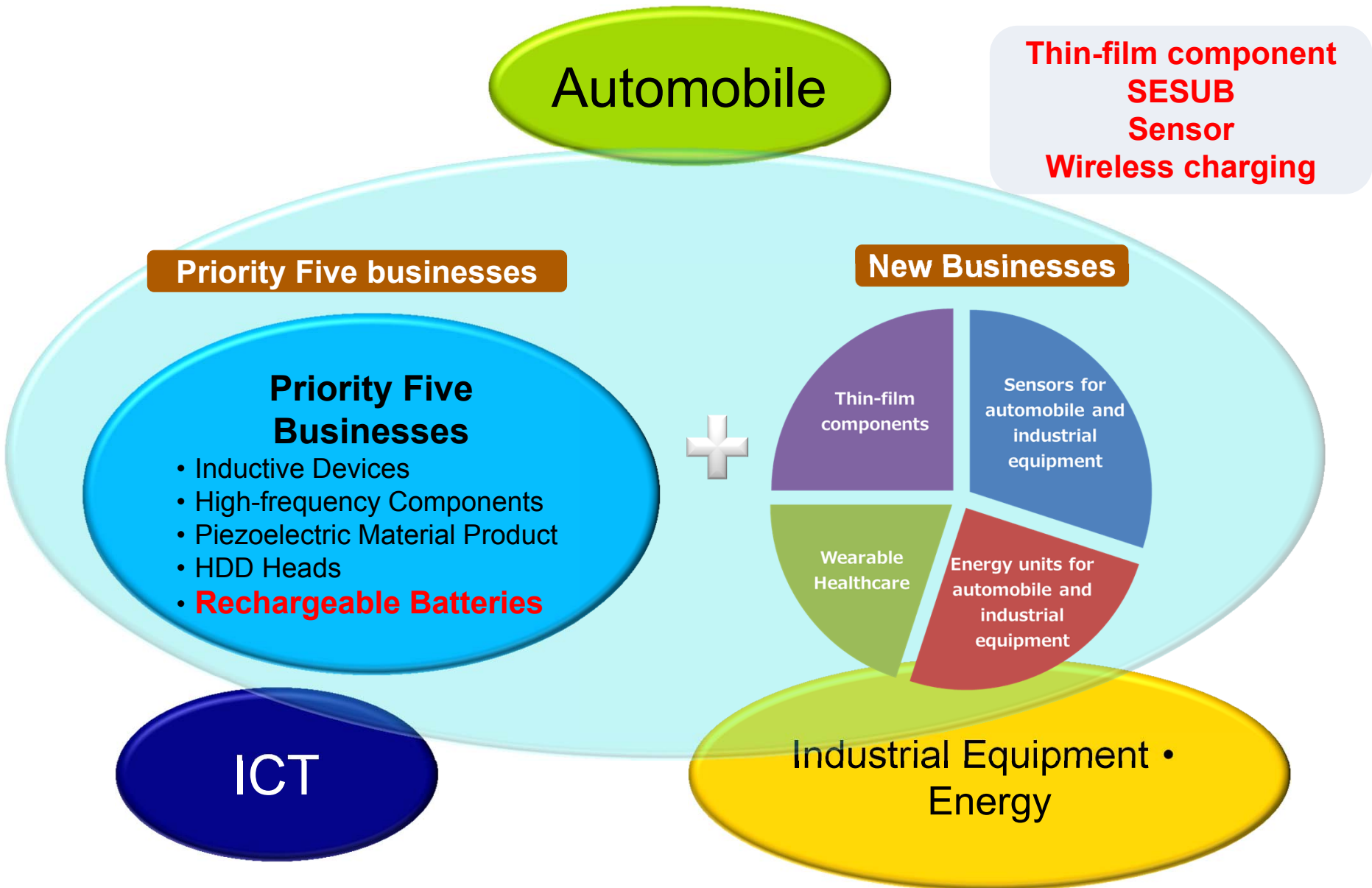















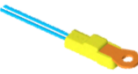


Summary








**President and CEO
Takehiro Kamigama**










NTC Sensor Business

Industry segment	Application
Powertrain >200°C	Exhaust   
Powertrain ≤200°C	TMAP, Engine management  
	Transmission 
	SCR  
Comfort	HVAC   
	Seat heating 
E-mobility	E-motor  
	Battery management  

