



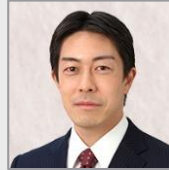









STRATEGY UPDATE

FEBRUARY 17, 2020
HIDETOSHI SHIBATA
PRESIDENT AND CEO
RENESAS ELECTRONICS CORPORATION

PRESENTER INTRODUCTION

Corporate	Automotive Solution Business Unit ("ABU")			IoT and Infrastructure Business Unit ("IIBU")	
	ABU Business Strategy	Digital	Analog & Power		
<p>Hidetoshi Shibata Representative Director, President and CEO</p> 	<p>Shuhei Shinkai SVP / CFO</p> 	<p>Shingo Yamamoto EVP / GM</p> 	<p>Takeshi Kataoka Deputy GM</p> 	<p>Tomomitsu Maoka SVP / Deputy GM / Chairman (RECH)</p> 	<p>Sailesh Chittipeddi EVP / GM / President (REA)</p> 
<ul style="list-style-type: none"> ■ Innovation Network Corporation of Japan (EMD) ■ Merrill Lynch (MD, Global Private Equity) ■ MKS Partners (Partner) ■ Central Japan Railway Company 	<ul style="list-style-type: none"> ■ Innovation Network Corporation of Japan (VP, Investment Group) ■ Anderson Mori & Tomotsune 	<ul style="list-style-type: none"> ■ Nissan Motor (Regional SVP, Representative Director of Nissan Korea) ■ Calsonic Kansei (CIO, EVP, Chairman & CEO of Calsonic Kansei Americas) ■ GE Capital (Japan Integration Leader) ■ GE Fleet Services 	<ul style="list-style-type: none"> ■ Renesas Mobile ■ Renesas Technology ■ Hitachi 	<ul style="list-style-type: none"> ■ Lenovo Japan (Strategy Director, Commercial Operations Director) ■ Infineon Technologies Japan (Senior Manager of Japan Regional Strategy, Head of Industrial and Multi Market Regional Center) ■ A.T. Kearney 	<ul style="list-style-type: none"> ■ IDT (EVP of Global Operations, CTO) ■ Conexant Systems (President, CEO, COO, co-President, EVP for Operations, CTO) ■ AT&T Bell Labs 

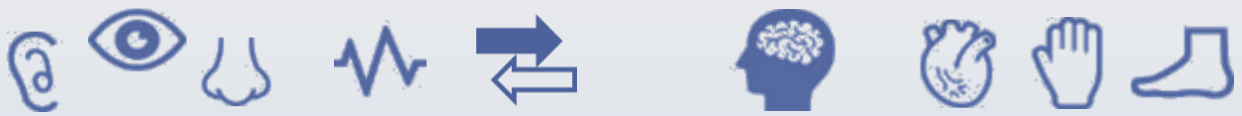
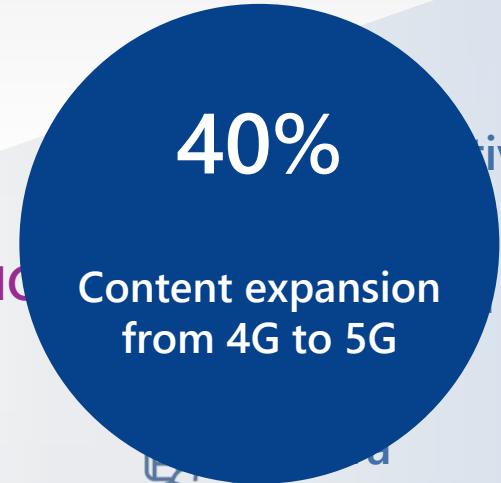
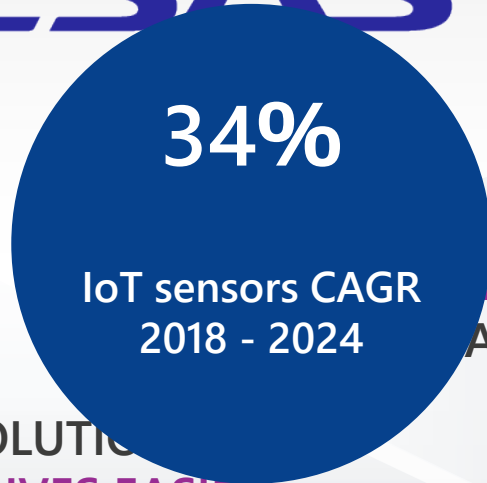
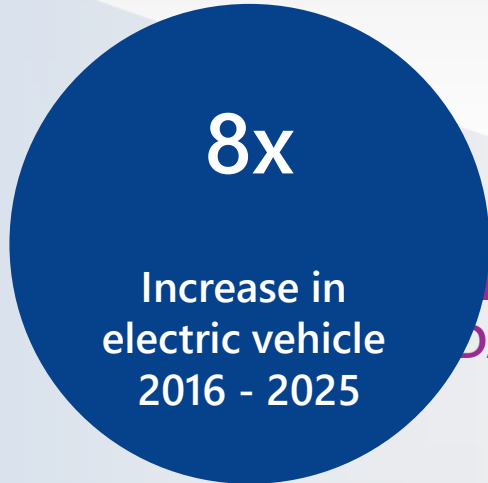
RECH: Renesas Electronics (China) / REA: Renesas Electronics America / EVP: Executive Vice President / SVP: Senior Vice President / VP: Vice President
EMD: Executive Managing Director / MD: Managing Director / GM: General Manager

IN A WORLD SWITCHED ON...



Source: 8x increase in electric vehicles by 2025 by Strategy Analytics, 20% ADAS semi market long-term growth rate by Market and Markets
34% long-term IoT sensors growth by Market Research Engine, 40% 4G -> 5G by Piper Jaffray

IN A WORLD SWITCHED ON...



Sense → Move / Store → Compute → Actuate



Source: 8x increase in electric vehicles by 2025 by Strategy Analytics, 20% ADAS semi market long-term growth rate by Market and Markets
34% long-term IoT sensors growth by Market Research Engine, 40% 4G -> 5G by Piper Jaffray

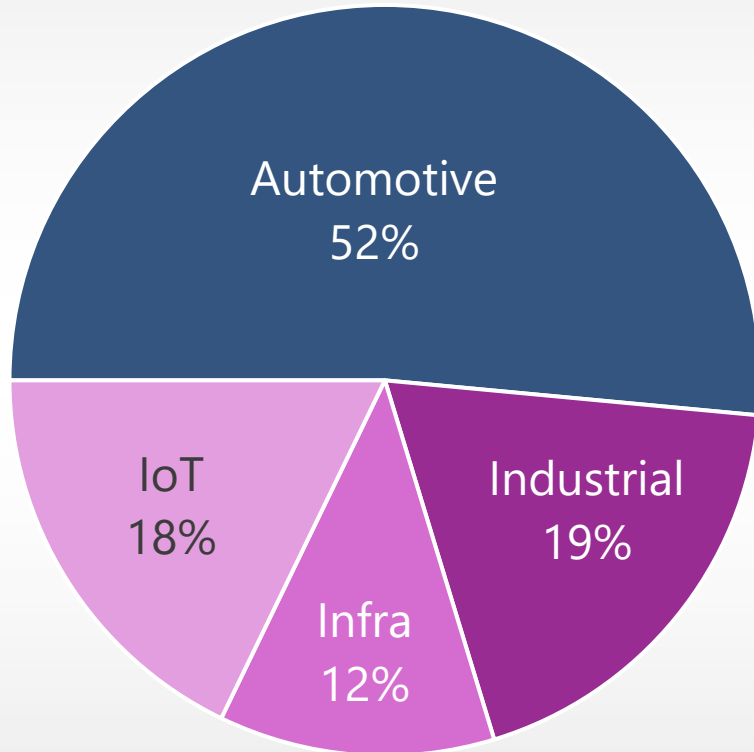
IN A WORLD SWITCHED ON...







