

# ZEON COPPORATION

ZEON CORPORATION

Kimiaki Tanaka President

April 27, 2018





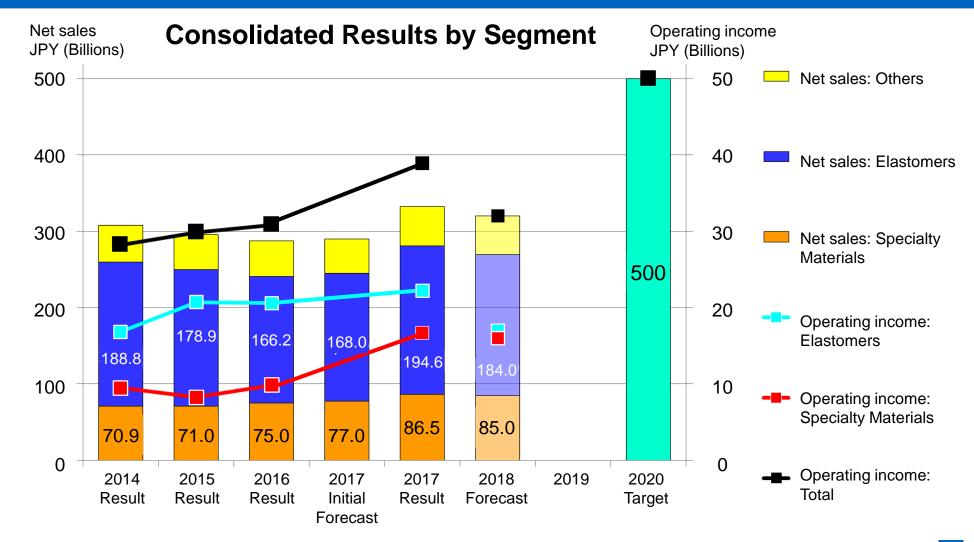
## 1. FY2017 Results and Business Environment

2. Business Topics

## **Consolidated Results**

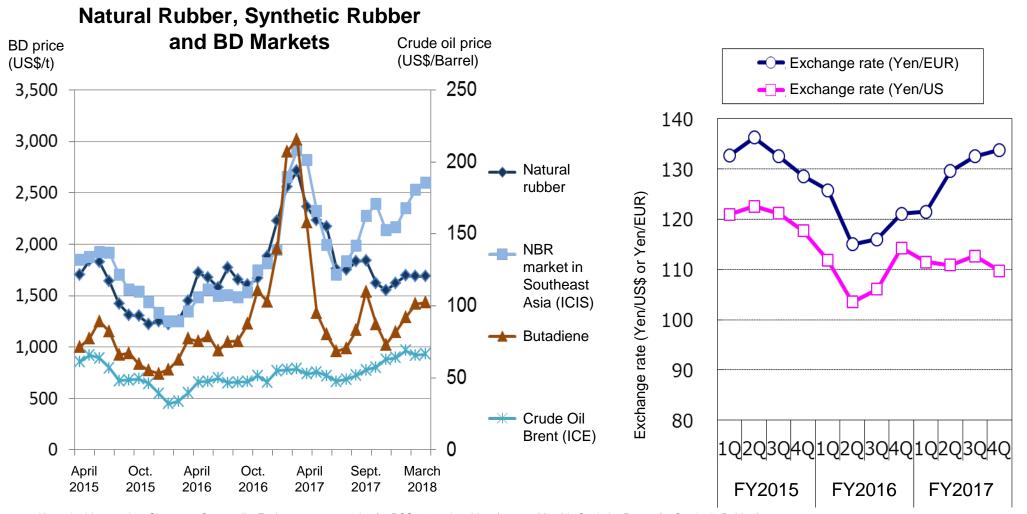


## FY2018 Forecast: Elastomers: Raw materials market will settle down and prices will fall. Specialty Materials Business: Grows steadily.





