

FY2016-2018
Mid-Term Management Plan

Kureha's Challenge 2018

Yutaka Kobayashi, CEO

March 14, 2016

1. Review of FY2012-2015 mid-term management plan: Grow Globally II
2. FY2016-2018 mid-term management plan: Kureha's Challenge 2018
 - Principles, strategic positioning
 - Improving competitiveness and profitability (PVDF, PPS)
 - Expanding the PGA business
 - Strategic actions for other businesses
 - Exploring new businesses
 - Promoting CSR management,
strengthening Kureha Group's management foundation
 - FY2018 qualitative targets
 - Capital policy, shareholder returns
3. Our vision: The Pursuit of Excellence

1. Review of FY2012-2015 mid-term management plan: Grow Globally II

Review of FY2012-2015 mid-term management plan: Grow Globally II

株式会社クレハ

FY2012-2015 Grow Globally II (“GG-II”)

Concepts:

“Global growth”

“Sustained results in new businesses”



Recover investment and
increase revenue and
earnings

Quantitative target (original plan): Operating income of ¥20 billion in FY2015

Capital investment: ¥90 billion over 4 years

Watchwords set up to improve corporate culture and guide Kureha toward GG-II goals:

“Passion, Speed and Commitment”

The Reform Project was launched in April 2013
to promote cost reduction and human resource development.

KUREHA

Review of FY2012-2015 mid-term management plan: Grow Globally II

株式会社クレハ

FY2012-2013

- ✓ Advanced Materials affected by slow growth of solar and lithium-ion battery markets
- ✓ Specialty Chemicals and Specialty Plastics achieved steady growth

In fall 2013, GGII was revised to reflect the changing business environment

- Top priority placed on raising profitability in Advanced Materials
- FY2015 operating income target lowered to ¥15 billion

FY2014-2015

- ✓ ¥4 billion cost reduction achieved over FY2013-2015 period through the Reform Project
- ✓ PGA earnings (Advanced Materials) significantly improved due to strategic business remodeling
- ✓ Growing influence of generic drugs affects Specialty Chemicals
- ✓ FY2015 operating income outlook revised from ¥13 billion (May '15) to ¥12 billion (Feb.'16)
- ✓ Restructuring measures for loss-making businesses are underway

Lessons learned from GG-II

- *We should have made business forecasts from a greater number of angles, and with greater precision.*
- *We did not fully consider preemptive strategies to cope with a downturn in the business environment.*
- *Despite signs of a downturn, we were unable to respond promptly and flexibly.*
- *We did not allocate adequate resources to future growth businesses (PVDF, PPS) from a long-term perspective.*

Review of FY2012-2015 mid-term management plan: Grow Globally II

株式会社クレハ

FY2012-2015 Key Developments

Promoting business development

- **PGA: Strategically reviewed business model to focus more on downstream markets in shale oil and gas exploration**
- PVDF: Commenced operations at new Chinese plant

Strengthening business foundation

- PVDC: Increased production capacity in Japan
- Packaging materials: Enhanced film manufacturing capabilities in Europe
- Environment business: Launched micro-PCB waste treatment services (Kureha Ecology Co.)

Allocation of R&D resources

- Enhanced R&D to explore mid- and long-term business themes

Disciplined capital investment

- Invested ¥70 billion in selected facilities over FY2012-15, ¥20 billion less than originally planned