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PORTFOLIO ALIGNED WITH HIGH-GROWTH END MARKETS









2019 Revenue by end market



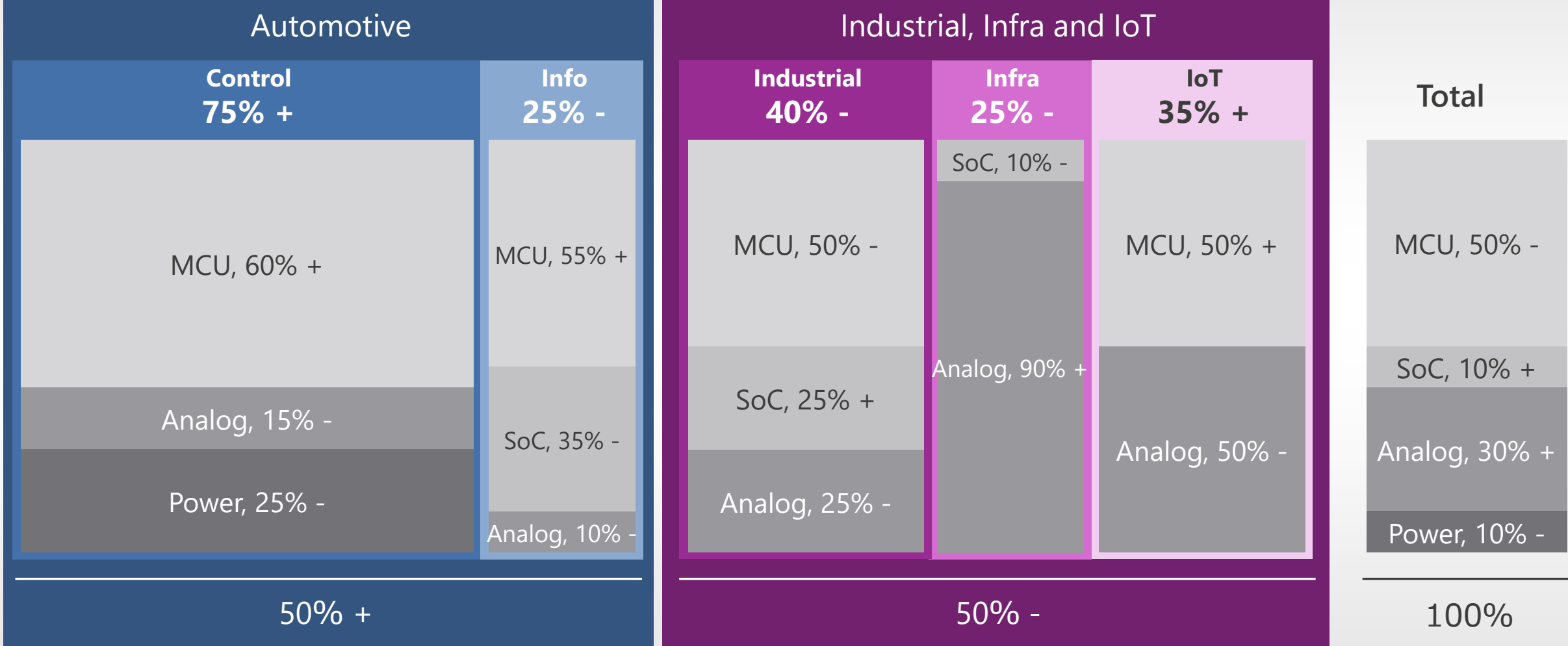
 Automotive	<ul style="list-style-type: none">■ No.1 automotive MCU supplier■ Most advanced geometry combined with MONOS technology■ Functional safety and security
 Industrial	<ul style="list-style-type: none">■ Leading MCU and SoC supplier■ Rich and extensive technology offering such as multi-protocol connectivity, time sensitive networking ("TSN") and real-time processing■ Strong relationship with leading customers of the world
 Infra	<ul style="list-style-type: none">■ No.1 memory interface supplier■ Tight engagement with hyperscalers and memory suppliers■ Technology leader in RF for 5G and massive MIMO
 IoT	<ul style="list-style-type: none">■ Leading provider of both proprietary and ARM MCUs■ Wide variety of technology offering such as SOTB, e-AI, security etc.■ Strategic collaboration with distributors

Source: Renesas management accounting, pro-forma basis

WHAT WE DO

		Product portfolio			
					
Focus verticals		Sense	Move / Store	Compute	Actuate
	Auto	<ul style="list-style-type: none"> ■ Sensor (optical, flow, humidity, gas, CO₂, temperature, thermopile) 	<ul style="list-style-type: none"> ■ Timing ■ Optical ■ Memory interface 	<ul style="list-style-type: none"> ■ ADAS/AD platform ■ Gateway ■ DRP / e-AI 	<ul style="list-style-type: none"> ■ Motor solution ■ OIS servo-controller
	Industrial	<ul style="list-style-type: none"> ■ Sensor signal conditioner ("SSC") 	<ul style="list-style-type: none"> ■ High bandwidth memory ("HBM") ■ NVDIMM 	<ul style="list-style-type: none"> ■ MCU ■ MPU ■ SoC 	<ul style="list-style-type: none"> ■ PMIC ■ BMIC ■ SOTB
	Infra		<ul style="list-style-type: none"> ■ BLE 5.0 ■ NB IoT 		<ul style="list-style-type: none"> ■ Low Iq ■ Wireless power
	IoT		<ul style="list-style-type: none"> ■ 6LoWPAN ■ RF, RF for 5G 		<ul style="list-style-type: none"> ■ IGBT / MOSFET

2019 REVENUE COMPOSITION



Source: Renesas management accounting, pro-forma basis

OUR VISION, MISSION AND VALUE



OUR VISION
RENEASAS CREATES
LEADING SEMICONDUCTOR
SOLUTIONS THAT SPARK
INNOVATION FOR A
CONNECTED WORLD,
BUILDING A TRUSTED BRAND
WE CAN BE PROUD OF.


RENEASAS
BIG IDEAS FOR EVERY SPACE



OUR MISSIONS

1. **DRIVE** PROGRESS TOWARD A SAFER, HEALTHIER, GREENER, AND SMARTER WORLD.
2. **DELIVER** CREATIVE SEMICONDUCTOR SOLUTIONS AND SUPPORT THAT MEET AND EXCEED CUSTOMER EXPECTATIONS.
3. **STRENGTHEN** OUR OFFERING TO CUSTOMERS IN FOCUS SEGMENTS THROUGH STRATEGIC PARTNERSHIPS, ALLIANCES AND ACQUISITIONS.
4. **DEVELOP** A GLOBAL CULTURE THAT ENCOURAGES OPEN COMMUNICATION, COLLABORATION, AND RESPECT FOR DIVERSITY.
5. **SEEK** CONTINUOUS IMPROVEMENT IN EVERYTHING WE DO.

