

Mid-term Management Plan

**SZ-20**  
*Phase II*

Current Status

**ZEON**

**ZEON CORPORATION**

Kimiaki Tanaka  
President

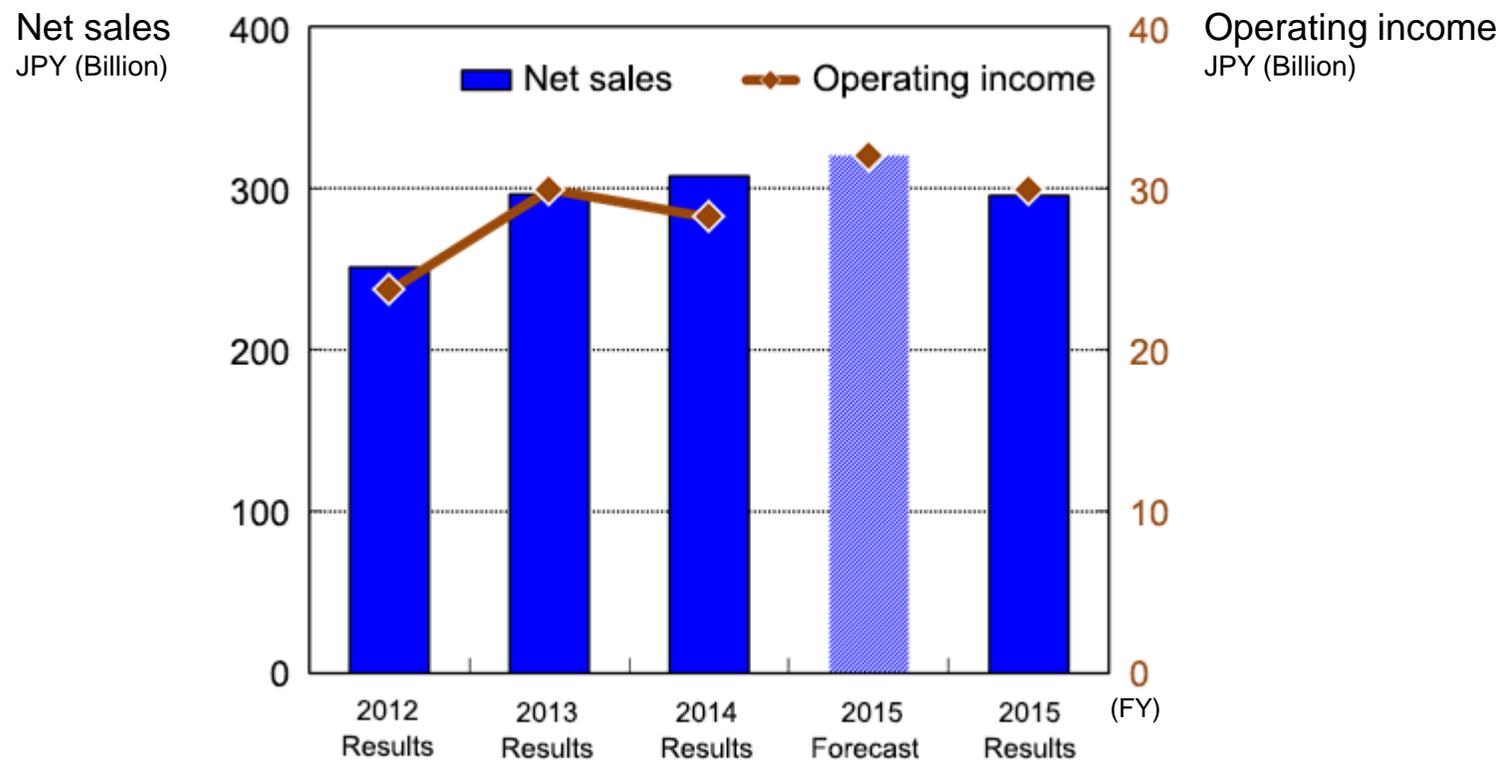
April 28, 2016

## **1. FY2015 Results and Business Environment**

## **2. Business Topics**

## **3. Performance Goals**

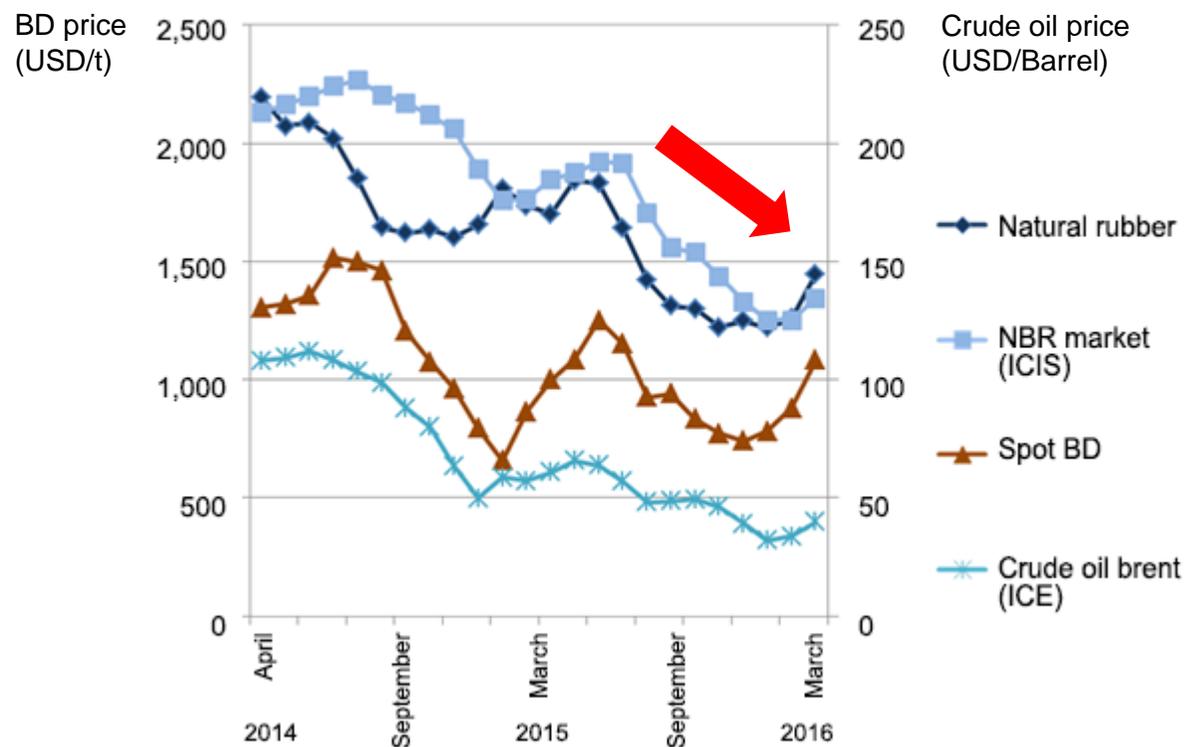
## FY2015 actual results was under the prior forecast



Net sales	JPY (Billion)	250.8	296.4	307.5	320.0	295.6
Operating income	JPY (Billion)	23.7	29.9	28.2	32.0	29.9
Exchange rate	(JPY/USD)	82	100	109	120	121
Domestic naphtha price	(JPY1,000/kl)	57.5	67.2	63.7	54.0	42.8

## Synthetic rubber market declines due to slump in crude oil and natural rubber markets

### Natural rubber, synthetic rubber and BD markets



Natural rubber market: Singapore Commodity Exchange nearby contract price for RSS #3 grade rubber (source: Monthly Statistics Report for Synthetic Rubber)  
 NBR market: CFR Southeast Asia (source: ICIS)  
 Spot BD: CFR Southeast Asia (source: IHS)  
 Crude oil (ICE Brent) (Source: IHS)



- **Change**
  - Promote reform and improvement
  - Change management structure
  - Cultivate renewed corporate culture
- **Progress management and quick response**

Enterprise Blueprint for 2020

**ZEON makes  
the future today through  
the Power of Chemistry**

Consolidated net sales:  
JPY 500 billion

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 (FY)

**Phase II**

**SZ-20**

**SZ-20**

**Further strengthen our Elastomer and  
Specialty Materials Businesses  
via globally expanding operations**

## Strategy by Business Segment

### Elastomer Business

Further strengthen competitive businesses by responding globally to growth markets

### Specialty Materials Business

Expand operations by accelerating R&D in three key fields

## Strategy by Business Segment

### Elastomer Business

Further strengthen competitive businesses by responding globally to growth markets

### Specialty Materials Business

Expand operations by accelerating R&D in three key fields

- ◆ Established a dual location production system for S-SBR and expanded business
- ◆ Increase the number of customers purchasing new Zetpol<sup>®</sup> with excellent heat resistance
- ◆ Begin sales of biosynthetic Hydrin<sup>®</sup> rubber
- ◆ Expand sales of NBR latex for gloves
- ◆ Implement strategy for expanding C5 chemicals business

## Expanded business by establishing a dual location production system and advancing new product development

### ■ Production Strategy

- Tokuyama Plant: Base for new product development and manufacturing proprietary products.
- Singapore Plant: Second line began operations in April 2016. Capacity up from 35,000 tons to 70,000 tons per year. Responding to rising demand through mass production.