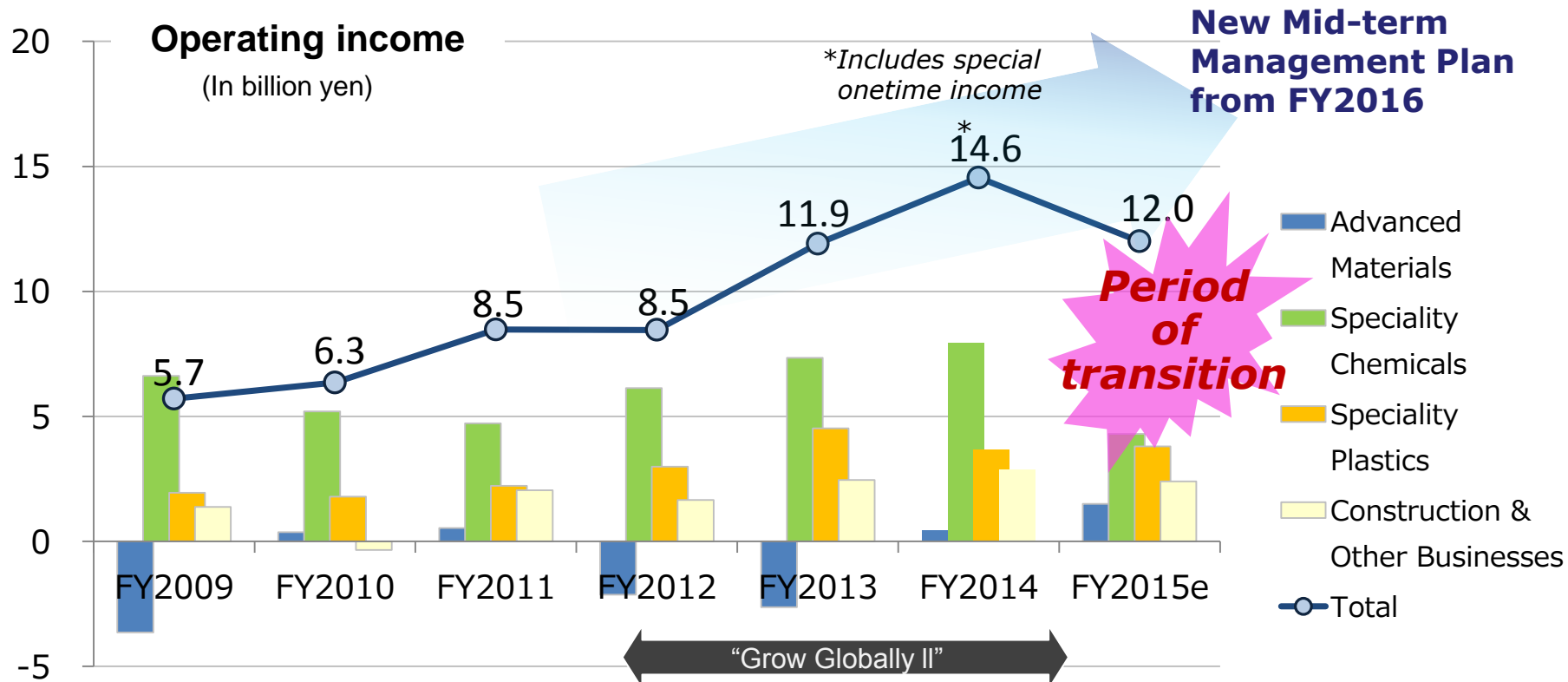
Restructuring businesses

- Hard carbon anode materials: Dissolved a joint venture for lithium-ion battery materials and streamlined facilities
- Carbon fiber: Closed a manufacturing subsidiary in the US and streamlined facilities and operations

KUREHA

Review of FY2012-2015 mid-term management plan: Grow Globally II

株式会社クレハ



Shifting weight from formally high-profit yielding Specialty Chemicals to Advanced Materials that turned profitable in FY2014 and will drive growth

→ **Strengthening Kureha's profit-generating structure**

KUREHA

2. FY2016-2018 mid-term management plan: Kureha's Challenge 2018

New Mid-term Management Plan **Kureha's Challenge 2018**

Concepts: “Achieve product differentiation” and “Create new businesses”

Duration: FY2016 through FY2018 (rolling plan)