RENEASAS
BIG IDEAS FOR EVERY SPACE



VALUES FOR GROWTH

- CUSTOMER CENTRICITY
- CREATIVITY & IMAGINATION
- TECHNOLOGY & EXPERTISE
- APPRECIATION OF DIVERSITY
- OWNERSHIP & INTEGRITY
- OPEN COMMUNICATION
- VALUE FOR LEADERSHIP

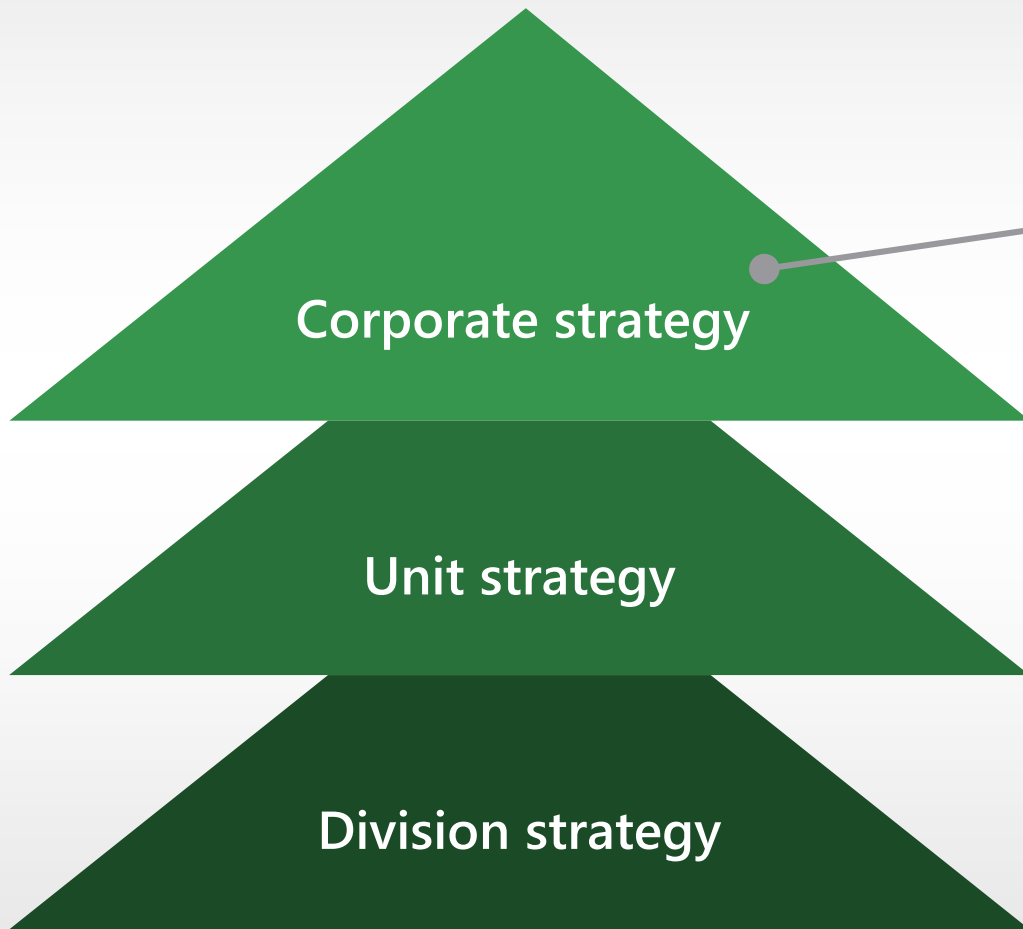
RENEASAS
BIG IDEAS FOR EVERY SPACE

MY CAUSE

To make our lives **easier** by complementing human capabilities



CORPORATE STRATEGY – BALANCED GROWTH



Balanced growth through diversification

Diversification:

- Product
- Market
- People

Common thread:

- Reliability
- Stickiness
- Constant innovation

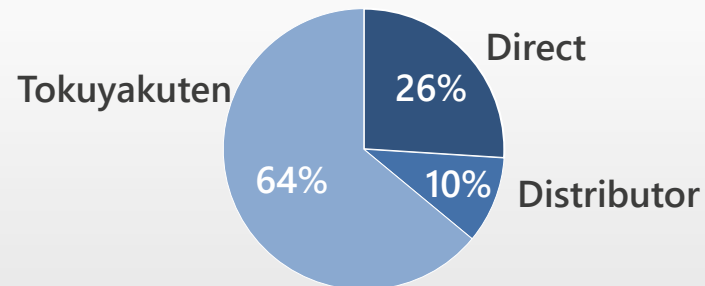
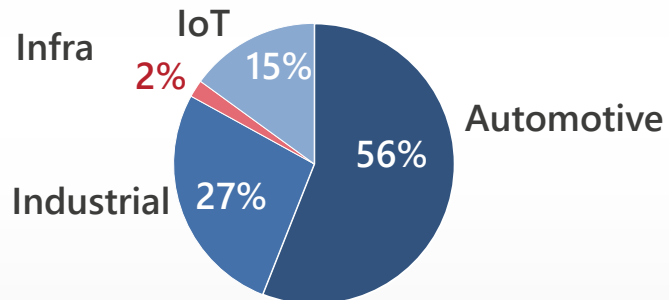
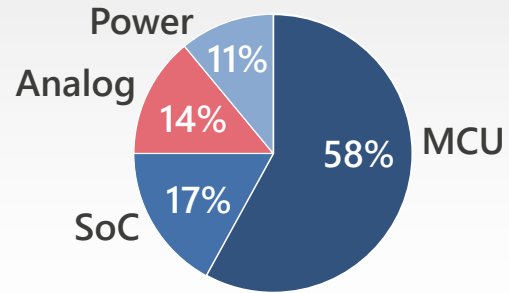
DIVERSIFICATION

By Product

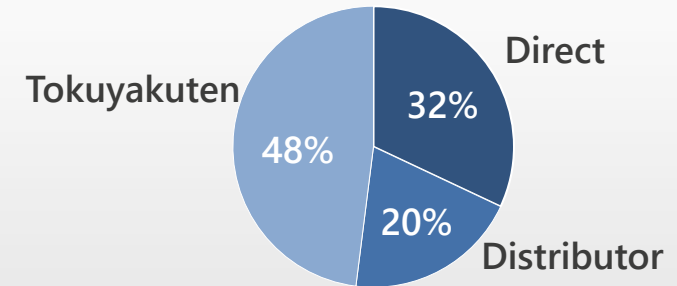
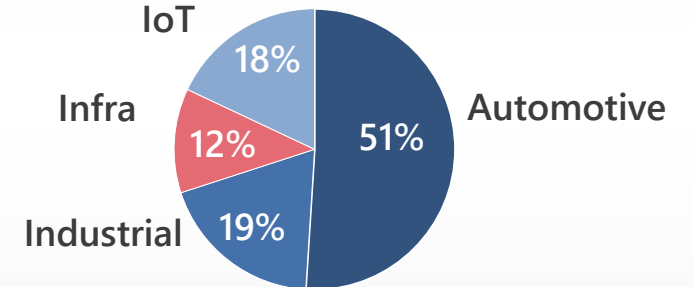
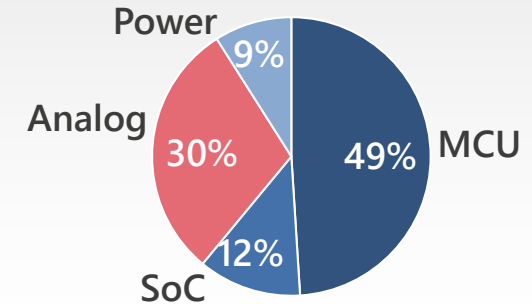
By End market

By Sales channel

Renesas (2016)



