Yokogawa Electric Corporation

Fiscal Years 2018-2020
Mid-term Business Plan
Transformation 2020

Takashi Nishijima

President and Chief Executive Officer

May 8, 2018

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Review of Transformation 2017 (TF2017) & Development Background of New Mid-term Business Plan

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TF2017 objectives

Establishing a foundation for growth by transforming our business structure

▶ Three reforms

Customer focus

-Develop business by pursuing close relationships with customers.
-Expand our business with our current customer base.

New value creation

-ICT advances are leading to new business opportunities.
-Co-create value across companies and markets by improving efficiency and achieving overall optimization.

Highly efficient global company

-Globally optimize all functions and operations.
-Be more profitable than our competitors.

▶ FY17 Targets

ROE (%)	**11 or more**
ROA (%)	**6 or more**
Sales (billion yen)	**440.0**
Operating income (billion yen)	**45.0**
ROS (%)	**10.2**
EPS (yen)	**100 or more**

*Exchange rate: 1$=110 yen

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TF2017 review: Three transformations

We recorded various achievements, but certain issues need to be addressed speedily.

Customer focus / New value creation

Achievements

- Significantly enhanced ability to provide solutions to customers by acquiring KBC
- Provision of new solutions using the GRANDSIGHT™ value co-creation environment
- Started development of IIoT architecture

Investment	Result	Achievement
Strategic investment (M&A)	34.1 billion yen	Prepared way for growth of solution service business through M&A and other means (9% sales growth starting in FY14)

Issues

- Creating synergy with KBC
- Roll-out of solutions business to new regions and industries
- Transformation of business model from the simple selling of product and services

Highly efficient global company

Achievements

- Centralized engineering function
- Improved efficiency of back office operations outside Japan
- Reduced production, logistics, and procurement costs

	FY14 result	FY17 initial target	FY17 result
Cost reduction (compared with FY14)	–	20 billion yen (3 years, cumulative)	13.2 billion yen (3 years, cumulative)
COGS ratio	58.3%	57% or less	56.9%
SG&A ratio	34.4%	32.8% or less	35.1%

Issues

- Reduction of fixed costs
- Achieving a more radical improvement in the efficiency of business processes
- Transformation of SG&A structure

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TF2017 review: Management indicators

- **The market downturn was greater than anticipated due mainly to declining oil prices.**
- **No matter what happened in our business environment, our major objective was to improve profitability.**

▶ Management indicators

	FY14 results (A)	TF2017 targets (B)	FY17 results (C)	Difference (C) – (B)
ROE (%)	8.6	11 or more	8.1	(2.9)
ROA (%)	4.1	6 or more	4.8	(1.2)
Sales (billion yen)	405.8	440.0	406.6	(33.4)
Operating income (billion yen)	29.8	45.0	32.7	(12.3)
ROS (%)	7.3	10.2	8.0	(2.2)
EPS (yen)	66.9	100 or more	80.27	(19.73)
Operating cash flow (3 years, cumulative, billion yen)	–	100.0	103.1	3.1
Exchange rate: 1$	110.58 yen	110 yen	110.70 yen	

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Changes to environment & current situation

- **Change to a growth model that is not dependent on conventional energy resources.**
- **We believe that the current situation provides us a good opportunity to use our strengths to help our customers realize radical improvements in productivity.**

〈Changing environment〉

Energy resource trends

- Slowing economic growth in emerging countries
- Decarbon-ization
- Shale oil & gas boom
- Role of oil

Innovations in digital technology

- IIoT
- Blockchain
- AI
- Big data

Pressing need to address social issues

- SDGs
- Paris-agreement COP21

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〈Yokogawa's strengths〉

Industry know-how

- Chemical
- LNG
- Power
- Down-stream
- Water

Rich installed base mainly in Asia and Middle East

- Japan
- Middle East
- Southeast Asia
- China

Problem-solving capabilities

Synaptic Business Automation™

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Development of new mid-term business plan

Transformation 2017

Establishing a foundation for growth by transforming our business structure

Due to factors such as a greater than anticipated decline in the oil price and slowing economic growth in emerging countries, **the market suffered a downturn and competition increased.**

Declining investment by our customers
(CAPEX stagnation ⇔ OPEX firm growth)

Our existing businesses face an uphill struggle: sales are flat for energy-related businesses.
Reform growth model: opportunities for growth as a result of innovations in digital technology, SDGs, and other changes in our external environment

In order to improve profitability, **we must continue to transform ourselves.**

New mid-term business plan
Transformation 2020

Creating opportunities and establishing a foundation for growth

Build a sustainable society.

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Yokogawa's Long-term Business Framework

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Long-term business framework

Vision Statement	Through "Process Co-Innovation," Yokogawa creates new value with its customers for a brighter future.

Delivering maximum economic value to our customers and addressing social issues
Benefiting society and the environment through the solutions that we provide to our customers

Business areas to focus on		
	Mid- to long-term view	✓ Natural resources, energy, and material-related industries ✓ Industries supporting health and the enrichment of lives
	Long-term view	✓ **Bio-economy business**

Addition of bio-economy to business focus areas

- Promising new markets are expected to emerge in the health and food industries
- Ability to utilize the measurement and control expertise and technologies that we have developed through our work for customers in the manufacturing sector
- Our efforts in the bioprocess technology field are contributing to the achievement of a sustainable society

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Overview of long-term business framework and mid-term business plan

2015 | 2020 | 2025 | 2030 | 2050

Transformation 2017

TF2017

- Customer focus
- New value creation
- Highly efficient global company

Transformation 2020

TF2020

- Transformation of existing businesses
- Creation of new businesses and transformation of business model
- Improvement of productivity through Group-wide optimization