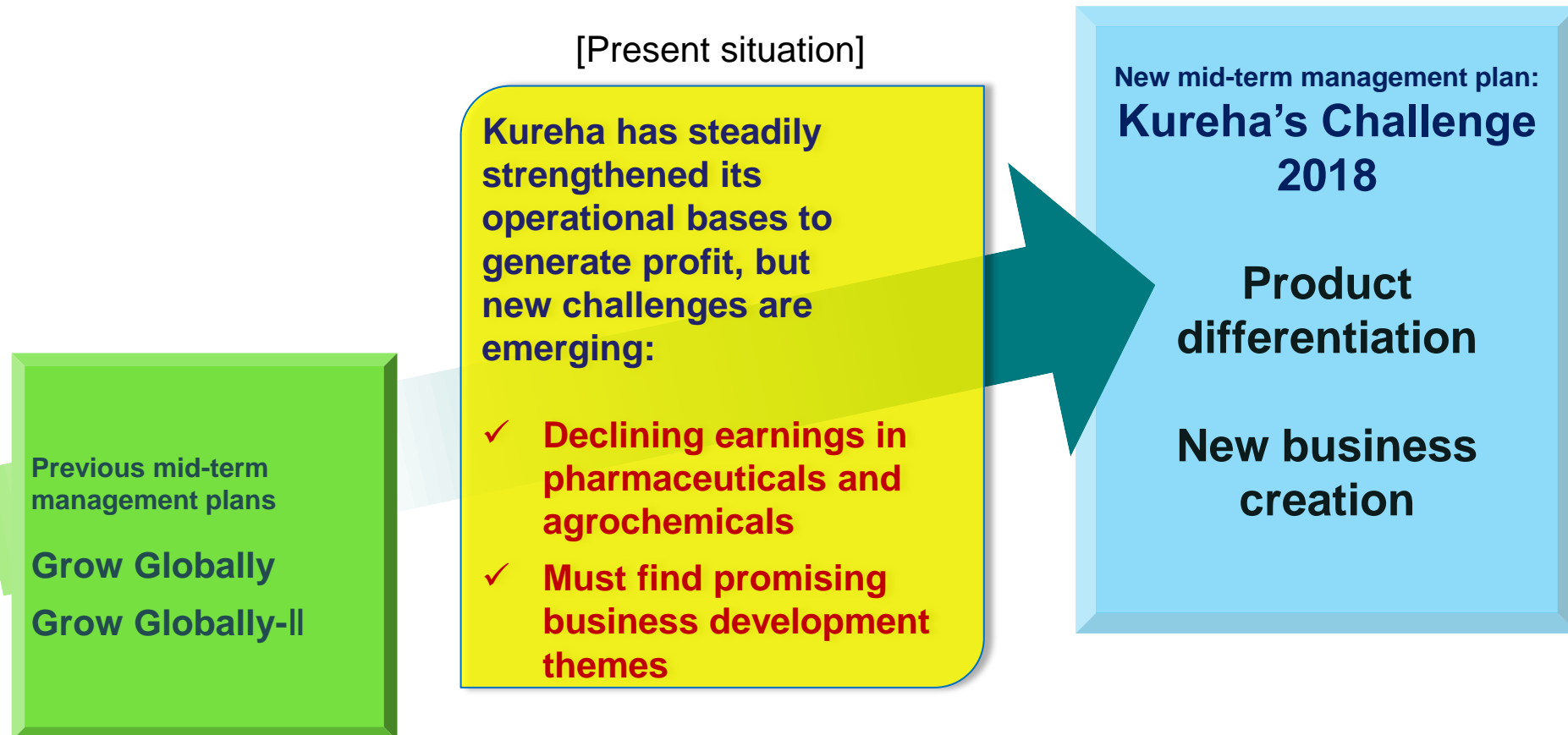
- Kureha aims to achieve the targets of Kureha's Challenge 2018 in line with our corporate philosophy:

- We treasure people and the natural environment
- We constantly evolve through innovation
- We contribute to society by developing beneficial products

- ★ Drawing lessons from previous mid-term management plans that did not reach their targets, Kureha has incorporated a wider range of risk factors in the new mid-term plan and is determined to achieve its goals.

Kureha's Challenge 2018: Strategic positioning (1)

株式会社クレハ



KUREHA

Kureha's Challenge 2018

➤ Business strategies

- Enhance competitiveness and earnings capacity of existing businesses
- Expand the PGA business
- Explore new business themes

➤ Promote CSR-based management

➤ Strengthen the management foundation

Strategic direction

As a **company built on technology**, Kureha will develop **differentiated products** in the field of specialty chemicals and become a **high value-added enterprise** that continually contributes to global society

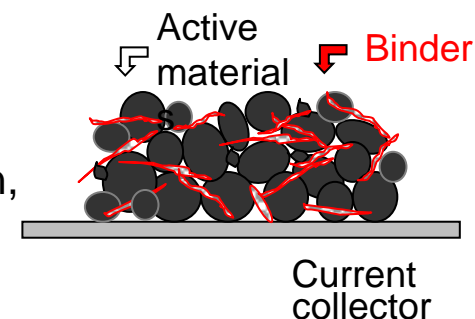
A period to lay the foundation for
Kureha's future expansion

Improving competitiveness and profitability: PVDF (polyvinylidene fluoride)

株式会社クレハ

Kureha, a pioneer in lithium-ion battery binder material, strives to be the first to answer unmet needs and lead the market.

