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Mitsubishi Chemical Holdings Group Investors Meeting

December 8, 2011

Yoshimitsu Kobayashi
President & Chief Executive Officer
Mitsubishi Chemical Holdings Corporation

Good Chemistry for Tomorrow
Creating better relationships among people, society, and our planet.

The forward-looking statements are based largely on information available as of the date hereof, and are subject to risks and uncertainties which may be beyond company control. Actual results could differ largely, due to numerous factors, including but not limited to the following: Group companies execute businesses in many different fields, such as information and electronics, performance products, polymers and processed products, pharmaceuticals, carbon and inorganic products, petrochemicals, and these business results are subjected to influences of world demands, exchange rates, price and procurement volume of crude oil and naphtha, trend of market price, speed in technology innovation, National Health Insurance price revision, product liabilities, lawsuits, laws and regulations.

List of Abbreviations

MCHC: Mitsubishi Chemical Holdings Corporation
MCC: Mitsubishi Chemical Corporation
MTPC: Mitsubishi Tanabe Pharma Corporation
MPI: Mitsubishi Plastics, Inc.
MRC: Mitsubishi Rayon Co., Ltd.
MEP: Mitsubishi Engineering-Plastics Corporation
JPP: Japan Polypropylene Corporation

GaN: Gallium nitride
CFRTP: Carbon fiber reinforced thermoplastics
PET : Polyethylene terephthalate
PTA: Purified terephthalic acid
EO: Ethylene oxide
EC: Ethylene carbonate
EG: Ethylene glycol
SM: Styrene monomer
PTMG: Polytetramethylene ether glycol
1,4-BG: 1,4-butylene glycol
PHL: Phenol
BPA: Bisphenol-A
PC: Polycarbonate
PO:Polyolefin
PP: Polypropylene
PE: Polyethylene
MMA: Methyl methacrylate
PMMA: Polymethylmethacrylate
VCM: Vinyl chloride monomer
PVC: Polyvinyl chloride
ABS: Acrylonitrile butadiene styrene
PS: Polystyrene
PBT: Polybutylene terephthalate

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Today's Agenda

Yoshimitsu Kobayashi
President & Chief Executive Officer
Mitsubishi Chemical Holdings Corporation

- **Business Challenges**
- **Progress in the First Year of *APTSIS 15* (FY2011 – FY2015)**
  - **Key Growth and Cash-generating Businesses**
  - **Growth and Next-generation Growth Businesses that We Are Intensively Cultivating**
  - **Synergies**
- ***APTSIS 15* Goals**

Hiroaki Ishizuka
Senior Managing Executive Officer
Mitsubishi Chemical Corporation

- ***APTSIS 15* Business Highlights**
  - **Business Strategies for the Chemicals and Polymers Segments**
    - Converting from Conventional Plant Operation to Optimal Plant Operation -

Business Challenges

Business Environment

Globalization

Sustainability

The Great East Japan Earthquake of March 11

Internally driven growth declining ⇨ Changing gear

Solutions

Differentiation

Innovation

Measures to prevent economic hollowing-out

Globalization (G∞)

1. Difficulty of differentiation (by digitalization and IT)
2. Securing resources (key challenges: rare earths, crude oil, and the Great East Japan Earthquake on 11, March)
3. Speed (in an increasingly borderless world)
4. A decoupling and coupling world

Decoupling

Macro vs. micro economies

Asia, South America, Eastern Europe, Middle East

- Capturing Asian growth markets with sales of commodities and other resources
- Scale and global expansion

- Inflationary risks - Country risks

Japan, Western Europe, North America

- Heading toward high performance and high-added value and solutions

- Sep.11, 2009 - Sep.15, 2008 - Mar.11, 2011
- Volatile trends - Downgrade of U.S. debt
- Sovereign risks

Coupling

State Capitalism

Free Market

Two-pronged strategy: Specialties and Commodities

Sustainability

The Environment

Notably global warming, water, desertification, and the biodiversity crisis

Economy

Issues including resource depletion, food, financial, and economic crisis

Society

Such as population of 7 billion, aging society and problems of developing countries

The world is facing a major turning point

Nuclear power accident transforms energy policies

Rise in power costs

Increase in fuel costs
Renewable energy law

Internally Driven Growth Declining

United States: Sluggish consumption and persistently high (8.6%) unemployment rates
Europe: Fiscal deficits posing sovereign risks
China: Rising consumer prices, high housing prices, and tighter monetary policy

Fiscal and monetary policies have reached limits of effectiveness
Fiscal and monetary policy-led growth has come to a standstill

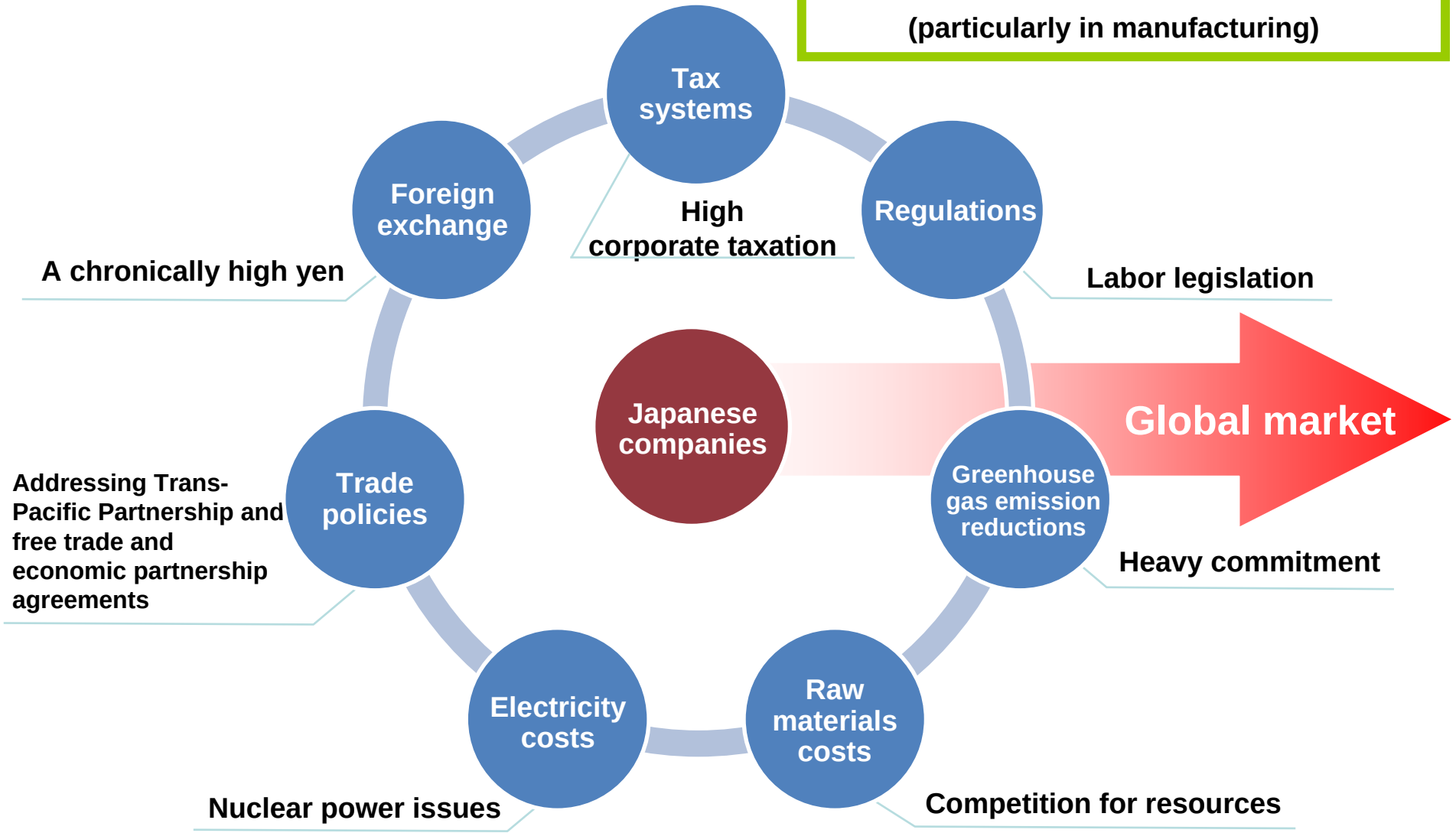
Relaxed monetary policy in China and cooperation between key central banks in Japan, the United States, and Europe

Prepared for the worst

Changing gear
Speedy optimization

Seven Key Barriers to Fair Competition in Global Market

Reactive deal with the risk of hollowing-out
Necessity of an equal footing internationally
(particularly in manufacturing)



Proactive Deal with the Risk of Hollowing-out

Differentiation & Innovation

Switch to international division of labor and low-energy-consumption model
Advance the industrial structure and create new industries

Provide employment

Notably in the service, agriculture, forestry and fisheries and healthcare sectors

Cultivating cosmopolitan employees and harnessing foreign nationals

Progress in the First Year of *APTSIS 15*

1. Key Growth and Cash-generating Businesses
2. Growth and Next-generation Growth Businesses that We Are Intensively Cultivating
3. Synergies

APTSIS 15 Portfolio Management

Topics: Growth and Cash-generating Businesses

◆Performance Products ◆Health Care ◆Industrial Materials

Next-generation Growth Business (6)

- Organic photovoltaic modules and materials
- Organic photo semiconductors
- Advanced performance products
- Agribusiness solutions
- Healthcare solutions
- Sustainable resources

Growth Business (11)

- White LED lighting and materials
- Lithium-ion battery materials
- **FPD components**
- Performance composite materials
- High performance molding products
- Specialty chemicals
- Water treatment system and services
- **Pharmaceuticals**
- **High performance graphite**
- Performance polymers
- **MMA/PMMA**

Net sales in FY2010

Business to be restructured (15)

Naphtha crackers, etc.

Cash-generating Business (18)

- Recording media
- Performance films
- Food ingredients
- Diagnostics & support for new pharmaceutical development
- **PTA**
- **Coke**
- PHL/BPA/PC
- PP

Conditions for Key Product Lines from First through Second Halves of FY2011

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MMA/PMMA

MMA performed basically as projected in the first half, but present market conditions have weakened owing to declining demand for optical applications. PMMA earnings will likely fall because of decreasing FPD demand.

Volumes →
Prices →

Pharmaceuticals

Earnings and profit increased in the first half. Second half earnings will likely be lower than in the first half because of higher operating costs to prepare for product launches and increased R&D expenditure.

Volumes →
Prices →

PTA

Although volume has not dropped much, the spread has deteriorated and the market has recently declined faster than envisaged. Prospects do not look very positive for the second half, either.

Volumes →
Prices (Spread) ↘

FPD components

LCD TV sales slowed significantly from 1Q of FY2011, with the downturn accelerating from 2Q. An early demand recovery seems unlikely.

Volumes ↘
Prices ↘

Carbon

We assume that market conditions will weaken in the second half, and will focus on maintaining sales volume and prices with outstanding customers with which we have enjoyed long-term relationships.

Volumes →
Prices (Spread) →

1-1: MMA / PMMA

Current situation

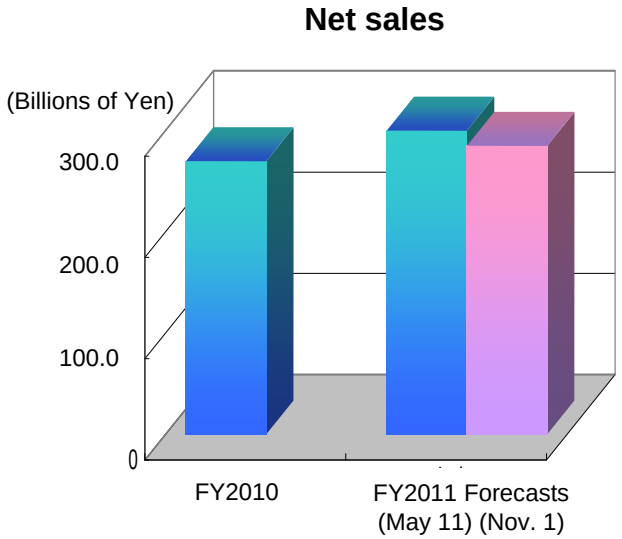
- **MMA monomer :**

・Demand for optical applications was sluggish in the first half, particularly in Asia, but profits were almost in line with projections, reflecting solid general and industrial demand in Europe and the U.S.

・In the second half, persistently sluggish sales for optical applications have started affecting market conditions, leading to minor production adjustments

- **PMMA :**

・Volumes and prices worsened in the first half because demand deteriorated for light guide plate for LCD TVs



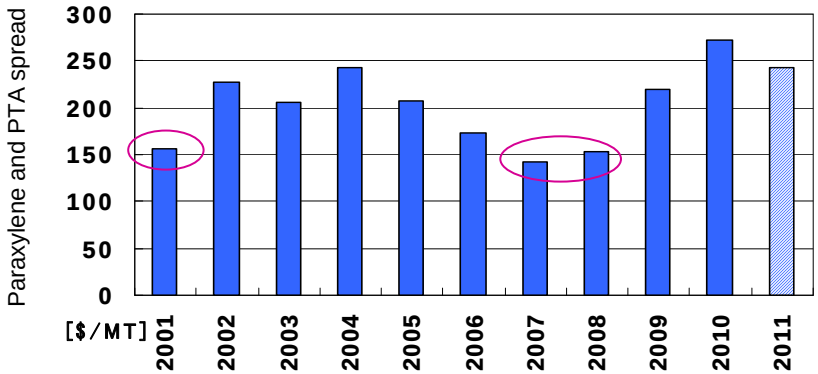
Future initiatives

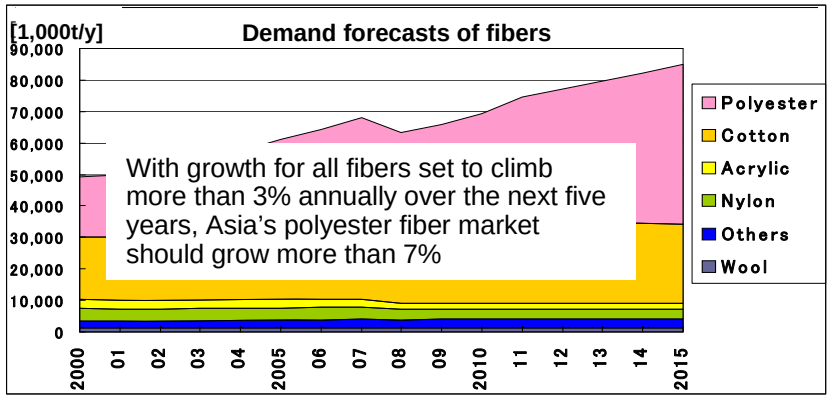
- Create an integrated management structure for our global production bases in MMA monomer, and maximize earnings for production plans formulated to match demand trends
- In PMMA, shift the sales portfolio from LED TV light guide plate applications to such general applications as LED lighting and automobiles.
  Continue to build global presence in large panels, a key Group strength

1-2: PTA

Current situation

- **While *APTSIS 15* factored in declining market conditions from its inception, the spread has deteriorated and the market has recently declined faster than envisaged**
  Prospects do not look very positive
  That said, the volume impact is limited

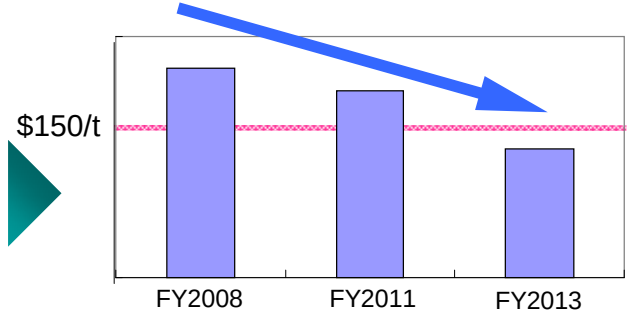




Future initiatives

- **Swiftly stabilize production at the No.2 production facility in India**
- **Further reduce costs by leveraging new technologies that enhance energy and water efficiency**
- **Currently reinforcing structure so we can secure profits even if yearly average-spreads drop beneath the worst levels of the past 10 years ($150/t)**