#### Butadiene prices fell from a high in FY2016; NBR spread recovers in FY2017



Natural rubber market: Singapore Commodity Exchange contract price for RSS #3 grade rubber (source: Monthly Statistics Report for Synthetic Rubber) NBR market: CFR Southeast Asia (source: ICIS)

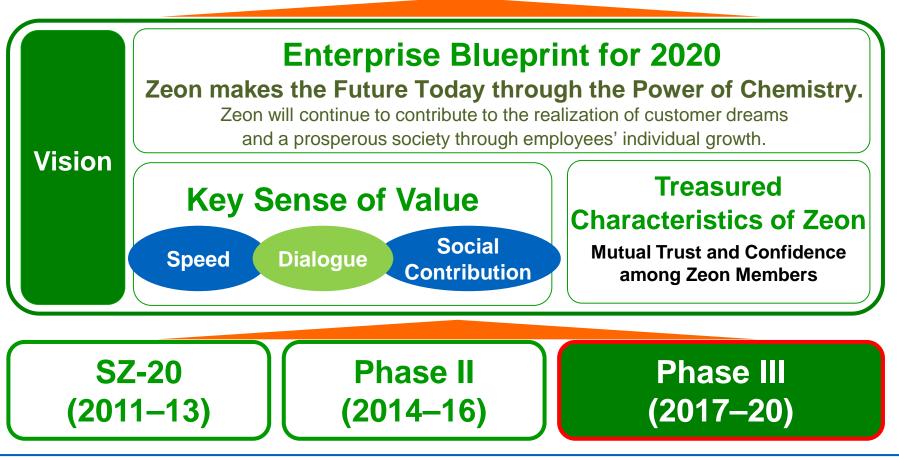
Spot BD: CFR Southeast Asia (source: IHS)

Crude oil (ICE Brent) (source: IHS)



**Corporate Philosophy** 

**Zeon CSR Policy** 





### SZ-20 Phase III: Group-wide Strategy

Growth	1. Reinforce the combined strengths of the Zeon Group. Explore ways of going beyond boundaries by collaborating with external players to provide solutions globally, as a contribution to society.
	2. Accelerate the pace of new business creation and product development in key development areas: global environment, smart devices, and health and living.
Culture	3. Cultivate a corporate culture that places value on taking proactive action by harnessing diverse ideas and implementing them.



## **Strategy by Business Segment**

## **Elastomer Business**

- Reinforce competitive businesses by responding globally to growth markets and improving cost effectiveness.
- Explore new opportunities and achieve growth based on Zeon's reputation in the market and relationships with customers.

## **Specialty Materials Business**

• Expand business in step with the speed of market growth and technological progress through focused investment of resources and stronger collaboration with outside players.



## **Strategy by Business Segment**

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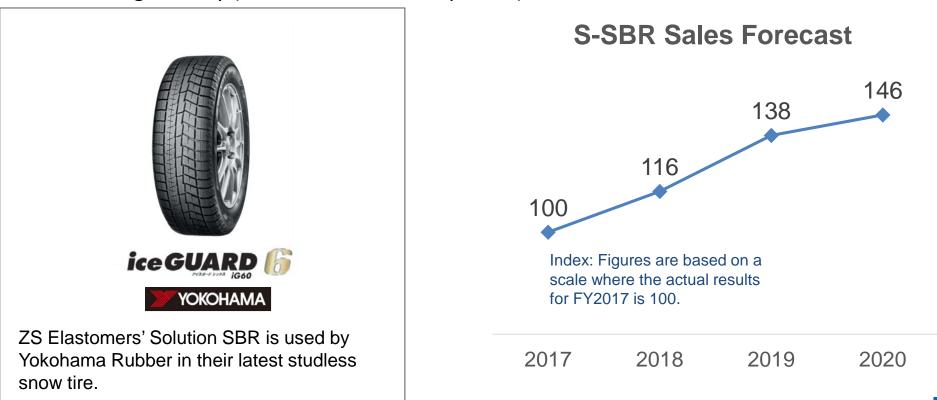
• Expand business in step with the speed of market growth and technological progress through focused investment of resources and stronger collaboration with outside players.





