

Mineral Resources, Energy, Chemical & Electronics Business Unit What We Aim to Be and Growth Strategies

May 28, 2018

Today's Agenda

I

Business Unit Overview

II

Business Unit Growth Strategies

III

Financial Results

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Mineral Resources, Energy, Chemical & Electronics Business Unit

Planning & Coordination Dept.,
Mineral Resources, Energy,
Chemical & Electronics Business Unit

Project Management Dept. for
Mining & E&P

Mineral Resources Division No. 1

- Copper, gold
- Nickel, cobalt
- Silver, zinc, lead

Mineral Resources Division No. 2

- Coal, uranium
- Iron ore, manganese
- Carbon products

Energy Division

- Crude oil, natural gas
- Petroleum products
- LNG, LPG

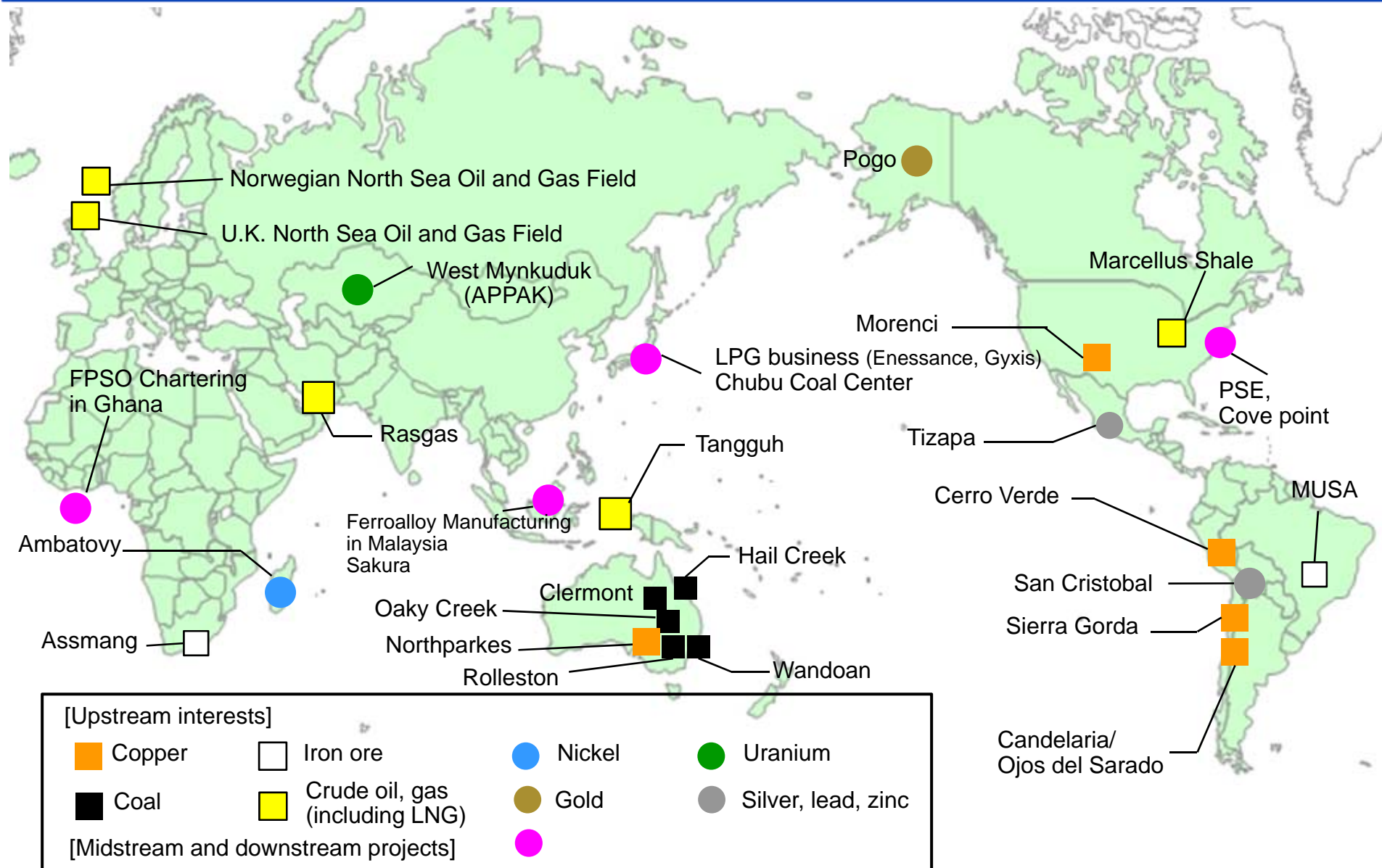
Basic Chemicals & Electronics Division

- Petrochemicals
- Inorganic chemicals
- Performance chemicals
- Semiconductor materials
- EMS business

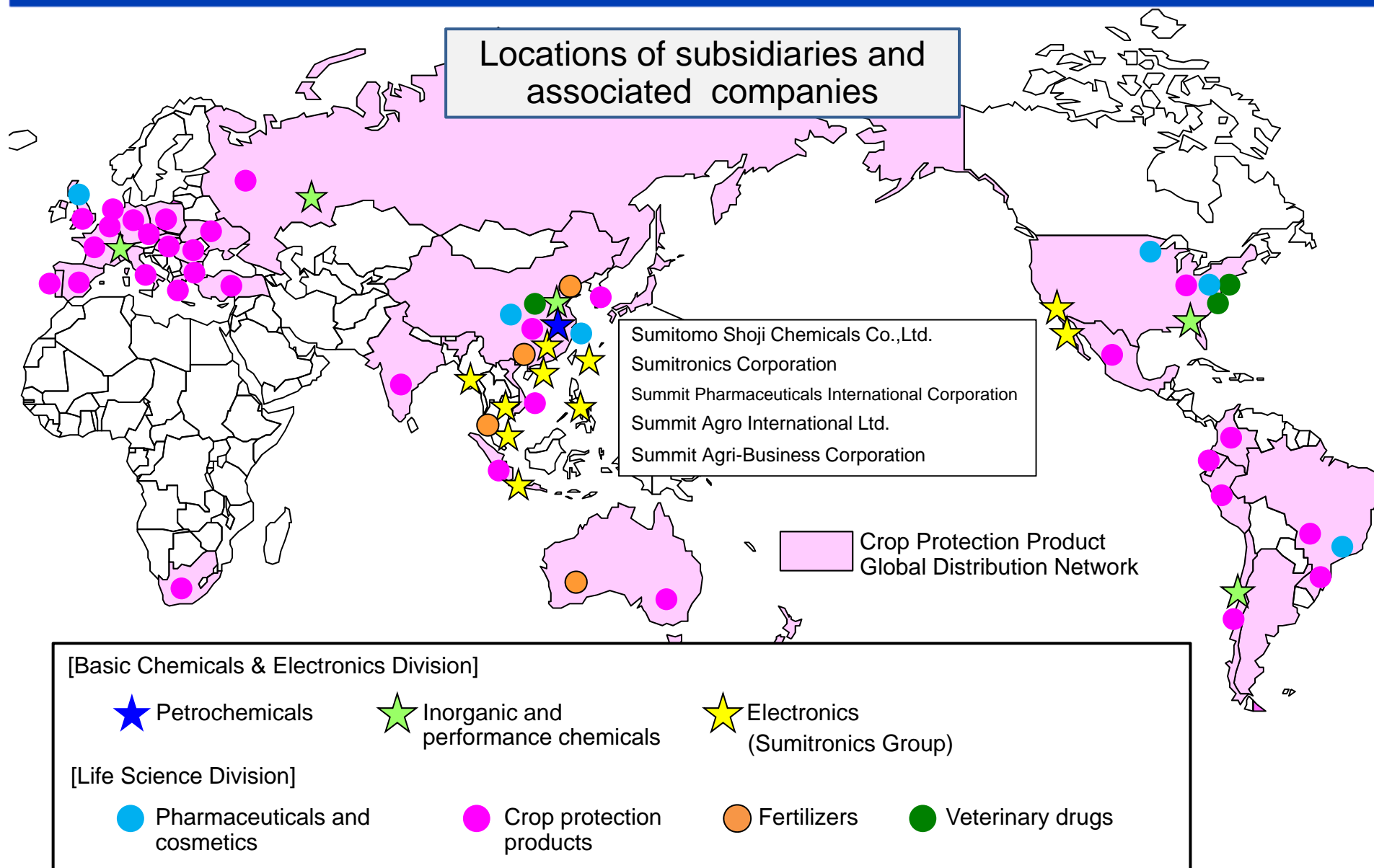
Life Science Division

- Pharmaceuticals
- Cosmetics
- Crop protection products
- Fertilizers
- Animal drugs

Mineral Resources and Energy Field: Business Portfolio



Chemicals Field: Business Portfolio



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Business Unit Growth Strategies

Business Unit Targets

■ Mineral Resources and Energy Field

We aim to fulfill stable products and services supply to industry while developing an upstream and mid-downstream combined portfolio that has significant upside potential with manageable downside risk, avoids concentration risk and yields earnings in a medium- to long-term perspective.

