

**TOSHIBA**

# **The Toshiba Next Plan**

— FY2019-23 Business Plan

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**Chairman & CEO**

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**November 8, 2018**

# Forward-looking Statements

- This presentation contains forward-looking statements concerning future plans, strategies, and the performance of Toshiba Group.
- These statements are not historical facts; rather, they are based on assumptions and judgments formed by the management of Toshiba Group in light of currently available information. They include items that have not been finally decided at this point and future plans that are yet to be confirmed or that require further consideration.
- Since Toshiba Group promotes business in various market environments in many countries and regions, its activities are subject to a number of risks and uncertainties that are, without limitation, related to economic conditions, worldwide mega-competition in the electronics business, customer demand, foreign currency exchange rates, tax rules, regulations, geopolitical risk, natural disasters and other factors. Toshiba therefore wishes to caution readers that actual results might differ from expectations. Please refer to the quarterly securities report (*shihanki houkokusho*) for the second quarter of FY2018 (issued in Japanese only) for detailed information on Toshiba Group's business risk.
- Toshiba's fiscal year (FY) runs from April 1 to March 31. All figures are consolidated totals for 12 months, unless otherwise stated.
- Results in segments have been reclassified to reflect the current organizational structure, unless otherwise stated.

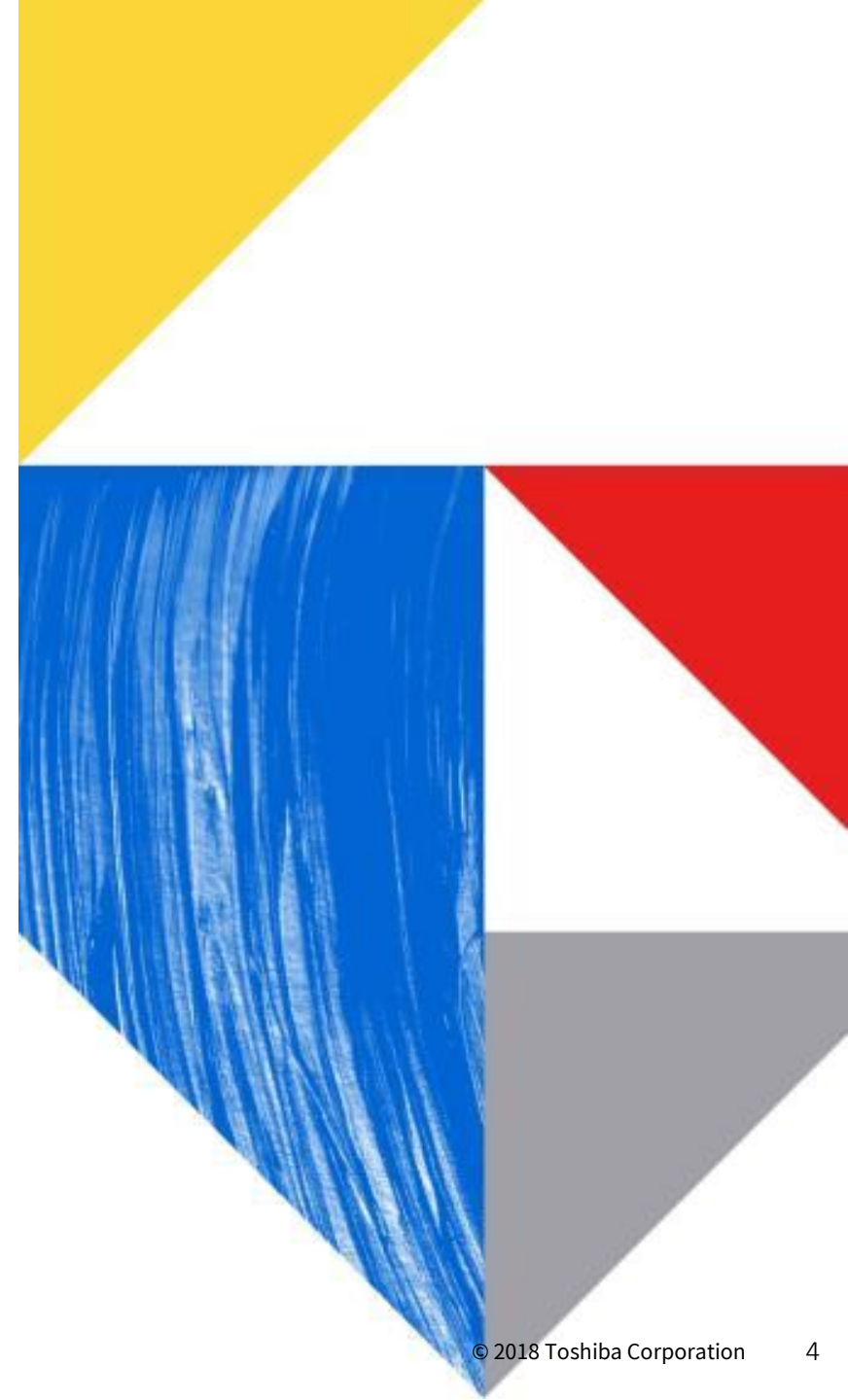
# Today's Agenda

- 01 Overview and Vision
- 02 Targets and Four Reforms
- 03 Business Portfolio and Action Plans
- 04 Policy on Shareholder Returns
- 05 Development of New Growth Fields
- 06 Toshiba's Digital Transformation
- 07 Establishing the Structure for Execution

# 01

The Toshiba Next Plan

## **Overview and Vision**



# Introduction

Confirmed “Toshiba’s DNA” through on-site discussions with employees



# Toshiba Group's History of Achievement

## Reviving the venture spirit of the company's founders



1875

Hisashige Tanaka starts a telegraph factory in Tokyo



1930

Japan's first electric washing machine and refrigerator



1989

World's first ultra-supercritical high capacity steam turbine



Tanaka Seizousho

Shibaura Seisakusho



Tokyo Denki

Hakunetsusha

1890

Ichisuke Fujioka developed Japan's first incandescent bulb



1967

World's first automated mail processing equipment



1991

World's first 4-megabit NAND EEPROM



1939

Tokyo Shibaura Denki

1984

Change company's name to Toshiba

**TOSHIBA**



1978

The first Japanese language word processor



1985

World's first laptop computer

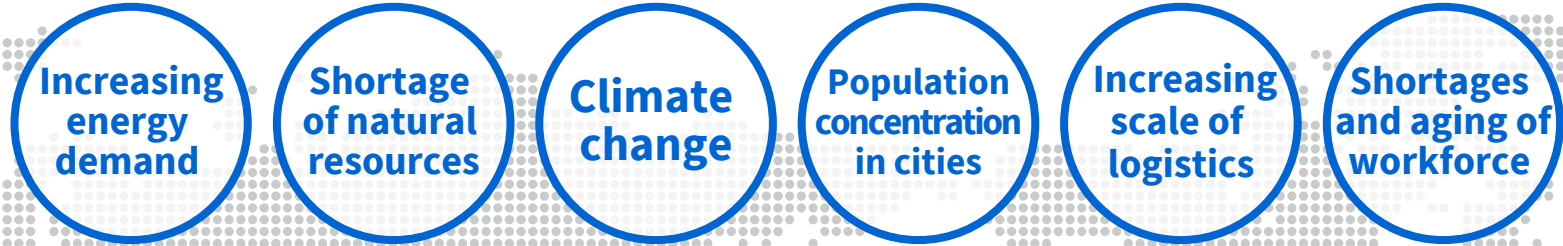
2007

World's first 320-detector row CT scanner



# Intensifying Global Social Issues

## Energy, natural resources and climate change among growing concerns



### Information explosion

**Global data generation**  
2020 forecast  
approx. **44 ZB**  
↑ 2013 approx. 4.4 ZB

**Global increase of cyber attacks**  
approx. 0.38 billion ppl a year  
approx. 1 million ppl a year  
approx. 12 ppl a second

FY2013

### Global warming

**Global CO<sub>2</sub> emissions**  
2012 approx. **31.7** B tons → 2012 approx. **37.8** B tons

**Worldwide increasing electricity demand**  
2000: approx. **13 x 10<sup>3</sup>** TWh  
2040: approx. **34 x 10<sup>3</sup>** TWh

### Aging society

**Worldwide average lifespan**  
2045-50 approx. **77** years old

**Global population over 65 years old 2030**  
Exceed approx. **1 billion** ppl

**Increasing number of aged drivers (Japan)**  
2009 **1,245 M** 15.41% → 2014 **1,639 M** 20%

### Workforce shortages

**Working-age population per person in Japan** 2000 → 2050  
approx. **3.6** ppl → approx. **1.2** ppl

**Workforce shortages**  
Lack of manpower in many industries and may lead to lower productivity  
2025 Workforce shortage of **5.83** million ppl

### Deterioration of public transportation

**Global traffic fatalities**  
approx. **1.4** million ppl per year

**Time lost in traffic jam in Japan**  
Traffic jam accounts approx. **40%** of total running time

### Aging social capital

**Costs for inspection and maintenance of infrastructure in Japan**  
2013 approx. 3.6 trillion yen a year  
2023 Max approx. 5.1 trillion yen

**Aging water facility infrastructure**  
2031 to 2035 updating cost  
approx. 1.4 trillion yen/year

### Climate change and natural disasters in JPN

**Landslides**  
approx. 10,500 in 10 years

**Flood damage**  
over approx. 5 trillion yen in 10 years

**Crop damage by natural disasters**  
approx. 23 billion yen 2014

### Workforce shortages, increasing scale of logistics

**Global mail volume**  
approx. **330** billion 2014

**Increasing delivery services in Japan**  
approx. 9.1 billion in 2014  
approx. Double of 10 years ago

### Increasing cost of medical care

**Global medical market**  
2013 approx. **363.8** billion dollar  
→ 2020 approx. **513.5** billion dollar

# A Technology-Driven Paradigm Shift

The fusion of physical and cyber technologies will shape a new world

The last 20 years

Introduction of new cyber technologies

Cyber tech

- Internet technology
- Semiconductors, computer technology



- High growth in internet and mobile use
- New captive business models



The next 20 years

A social revolution driven by cyber-physical tech

Demands from a rapidly changing society

Energy, Natural resources, Climate change, Urbanization, Aging, Workforce shortages



The fusion of cyber and physical technologies

Further evolution of cyber tech

AI (deep learning), Digital twin, Quantum computing, Security



Physical technology breakthroughs

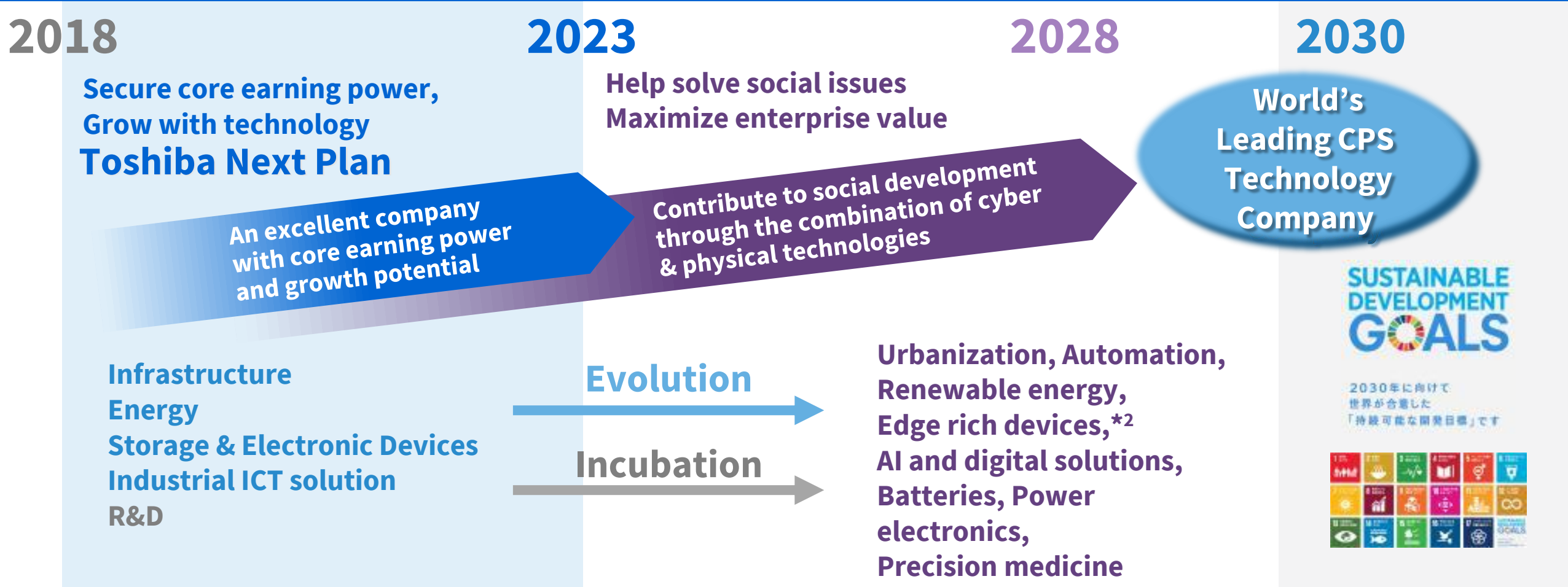
Robotics, Autonomous driving, Biotech, Sensing, Wireless, Materials





# Toshiba Group's Vision

Become world's leading CPS\*<sup>1</sup> technology company,  
ensure profitability by implementing the Toshiba Next Plan



\*1 CPS(Cyber Physical Systems): CPS collect data from the physical world to be analyzed and processed using digital technology. CPS create value through a constant feedback loop between the cyber and physical worlds.

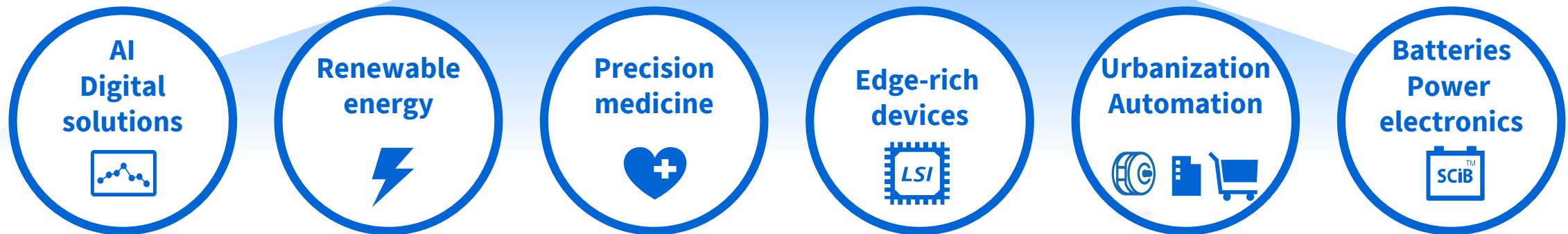
\*2 Devices that use sensing technology such as LIDAR, Spin MEMS, hydrogen sensors, pressure sensors, RIG (rate integrating gyroscope), and ULP gyro

# Help to Achieve SDGs\* Through Business Activities

## Apply CPS technologies to solve social issues



### Digital Transformation

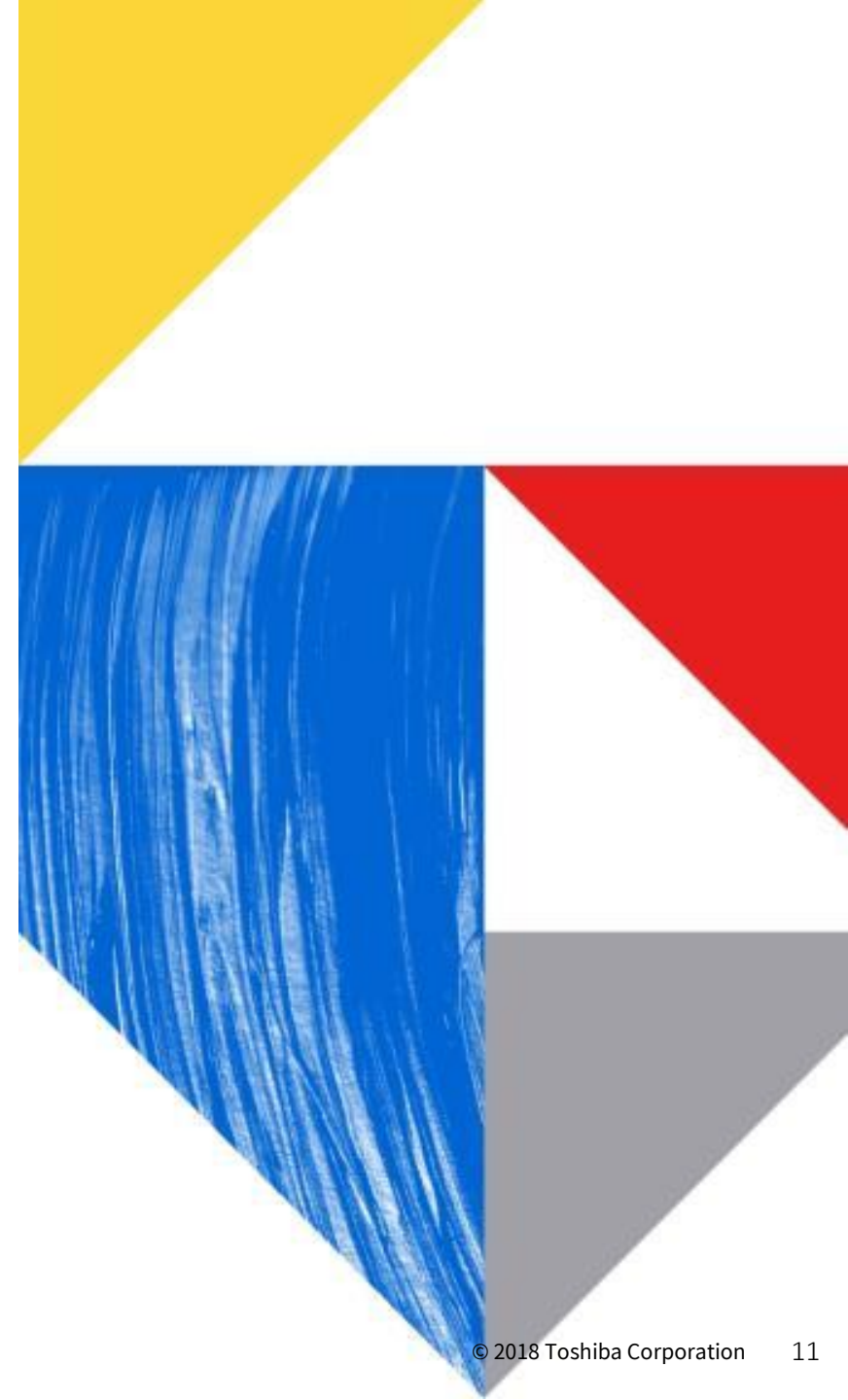


**Committed to People, Committed to the Future** (Basic commitment of the Toshiba Group)

# 02

The Toshiba Next Plan

## **Targets and Four Reforms**



# Objective of the Toshiba Next Plan

## Enhance shareholder's value by maximizing enterprise value

Customers, Business partners, Employees and the Community

### Invest in growth

- Manage business portfolio
- Develop new businesses
- Enhance investment for organic growth

### Manage risk

- Maintain effective internal controls
- Avoid excessive risk
- Sustain long-term corporate activities

### Improve core earnings

- Strengthen core earning power
- Change profit structure by evolving as a CPS tech company

Maximize enterprise value

Enhance Total Shareholder's Return (TSR\*)

\*TSR: Total Shareholder's Return. The overall yield and return on an investment, including capital gain and dividends, received by a shareholder.