Digital Transformation

Mid-term business plan

Phase1 : 2015 - 2017
Establishing a foundation for growth by transforming our business structure

Phase2 : 2018- 2020
Creating opportunity and establishing foundation for growth

Phase3 : 2020 -
Growth to become an even more profitable company

Long-term business framework

Sustainability targets: Three goals

Net-zero emissions | Well-being | Circular economy

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Sustainability targets: Three goals

Selected themes that will have a major impact on our customers, society, and the environment and which we seek to address through our business activities

Vision toward 2050 (Three goals)	**Achieve** **Net-zero emissions**	**Ensure** **Well-being**	**Make transition to** **Circular economy**
Material theme and sustainability stories	**Renewable and low-carbon energy** Reduction of CO2 emissions through offering of renewable energy and LNG solutions	**Life innovation and safety** Support people's health and prosperity through provision of life-innovation solutions and assurance of safe and comfortable workplaces	**Energy saving and resources** Contribute to sustainability and economic growth through stable and efficient operation, and resource regeneration
Related SDGs target	7 AFFORDABLE AND CLEAN ENERGY; 13 CLIMATE ACTION	2 ZERO HUNGER; 3 GOOD HEALTH AND WELL-BEING; 8 DECENT WORK AND ECONOMIC GROWTH	6 CLEAN WATER AND SANITATION; 7 AFFORDABLE AND CLEAN ENERGY; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

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New Mid-term Business Plan

Transformation 2020

Creating opportunity
and establishing foundation for growth

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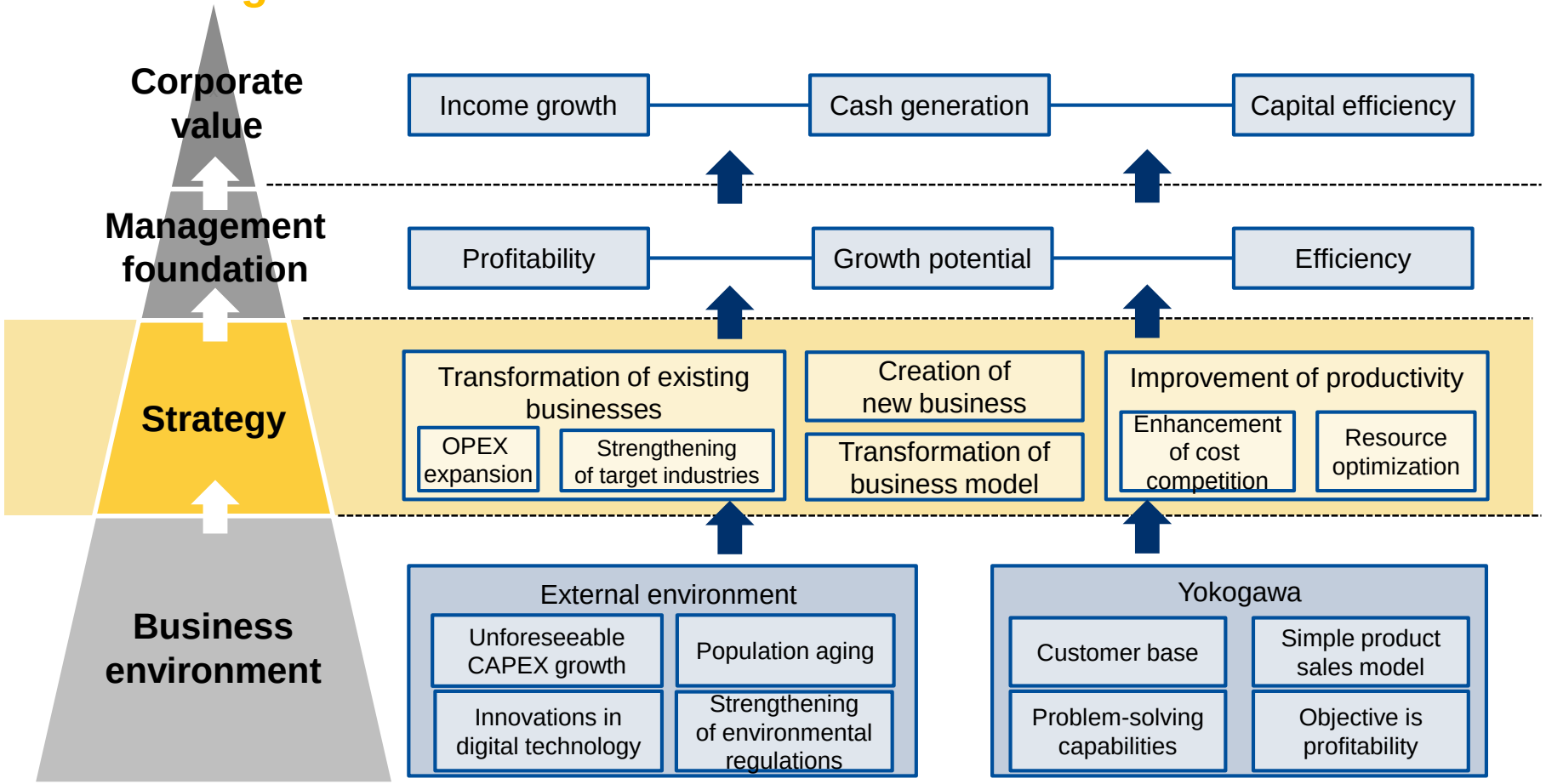
Transformation 2020 (TF2020) overview

Based on an accurate understanding of our business environment, we have formulated a strategy for maximizing our corporate value over the mid- to long-term



