

Medium-term Business Plan “EGP2018”

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1. Revision of Corporate Philosophy

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1.Revision of Corporate Philosophy

Changes in external environment and Company's business developments

1990~

Accompanying to the overseas shift of Japanese CRT manufacturers, overseas expansion of business of glass for CRTs

2000~

Market changes from CRTs to FPDs; structural reforms in Display glass business

- ✓ Closure of bases for CRT glass business
- ✓ Accelerated investments in LCD glass business and launch of overseas after-processing bases

2010~

Hit a peak in growth of glass for FPDs, shift to development of next growth axis

- ✓ Utilize the slogan of "Strengthen display business, expand non-display business"
- ✓ Accelerate overseas shift for LCD glass business
- ✓ Reinforce efforts to expand non-display business

2015~

"Transition stage" to position the Company for further growth

- ✓ Establishment of Corporate Philosophy Structure (Resurrect founding spirit, clarify direction and values)
- ✓ Establishment of management strategy and medium-term business plan

1.Revision of Corporate Philosophy

Establishment of Corporate Philosophy Structure (2015.12.1)

The NEG Corporate Philosophy Structure

At Nippon Electric Glass, our corporate philosophy is a reflection of our founding mission, a statement of our devotion to creating products infused with the very best of human civilization for the betterment of society.

【Our corporate philosophy】

We strive to build a brighter future for the world by uncovering the unlimited possibilities of glass for more advanced creative manufacturing.

Our slogan

GLASS FOR FUTURE

【Our vision】

The world's leading manufacturer of special glass

【Our values】

- Customer first
- Get the job done
- Broad minds and open communication
- High ethical standards
- Consideration for the environment

1.Revision of Corporate Philosophy

Our vision

“The world’s leading manufacturer of special glass”

“To become the world’s leading manufacturer of special glass, with the best talent, the best technology, and the best creative manufacturing* ability.”

* Creative manufacturing:

Achieved through state-of-the-art technological development, the highest quality standards, efficient production, and a steady supply of products, all underpinned by a fundamental dedication to environmental sustainability.

2. Management strategy

- Business model
- Focus market areas and needs
- Financial policy
- Profit distribution policy

2. Management strategy

Business model

- Create high-value-added products and innovative products
- Provide glass in a wide variety of forms and that offer a range of functions “substrate”, “tube”, “sphere”, “fiber”, “powder”, “forming goods”, and “hybrid products”—that combine thin films, plastics, and metals
- Build a balanced business portfolio.

Electronics & Information Technology	glass for displays, glass for optical and electronic devices, etc.
Performance Materials & Others	glass fiber, medical care, heat-resistant, building materials, etc.

- Fulfill its corporate social responsibilities and contribute to social development

Increasing corporate value and pursuing sustainable growth

2. Management strategy

Focus market areas and needs

Expansion and reinforcement areas : aggressively expanding business and strengthening competitiveness in these areas

Automotive & Transportation	Lightweight materials, in-vehicle lighting, display devices, in-vehicle cameras, electronic devices
Information Technology & Semiconductors	High-speed and high-capacity optical communications equipment, next-generation semiconductors (small-sized, high-precision, high-functioning)
Medical Care	Advanced pharmaceutical containers, cutting-edge medical equipment and devices
Displays	Next-generation displays (high-definition, thin and lightweight, flexible)