# The Toshiba Next Plan Targets

Aim to maximize enterprise value and TSR through profitable growth

	FY18 Forecast	FY19 Plan	FY21 Plan	FY23 Target
Revenue	3.6 T	3.4 T	3.7 T	Over 4.0 T
Operating Income (ROS%)	60 B (1.7%)	140 B (Over 4%)	240 B (Over 6%)	Over 8% Target 10%
EBITDA	130 B	220 B	340B	--
ROE	-13% <small>*Excluding discontinued business</small>	Over 6%	Over 10%	approx. 15%

\*All monetary figures are JPY

\*Expected exchange rate: USD 1 = JPY 105, EUR 1 = JPY 125

# Selection and Concentration for Executing the Toshiba Next Plan

## Implemented crisis management measures, selected and concentrated businesses, laid foundations for executing the Toshiba Next Plan

### Enhanced internal controls and governance

#### Reinforced governance, improved management decision making processes, strengthened subsidiary management

- Split off in-house companies (July and Oct. 2017)
- Reporting of internal management system improvement (Oct. 2017)
- Revised executive officer structure (Nov. 2017)
- Resolving of “Explanatory notes regarding the going concern assumption” (Feb. 2018)



#### Dealt with stock exchange related issues

- Secured cancellation of designation as a securities on alert and under supervision (Oct. 2017)

### Improved financial status and reviewed business portfolio

#### Strengthened financial status

- Share issue by third-party allotment (Dec. 2017)
- Divested non-core assets
  - Sold Shibaura Mechatronics securities (Dec. 2017)
  - Sold Toshiba Hospital (Mar. 2018\*)
- Completed transfer of Memory business (June 2018)

#### Eliminated potential risk

- Transferred Westinghouse related claims (Jan. 2018)
- Pension buy-out of an European subsidiary (Mar. 2018)

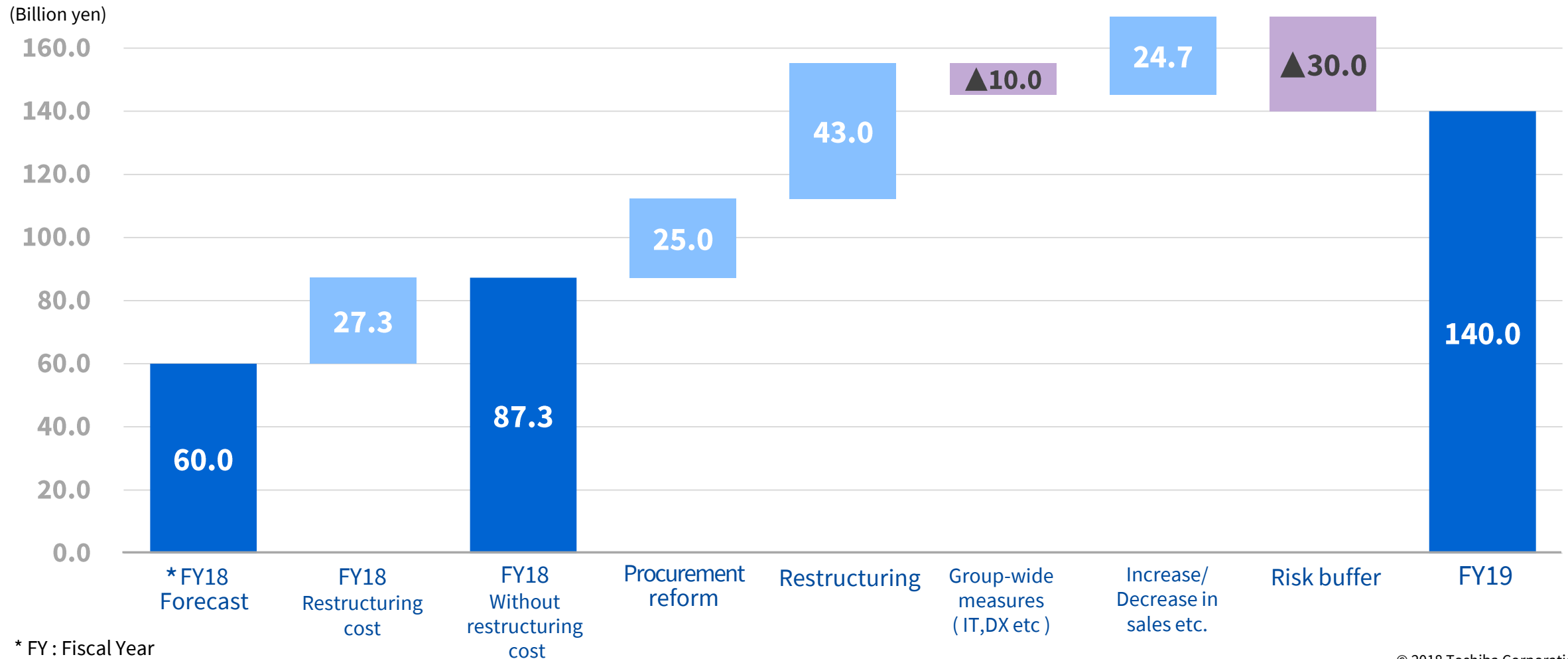
#### Reviewed business portfolio

- Landis+Gyr IPO (July 2017)
- Transferred Visual Solution business (Feb. 2018)
- Transferred Brazilian subsidiary (Mar. 2018)
- Transferred PC business (Oct. 2018)

\* Cash-in in March, transaction completed in April 2018

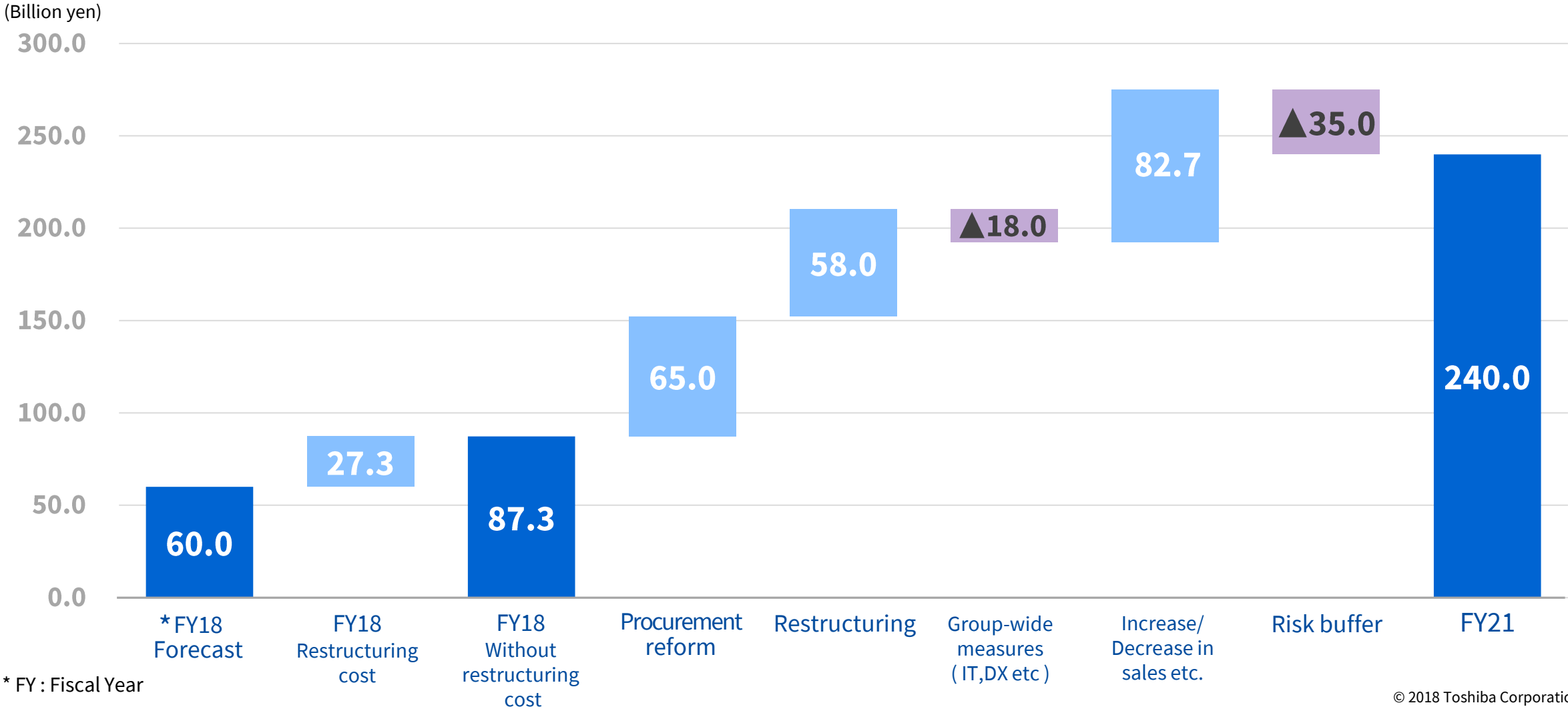
# Plan to Improve Group-wide Profitability (FY18 → FY19)

Initiate measures for rapid profitability improvement by strengthening core earning power, and aim to double operating profit



# Plan to Improve Group-wide Core Earning Power (FY18 → FY21)

## Invest in growth while strengthening core earning power





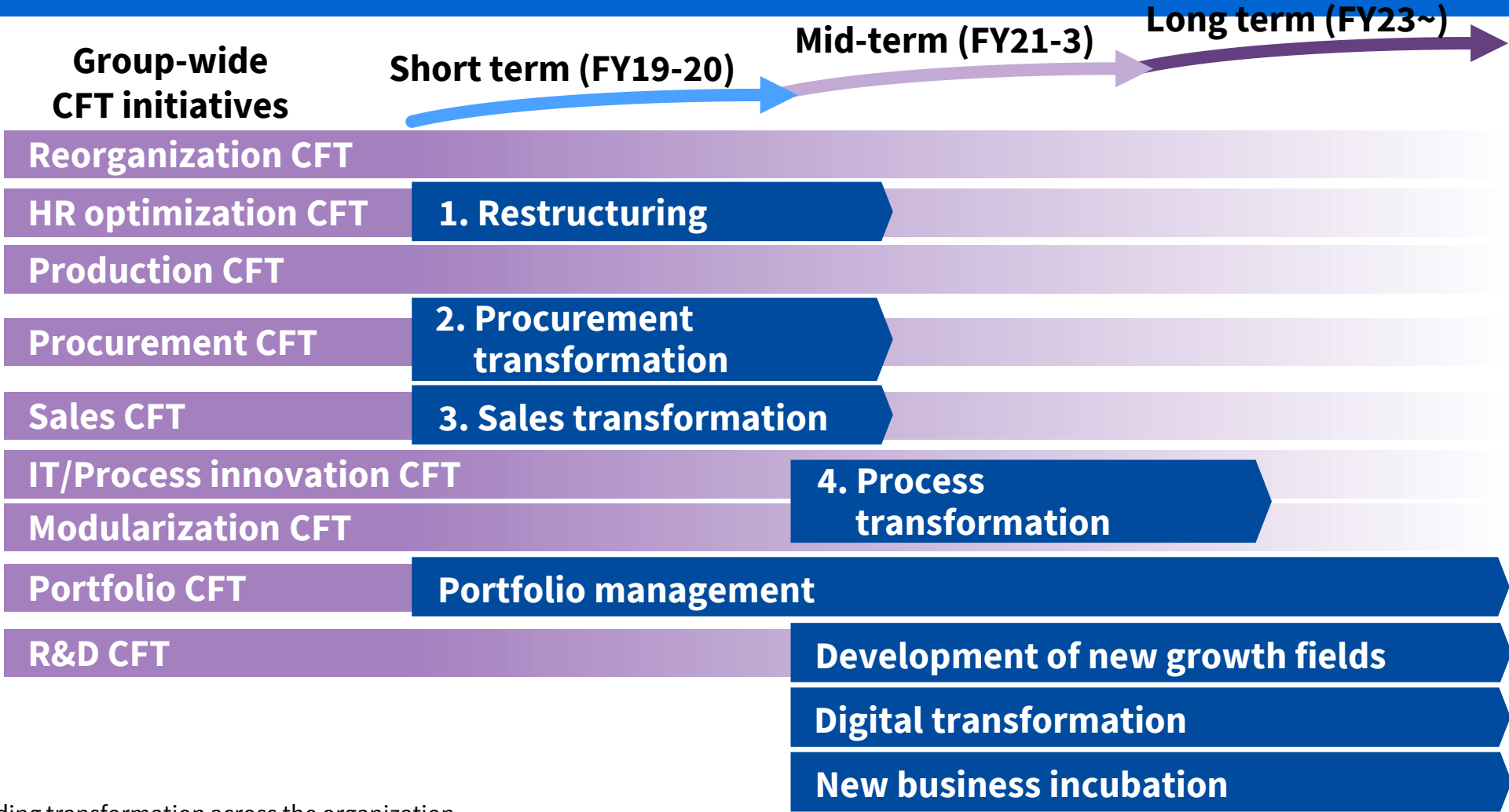
# The Toshiba Next Plan Overview

## Four reforms to transform core earning power and focused investments in growth field

Four reforms to improve core earning power



Focused investments in growth fields



\*CFT : Cross-functional teams leading transformation across the organization

# 1. Improve Profitability through Restructuring

## Improve profitability through optimization of business operation

### Exit non-focus businesses

- Mitigate future risk
- Transfer the liquid natural gas business
- Withdraw from the UK nuclear power plant business

### Optimize workforce

- Rationalize fixed costs
- Reform and optimize IT and modularize production to increase efficiency, and reduce workloads etc. (Organic decrease in headcount by 7,000 over 5 years )
- Promote early retirement in some businesses

### Reorganize production bases

- Improve productivity and production processes
- 15% of total locations will be reorganized
- Reorganization cost: JPY 22.0B

### Reduce subsidiaries

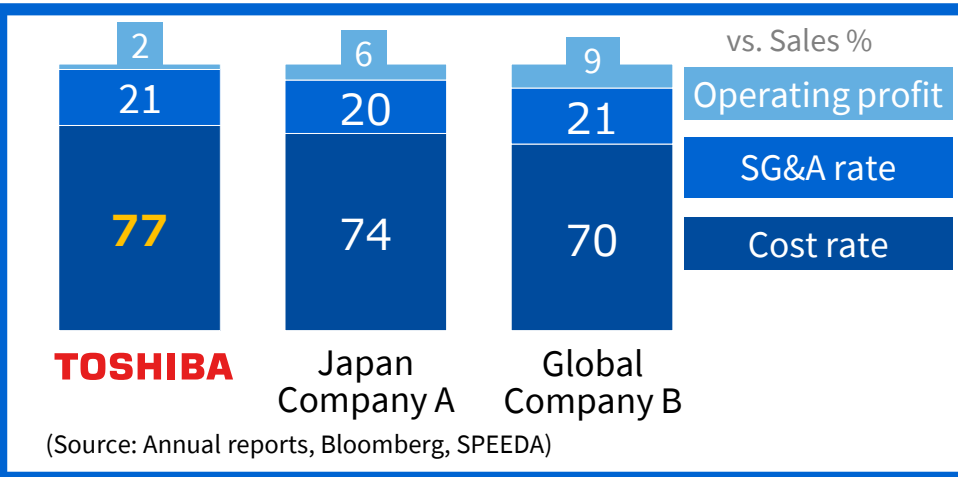
- Secure better governance of subsidiaries
- Reduce domestic subsidiaries by 25%
- Reduce overseas subsidiaries by 25%

# 2. Reduce Cost rate by Reforming Procurement

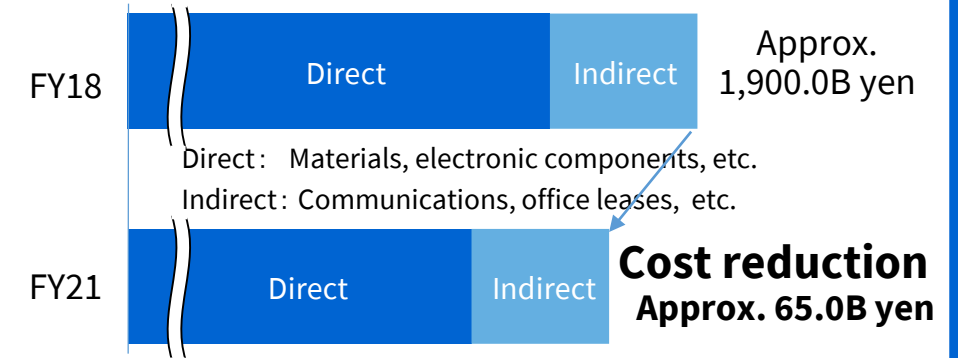
## Cost improvement of approx. 65 billion yen

(FY21 vs FY18)

### Comparative analysis of cost rate\*1



### Scope



### Direct cost initiatives

- Price management**
- Process and demand management**
- Specification optimization**

**Enhance procurement capabilities and bargaining power**

- Review supplier portfolio
- Centralized purchasing, etc.

**Optimize procurement process and volumes**

- Inventory control, etc.

**Review designs and specifications**

- Review design standards
- Standardization, modularization, etc.

### Indirect cost initiatives

- Overall regulation**
- COO approval**
- Price control**

**Spend management**  
Restrict expenditures

**Restrain spending**

- Increase items requiring COO approval

**Cut expenses by reducing material costs**

- Reduce costs of individual item

\*1 Based on FY16 actual

# 3. Improve Profit by Reforming Sales Activities

## Initiated activities to pursue upside potential improvement

### Improve sales returns

- Streamline sales activities, improve efficiency
- Analyze detailed sales costs through benchmarking
- Reevaluate contract conditions, including prices
- Screen low profit products

**Pursue JPY 30.0B improvement by FY21**

**Upside is not included in the plan**

### Sales organization structure

- Enhance sales structure, utilize total capabilities including DX, in key account management
- Monitor sales activities and accelerate decision making processes through CRM<sup>\*1</sup>
- Promote digital marketing and enhanced communication

**Strengthen relationships with customers and market**

**Upside is not included in the plan**

### Evaluate project order acceptance

- Increase corporate audits of orders (start in Oct.)
- Target large projects, new developments, EPC<sup>\*2</sup> projects etc.

**Prevent future project losses**

\*1 CRM: Customer Relationship Management \*2 EPC : Engineering, Procurement, Construction

# 4. Improve Operations by Reforming Processes

## Standardize and digitize operations across the Group

### IT system reform

**Next-generation IT investment plan:  
JPY 110.0B (FY19-23)**



**Develop IT infrastructure that supports transition to a CPS enterprise**

**Standardized operations**

Reform obsolete and silo IT systems and web sites (over 80% of total)

**Business management**

Secure swift visualization of thousands of financial and operational KPIs

**Operating costs**

Shift over 90% of conventional IT server to cloud

### Product modularization

**Engineering transformation  
Investment plan: JPY 30.0B (FY19-23)**



**Improve production efficiency and customer satisfaction**

**Manufacturing costs**

Increase common parts ratio by 25% to promote procurement transformation

**Response to customer**

Reduce design man-hours and lead times by 15% in a pilot business

**Design transformation**

Deploy modular design in all business units

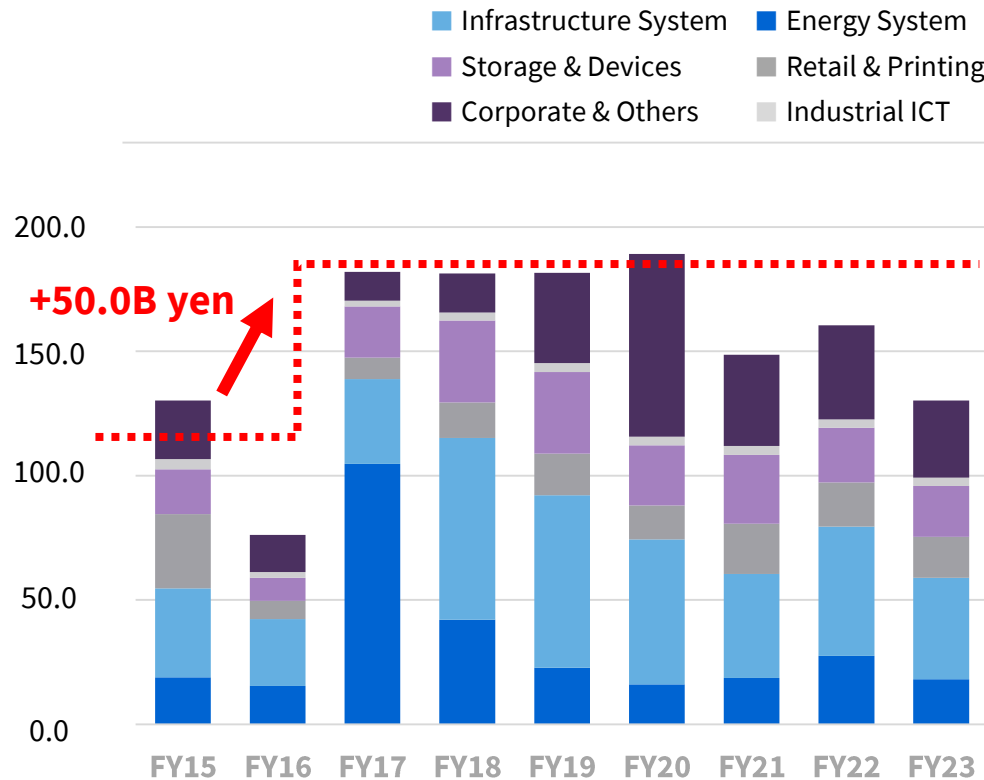
**To increase sales per employee and the profit margin, develop foundations to improve operational efficiency**

# Capital Expenditure and Investments

## Accelerate investments in medium- to long-term organic growth

### Capital Expenditure and investments\*1

**Total investment plan: JPY 810.0B** (FY19-23) \*Order base



\*1 Excluding Toshiba Memory

\*2 Nearline HDD Large capacity HDD for data centers

### Major investment projects

#### Investments in growth

- Renewable energy generation
- HVAC/AC development and production
- Production capacity for power devices
- Production capacity for nearline HDD\*2
- Production capacity for SCiB™ batteries

#### Investments in business foundations

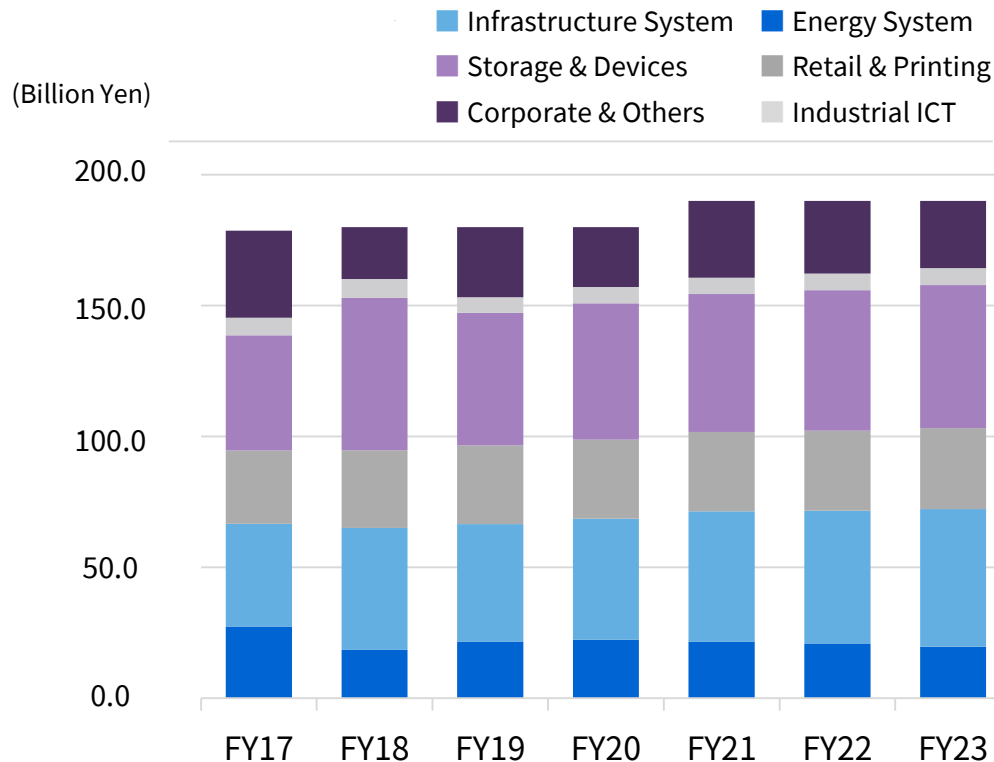
- Next-generation enterprise IT systems
- Engineering transformation
- New R&D center

# R&D Investment

## Accelerate investments to support profit and medium- to long-term growth

### R&D investment <sup>\*1</sup>

**Total investment plan: JPY 930.0B** (FY19-23)



\*1 Excluding Toshiba Memory, \*2 VPP: Virtual Power Plant

### Major R&D projects

#### Energy system

Focus on growth fields such as renewable energy technology (e.g., PV, Wind power, VPP<sup>\*2</sup>), asset management solutions and environmentally friendly products (supercritical CO<sub>2</sub> power cycle etc.)