Leveraging synergistic effects in technology and production deriving from Sumitomo Chemical and Zeon for creating value;

ZS Elastomers is committed to providing products that meet Tire Customers' requirements such as Low fuel consumption (Low Rolling Resistance) Safety (Good Wet Grip) Longer service life (Good Abrasion Resistance) Cornering stability (Good Mechanical Properties)





#### Determined to make an investment for new drying facility at Kawasaki Plant

Excellent heat resistance promotes Specialty Cross-linked Zetpol<sup>®</sup> to oil seals.
Newly adopted as the material for an automotive blow-by hose.

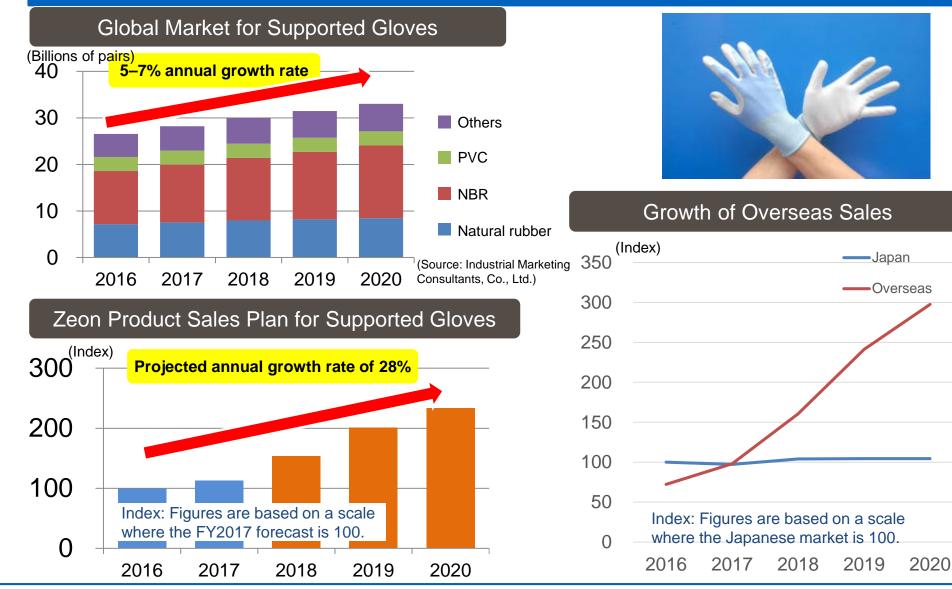


### **Latex: Expansion Strategy**

Accelerate new business creation and product development

## ZEON

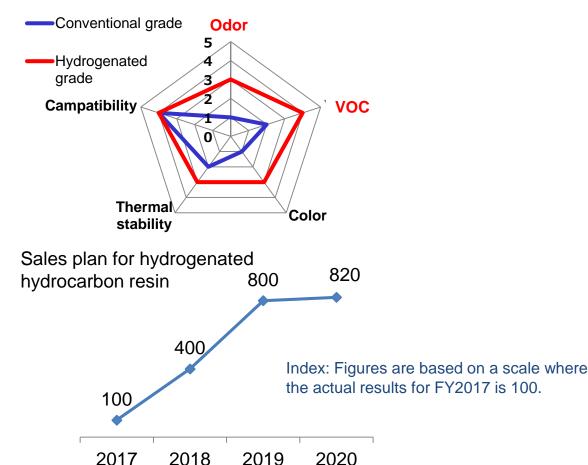
#### New products for growing "supported glove" market