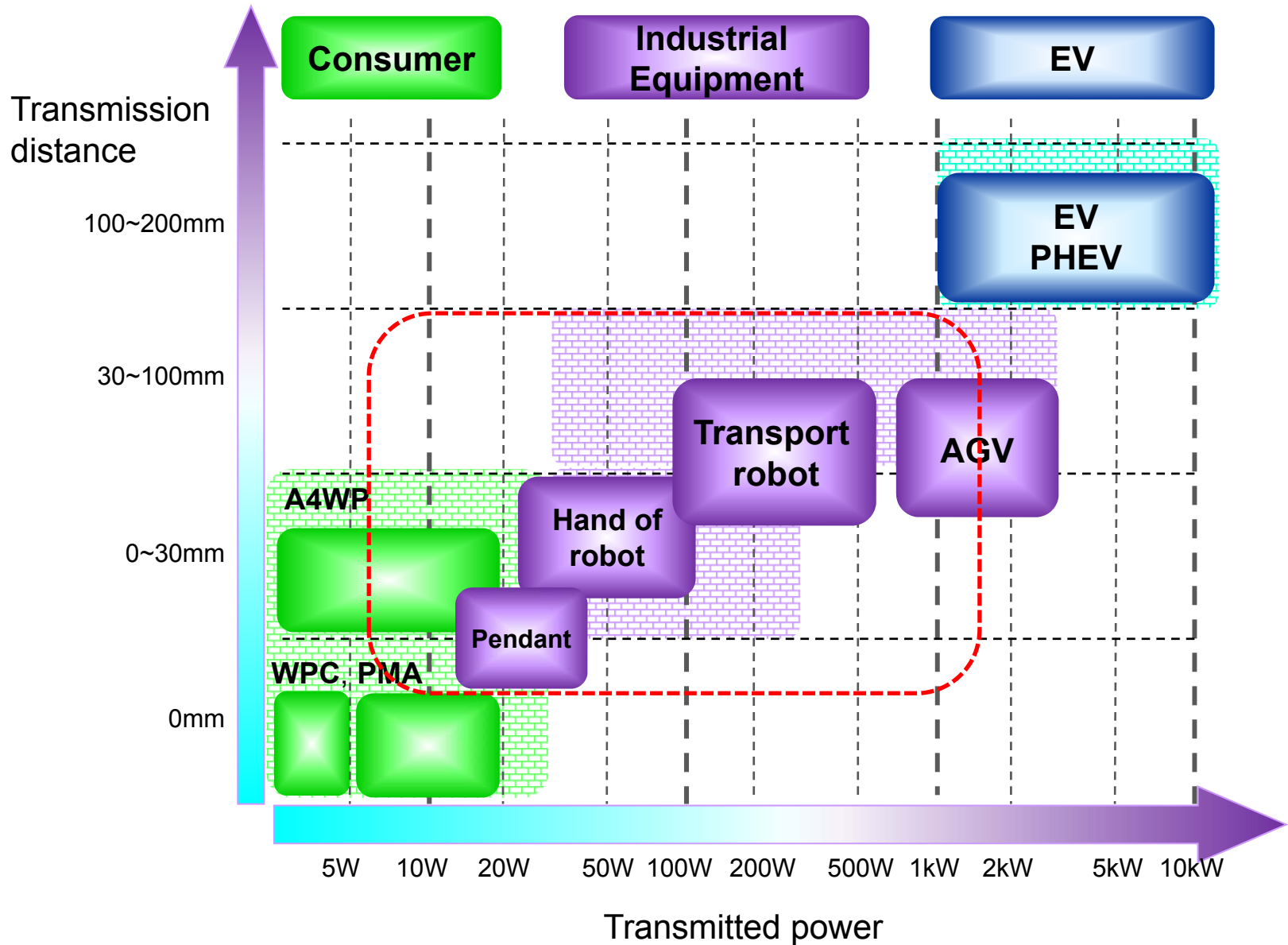
Magnetic Sensor Business

Industry segment	Application
Encoder	Camera  Linear scale 
Angle Sensors	EPS  Wiper  
Gear tooth sensors	Wheel speed  TPMS (Tire pressure monitoring system) 

Pressure Sensor Business

Industry segment	Application
Fuel	Fuel and vapor control  
	Tank and leakage control 
Exhaust	Particle filter (gasoline & diesel), Exhaust gas recirculation 
	Selective catalytic reduction 
Powertrain	TMAP, transmission, exhaust 
Brake	Airbrake 

Wireless Charging System (Portfolio)



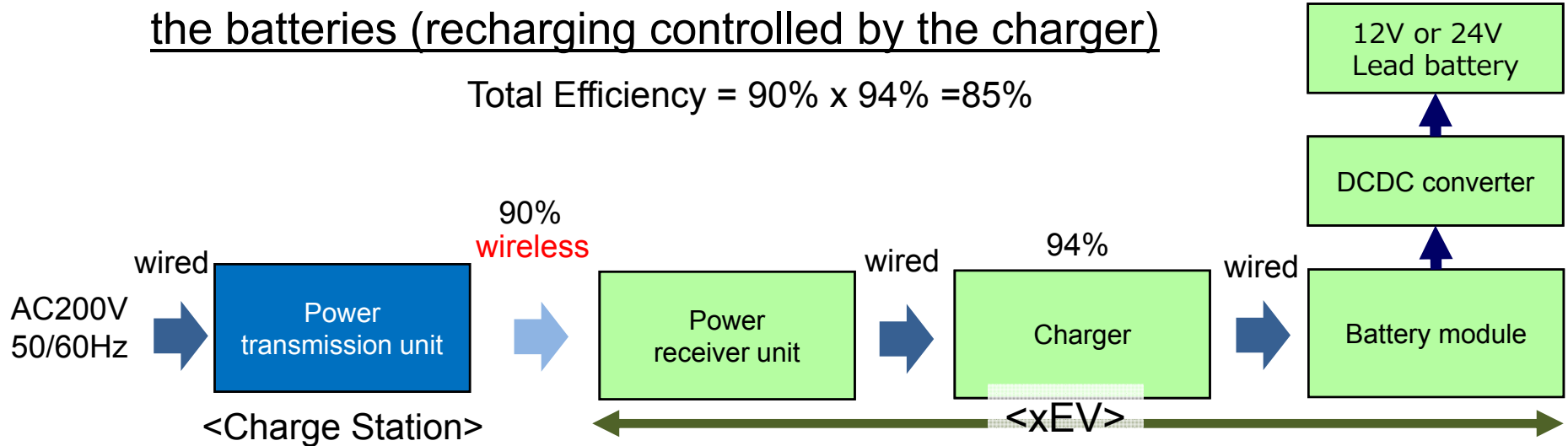
Wireless Charging System

(expansion of businesses for industrial equipment in addition to xEV)