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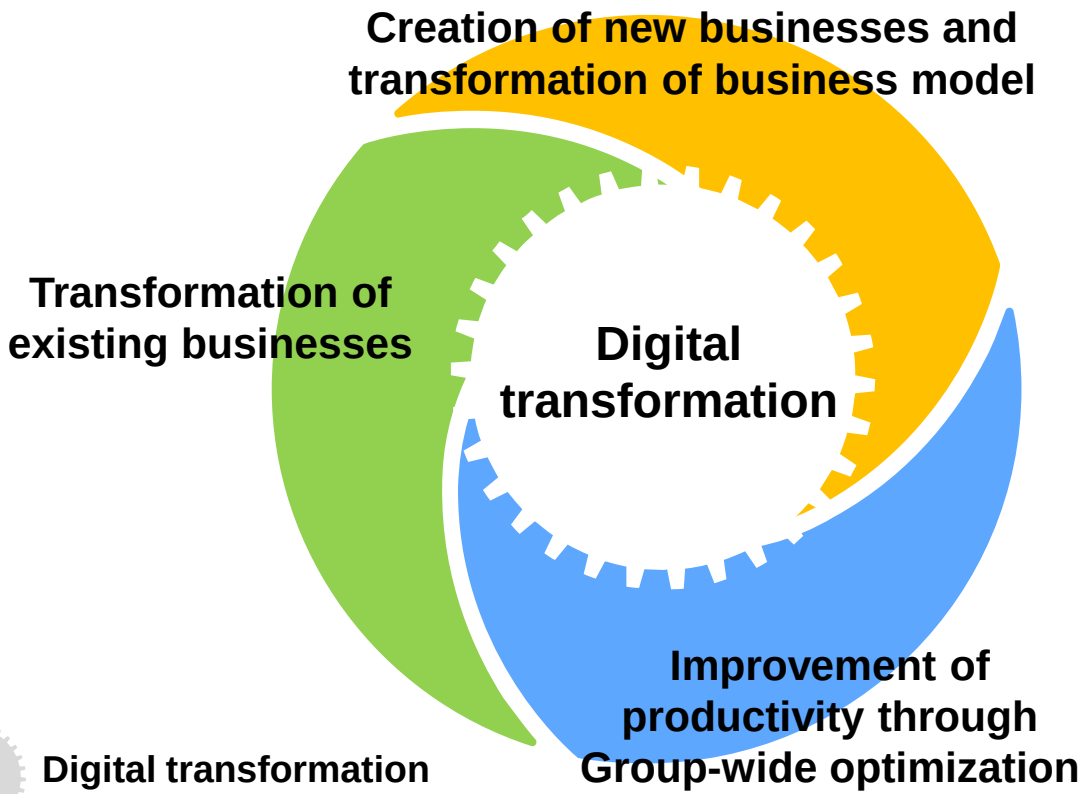
TF2020 basic strategy

Transform our businesses to achieve a sustainable society.



Working with customers to radically improve productivity

- Expansion of the OPEX business
- Further strengthening of target industries

Sustainably creating value through innovation

- Creation of life innovation business
- Creation of recurring model business

Significantly improving business efficiency

- Enhancing cost competitiveness
- Optimizing utilization of resources

Digital transformation

- Creating digital businesses
- Transforming our business processes
- Strengthening our information technology infrastructure

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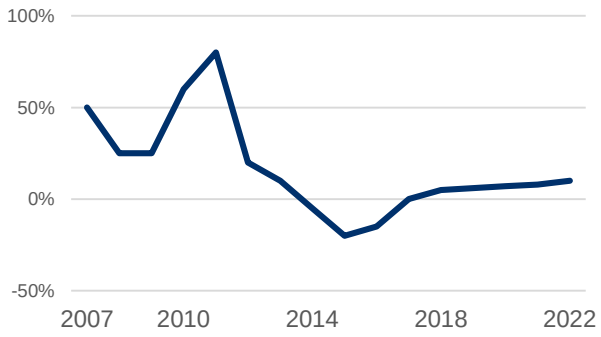
Expansion of OPEX business

Focusing on our installed base to expand the OPEX business

Background

- Customers are shifting investment from CAPEX to OPEX.
  -CAPEX: New plant construction
  -OPEX: Revamp of existing plants to improve productivity

Oil & Gas Industry, CAPEX growth ratio for IA market



Source: ARC Capital Expenditure Report

Strategy

- Expand our Japan solutions business and KBC's consulting business to other regions and industries.
- Utilize data obtained from a rich installed base to optimize the service business.

Target

OPEX growth*: **7 to 10%** per year

* Control business OPEX orders
Note: Project orders exceeding 1 mil. USD are considered CAPEX; anything less than this amount is regarded as OPEX.

Portfolio

- Control systems, field instruments
- KBC consulting
- Energy-saving, cyber security, and other solutions