#### Infrastructure system

Focus on growth fields such as SCiB<sup>™</sup>, power electronics, robotics

#### Storage and device

Focus investment on power devices, large capacity HDD for data center development

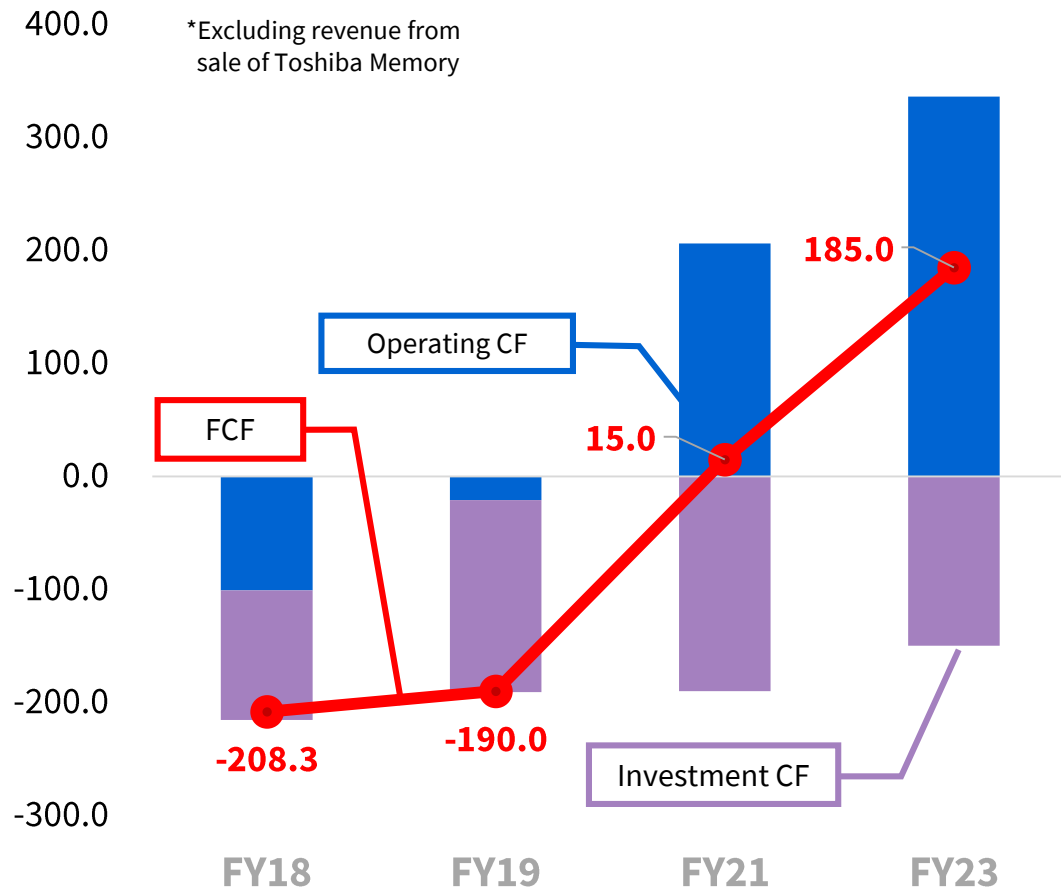
#### Industrial ICT

Focus on development of business model transformation systems, such as SPINEX<sup>™</sup>, RECAIUS<sup>™</sup> and SATLYS<sup>™</sup>

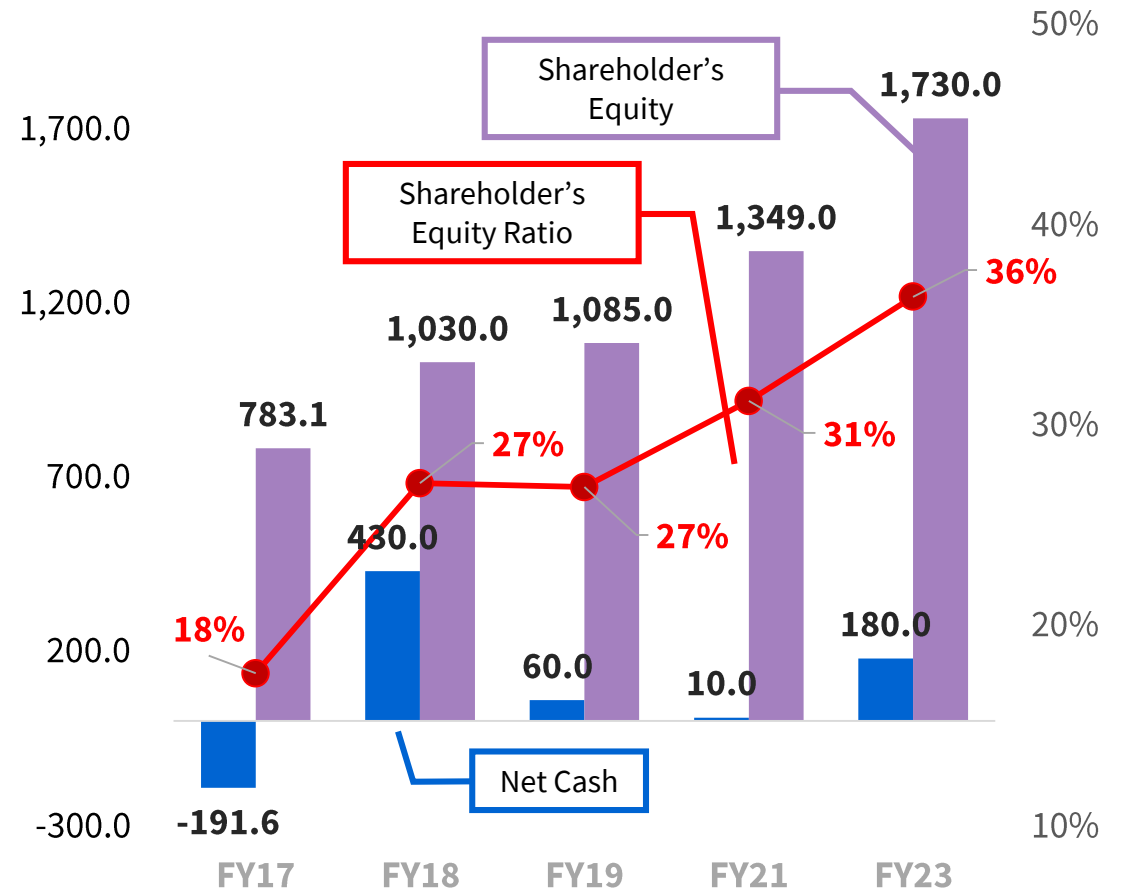
# Cash Flow Plan and Financial Structure

Aim for stable cash flow to finance investment for growth

## Cash flow plan (Billion yen)



## Balance sheet forecast (Billion yen)





# 03

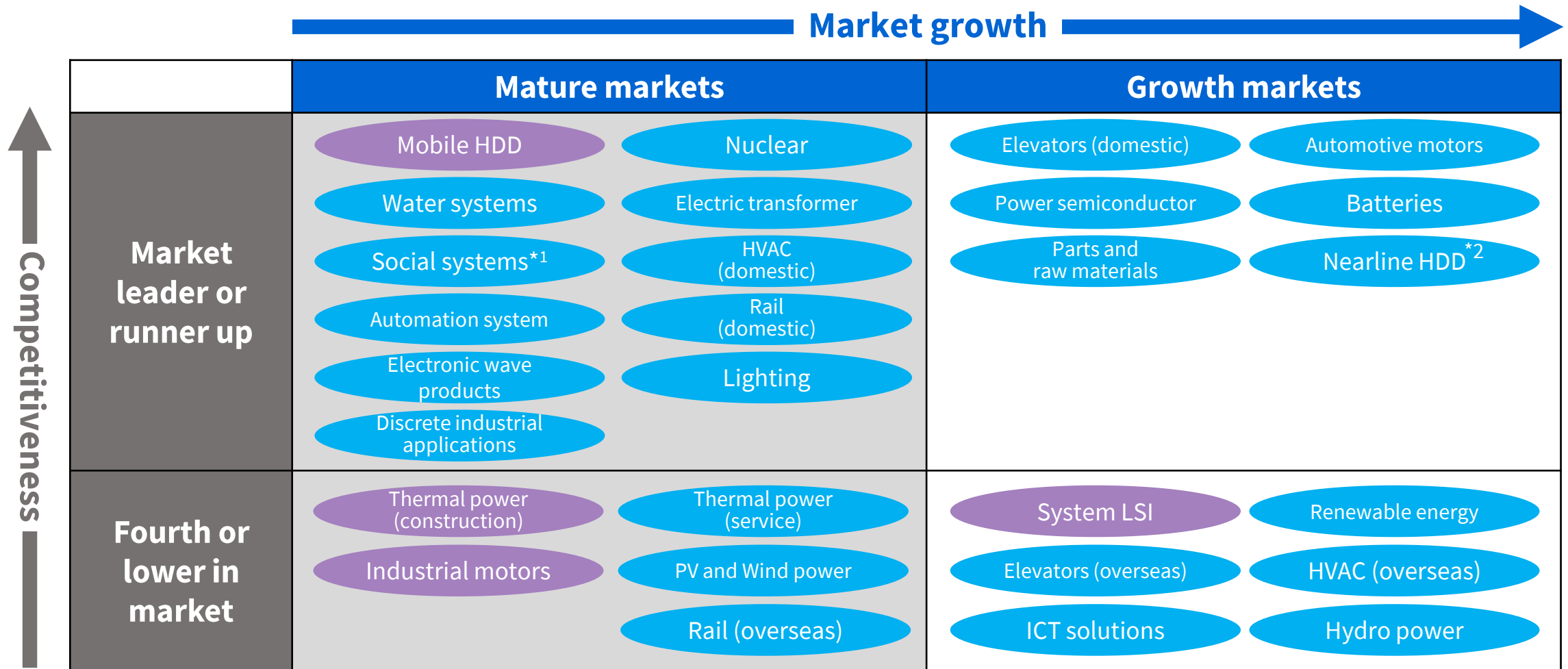
The Toshiba Next Plan

## **Business Portfolio and Action Plans**



# Business Portfolio

## Thorough portfolio management, active investments in growth fields



Monitored business

\*1 Social systems, power distribution, broadcasting systems, telecommunications, road systems

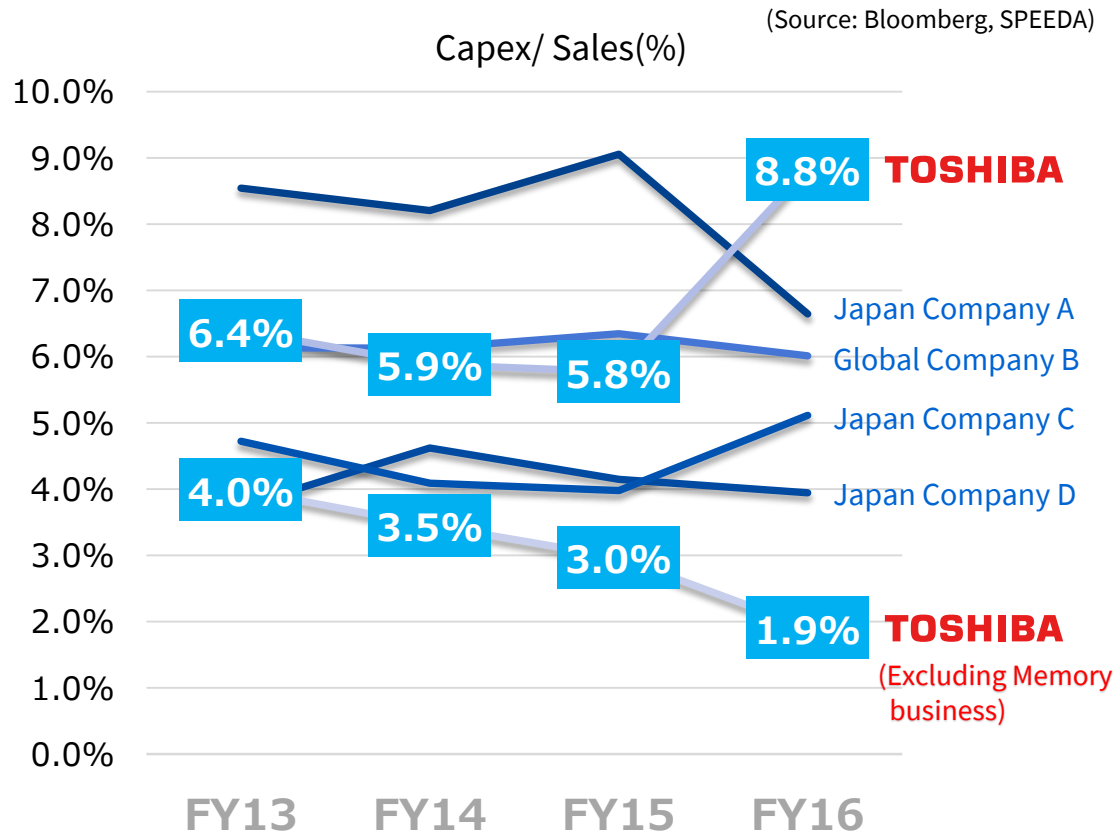
\*2 Nearline HDD: Large capacity HDD for data centers

\*Retail & printing businesses are not included

# Investment Plan for Growth

## 80% of planned strategic investments to go to growth fields

### Past investment was concentrated on the memory business



### Planning organic growth by investment in growth fields

#### Major growth investment projects

- Renewable energy generation
- Production capacity for SCiB™ batteries
- Production capacity for HVAC/AC
- Production capacity for power devices
- Production capacity for nearline HDD\*

#### Toshiba Next Plan growth investment plan

(Main growth investments for FY19-23)

	Stable	Growth
High market share	10%	60%
Low market share	9%	21%

\* large capacity HDD for data centers

# Structural Change of the Monitored Businesses

## Set up toll gates and closely monitor low profit businesses

**Thermal power (construction)** Operating profit turn-around plan

FY17 Negative → FY20 Over 5%

**Current situation**

- Fewer new projects due to decarbonization trend

**Countermeasures**

- Shift from construction to services
- Optimize staff allocation and production capacity

**System LSI** Operating profit turn-around plan

FY17 Negative → FY20 Over 5%

**Current situation**

- An expanding market, but R&D costs are high

**Countermeasures**

- Expand in the automotive and industrial areas
- Optimize R&D with withdrawals from certain areas

**Industrial motors** Operating profit turn-around plan

FY17 1% range → FY20 4% range

**Current situation**

- Cost increases due to rising material costs
- Expanding demand for green products

**Countermeasures**

- Shift to high-end products, increase price of lower margin products
- Optimize staff and production capacity

**Mobile HDD** Operating profit turn-around plan

FY17 Over 5% → FY20 Maintain

**Current situation**

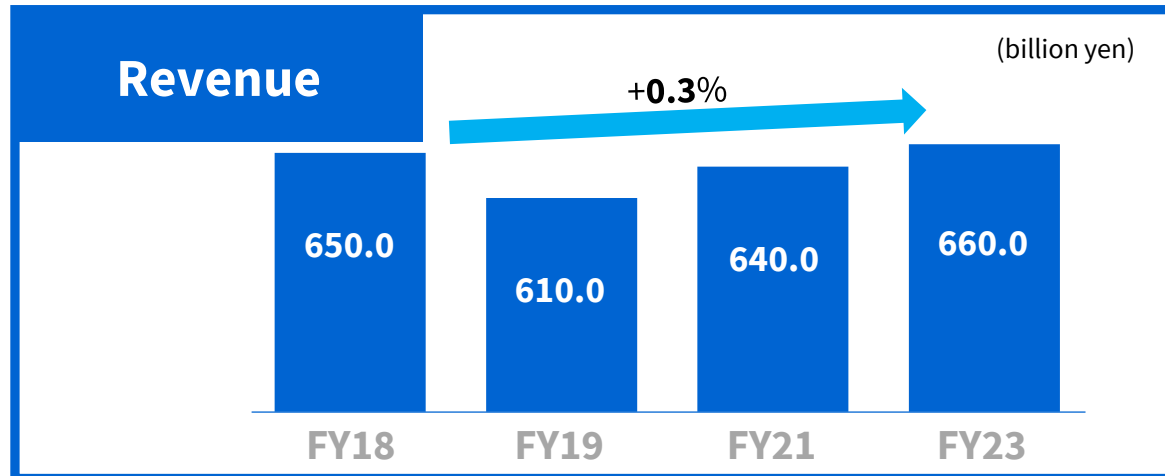
- Shrinking mobile market
- Expanding data center market

**Countermeasures**

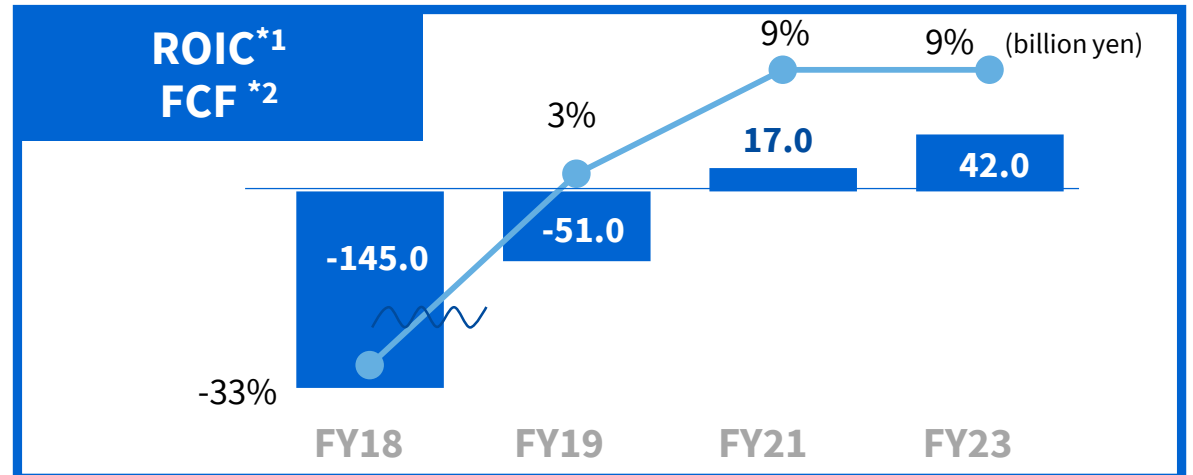
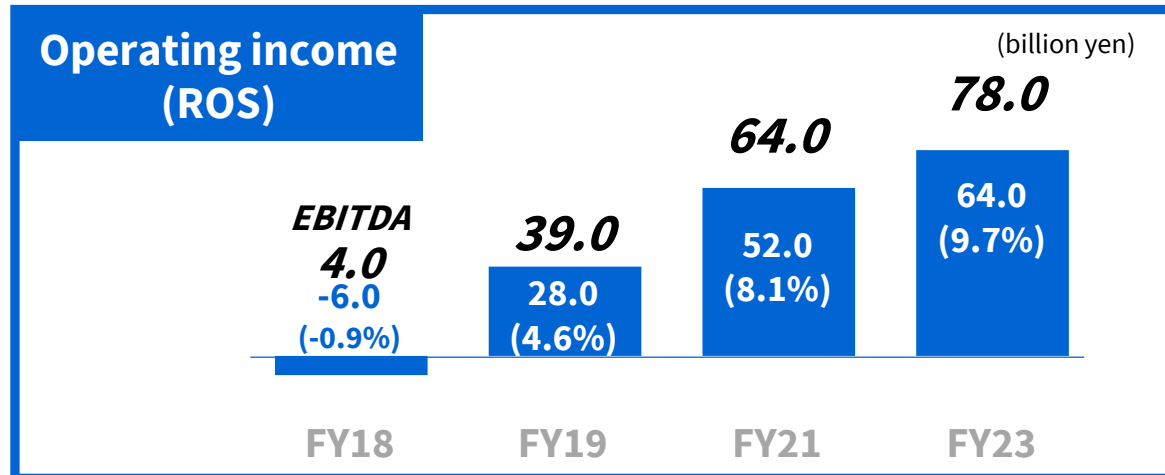
- Optimize production capacity for mobile device
- Accelerate shift to large capacity HDD for data centers

# Objectives by Business Unit: Energy Systems

Increase earning power by shift to services and solutions, reduce fixed costs



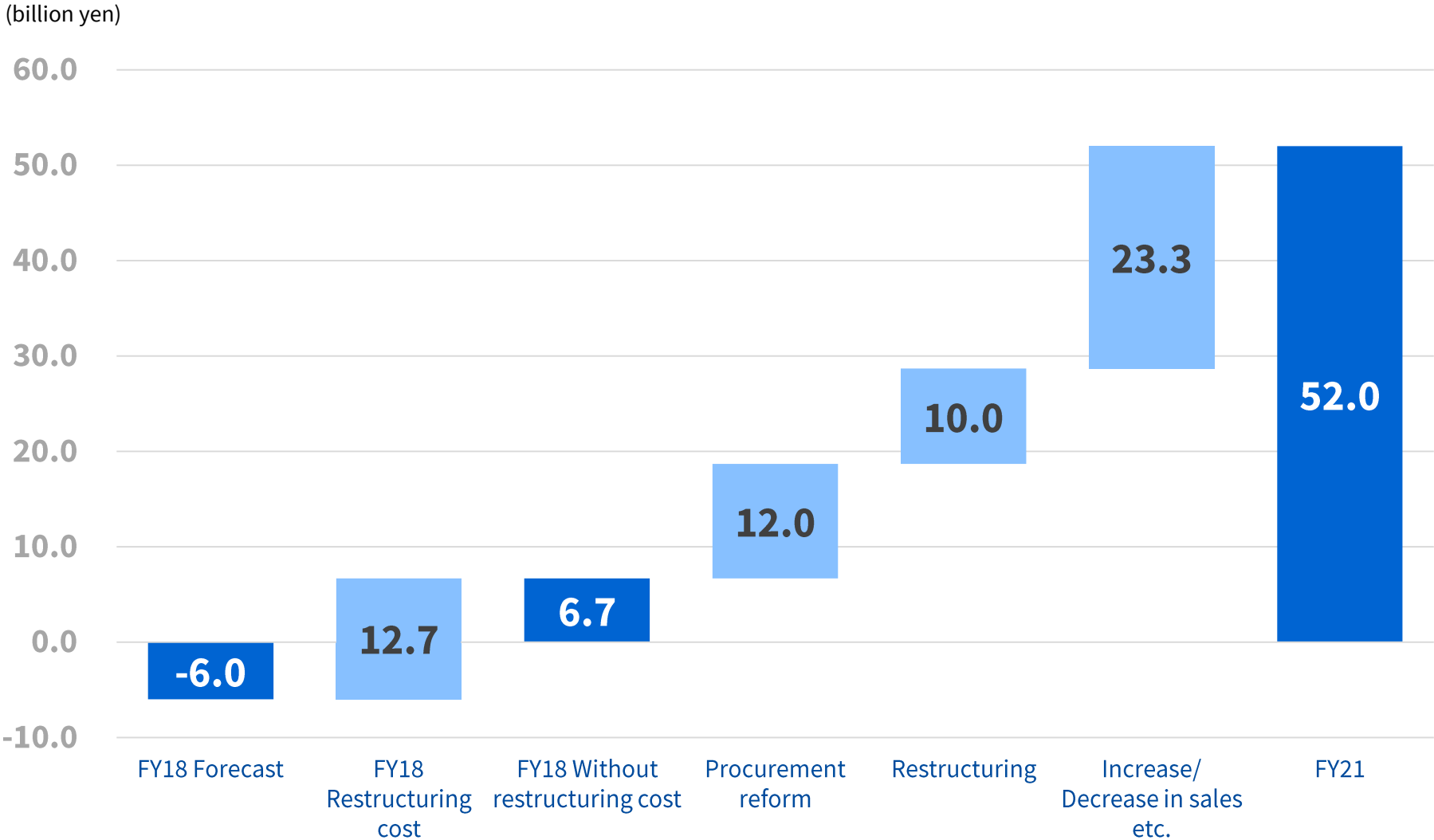
- ### Focus initiatives
- In thermal power, shift from construction to services
  - Strengthen renewable energy and solutions business
  - Reevaluate production base strategy (Keihin Operations, overseas production bases)
  - Reduce fixed expenses