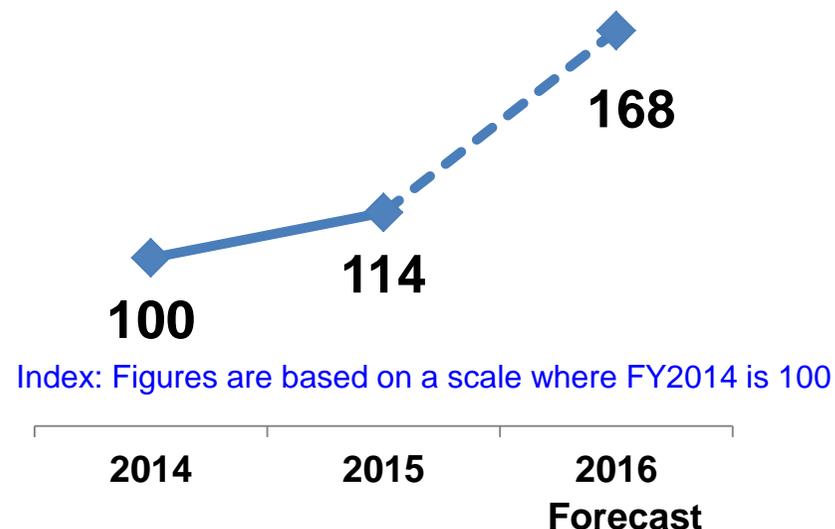
### ■ Product Strategy

- Non-oil extended rubber: New mainstay products expected to significantly improve fuel economy compared to existing Zeon products.
- Oil extended rubber: Expanded sales of existing products offering superior performance over competitors, and continued to launch new products.



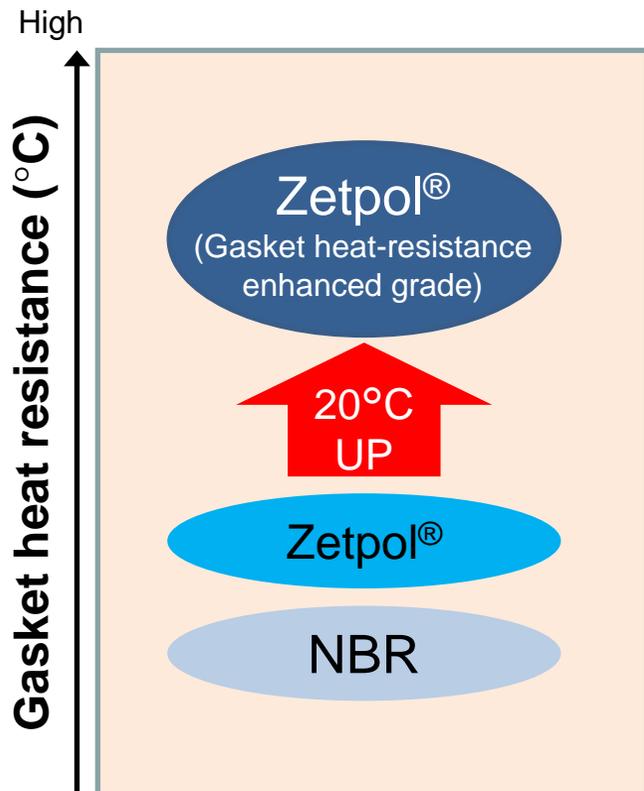
Singapore plant

### Sales results and forecast of SSBR



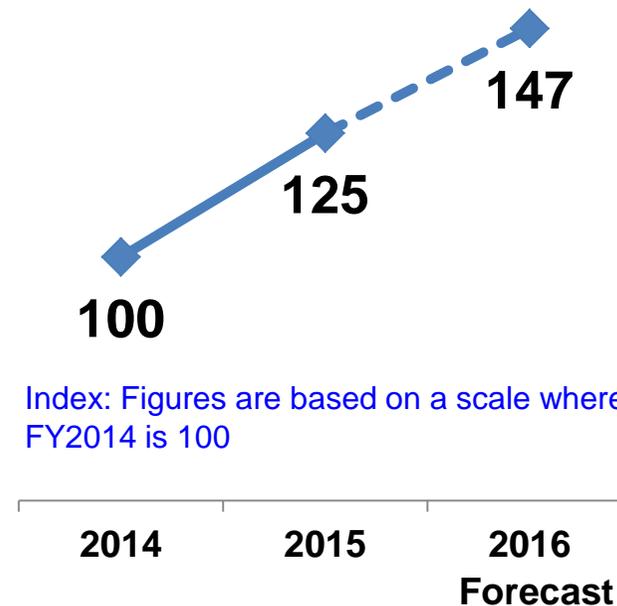
## Providing highly functional, low-cost automotive components

Superior heat resistance leads to excellent growth prospects in following applications: gaskets, seals, and treating agents for core wires used in timing belt.



Commercial production at Kawasaki Plant's new facility

Sales results and forecast of Zetpol® (Gasket heat-resistance enhanced grade)



## Providing automotive components that reduce environmental impact

Toyota Motor began using biosynthetic Hydrin<sup>®</sup> in vacuum sensing hose production from April 2016.



Hydrin<sup>®</sup> rubber production base  
Zeon's Mississippi Plant, USA



Hydrin<sup>®</sup> rubber manufacturing line

## Growth in NBR glove market continues. Sales of new products expanded

### Latex for gloves

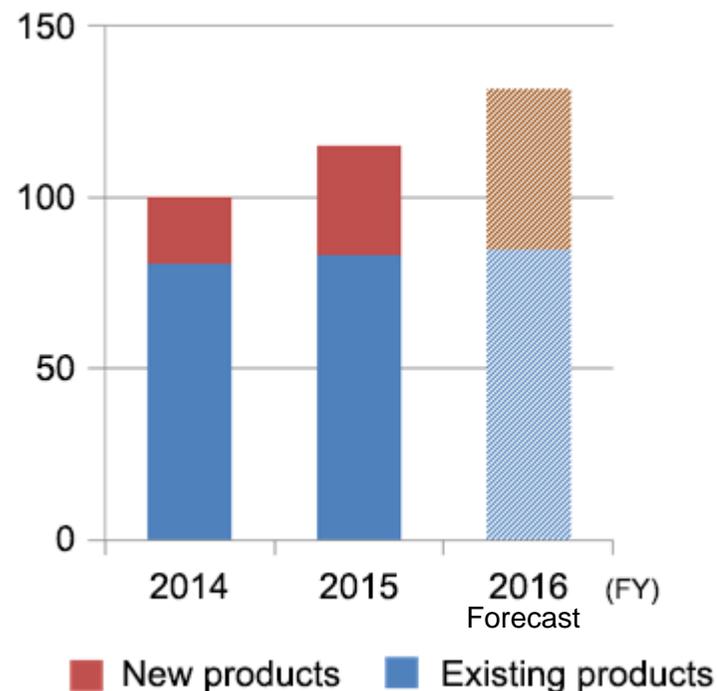
Market for gloves using NBR shows annual growth of 7%

#### Use of NBR Latex for Gloves

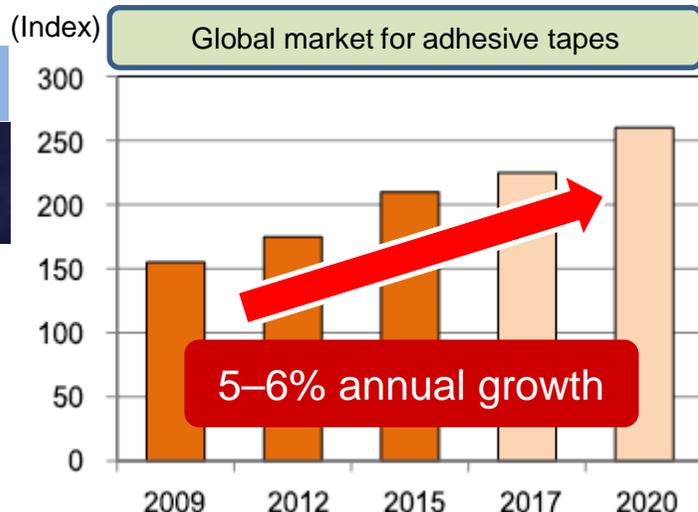


### Sales volume for latex for gloves

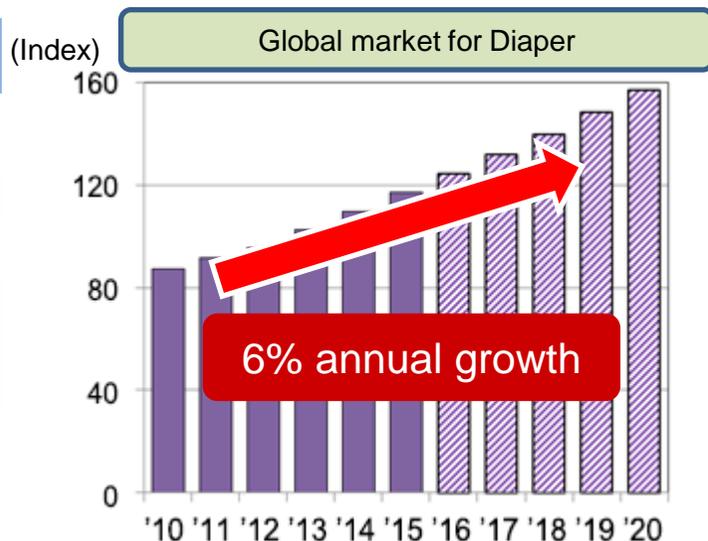
(Index)