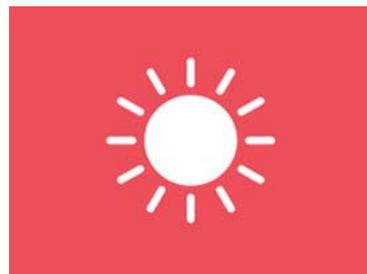


2. Management strategy

Focus market areas and needs

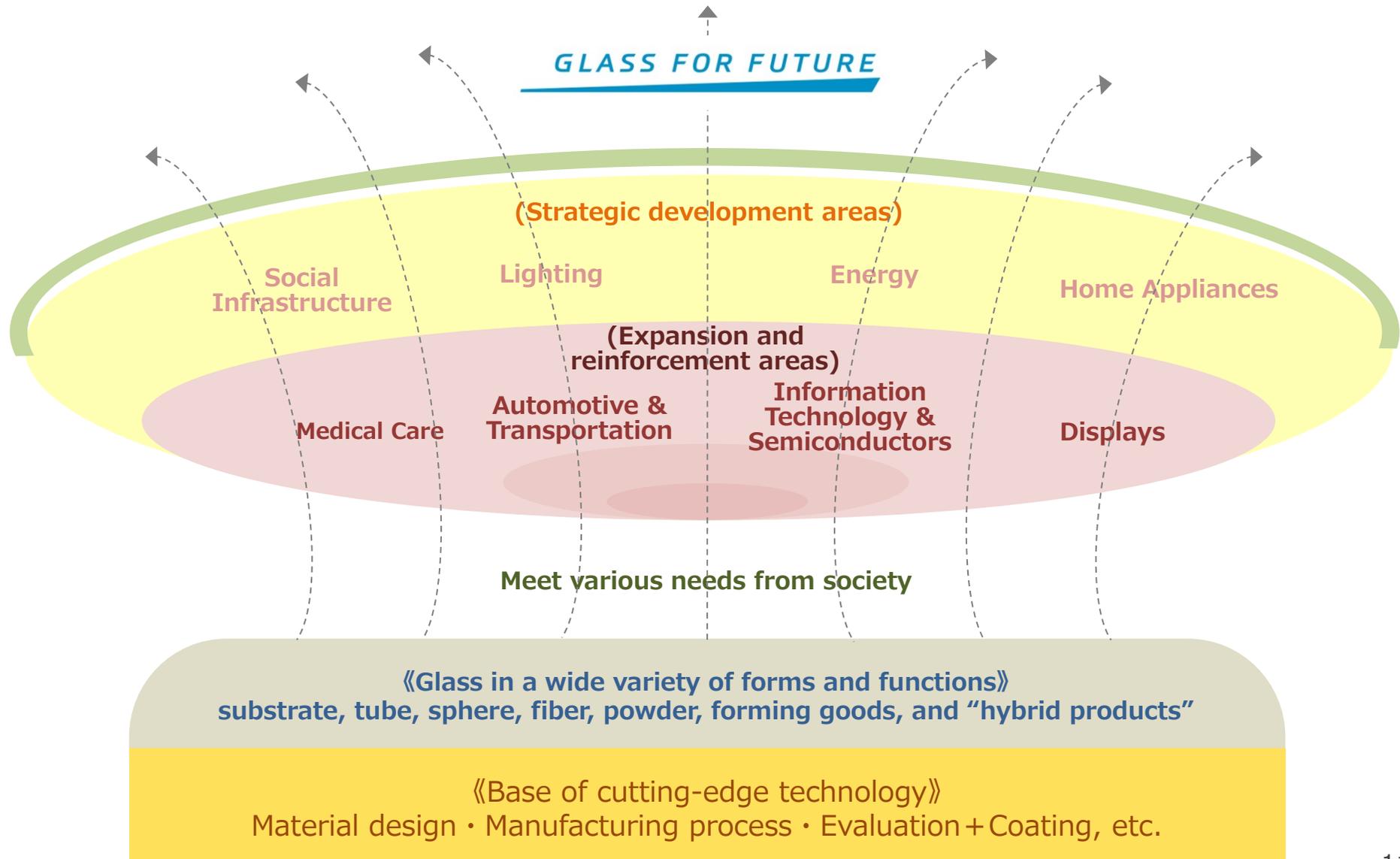
Strategic development areas : Research and development is under way to create new businesses in these areas

Lighting	Next-generation lighting (energy-saving, high-luminance, high-output)
Energy	Natural energy systems, secondary batteries
Social Infrastructure	High-functioning fire-resistant equipment, high-functioning structural materials (safe, durable, lightweight)
Home Appliances	High-functioning home appliances and housing equipment materials, multi-function wall materials



Business model

“We strive to build a brighter future for the world by uncovering the unlimited possibilities of glass for more advanced creative manufacturing.”