■ Chemicals Field

We aim to provide differentiated, highly profitable and value-added services and raw materials in growing industries.

Growth Strategies

The global macro trends change the demand-supply mineral resources, energy and food, and the industrial structure of IoT. Considering those changes, we aim to accomplish following material issues: Achieving harmony with the global environment; Contributing to the development of local communities and industries; and Establishing a foundation for comfortable and enriching lifestyles.

Mineral Resources and Energy: Upstream Strategy

Our VISION for the Mineral Resources and Energy Upstream Business

To develop a strong asset portfolio with significant upside potential and manageable downside risk

by acquiring cost-competitive assets based on a long-term view supported by supply-demand dynamics

Upside potential

- ✓ Higher profitability than that of the company-wide average
- ✓ Significant earning power during favorable market periods

Manageable downside risk

- ✓ Minimize downside risks through sound portfolio management
- ✓ Capture competitive assets well positioned in the cost curve

Basic policy for strengthening upside potential and tolerance to downside risks

- **Acquire cost-competitive resources** that have the upside potential to increase resources base
- **Develop an asset portfolio that mitigates concentration in particular risks**
 - (i) products, (ii) country of project, (iii) project participation phase, (iv) project size,
 - (v) number of projects, (vi) investment timing, (vii) liquidity,
 - (viii) investment format (including partnership)

Mineral Resources and Energy: Upstream Strategy

Strategic Initiatives in BBBO2017

Enhancement of quality of portfolio

✓ Achieve stable operation and profitability in our large-scale development projects
(Ambatovy, Sierra Gorda, etc.)

✓ Strengthen cost competitiveness for all producing assets
(San Cristobal, MUSA, etc.)

✓ Asset replacement (significant progress in divestments)

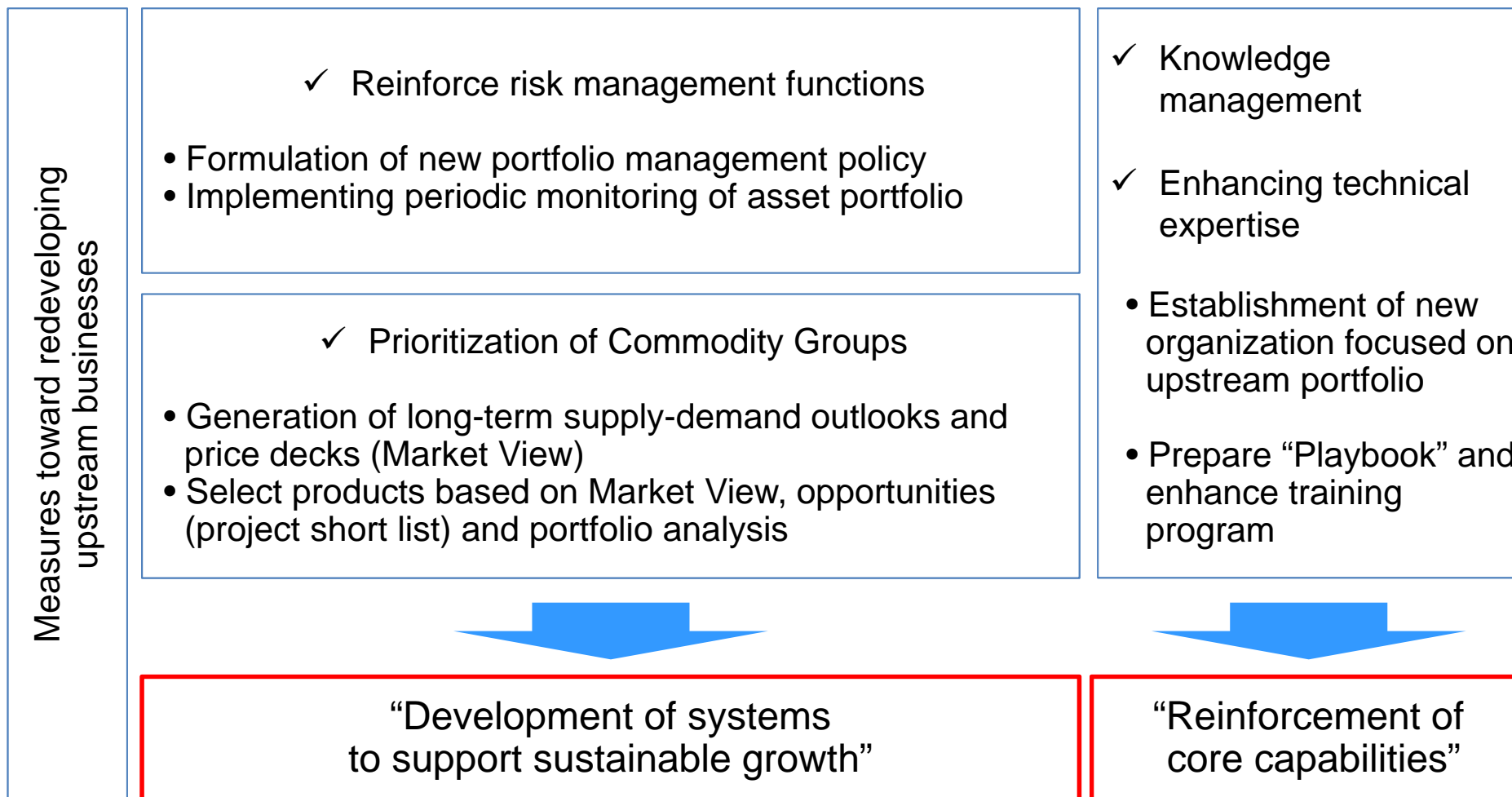
- New investment: Expansion of Tangguh LNG project in Indonesia
- Asset reduction: Coal assets in Australia (Isaac Plains etc.)
Batu Hijau copper and gold mine project in Indonesia
Tight oil development project in the U.S., etc.



“Strengthened our Asset Portfolio” but also resulted in “Downsizing our Asset Base”