## Capital investment responding to the growth in the major markets

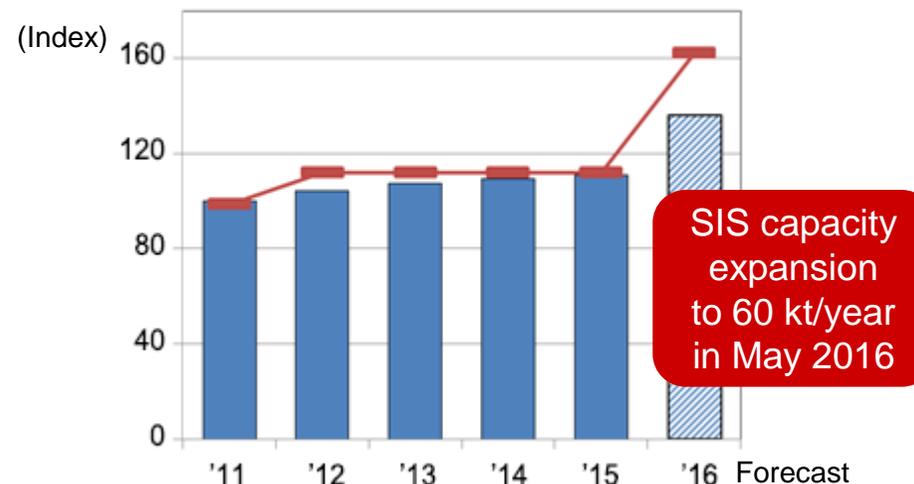


Source: Zeon estimates based on data provided by The Freedonia Group

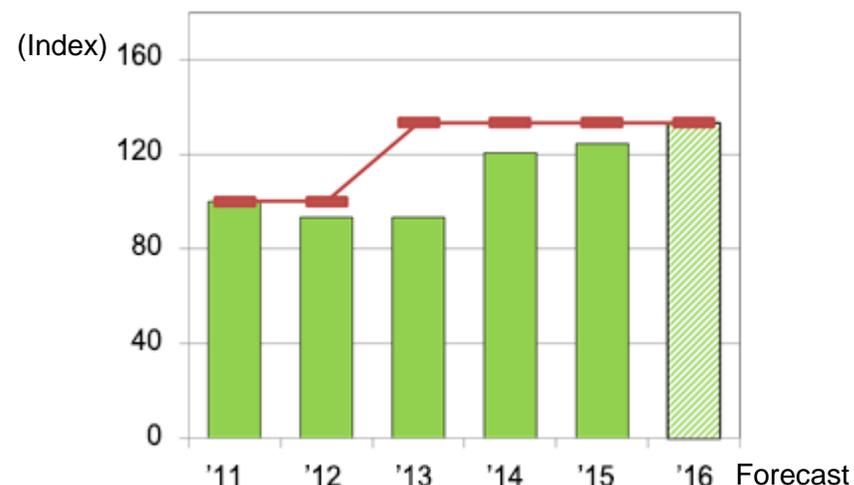


Source: Estimates by Zeon

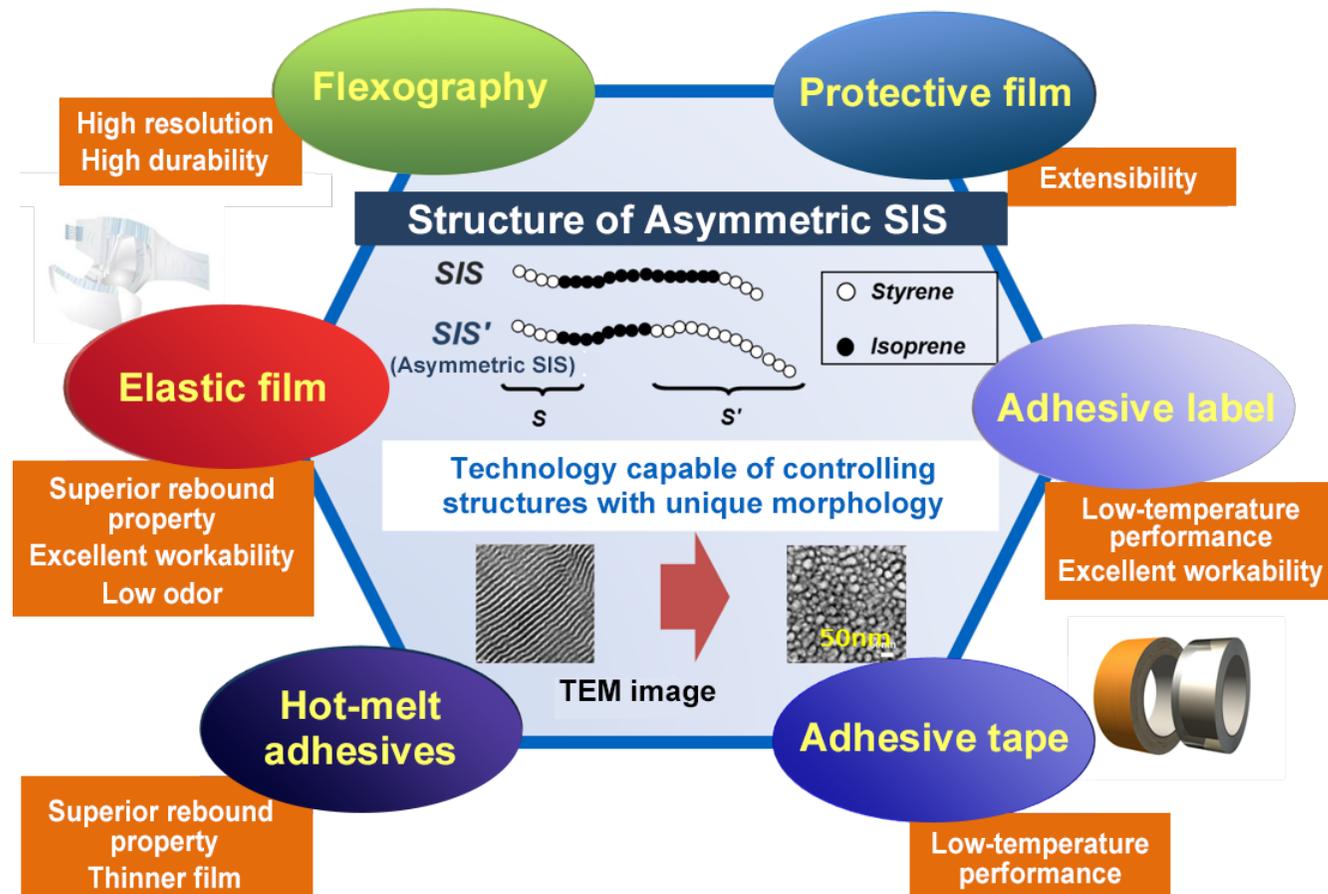
### Zeon sales plan and production capacity for SIS



### Zeon sales plan and production capacity for hydrocarbon resin



## Diversification of SIS applications with asymmetric technology



## Strategy by Business Segment

### Elastomer Business

Further strengthen competitive businesses by responding globally to growth markets

### Specialty Materials Business

Expand operations by accelerating R&D in three key fields

Realizing an Advanced  
Information Society

Saving, Storing and  
Creating Energy

Enhancing QOL  
(Quality of Life)