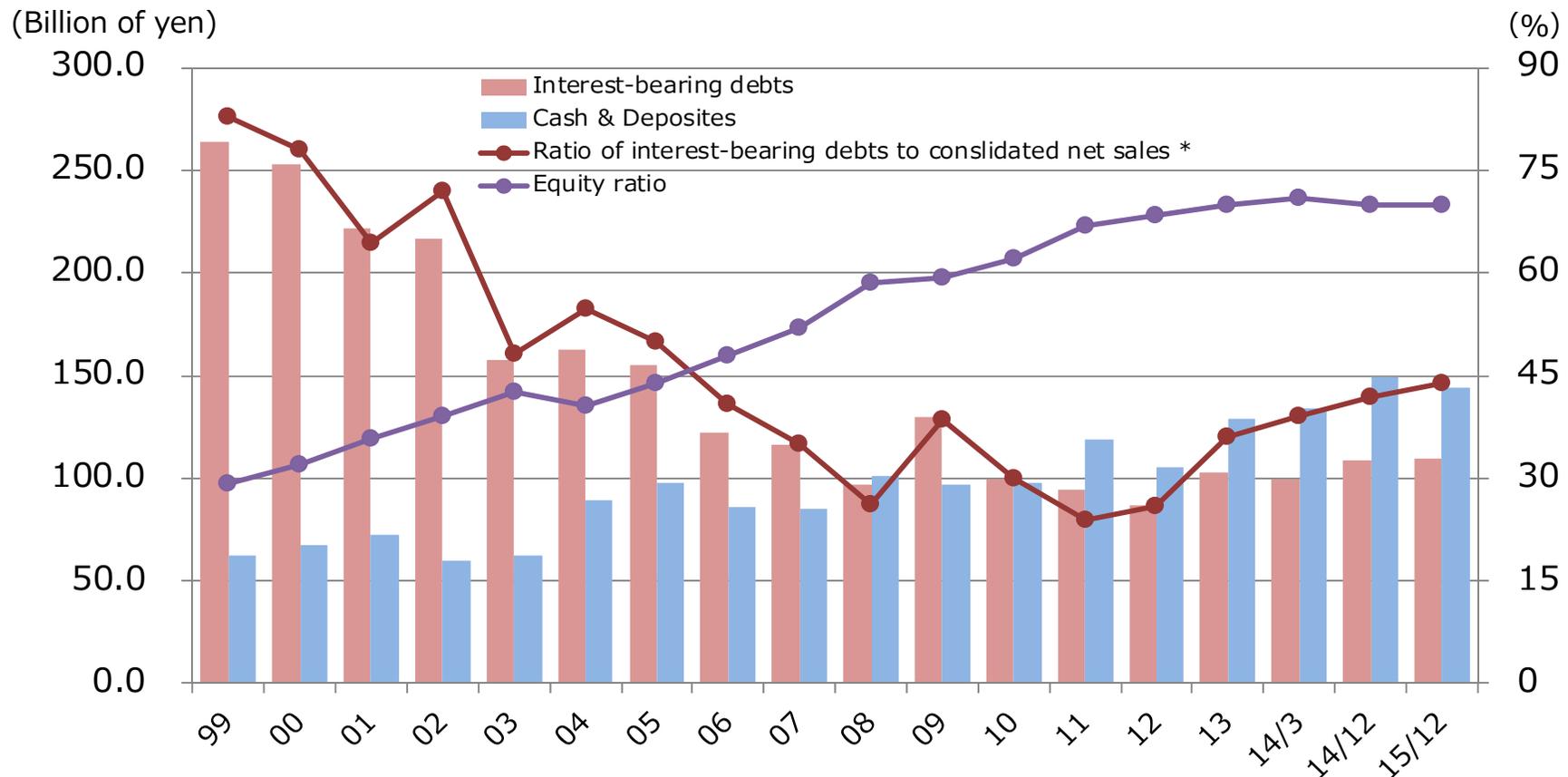
2. Management strategy

Financial policy

- Emphasis on cash flow
- Efficient use of assets
(reduction in financial assets and inventory assets,
improvement of productivity for equipment and consolidation)
- Reinforcement of financial base
(appropriate shareholders' equity ratio and effectively debt-free
management)

(Trends of Interest-bearing debts/Equity ratio)

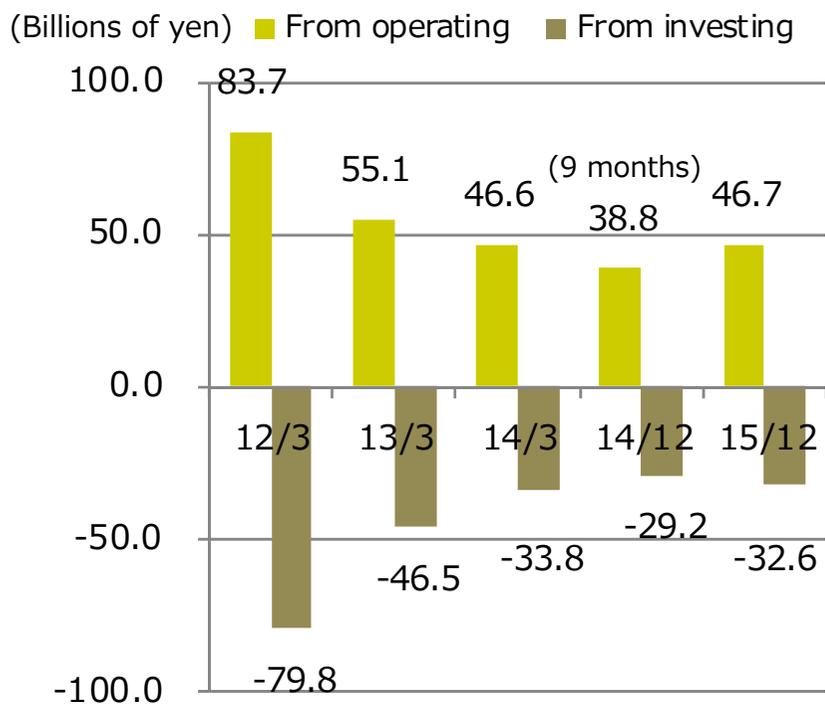
Interest-bearing debts	109.7 billion yen (+0.5 billion yen vs. Dec 31, 2014)
Equity ratio	70% (+0.4 point vs. Dec 31, 2014)