- Kureha aims to be the #1 player in the global niche market
- Owns proprietary technologies (polymerization, battery performance analysis) which are continually refined and improved
- Ensures stable supply of high-quality PVDF from two locations (Japan, China)
- Demand for other PVDF applications, including water treatment membranes and pipes, continues to expand globally



	FY2015 Outlook	FY2018 Plan	(Billion yen)
Sales	8.5	13.0	Increase +4.5
Operating income	-0.3	1.8	+2.1

Kureha is planning its next capacity expansion using innovative process technology in FY2018.

KUREHA

Growing demand for plug-in hybrid electric vehicles and electric vehicles driven by stronger environmental regulations in China, the US and EU



Increasing demand for PVDF binder material for lithium-ion batteries used in “green” vehicles

Strengths of Kureha's PVDF binder

- Established supply system for small lot and multi-variety products
- Customized products and services
- Original battery performance analysis technology
- High quality control system

Kureha can speedily develop products to meet customer needs (e.g., high-adhesive binder) and offers reliable technical support

Customers' 1st choice of binder

Kureha's PVDF binder has a 50% share of the market for binder materials. Its performance has been proven with many vehicle lithium-ion batteries.

Improving competitiveness and profitability: PPS (polyphenylene sulfide)

株式会社クレハ

Demand for PPS as a lightweight solution
is growing in the automobile industry.

- Kureha is a leading PPS resin maker and expands its business through partnerships
- Maintains cost-competitiveness by self-producing primary raw materials for PPS (paradichloro benzene, etc.)
- Annual production reaching 10,700 tons after summer 2016 enhancement
- US joint venture (Fortron Industries LLC) continues strong performance

	(Billion yen)		
	FY2015 Outlook	FY2018 Plan	Increase
Sales	9.0	11.5	+2.5
Operating income	1.0	1.2	+0.2

Note: Above figures do not include earnings generated by the joint venture.

**Kureha is planning an additional manufacturing facility
in Japan, which will be operational in FY2019.**

KUREHA

Expanding the PGA Business

株式会社クレハ

Kureha provides differentiated technology solutions for shale oil and gas extraction.

- With oil prices around US\$40/bbl, Kureha aims to increase market share of frac plugs
- Continued development and refinement of proprietary technologies (resin manufacturing, secondary processing)
- Collaboration with domestic and international partners that have strong technological expertise
- Stronger focus on downstream markets (100% degradable frac plugs, low-temp degradable frac plugs)
- Global expansion of PGA business beyond North America

	(Billion yen)		
	FY2015 Outlook	FY2018 Plan	Increase
Sales	3.5	13.0	+9.5
Operating income	-0.5	1.5	+2.0

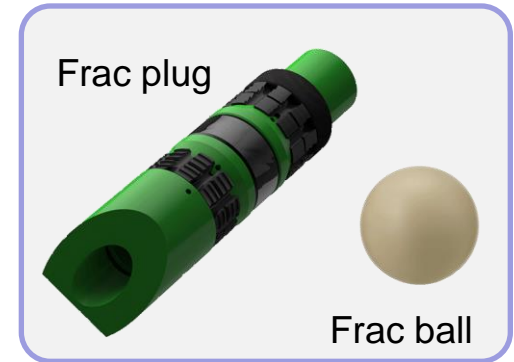
KUREHA

Kureha aims to expand PGA applications in shale oil and gas exploration.

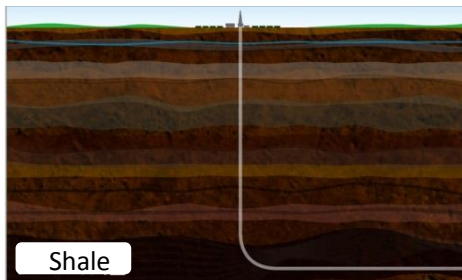
Merits of PGA in shale oil and gas extraction

- PGA improves the cost- and operational efficiency and productivity of hydraulic fracturing operations
 - PGA downhole tools will degrade and dissolve in water after use, eliminating costly drill-out processes
 - PGA downhole tools allow oil and gas exploration in extended horizontal wellbores, without the limitations of conventional drill-out technology

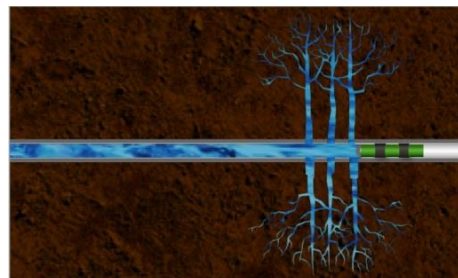
PGA downhole tools



How hydraulic fracturing works



A wellbore is drilled horizontally within the shale formation, extending 2-3 kilometers.