\*1 ROIC: Return on Investment Capital, \*2 FCF: Free cash flow

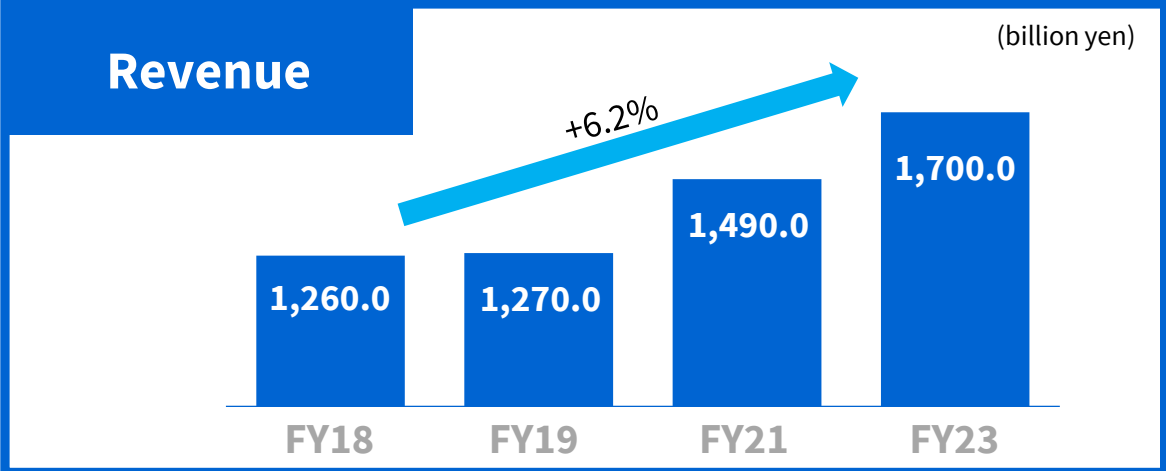
# Improving Energy Systems' Operating Profit: FY18→FY21

## Reform structure and procurement to secure improved profit

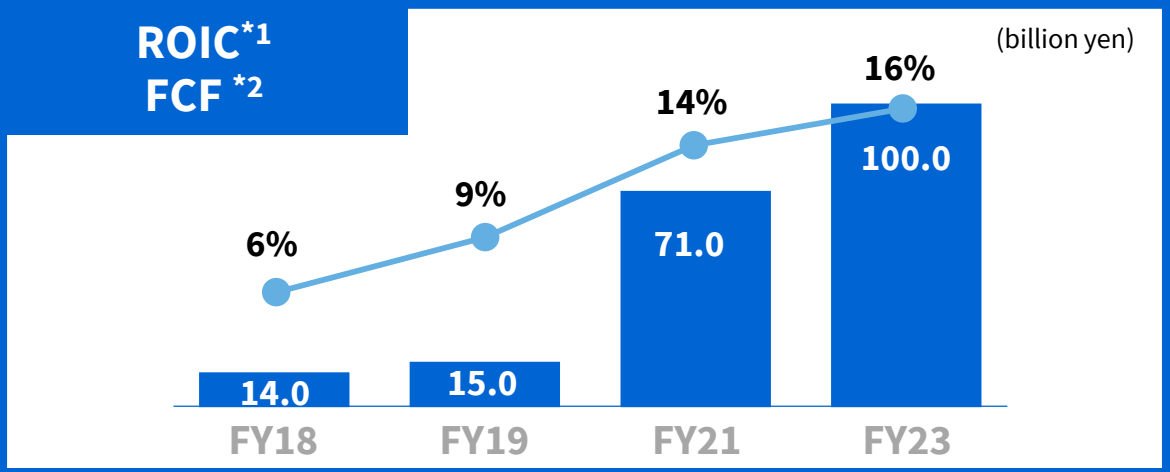
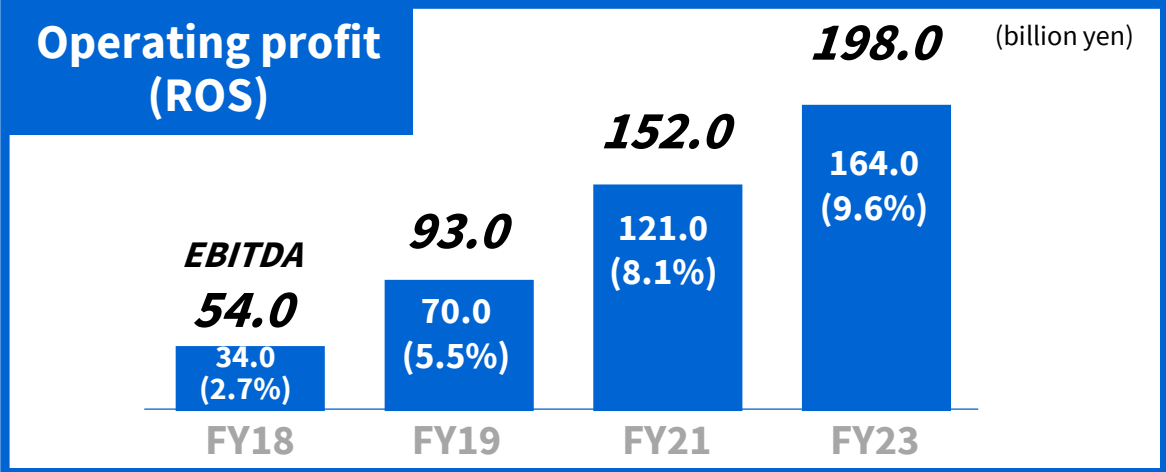


# Objectives by Business Unit: Infrastructure Systems

Aim to drive growth with proactive investment in buildings, railways and batteries



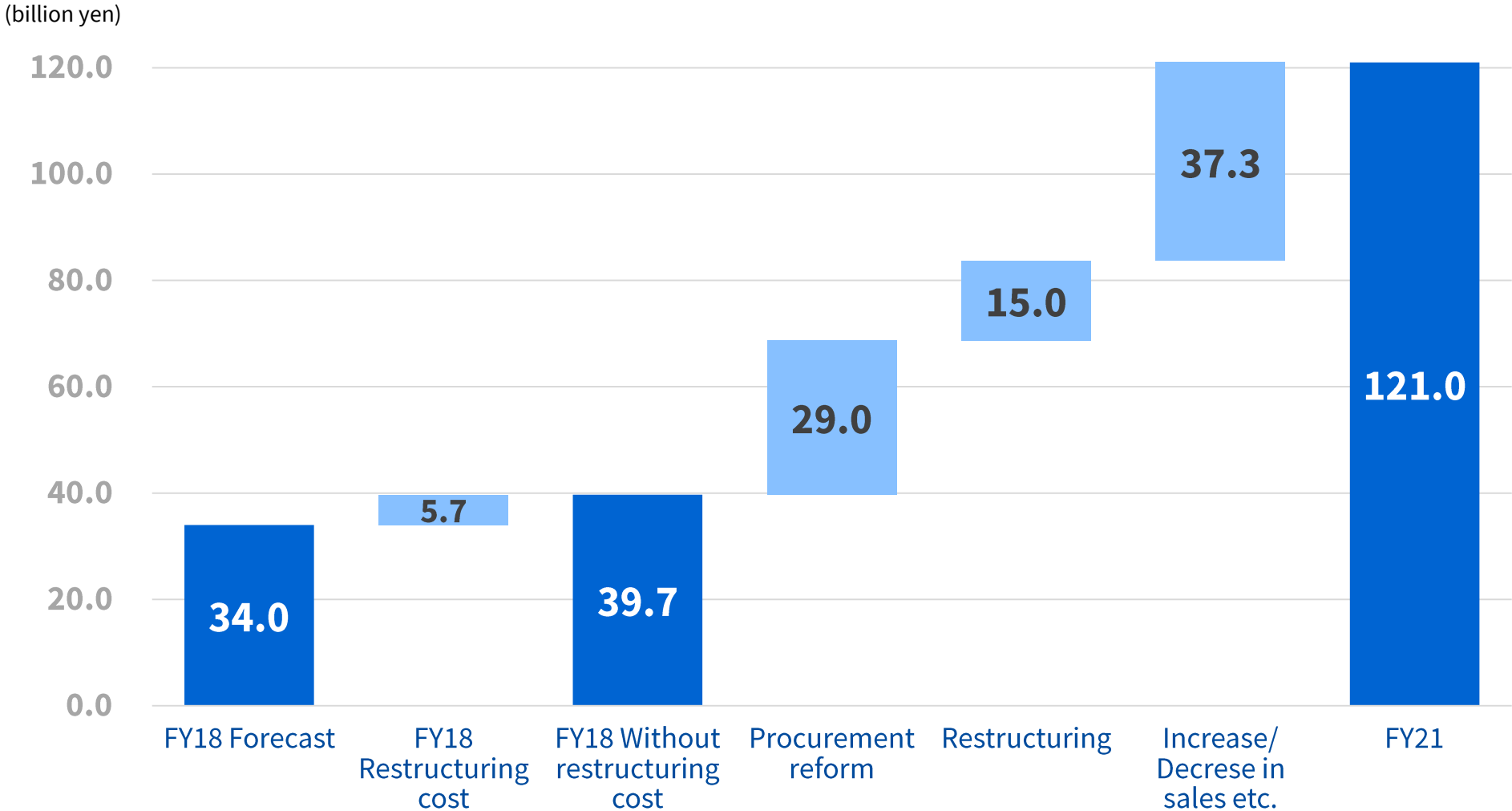
- ### Focus initiatives
- Leverage customer base to expand O&M and new services such as monitoring, and new solutions
  - Increase profit through growth investments in the building & facilities business and expand replacement business
  - Expand business in the growth markets of railways and batteries



\*1 ROIC: Return on Investment Capital, \*2 FCF: Free cash flow

# Improving Infrastructure Systems' Operating Profit: (FY18 → FY21)

Plan to improve profit and increase business scale by reaping results of investment

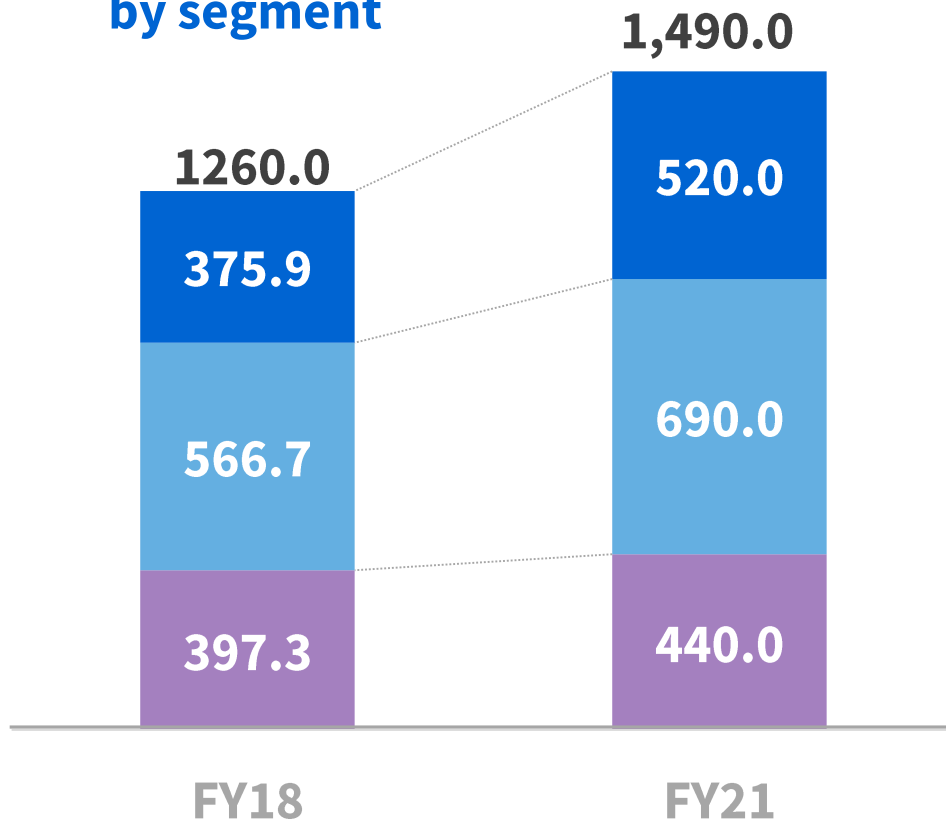




# Improving Infrastructure Systems' Operating Profit: FY18 → FY21

Plan to increase sales in growth markets, and increase production capacity of core products to boost sales by 230 billion yen from FY18 to FY21

FY18→21 sales increase, (billion yen)  
by segment



Rail Industrial

Building Facility

Public Infrastructure

## Lithium-ion batteries

- Leverage SCiB™ characteristics to expand into the automotive market
- Increase production capacity in Japan, India and the US

## Railway

- Increase sales in focus markets, e.g. Japan and China
- Enter hybrid train market in Europe

## HVAC/AC

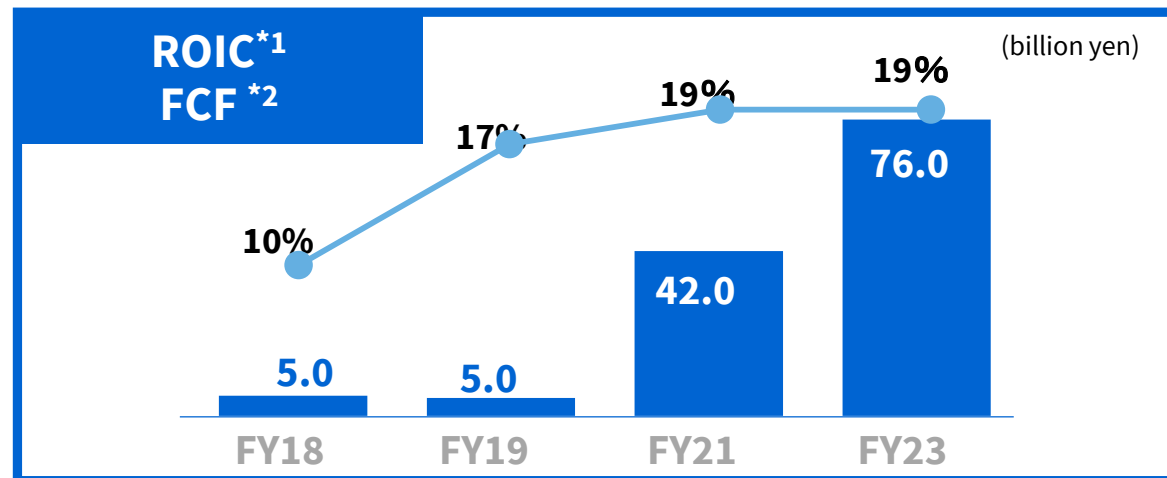
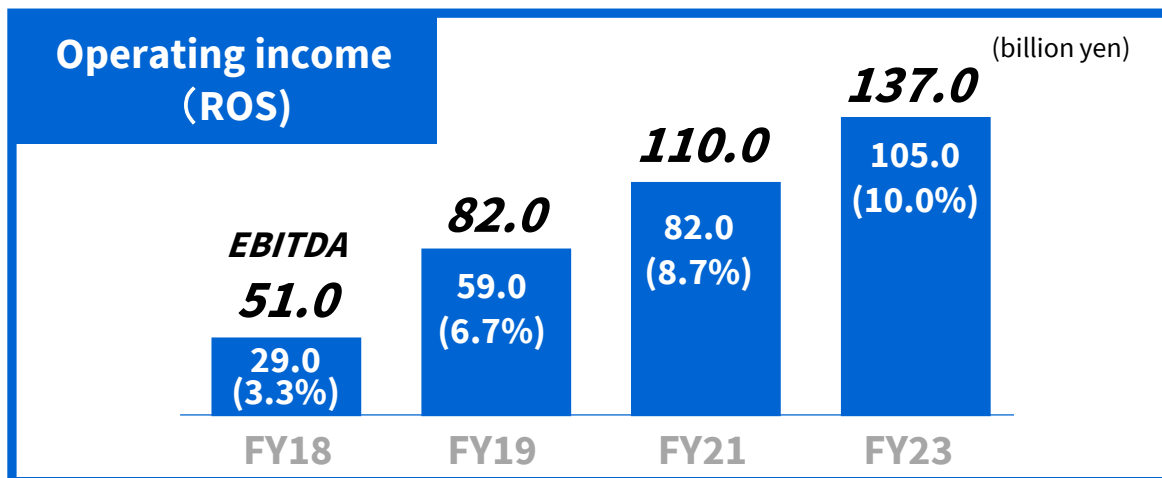
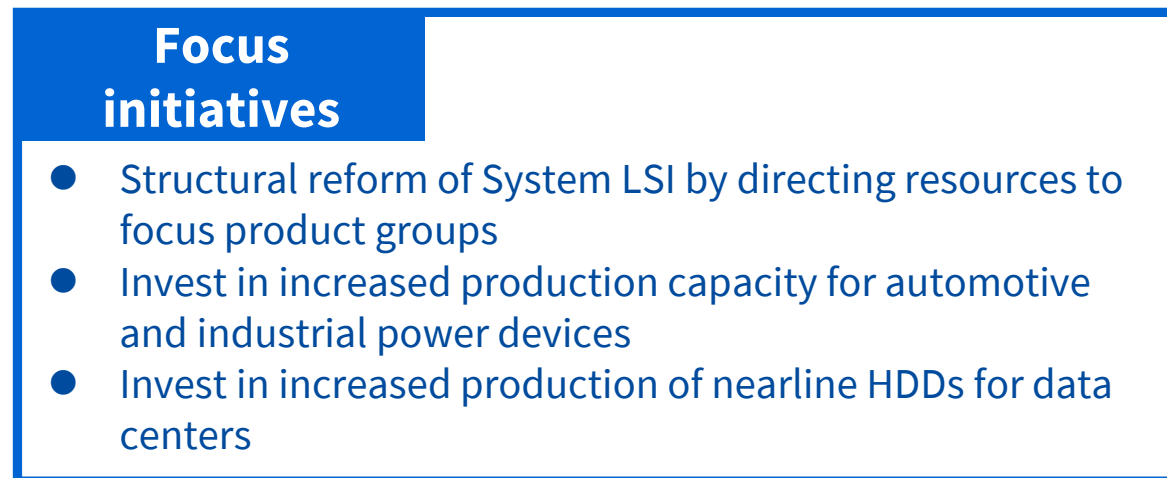
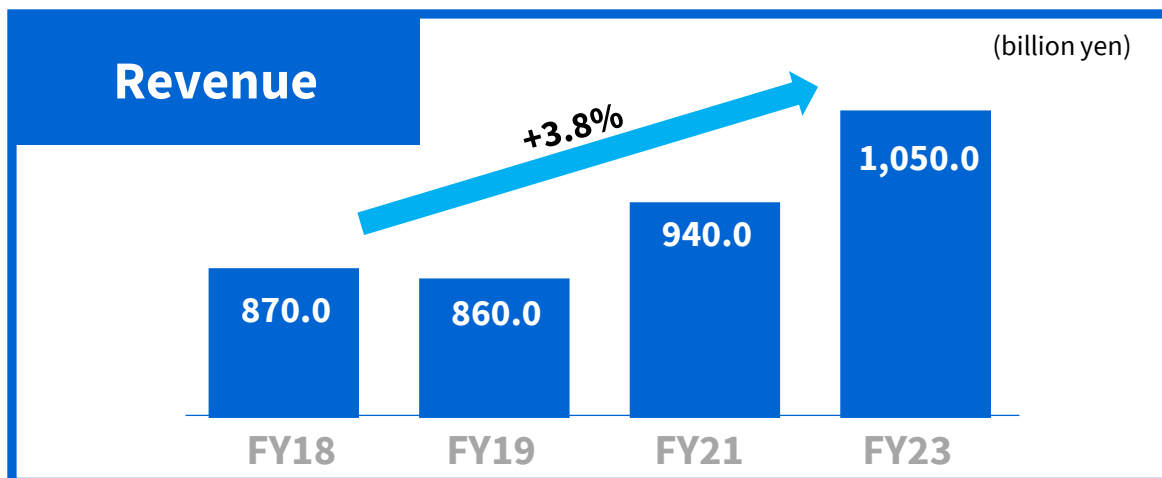
- Enhance product development and production capacity in Japan, China and India
- Expand presence in international markets

## Elevators

- Focus on replacement demand for buildings constructed in the 90s
- Meet increasing demand from urbanization