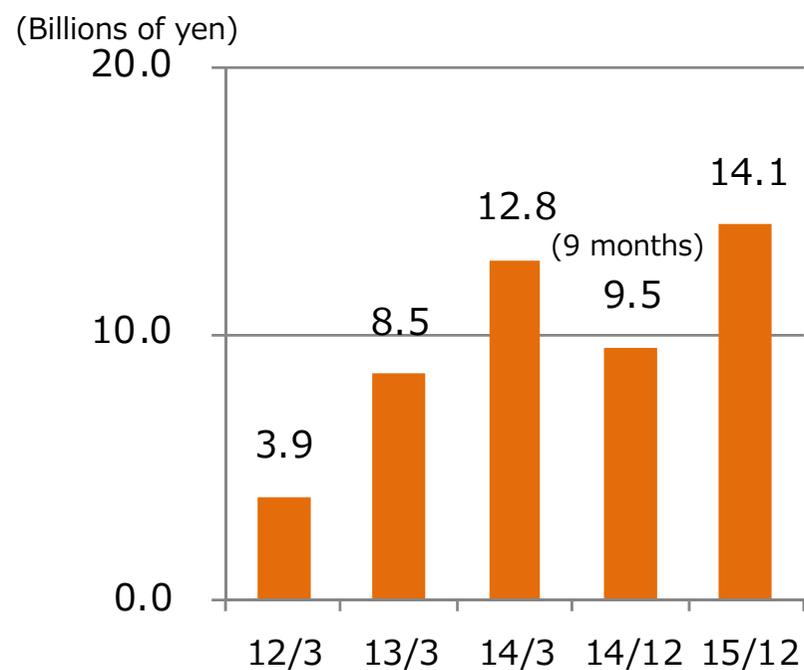
* Consolidated interest-bearing debts / consolidated net sales ×100

(Trend of Cash Flow)

Cash flow from operating/investing



Free cash flow



2. Management strategy

Profit distribution policy

- Based on continuous payment of stable dividends to shareholders
- Flexible shareholder return measures also considered for certain occasions
- In addition to shareholder returns, proactive use of retained earnings for research and development, and growth investments with an eye on the future

3. Medium-term Business Plan “EGP2018”

- Summary
- Basic policies
- Management targets
- Measures

3. Medium-term Business Plan “EGP2018”

Summary

- Position : Milestone to “The world’s leading manufacturer of special glass”
- Duration : January 1, 2016 to December 31, 2018

※EGP : **E**lectric **G**lass **P**rospects

Basic policies

- ① Strengthen profitability of “display” related business
- ② Expand business related to “performance materials, optical and electronic devices and medical care, heat-resistant, and building materials”
- ③ Reinforcement of R&D
- ④ Constructive investments

3. Medium-term Business Plan “EGP2018”

Management targets (Consolidated basis)

- Net sales : **300 billion yen**

(Breakdown)

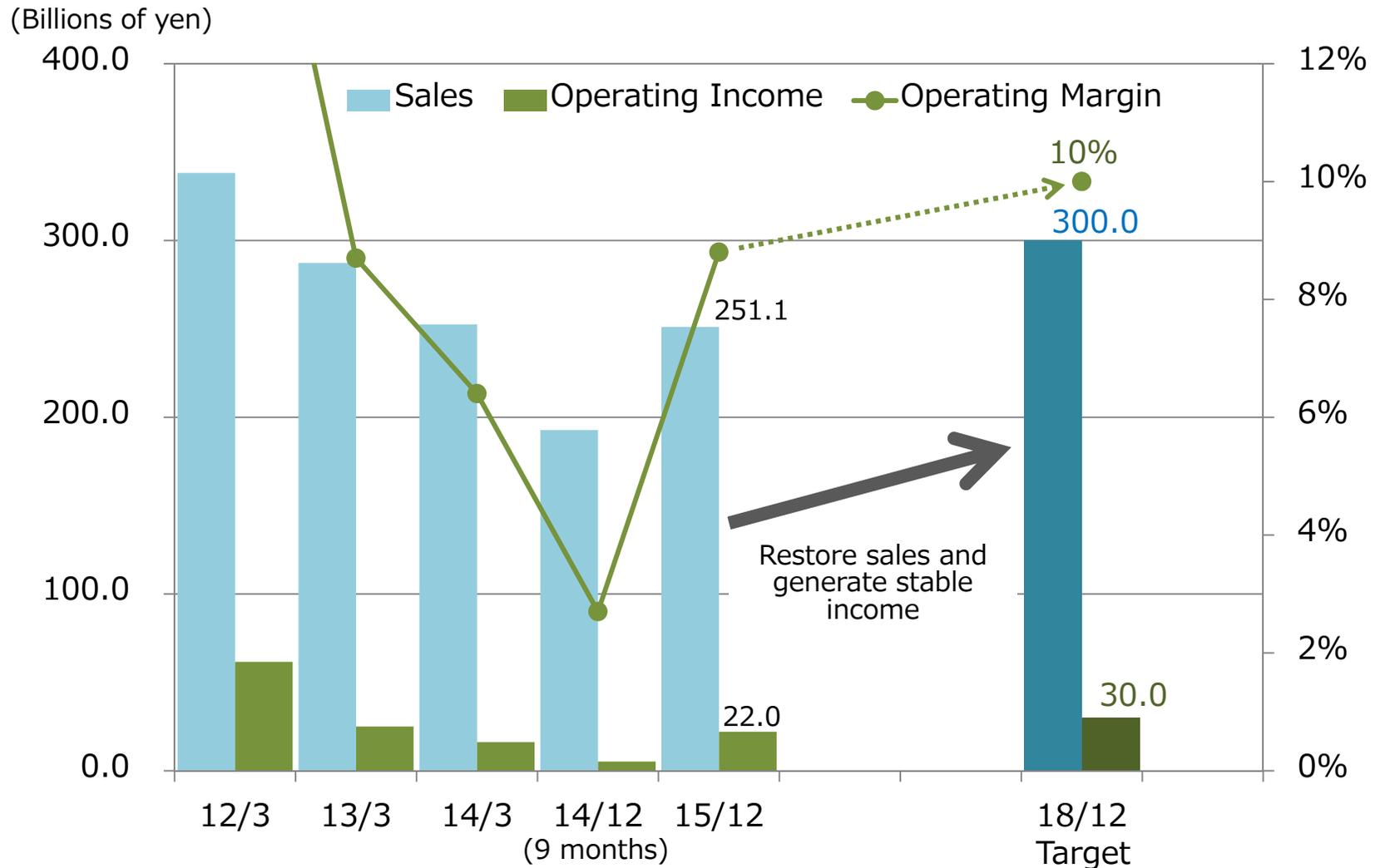
Electronics and Information Technology : **170 billion yen**
(glass for displays, glass for optical and electronic devices, etc.)