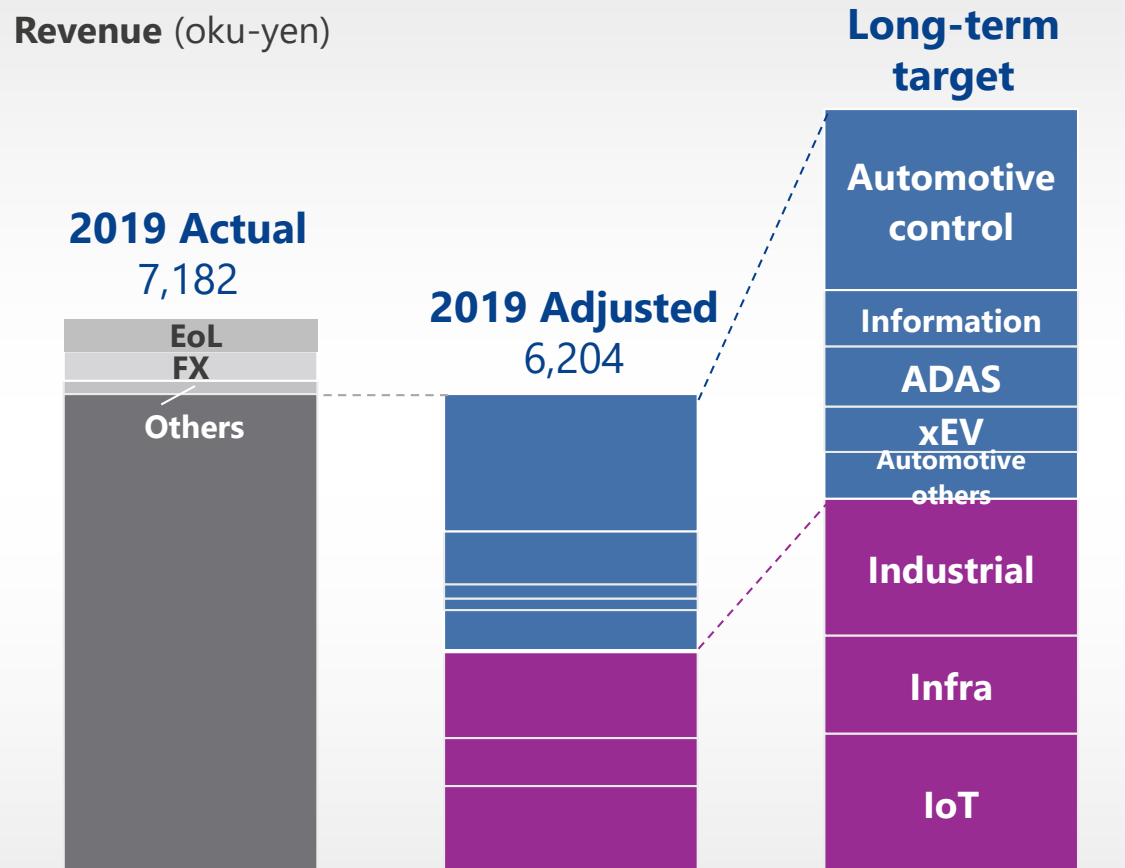
Renesas+Intersil+IDT (2019)



Source: Renesas management accounting, Pro-forma basis
Tokuyakuten: Selected sales distributors for Japanese customers

GROWTH PLAN

Revenue (oku-yen)



	Long-term Renesas CAGR	Long-term Market (SAM) CAGR
Renesas	+	7%*
Automotive	≡	8%**
Automotive control	≡	4%
Information	—	4%
ADAS	++	17%
xEV	+	18%
Industrial, Infra and IoT	+	7%***
Industrial	+	7%
Infra	++	5%
IoT	≡	8%

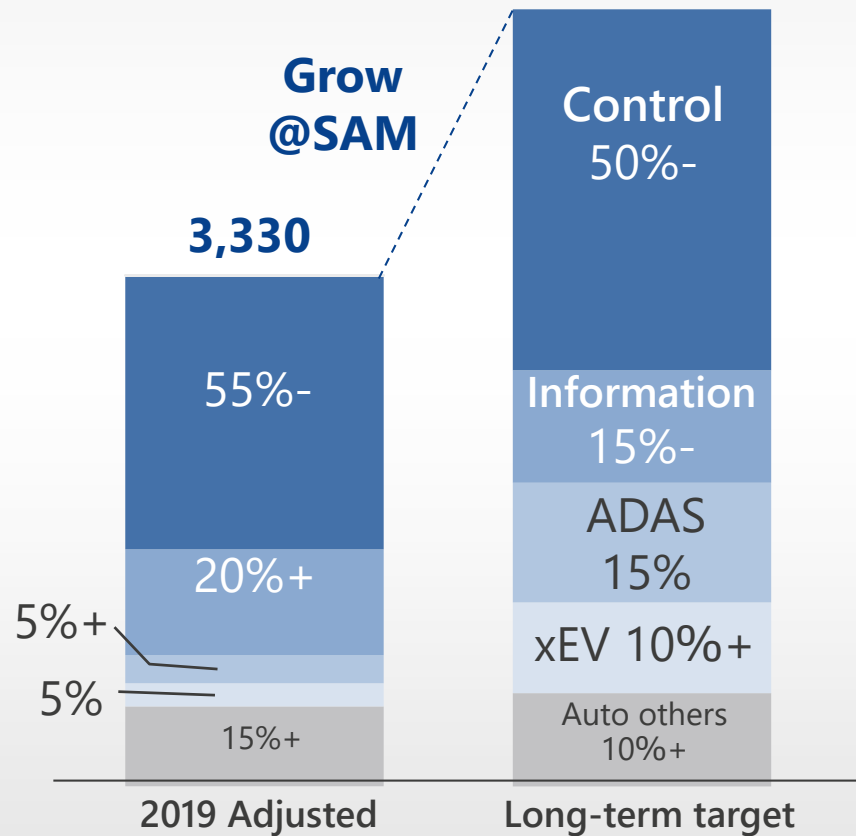
FX for 2019 Actual: 1USD=109yen, 1EUR=123yen, FX for 2019 Adjusted and Long-term target: 1USD=100yen, 1EUR=120yen

* Renesas estimate. ** Source: Strategy Analytics automotive semiconductor demand forecast by business segment in December 2019.

*** Source: 2019-2023 chart created by Renesas based on Gartner Research, Semiconductor Forecast Database, Worldwide, 4Q19 Update, Ben Lee et al., 24 December 2019. After 2024, Renesas estimate

AUTOMOTIVE

Revenue (oku-yen)



Growth Driver



- Continued electronic content growth
- Electric / electronic architecture evolution