KBC
A Yokogawa Company

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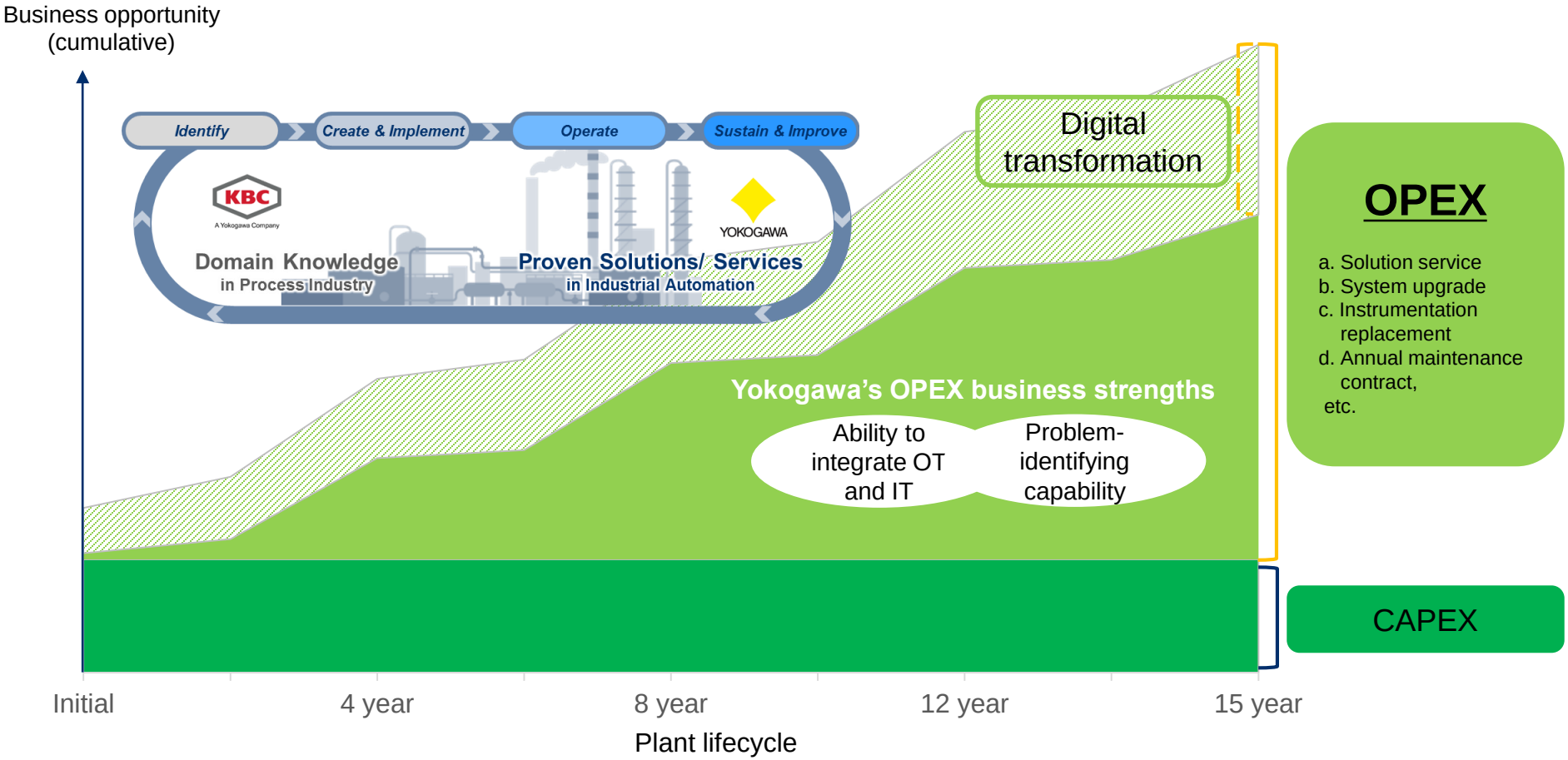
Plant lifecycle (example of a Japan chemical project)

An OPEX business is cumulative, providing solutions over the entire lifecycle of a plant.

Yokogawa has many opportunities in this field to exercise its strengths.



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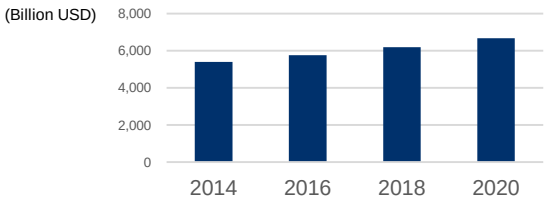
Expansion of business in growth industries

Background

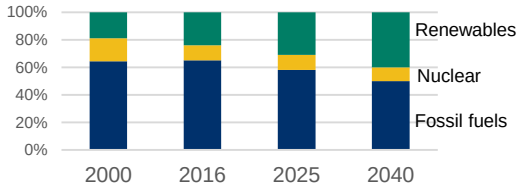
- Investment is expected to increase in the chemical industry due to economic growth in emerging countries and strengthening environmental regulations.
- Efforts to reduce CO2 emissions by building renewable energy plants are accelerating.

Chemical market outlook



Source: IMF World Economic Outlook Database, BTMU

World electricity generation by source (New policies)



Source: IEA, World Energy Outlook 2017

Strategy

- Expand our bulk chemical and specialty chemical businesses outside Japan.
- Develop new renewable energy markets.

Target

Targeted growth*: **3 to 5%** per year

*Control orders in chemical and renewable energy industries

Portfolio

- Control systems, field instruments
- Manufacturing execution systems
- Information systems (asset management systems)
- KBC consulting

KBC
A Yokogawa Company

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Creation of life innovation business

Focusing on the pharmaceutical and food industries, establish a support business that improves safety and enriches lives.

Environmental changes and issues

- The business environment has changed significantly due to issues such as population growth in developing countries and population aging in developed countries.
- The need to address a variety of global social issues is leading to the development of bio technology solutions using genome and digital technologies and a change in general attitudes on health, food, and medicine.

Population & food issues	Population aging	Developing genome technology	Drug development process (especially bio medicine)	Mass production tech
Increasing medical bills	Utilizing bio technology	**Pharmaceutical and food industries**	Safety management tech	Logistics management tech
Need for safety	Digital technology innovation	Health consciousness	Quality assurance/management tech	Reduction of food waste

Aim

- Through the use of measurement, control, and information technology, radically improve productivity across the entire value chain, from basic research to logistics and services.

Strategy

- Expand business based on existing pharmaceutical/food industry businesses and new technologies and products that are under development.
- Expand solutions portfolio by actively utilizing external resources and M&A.