Performance Materials and Others : **130 billion yen**
(glass fiber, medical care, heat-resistant, building materials, etc.)

- Operating income: **30 billion yen**
- Operating profit margin: **10%**

3. Medium-term Business Plan “EGP2018”

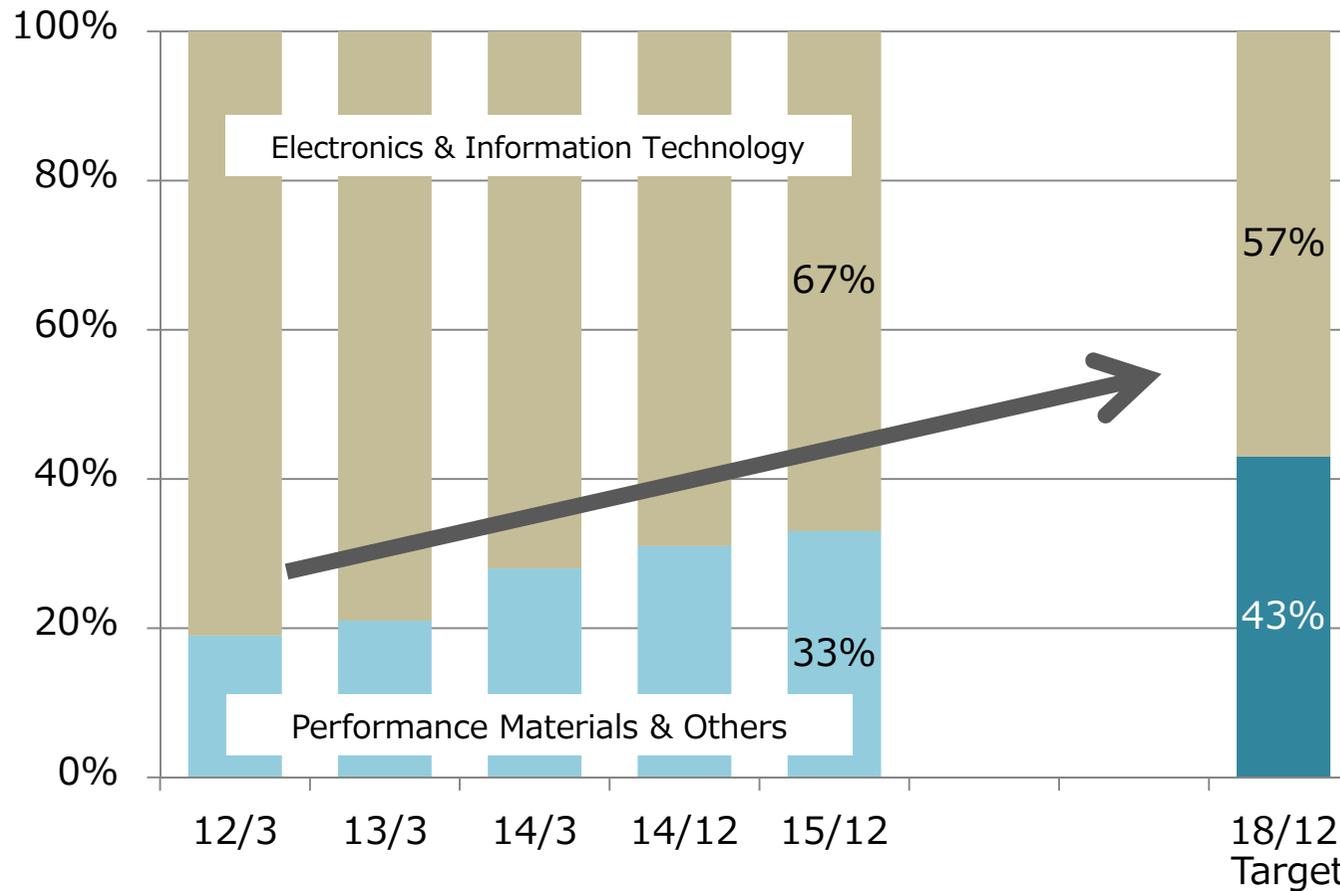
(Trends of sales, operating income and operating margin)