# Objectives by Business Unit: Storage & Devices, FY18 → FY21

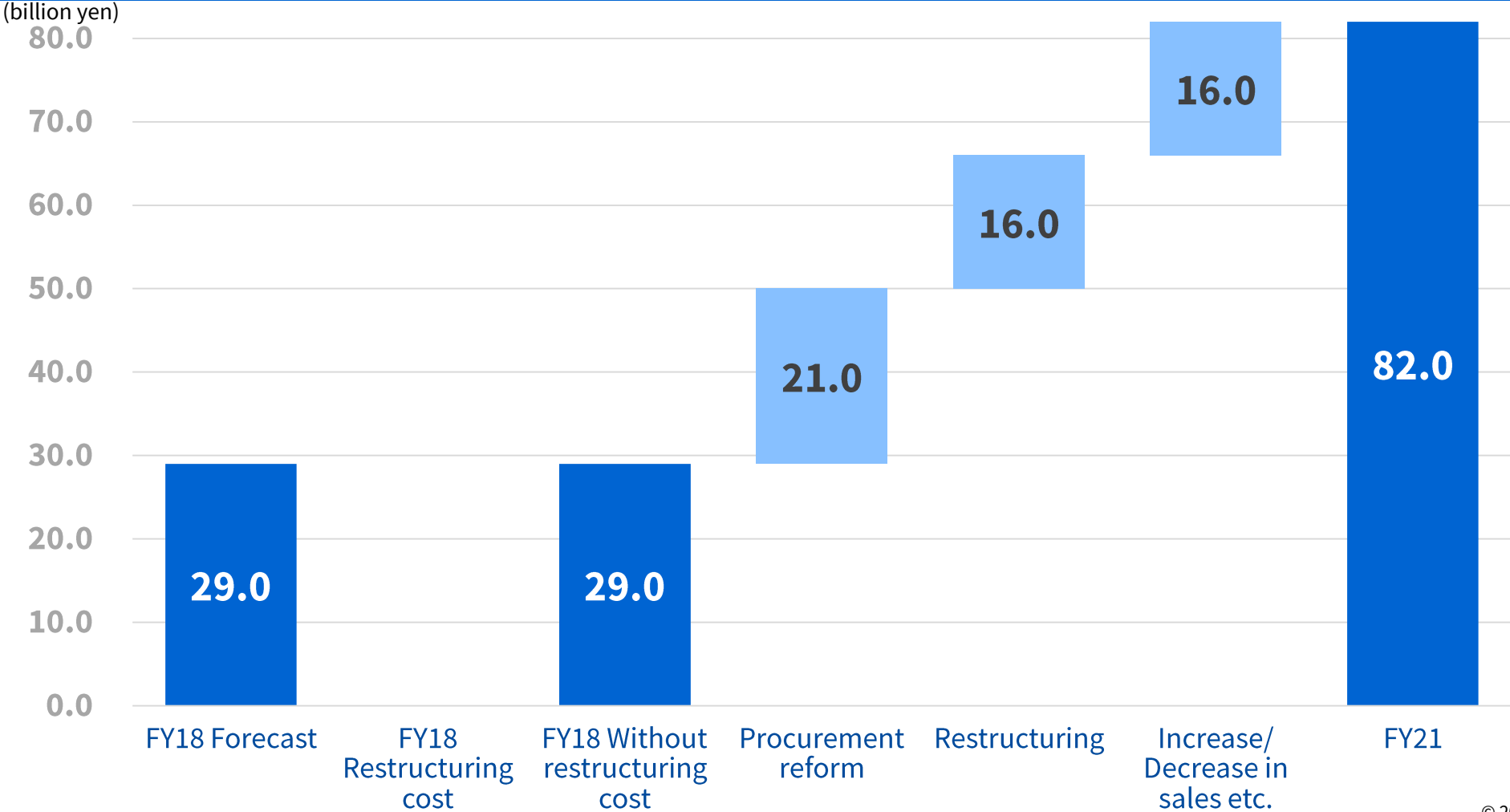
## Focus on automotive and industrial, data centers and storage servers



\*1 ROIC: Return on Investment Capital, \*2 FCF: Free cash flow

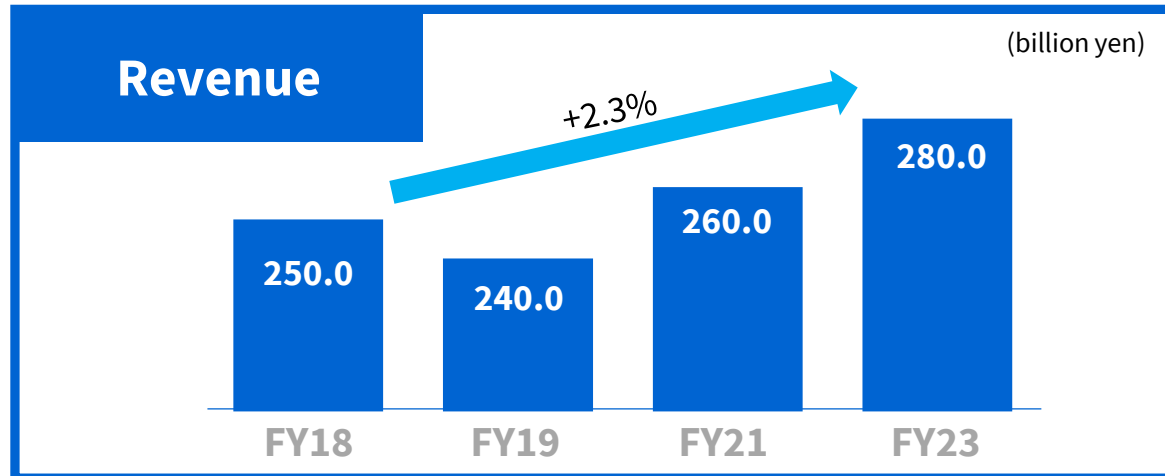
# Improving Storage & Devices' Operating Profit: FY18 → FY21

Plan to reform procurement, and to optimize development costs to improve profit

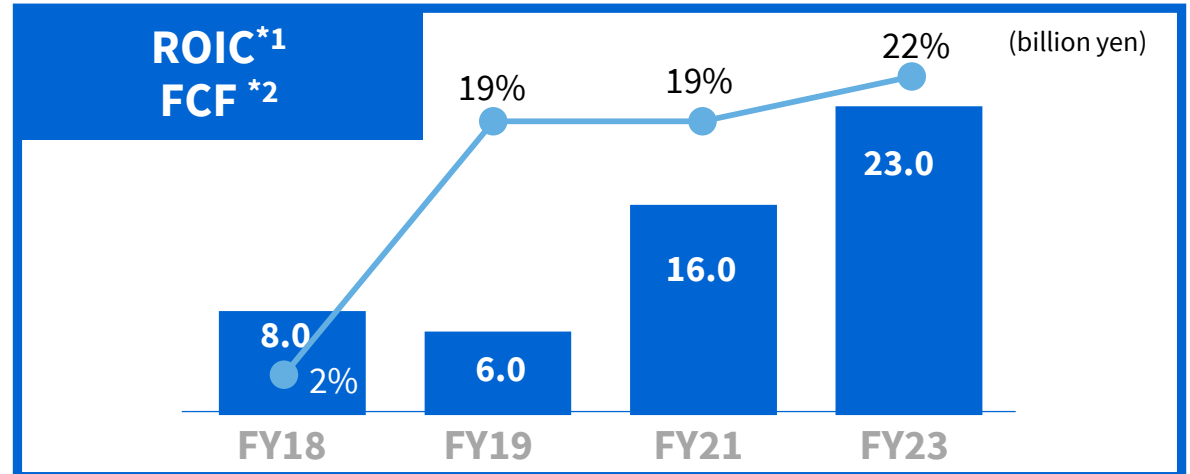
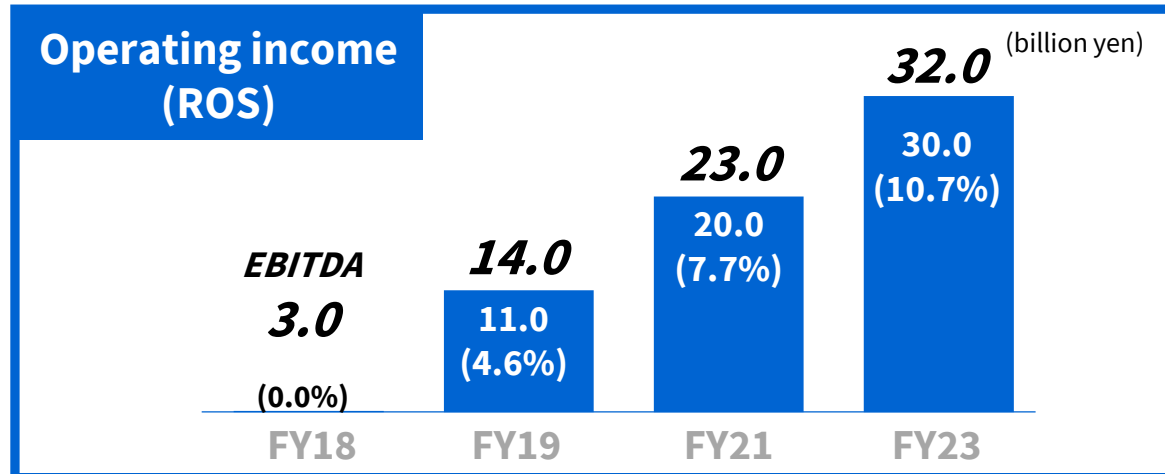


# Objectives by Business Unit: Industrial ICT, FY18→FY21

## Secure stable profit by expanding IoT and cost structure review



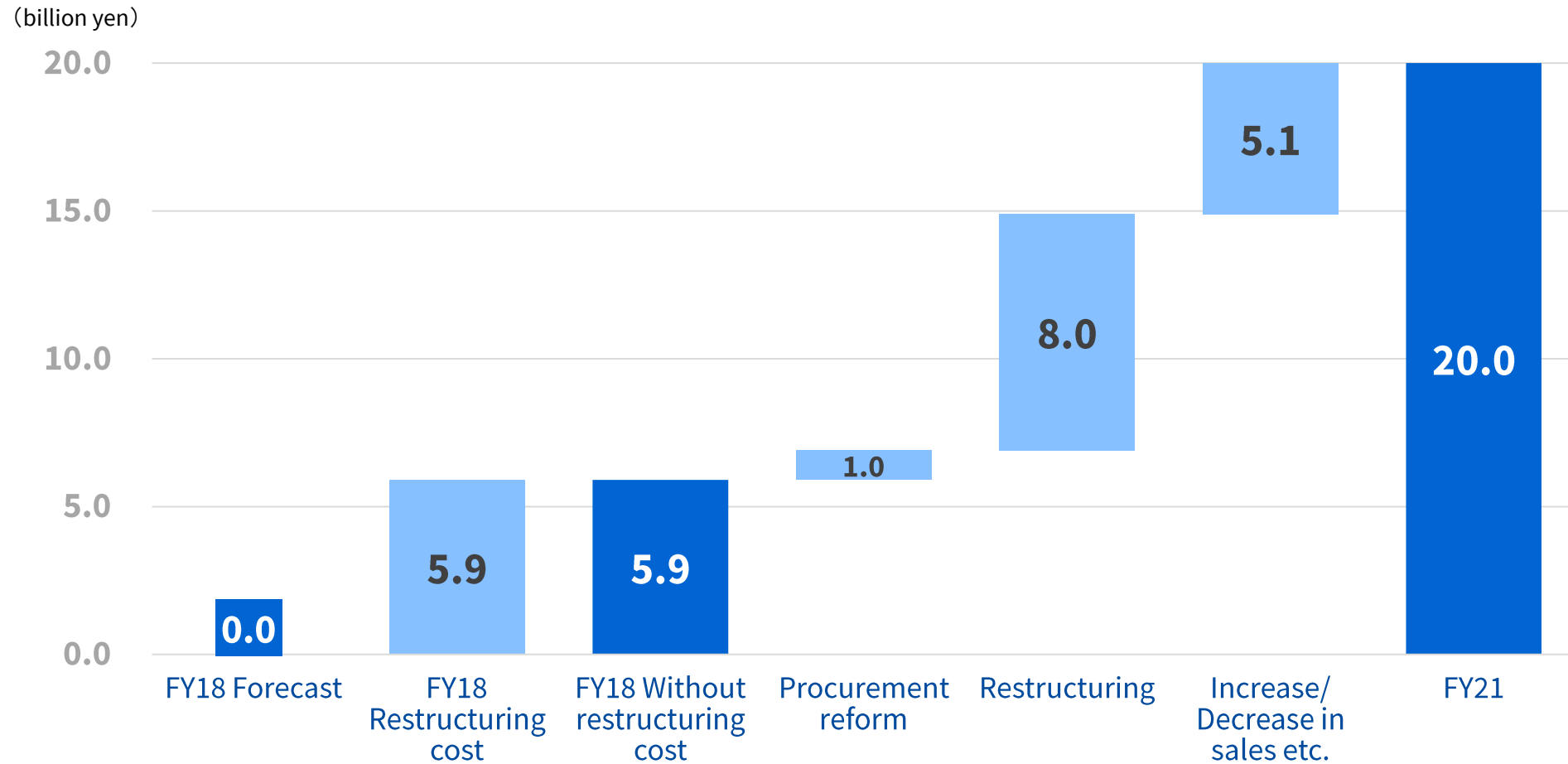
- ### Focus initiatives
- Selection and concentration of business
  - Meet management challenges by reforming business models with IoT and digital technology (AI)
  - Reinforce SI business (optimize costs by leveraging off-shore resources)
  - Reduce fixed costs



\*1 ROIC: Return on Investment Capital, \*2 FCF: Free cash flow

# Improving ICT Solutions' Operating Profit: FY18 → FY21

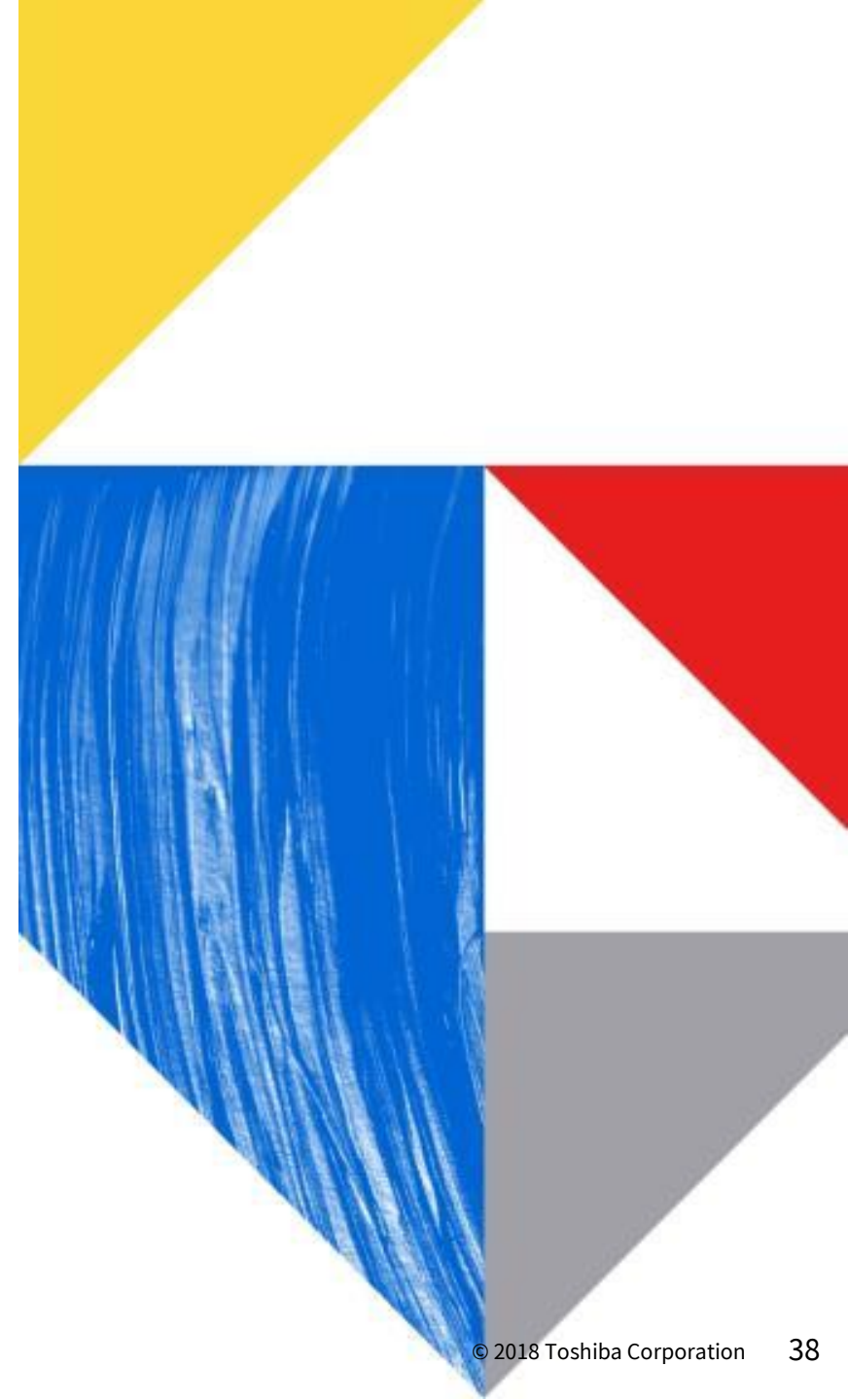
Plan to improve profit through structural reforms and business transformation



# 04

The Toshiba Next Plan

## **Policy on Shareholder Returns**



# Improve Shareholder Returns

**Increasing shareholder return through resuming dividend payments as well as share repurchases**

- **Swiftly implement a share repurchase of approx. 700 billion yen**
- **Resume dividend payments of 20 yen per share to shareholders as of December 31**
- **Continue to achieve stable shareholder returns in FY2019 and onward**

**During the 5-year course of Toshiba Next Plan, the company aims to increase its dividend and to secure a planned average consolidated dividend payout ratio of 30%\*. Toshiba will enhance profit distribution to shareholders through dividend payments and repurchase of its own shares, according to the situation.**

**\* For the time being, equity method profit and loss for Toshiba Memory Corporation is excluded from Toshiba's policy on shareholder returns.**

# 05

The Toshiba Next Plan

## **Development of New Growth Fields**

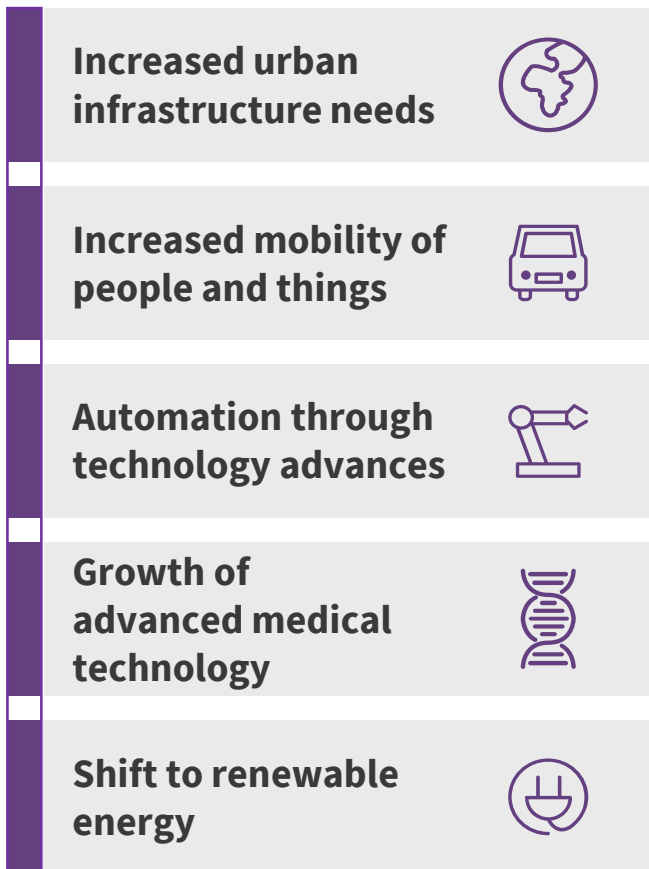




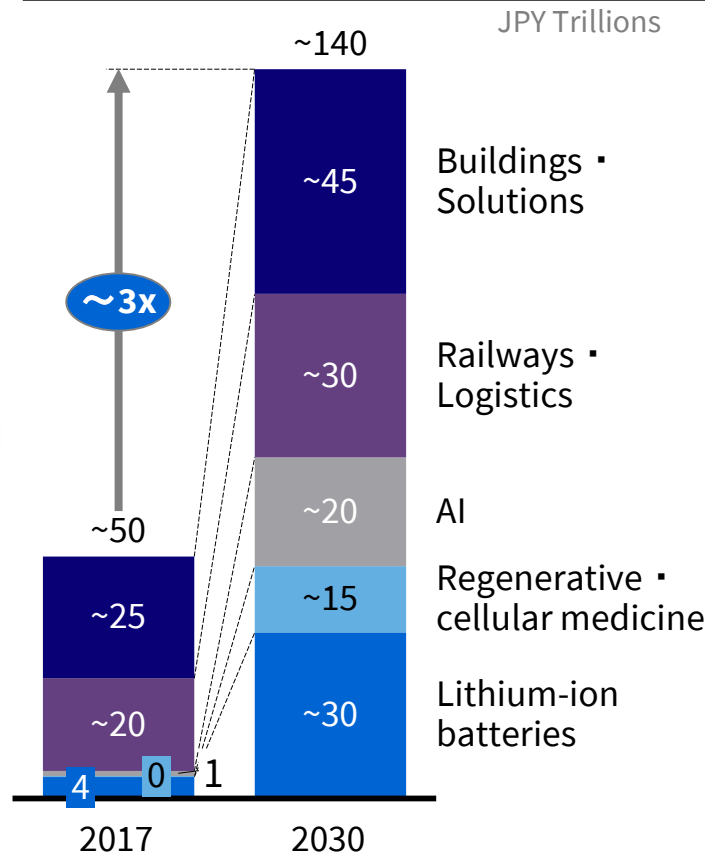
# Focus Fields Based on Mega-Trends and Owned Technologies