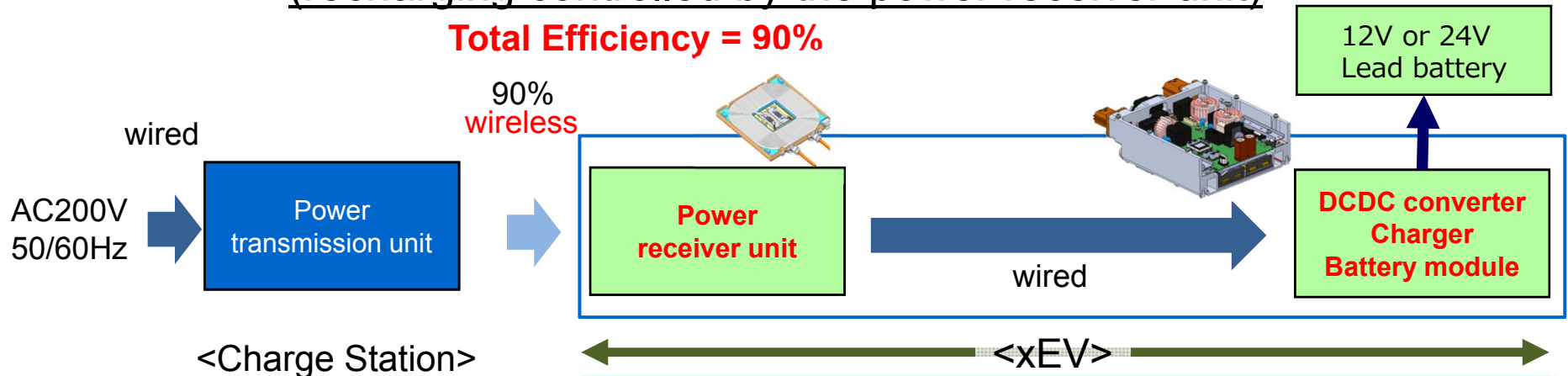
Now: A power charger equipped in the vehicle is used to recharge the batteries (recharging controlled by the charger)

$$\text{Total Efficiency} = 90\% \times 94\% = 85\%$$



In the future: Wireless systems will directly recharge the batteries (recharging controlled by the power receiver unit)

$$\text{Total Efficiency} = 90\%$$



Units can be made compact and highly efficient

Wireless Charging System

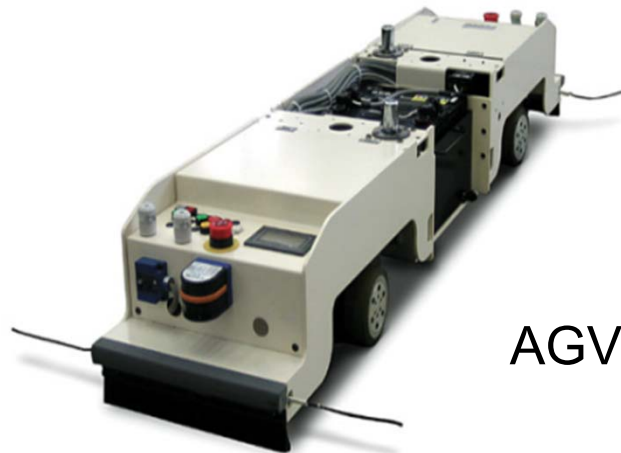
(expansion of businesses for industrial equipment in addition to xEV)