3. Medium-term Business Plan “EGP2018”

(Trend of sales by business)

Carry out reforms to achieve balanced business portfolio
~ Return to growth track

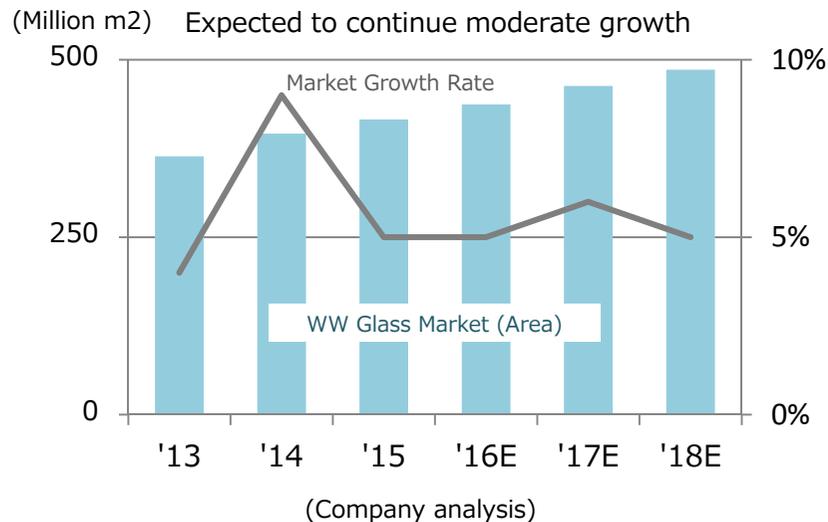


3. Medium-term Business Plan “EGP2018”

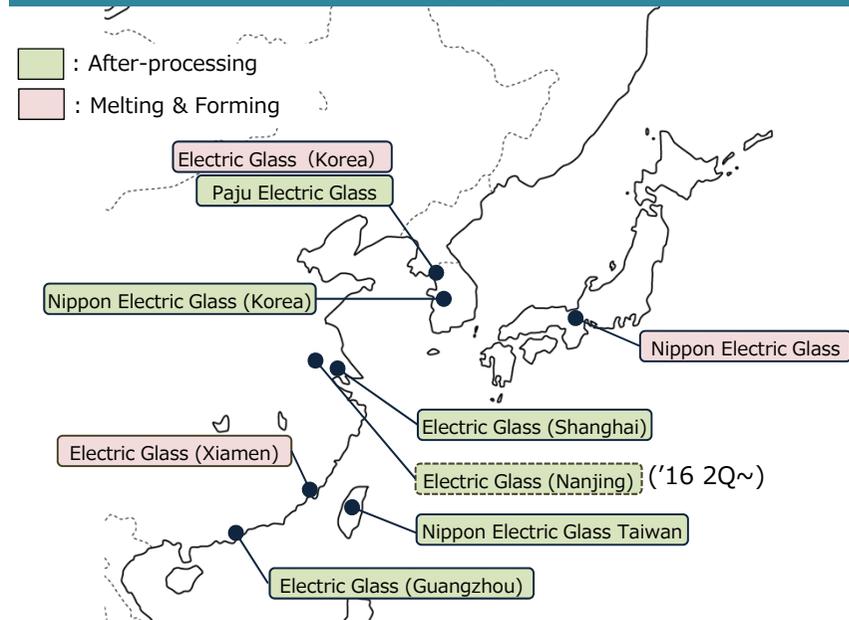
① Measure of strengthen profitability of “display” related business

- Improve productivity and quality by improving manufacturing process
- Smooth shift of production overseas
- Management based on controlling risk and prioritizing income/expenditures