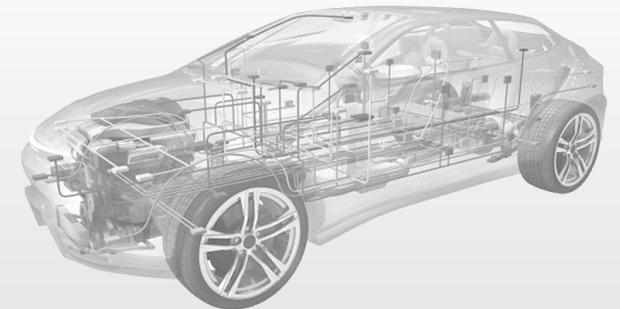
- ADAS / AD progress



- New regulations calling for more xEVs

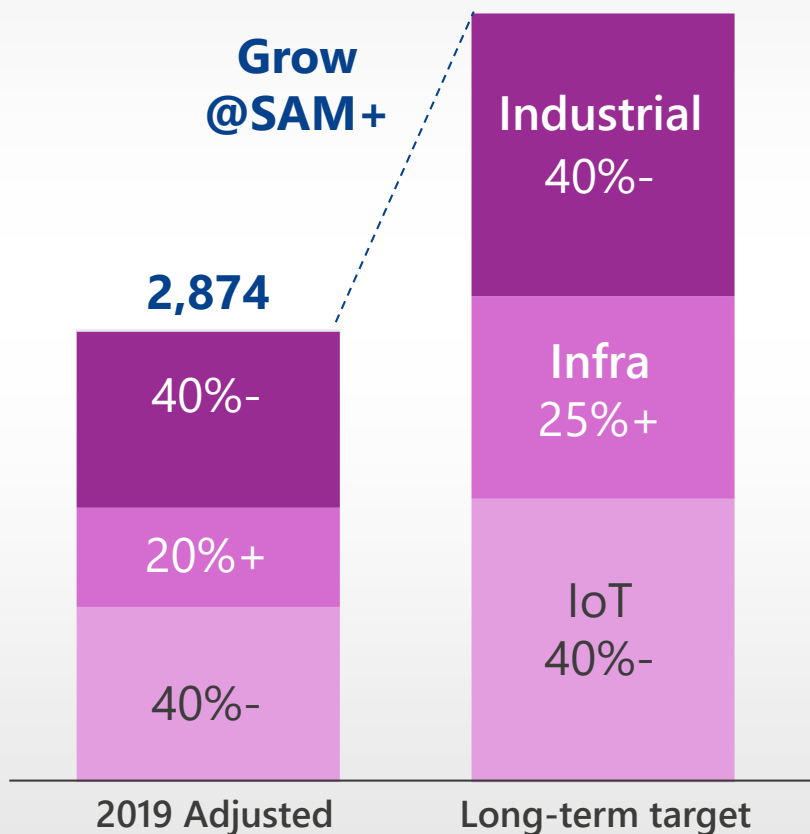
How We Win

- Scalable product offering to streamline E/E architecture
- ADAS / AD product offering expansion to full spectrum
- Winning combo solutions by leveraging digital footprint to deliver more analog and power products



INDUSTRIAL, INFRA AND IoT

Revenue (oku-yen)



Growth Driver



- Robotics applications
- Human-machine interaction
- Realtime synchronization



- 5G
- Datacenter and cloud
- Faster memory access



- > 1 trillion connected devices
- Endpoint computing
- Wireless charge adoption

How We Win

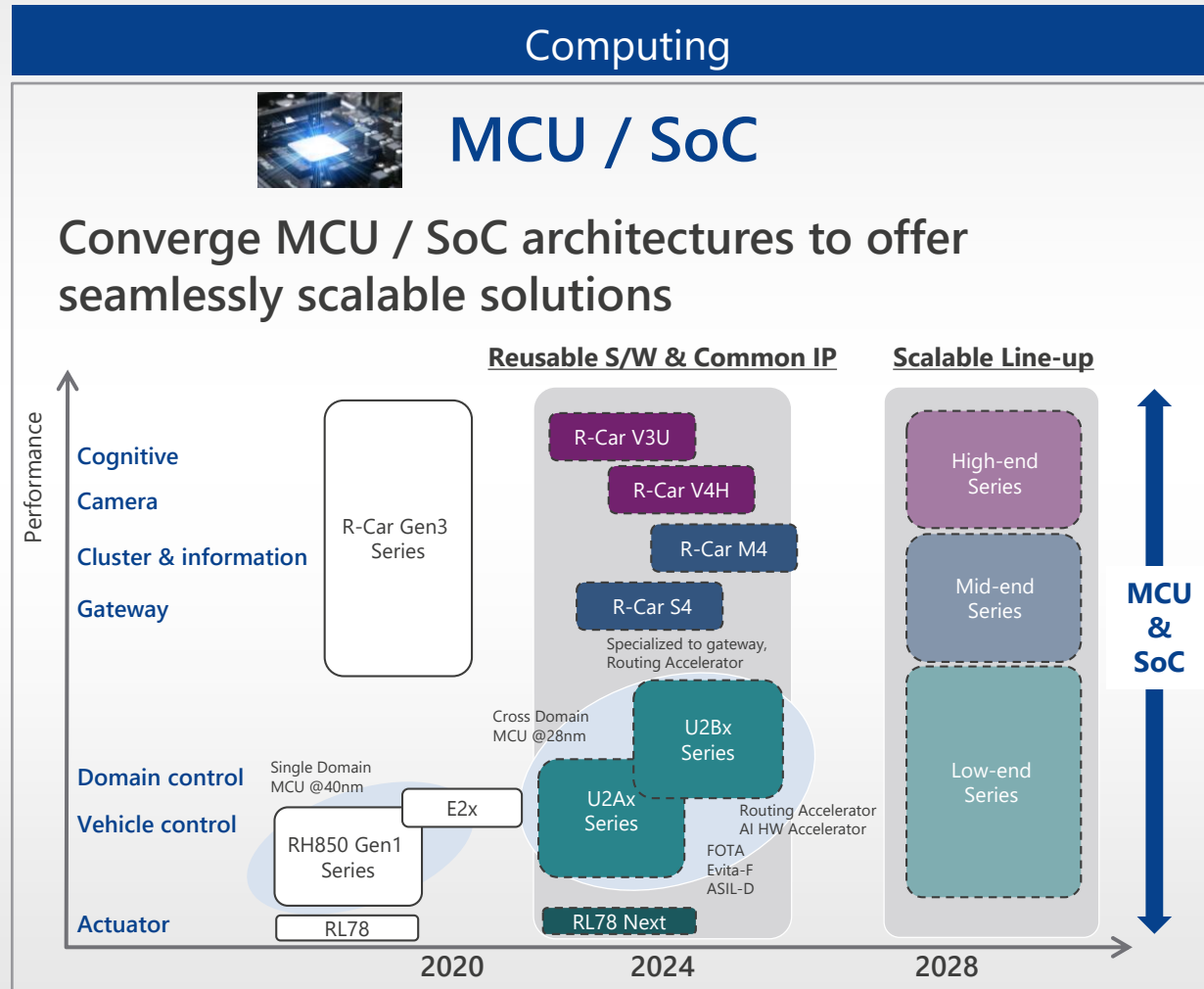
- Differentiated and scalable product offerings
- Winning combos
- Strategic collaborations with technology, cloud and channel partners
- Deeper and broader go-to-market



ILLUSTRATIVE SCENARIOS FOR WINNING

	Automotive	Industrial	Infra	IoT
MCUs				RA Cloud connection
SoCs	ADAS / AD Scalability	MPUs		
Analog & Mixed Signal	xEV & ADAS / AD solutions	Human-Machine Interface ("HMI")	5G Data center	Winning combos
Power Discretes				

