneous combustion can be controlled, and that with reduced ash content, a clean source of energy can be produced.



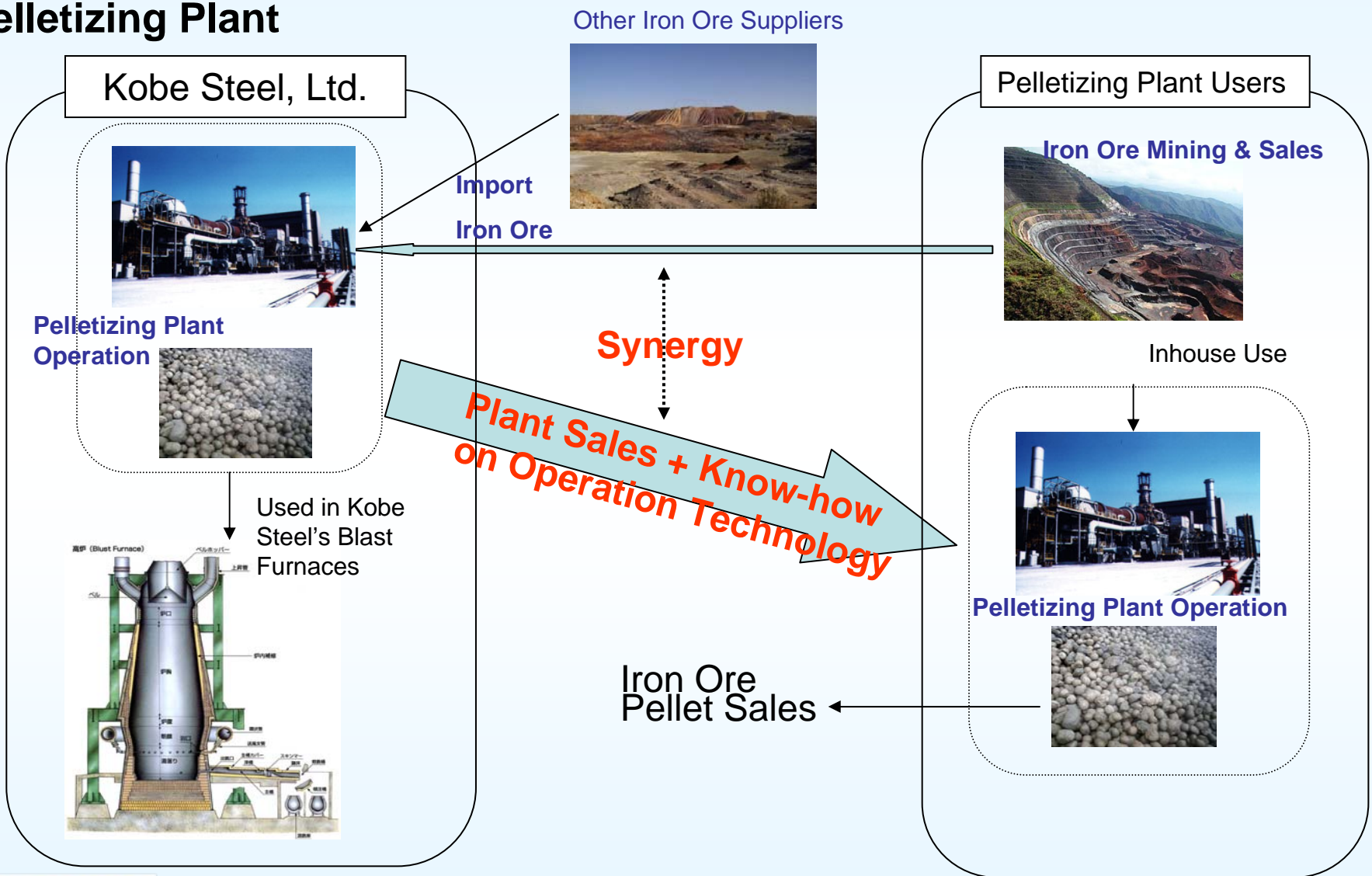
The Tempura Principle

Upgraded Brown Coal (UBC) is made using the Tempura Principle in the following way:

1. Brown coal is pulverized to several millimeters in diameter and mixed with oil to form a slurry. A small amount of asphalt is mixed with the oil.
2. The slurry is heated and the water in the slurry is evaporated. The asphalt coats the brown coal. Heating the pulverized coal is generally a troublesome operation, but in the case of UBC, the oil serves as a medium to transfer heat, thus providing for more efficient heating of the coal.
3. The oil is separated from the coal. Since it is volatile, it is immediately removed from the brown coal. The oil is recycled for reuse.
4. As the upgraded brown coal is in pulverized form, it is made into briquettes for ease in handling.