FPD glass market growth



Location of display business

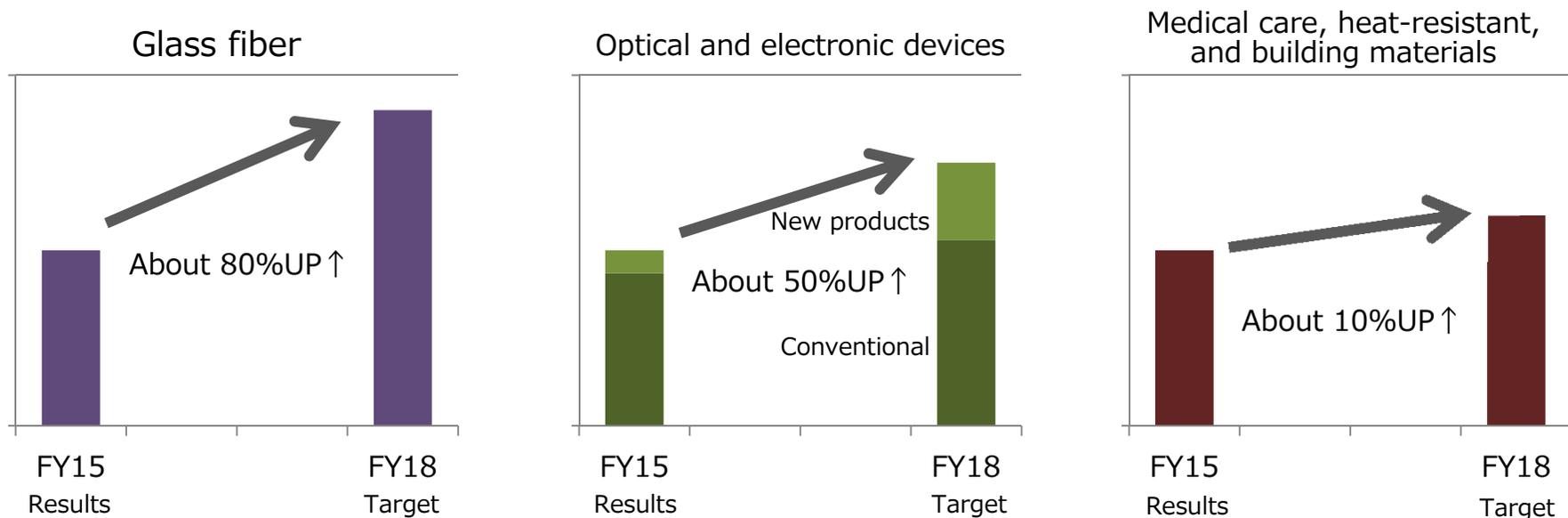


3. Medium-term Business Plan “EGP2018”

② Measure of expand business related to “performance materials, optical and electronic devices and medical care, heat-resistant, and building materials”

- Provide specifics for the M&A and alliance strategy to generate new business opportunities and growth synergy
- Grow existing businesses through sales expansion and investment
- Early commercialization of newly developed products

(Growth image)



3. Medium-term Business Plan “EGP2018”

(Early commercialization of newly developed products)

Development for OLED lighting field

- High refractive index glass <HX-1>
- IEL* substrate (JV with Saint-Gobain)
*Internal extraction layer
- Process development with Fraunhofer

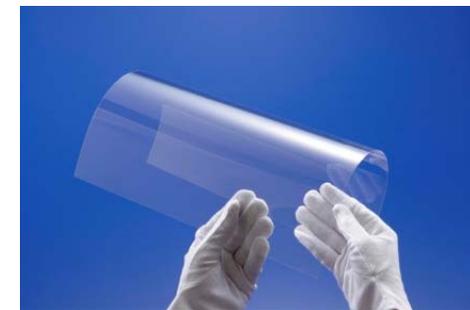
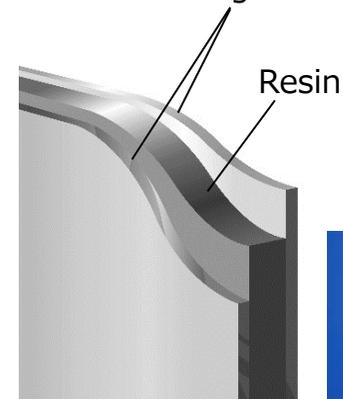


OLED lighting (using <G-Leaf>)

Ultra thin glass laminated on resin <Lamion>

- Protective cover for digital signage and lighting equipment, window of airplane and railway station, and platform screen door at station, etc.