A frac plug is inserted to “plug” the wellbore, and operators apply hydraulic pressure to create fractures and fissures in the shale.



With PGA downhole tools, this third step becomes unnecessary.

The frac plug is drilled out after use, so that the oil and gas can flow back.

KUREHA

Strategic actions for other businesses

株式会社クレハ

Advanced Materials

Carbon materials

Implement drastic and thorough measures to secure profits

Specialty Chemicals

Agrochemicals

Promote development of a new azole-family fungicide

Pharmaceuticals

Promote development of new adsorptive medicines

Specialty Plastics

Household products

Strengthen brand recognition and promote global marketing of *New Krewrap* products

Packaging

Promote global business expansion of heat-shrinkable multilayer film

Synthetic fiber

Develop new products and improve cost-competitiveness

Construction & Other Operations

Industrial waste services

Expand micro-PCB treatment business (Kureha Ecology Co.)

Construction

Strengthen profit bases by increasing orders and lowering costs

Exploring new businesses (1)

株式会社クレハ

Urgent!

Kureha is exploring potential new businesses after PGA...

We must immediately plant new business “seeds” that can be harvested in the next decade!

Environment

Energy

Quality of life
(medicine, food)

Open innovation

- “R&D Exchange Forum” (communicating R&D efforts within Kureha Group)
- Collaboration with academic and research institutes
- Partnership with multiple companies

“Hatched Egg Trials”

- R&D initiatives to generate and test multiple “seeds” or new business ideas through cross-departmental collaboration

... still no potential “seeds” to underpin Kureha’s future after FY2019

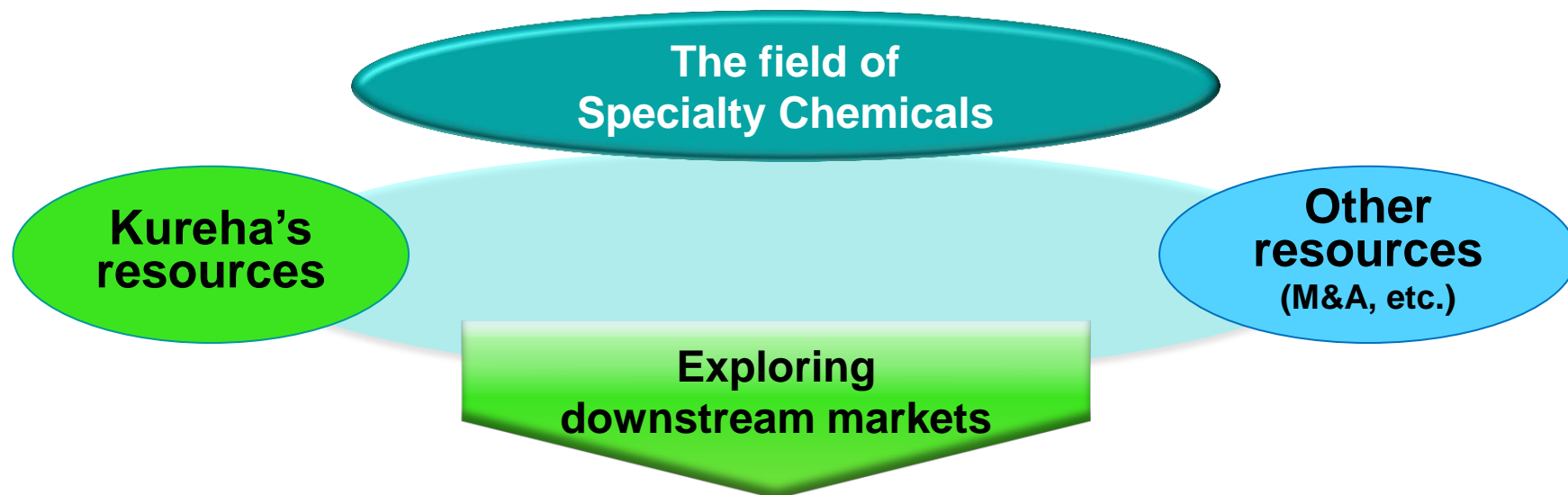
KUREHA

Exploring new businesses (2)

株式会社クレハ

CEO-led “New Business Creation Project” starts from April 2016.