Mineral Resources and Energy: Upstream Strategies

Strategic Initiatives in BBBO2017

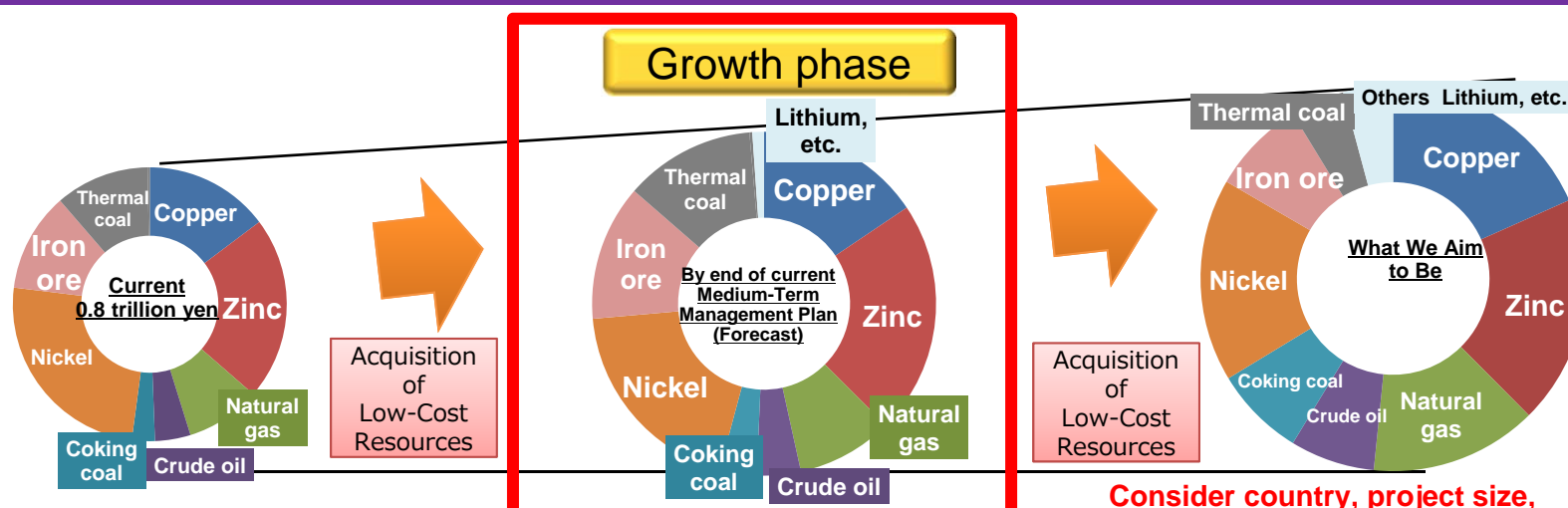


Mineral Resources and Energy: Upstream Strategy

Under Current Medium-Term Management Plan

- ✓ Achieve operational stability and profitability in existing large-scale development projects (Ambatovy, Sierra Gorda, etc.)
- ✓ Acquire new cost competitive resources from a medium to long-term perspective
 - Proactively seek to acquire cost competitive assets in prioritized commodity groups (Taking into account “mega trends”)
 - Seek and acquire projects by leveraging our strengths (partners, operation management capability, etc.)
 - Mitigate concentration on specific projects and regions
- ✓ Continuously enhance systems and strengthen capabilities

“Roadmap towards our VISION”



Consider country, project size, project stage, etc.

Ambatovy Nickel Project

- **Products: Nickel, Cobalt**
- **Country: Madagascar**
- **Shareholder composition:**
Sumitomo Corporation: 47.7%,
Sherritt: 12%, KORES: 40.3%



- **September 2015:** Achieved financial completion under the project finance contract
⇒ In terms of operation, 90-day average nickel metal production achieved over 90% of full capacity.
- **August 2016:** Reached agreement with the lenders on the deferral of principal repayments
⇒ Mitigated financial concerns. Concentration on operational improvements.
- **January 2018:** Completed the sponsor structural change,
Sumitomo Corporation became the largest shareholder

[Future initiatives]

- Focus on stabilizing operation at a high level and further cost reduction
- Continue to provide support to the project as the largest shareholder

Sierra Gorda Copper and Molybdenum Project

- **Products: Copper, Molybdenum, Gold**
- **Country: Chile**
- **Shareholder composition:**
Sumitomo Corporation: 13.5%,
KGHM: 55%,
Sumitomo Metal Mining: 31.5%



June 2015: Commenced commercial production.

[Current initiatives]

- Reduce cost and increase production.
- Increase throughput with minimum additional CAPEX (debottlenecking plan).



Increase Value for Existing Upstream Projects

San Cristobal

- Products: Lead, zinc, silver
- Country: Bolivia
- Shareholder composition:
Sumitomo Corporation: 100%

2017: Achieved record profits
(27.8 billion yen)

[Future initiatives]

- Continue to work on project management and to increase value of this asset, while also taking the life of mine into consideration.



MUSA

- Product: Iron ore
- Country: Brazil
- Shareholder composition:
Sumitomo Corporation: 30%,
Usiminas: 70%

July 2017: Settlement of arbitration with the port
September 2017: Resumed exports

[Future initiatives]

- Feasibility Study for Phase II expansion



Increase Value for Existing Upstream Projects

Coal project in Australia

- Products: Coking coal, thermal coal
- Country: Australia
- Major partner : Glencore

[Future initiatives]

- Acquire prime assets



Shale gas project in the U.S.

- Products: Natural gas, NGL
- Country: U.S.
- Major partner : Rex Energy Corporation

August 2010: Participated in the project

[Future initiatives]

- Since almost all lease has been maintained, will promote the development through monitoring the trends of gas prices
- Continuous cost reduction and improvement of productivity through the optimization of development



Mineral Resources and Energy: Initiatives in Midstream and Downstream Fields

Growth Strategies

- In the midstream and downstream fields, we will strengthen the value chain with upstream fields, and create value-added businesses utilizing derivative functions, etc. In addition to expand existing businesses, we will aim to develop new business models.

Major Initiatives

Mineral Resources Division No. 1	<ul style="list-style-type: none"> • Trading of nonferrous metals (copper, nickel, rare metals, zinc, lead, etc.) • Commodity trading (derivatives, physical precious metals)
Mineral Resources Division No. 2	<ul style="list-style-type: none"> • Manganese Alloy Project (SAKURA) • Trading of carbon materials and products (needle coke, electrodes, carbon fiber reinforced plastic [CFRP], etc.)
Energy Division	<ul style="list-style-type: none"> • U.S. LNG export project • LPG project: Gyxis/Enessance • LNG bunkering project • FPSO owning and chartering project

Manufacturing and Sales of Manganese Ferroalloys ♦ Sumitomo Corporation (SAKURA)

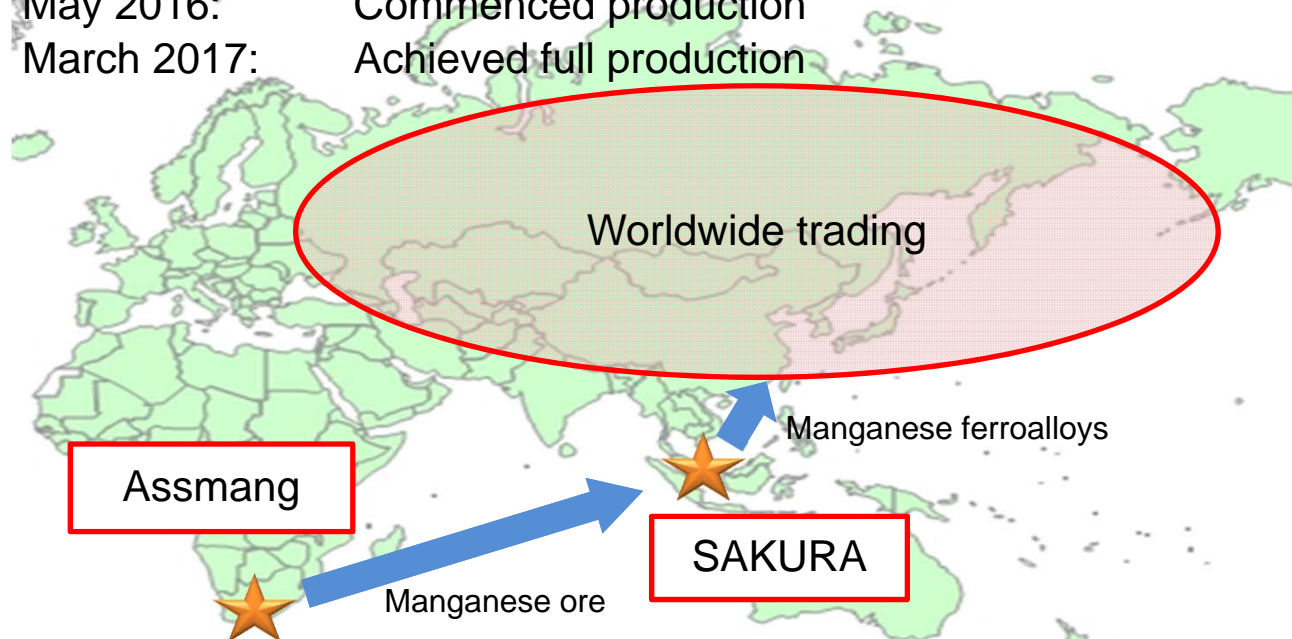
- **Products:** Manganese ferroalloys
 - **Country:** Malaysia
 - **Shareholder composition:**
Sumitomo Corporation: 26.64%,
Assmang: 54.36%, China Steel: 19%
- Expand business with Assmang into manufacturing fields
— Development of value chain —**