Target

Through new businesses, increase orders* **2 to 3 times** by FY20 (compared to FY17)

***Orders for pharmaceutical and food industries** ***FY17 result: approx. 10 billion yen**

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Solutions that improve safety and enrich lives

Areas in which we can make an important contribution in addressing social issues and will seek to rapidly commercialize new solutions.

Basic research | Applied research | Development | Quantity production | Logistics & service

Pharmaceutical, Food

Dotted lines indicate future release plan

- Existing measurement products

(Confocal scanner units, etc.)

CSU-W1

- Solution for cell-based manufacturing
- Solution for regenerative medicine
- Solution for single-cell analysis
- Solution for biological contamination management

- Existing control solutions
  - Quality management
  - Production management
  - Manufacturing management
  - Asset management
  - Process control
  - Field instruments

MES package for pharmaceutical and food industries

M&A, alliance

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Moving to a recurring business model

Transform from simple selling model to recurring model

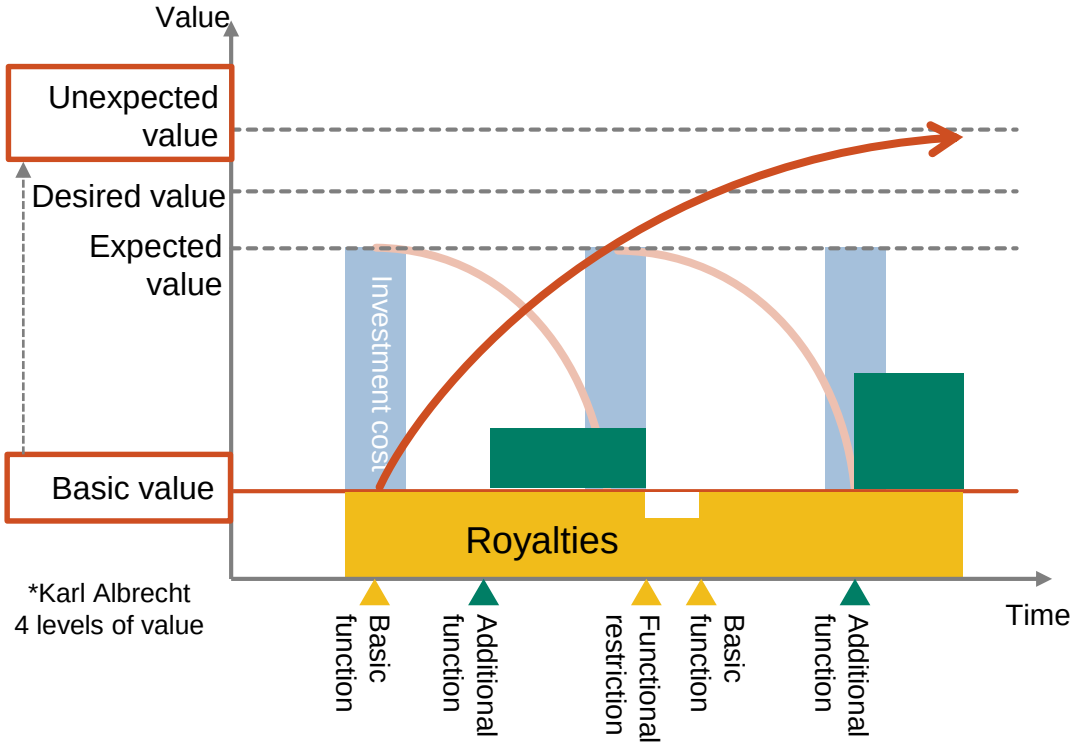
- Benefit: Reduction of customers' initial costs and stabilizing our revenue
- Strategy: Use the IIoT cloud platform that is under development.
  First, roll this out to new businesses. Then, using the know-how that has been gained, roll out to existing businesses.

Simple selling model

- Need to adapt to technology
- Continue maintenance to maintain value
- When replacing, opportunity for other companies to enter the project

Recurring model

- Platform is always up to date
- Improve functionality with periodic application update
- Personalized services