Cost reduction outlook



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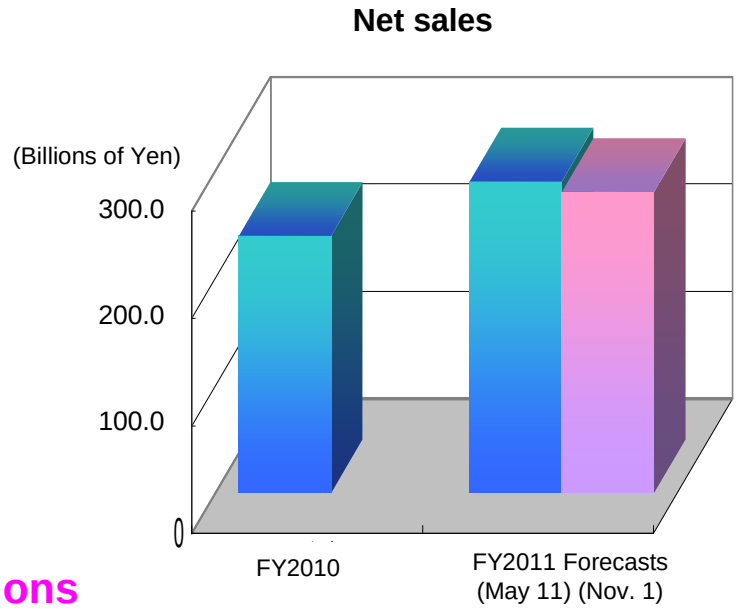
1-3: Carbon (Coke and High-Performance Graphite)

Current situation

- Volumes down slightly in line with decreased crude steel production
- Slow markets from 2Q of FY2011 because of an imbalance in demand and supply
- Export margins deteriorating



Future initiatives

- Export focus shifting from Europe and the U.S. toward India, Thailand, and other emerging nations
- Explore joint venture with overseas partner (POSCO Chemtech Co., Ltd. in Korea)
- Harness proprietary technologies and maintain and reinforce production

1-4: Pharmaceuticals

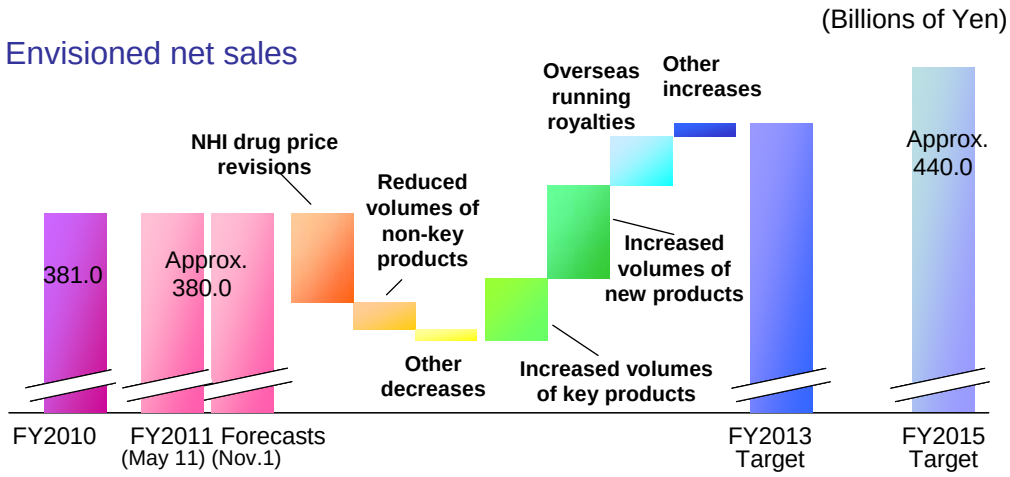
Current situation

- Exceeded projections in the first half, notably because of increased income from technology licensing fees for FTY720 (*Gilenia,* multiple sclerosis treatment)
- In the second half, we expect lower earnings because of significantly higher marketing spending on four new products (*Lexapro*, *Simponi*, *Telavic*, and *Imusera*) and higher R&D expenditure stemming from development progress

Future initiatives

- FY2011: Steadily cultivate *Remicade* and new products (*Lexapro* and *Simponi*)
- From FY2012: Boost earnings by offsetting declines from a revision in NHI drug prices through gains from new products and increased volume of key products

Outlook for FY2012 and beyond



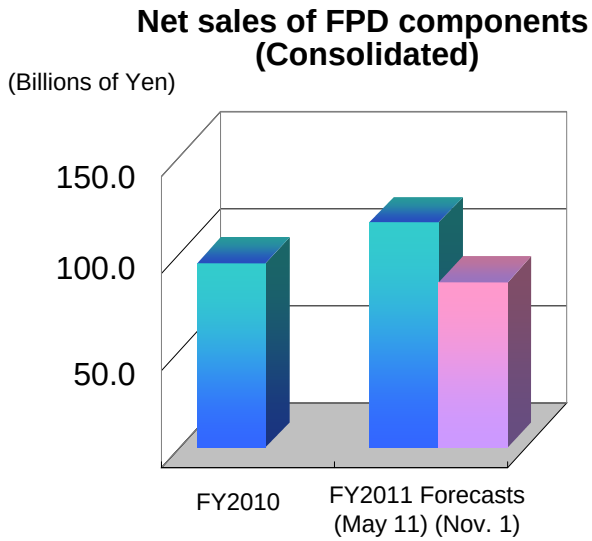
Remicade: Indication changed for treating Crohn's disease; *Venoglobulin*: For generalized Myasthenia Gravis; *Lexapro*: Antidepressant; *Simponi*: For rheumatoid arthritis; *Telavic*: For chronic hepatitis C; *Imusera*: For multiple sclerosis

1-5: FPD Components*

* OPL film for polarizing film, PET film, Color resist, and Acrylic sheet for light guide panel etc.

Current situation

- In FY2011, revenues and earnings likely to suffer from downturn in global LCD television market, chronic inventory adjustments in LCD components, and yen's appreciation
- From 2012, likely to feel effects of slower expansion in large panel production and further price declines
- Some products have only slight price decreases because of their market share and the nature of the products



Future initiatives

- We are reviewing overall projections for FPD components growth rates, but we anticipate ongoing expansion, as we are specializing in the smiling curve area on the left

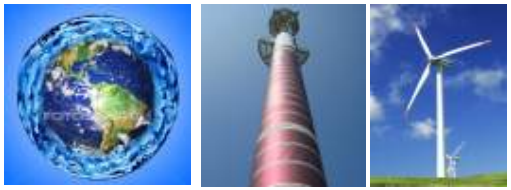
- That said, we will continue to push ahead with materials in which we have superior quality, including by accelerating overseas expansion.
  At the same time, we will radically overhaul our business in materials for which it is hard to differentiate quality, including by freezing investments and developing other applications

Prospects for Electronics Businesses

Accelerate the shift to solutions businesses in the sustainability and health fields

Build presences in expanding markets

Sustainability	Health	Comfort
Environment and new energy	Health and healthcare	New materials



Develop solutions businesses

Develop convenient and entertaining products

Fully harness technological capabilities and marketing and sales platform

Electronics businesses

Progress in the First Year of *APTSIS 15*

1. Key Growth and Cash-generating Businesses

2. Growth and Next-generation Growth Businesses that We Are Intensively Cultivating
   - 2-1 Carbon Fibers and Composite Materials (Performance composite materials)
   - 2-2 High performance graphite
   - 2-3 White LED lighting and materials
   - 2-4 Lithium-ion battery materials
   - 2-5 Health Care Solutions

3. Synergies

Growth and Next-generation Growth Businesses that We Are Intensively Developing

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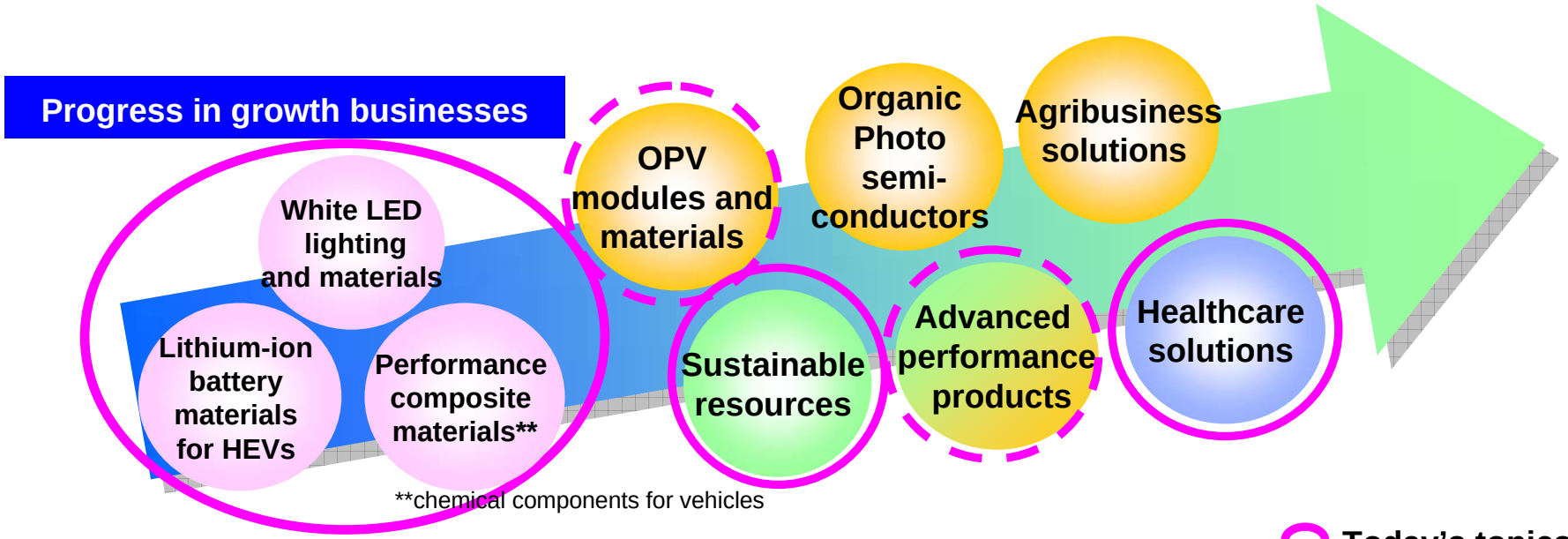
Sustainable growth drivers

Challenge the growing markets

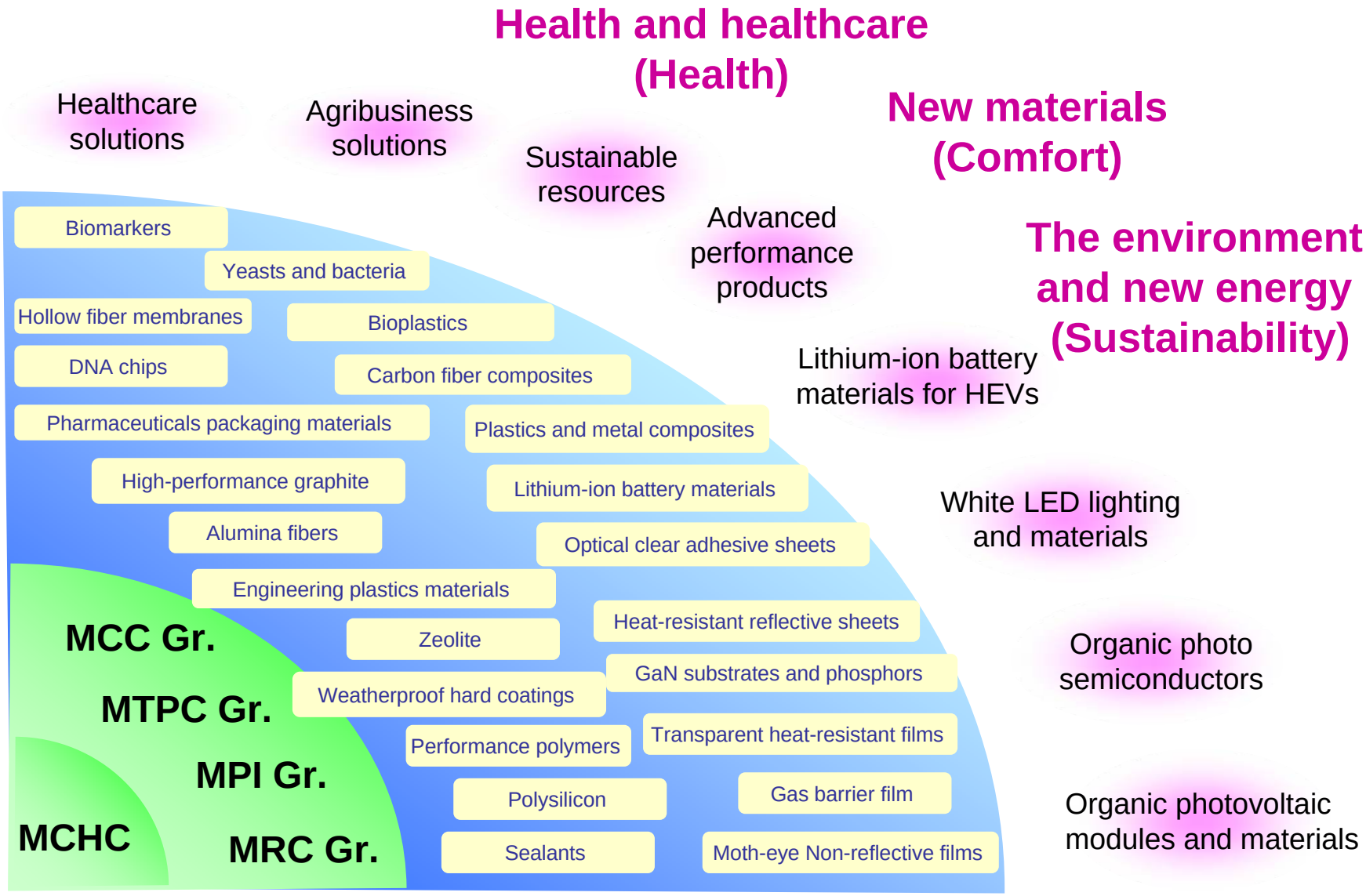
Sustainability — Environment and new energy

Health — Health and healthcare

Comfort — New materials



Materials in Next-generation Growth and Growth Businesses



New Carbon Technology
- Integration of Organic, Inorganic and Polymer Chemistry -