November 2013: Commenced construction

May 2016: Commenced production

March 2017: Achieved full production



U.S. LNG Export Project

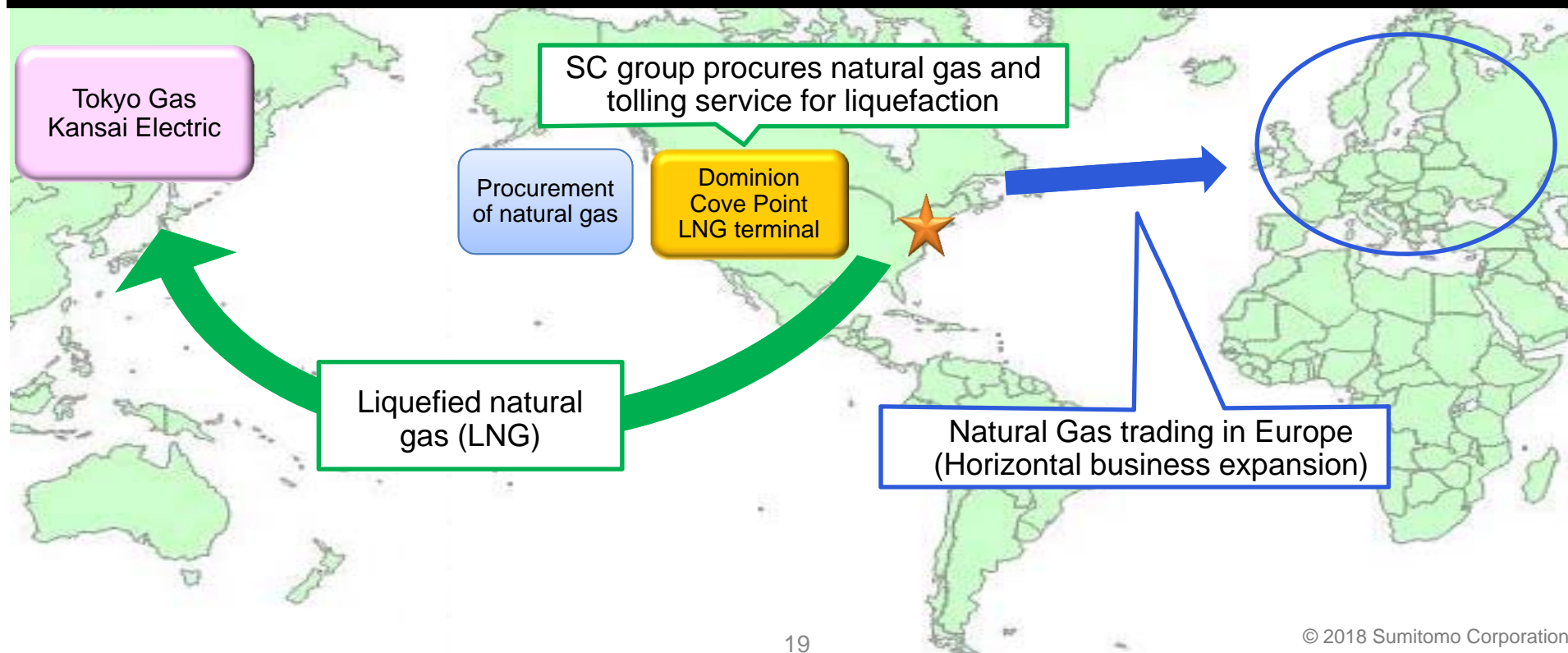
In 2014, Sumitomo Corporation established ST Cove Point LLC jointly with Tokyo Gas. Sumitomo Corporation's first LNG project in which we will engage in natural gas liquefaction and sales for the next 20 years.

● Shareholder composition: Sumitomo Corporation: 51%, Tokyo Gas: 49%

December 2012: Signed a Terminal Service Agreement with Dominion for the liquefaction service

April 2013: Entered into Heads of Agreement for LNG sales and purchase

April 2018: Commenced commercial operation



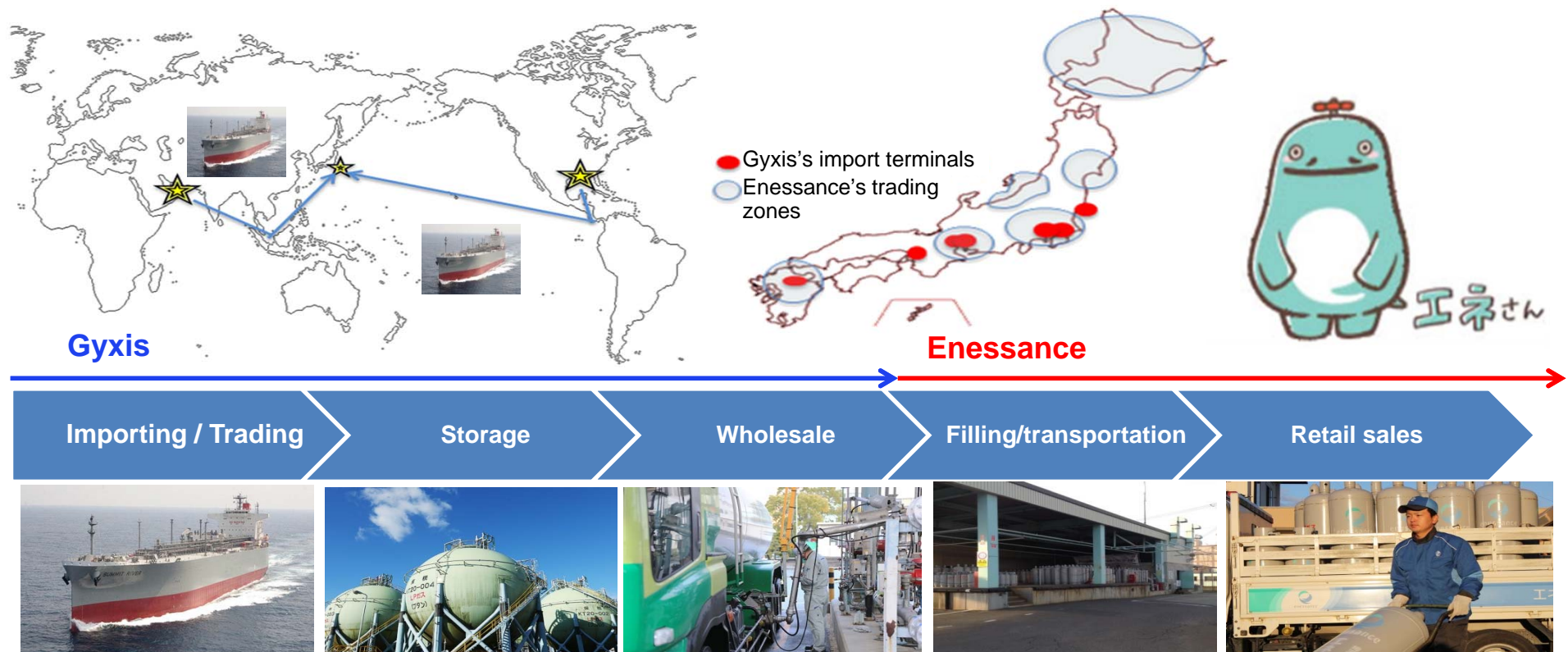
LPG Project: Gyxis/Enessance

Gyxis (Importing)

- ✓ Stable supply mainly from the Middle East and U.S., by using its own chartered vessels.
- ✓ Global trading by leveraging importing flow into Japan.

Enessance (Retailing)

- ✓ Direct-sales customers: 280k, that rank in top 10 as LPG retailers in Japan.
- ✓ Promotion of electricity sales and house renovation business along with LPG business.