HOW WE WIN – AUTOMOTIVE 1



Power / Battery management

PMIC

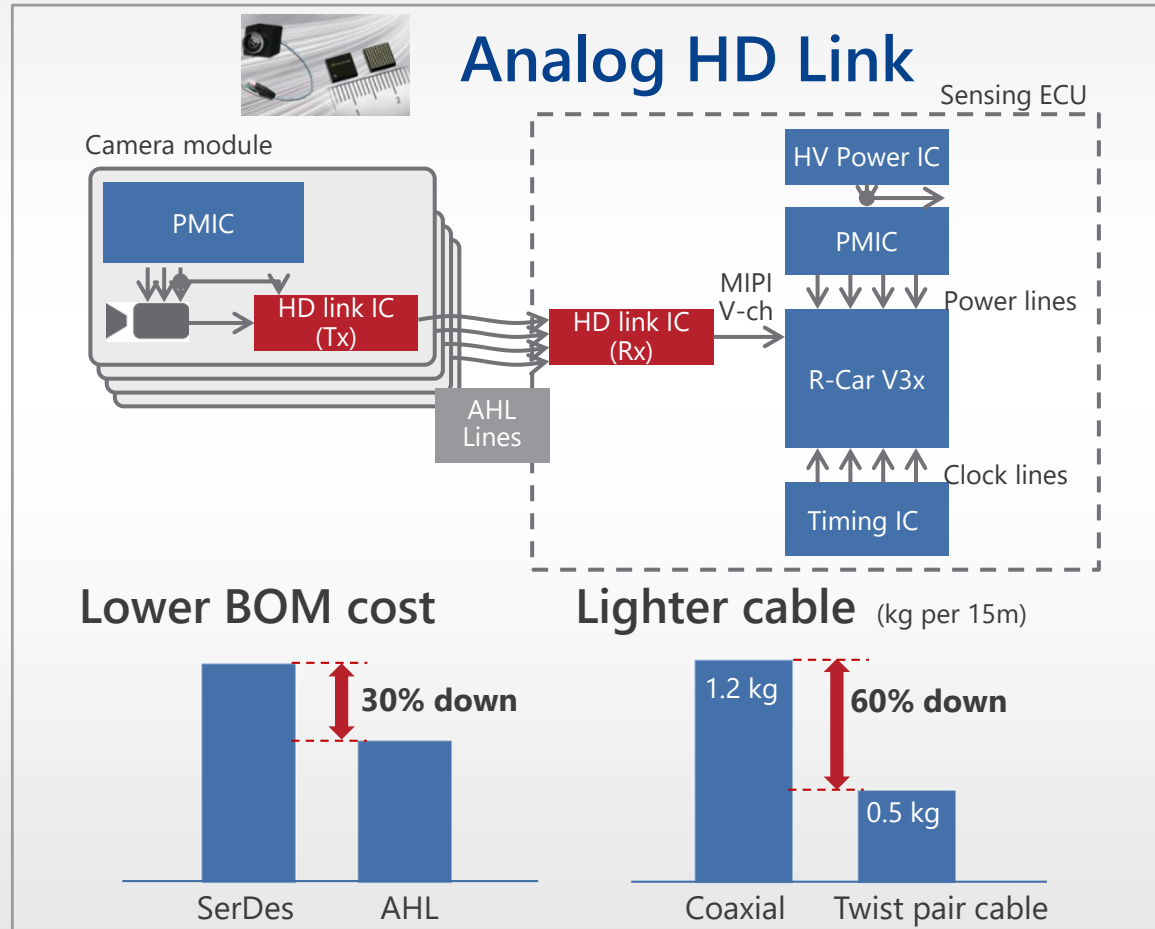
PMICs fully calibrated to our MCUs and SoCs

BMIC

BMS solutions of supreme accuracy and long life

HOW WE WIN – AUTOMOTIVE 2

Camera / Video interface



Sensing



Radar / Lidar



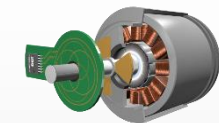
Strategic partnerships

STERADIANSEMI

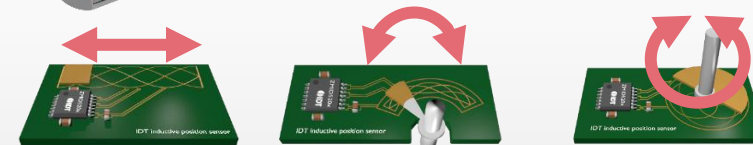
LeddarTech®

Ultra low noise, 4D

Solid state, high resolution



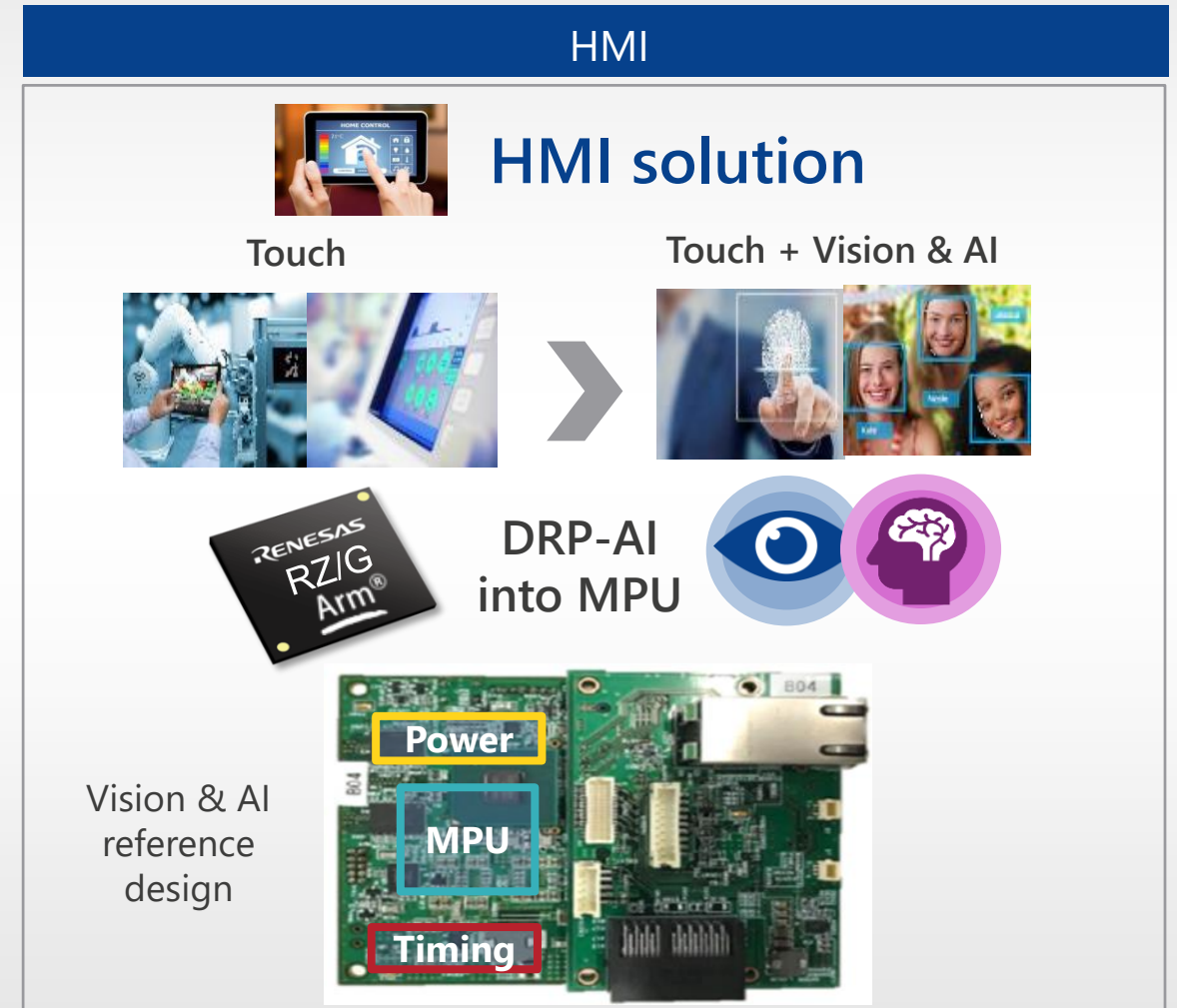
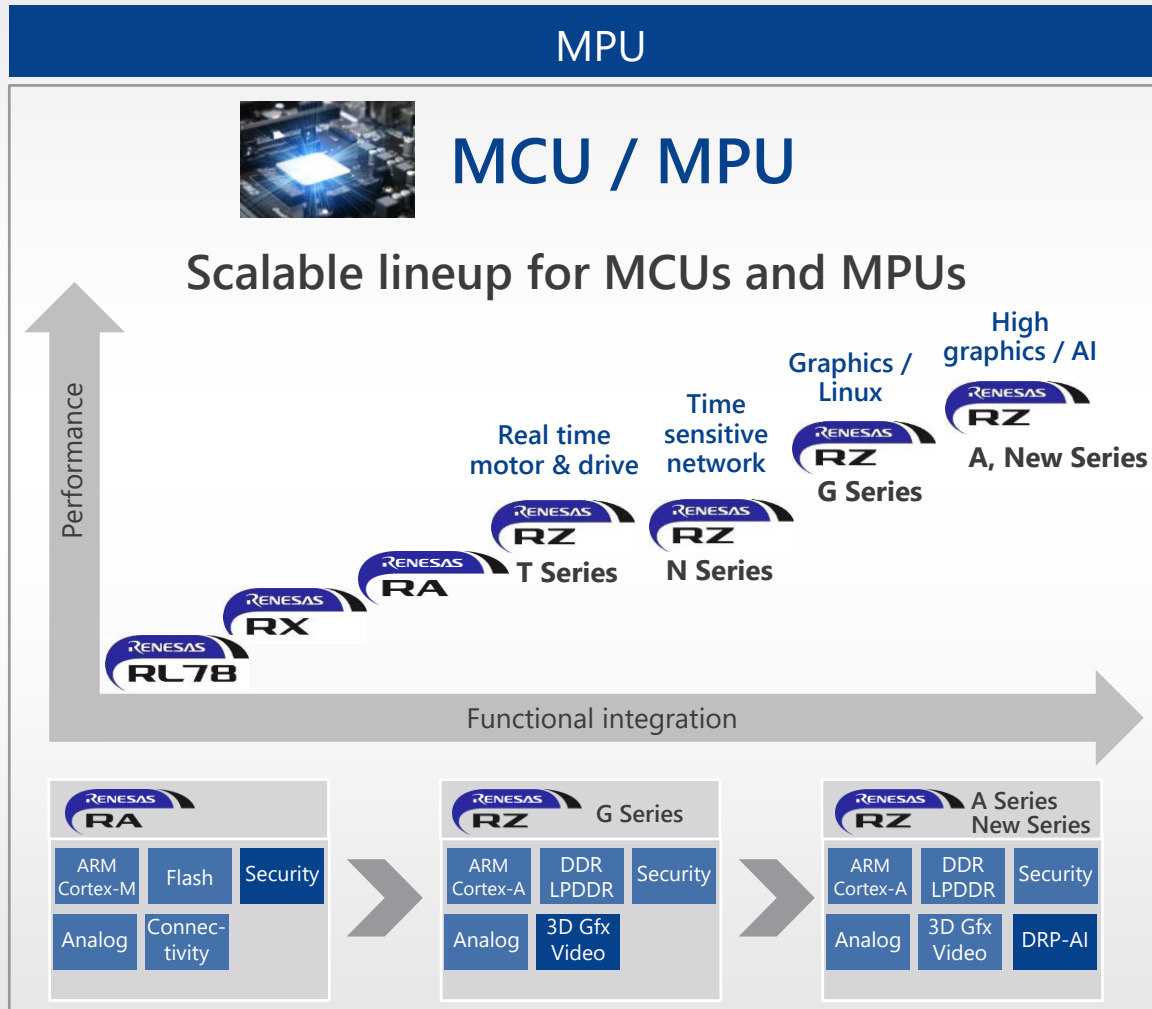
Position Sensor