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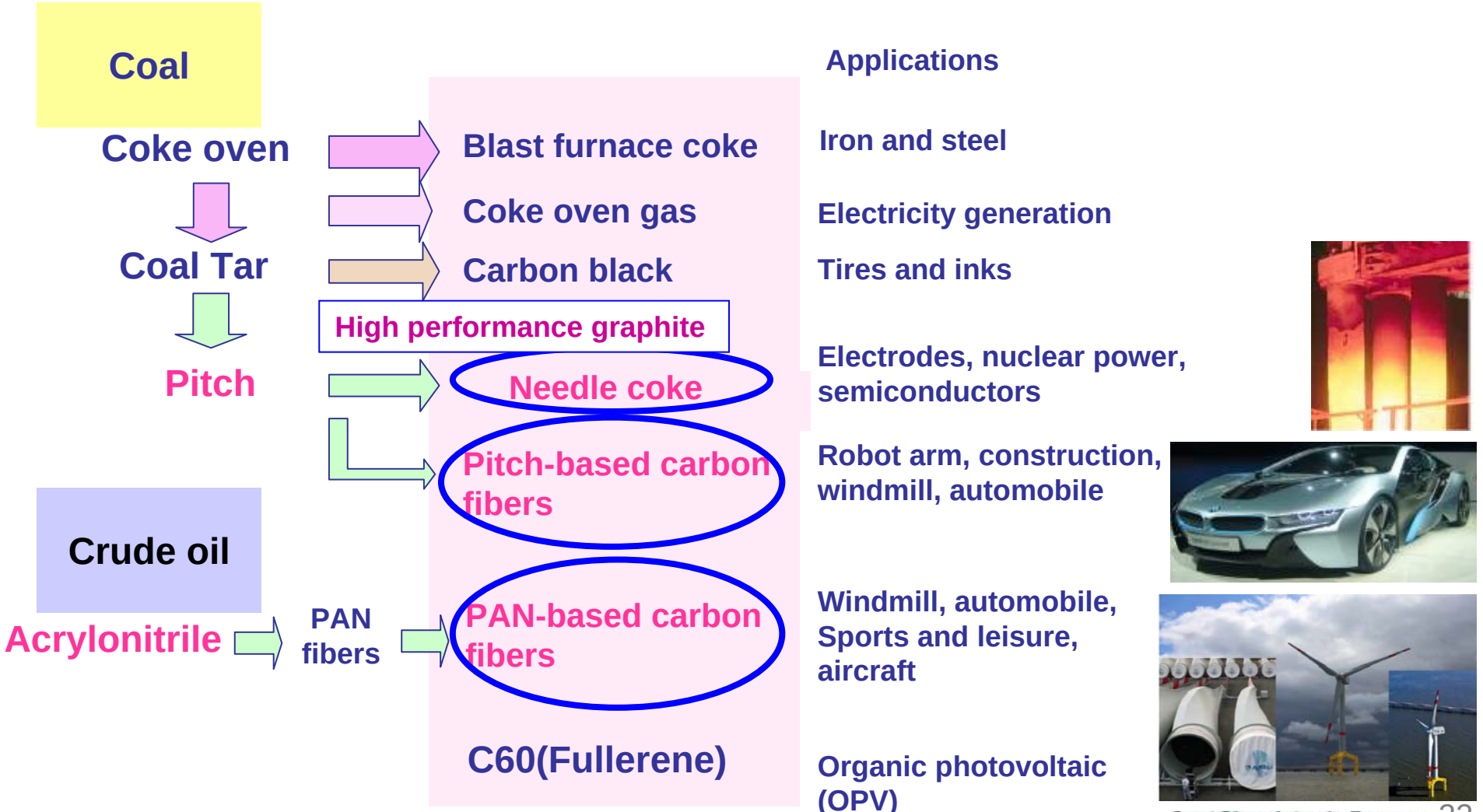
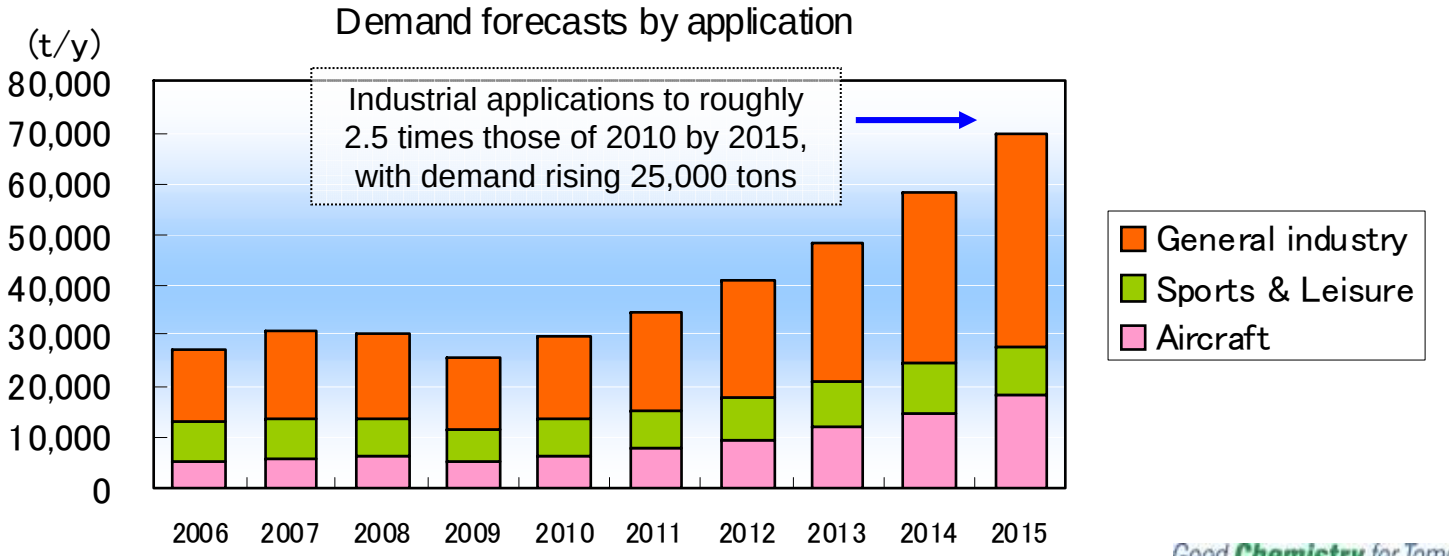
Drawing on more than seven decades in the carbon business to contribute to *KAITEKI* with development of new carbon materials



2-1: Carbon Fibers and Composite Materials

Expand in promising industrial applications

- Focus on and accelerate in high-performance large tow size (LT) carbon fiber for the environmental and energy fields and for the automotive and other industries (PAN industry applications: from 40% in FY2010 to 80% in FY2015)
- Leverage Group synergies in cultivating thermoplastic composites (CFRTP)
- Maintain leading position in sports and leisure fields
- Collaborate with Cytec Industries Inc. (the U.S.) in aerospace development



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Developing Wind Power Applications

Turbine blades are becoming larger in the drive to attain even higher efficiency for wind power
Carbon fiber can help increase blade sizes, and MCHC can optimally supply PAN- and pitch-based CFs

Wind power capacity is fast expanding worldwide

197,000 megawatts in 2010 (1.5% of global electricity demand)

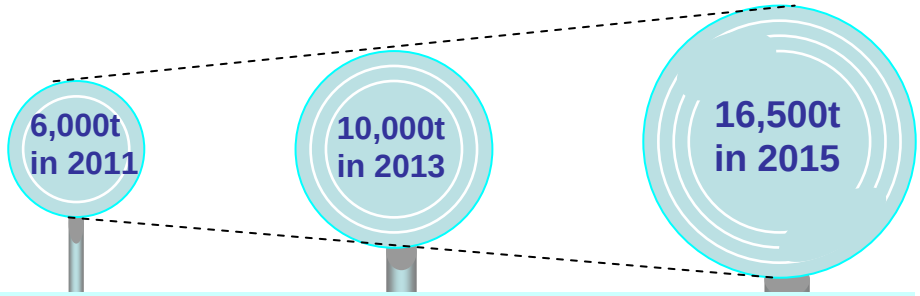
1.5 million megawatts by 2020 (12% of global electricity demand)
(Source: World Wind Energy Report 2009 from World Wind Energy Association)

Higher performance from carbon fiber-reinforced plastics will lead to larger turbines

- **Increasing generating efficiency →Output proportional to the square of the diameter →Larger scale**
- **Few wind farm locations (particularly in Europe) →Operators constructing turbines offshore →Larger scale**

We aim to increase shipments for turbine blades by 10,000t by 2015

Carbon fiber demand projections for wind power application (Calendar year)



We have already begun steady production and sales of high-performance LT carbon fiber

PAN-based CFs 10,100t/y（current）→ 13,800t/y（FY2015）
Maintaining steady shipments for wind turbine applications from a line with an annual capacity of 2,700 metric tons that began production at the Otake Plant in June 2011

Pitch-based CFs 1,000t/y（current）→ 1,450t/y（FY2015）
Looking to expand industrial applications, including for use with PAN-based carbon fibers

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Developing Automotive Applications

- **For mass-produced vehicles, using PCM* technology to dramatically shorten process lead times, applying this approach for some vehicles**

***Prepreg Compression Molding: Original technology with quick cure prepreg and preform technology**

- **Thermoplastic compound resins used in carbon fiber applications will soon become essential for mass produced vehicles. We are combining carbon chemistry and polymer technologies in deploying the Group's comprehensive capabilities, including in processing technologies**
- **We are steadily selling carbon fiber precursors for high-performance LT carbon fiber for BMW's Megacity Vehicle**

Employing MRC's carbon fiber as a precursor raw material in the first mass-produced passenger vehicle whose main structural material is carbon fiber (Scheduled to be launched in 2013)

BMW i8 (plug-in hybrid car)

BMW i3 (electric vehicle)

(Photos: Tokyo Motor Show 2011 (December 3 to 11, 2011))

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Generating Synergies

2010 → 2012 → APTSIS 15 → 2015

Research and development into increasingly large-scale wind power applications

Start R&D to optimize performance for polyacrylonitrile(PAN)- and pitch-based carbon fibers (MRC and MPI)

Research and development for Automotive usage

Develop thermoplastic materials(CFRTP) (MRC/MCC)

Develop materials → Cultivate molding techniques → Launch mass production

Develop automotive materials (MRC and MPI)

Start development (such as with wheels) → Launch mass production

Cultivate European market through cooperation with Quadrant

Set up business site (in Germany)
Start marketing with PCM technology → Begin full-fledged usage

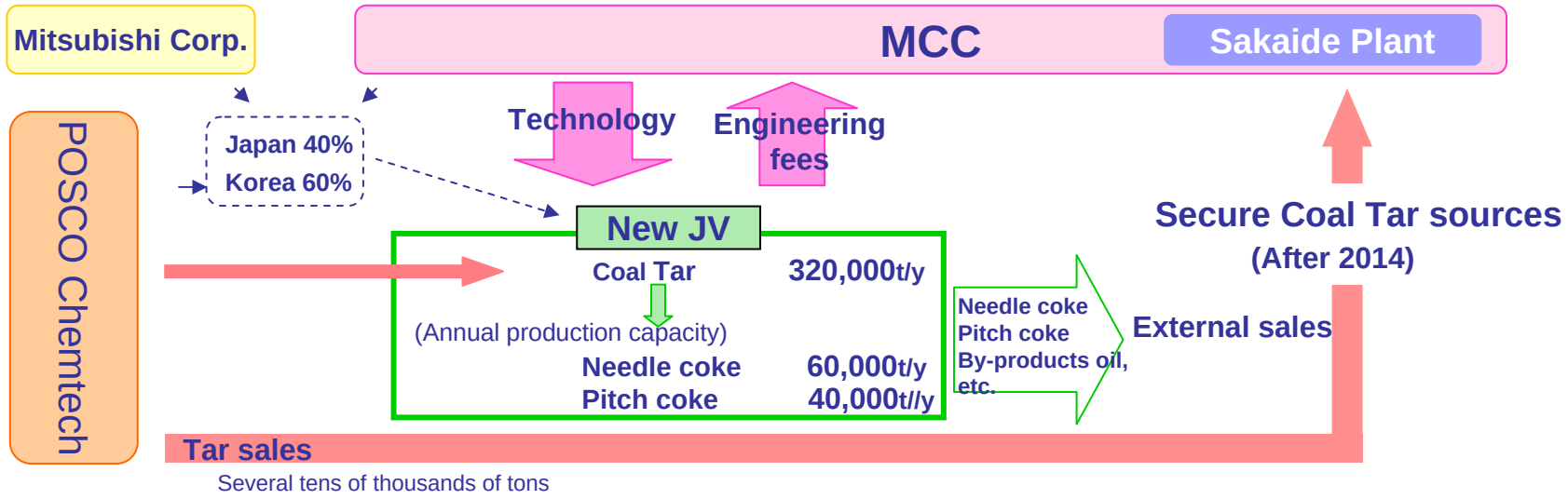
Aerospace usage

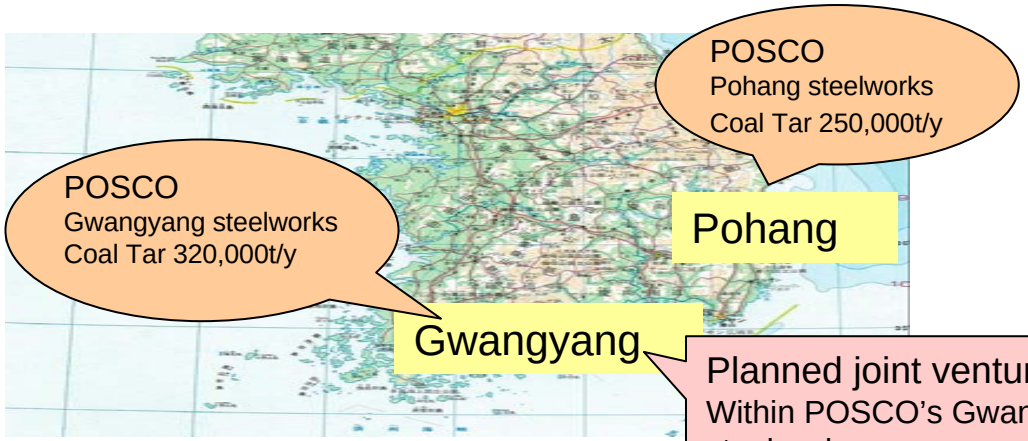
Collaborate with Cytec in aerospace development

Undertake activities to secure quality certifications from domestic and foreign aircraft manufacturers

2-2: High-Performance Graphite

Planned to set up a production and sales joint venture for needle coke in Korea to reinforce our business



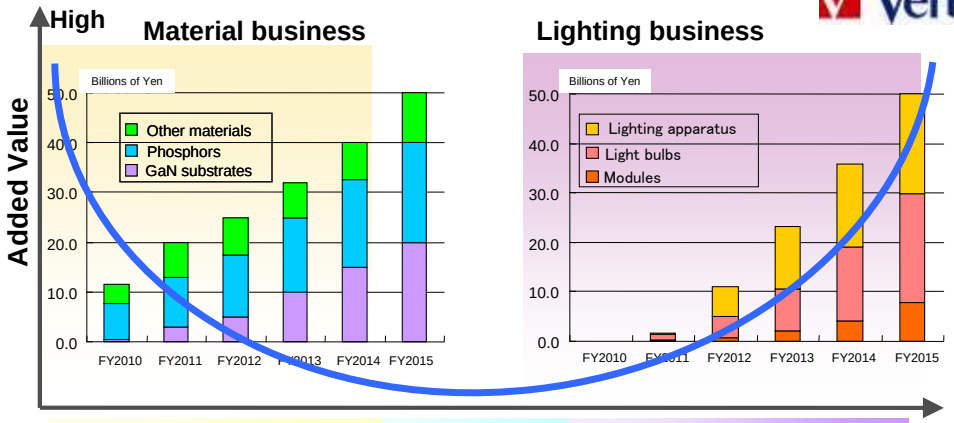


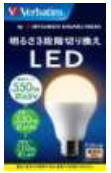
Planned joint venture site
Within POSCO's Gwangyang steelworks

Overview of planned joint venture
Scheduled establishment date: Mid-2012
Paid-in-capital: KRB 200B (JPY14B)
Investment ratios:
40% from Japan (MCC and Mitsubishi Corp.)
60% from POSCO Chemtech

2-3: White LED Lighting and Materials

Materials and lighting businesses in line with objectives





In-house materials | **Modules** | **Lighting apparatus**

Mass production of gallium nitride substrates by liquid phase method

- ✓ **Nov. 2011** Started distributing samples
- ✓ **2012** Will complete mass production pilot facilities (Mizushima)
- ✓ **2013** Plan to start full-fledged mass production (Mizushima)

(Aim to establish G-CHEM* low-pressure production technology in 2012)

Phosphor business focusing on the lighting market

- ✓ Maintain high market share in red phosphors
- ✓ Launched sales of new yellow nitride phosphors and upgrading facilities to increase production
- ✓ New LED lighting techniques: Starting to handle remote phosphors

Lighting business with Verbatim's global sales channels

- ✓ Already launched LED light bulbs in Japan, United States, and Europe
- ✓ High-color-rendering lighting fixtures for high end of markets (launch *VxRGB* fixtures in Dec. 2011)

*G-CHEM : Growth by Chemical Equilibrium Method

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Gallium Substrate Business Efforts

Leveraging SCAAT* (liquid phase) method in drive to attain revolutionary quality, mass production, and low costs

Innovation & Differentiation - SCAAT* method

Materializing high-performance m-plane substrates

- Creating a market for green laser diodes
- Creating a market for high-performance, high-color-rendering LED lighting

Materializing large substrates

- Expanded applications for electronic devices

Road map for gallium nitride substrates

2012 Inaugural year for lighting applications

Jan. **Commercialize high-quality c-plane substrates**

Oct. **Commercialize high-quality two-inch m-plane substrates**

Monthly output of 500 units

Main applications:

- Green laser diodes (for projectors and laser displays)
- Blue and Violet LEDs

2013 Fully enter the LED lighting market

Apr.-Oct. **Start mass production furnace operations**

Commercialize high-quality four-inch substrates and launch full-fledged production

6,000 units monthly (two-inch substrate equivalents)

Main applications: Blue and Violet LEDs, Electronic devices

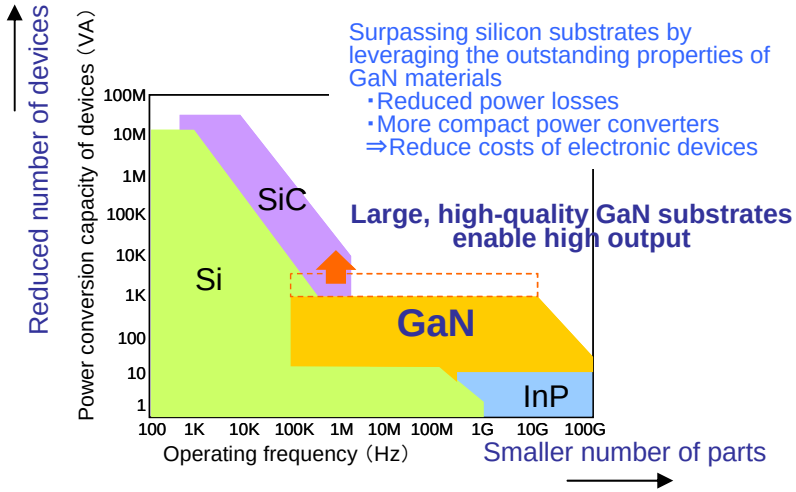
2015 Planning to fully enter electronic devices market

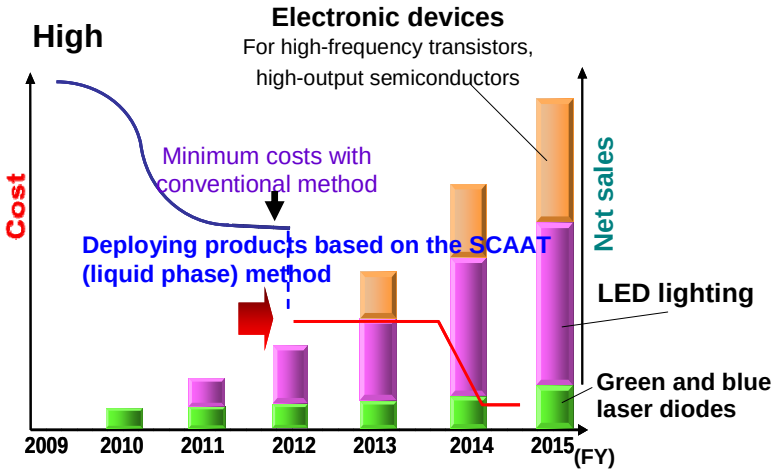
Oct. **Commercialize high-quality 6-inch substrates**

30,000 units monthly (two-inch substrate equivalents)

Main applications: Electronic devices

* Super Critical Acidic Ammonia Technology





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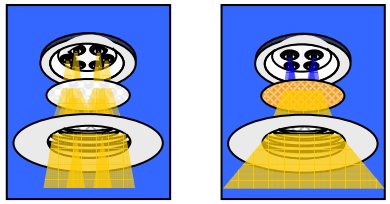
Phosphor and Lighting Businesses

Build a presence in high-output, high-color-rendering lighting centered on Group lighting materials

A full phosphor lineup targeting the lighting market

Cultivate the KAITEKI lighting business globally through the Verbatim marketing channel

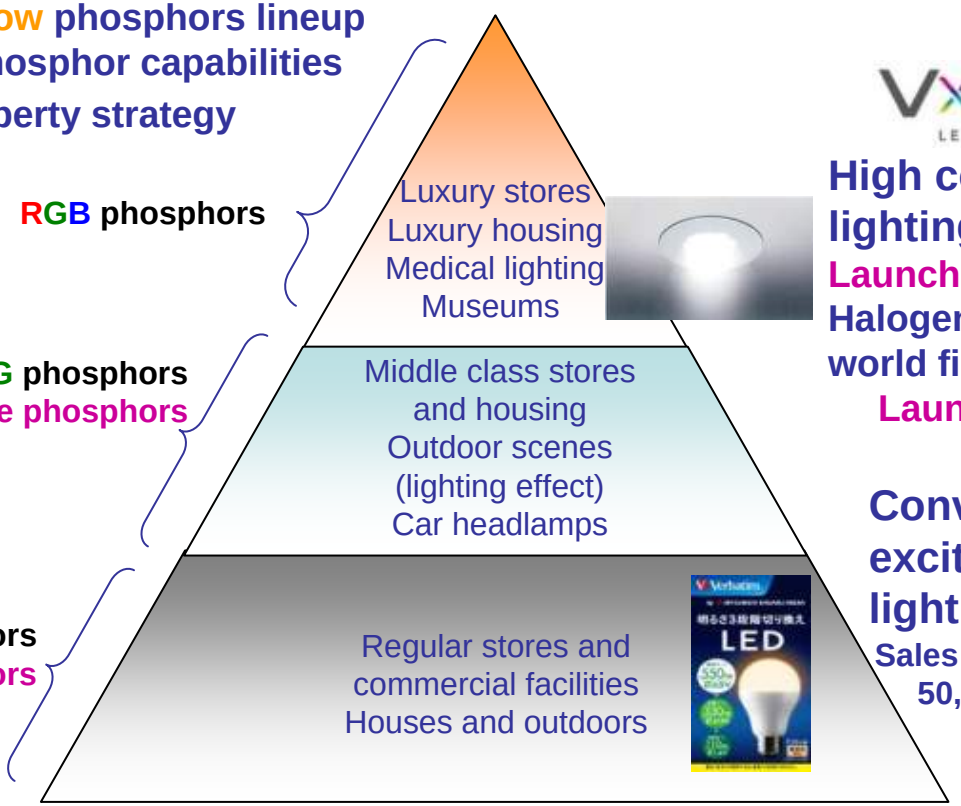
Maintain a high share of the red phosphor market
Boost green and new yellow phosphors lineup
Stake future on remote phosphor capabilities
Reinforce intellectual property strategy



Conventional setups

Remote system

Phosphor parts separated from LED light sources



VxRGB LED LIGHTING

High color rendering lighting
Launch in December 2011
Halogen bulb alternatives (a world first)
Launch in spring 2012

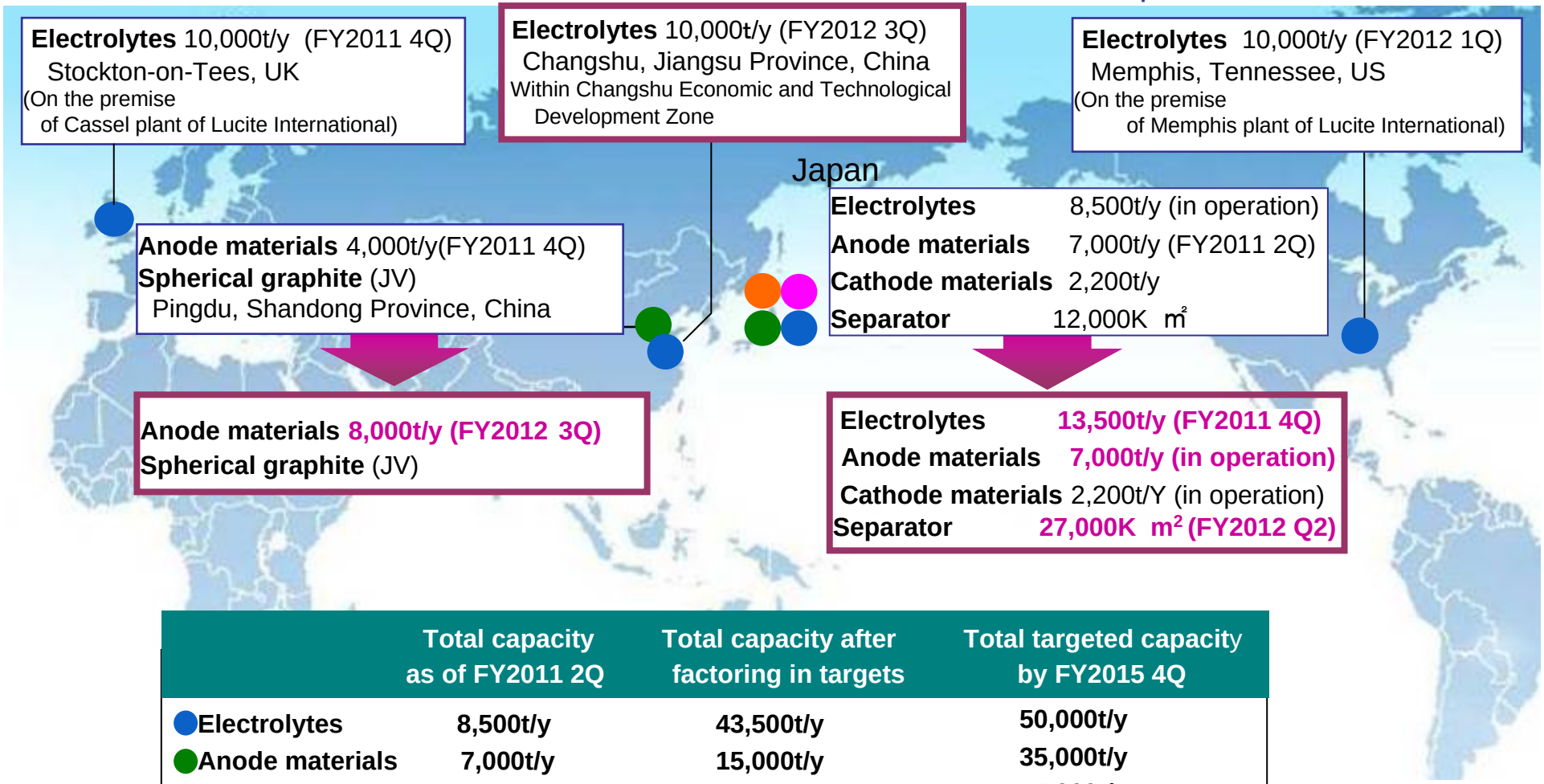
Conventional blue excitation LED lightings
Sales target for end-fiscal 2011
50,000 units monthly･WW

2-4: Lithium-ion Battery Materials

Steadily expand globally for all four key materials in line with market expansion

Progress after the last investors meeting on Jun. 14, 2011

Production capacities and Schedules of increase



	Total capacity as of FY2011 2Q	Total capacity after factoring in targets	Total targeted capacity by FY2015 4Q
Electrolytes	8,500t/y	43,500t/y	50,000t/y
Anode materials	7,000t/y	15,000t/y	35,000t/y
Cathode materials	2,200t/y	2,200t/y	15,000t/y
Separator	12,000K ㎡	27,000K ㎡	72,000K ㎡

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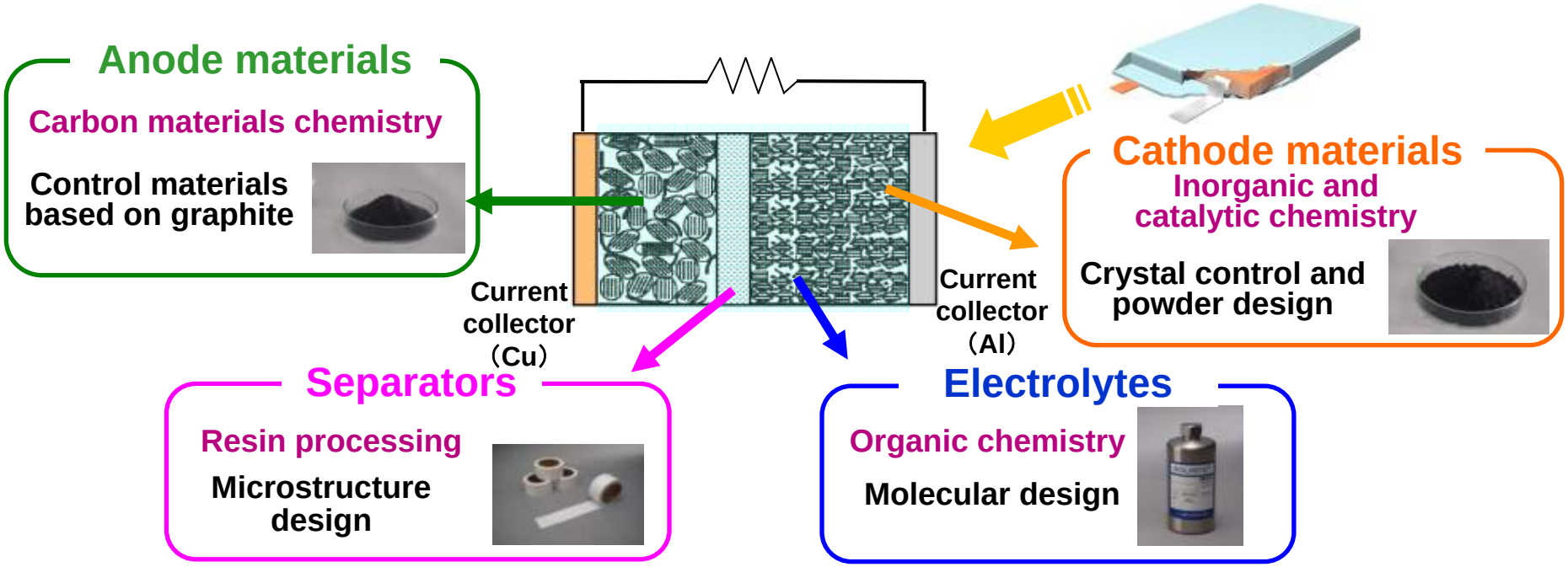
MCHC Group's Strengths

Collaborating in four materials categories to help create safer, more reliable batteries

Lithium-ion batteries are small chemical plants

(Consolidating chemical materials to drive physical and chemical reactions)



High-safety design

We have testing capabilities and safety testing facilities for battery cells that we are harnessing in materials development

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Developing into KAITEKI Societies (Smart Communities)

Also targeting stationary batteries with renewable energy storage systems


Wind power


Solar power


Geothermal power

Achieved 11% conversion efficiency in organic thin-film solar cells, a world best

Next target

Stationary storage batteries

PV/OPV

Exploring smart community collaborations with housing makers and general contractors