## Three Key Specialty Material Fields

### IT Components

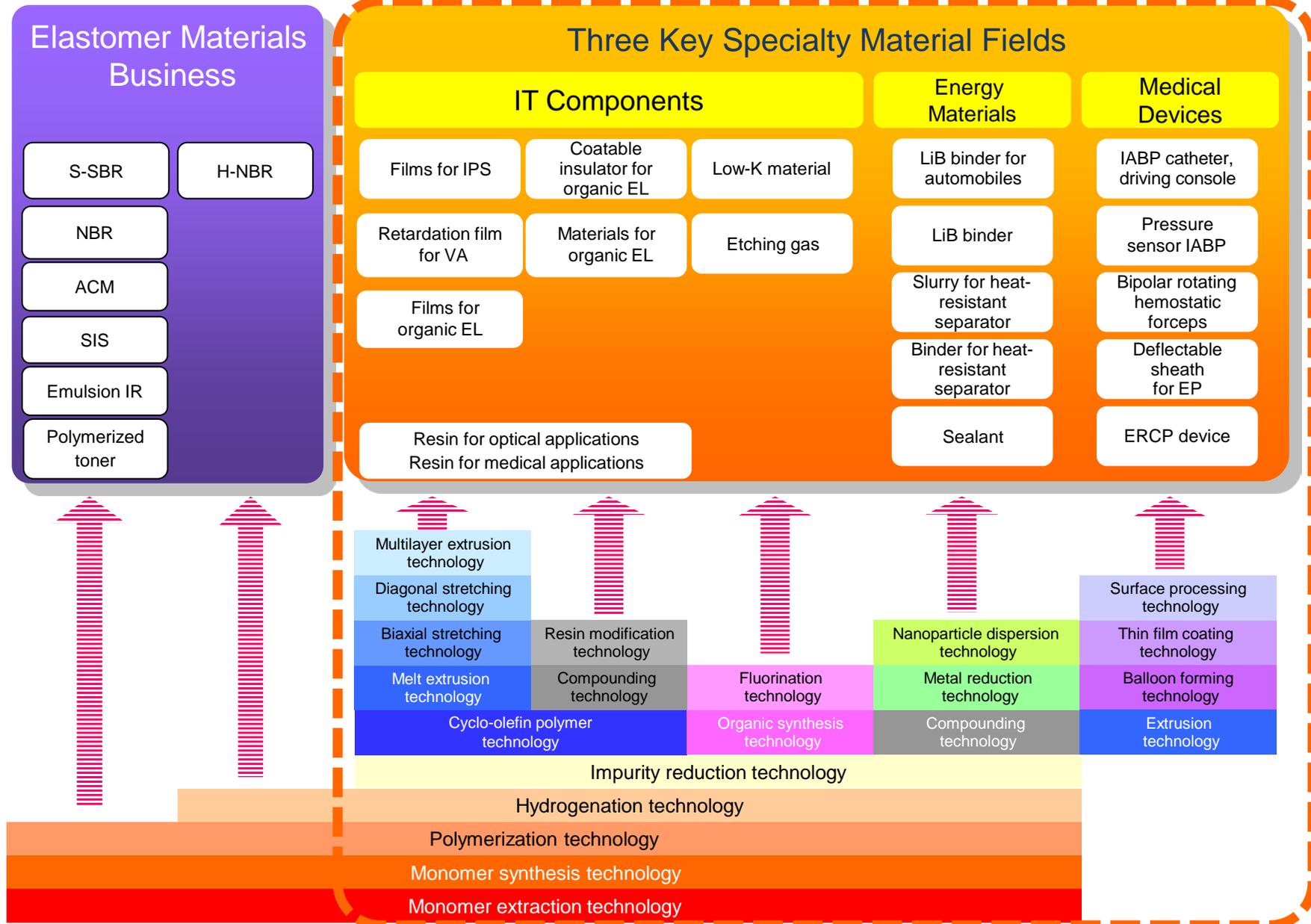
Optical, packaging,  
electronic applications

### Energy Materials

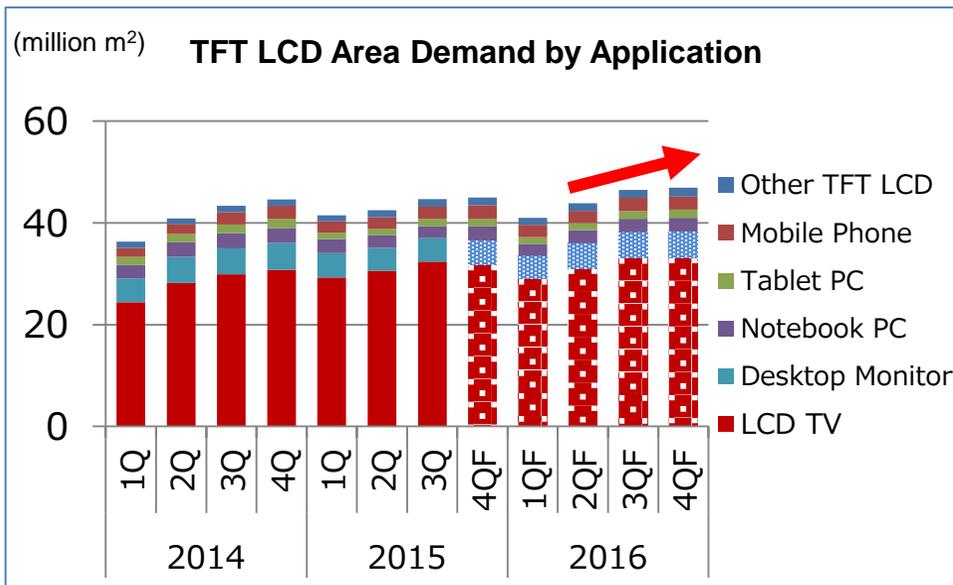
### Medical Devices

Specialty Materials (proprietary materials developed based on  
Zeon's comprehensive use of the C5 fraction)

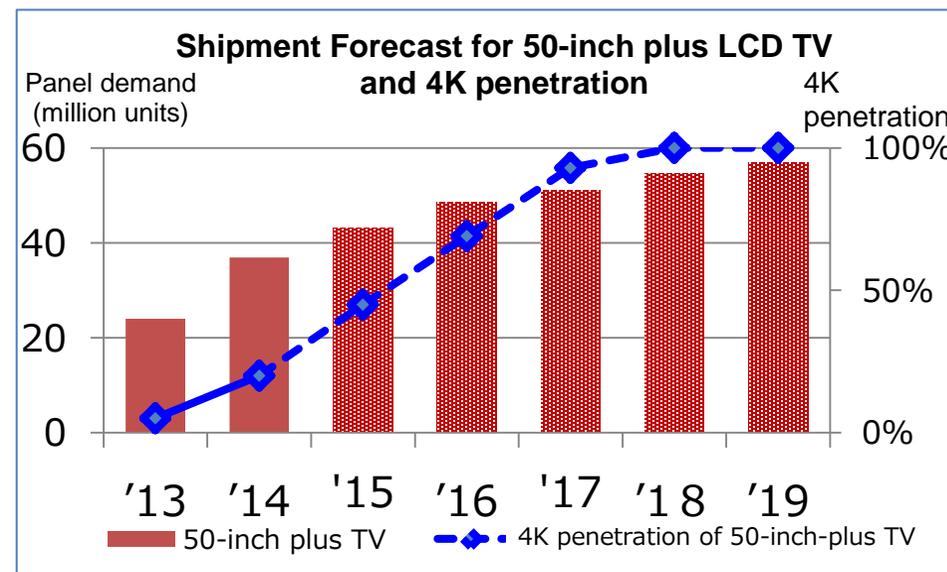
- ◆ Optical applications: ZeonorFilm™
- ◆ Energy materials (Li-ion battery materials)
- ◆ Medical devices
- ◆ Specialty materials: Carbon nanotubes (CNT)



## LCD panel demand-led recovery in 2016. Panel size is protected to increased for high-resolution TVs with larger screens



LCD panel market to recover in latter half of 2016



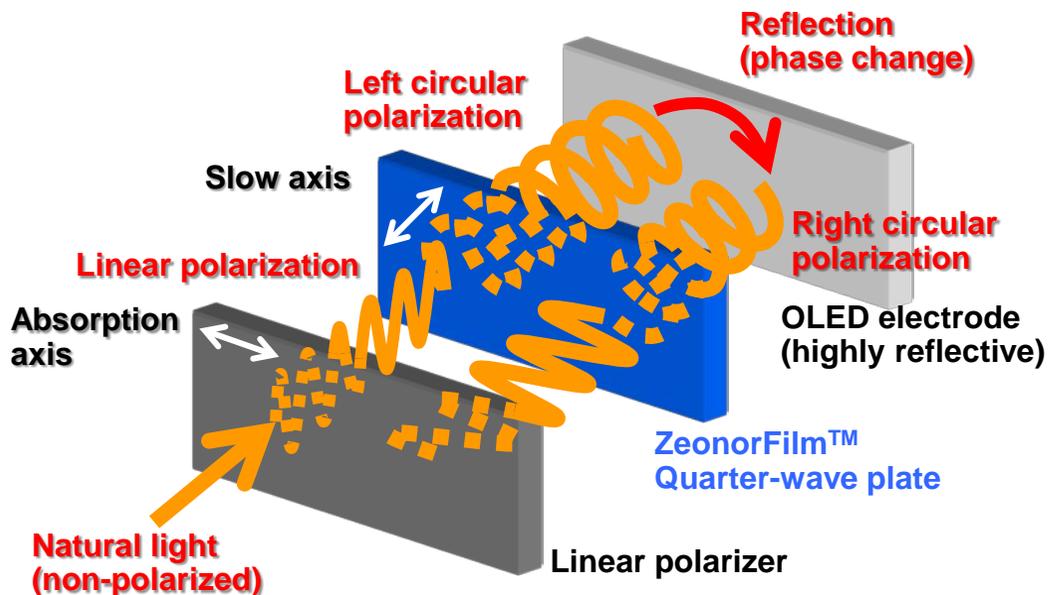
TV market: larger screens, higher resolution  
4K penetration of 50-inch-plus TV to reach 100%