## Recognize social change through disruptive innovation as an opportunity; focus on high growth markets

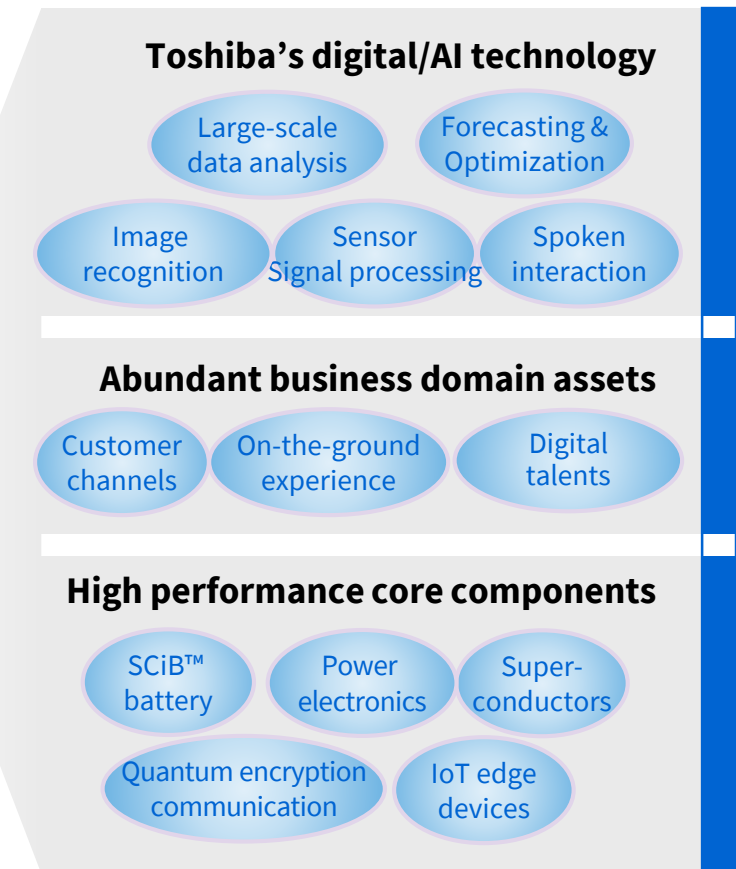
### Mega-trends



Toshiba's focus markets in each megatrend\*1



### Toshiba Group technologies



\*1 (Building solution):HVAC - BIS research "Global HVAC market", Elevator - TechNavio "Global Elevator and Escalator Market 2018-2022"; Rail+Logistics IoT:Rail - SCI "Worldwide market for railway industries", Logistics IoT - Markets and Markets "Material handling equipment market Global forecast to 2022", Fuji Keizai "Next generation logistics business systems forecast 2017" domestic market only; (AI):Fuji Chimera "2016 Artificial intelligence business report; (Regenerative/ cellular medicine):Seed Planning "Regenerative/ cellular medicine research on current and future business—research report—"; (Lithium batteries):Global Market Insights "Lithium Ion Battery Market Size, Competitive Market Analysis & Forecast, 2017 - 2024"

# New Growth Business 1: SCiB™

Focus on markets where the SCiB™\*1 characteristics are attractive  
 Target 400 billion yen business scale in 2030

## SCiB™ strengths



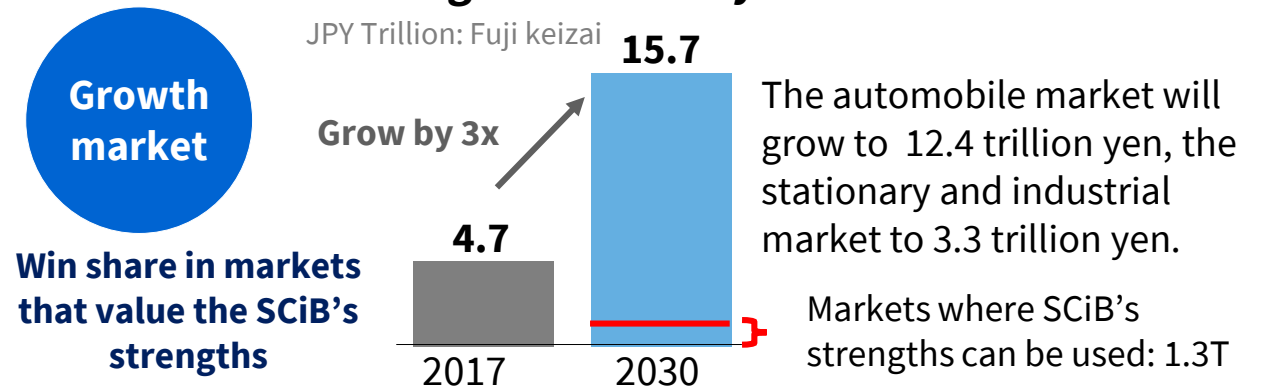
## Growth Strategy

- Increase investments for growth
  - New plant under construction in India (JV)
  - Decision made for new factory in Yokohama
  - Decided to increase capacity at Kashiwazaki Operations
- Strategic alliances
  - Start alliance with JCI\*2;
  - co-develop next-generation material with CBMM\*3

## Market environment and main focus fields

### Rechargeable battery market\*1

JPY Trillion: Fuji keizai



### Focus fields



HEV\*4

Automotive  
HEV, Commercial vehicle

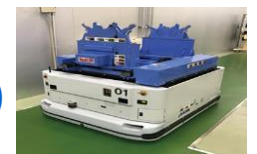


EV Bus\*4



Railways\*5

Industrial  
(Railways, AGV, etc.)



Automated Guided Vehicles (AGV)

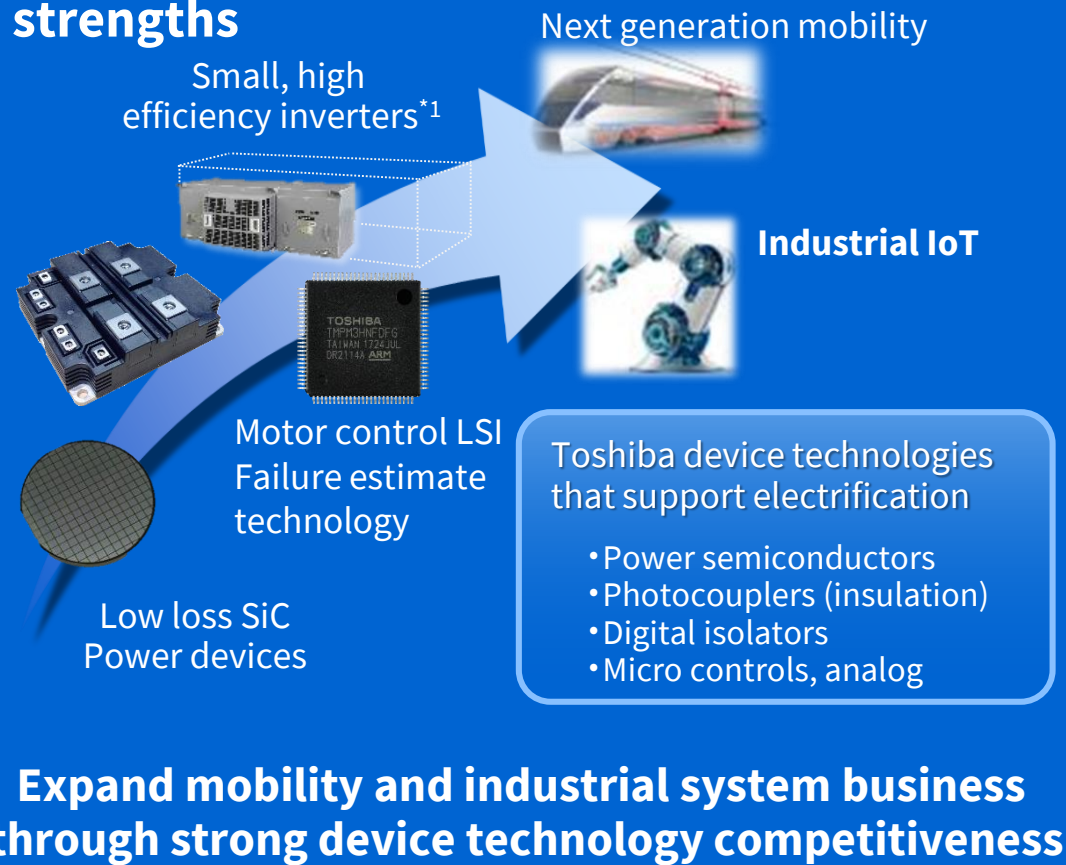
\*1 Compound Average Growth Rate \*2 JCI: Johnson Controls (US)

\*3 CBMM: Companhia Brasileira de Metalurgia e Mineração (Brazil) Photo by \*4: Suzuki \*5: Tokyo Metro \*6:NEDO

# New Growth Business 2: Power Electronics

## Capture evolution of power devices in a system that ensures differentiation

### Product & technology strengths

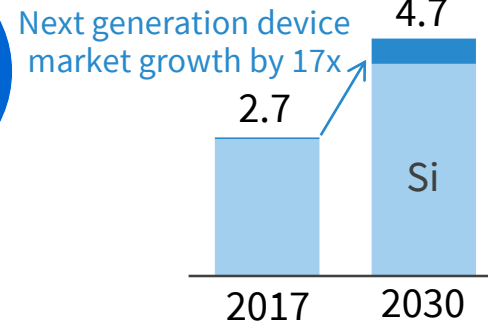


### Market environment and main focus fields

#### Power device market forecast

Trillion yen, source: fuji keizai

**Growth market**



Continuing electrification; Growth in power devices, inverters and system markets. Specifically, growth is expected in SiC, GaN next generation devices.



\*1 NEDO: New Energy and Industrial Technology Development Organization \*2 SiC: Silicon carbide, \*3 GaN: Gallium nitride Photo by \*4 JR Tokai \*5: Tokyo Metro

# New Growth Business 3: Precision Medicine

Improve cancer cure rates by very early detection and individualized treatment

## Product and technology strengths



Japonica array<sup>\*1</sup>

Next gen clinical sequencer

Liposome

Micro RNA

Living cell visualization

Heavy-ion radiotherapy

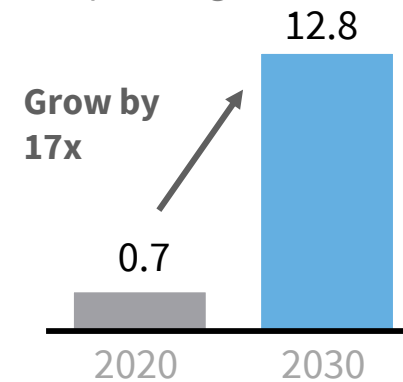
Core technologies across all phases from prevention to treatment

## Market environment and main focus fields

### Global regenerative and cellular medicine market

Trillion yen, Seed • planning

Growth market



Expansion of individualized medicine market through advances in regenerative and precision medicine

Focus fields

**Very early detection**

Identify cancers that take years to grow to identifiable levels at an earlier stage.

**Individualized treatment**

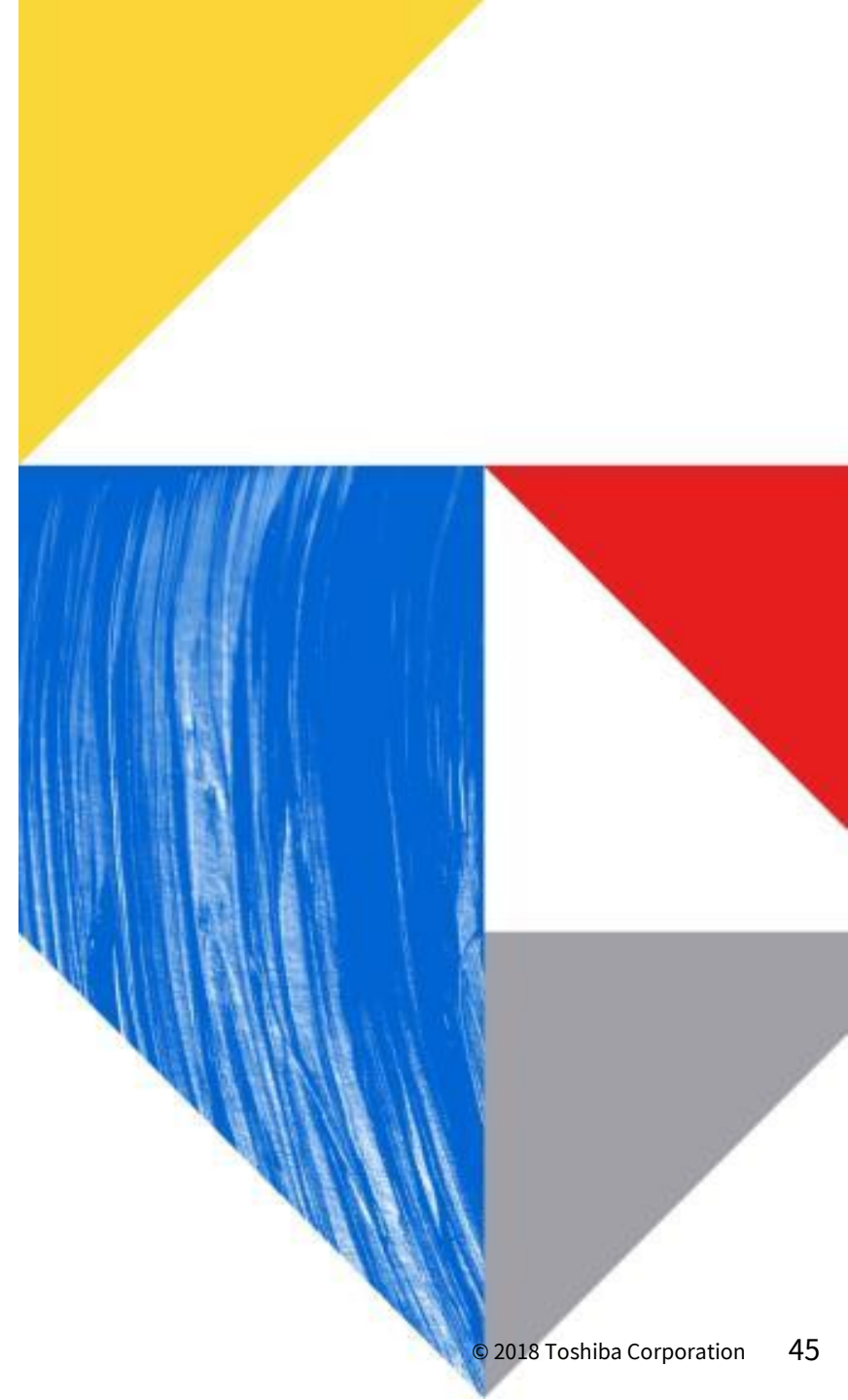
Realize treatment optimized for the individual.

\*1: In collaboration with Tohoku University

# 06

The Toshiba Next Plan

## **Toshiba's Digital Transformation**



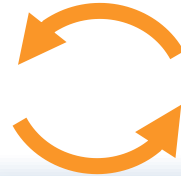
# Gains from Digital Innovation

Use digital transformation to add value to all business fields

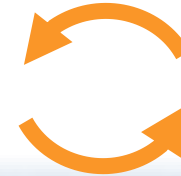
High value added



Increased importance of key devices and core components



Optimize products and systems through data feedback



Use data to expand operations and services using AI/IoT



Digital Revolution



Key devices, components



Products, systems



Operations, services

# Implementation of Digital Culture

**Transform Toshiba by implementing digital culture throughout the organization**

**Constant reconciliation**

**Closed hierarchy**

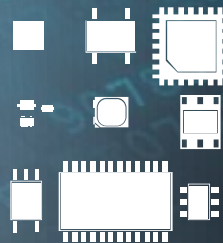
**Closed innovation**

**Continuous customization**

**Low profitability**



**Digital culture**



**Modular architecture**

**Flat**

**Co-creation**

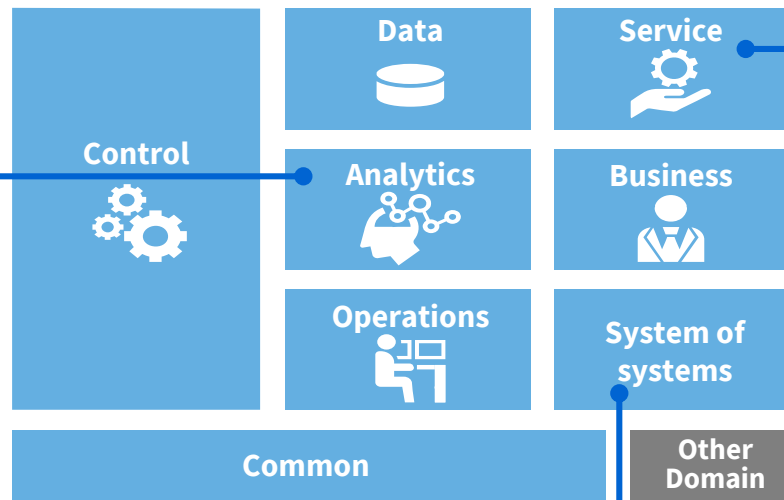
**Scalable, standardized**

**High profitability**

# Implementing Toshiba's IoT in Society

Applied extensive practical knowledge to create standardized IoT architecture and technology as an open source, available to all

## Toshiba's IoT **SPINEX**<sup>TM</sup> Toshiba IoT Reference Architecture



*Industrie4.0*

*NIST\**

*Industrial Internet Consortium*

**Differentiated Fields**

Operations optimized Analysis and prediction technology

System of Systems, that allows services to be connected

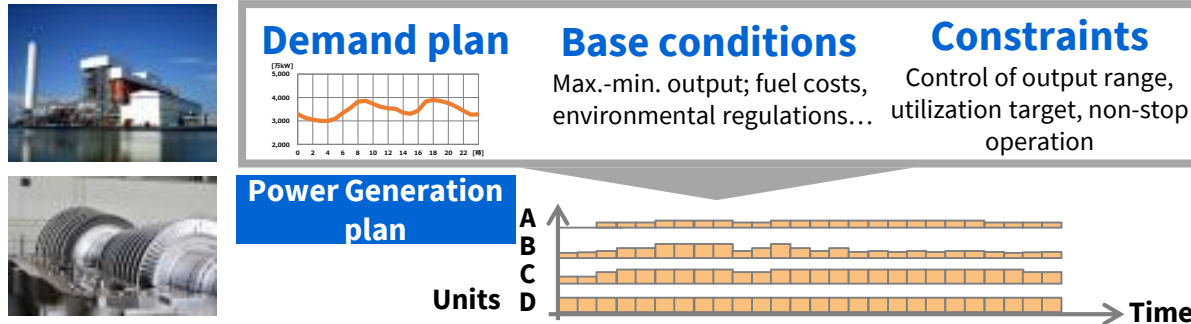
Interactions with people

\* NIST : National Institute of Standards and Technology



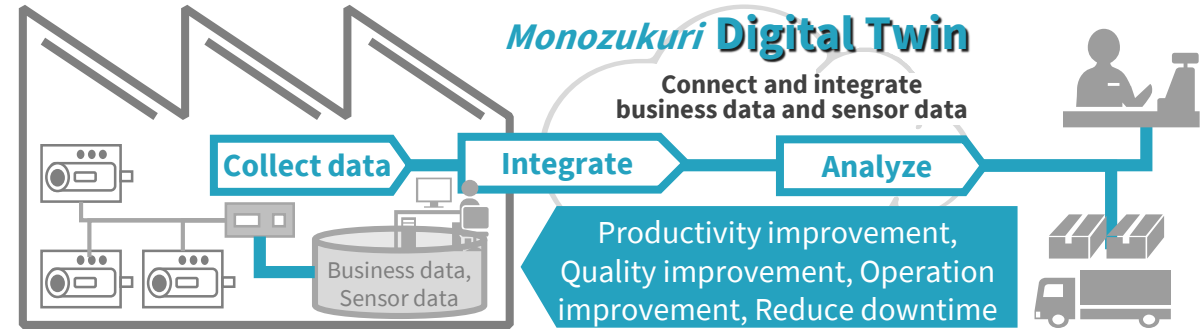
## New services backed by extensive experience and digitization

### Optimized operation of power plants



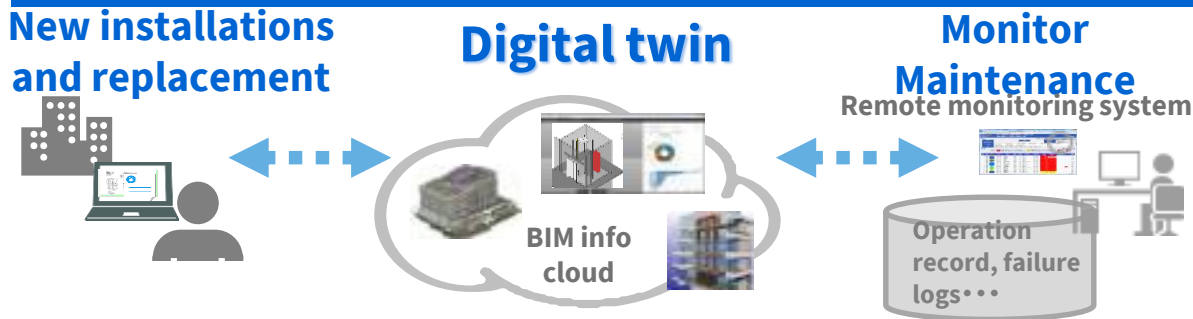
Formulate cost effective generation plan for multiple generation units, considering constraints and operational conditions

### Factory IoT



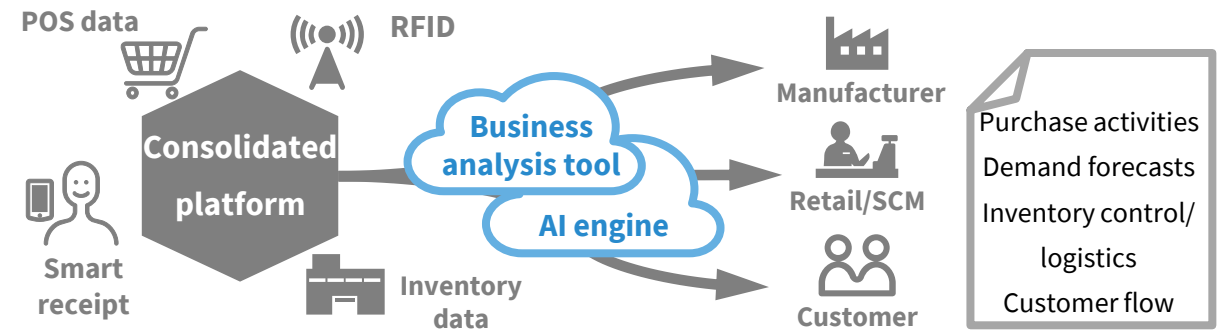
Visualize 5M1E<sup>\*2</sup>, and upgrade manufacturing by advanced analysis on causal

### Digitization of elevator business through BIM<sup>\*1</sup>



Provide added-value services from proposals on new and replacement installation to high end maintenance and operation, by sharing BIM information with customers

### Retail consolidated platform



Provide data services backed on consolidated platform

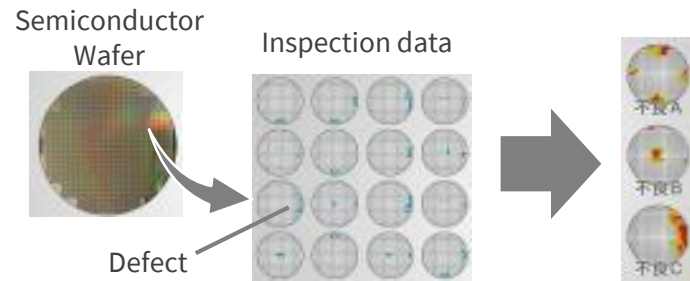
\*1: BIM (Building Information Modeling): Building database, which add customer information on 3 dimension digital model of buildings

\*2: Capital letter for quality valuation factor in manufacturing business, Man, Method, Measurement, Material, Machine, Environment

# AI Technology as a Source of Competitiveness

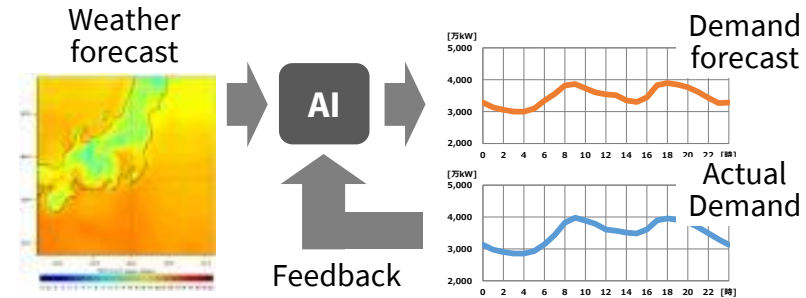
## Develop competitive technologies awarded by third parties

### Product failure analysis through data mining



Automatic classification of failure tendency without learning

### Power demand forecast



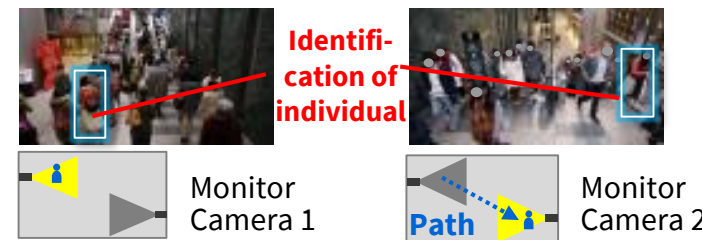
Highly accurate electricity demand forecast based on weather conditions

### Image segmentation



Estimation of subjects in images through deep learning

### Identifying individuals across multiple cameras



Identify same person through robust person feature value

\*1: [https://www.toshiba.co.jp/rdc/detail/1706\\_04.htm](https://www.toshiba.co.jp/rdc/detail/1706_04.htm) (FY2016) \*2: [https://www.toshiba.co.jp/about/press/2017\\_11/pr\\_j0801.htm](https://www.toshiba.co.jp/about/press/2017_11/pr_j0801.htm) (FY2017/Tokyo Electric Power Holding)

\*3: Viet Pham, et al., "BiSeg: Simultaneous Instance Segmentation and Semantic Segmentation with Fully Convolutional Networks," 28th British Machine Vision Conference, 2017.