Smart communities

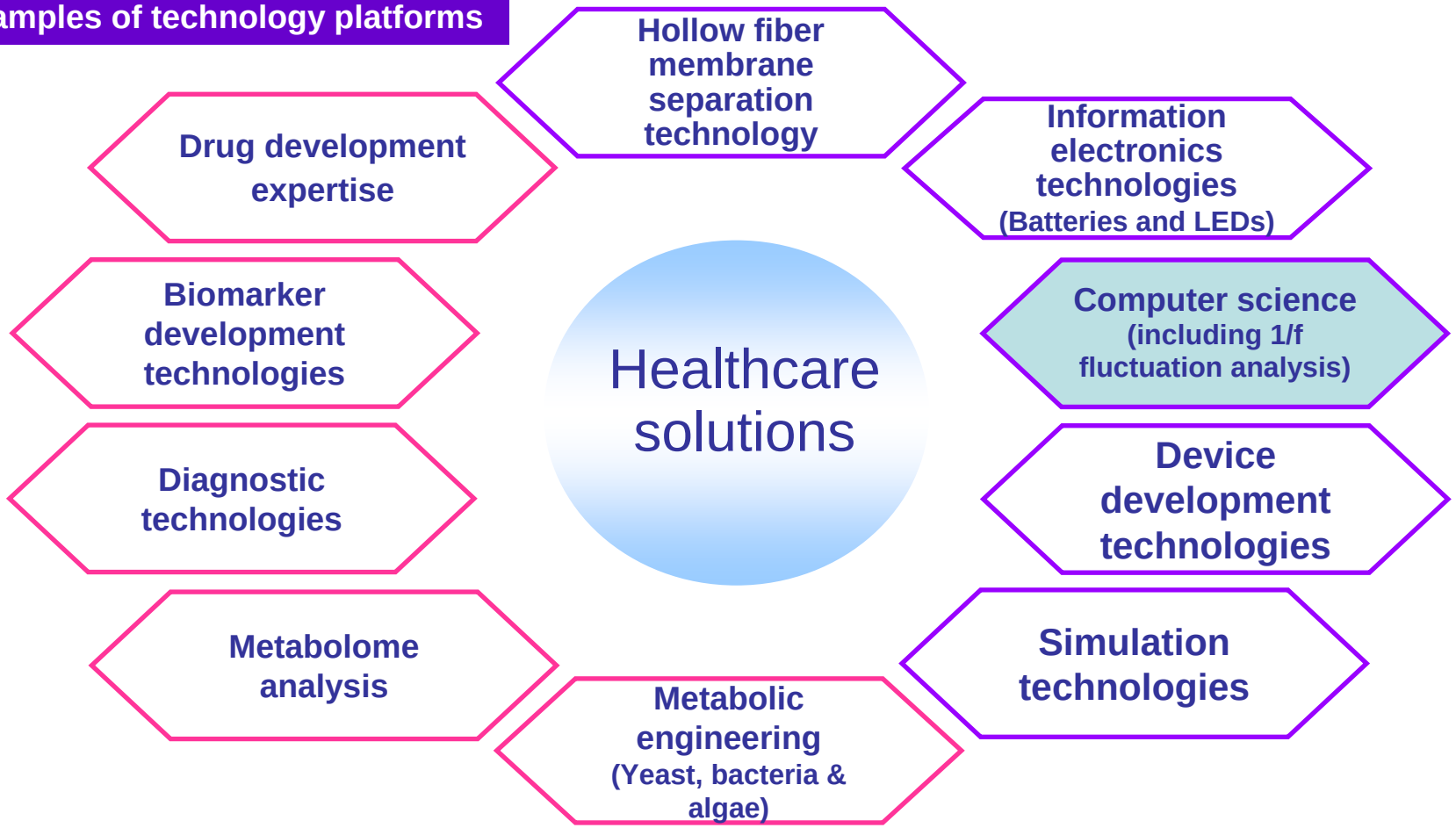
- PV/OPV
- LEDs/OLEDs
- LiB materials
- Stationary storage batteries

Cultivating our systems business through a Holy Grail combination of power generation (PV/OPV), storage batteries (LiBs), and power savings (LEDs/organic OLEDs)

2-5: Healthcare Solutions

Meet emerging healthcare needs by delivering solutions for disease treatment and prevention, through synergies of the Group core technologies

Examples of technology platforms



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Example of MCHC Group's Vision for Companion Diagnostics

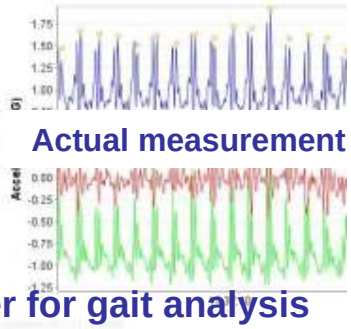
Developing general medical device by applying computational analysis technologies accumulated in chemical plant control

Core technologies	Example of applications	Healthcare solution
Applying 1/f fluctuation and other computational analysis technologies for nonlinear phenomena in the chemical industry	・Plant control technologies ・Liquid chromatographic analysis ・Carbon fiber brake disc applications	**Body signal detection (daily gait analysis)**

application examples * :
Parkinson's disease
Tracking rehabilitation progress
(rehabilitation after stroke treatment)
* Adviser:
Professor Hiroshi Mitoma ,
Tokyo Medical University

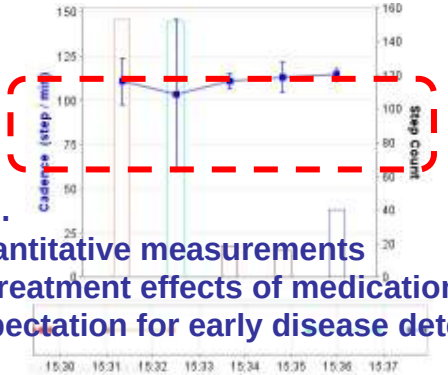
MIMAMORI-gait

May 2011 Approved by PMDA (Pharmaceutical and Medical devices Agency), Japan



Analysis

e.g.
Quantitative measurements of treatment effects of medications.
Expectation for early disease detection.



General medical equipment: Motion recorder for gait analysis

Progress in the First Year of *APTSIS 15*

1. Key Growth and Cash-generating Businesses
2. Growth and Next-generation Growth Businesses that We Are Intensively Cultivating
3. **Synergies**
   - **3-1 Costs and R&D**
   - **3-2 Headquarters Relocation**

3-1: Framework of Cost and R&D Synergies

Start various projects to realize synergies

Area under study (FY2015 Target : Billions of Yen)	Remarks	FY2011 / FY2013 / FY2015
Purchasing **(23)**	Set up office to prepare an equipment (& materials) procurement center **Starting 9 months earlier**	Start in Jul. ▼ Launch procurement center ▼
Logistics **(5)**	Start logistics efficiency project	Review logistics centers and others — Transition — Review operations — Transition
IT units **(3)**	Integrate group IT companies **Looking to save ¥400 million from integration**	Integrated in Oct. ▼ Review IT functions — Shift to optimal operations
R&D units **(0.5)**	Integrate MCC & MRC biotech research labs **MCC/MPI/MRC: In July, launched joint development structure and project for carbon fiber-reinforced thermoplastics** **MCC/MRC: Leverage dehydrogenative oxidation catalyst technology synergies of both companies to shorten lead time for butane to crude butadiene process**	
Intellectual Property Department	**Concluded basic memorandum of understanding for Group intellectual property collaboration rules and research and business development** **・Foster the mutual usage of patents and joint development among operating companies and accelerate business development, deploying a patent strategy to integrate specific technologies** **Examples: Carbon fiber-reinforced thermoplastics and bioplastics manufacturing and applications development**	

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3-2: MCHC Headquarters Relocation

Move aims to help materialize Group synergies more swiftly and streamline organizational management

New address: 1-1, Marunouchi 1-chome, Tokyo
Relocation timing: From May through August 2012

Basic concept of *APTSIS 15* :
Grow, Innovate, and Leap Ahead by orchestrating the Group's strengths

- **Streamlining efficiency**
  - ・Harness human resources more efficiently by consolidating headquarters of Group companies (except MTPC) in one location
  - ・Integrate business infrastructure and streamline office service management to cut costs
- **Close communication with top management**
  - ・Proximity of offices for directors of MCHC and Group companies
- **Efficient management of shared facilities and more efficient office operations**
  - ・Locating common departments on the same floors and installing an IT infrastructure that matches future needs
- **Creating an environment in which we can swiftly materialize business synergies and foster Group unity**

APTSIS 15 Goals

APTSIS 15

“Grow, Innovate and Leap Ahead by orchestrating the Group strengths”

APTSIS 15 Strategies

APTSIS

"Grow, innovate, and leap ahead by orchestrating the Group strengths"

Strengthening fundamentals	**Generate synergies, improve financial position, and reform business structure by orchestration**
Growth Strategy	• **Accelerate transformation to deliver high-performance products and high-value-added businesses** • **Expand green businesses** • **Develop new medicines to fulfill unmet medical needs** • **Operate globally** **Deliver *KAITEKI* solutions by pursuing Sustainability, Health, and Comfort**
Innovation Strategy	**Build new businesses for the future**
Leaping Ahead (M&A)	**Invest strategically in alliances and M&A**

APTSIS 15 Goals 2015

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[Targets for enhancing corporate value]

		FY2012	FY2015
Economic Indexes	**Operating income**	**(¥230.0 billion)**	**¥400.0 billion**
	➢ Growth & Innovation Strategies		¥330.0 billion
	➢ Leaping ahead (M&A)		¥70.0 billion
	ROA (income before income taxes/total assets)		**≥ 8%**
	Net debt-to-equity ratio		**1.0**
	Overseas sales ratio		**≥ 45%**

MOS Indexes
(Major instances)

Sustainability Index
- Environmental impact
  - ➢ **reduce by 30% (Japan) vs. FY2005** (17% reduction of GHG)

Health Index
- Index derived by the degree of difficulty to treat diseases & the number of administered patients
  - ➢ **increase by 30% vs. FY2009**

Comfort Index
- New products ratio in the Performance Product & Health Care domains
  - ➢ **≥35%**

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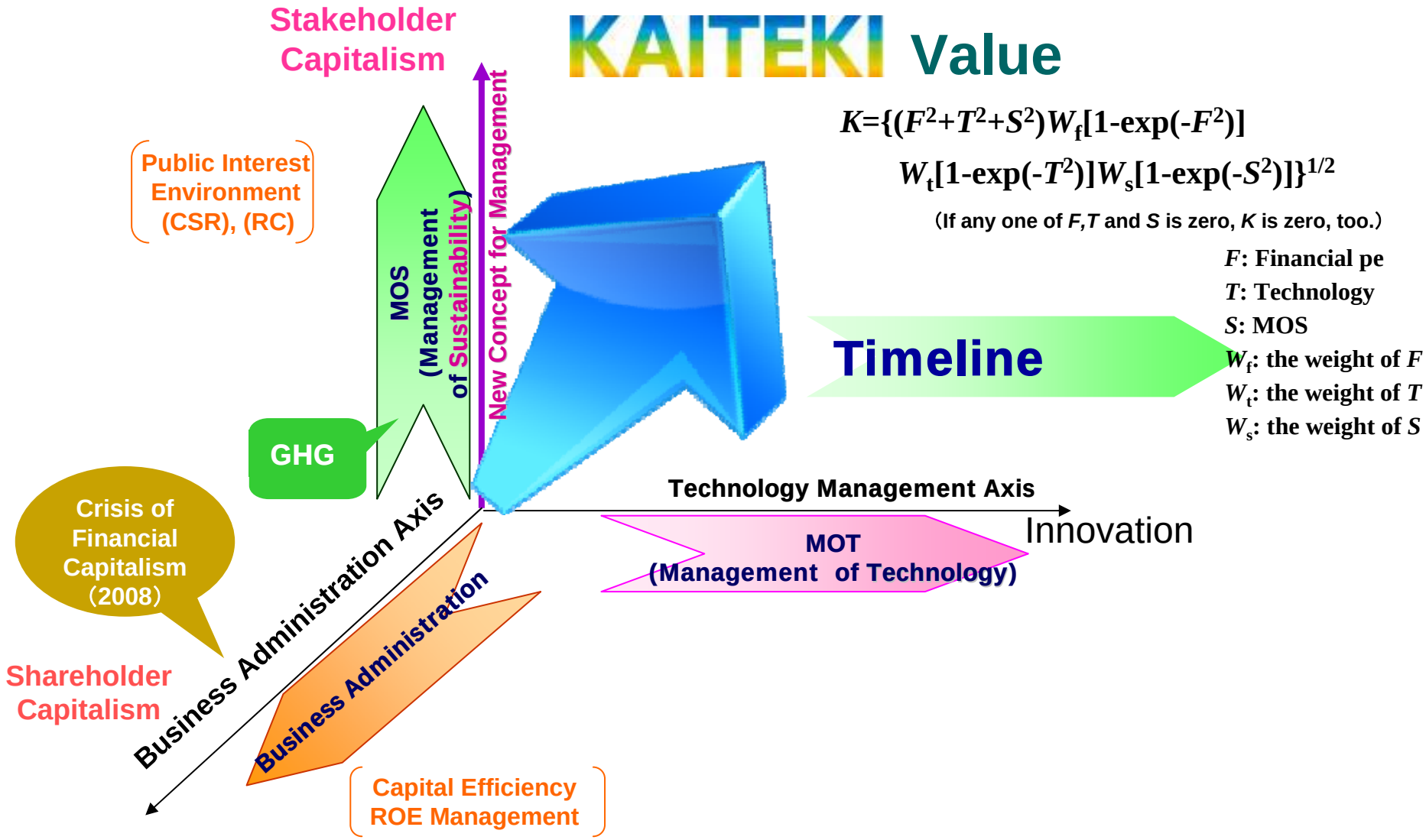
“Four Dimensional Management” and MOS

Proposal of “Management of SUSTAINABILITY” (MOS Axis)



Industrial Materials Domain—Business Strategies for the Chemicals and Polymers Segments

(excluding carbon, MMA/PMMA)

1. Business Climate Assessment
2. Basic Strategies
3. Business to be Restructured
4. Growth and Cash-generating Businesses
5. Next-generation Growth Business
6. New Technologies
7. Progress in Our Business Strategies under *APTSIS 15*

APTSIS

Business Climate Assessment

	2011	Around 2015
Assessment in 2010	Production of PO and other derivatives to decline	Reduced cracker operations
	・Excess supplies from other markets ・Production within Middle East and China markets ↓ ・Shrinking export demand ・Greater penetration of Japanese market	・Domestic ethylene production to decline to 5 million metric tons in 2015 ・Further decreases feared

Great East Japan Earthquake, Thai floods, U.S. giant hurricane, a rising yen, monetary tightening in China, sovereign risks in Europe, and downgrade of U.S. debt

Near-term assessment

Assessment: As per last year
Conditions: Deteriorating more swiftly than expected
Initiatives: Implementing earlier than planned

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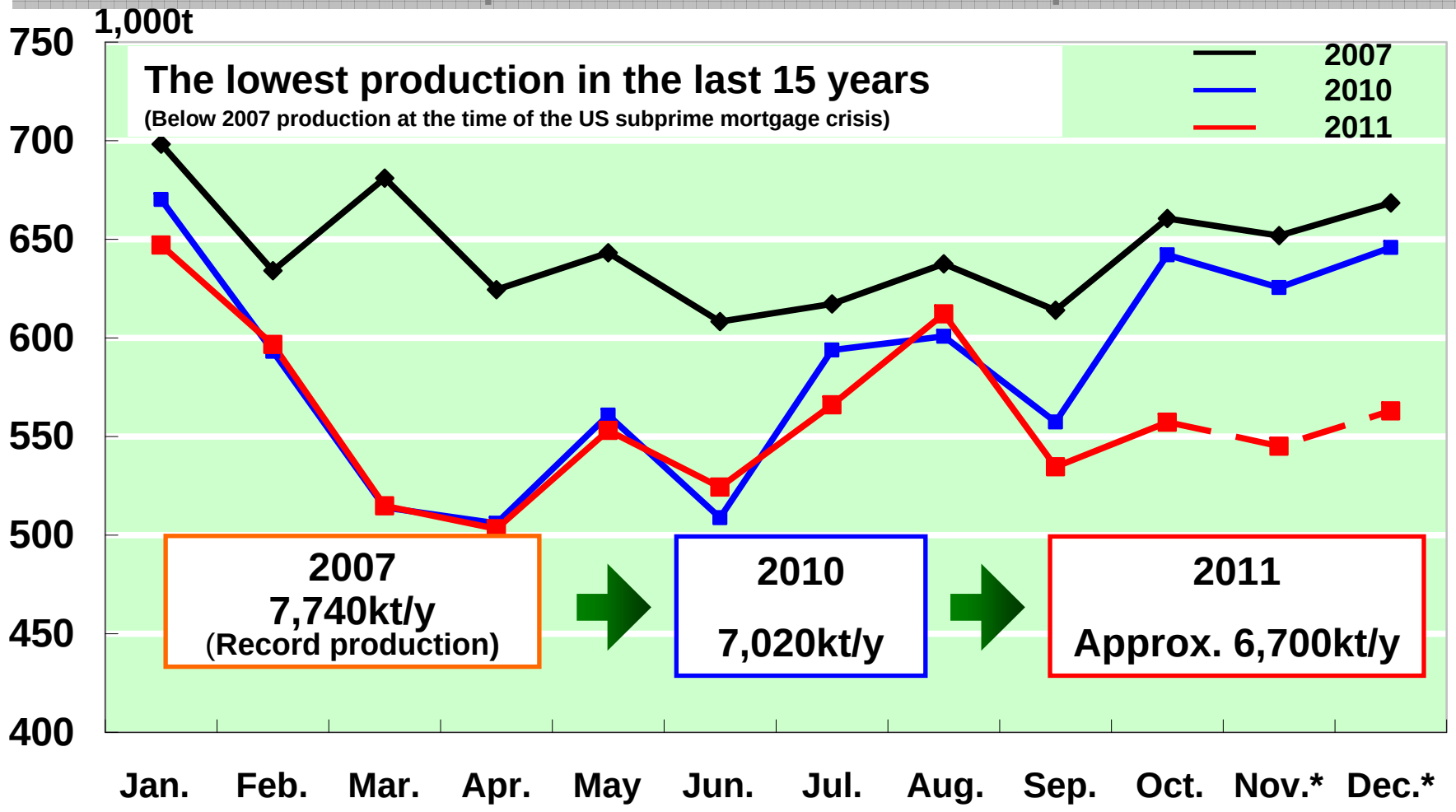
Domestic Ethylene Production Trends