Promotion of New Businesses

LNG Bunkering Project

- Activities: LNG supply to LNG fueled vessels
- Operations site: Japan (Tokyo Bay)
- Major partners: Uyen Transtech,
Yokohama-Kawasaki
International Port

Work on the development of LNG bunkering business looking ahead of the regulations on sulfur oxide emissions to be tightened for all ocean areas starting from 2020

[Future initiatives]

- Joint discussion with partners with regard to deploy LNG bunkering vessel
- Marketing toward securing LNG bunker demand

FPSO Owning and Chartering Project

- Products: Crude oil, Natural gas
- Operations site: Offshore Ghana
- Major partners: Yinson Holdings BHD(Yinson),
JGC Corporation,
Kawasaki Kisen Kaisha, Ltd.,
Development Bank of Japan

April 2018 :

Yinson and Sumitomo Corporation entered into Memorandum of Understanding for collaboration in FPSO and FSO business.

[Future initiatives]

- The domestic supply of natural gas from FPSO is expected to commence in Ghana within 2018.
- Sumitomo Corporation will roll out FPSO and FSO Business in other regions with Yinson.



Initiatives by the Basic Chemicals & Electronics Division

Petrochemicals	Inorganic and Performance Chemicals	Electronics
<ul style="list-style-type: none"> Petrochemical raw materials (Olefin, etc.) Petrochemical products (Phenol, etc.) Plastics, synthetic rubber 	<ul style="list-style-type: none"> Raw materials for glass (Soda ash, etc.) Sulfuric acid, slag High purity quartz Performance chemicals (Battery materials, etc.) 	<ul style="list-style-type: none"> Semiconductor materials LED chips EMS business (PCB Assembly business)



Initiatives by Basic Chemicals & Electronics Division

Growth Strategies

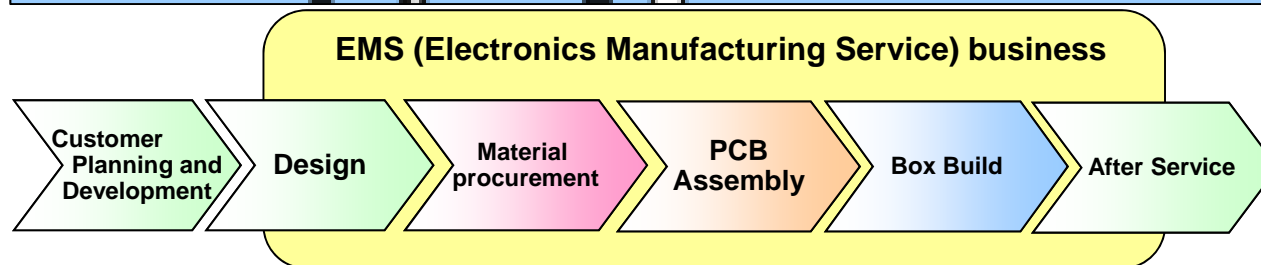
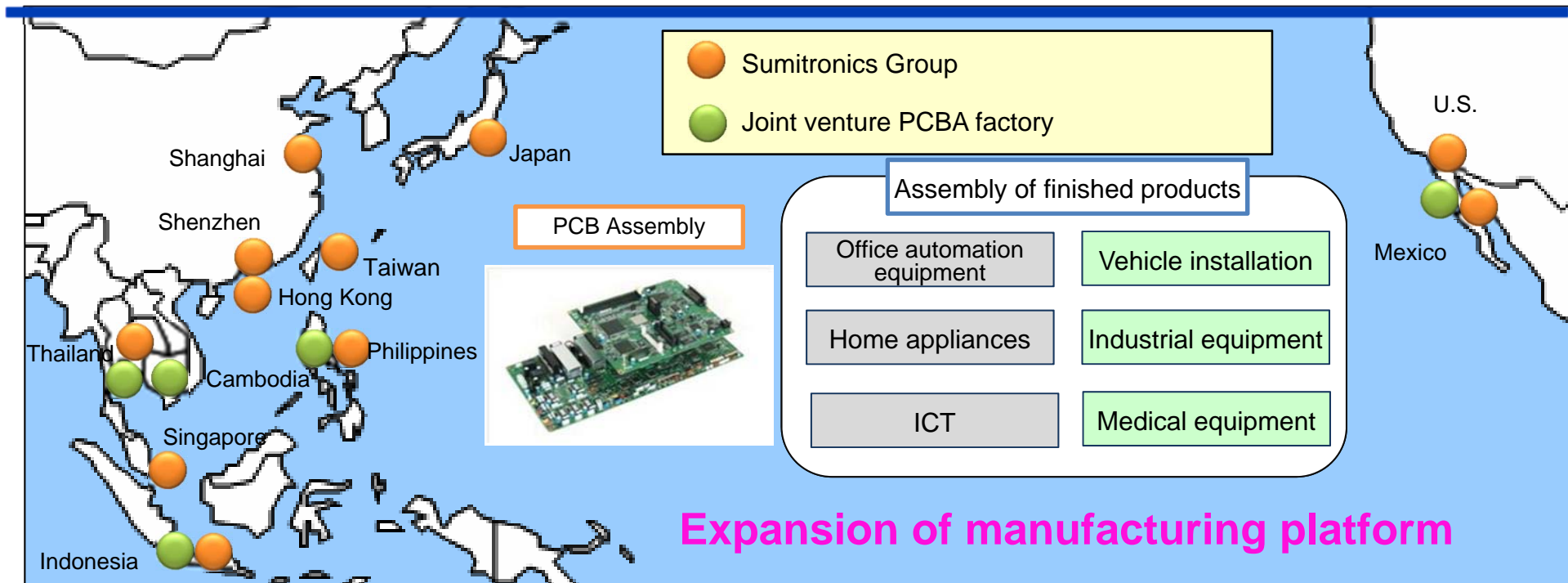
- With the aim of “contributing to the development of local communities and industries” and “establishing a foundation for comfortable and enriching lifestyles,” we will provide highly value-added services and raw materials.
- We will strive to expand our global earnings base by boosting the joint structure of trading and manufacturing businesses and take on challenges to develop new businesses that will lead to the achievement of rapid growth.

Major Initiatives

Petrochemicals	<ul style="list-style-type: none"> • Accelerate the growth of the phenol manufacturing business in China and expand revenue from trading of peripheral core products • Promote the engineering plastics manufacturing business jointly with KURARAY and PTTGC in Thailand
Inorganic and performance chemicals	<ul style="list-style-type: none"> • Enhance the sulfuric acid tank terminal business (U.S. and Chile) • Expand the business for lithium-ion battery materials
Electronics	<ul style="list-style-type: none"> • Expand trade of semiconductor and electronics material business and develop next-generation automotive electronics business • Strengthen the earnings base of EMS business by Sumitronics Group

Strengthen the Earnings Base of EMS Business by Sumitronics Group

◆ Sumitomo Corporation



- ◆ Robotization for productivity improvement
- ◆ Business expansion to other regions following Cambodia
- ◆ Expansion of value chain to resin molding business, etc.