#### Further growth on Hydrocarbon Resin and SIS business units with product differentiation

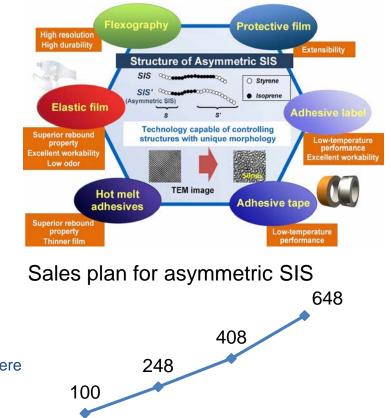
#### Hydrocarbon Resin

## Hydrogenation system process newly installed at Mizushima Plant



#### SIS

#### Steady growth on SIS business with Market/Application expansion on asymmetric SIS



2017

2018

2019

2020

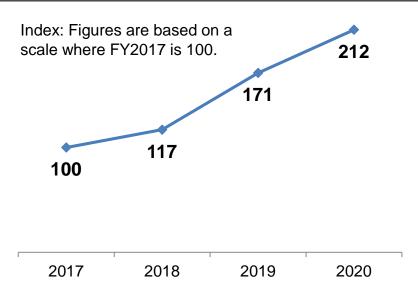
#### Meeting the needs of the expanding market from Japan, China, and Mexico

#### **PSC Production Capacity**

- ◆ Japan 2,000 t
- ♦ China 2,400 t

Mexico Phase 1: 1,200 t (full-scale production began in January 2018) Phase 2: 2<sup>nd</sup> line - 1,200 t (production to begin in 2020)

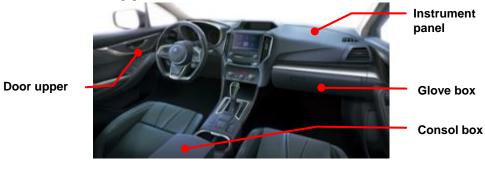
#### PSC Sales Plan (Global)



#### **Powder Slush Compounds (PSC)**

- PVC-based powder compounds for slush molding
- Superior design, moldability, and low-temperature properties

#### **PSC** application: Automotive interior skins







## **Strategy by Business Segment**

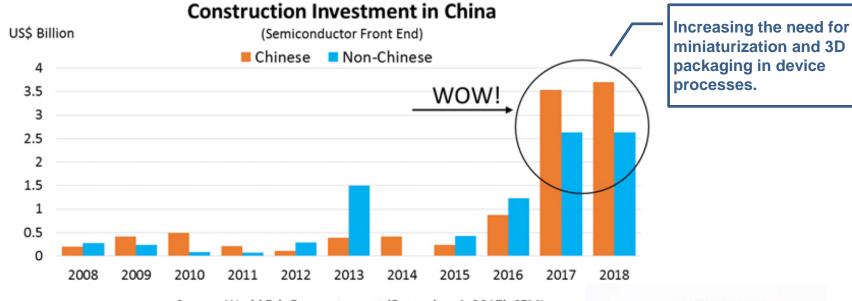
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#### Semiconductor Investment Trends in China



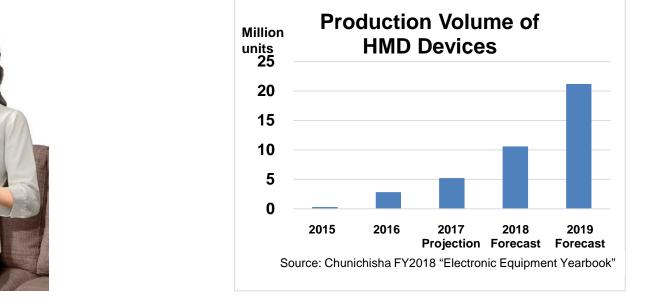
Source: World Fab Forecast report (December 4, 2017), SEMI