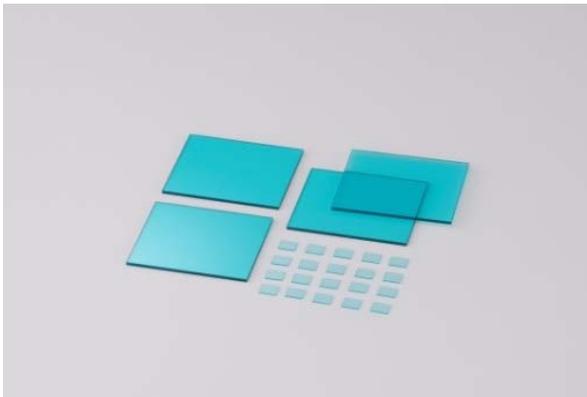
Ultra thin glass <G-Leaf>



3. Medium-term Business Plan “EGP2018”

IR absorbing filter

- Same infrared absorption feature with about half of the original thickness (about 0.1mm)
- Help to make mobile devices thinner



Glass for supporting semiconductor wafers

- Glass substrate for semiconductor manufacturing process
(Various glass product lineup from low CTE to high CTE)
- * CTE : Coefficient of thermal expansion



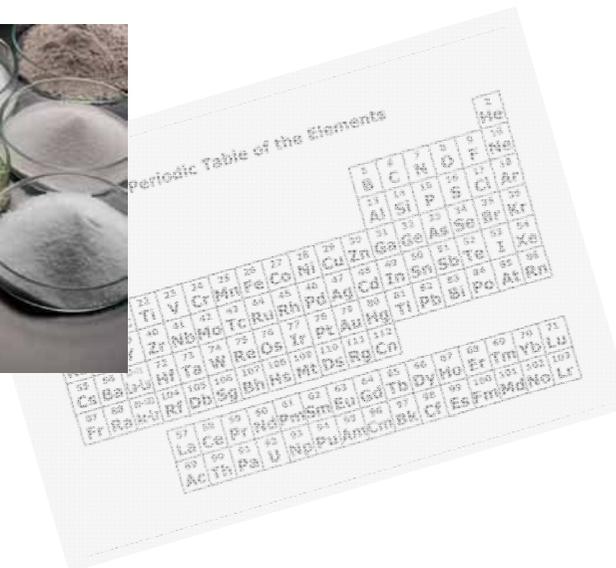
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③ Measure of reinforcement of R&D

- Develop “materials, processes, and products” that take advantage of the superior features of glass
- Improve basic technologies in material design, manufacturing process technology, and evaluation technology
- Strengthen intellectual property strengths and utilize licensing-in and cross-licensing to generate new businesses and expand existing businesses



Raw materials
for making glass



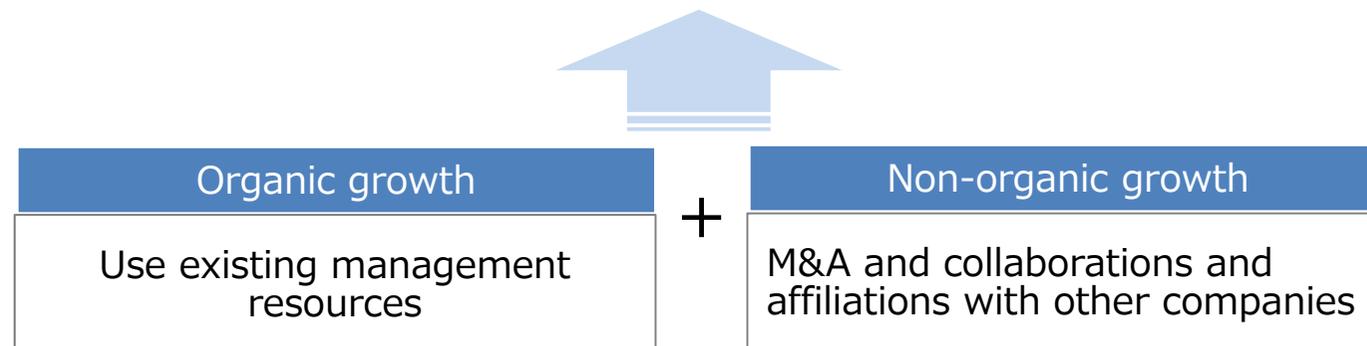
3. Medium-term Business Plan “EGP2018”

④ Measure of constructive investments

- In addition to the usual capital investments, the Company will set aside about 50 billion yen spread out over the three-year period for strategic investments (including M&A and collaborations and affiliations with other companies).

Increase corporate value and aim for sustainable growth in both organic and non-organic areas

Increase corporate value and aim for sustainable growth



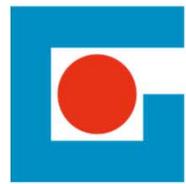
3. Medium-term Business Plan “EGP2018”

~ Foundation for non-organic growth ~

- ✓ **Joint venture with Saint-Gobain Group**
Commercialize glass substrates with internal extraction layers to raise the luminous efficiency of OLED lighting
- ✓ **Joint development with Nippon Sheet Glass**
Engineering plastic filler currently under joint development; expected to enable lighter-weight, higher-performing autos and electric and information-related device components

Next initiatives are under way

GLASS FOR FUTURE



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