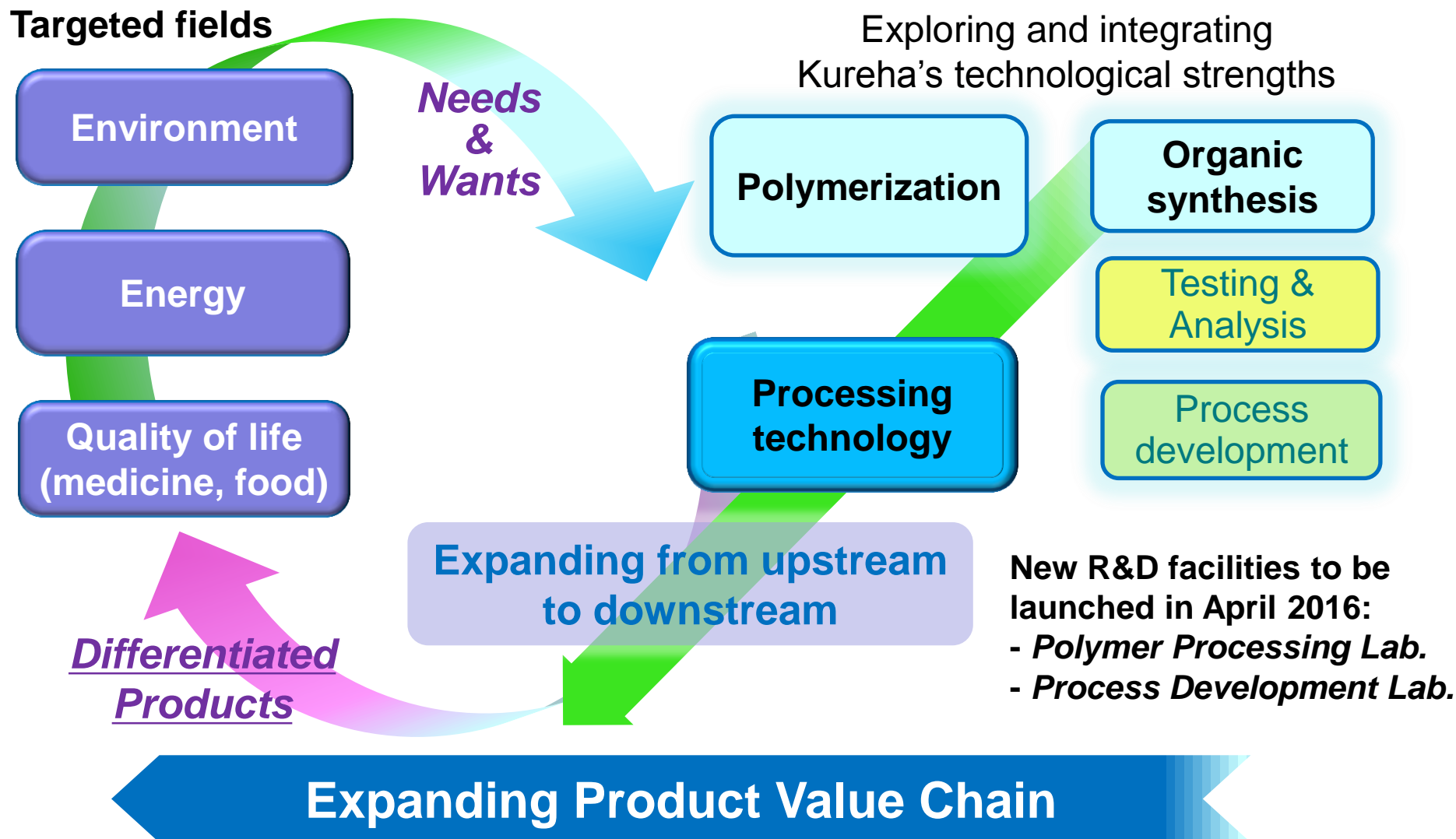
- Project team consists of selected R&D and sales staff members working full-time to explore new business possibilities
- Project focuses on **new business themes** related to Kureha’s technological strengths and relevant market research