Mobile Robot



Hand of Robot



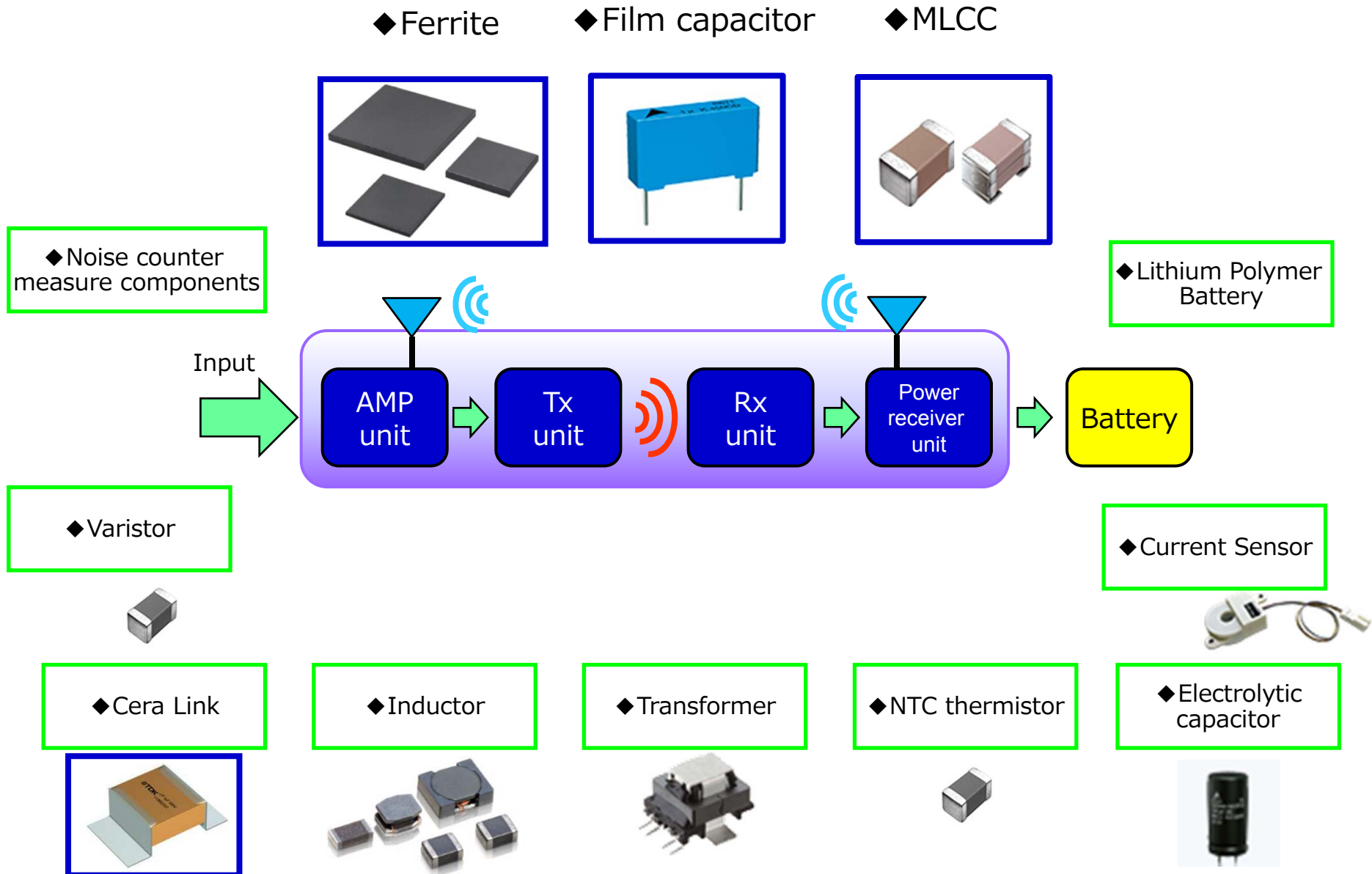
AGV



Pendant for CNC

Wireless Charging System

(Electronic components for Wireless Power Charger System)



Press Release (30 Nov, 2015)

Press Releases

TDK and Renesas Electronics Sign Basic Agreement on Transfer of Renesas Electronics Subsidiary's Tsuruoka Factory

Nov. 30, 2015

TDK Corporation ("TDK", TSE: 6782), Renesas Electronics Corporation ("Renesas Electronics", TSE: 6723), and Renesas Semiconductor Manufacturing Co., Ltd. ("Renesas Semiconductor Manufacturing"), a wholly owned subsidiary of Renesas Electronics, today announced that they signed a basic agreement on November 27, 2015 under which Renesas Semiconductor Manufacturing's Tsuruoka Factory will be transferred to TDK. The three companies target to conclude a definitive agreement on the transfer by the end of February 2016, and are currently negotiating the details, including the handover date and the transfer (reemployment) of personnel currently employed at the Tsuruoka Factory.

In the news release "Renesas Electronics Shows Direction of Renesas Group," announced on August 2, 2013, Renesas Electronics indicated its intentions for the Tsuruoka Factory (then the 5-inch front-end wafer fabrication line of Renesas Yamagata Semiconductor Co., Ltd.'s Tsuruoka Higashi Factory) as "planned to be closed in 2 or 3 years," and plans were proceeding to close the factory by the end of the current fiscal year.

TDK, for its part, has identified the electronic components business based on magnetic materials technology as a core business. It considers its three priority markets to be the ICT market, which encompasses products such as smartphones that continue to be increasingly popular worldwide; the automotive market, which includes hybrid vehicles and electric vehicles; and the industrial equipment/energy market, which covers applications such as wind power generation and solar power generation. TDK is intensely focused on efforts to expand these businesses and their profitability through a concentration on the electronic components business targeted at these three markets. To assure future growth, TDK is working to take thin-film technology built up over many years for the manufacture of magnetic heads for hard disk drives and extend it laterally into electronic components. In order to respond in a timely manner to the vigorous demand of thin-film components that demonstrate the company's strengths centering the three priority markets, TDK decided to acquire Renesas Semiconductor Manufacturing's Tsuruoka Factory.

TDK approached Renesas and Renesas Semiconductor Manufacturing in early October of this year with a view toward acquiring the Tsuruoka Factory. The three parties were able to come to a meeting of minds, and as a result, a basic agreement regarding transfer of the Tsuruoka Factory was concluded. Negotiations on detailed conditions will continue with the aim of concluding a definitive agreement at a future date.

Background

- Establishment of thin-film passive components production base in Akita district
- Securing of the manufacturing and technical capabilities for thin-film product
- Securing of production space for future demand expansion of thin-film product

Tsuruoka Factory



※ Renesas Semiconductor Manufacturing Co., Ltd.

Thin Film Devices · SESUB (Target applications)

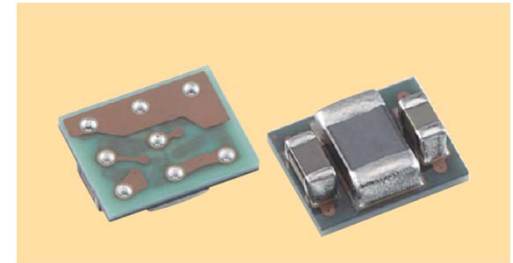


Target Applications		SESUB	Thin Film Devices
Smartphones • Tablet Devices	Power line use	Power Module	Low-profile inductors
	RF use	PA/RF Module	High Frequency Filters Capacitors downsized, arrayed and with narrow tolerance High Q inductors MEMS
	Sensor	Asic Package	
	Other		Common mode filters Composite components
Wearable devices (health care)	Power line use	Charger Module	Low-profile inductors
	RF use	PAN Module	
	Sensor	Asic Package	
Data Centers (servers)	CPU		Embedded capacitors