\*4: Shibata, et al., "AI technology that uses video feeds from multiple surveillance cameras to track the movements of people," Meeting on Image Recognition and Understanding, 2017.

# Toshiba's Vision for the new IoT as a leading CPS Technology Company

Toshiba's IoT **SPINEX™**

## Digital: Cyber

To predict and reproduce complicated matters by overcoming time and space

				
<b>SPINEX for Energy</b>	<b>SPINEX for Infrastructure</b>	<b>SPINEX for Logistics</b>	<b>SPINEX for Buildings</b>	<b>SPINEX for Manufacturing</b>
<b>Energy</b>	<b>Infrastructure</b>	<b>Logistics</b>	<b>Building • Facilities</b>	<b>Manufacturing</b>
				

Information

Action

## Real: Physical

The knowledge and experience Toshiba has gained from the real world

Total capability of Toshiba Group

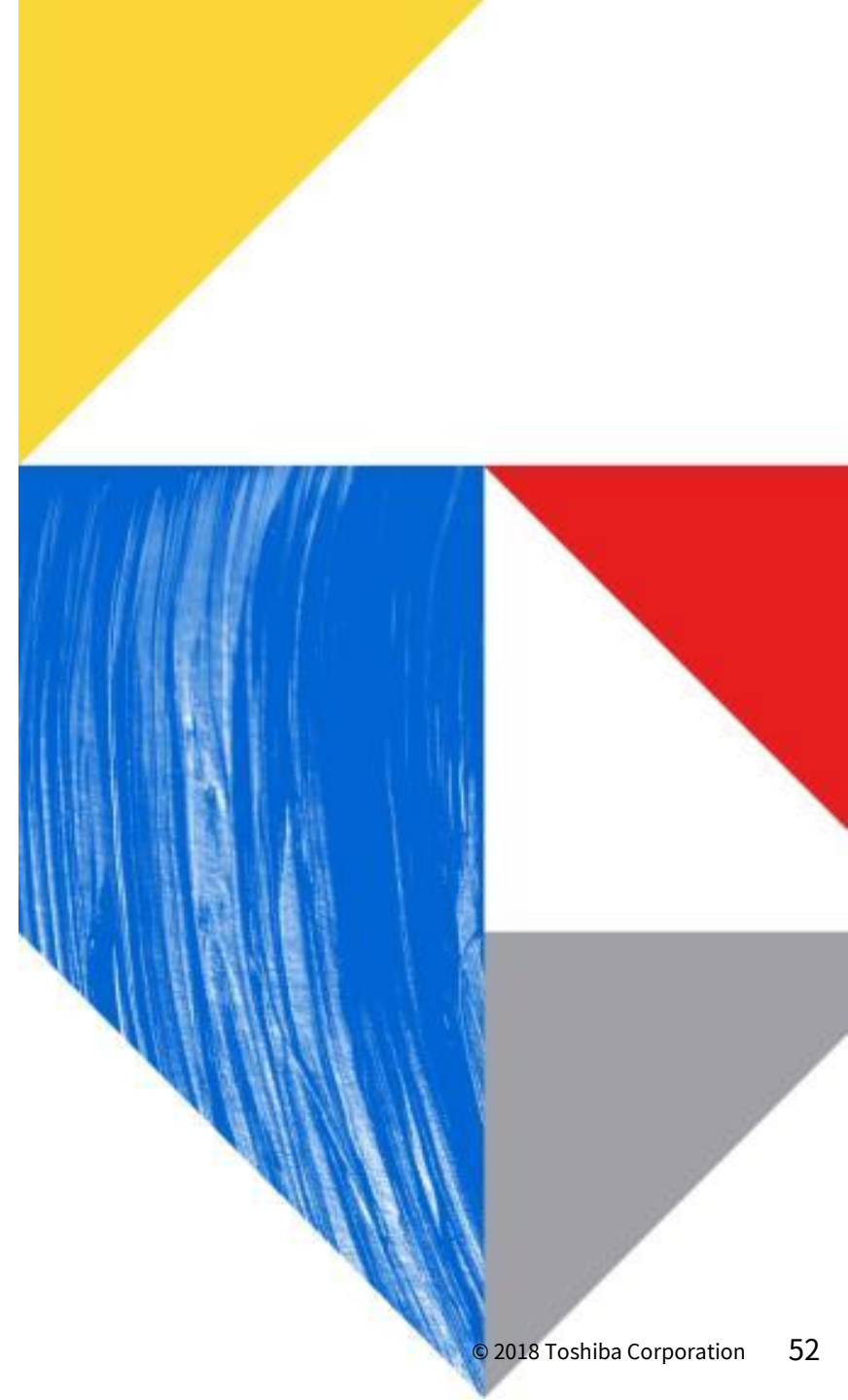
Original AI and digital technologies

Extensive business domain assets

# 07

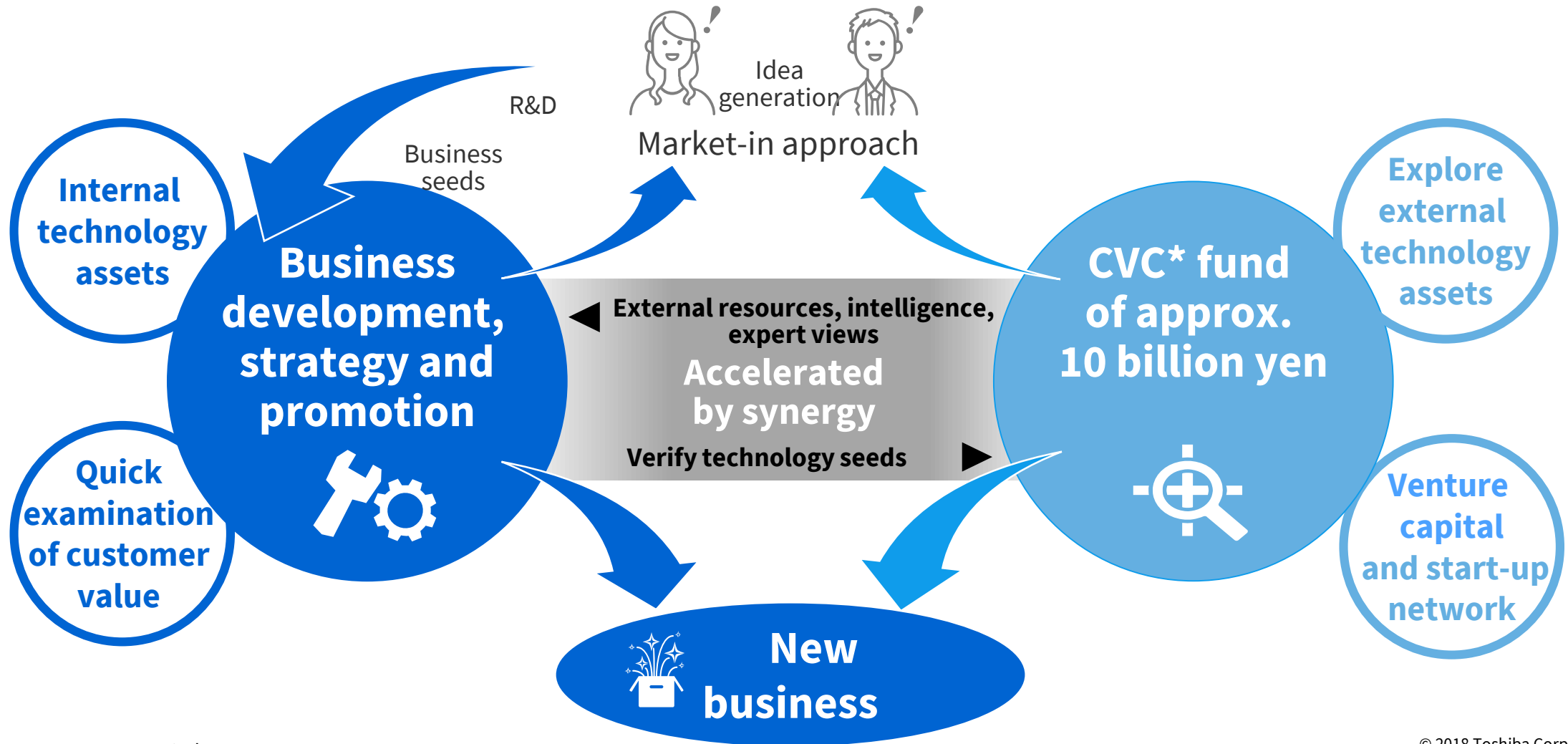
The Toshiba Next Plan

## **Establishing the Structure for Execution**



# Concept: Open Incubation Initiative

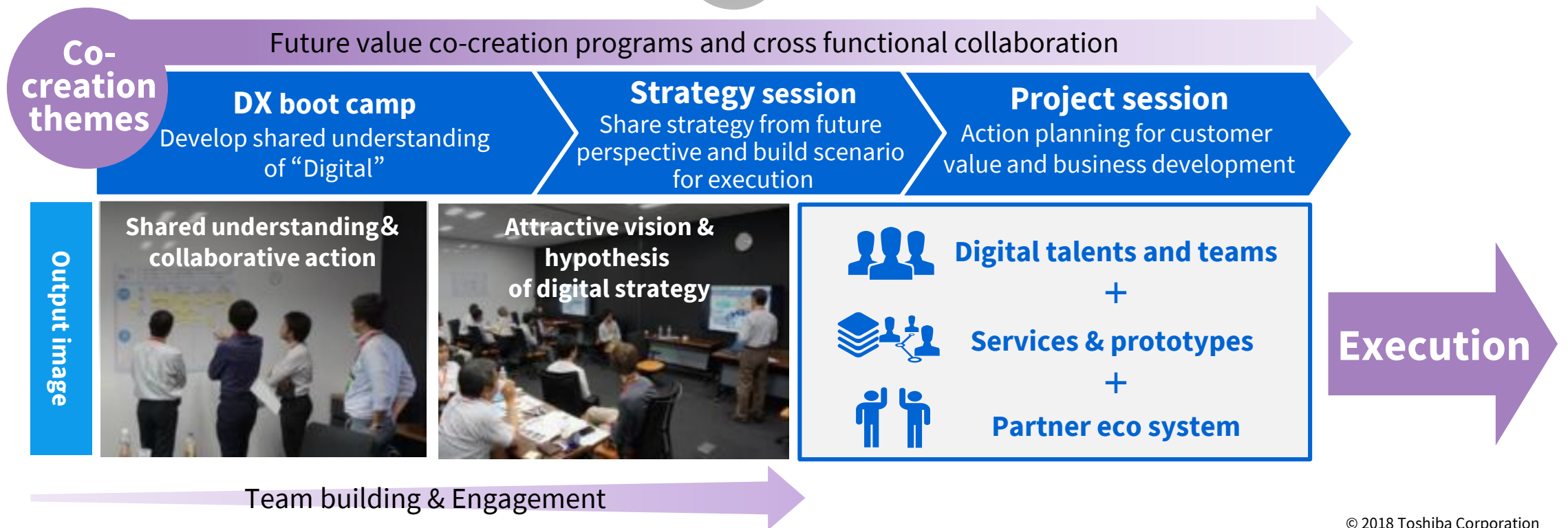
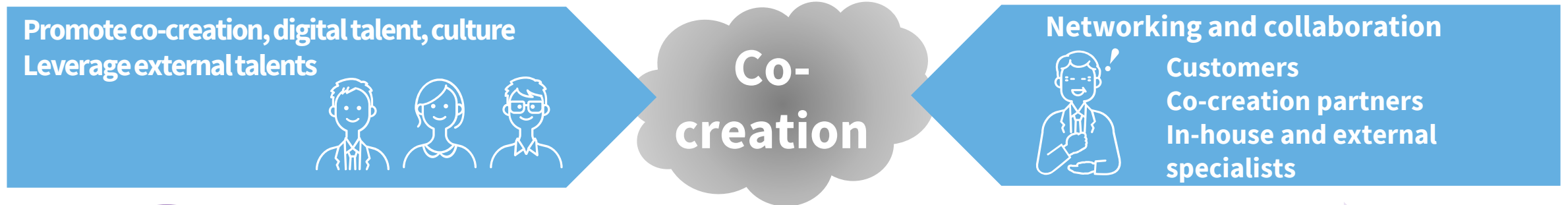
## Harnessing venture spirit, incubating new businesses



\* CVC: Corporate Venture Capital

# Cultivation of Co-creation and Digital Talent

## Cultivate boundary-breaking talent to accelerate digital transformation



# The Next Generation Project

## 24 talented young employees share ideas on how to grow Toshiba



Team  
**N**

**Urban problem-solving  
business**

Food x Mobility x Future  
creation

Team  
**E**

**Creating seeds of next-  
generation businesses**

Proposals for “Mechanisms to  
identify new business seeds”  
and “co-creation space”

Team  
**X**

**Next business creation  
plan**

Plans to create next  
businesses

Team  
**T**

**The world of next-  
generation big data  
healthcare**

Next generation big-data  
business in medicine

**Realizing the way to the next step forward**

# Group-wide Reorganization

## Reevaluate organizations for execution of the Toshiba Next Plan

**Consolidation of  
business units**



**Simplification of  
the hierarchy**

**Reorganize and consolidate business units**

**Slim-down the corporate staff**

**Consolidate staff functions**

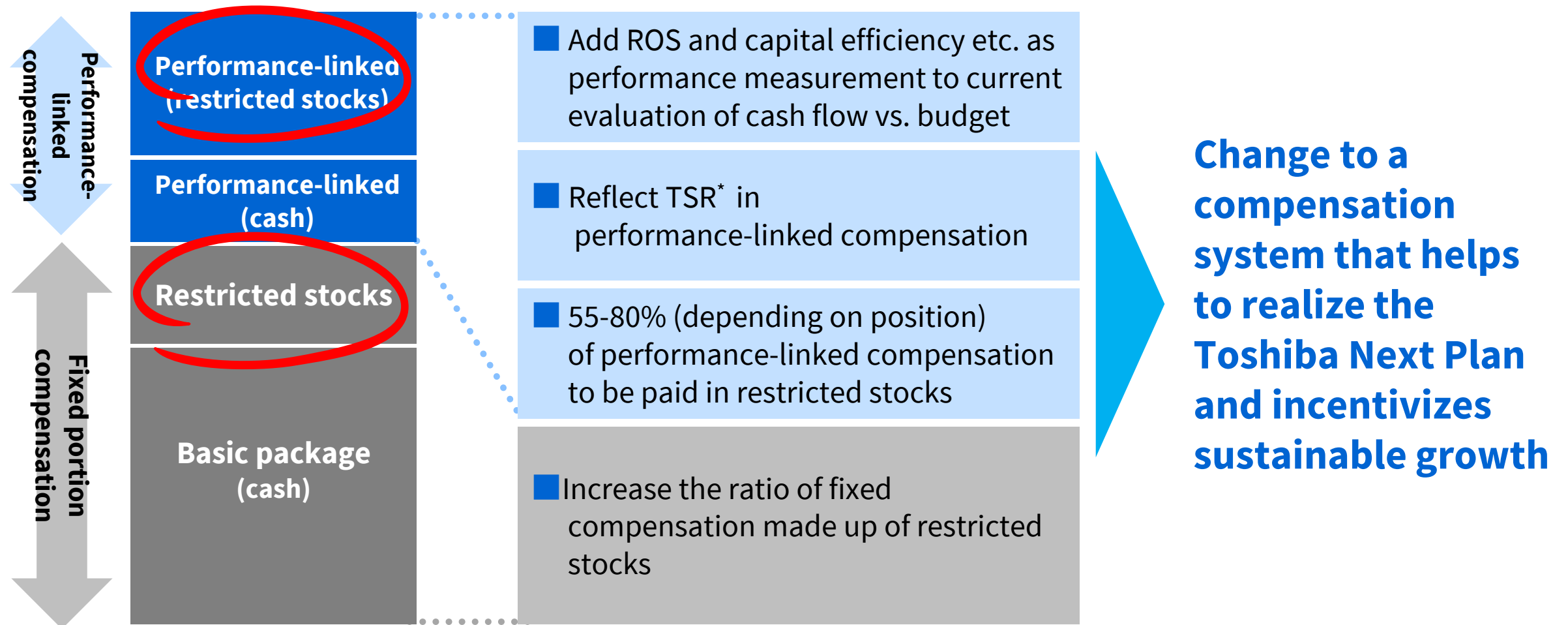
**Strengthen business  
operating structure**

**Accelerate decision making**



# Executive Officer Compensation System

Change to compensation system aligned with maximizing mid-to-long term enterprise value. Over 50 % of performance-linked compensation to be paid in restricted stocks.