## Characteristics of ZEONEX<sup>®</sup> and ZEONOR<sup>®</sup> for Wafer-Handling Containers (FOUP)

- Ultra-low amount of out-gassing
- Low water vapor transmission



## **COP: Development of VR/AR Applications**



#### Properties of ZEONEX®

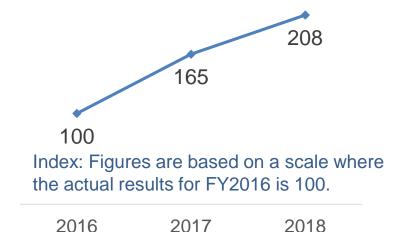
#### Projected Sales for HMD Lens

Reinforce

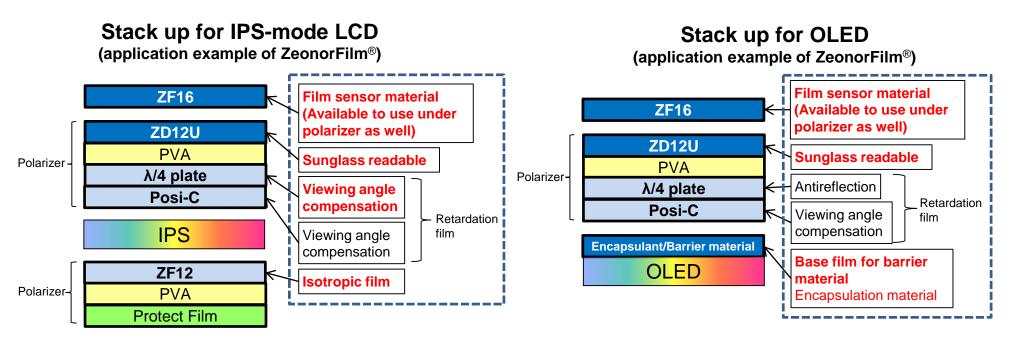
ZEON

- Low water absorption
- High transparency
- Superior optical properties
- Precision molding

Ideal as the lens material for Head Mounted Display (HMD) VR/AR devices.



### ZeonorFilm<sup>®</sup> series for LCD and OLED display



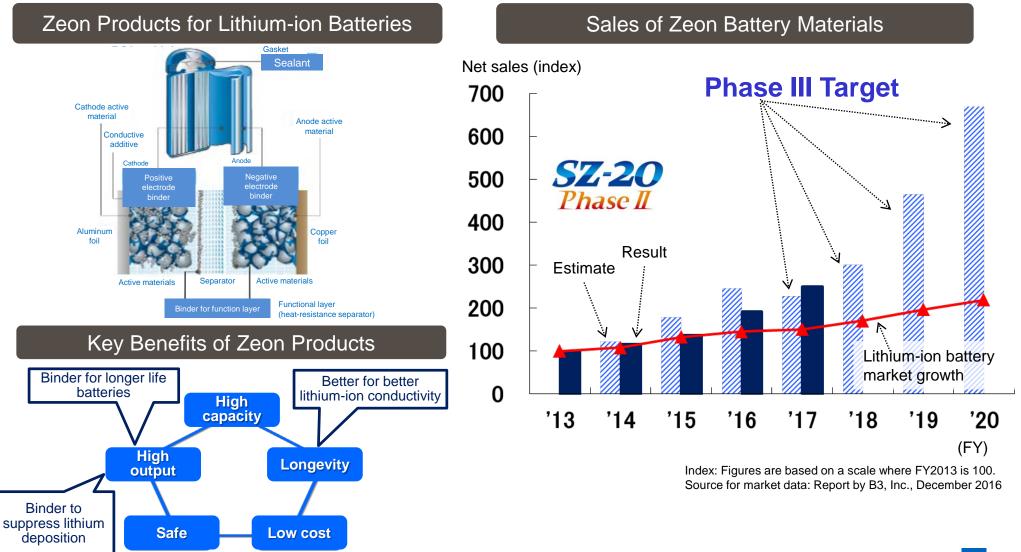
- ZeonorFilm<sup>®</sup> is being used for both LCD and OLED for display of mobile and tablet.
- We will expand our conventional material, and also accelerate developing new material for OLED.
- Developing new flexible films for foldable applications.