Fall of operation rates since September 2011
with a decrease in exports and an increase in imports in derivatives



Source: Japan Petrochemical Industry Association

*Nov. – Dec. 2011: estimates by MCHC

Industrial Materials Domain—Business Strategies for the Chemicals and Polymers Segments

(excluding carbon, MMA/PMMA)

1. Business Climate Assessment
2. **Basic Strategies**
   - **Business to be Restructured**
   - **Growth and Cash-generating Businesses**
   - **Next-generation Growth Businesses**
3. Business to be Restructured
4. Growth and Cash-generating Businesses
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APTSIS

Basic Strategies

Increase profitability by accelerating globalization, shifting to high-performance products, and optimizing product chain

- **Growth Strategy**
  - ・Expand global operations and shift to high-performance products with regional partners
    - -MMA/PMMA, Performance polymers, High-performance graphite
- **Innovation Strategy**
  - ・Deliver new materials that contribute to the environment and to sustainable carbon society
    - -Sustainable resources
- **Cash-generating Business**
  - ・Stabilize earnings and reinforce business structure
    - -Stabilize operations and minimize environmental impact
    - -Reinforce business structure by expanding technology licensing, improving process technologies, and leveraging high-value-added products
    - -PTA, Coke, PP, PHL/BPA/PC, etc.
- **Business to be restructured**
  - ・Complete restructuring

APTSIS

Portfolio Management

Today's Topics

◆Performance Products ◆Health Care ◆Industrial Materials

Next-generation Growth Business (6)

- Organic photovoltaic modules and materials
- Organic photo semiconductors
- Advanced performance products
- Agribusiness solutions
- Healthcare solutions
- **Sustainable resources**

Growth Business (11)

- White LED lighting and materials
- Lithium-ion battery materials
- FPD components
- Performance composite materials
- High performance molding products
- Specialty chemicals
- Water treatment system and services
- Pharmaceuticals
- High performance graphite
- **Performance polymers**
- MMA/PMMA

Today's topics

Business to be Restructured (15)

- **Naphtha crackers, etc.**

Cash-generating Business (18)

- Recording media
- Performance films
- Food ingredients
- Diagnostics & support for new pharmaceutical development
- **PTA**
- Coke
- **PHL/BPA/PC**
- **PP**

APTSIS

Industrial Materials Domain—Business Strategies for the Chemicals and Polymers Segments

(excluding carbon, MMA/PMMA)

1. Business Climate Assessment
2. Basic Strategies
3. **Business to be Restructured**
   - **3-1. Restructuring Plants**
     - **- Mizushima Plant**
     - **- Kashima Plant**
     - **- Other Plants**
   - **3-2. Business to be Restructured**
4. Growth and Cash-generating Businesses
5. Next-generation Growth Business
6. New Technologies
7. Progress in Our Business Strategies under *APTSIS 15*

APTSIS

Mizushima Plant

Increased flexibility from operational integration with Asahi Kasei Corporation and downsizing

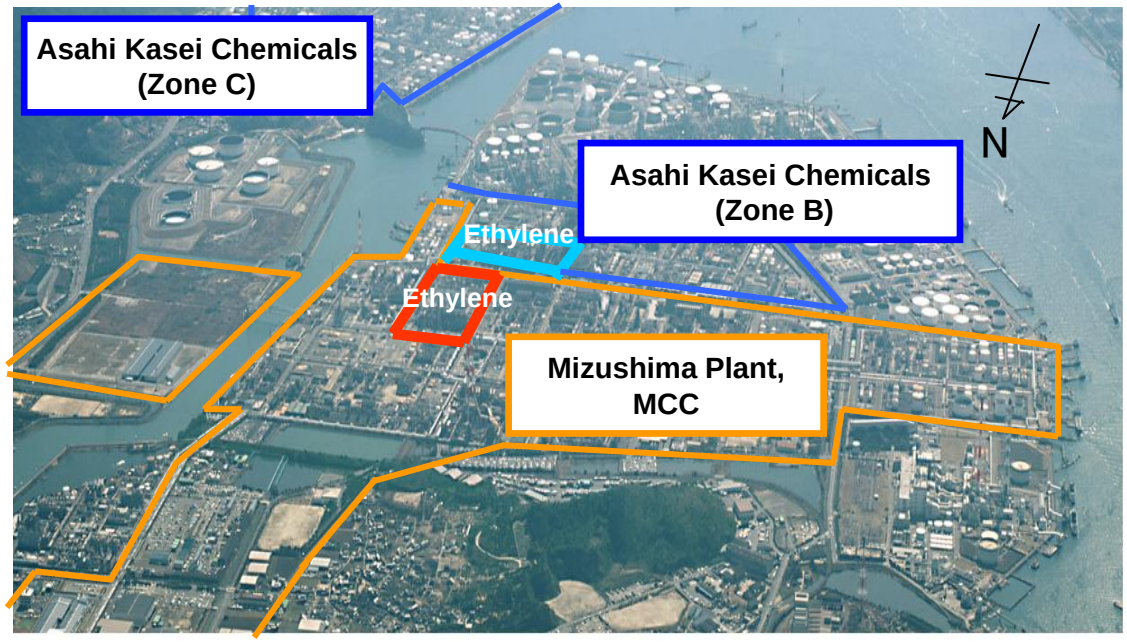
1. Nishi Nippon Ethylene began operations in April 2011

   →Preparing an ethylene demand decline

2. Cracker downsizing in June 2011

   →Completed measures to counter higher costs during lower operations

3. Forming aromatics alliances in April 2012



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Kashima Plant

Strengthening competitiveness through structural reforms and regional alliances

1. Structural Reforms

Ethylene:	Reinforce EO business	Complete EO center and boost EC production →Stabilize demand
	Reinforce PE business	High performance
Propylene:	Reinforce PP business	Shut down obsolescent slurry facility and shift production to state-of-the-art production facility →Become more cost competitive
Aromatics:	Shut down a part of benzene production facility →Reduce benzene business risk	

2. Under discussions about restructuring of VCM/PVC sector

3. Studying optimal operation of Kashima-Kita Kyodo Power Station

4. Exploring petrochemicals refinery partnership opportunities

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Other Plants

Strengthening our organization largely by rebuilding utilities

Kurosaki Plant	**Cut costs by optimizing utilities (Implemented from May 2011)**
Yokkaichi Plant	**Form utilities alliance with Showa Yokkaichi Sekiyu Co., Ltd. (To be completed in July 2013)**

Kashima Plant (Kashima-Kita Electric Power) **Naoetsu Plant** **Yokkaichi Plant**	**Supply power through full operation of in-house generating facilities** **Total of around 200,000 kWh (enough to supply about 500,000 homes)**

APTSIS

Progress from *APTSIS 10* through First Year of *APTSIS 15*

Sales reduction of about ¥150 billion, cutting losses by around ¥13 billion

	Restructuring details	FY 2008	FY 2009	FY 2010	FY 2011
SM chain	Liquidated SM business (Yuka Seraya)	■			
	Sold stake in ABS business (Techno Polymer)	■			
	Sold stake in PS business (PS Japan)		■		
	Shut down a SM production facility at the Kashima Plant			■	
PVC chain	Shut down a PVC production facility at the Mizushima Plant	■			
	Shut down a PVC production facility at the Yokkaichi Plant and electrolyte and VCM production facilities at the Mizushima Plant			■	
Nylon chain	Shut down a cyclohexane production facility at the Mizushima Plant		■		
	Shut down caprolactam, anone, and ammonium sulfate production facilities at the Kurosaki Plant		■		
	Sold nylon business to Royal DSM N.V.			■	
Surfactants	Terminated ethoxylates business	■			
	Shut down aliphatic alcohol and hydrophobic apoprotein production facilities at the Mizushima Plant		■		
	Withdrew from glycol ester business			■	
PTA	Shut down a paraxylene production facility at the Mizushima Plant			■	
	Shut down a PTA production facility at the Matsuyama Plant			■	
PP	Shut down two PP production facilities at the Kawasaki Plant of Japan Polypropylene (JPP)	■			
	Shut down a PP production facility at the Kashima Plant of JPP				■
	Shut down a PP production facility at the Goi Plant of JPP				■

Industrial Materials Domain—Business Strategies for the Chemicals and Polymers Segments

(excluding carbon, MMA/PMMA)

1. Business Climate Assessment
2. Basic Strategies
3. Business to be Restructured
4. **Growth and Cash-generating Businesses**
   - **Accelerating Globalization and Drive toward High Performance**
   - **Solidifying Fundamentals through Technology Licensing and High-performance Products**
5. Next-generation Growth Business
6. New Technologies
7. Progress in Our Business Strategies under *APTSIS 15*

APTSIS

Growth and Cash-generating Businesses

Performance polymers	・Accelerate globalization (encompassing China, North America, and Asia) of existing products ・Transfer PVC compound business owned by The Sunprene to Mitsubishi Chemical Performance Polymers in the U.S. (Dec. 2011) ・Rationalize domestic operations: Reorganized the Nagoya Plant (Oct. 2011)
PTA	・Swiftly stabilize production at the No. 2 production facility in India ・Become more cost competitive by cutting energy costs while establishing world-class technologies that minimize environmental impact ・Secure a market presence by deploying a market-driven partnership strategy (technology exports and offtakes agreements in expanding markets)
PHL/BPA/PC	・Launched Sinopec Mitsubishi Chemical Polycarbonate (Beijing), a BPA and PC joint venture between PCR Investments Japan* and China Petroleum & Chemical Corporation (Dec. 2011) ・Swiftly develop non-phosgene diphenyl carbonate and PC processes (Target: End of 2012) ・In Japan: Boost profitability by cutting costs and expanding sales of high-performance products *an 80:20 JV between MCC and MEP
PP	・Develop advanced PP technologies at a new pilot facility (Target: End of 2013) ・License HORIZONE process (Two licensing contracts in China) ・Globally deploy PP compound operations (China, North America, Thailand, India, and Europe) ・Strengthen alliance with Borealis AG ・In Japan: Optimize PP production structure (shut down four production facilities and operate at full capacity at state-of-the-art facilities)

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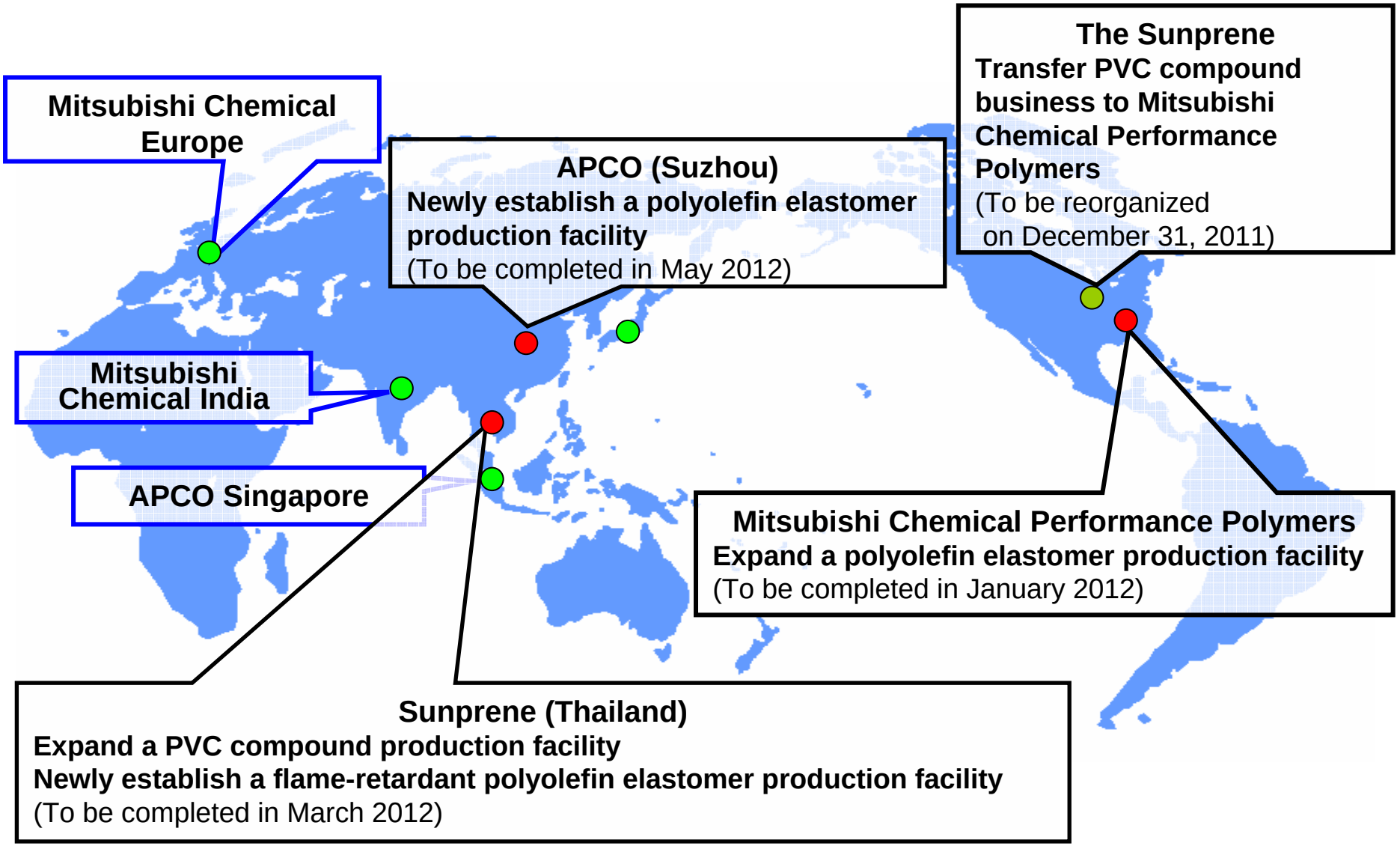
Globalization: Performance Polymers Overseas Development



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Globalization: BPA/PC Business in China

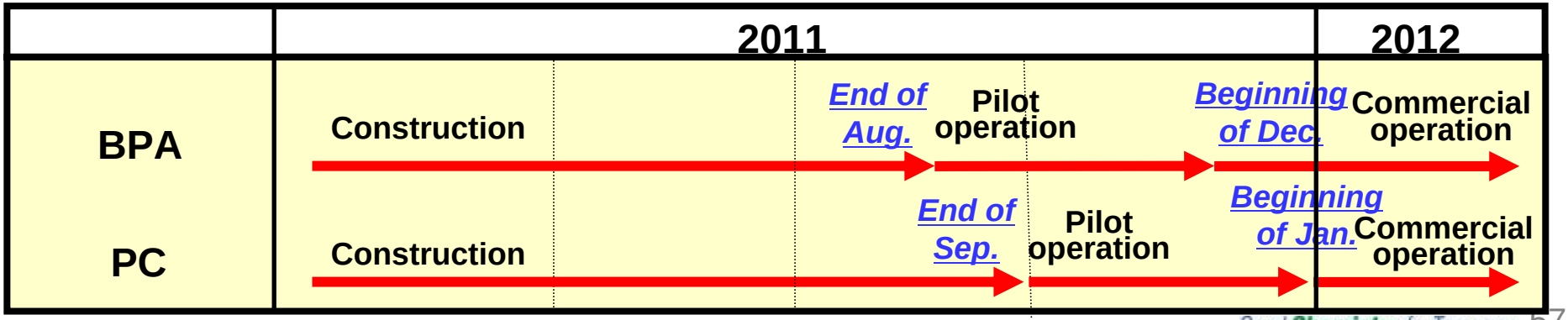
Begin commercial operation of a BPA and PC JV in China