**Demand for ZeonorFilm™ expected to recover in FY2016**  
**Pursue sales in 50-inch-plus, high resolution TV**  
**and small to mid-sized FPD**

Source: 30th IHS Display Japan Forum, January 2016 (© 2016 IHS)

## Antireflection function of ZeonorFilm™ in OLED



## Improvement of Black-Mode Performance for OLED



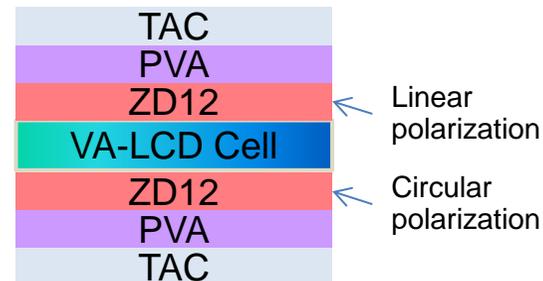
Without circular polarization

With circular polarization

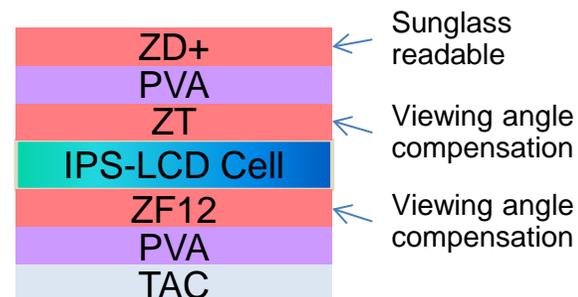
(Linear polarizer + Quarter-wave plate)

## Applications to small to mid-sized FPD

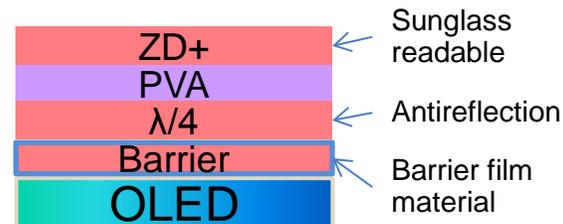
VA-LCD  
ZeonorFilm™  
2 layers



IPS-LCD  
ZeonorFilm™  
3 layers



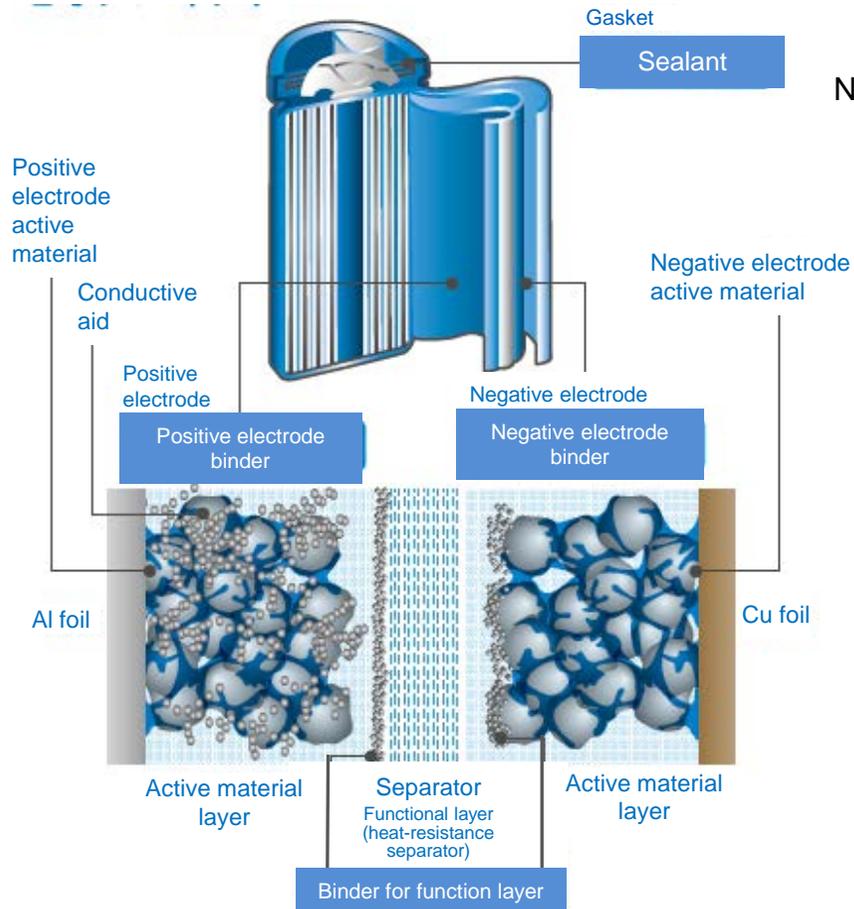
OLED  
Promoting  
ZeonorFilm™  
3 layers