*Karl Albrecht
4 levels of value

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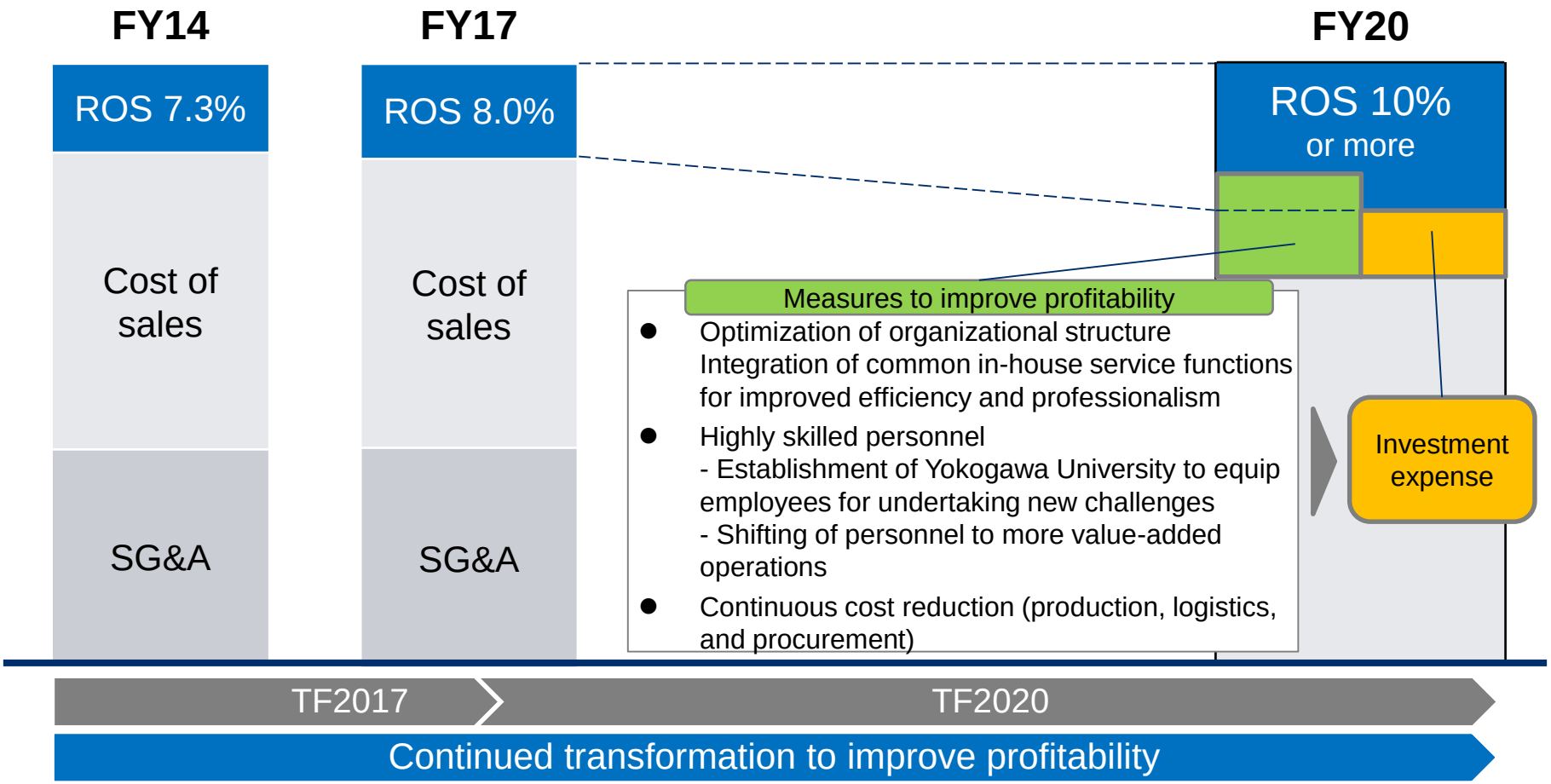
Improvement of productivity through Group-wide optimization

Establish foundation for mid- and long-term growth: Improve profitability to generate the funds needed to invest in growth (10 billion yen).



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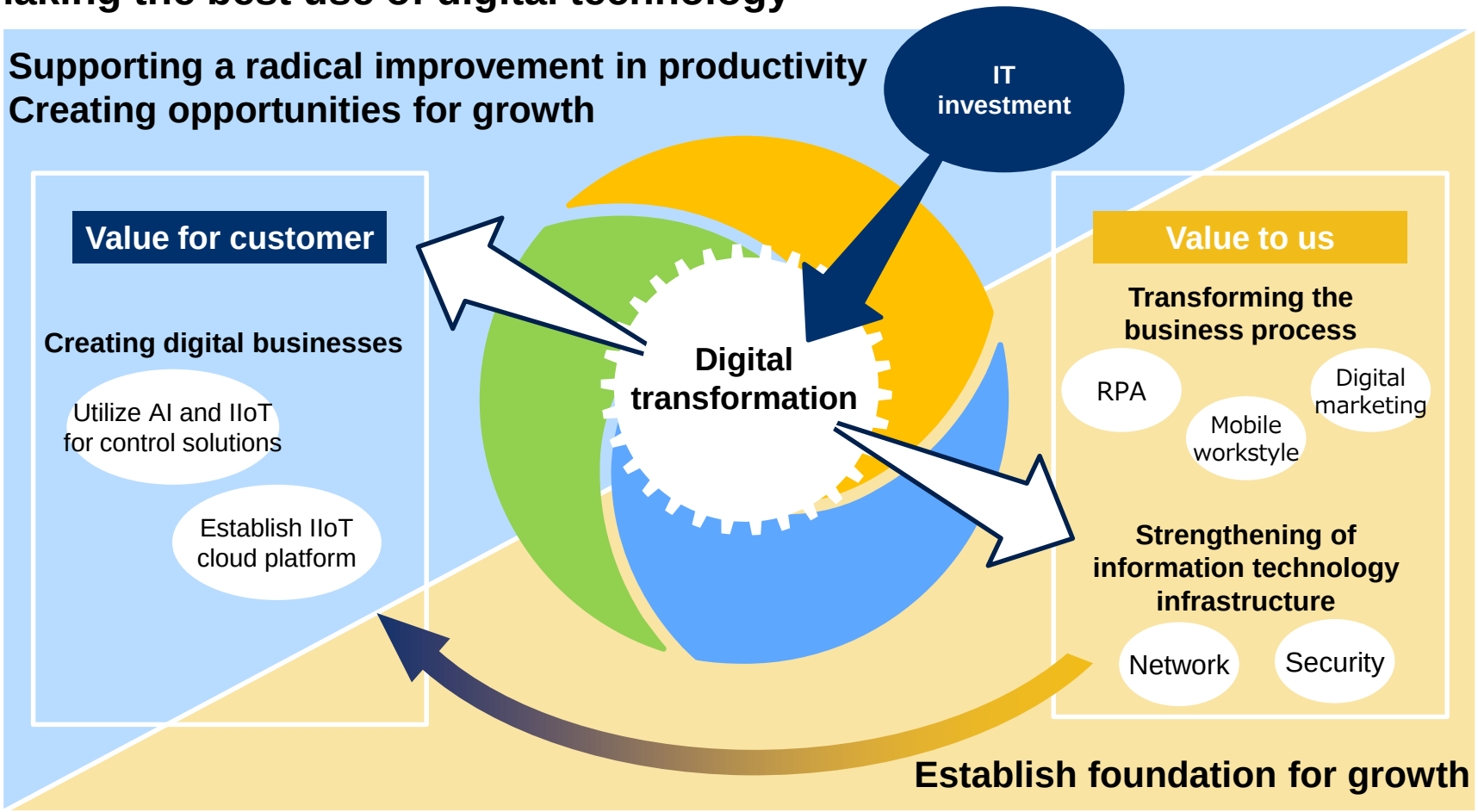
Digital transformation

Digital technology is the foundation for all our transformations.