Sinopec Mitsubishi Chemical Polycarbonate (Beijing)

- Established on May 21, 2009
- A 50:50 JV between PCR Investments Japan (an 80:20 JV between MCC and MEP) and China Petroleum & Chemical Corporation

BPA production facility

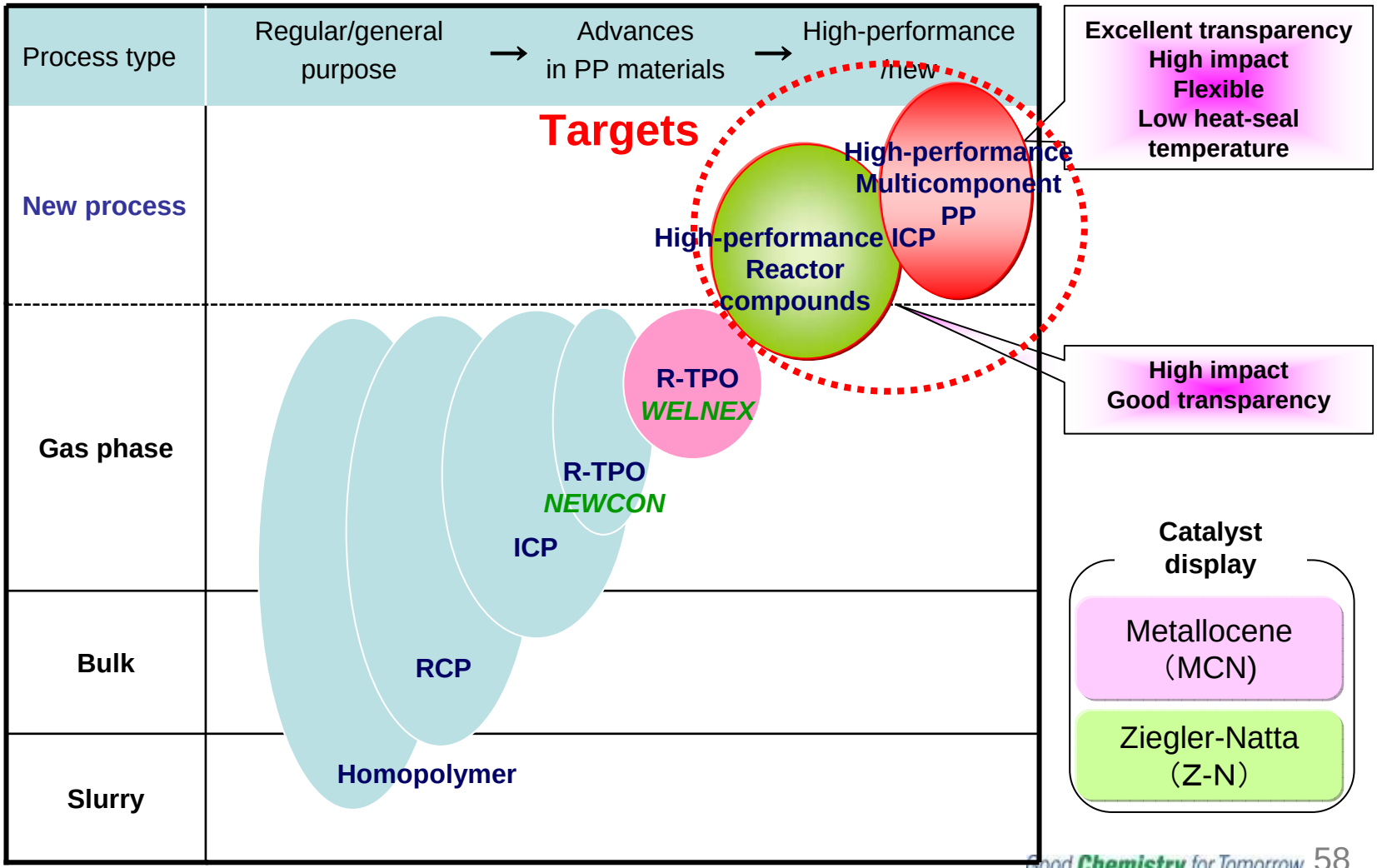
PC production facility



APTSIS

High Performance: PP

Develop advanced PP technologies at the new pilot facility



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Progress from *APTSIS 10* through First Year of *APTSIS 15*

Taking steps for the future

	New project progress	FY 2008	FY 2009	FY 2010	FY 2011
Performance polymers	Integrated polyethylene adhesive polymer business of JPE to MCC			■	
	Newly establish a polyolefin elastomer production facility in China				■
	Expand a PVC compound production facility in Thailand				■
	Expand a polyolefin elastomer production facility in the U.S.				■
	Acquire PVC compound business and transfer its business to MCPP in the U.S.				■
PTA	Built global structure by transferring headquarters functions to MCC PTA Asia Pacific Private		■		
	Completed the No. 2 PTA production facility in India		■		
PHL/BPA/PC	Began commercial operation of the No. 2 PC production facility with melt process at the Kurosaki Plant (capacity: 60kt/y)			■	
	Acquired PC business from Royal DSM N.V.			■	
	To be begun commercial operation of BPA/PC production facility at Sinopec Mitsubishi Chemical Polycarbonate (Beijing), a BPA and PC joint venture between PCR Investments Japan* and China Petroleum & Chemical Corporation (SINOPEC) *an 80:20 JV between MCC and MEP				■
PP	Began commercial operation of a PP compound production facility in Thailand	■			
	Began commercial operation of a PP compound production facility in Foshan, China	■			
	Began commercial operation of the No. 4 PP production facility at the Kashima Plant (capacity: 300kt/y)		■		
	Began commercial operation of a PP compound production facility in India				■

APTSIS

Promoting Technology Licensing

Technology License Dept. established in January 2011

Processes	Plant launches	Locations	Capacity (kt/y)
EG (OMEGA process)	2008-2010	Korea Saudi Arabia Singapore	390 600 750
PTA	2008-2010	India	800
	From 2011	Poland	600
BPA	From 2011	Thailand China Korea	150 150 150
PP	From 2011	China China	200 200
PTMG	2008-2010	China	25
Maleic anhydride Acrylic acid	From 2011	Taiwan Russia	65 80

APTSIS

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5. **Next-generation Growth Business**
   - **Deliver New Materials that Contribute to the Environment and Sustainable Carbon Society**
6. **New Technologies**
   - **Raw Materials Diversification and Other Technologies**
7. Progress in Our Business Strategies under *APTSIS 15*

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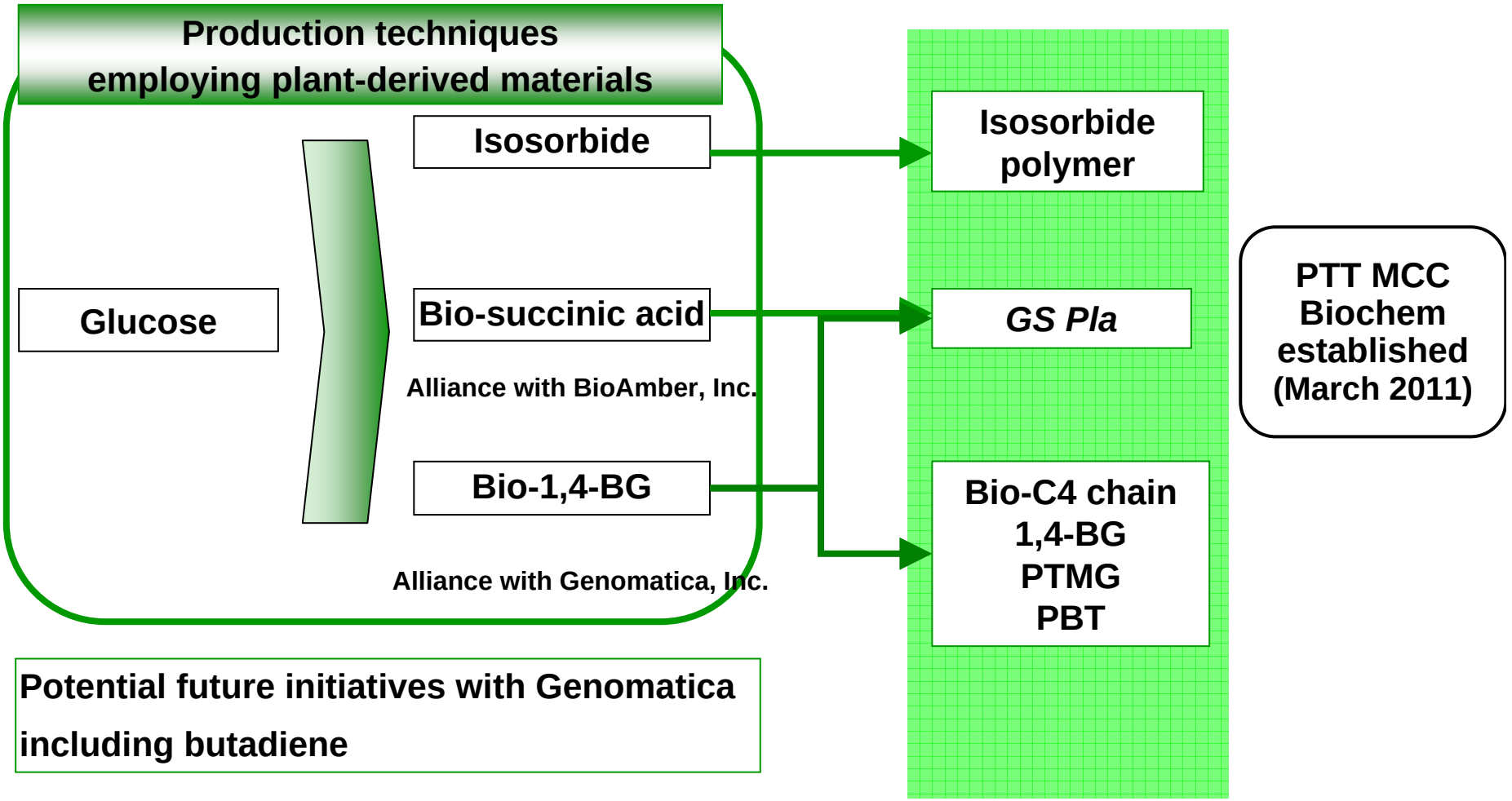
Sustainable Resources

Delivering new materials that contribute to the environment and to sustainable carbon society



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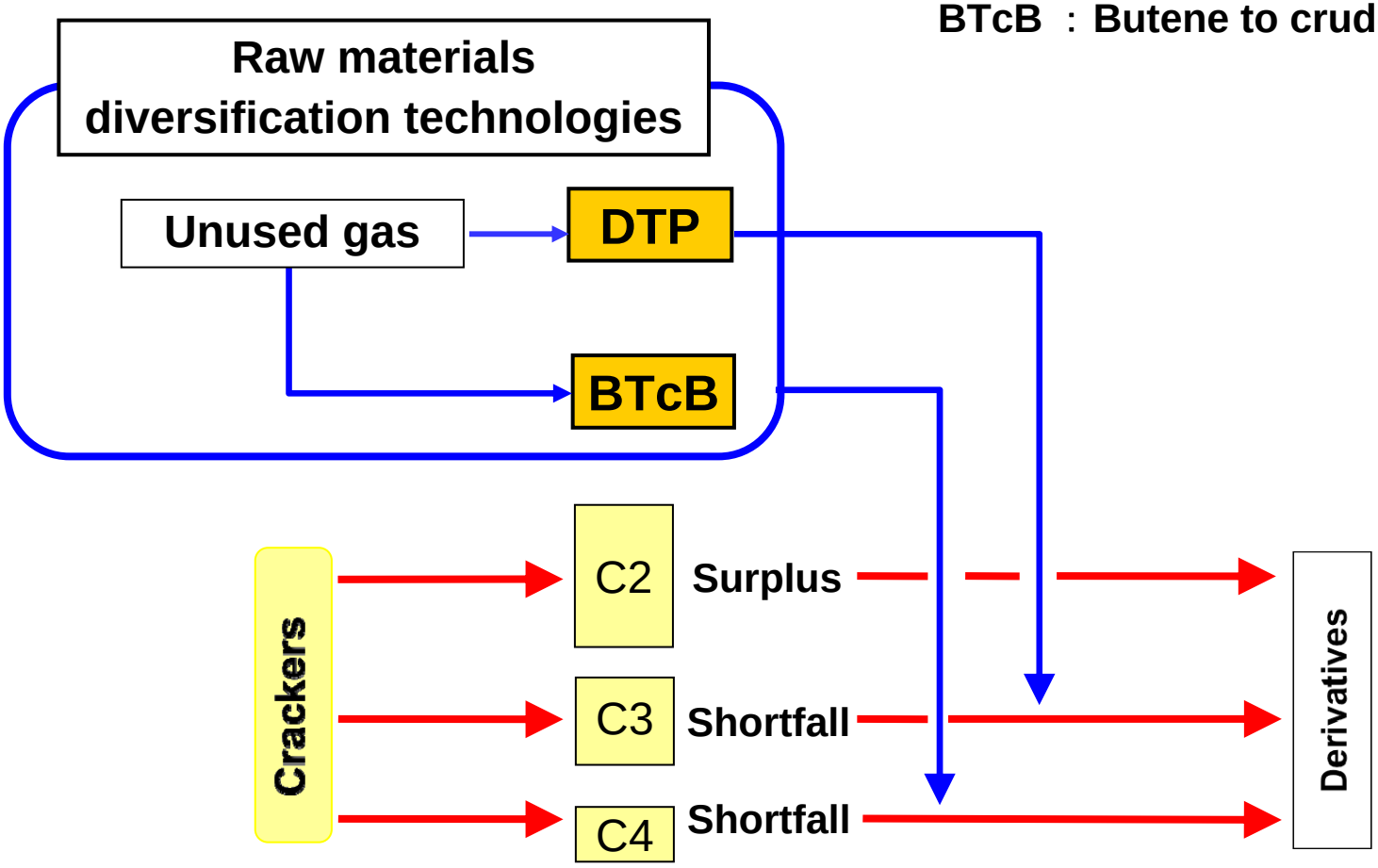
Raw Materials Diversification Technologies

Converting from conventional plant operation to optimal plant operation

DTP : Dimethylether to propylene
BTcB : Butene to crude butadiene



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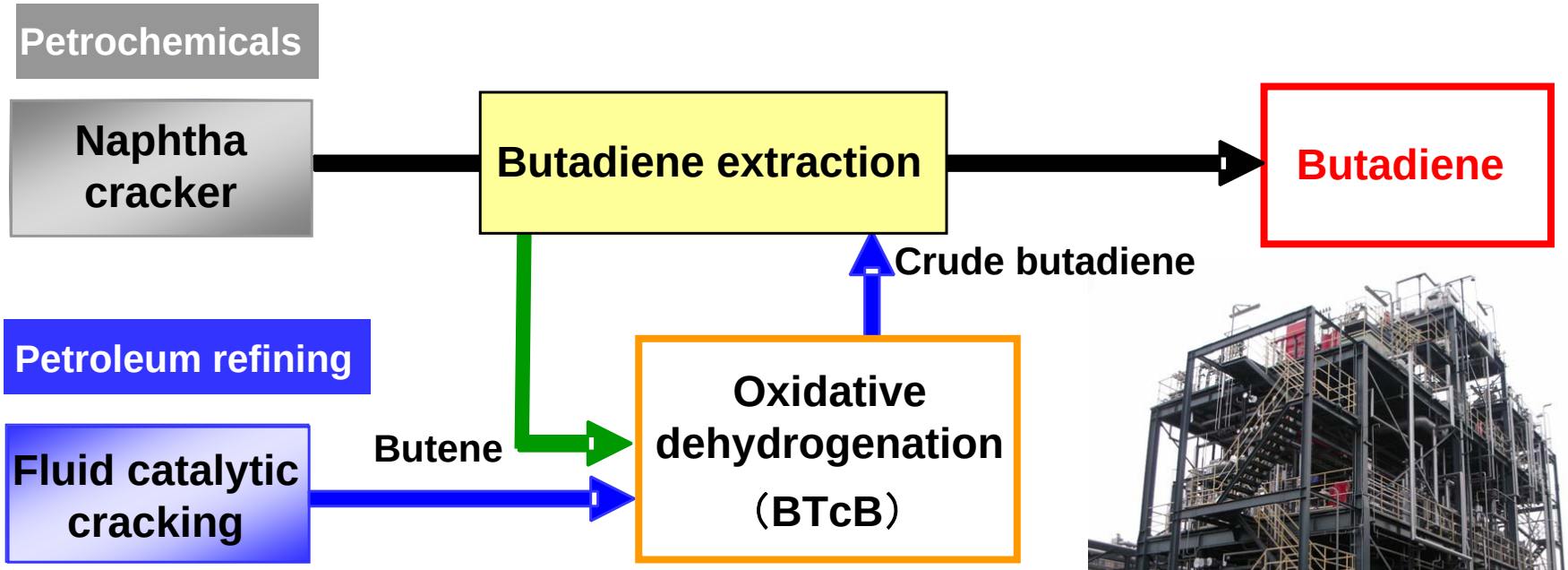
Butene to Crude Butadiene (BTcB)