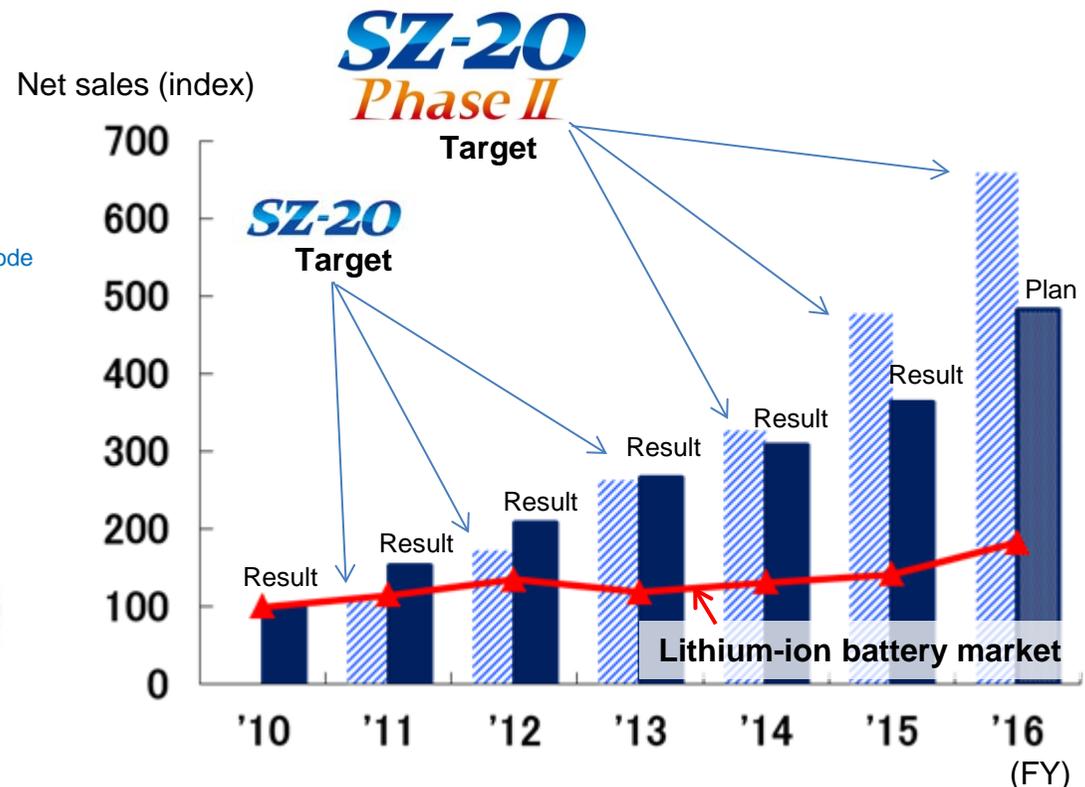
excl. touch panel substrate

## LiB Materials Business maintaining steady growth by expanding product line

### Zeon products for Li-ion batteries



### Sales of Zeon battery materials

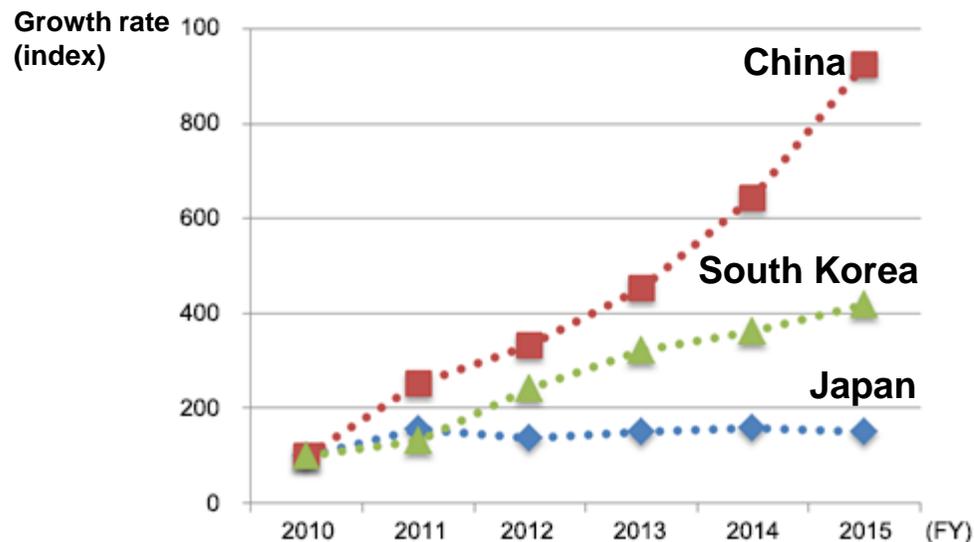


Index: Figures are based on a scale where FY2010 is 100  
 Source for market data: Report by B3, Inc., November 2013

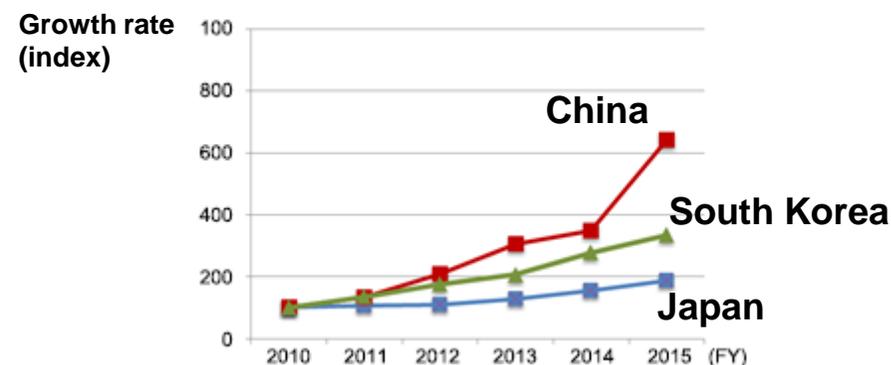
## Expanded growth into automotive market. Increased sales to growing markets in South Korea and China

1. Expanded business by increasing products for the xEV automotive market  
→ Compared to 2010, Zeon sales growth in 2015 significantly exceeded market growth (sales quadrupled in automotive LIB market)
2. Increased sales in high-growth markets in China and South Korea  
→ Compared to 2010, Zeon sales in China rose by 9.3 times (market growth: 6.4 times), sales in South Korea rose 4.2 times (market growth: 3.3 times)

### Sales of Energy Materials by region



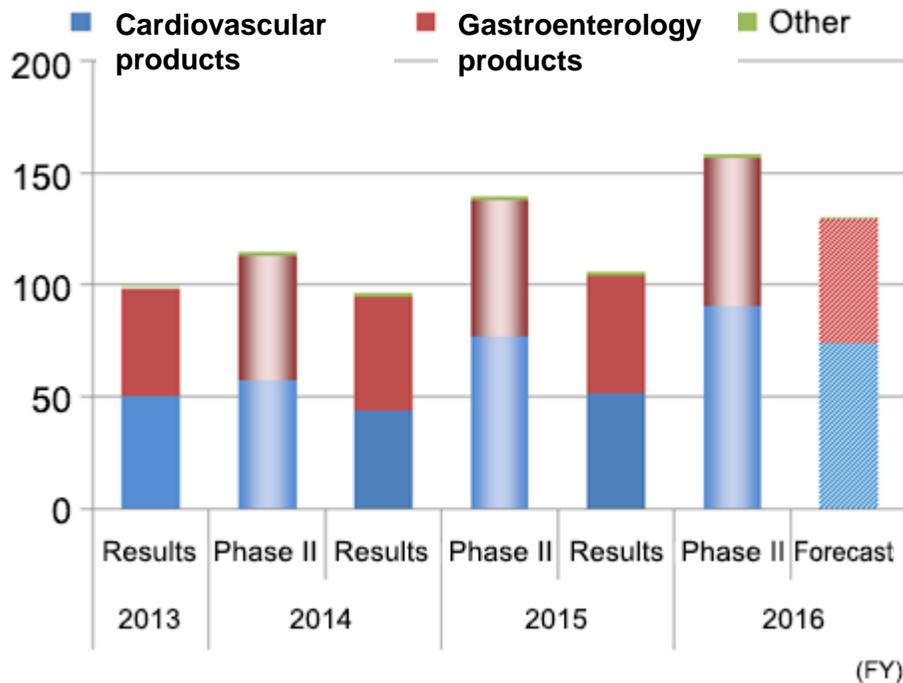
### Production volume of Li-ion Batteries by region



Index: Figures are based on a scale where FY2010 is 100  
Source for market data: Report by B3, Inc., January 2016

## Planning to boost sales in 2016 by promoting new products

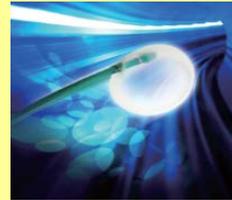
### Zeon Medical Inc. sales index (FY2013 sales = 100)



FFR: Fractional Flow Reserve  
IABP: Intra-aortic Balloon Pumping  
ERCP: Endoscopic Retrograde Cholangiopancreatography

#### New products for gastroenterology field

- ERCP: Stone-flushing balloon catheter (market launch: July 2014)  
Crusher catheter M (market launch: March 2015)
- Biliary drainage: Biliary stent with thinner catheter (market launch: February 2015)



#### New products for cardiovascular field

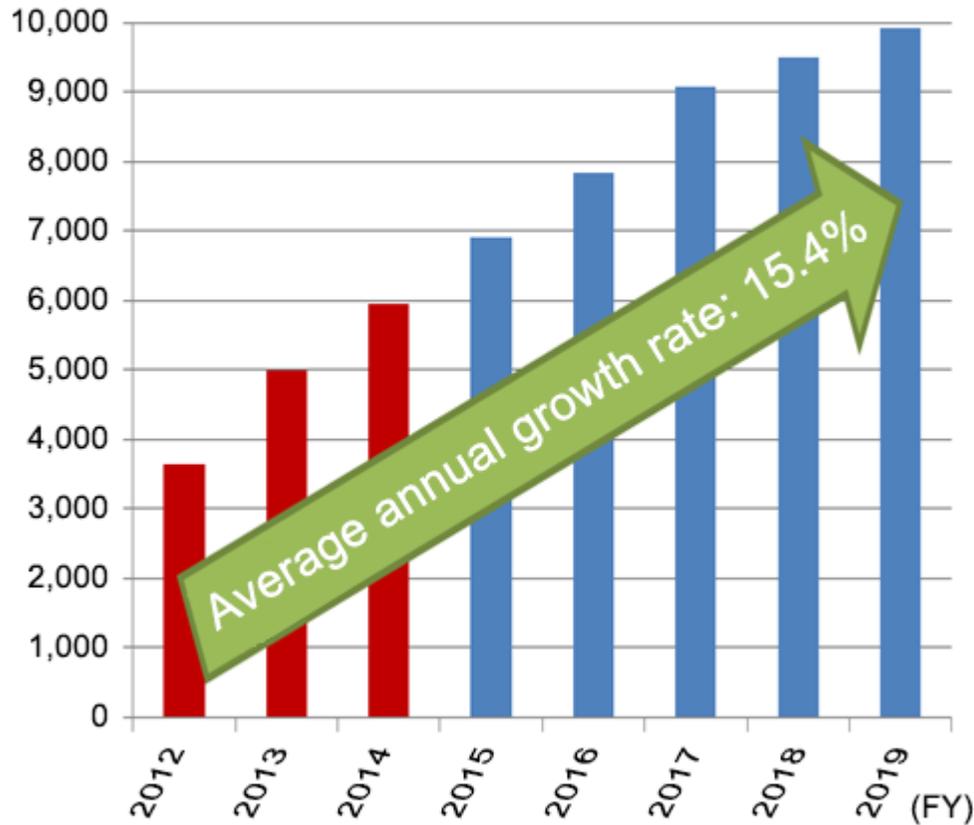
- Assisted circulation: IABP driving console (market launch: March 2016)
- Coronary intervention: FFR device (market launch: March 2016)