Creating opportunities and establishing a foundation for growth by making the best use of digital technology



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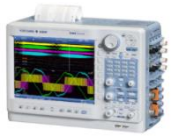
Measurement business, aviation & other businesses

Measurement

- Focusing on competitive products
- Targeting new growth markets



Oscilloscopes, optical test equipment

Aviation & other

- Transform into growing businesses

Flat panel displays, gyrocompasses

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Management indicators

By creating opportunities and establishing a foundation for growth, maximize corporate and shareholder value over the mid- to long-term.

▶ Points

- **Expanding business in focus areas and exceeding the market growth rate**
- **Increasing profitability regardless of what happens in external environment**
- **Reallocating management resources to focus areas**
- **Maximizing cash generation by increasing income and improving capital efficiency**

▶ Targets

Order & sales growth	**3** to **5**%/ year
EPS growth	**7** to **9**%/year*1
ROS	**10**% or more (FY20)
ROE	**10**% or more (FY20)
Organic FCF*2	**85** billion yen or more (3 years, cumulative)

Exchange rate (1$): 110 yen

*1 Excluding the FY17 impairment of goodwill, credit to allowance for doubtful accounts, and asset sales

*2 **Free cash flow (FCF) + strategic investment (3 year cumulative total of 70 billion yen)**

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Treasury strategy and capital policy

Prioritize investments that maximize corporate value over the mid- to long-term.

Also, proactively increase dividends.

Organic FCF 85 billion yen or more
(3 years, cumulative)
Free cash flow (FCF) + Strategic investment

+ Cash

Precondition: keep shareholder capital at a level that can maintain an A rating

① Strategic investment cap

M&A, alliances: 70 billion yen

- Prioritize investment in the transformation of existing businesses and the creation of new businesses.
- Purposes include acquisition of technologies, sales channels, products and services, customers, human resources, and know-how.

② Return to shareholders

Stable and sustainable dividend payment

- Dividend payout ratio: seek to keep at over 30%

Even when temporary factors lead to a downturn in financial results, maintain a stable dividend rate based on the equity dividend rate.

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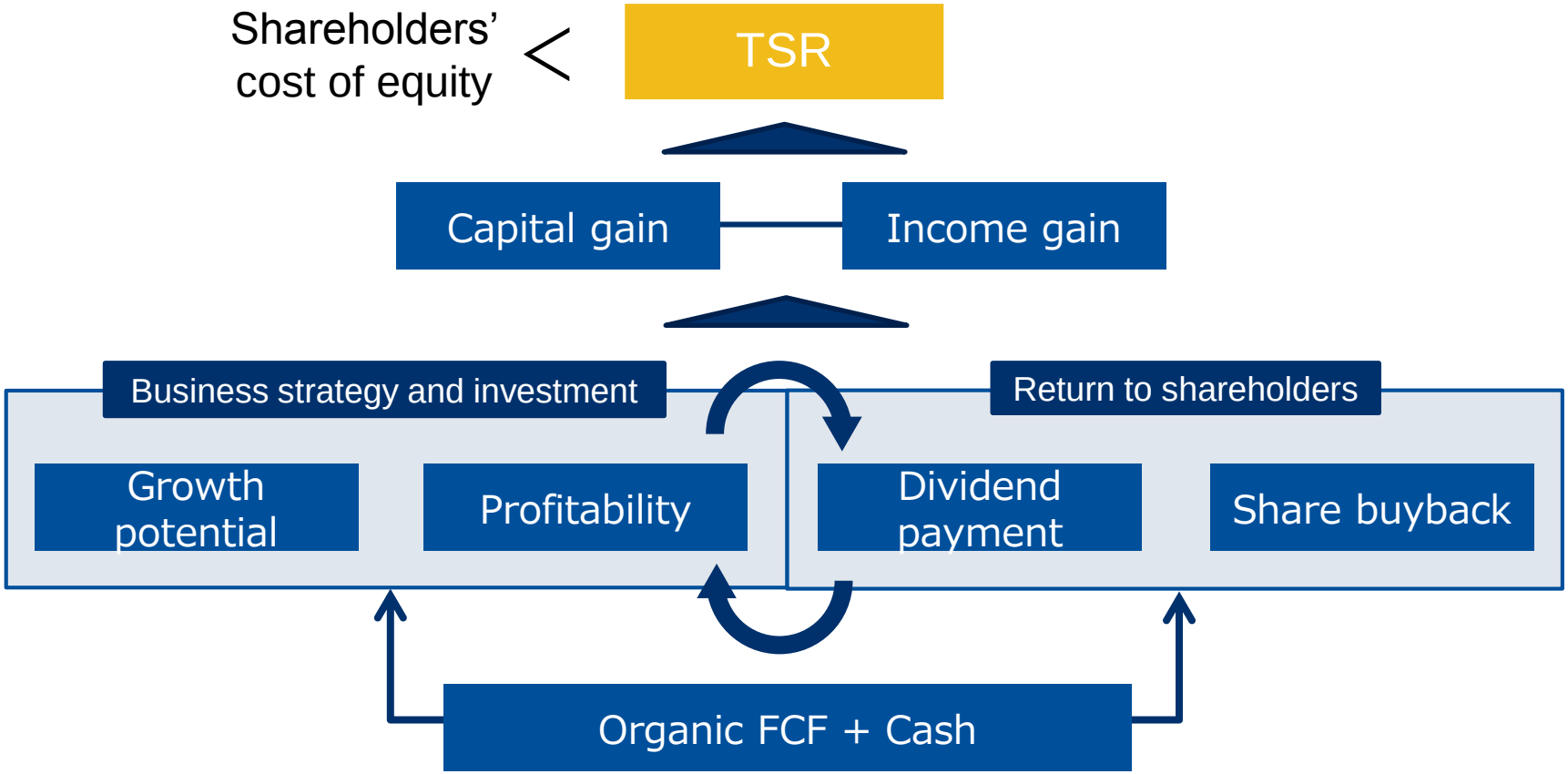
Shareholder value