ZEON

Reinforce

Solution ZEON

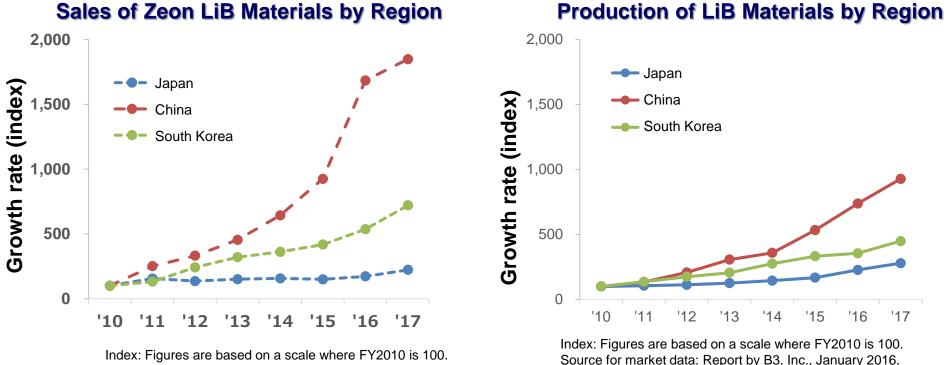
### Expanding business with a wide product lineup





#### Expansion of LiB Binder Sales in South Korea and China

- 1. Expanded business by developing Binders and expanding sales network for the electrified vehicle market
  - $\rightarrow$  Compared to 2010, sales growth in 2017 significantly exceeded market growth (Zeon sales quadrupled in automotive LiB market)
- 2. Increased sales in high-growth consumer electronic markets in China and South Korea
  - $\rightarrow$  Compared to 2010, Zeon sales in China rose by 18.5x (market growth: 9x),
    - sales in South Korea rose by 7x (market growth: 4.5x)



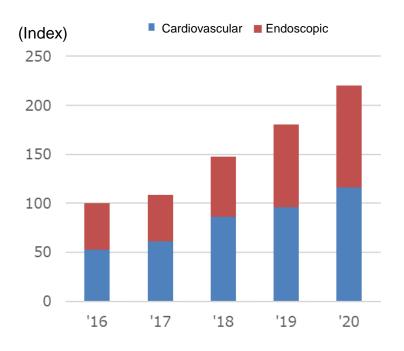
#### Sales of Zeon LiB Materials by Region

## **Medical Devices**



## Expand businesses with FFR\* devices, gallstone extraction and gastrointestinal stents

#### Zeon Medical Sales Trend



Index: Figures are based on a scale where sales for FY2016 is 100.

**Cardiovascular Business:** 

Advanced accuracy and reliability of pressure measurement resulting in increased market share

Aim for 30% of FFR<sup>\*</sup> market share with fiber optic sensing technology by FY2020 **FFR Market in Japan and Zeon's Share** 



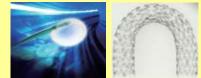
#### Endoscopic Business: Focus on minimally invasive devices

Product launched in FY2017:

• Large-diameter balloon catheter Products to be launched in FY2018:

- Next generation balloon catheter for extracting biliary calculus
- New type of biliary stents





\*FFR=Fractional Flow Reserve

(FY)

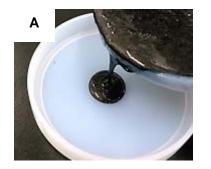


### **New Application of ZEONANO® SG101**

#### Developed caulking material with EMI shielding property based on carbon nanotubes

\*EMI = Electromagnetic interference

Results of R&D at the Zeon Sunarrow AIST\* CNT Composite Material Research Center (Press release issued by AIST in February 2018)