Natural Resources & Energy

Pelletizing Plant



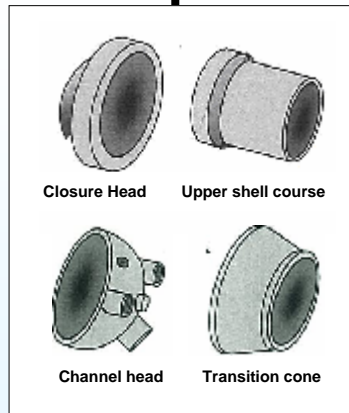
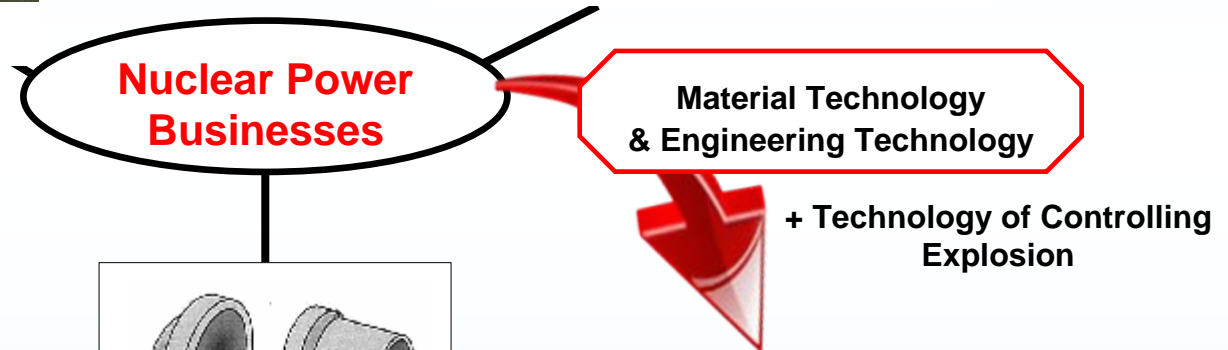
Natural Resources & Energy



Fuel Channels



Spent Nuclear Fuel Cask

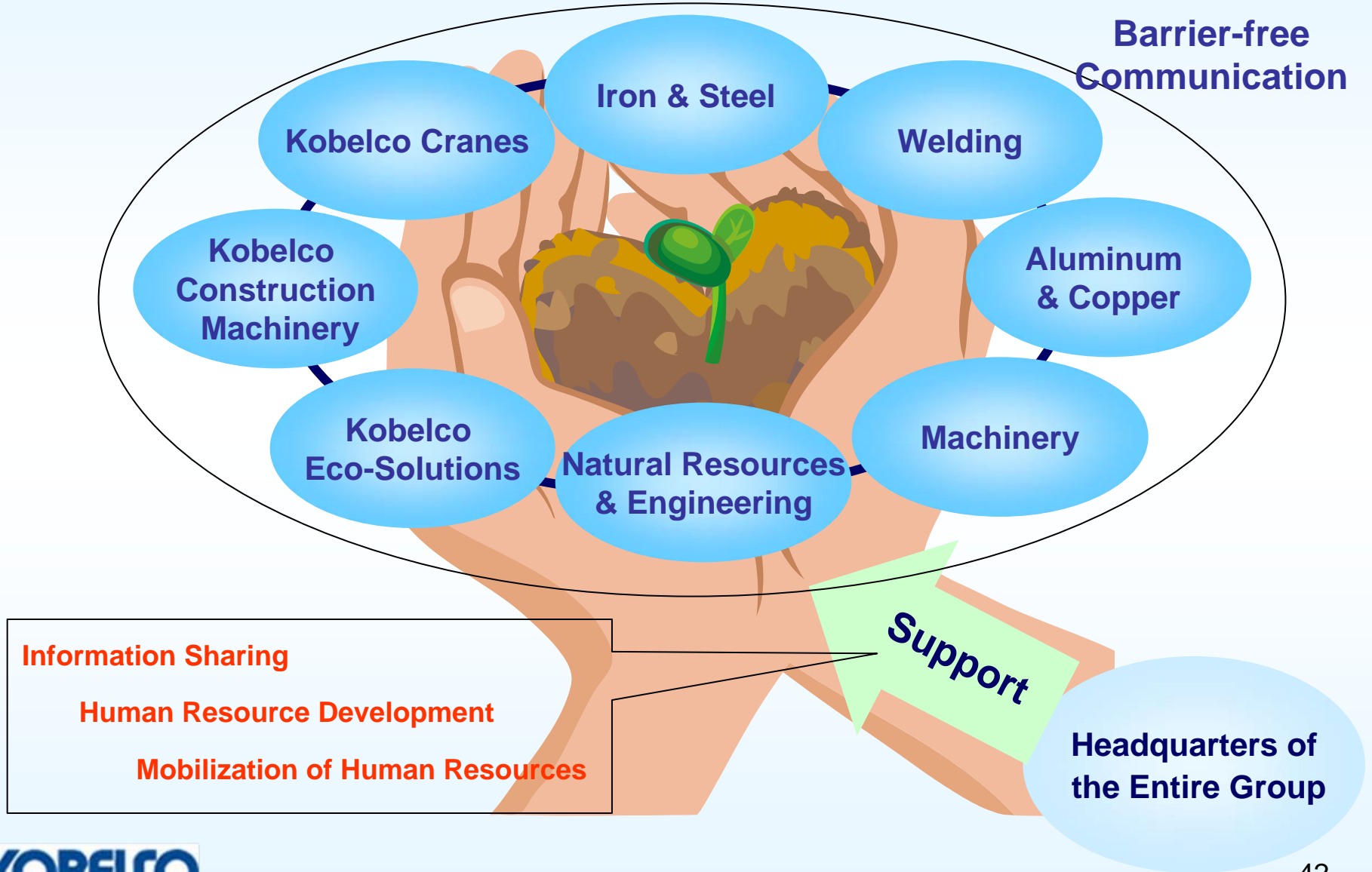


Large Profile Materials for Nuclear Reactors
(Return to the Market)

Disposal of Abandoned Chemical Weapons



Demonstrating the Comprehensive Capabilities of the Kobe Steel Group



THE KOBE STEEL GROUP'S CORPORATE PHILOSOPHY

1. We provide reliable and advanced technologies, products and services that satisfy customers.
2. We support each employee in developing his or her abilities, while respecting mutual cooperation within the Kobe Steel Group.
3. Through continuous efforts for innovative change, we aim to enhance our corporate values.