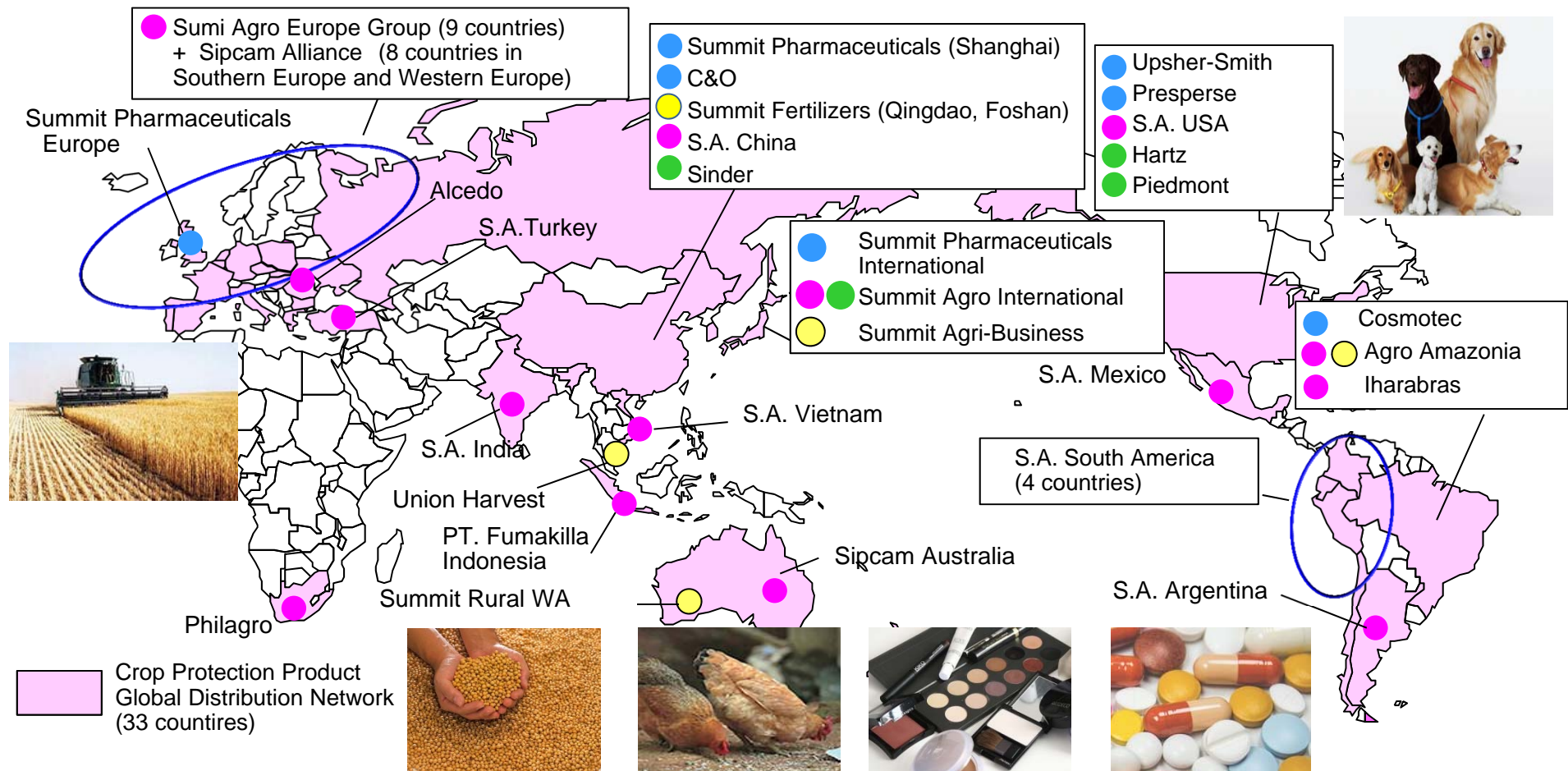


“CIMS” production facility management system

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Initiatives by Life Science Division

Medical Science	AgriScience	Crop Science	Animal Health Science
<ul style="list-style-type: none"> Pharmaceuticals, generic medicine Cosmetics 	<ul style="list-style-type: none"> Crop protection products Seeds and other agricultural materials Agricultural input & service business 	<ul style="list-style-type: none"> Fertilizers Agricultural input & service business 	<ul style="list-style-type: none"> Veterinary drugs (for livestock and companion animal)



Initiatives by the Life Science Division

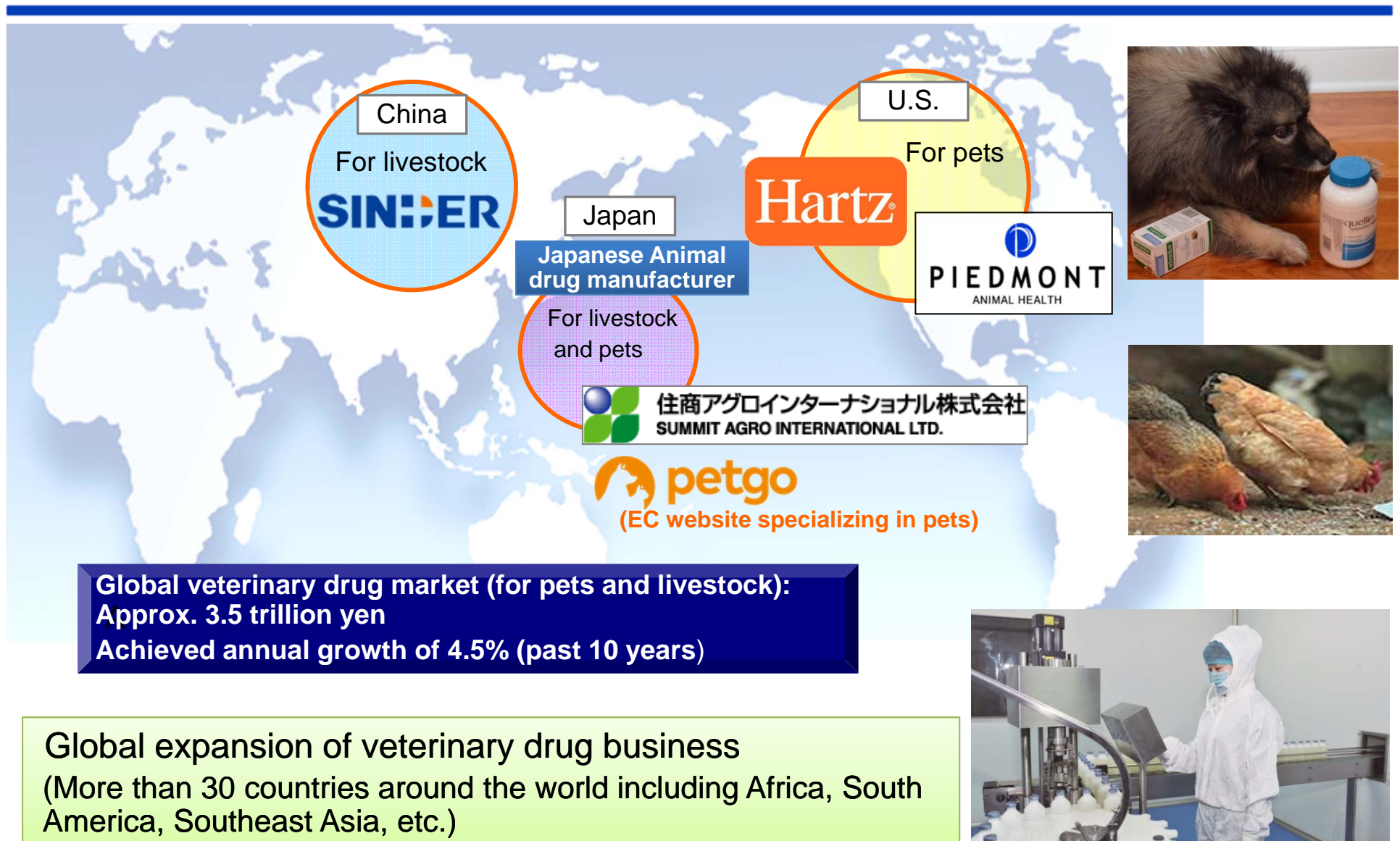
Growth Strategies

- We will contribute to the goal of “establishing a foundation for comfortable and enriching lifestyles” by ensuring the stable supply of safe and reliable food and promoting mental and physical health in the life science fields.
- We will aim to realize the No. 1 position as a trading company that possesses highly specialized expertise and a solid business foundation.

Major Initiatives

Pharmaceutical and cosmetics	<ul style="list-style-type: none"> • Enhance the value of generic pharmaceutical business in the U.S. (Upsher-Smith Laboratories, LLC) • Expand global operation of the cosmetics business
Crop protection products and fertilizers	<ul style="list-style-type: none"> • Expand the agricultural input & service business (new businesses in Ukraine, Brazil, etc.) • Further strengthen distribution network for crop protection products and fertilizers • Promote IoT-based precision agriculture (use of agricultural drones, etc.)
Veterinary drugs	<ul style="list-style-type: none"> • Expand global operation of veterinary drugs • Promote biological business for livestock in China • Develop and promote companion animal drugs in U.S.