For Smartphone

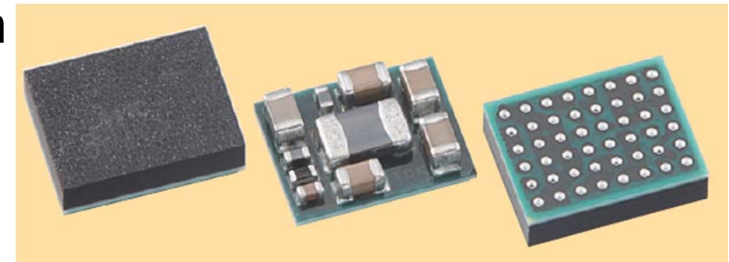
μ DC/DC converter

- ◆ Space-saving, power-saving DC/DC converter
- ◆ Under development (Mass production will be started in 2016)



Envelope tracker

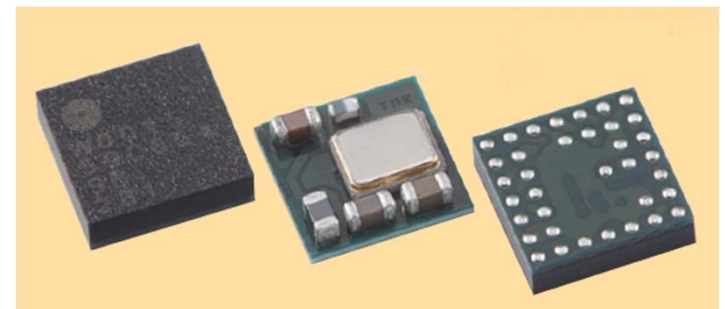
- ◆ A DC/DC converter for driving a RF power amp with high efficiency
- ◆ Under development (Mass production will be started in 2017)



For Wearable

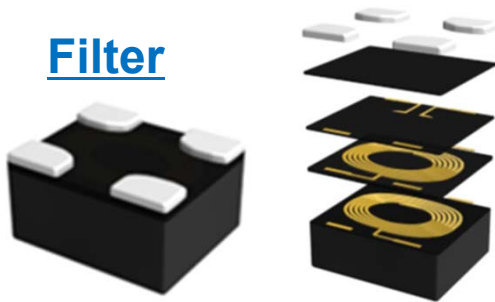
Bluetooth Module

- ◆ World smallest size
- ◆ In mass production

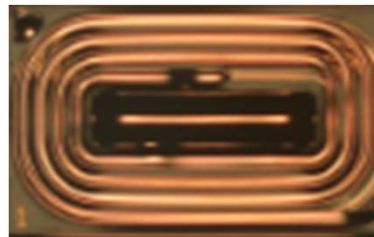


Product family	Feature
Common-mode filters	Size reduction and performance improvements
High-frequency filters	Reduced footprint enabled by size reduction and use of arrayed configuration Performance improvements in high-frequency
Inductors	Low-profile power devices (low-profile modules) and embedded high Q-factor types (low profile)
Composite components (capacitors and inductors)	Reduced footprint and low profile achieved by composite design.
MEMS	Three-dimensional structure and material characteristics used at the core to achieve performance improvements.