- No magnet
- No resolver-to-digital converter ("RDC")
- Fewer number of wires


➔ 1/10 thinner
1/100 lighter

HOW WE WIN – INDUSTRIAL




HOW WE WIN – INFRA AND IoT

Infra

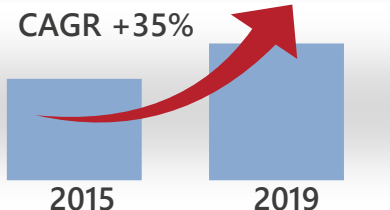


5G




Revenue for RF (4G & 5G)

CAGR +35%



2015 2019

- Fastest entry to market with
- ✓ RF ICs for massive MIMO
- ✓ Beamformer ICs for mm Wave phased array antennas

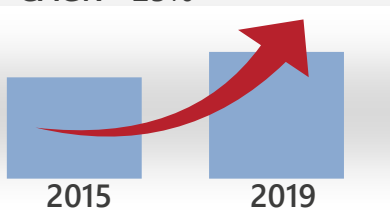


Data center



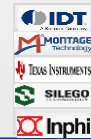


MIP competitive landscape

Revenue for Data center

CAGR +25%




2015 2019


DDR	DDR2	DDR3	DDR4	DDR5
7	10	5	3	3
				

IoT

Arm MCU




Security for IoT




System Security by ARM

Connectivity




Bluetooth® Low Energy




Telink

NB IoT




A Sony Group Company



Low pin count



25pin WFLGA 24pin HWQFN 20pin LSSOP



Cloud partnership

RESULT-ORIENTED, PRAGMATIC APPROACH

Delivering results



Achievable target



Make or buy



Clearer accountability

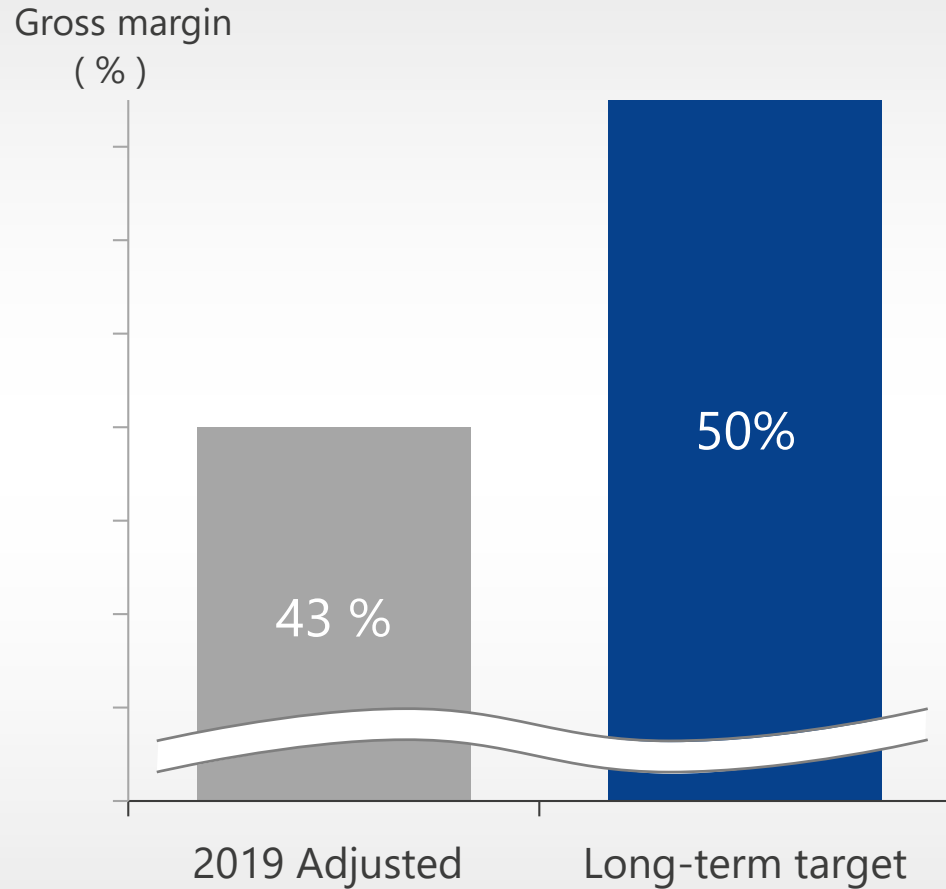
TARGET FINANCIAL MODEL

	2019 Actual	2019 Adjusted*	Long-term target*		
			Automotive	Industrial, Infra and IoT	Total
Revenue	7,182 oku-yen	6,204 oku-yen	Grow @SAM	Grow @SAM+	Grow @SAM+
Gross margin	44%	43%**	40-45%	55-60%	50%
Operating margin	13%	12%	10-15%	25-30%	20%+