KUREHA

Exploring new businesses (3)

株式会社クレハ



Kureha's Challenge 2018: Strengthening the management foundation

株式会社クレハ

Promoting CSR management

- Structural enhancements to promote CSR initiatives (CSR Division to be established April 2016)
- Strengthen efforts to co-exist with and contribute to society
- Promote activities related to environmental protection and operational safety
- Ensure compliance with laws and regulations
- Improve efficiency of corporate governance

Strengthening the management foundation

- Strengthen technological competence by facilitating interaction between R&D, Production, Engineering and CSR divisions
- Invest to increase production capacity by incorporating technological innovation and to ensure stable production with proper facility maintenance and upgrades, and enhance asset efficiency
- Develop and cultivate human resources with the goal to mobilize all Kureha employees, and support career development for female workers
- Continue cost reduction efforts through the Reform Project

KUREHA

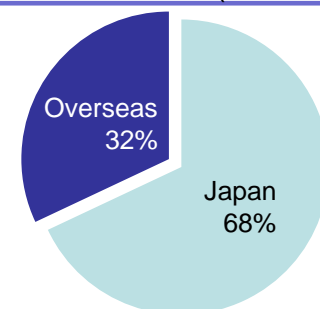
Kureha's Challenge 2018: Quantitative targets (1)

株式会社クレハ

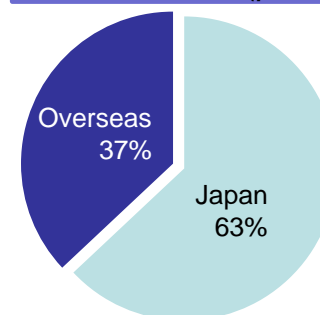
(Billion yen except where stated otherwise)

	FY2015 Outlook	FY2018 Plan	Increase
Net sales	145.0	170.0	+25.0
Operating income	12.0	16.0	+4.0
Operating income ratio (%)	8.3%	9.4%	+1.1%
Net income	7.0	9.0	+2.0
Net income per share (yen)	40.73	43.7	+2.97

FY2015 sales (estimate)



FY2018 sales (plan)



Presumptions

- Currency exchange rates: ¥120/US\$1, ¥130/€1, ¥18/CNY1
- Crude oil price: US\$40/bbl
- Number of shares of common stock issued in FY2018: 206 million shares, including conversion of convertible bonds

KUREHA

Kureha's Challenge 2018: Quantitative targets (2)

株式会社クレハ

Quantitative targets by segment

(Billion yen except where stated otherwise)

	FY2015 Outlook		FY2018 Plan		Operating income increase/decrease	Factors behind increase/decrease
	Net sales	Operating income	Net sales	Operating income		
Total	145.0	12.0	170.0	16.0	+4.0	
Advanced Materials	38.0	1.8	55.0	7.0	+5.2	<ul style="list-style-type: none"> • Growth in Advanced Plastics • Improved profitability for carbon products
Specialty Chemicals	32.0	4.3	30.0	2.0	-2.3	<ul style="list-style-type: none"> • Negative impact of growing generic drugs market
Specialty Plastics	44.0	3.8	50.0	5.0	+1.2	<ul style="list-style-type: none"> • Accelerated global business expansion
Construction	16.0	0.9	13.0	0.3	-0.6	<ul style="list-style-type: none"> • Decrease in post-quake demand
Other	15.0	1.2	22.0	1.7	+0.5	<ul style="list-style-type: none"> • Increased business for difficult -to-treat waste treatment

KUREHA

Kureha's Challenge 2018: Quantitative targets (3)

株式会社クレハ

(Billion yen)

	FY2015 Outlook	FY2016 - 2018 Plan (3 years total)
Capital investment	16.0	50.0
Depreciation	10.0	35.0
R&D expenditure	5.7	20.0

Our approach to capital investment:

- Utilize innovative cost-effective process technologies for new PPS and PVDF plants (scheduled to start operations in FY2019 and FY2018, respectively)
- Maintain and upgrade facilities to ensure operational profitability
- Construction of a new R&D facility for process development
- Increased R&D expenditure will be used to enhance Kureha's processing capabilities for downstream business expansion and to explore new business themes

KUREHA

Kureha's Challenge 2018:

Capital policy

株式会社クレハ

Kureha aims to **improve earnings and capital efficiency** while securing and enhancing financial stability. Key measures include:

- Reducing inventories and working capital needs and efficiently utilizing assets
- Decreasing interest-bearing debt from ¥88.5 billion at the end of FY2015 to ¥70 billion at the end of FY2018

	FY2015 Outlook	FY2018 Plan
ROA (%)	4.6	5.5
ROE (%)	5.8	6.0
D/E ratio	0.7	0.5

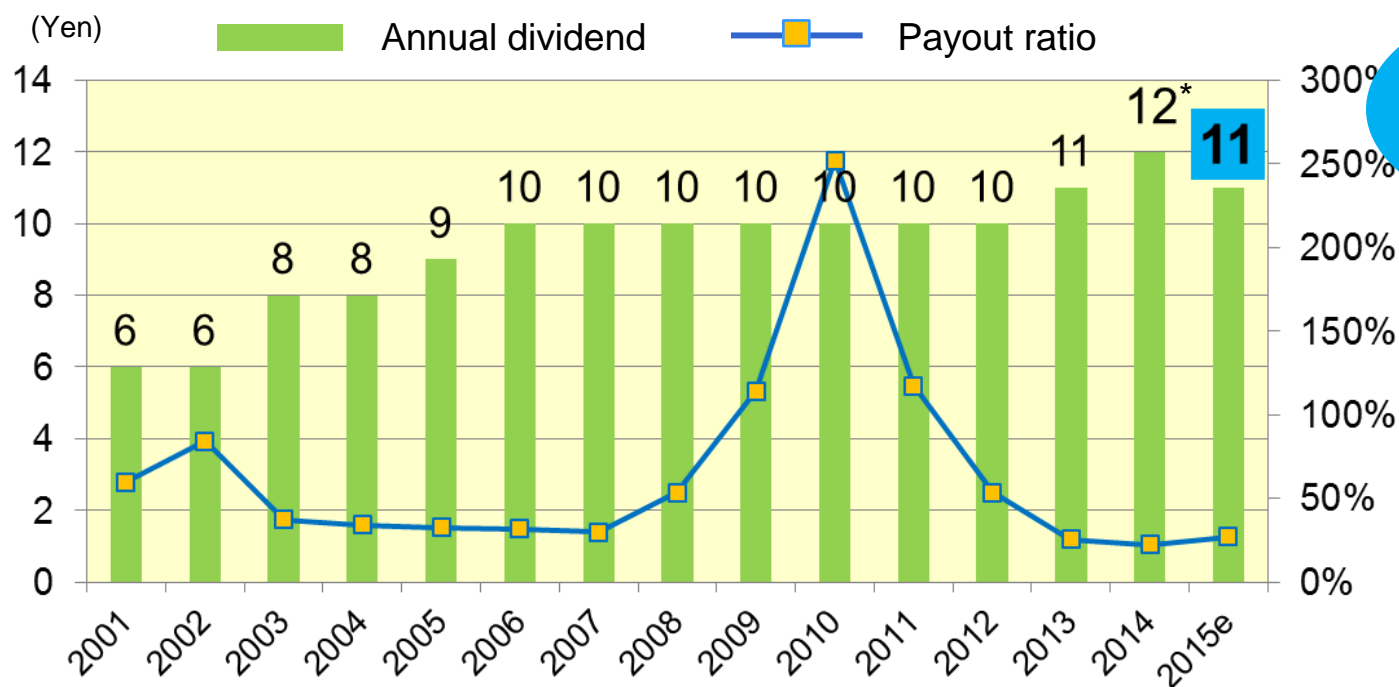
Kureha aims to improve ROA and ROE over the medium to long term

KUREHA

Shareholder returns

株式会社クレハ

Kureha's basic policy for the distribution of earnings is to strengthen the company overall to realize longer-term growth, prepare for future business expansion, enhance retained earnings, and provide a stable and continued dividend. We aim to increase the dividend over the medium to long term.



Kureha aims to increase dividends over the medium to long term

*FY2014 dividend includes Kureha's 70th anniversary commemorative dividend

KUREHA

- This documentation is intended to provide a deeper understanding of our company, and not to act as a solicitation for investment or other actions.
- This documentation has been prepared by our company based on information available at this point in time. However, actual performance results may differ those projected in the plan, due to various factors.
- Please exercise proper judgment when using this documentation.

For more information, please contact:
Kureha Corporation
Investor & Public Relations Department
TEL: 03-3249-4651