### FFR market forecast in Japan

JPY (Billion)

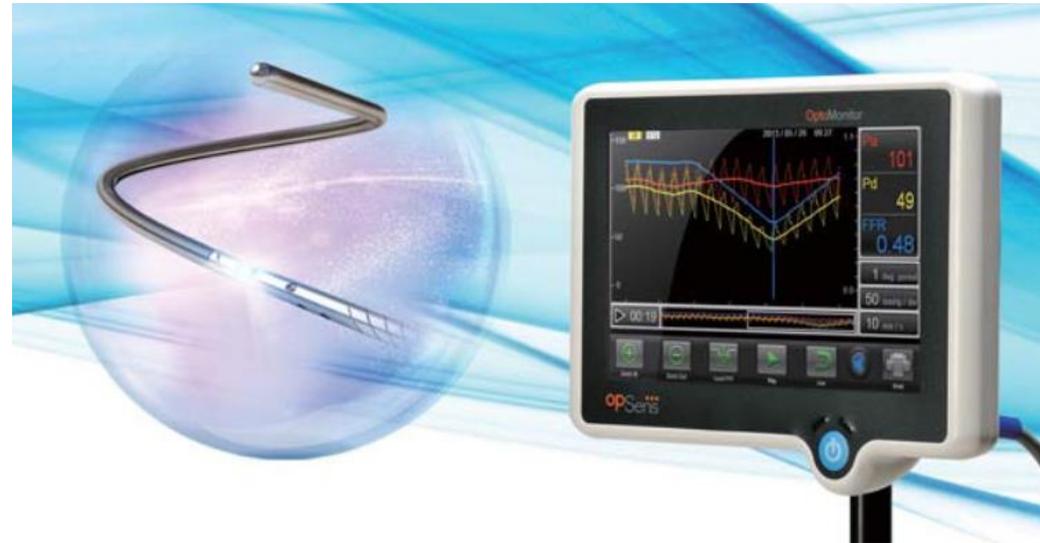
■ Results ■ Forecast



Source: Yano Research Institute “Catheter & Tube and IVR Market 2015”

### World’s First Optical Sensor-based FFR Device

(as guidewire type)

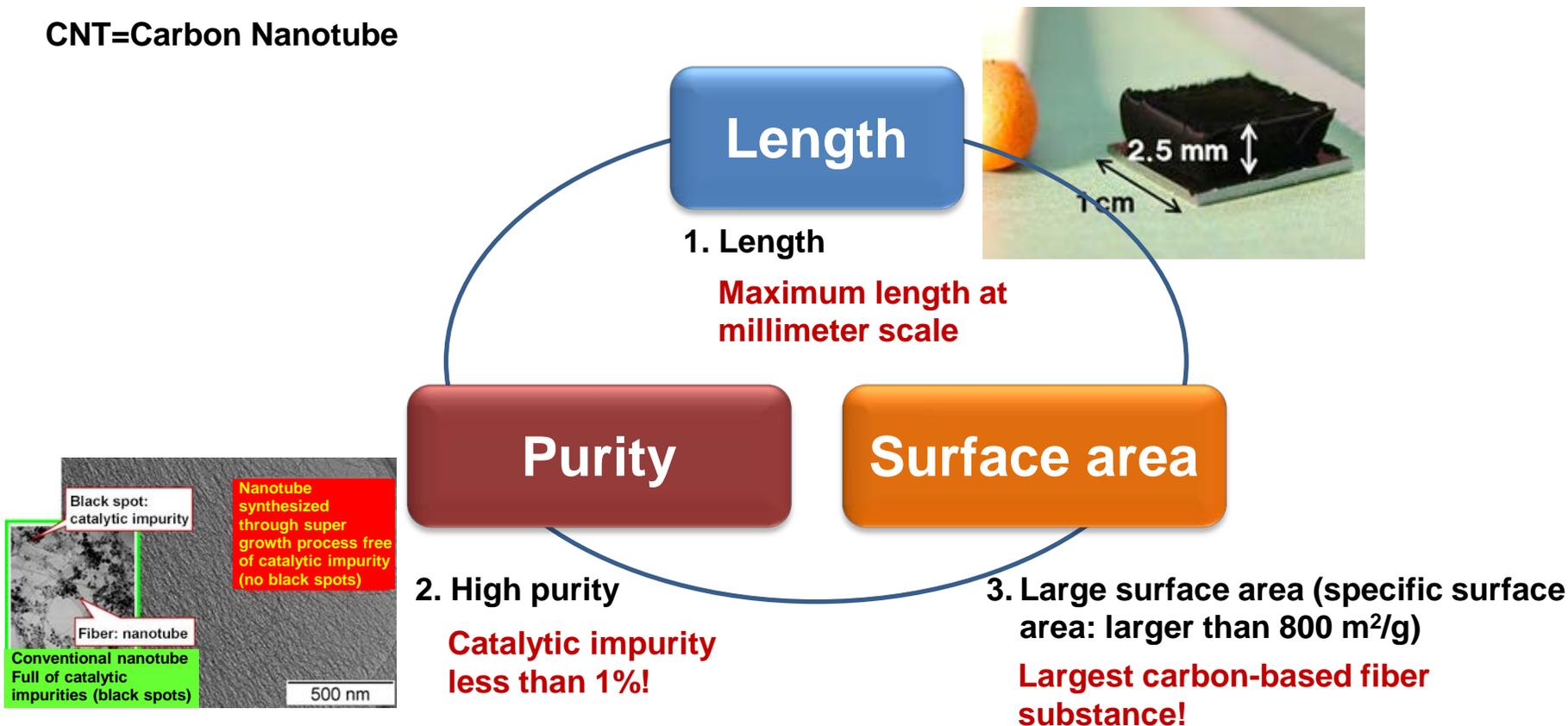


**Target share: 30%**  
(FY2020 in Japan)

FFR: Fractional Flow Reserve

## “Super Growth CNT” developed by the National Institute of Advanced Industrial Science and Technology (AIST)

CNT=Carbon Nanotube



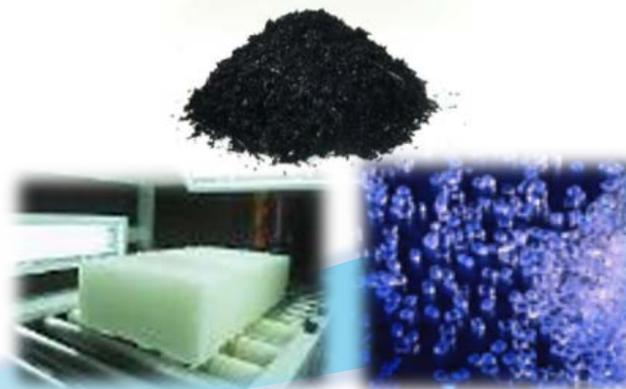
## Numerous Differentiating Characteristics

**FY2015: Completed mass production plant for SGCNT, began operations**

**FY2016: Create new applications through integration with existing businesses**



**Completed SGCNT plant  
and began operations  
in October 2015**



**Create new  
applications**

**Highly heat-resistant rubber  
Composite materials with  
high thermal conductivity**

**Creating superior  
functionality in combination  
with rubber and resin**

**Integration with Existing Businesses**

**Mass production technology for SGCNT received accolades for raising the levels of science and technology and industry development**