* FX 1USD=100yen, 1EUR=120yen. Continuing business only

** After reclassification (part of SG&A reclassified to CoGs and R&D)

MARGIN EXPANSION

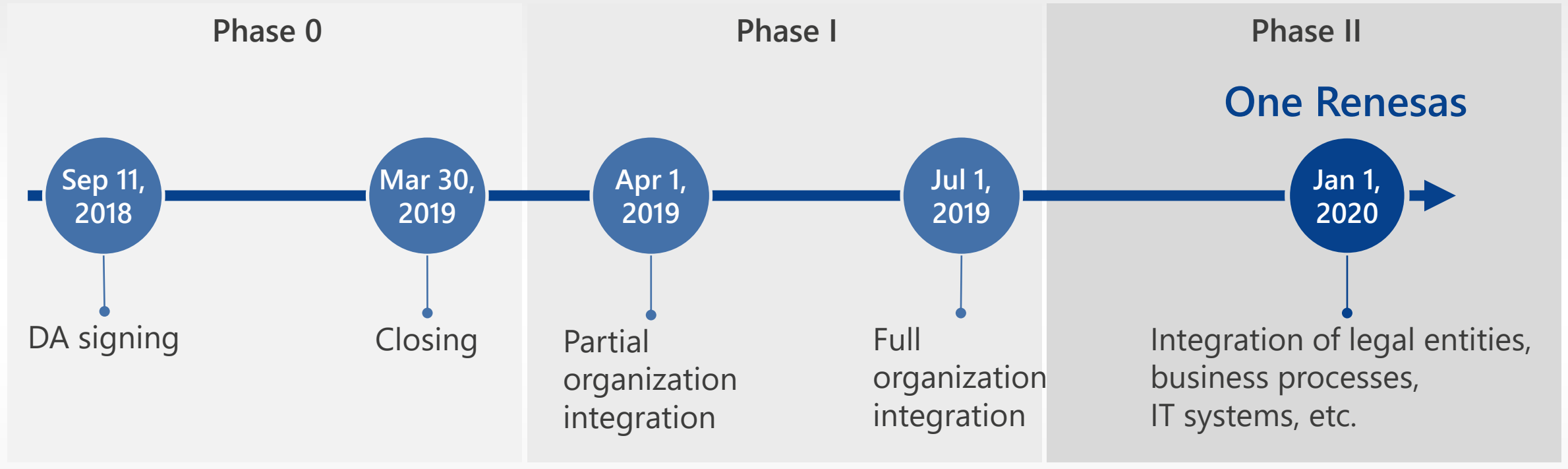


Key Contributors

-  Depreciation scale down
-  Structural reform
-  Product mix improvement
-  Volume increase

* FX for 2019 Adjusted and Long-term target: 1USD=100yen, 1EUR=120yen, continuing business only

IDT INTEGRATION

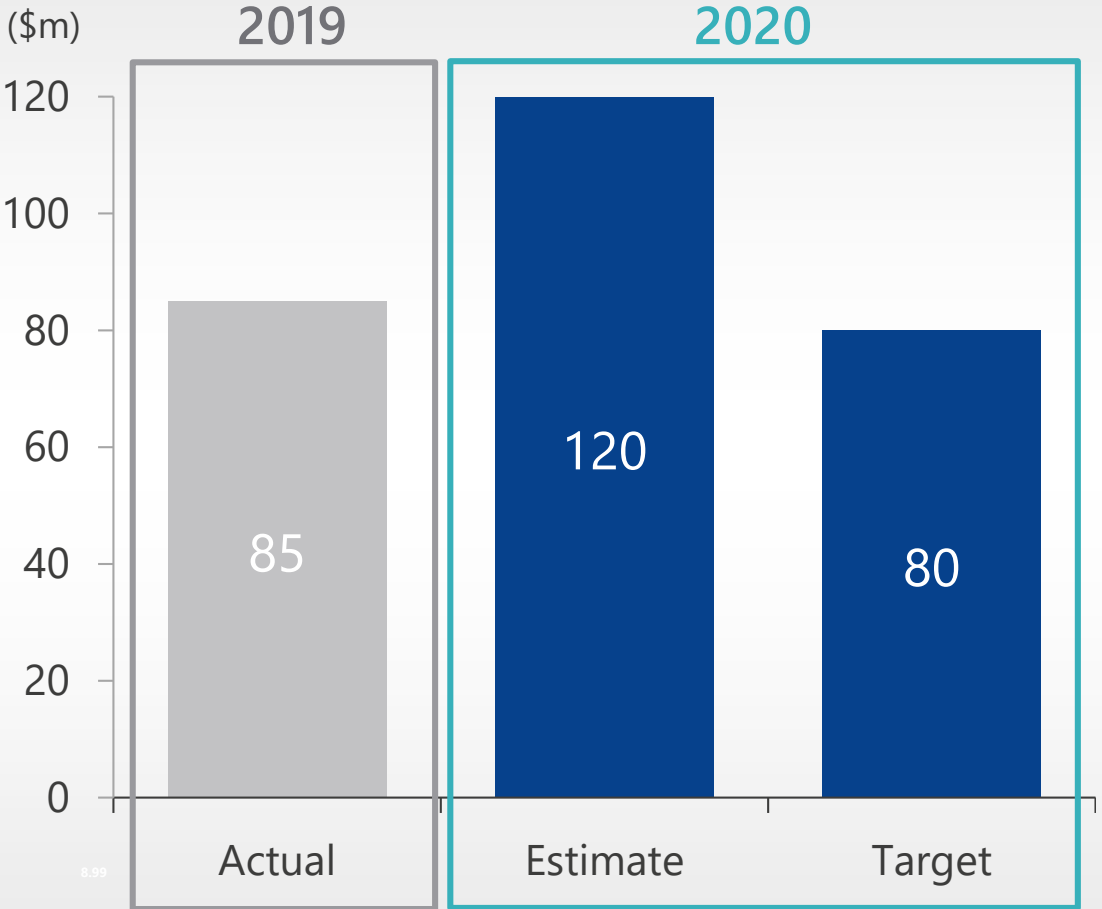


2 business units

Integration of 6 sites

Former IDT now part of
Renesas Electronics America

SAVINGS



Key Contributors

-  Patent and design tools
-  Organization and operation
-  Procurement
-  Distribution margin

As of January 24th, 2020
 Gross savings on an annual run rate basis, in \$m

REVENUE SYNERGIES

	Strategy	Solution	2019 Actual
Deeper	Boost sales per customer	Winning combinations	LTV of \$ 129m
Broader	Win new customers	New customer acquisition	11,802 new customers

100+ WINNING COMBOS WITHIN 1 YEAR OF ACQUISITION



Automotive

- Electric vehicle charger
- Automotive infotainment and dashboard

4 solutions



Industrial

- Carbon monoxide detector
- Edge computing for security system
- High-voltage motor drive

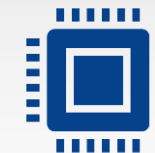
27 solutions



Infra

- Cellular base station
- Fleet tracking
- Enterprise server

17 solutions



FPGA designs

- Xilinx Versal ACAP power and timing
- Xilinx Spartan 7 power

10 solutions



Fitness and healthcare

- Blood glucose meter
- Pulse oximeter
- Electronic drug delivery system

10 solutions



Home appliance

- Cordless vacuum cleaner
- Smart IoT air purifier

25 solutions



Gaming and entertainment

- Solar battery charger
- Soundbar with Bluetooth streaming

3 solutions



Others

- E-bike system
- Robotics solution for image processing

5 solutions

[Explore 100+ comprehensive Winning Combination solutions](#)

As of January 24th, 2020

CULTURAL FUSION

25%

Above manager
from Intersil or IDT

Diverse team

GM ~60%
OM ~20%

Profitability

Financial discipline

800

Headcount in
Silicon Valley

Entrepreneurial mindset

SUMMARY

Well positioned portfolio



To address high growth market



With emphasis on delivering results



... to make our lives easier



[Renesas.com](https://www.renesas.com)