Newly developed EMI shielding caulking material A: Before curing B: After curing

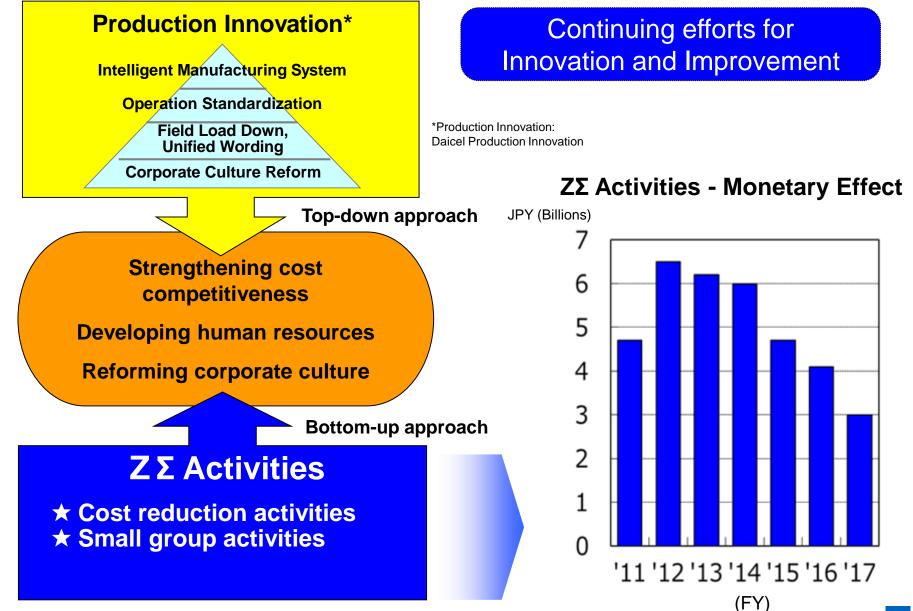
ZEONANO<sup>®</sup> SG101 provides EMI isolation and shielding needs for electronic equipment installations.

- Combined ZEONANO<sup>®</sup> SG101 with curable liquid rubber
- The caulking material excels in coating and filling gaps and can be bonded with metals
- Prevents electromagnetic interference through gaps in shielding material. The caulking material absorbs vibration and strain without cracking

\*AIST=AIST ; National institute of Advanced Industrial Science and Technology

## **Strengthening Competitiveness**





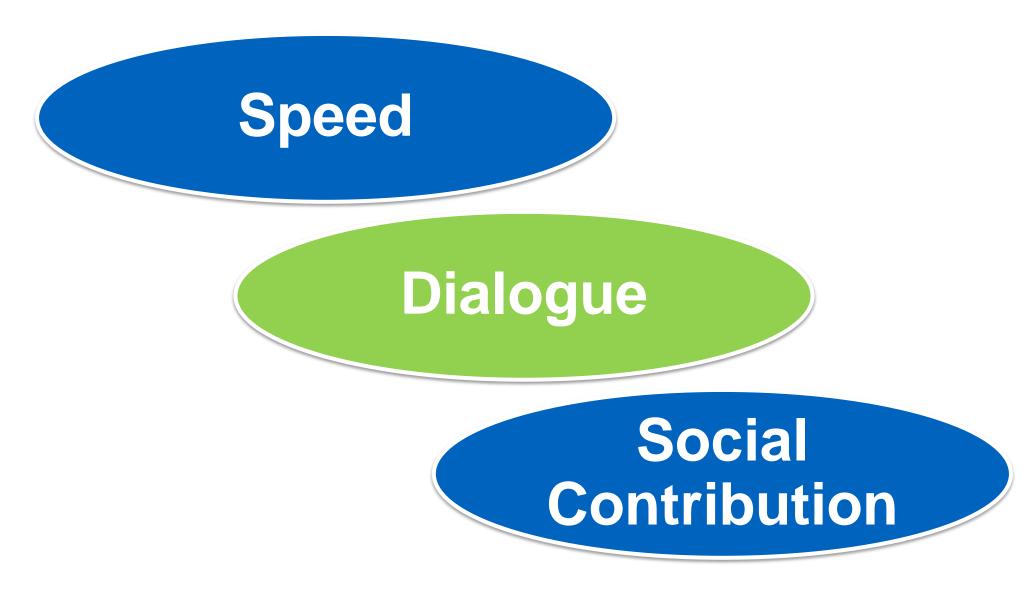


## **Enterprise Blueprint for 2020**

# Zeon makes the Future Today through the Power of Chemistry.

Zeon will continue to contribute to the realization of customer dreams and a prosperous society through employees' individual growth.

Targeting consolidated net sales of over 500 billion yen in FY2020



### 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.

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