## 45th Japan Industrial Technology “Jury’s Special Award”



**Jointly awarded to Zeon Corporation and the National Institute of Advanced Industrial Science and Technology (AIST)**

**“ Prizes for Science and Technology ” of the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology in 2016**

**Recipients:**

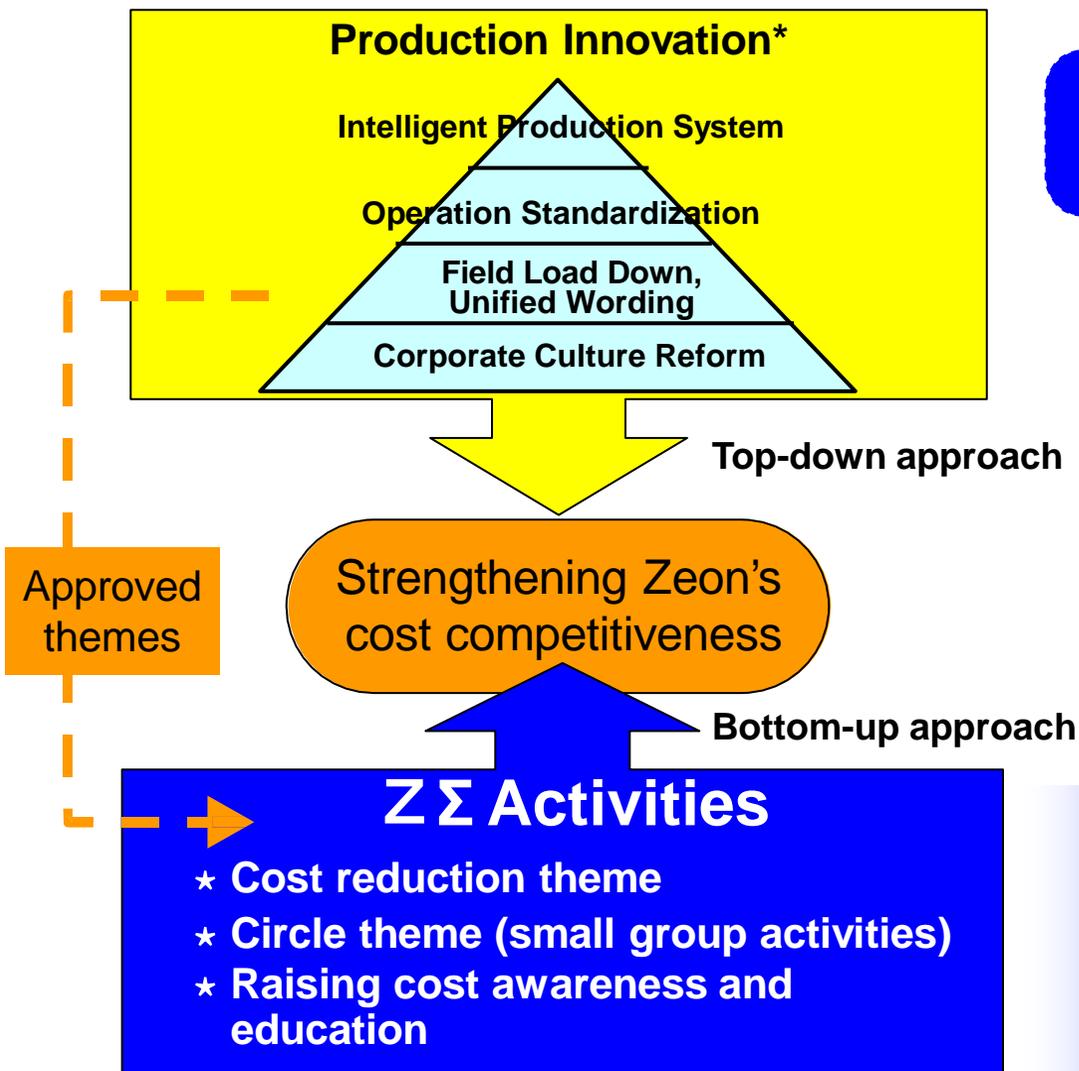
**Zeon Corporation**

- Kohei Arakawa, Senior Corporate Officer
- Mitsugu Uejima, Manager, CNT Laboratory

**AIST**

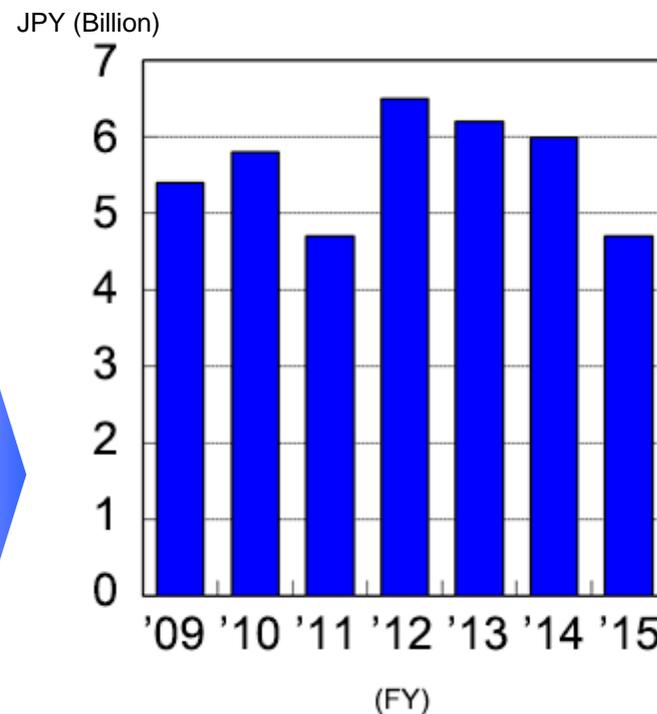
- Kenji Hata, Director, CNT Application Research Center
- Motoo Yumura, Prime Senior Researcher
- Don Norimi Futaba, Team Leader





**Continuing efforts for Innovation and Improvement**

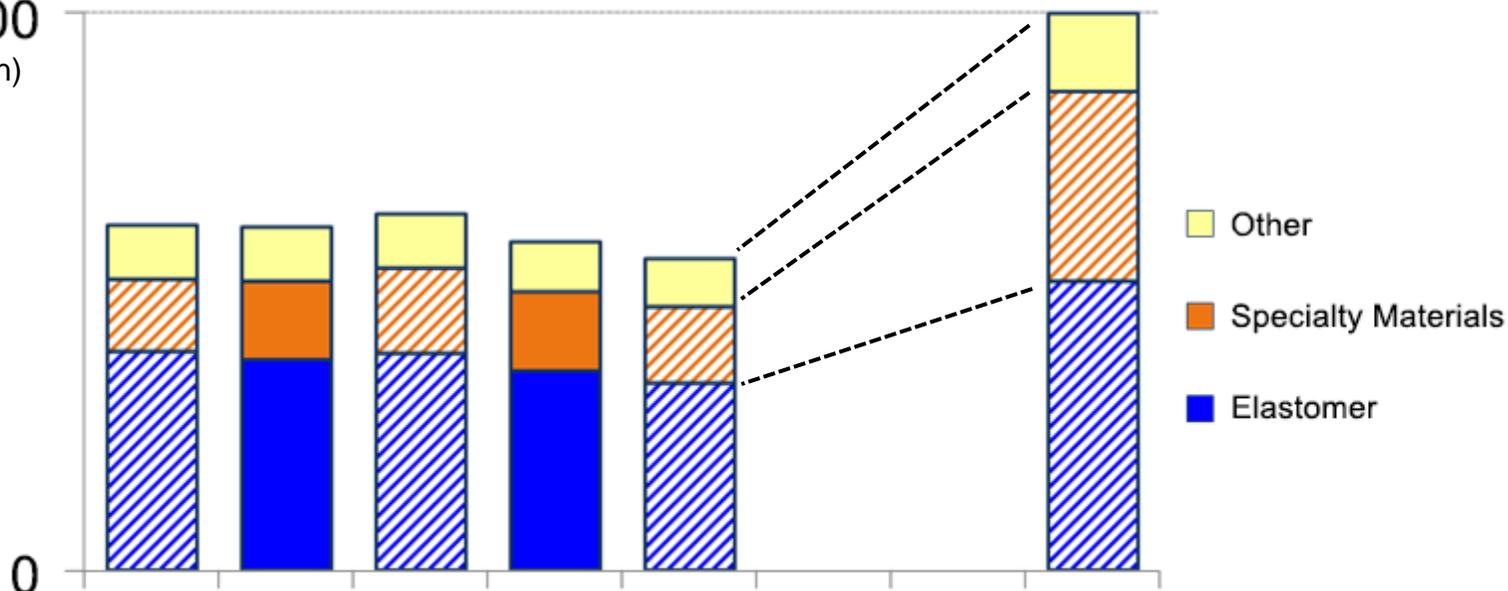
**ZΣ Activities – monetary effect**



\* Production Innovations the Daicel way

## Targeting 500 billion JPY in consolidated net sales in FY2020

Net sales 500  
JPY (Billion)



	2014 Target	2014 Results	2015 Forecast	2015 Results	2016 Forecast
<b>Consolidated net sales</b>	<b>310.0</b>	<b>307.5</b>	<b>320.0</b>	<b>295.6</b>	<b>280.0</b>
<b>Operating income to sales</b>	<b>8.1%</b>	<b>9.2%</b>	<b>10.0%</b>	<b>10.1%</b>	<b>10.0%</b>

	2020 Target
<b>Consolidated net sales</b>	<b>500.0</b>
<b>Operating income to sales</b>	<b>10.0%</b>

JPY (Billion)

**Speed**

**Dialogue**

**Social  
Contribution**

**Mutual trust and confidence among Zeon members**

Zeon's plans, forecasts, and other data appearing in this presentation were calculated based on information which was currently available and therefore includes risks and uncertainties.  
Actual results may differ depending on various factors.

# ZEON

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