Global Expansion of Veterinary Drug Business



Incubation of Next-Generation Businesses

Mineral Resources &

<Eco friendly>

- ◆ Considering hydrogen production by using renewable energy
- ◆ Considering utilization of brown coal carbonization and hydrogen (by-product)
- ◆ Expansion of gas business through LNG that is core of low-carbon energy



Mining area of brown coal

<Battery related (EV etc.) >

- ◆ Production of nickel/cobalt by Ambatovy project
- ◆ Considering investment in lithium project
- ◆ Pioneering a new market of needle cokes using for anode material of lithium-ion battery

<Energy-saving material>

- ◆ Consider investment in carbon fiber composite material business
- ◆ Utilization of carbon fiber for weight saving of dump truck's bed

Macro trend(Population growth·Increase in income·Urbanization)

Mega trend

Shortage of Mineral resources & energy

Shortage of food

Global warming

IoT etc.

Chemicals Field

<Power consumption efficiency /Energy-saving material>

- ◆ Expand businesses of silicon wafer made by SUMCO and silicon carbide wafer made by Cree
- ◆ Invest in manufacturing business of engineering plastics jointly with Kuraray and PTTGC in Thailand
- ◆ Consider the participation in rubber compounding business in the U.S. for automotive applications



Engineering plastics by Kuraray

<Battery-related (EV, etc.)>

- ◆ Manufacturing electrolytes for lithium-ion batteries by Morita New Energy Materials
- ◆ Expand trade businesses of binder for positive electrode material made by Kureha



Special drum containers of LiPF6

<IoT-based precision agriculture>

- ◆ Overseas development of smart wearable device for cattle monitoring and agricultural drone



Smart wearable device for cattle

Agricultural drone

Incubation of Next-Generation Businesses

Engineering plastics manufacturing business in Thailand

- Products: Engineering plastics (butadiene derivatives)
- Country: Thailand
- Shareholder composition:
Sumitomo Corporation: 13.3%, Kuraray Co., Ltd: 53.3%,
PTT Global Chemical Public Company Ltd. (PTTGC): 33.4%

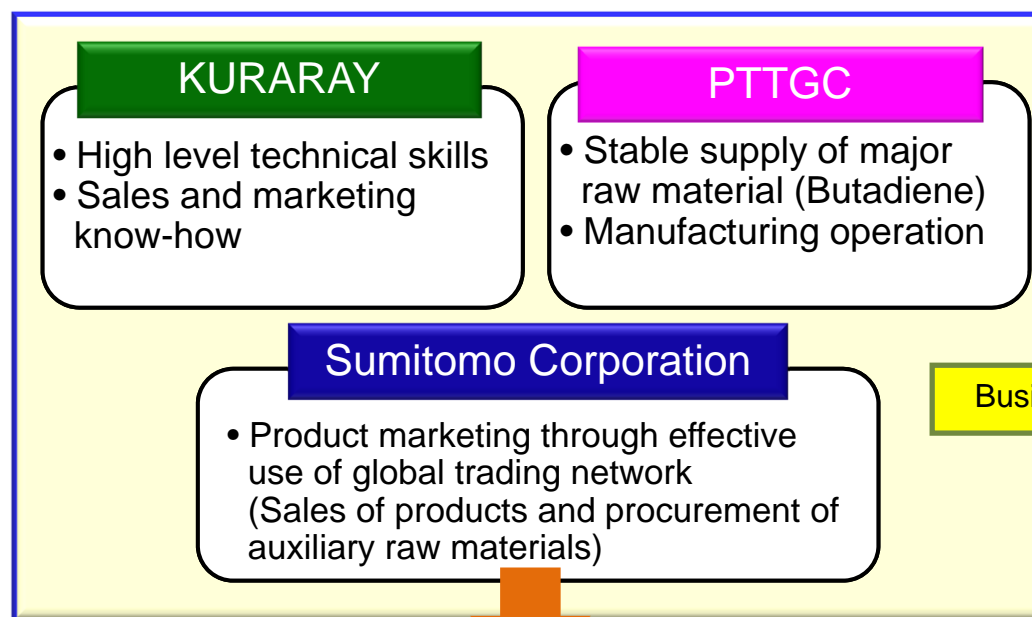
“Manufacturing” in a global niche market



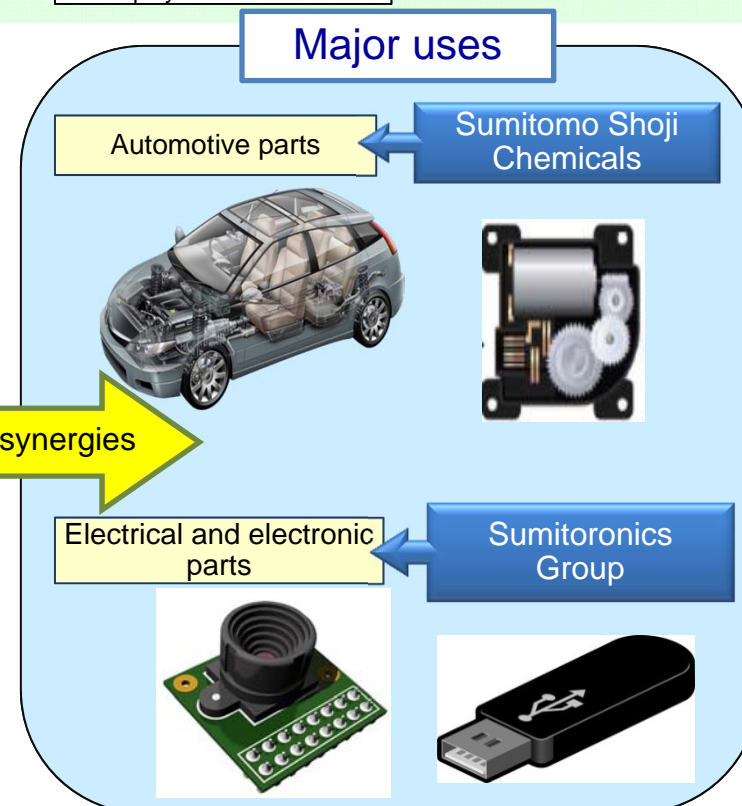
High heat-resistant polyamide resins



Thermoplastic elastomers



Creation of new values



Incubation of Next-Generation Businesses

Carbon-free production of hydrogen by electrolyzing water using power generated from renewable sources

Will consider carbon-free hydrogen production business by using renewable energy (mainly wind and solar power) for electrolyzing water, both inside and outside Japan.

Will contribute to developing a post-carbon energy system by cultivating demand and using such carbon-free hydrogen for regional energy management, and as fuel in household, industrial and transportation sectors.

Development of Hydrogen business with unused natural resources such as Brown coal, combined with CCUS

To study the development of Hydrogen business through the utilization of unused resources such as Brown coal, combined with CCUS technology, to help achieve a carbon neutral world.