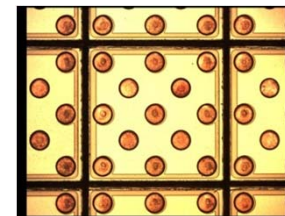
Filter



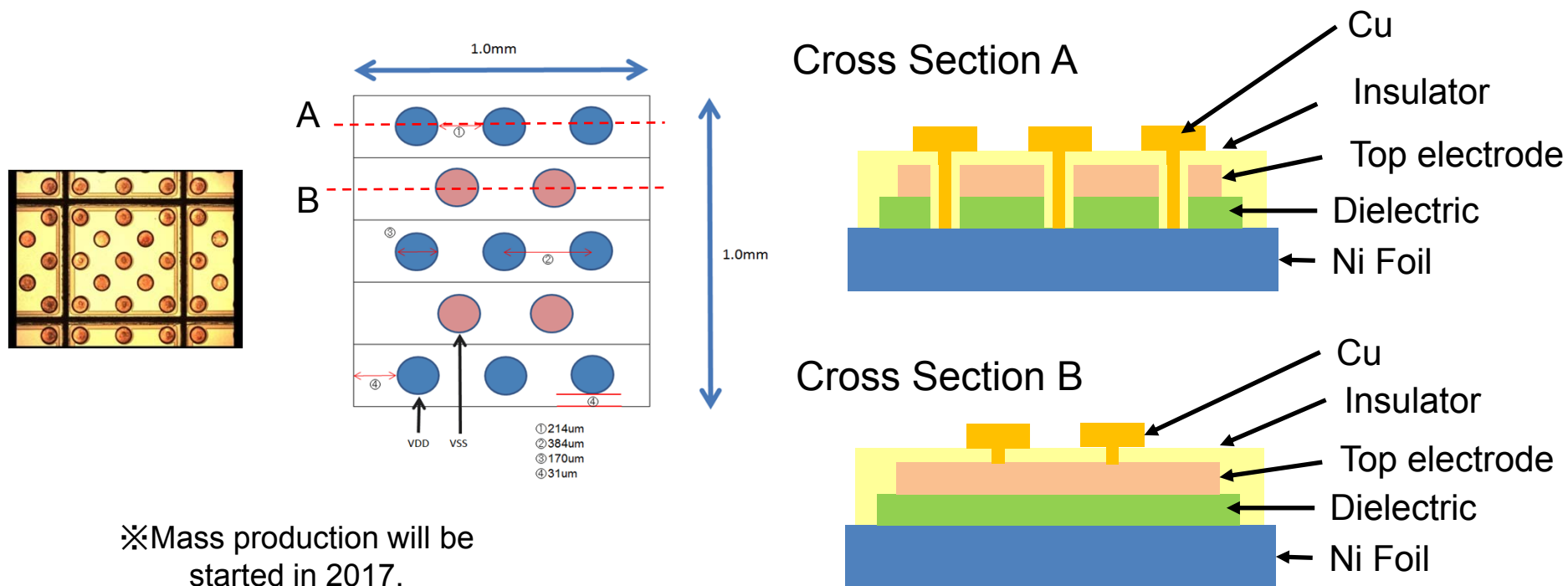
Inductor



Capacitor

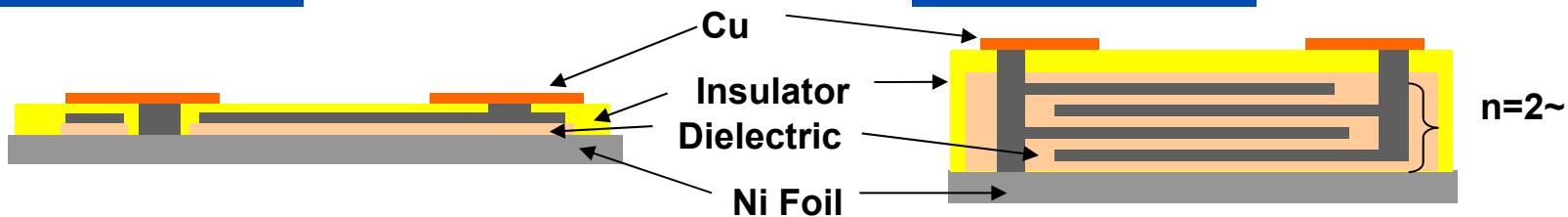


Item	Shape	Thickness (mm)	ESL (pH)
MLCC		0.5	350
TFCP		0.055	26



Single Layer

Multi Layers



Thickness 30 μ m~100 μ m

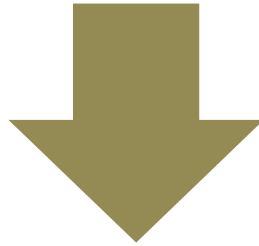
Year	2015	2016	2017	2018	2019
------	------	------	------	------	------

Form	2015	2016	2017	2018	2019
1608	22nF	47nF	100nF	470nF	2.2uF
1005	4.7nF	10nF	22nF	100nF	470nF
0603	1nF	2.2nF	4.7nF	22nF	100nF

1608, 1005, 0603(mm) : 0603, 0402, 0201(inch)

Market change

Industry led by IC manufacturers rather than by telephone manufacturers



- Uniformized specifications
- Standardized OS (e.g., Android and iOS)
- Shortened development period



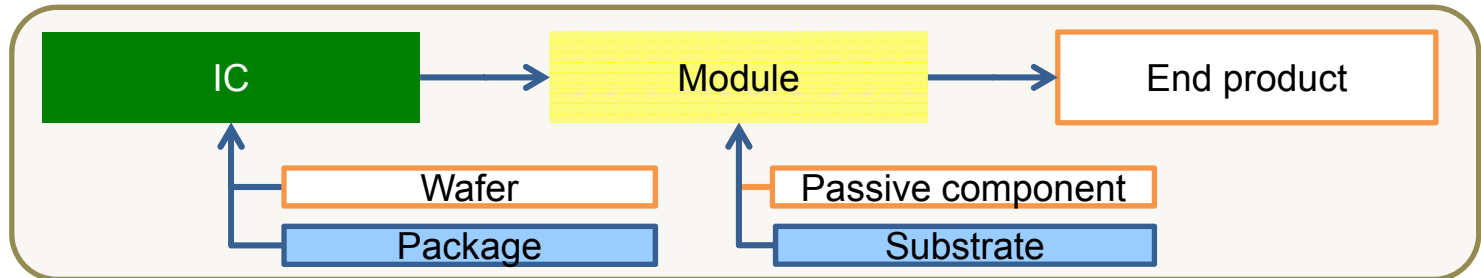
Smartphone manufacturers use IC manufacturers' references

SESUB business: Gain customers in collaboration with IC makers and OSAT* companies