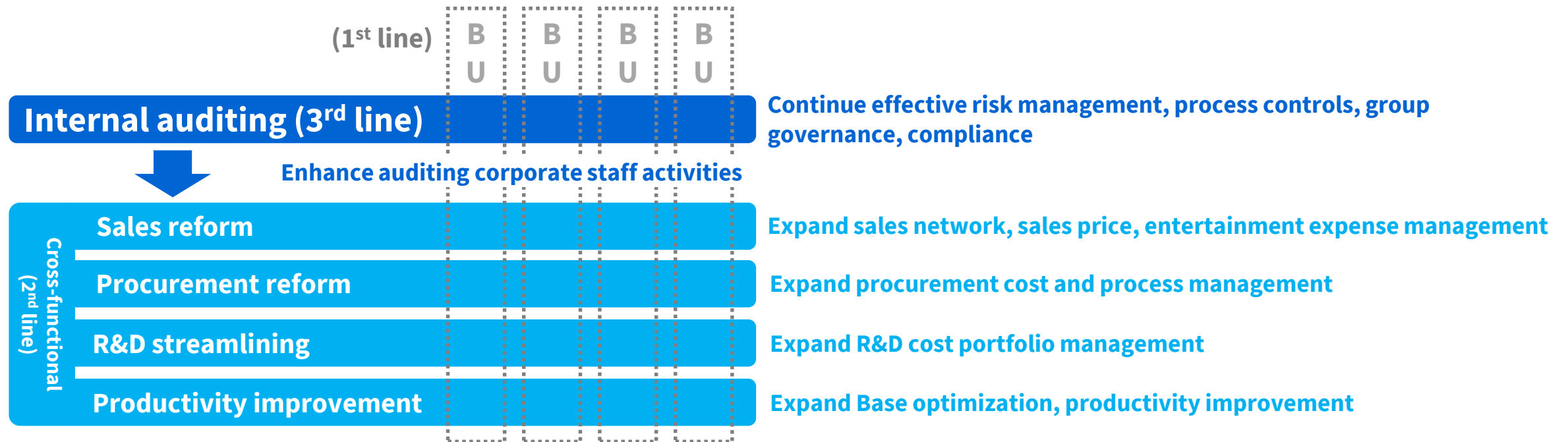


# Enhance Internal Control

## Strengthen internal control functions with the “2<sup>nd</sup> and 3<sup>rd</sup> lines\*” of defense

Continue effective risk management, process controls, group governance, compliance (3<sup>rd</sup> line)

Expand use of cross-functional activities (2<sup>nd</sup> line) to strengthen checks, balances and monitoring



\* The three defense lines include the department that monitors risk (2<sup>nd</sup> line) and the department that gives reasonable assurances to the board of directors (3<sup>rd</sup> line)

# Establish a Structure to Effectively Execute the Toshiba Next Plan

## Develop a structure and system for realizing the Toshiba Next Plan

### Toshiba Group's philosophy

#### Beliefs and values shared by all Group employees

- Basic Commitment of The Toshiba Group
- Our Purpose • Our values

### Toshiba's "Ten Guides to Action"

#### Guiding principles for execution of the Toshiba Next Plan

- Our goals • Our people
- Our *monozukuri* • Our organization

### Deployment of "My Next Plan"

#### Propagation of transformation to entire the Toshiba Group

- From top management to executives and then to all employees
- Make targets cascade down to realize a sense of ownership

### Reevaluation of the personnel system

#### A system that rewards behavior working toward achieving targets, and results

- Actively assign people who can take on challenges
- A varied personnel system that is linked to performance/ and results

A mindset that encourages every employee to have a sense of ownership for the Toshiba Next Plan

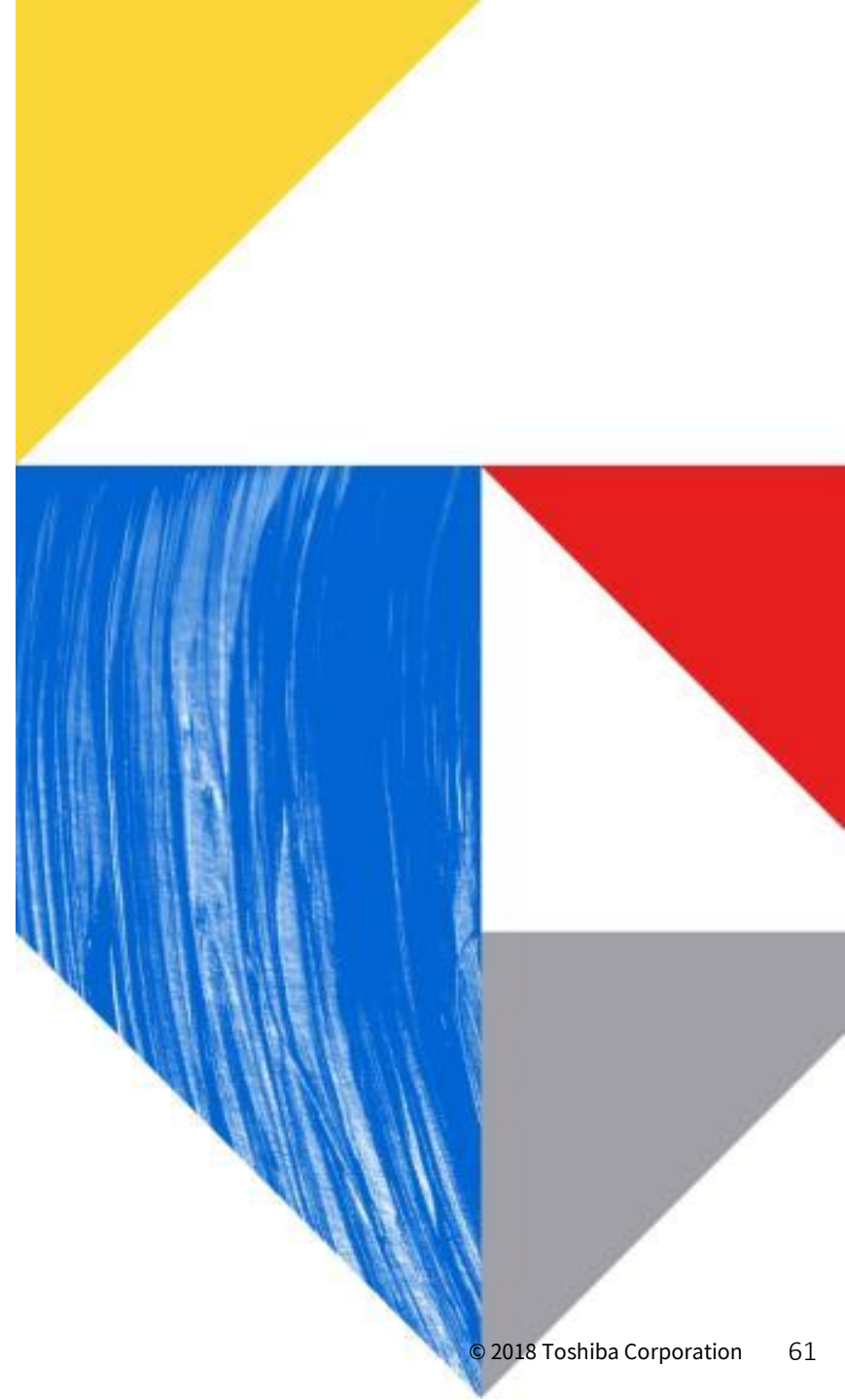
Share a determination and commitment throughout the organization to definitely achieve goals

An open minded culture that supports a healthy and sustainable growth model

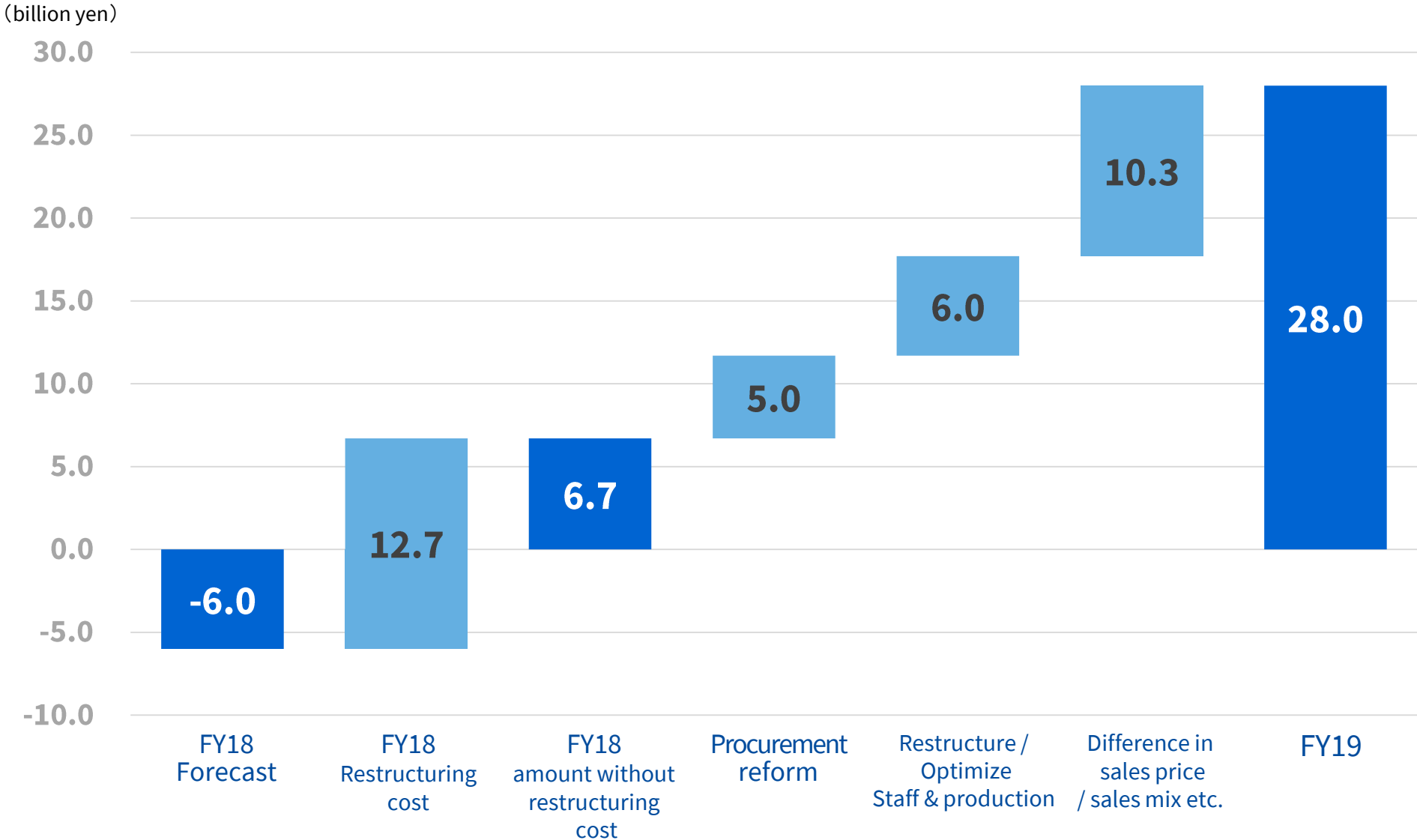


Committed to People, Committed to the Future

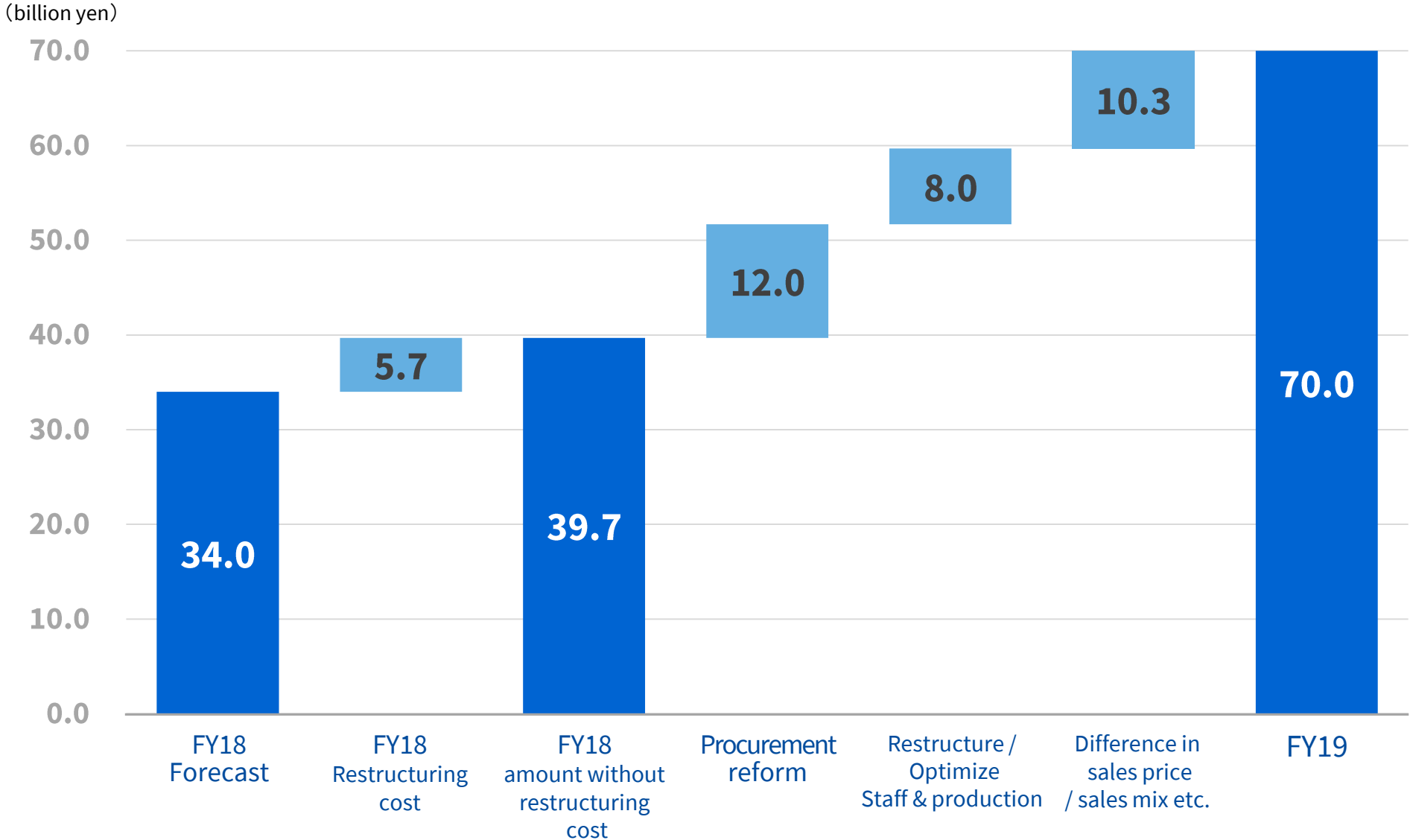
# Appendix



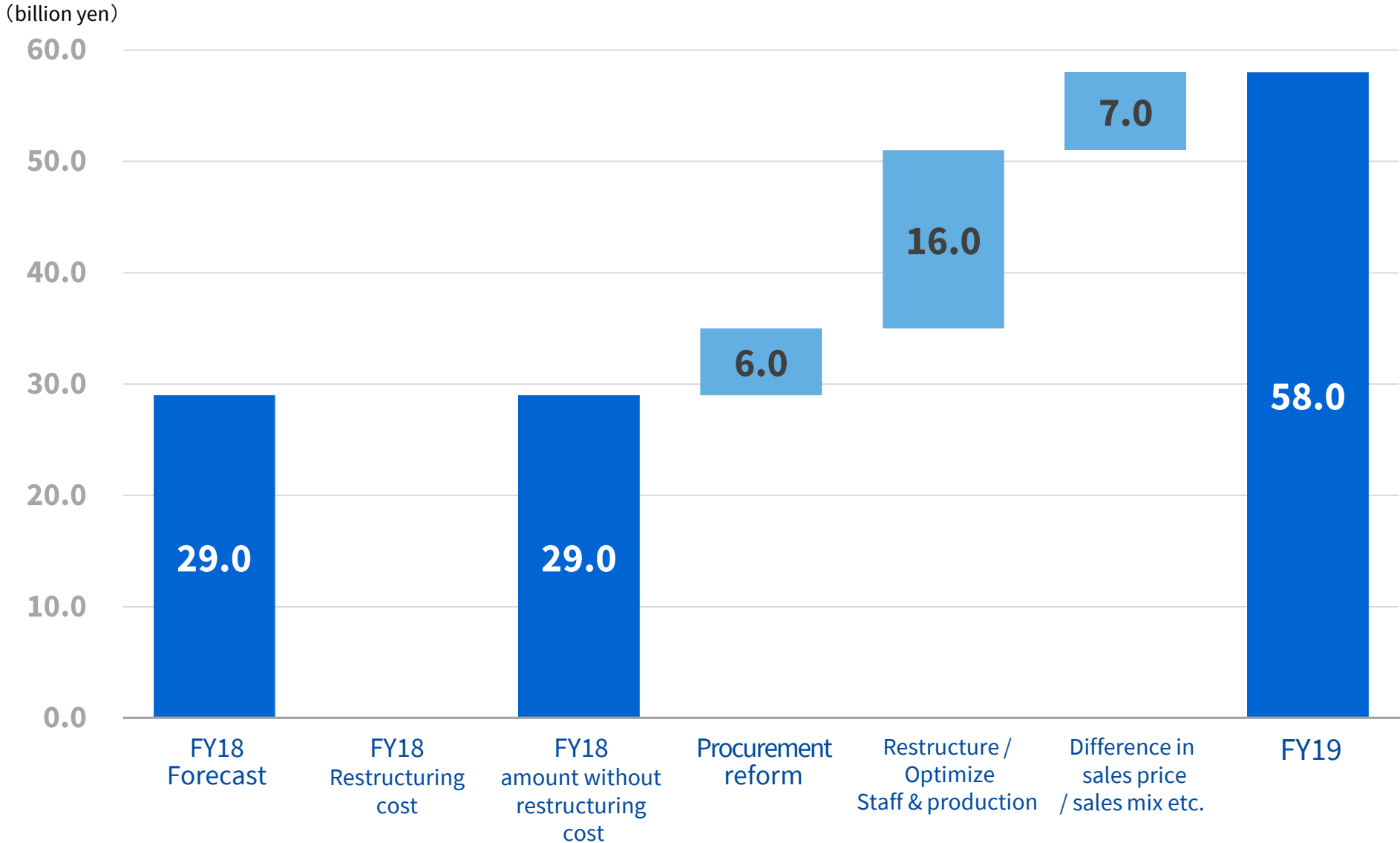
# Improvement Plans for Energy Systems' Operating Profit (FY18 → FY19)



# Improvement Plans for Infrastructure Systems' Operating Profit (FY18 → FY19)

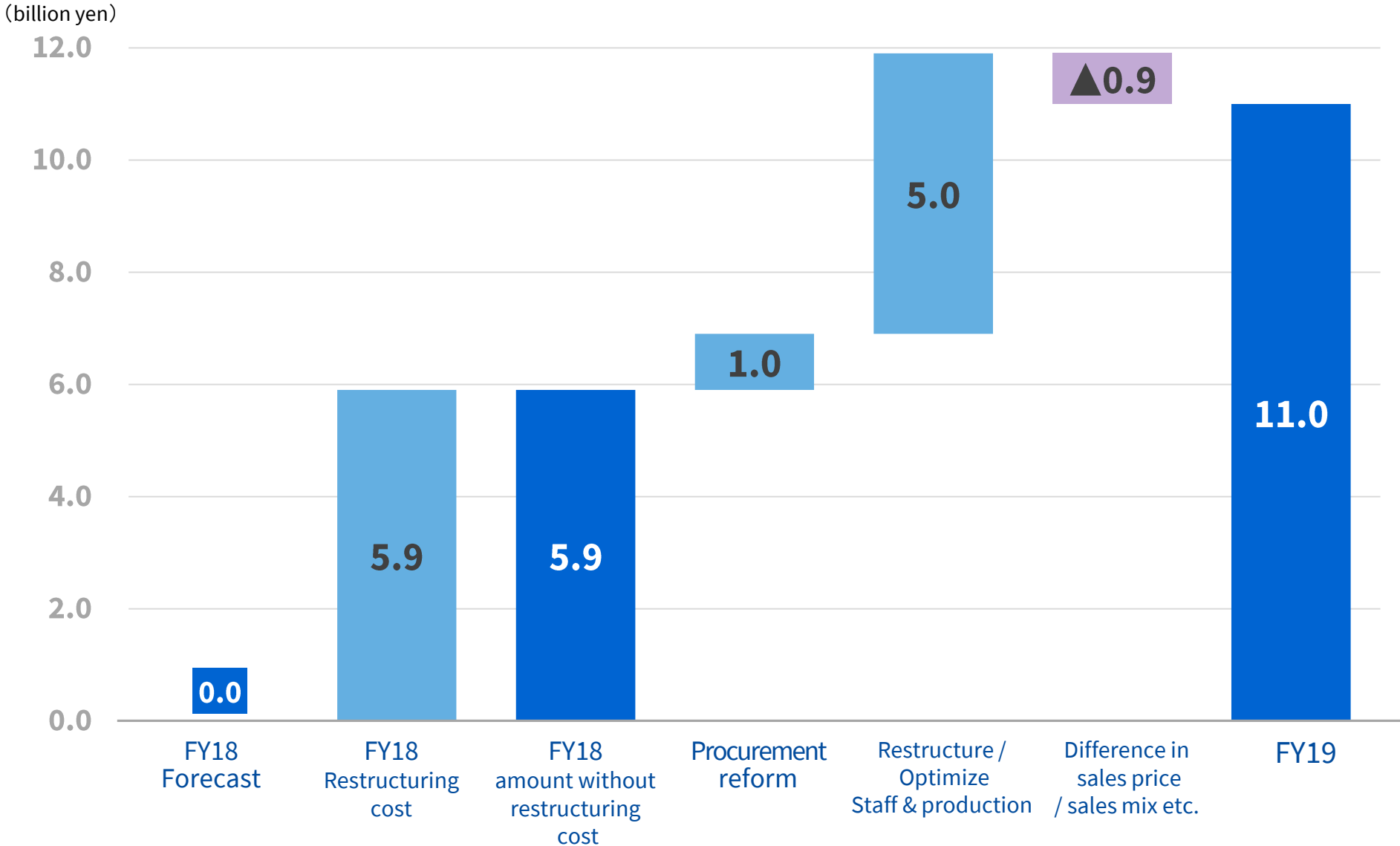


# Improvement Plans for Storage & Devices' Operating Profit (FY18 → FY19)





# Improvement Plans for Industrial ICT's Operating Profit (FY18 → FY19)



# Plan by Segments (Energy Systems)

Energy Systems	FY18	FY19	FY21
Revenue	650.0	610.0	640.0
Operating income	-6.0	28.0	52.0
EBITDA	4.0	39.0	64.0

(billion yen)

Nuclear Power	FY18	FY19	FY21
Revenue	171.3	170.0	180.0
Operating income	6.5	13.0	17.0
EBITDA	8.0	15.0	19.0

Thermal & Hydro	FY18	FY19	FY21
Revenue	277.3	230.0	230.0
Operating income	-8.7	8.0	19.0
EBITDA	-3.2	15.0	25.0

T&D	FY18	FY19	FY21
Revenue	218.7	220.0	240.0
Operating income	3.5	12.0	18.0
EBITDA	5.8	15.0	21.0

# Plan by Segments (Infrastructure Systems)

Infrastructure Systems	FY18	FY19	FY21
Revenue	1,260.0	1,270.0	1,490.0
Operating income	34.0	70.0	121.0
EBITDA	54.0	93.0	152.0

(billion yen)

Public Infrastructure	FY18	FY19	FY21
Revenue	397.3	410.0	440.0
Operating income	18.3	27.0	34.0
EBITDA	22.3	32.0	40.0

Rail & Industrial Systems	FY18	FY19	FY21
Revenue	375.9	390.0	520.0
Operating income	2.3	13.0	39.0
EBITDA	8.0	19.0	50.0

Building & Facilities	FY18	FY19	FY21
Revenue	566.7	600.0	690.0
Operating income	14.1	30.0	48.0
EBITDA	24.3	42.0	62.0

# Plan by Segments (Storage & Devices)

Storage & Devices	FY18	FY19	FY21
Revenue	870.0	860.0	940.0
Operating income	29.0	58.0	82.0
EBITDA	51.0	82.0	111.0

(billion yen)

Semiconductors	FY18	FY19	FY21
Revenue	365.5	380.0	420.0
Operating income	16.4	36.0	51.0
EBITDA	34.4	55.0	73.0

HDD and others	FY18	FY19	FY21
Revenue	504.5	480.0	520.0
Operating income	12.6	22.0	31.0
EBITDA	16.6	27.0	38.0

# Plan by Segments (Industrial ICT)

(billion yen)

Industrial ICT	FY18	FY19	FY21
Revenue	250.0	240.0	260.0
Operating income	0.0	11.0	20.0
EBITDA	3.0	14.0	23.0

Retail & Printing	FY18	FY19	FY21
Revenue	480.0	510.0	540.0
Operating income	19.0	22.0	29.0
EBITDA	27.0	31.0	38.0