Brown Coal: low grade, high moisture coal.
CCUS: Carbon Dioxide Capture, Utilization and Storage.
(CO₂ capture, reuse and storage technology)



Brown coal mining site

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Net Profit/Loss: Actual Results and Plan Sumitomo Corporation

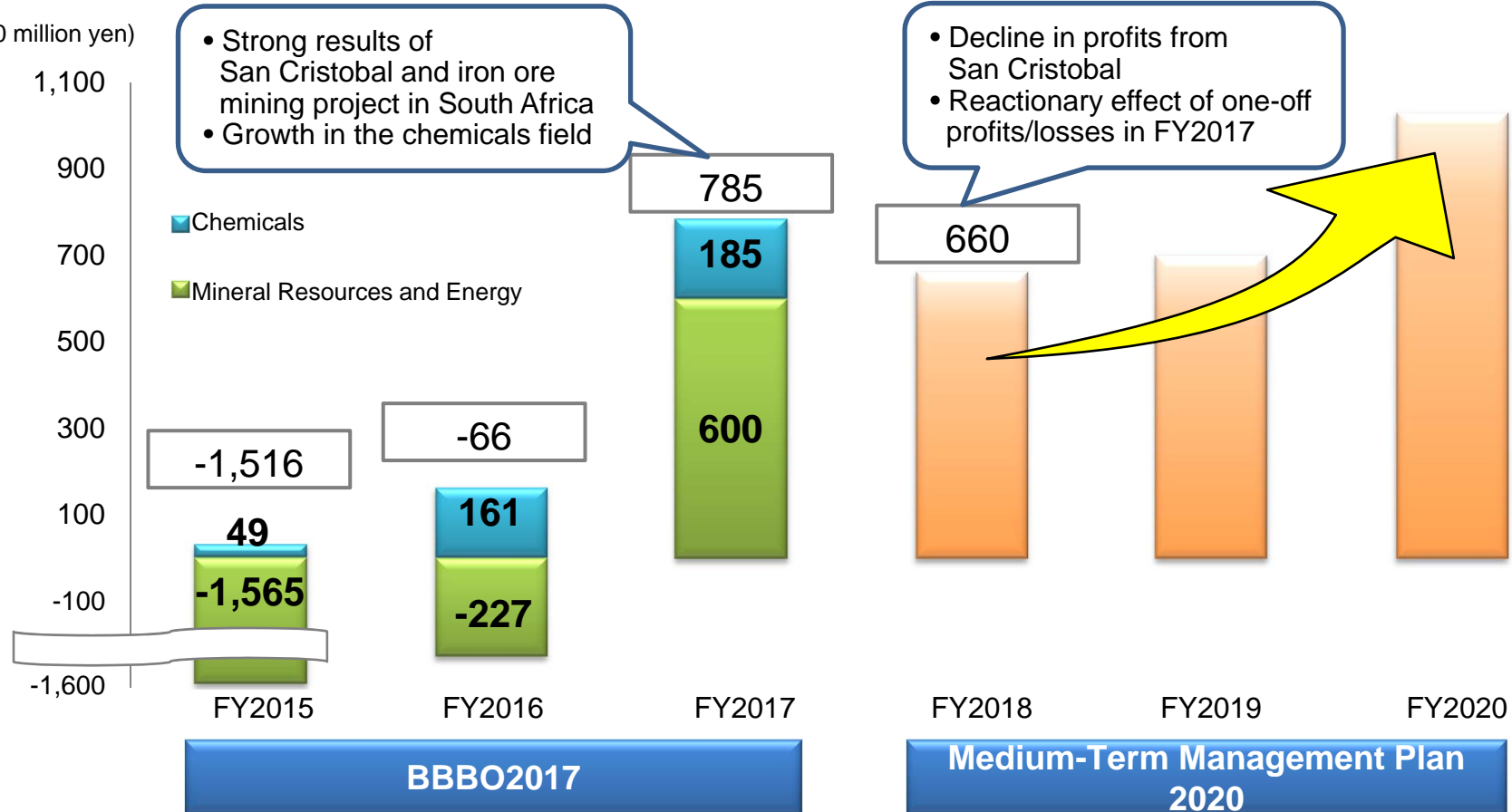
■ BBBO2017

Mineral Resources and Energy: Stabilization of operations and cost reduction of existing upstream projects
Chemicals: Development of profit foundation toward a new growth stage
⇒ Regained position as one of the main pillars of Sumitomo Corporation's businesses

■ Medium-Term Management Plan 2020

Mineral Resources and Energy: Enhancement of profitability of existing businesses and investment in upstream projects
Chemicals: Solid growth
⇒ Plot growth strategies toward FY2020

(100 million yen)



Note: Results for FY2015 are on a segment basis 32

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Investment and Reduction: Actual Results and Plan Sumitomo Corporation

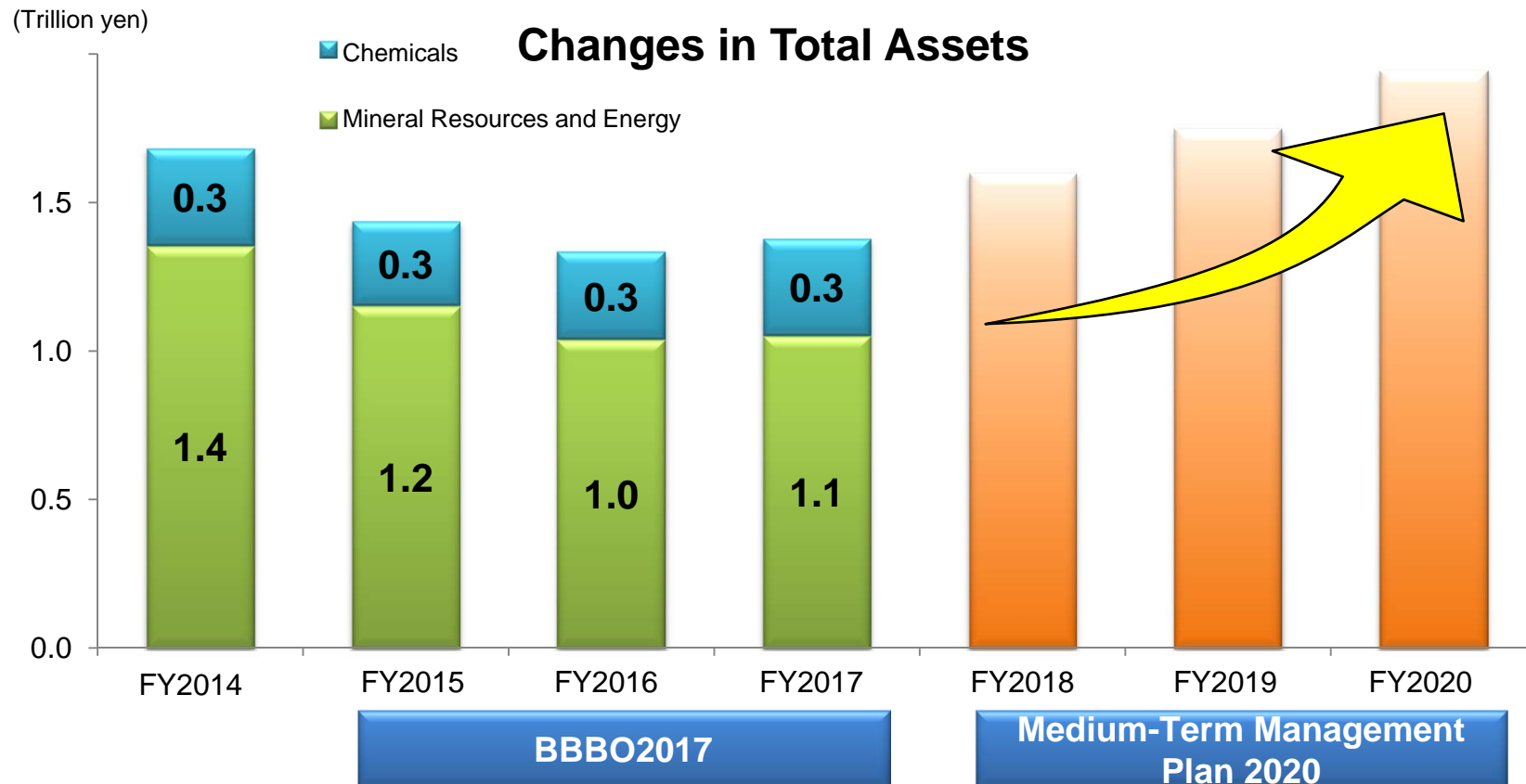
■ BBBO2017

Mineral Resources and Energy: Divestiture took precedence

Chemicals: Invested in the generic medicine business in the U.S.

■ Medium-Term Management Plan 2020

Will make new investments based on growth strategies both in mineral resources field and the chemicals field



Note: Segment basis



Phenol production business in China



Ambatovy nickel project

Achieving Harmony with the Global Environment



Iron ore mining project in South Africa

Contributing to the Development of Local Communities and Industries

Establishing a Foundation for Comfortable and Enriching Lifestyles



Tangguh LNG project in Indonesia



Cosmetics business



Developing Human Resources and Promoting Diversity