- **Develop new butadiene sources through process of oxidative dehydrogenation of butene**
  - **Create new butadiene manufacturing routes that do not rely on naphtha cracking**
  - **Aiming to achieve this goal during fiscal 2012**



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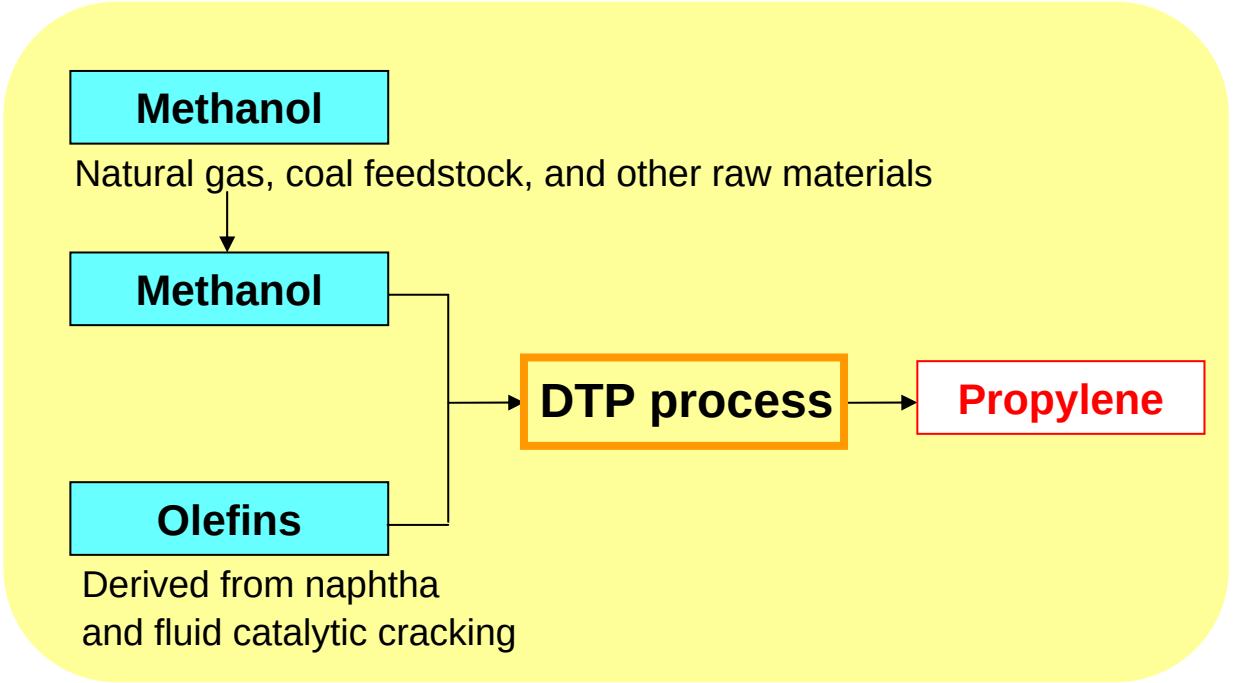
Dimethylether to Propylene (DTP)

- **Efficiently produce propylene with methanol/methanol derivatives and olefins**
  - **Developed DTP process with JGC Corporation funded by New Energy and Industrial Technology Development Organization (NEDO)**
  - **Completed proving tests with pilot operation**
  - **Preparing the technology licensing with JGC**



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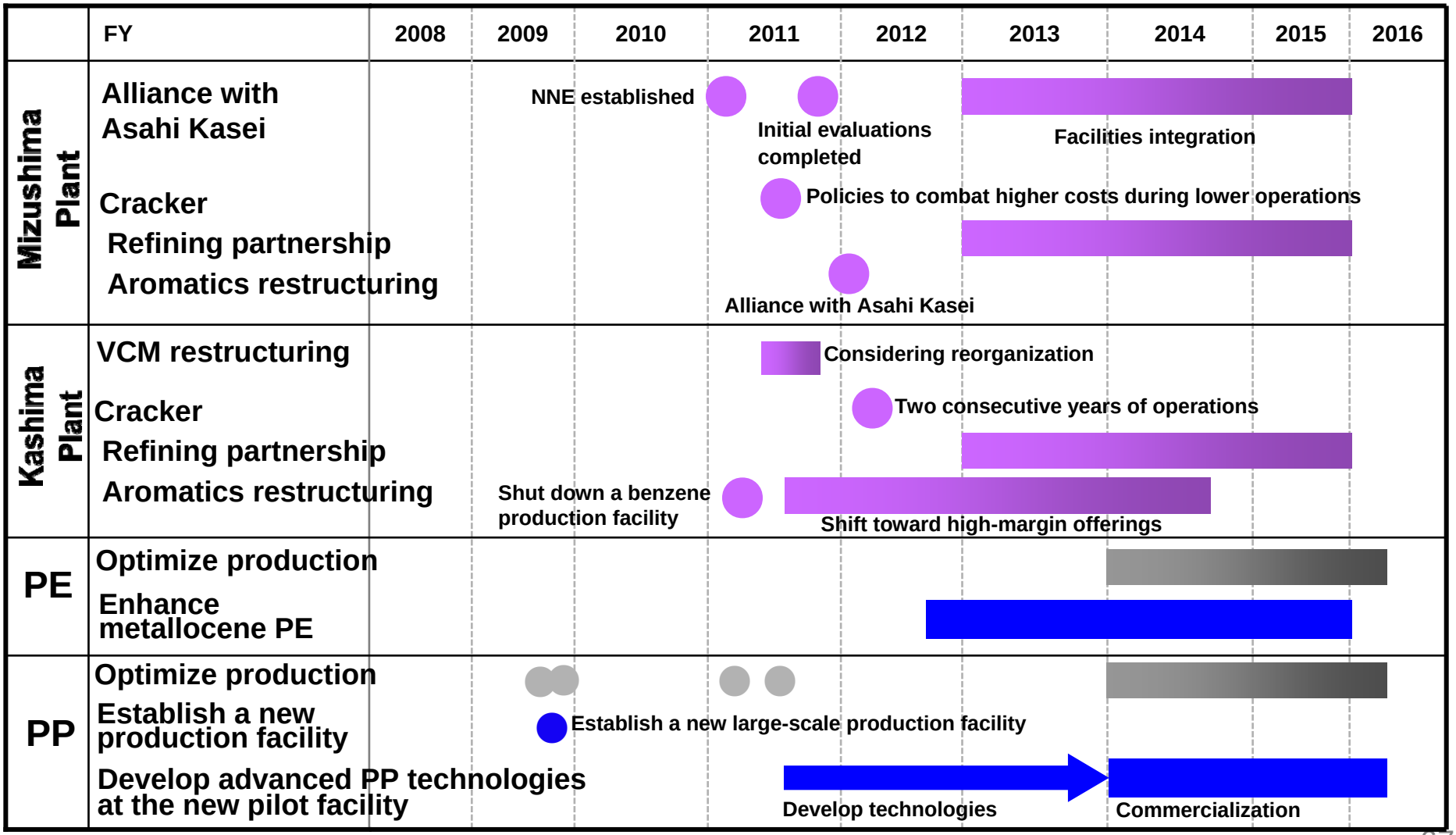
APTSIS

Progress in Olefin Aroma and Polyolefin

Considering to implement measures ahead of schedule



NNE: Nishi Nippon Ethylene

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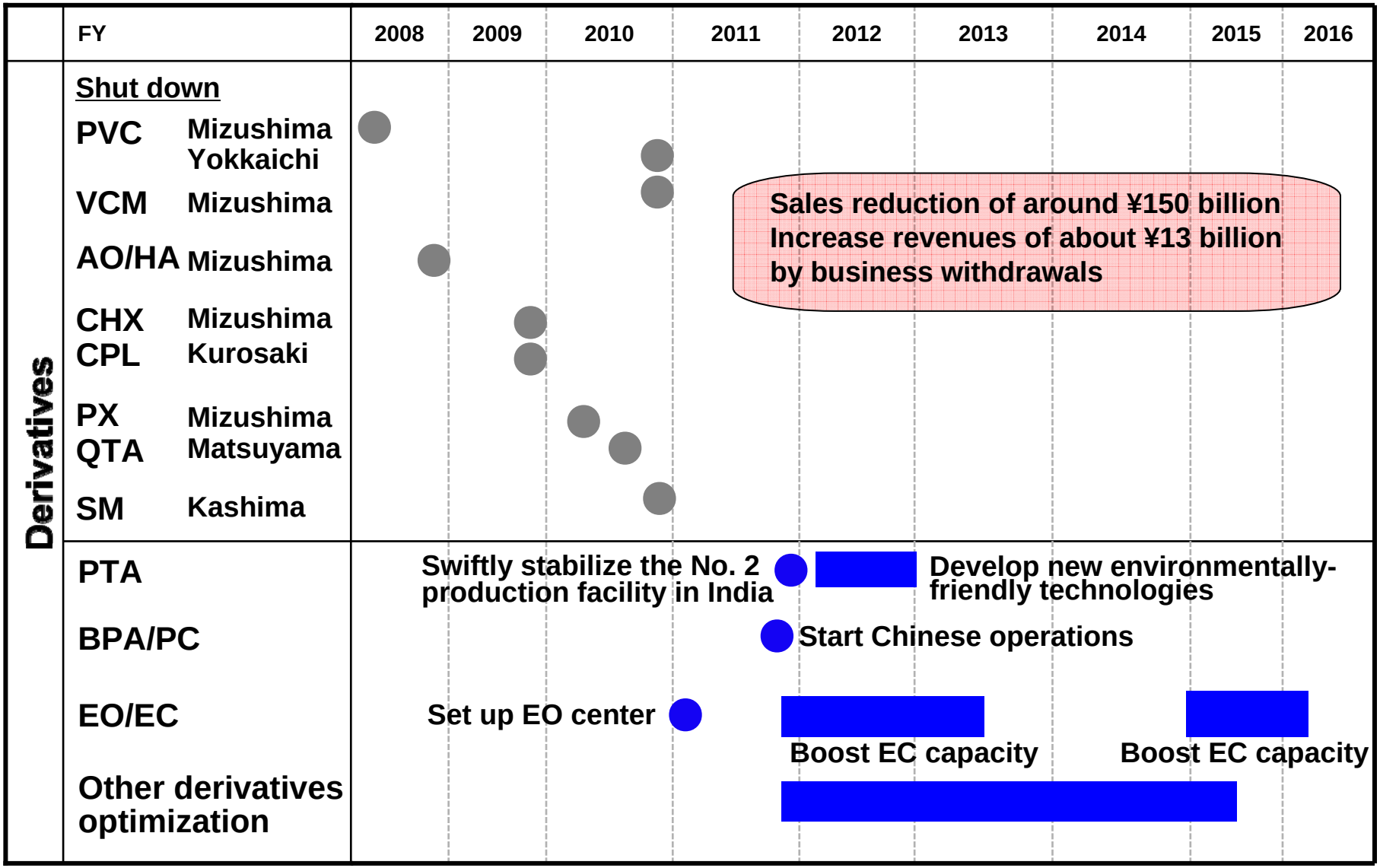
Progress in Derivatives



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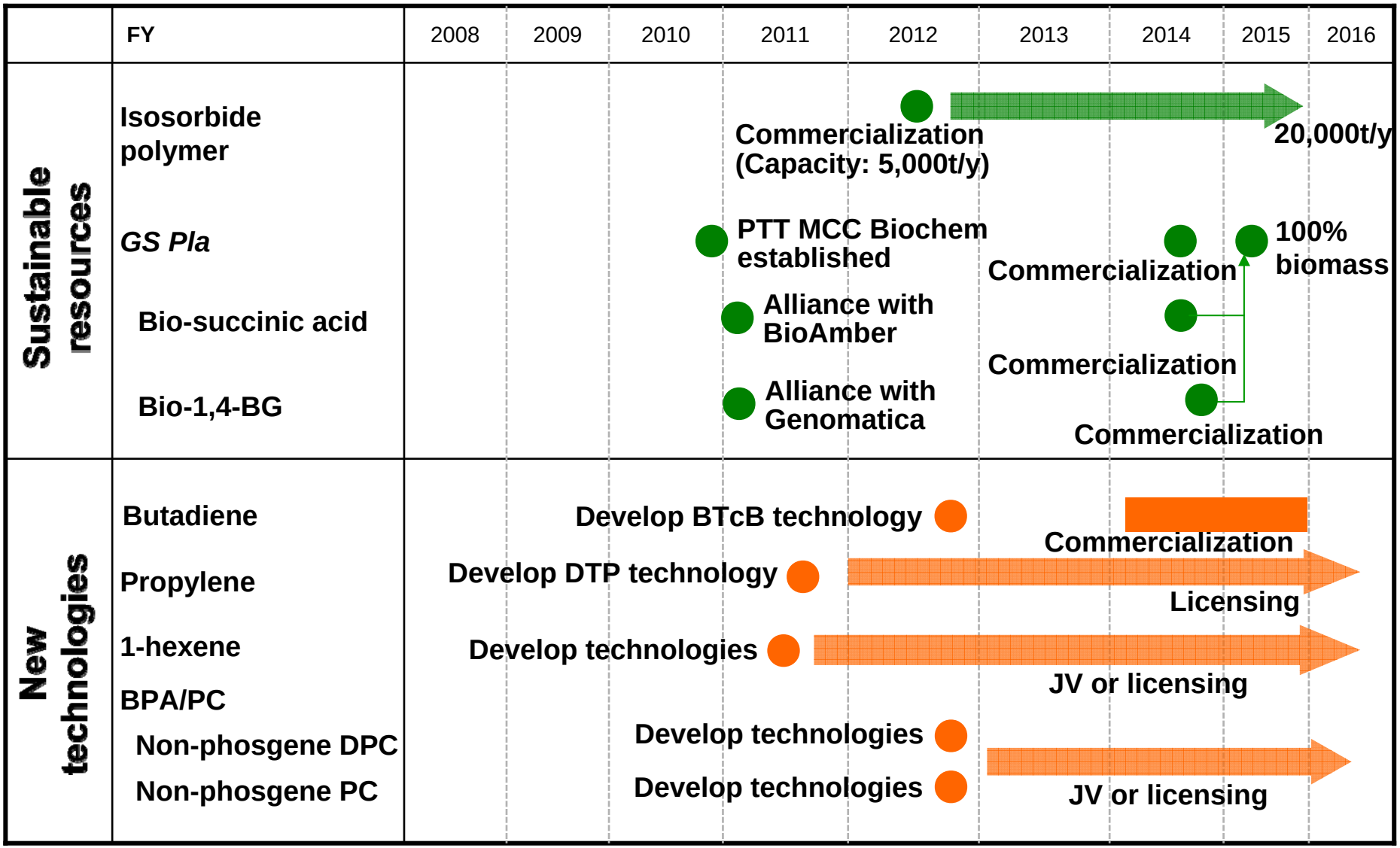
Progress in Sustainable Resources and New Technologies



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Enhanced Earnings from Progress with Business Strategies