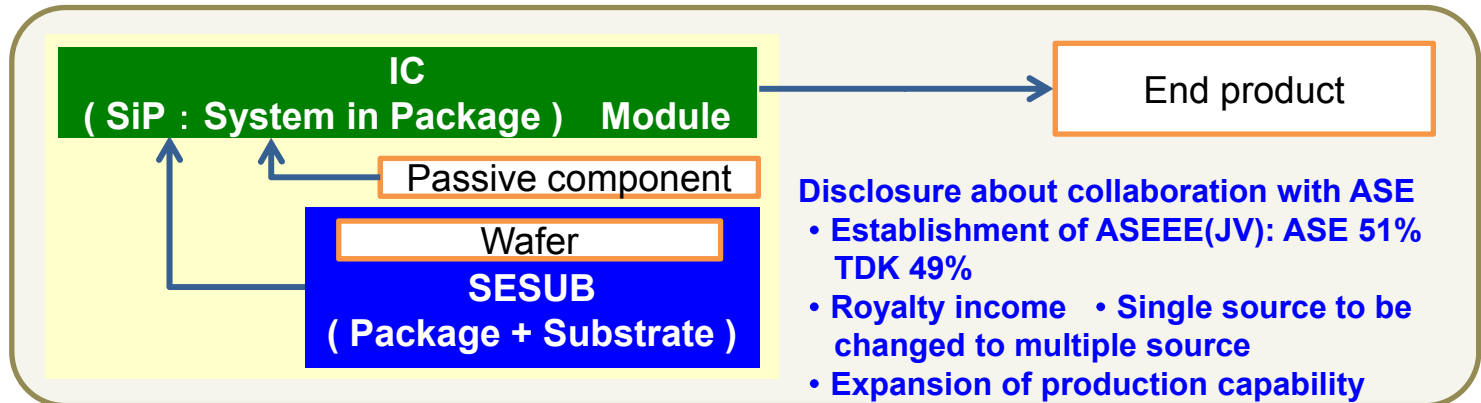
*Outsourcing assembly and testing

Business model

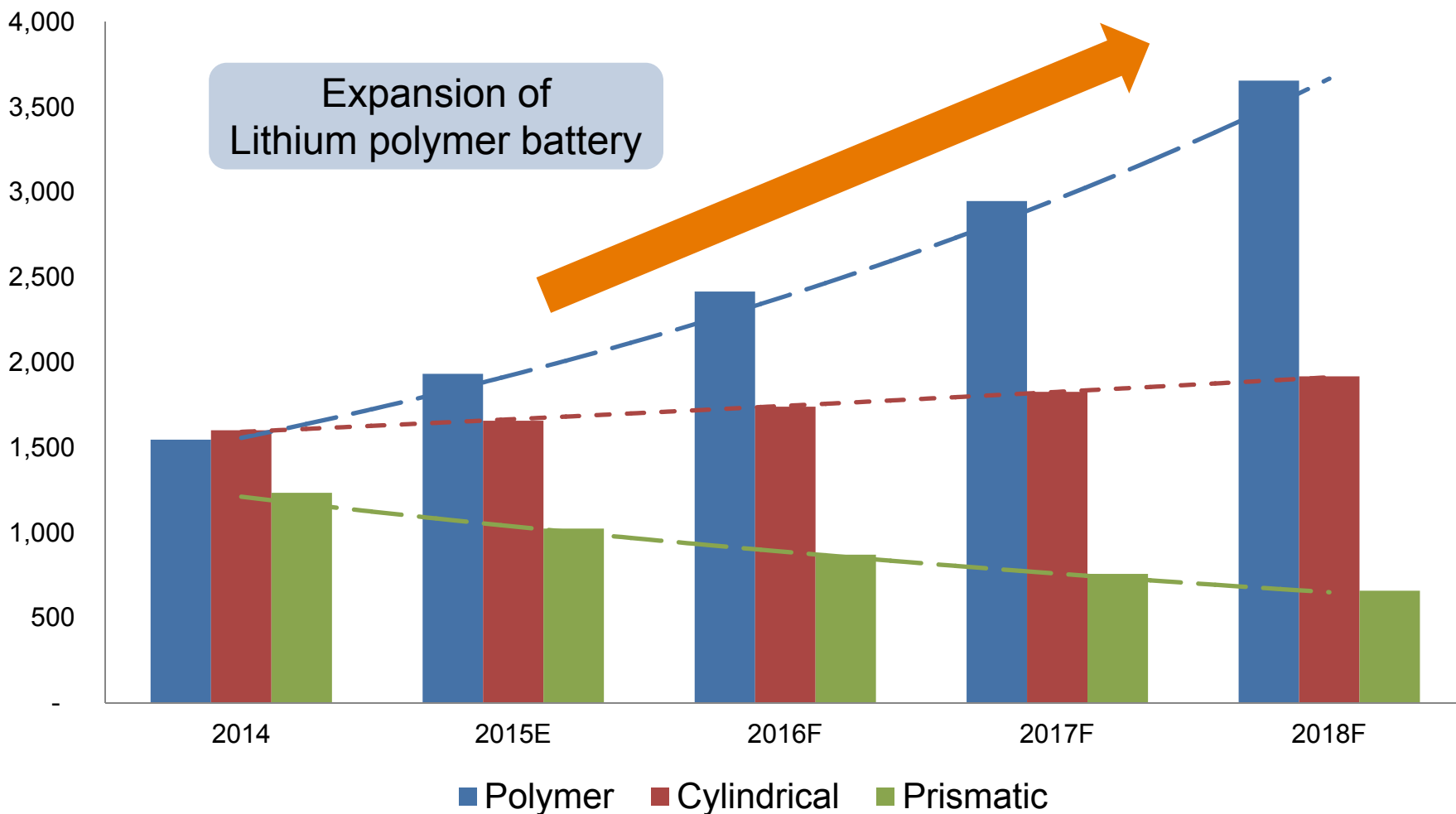
Conventional model



SESUB

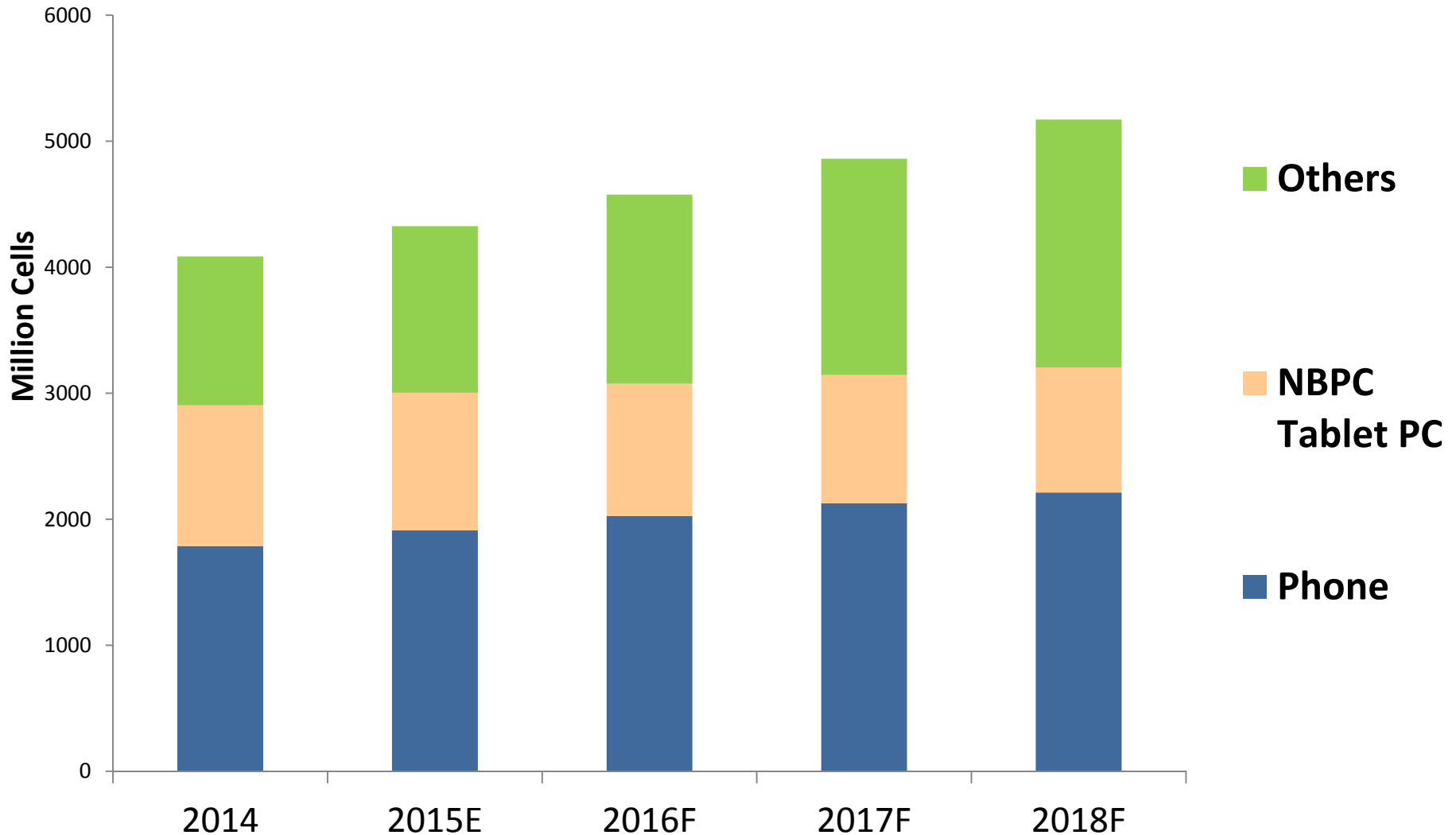


Market Trend of Small-sized Cell for Mobile/IT (By Cell Types)



TDK's estimation

Market Trend of Small-sized Cell for Mobile/IT



TDK's estimation

Growth Investment

- Investment in new products, new businesses, and M&A
- Increase production capacity of existing businesses

Return to Shareholders

- Stabilize or increase dividends through EPS growth
- Target a 30% dividend payout ratio

	FY March 2015 Results	FY March 2018 Target
Operating Income Margin	6.7%	Over 10%
ROE	7.2%	Over 10%

(Yen billions)

Total investment over the next 3 years (Mid-Term Business Plan)

**Capital
Expenditure**

**350.0~
400.0**

**R&D
Investment**

About 230.0

FY March 2016 Projections

130.0

77.0

- Construction of new factory buildings in the Akita area
- Production capacity increase in the 5 core businesses
- Investment in new products and new businesses

This material contains forward-looking statements, including projections, plans, policies, management strategies, targets, schedules, understandings, and evaluations about TDK, or its group companies (TDK Group). These forward-looking statements are based on the current forecasts, estimates, assumptions, plans, beliefs, and evaluations of the TDK Group in light of the information currently available to it, and contain known and unknown risks, uncertainties, and other factors. The TDK Group therefore wishes to caution readers that, being subject to risks, uncertainties, and other factors, the TDK Group's actual results, performance, achievements, or financial position could be materially different from any future results, performance, achievements, or financial position expressed or implied by these forward-looking statements, and the TDK Group undertakes no obligation to publicly update or revise any forward-looking statements after the issue of this material except as provided for in laws and ordinances.

The electronics markets in which the TDK Group operates are highly susceptible to rapid changes, risks, uncertainties, and other factors that can have significant effects on the TDK Group including, but not limited to, shifts in technology, fluctuations in demand, prices, interest and foreign exchange rates, and changes in economic environments, conditions of competition, laws and regulations. Also, since the purpose of these materials is only to give readers a general outline of business performance, many numerical values are shown in units of a billion yen. Because original values, which are managed in units of a million yen, are rounded off, the totals, differences, etc. shown in these materials may appear inaccurate. If detailed figures are necessary, please refer to our financial statements and supplementary materials.