Ensure that TSR* exceeds shareholders' cost of equity while seeking to maintain a close dialogue with the capital markets (investor relations).

Maximizing the shareholder value over the mid- and long-term



*TSR : Total Shareholders Return

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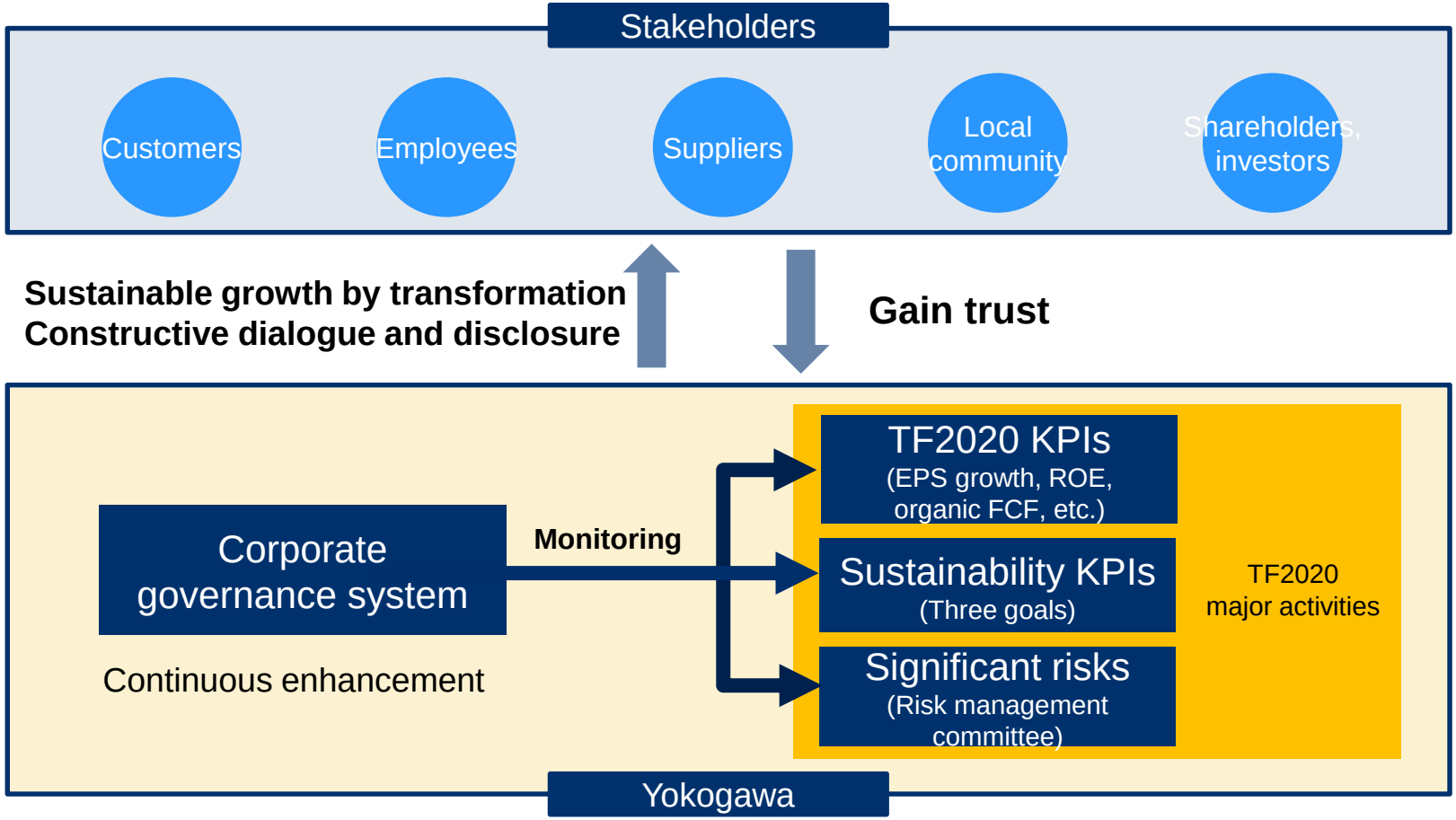
Corporate governance

While monitoring to ensure the achievement of all key TF2020 transformation targets, work to gain the trust of all stakeholders.



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Co-innovating tomorrow™

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Reference: Enhancement of corporate governance

Year	Action	Directors			Auditors		Officers	
		In	outside	Outside %	in	outside		(doubling as board member)
2003	Introduced outside directors	7	1	13%	2	2	24	6
2004	Abolished retirement bonuses for directors	7	1	13%	2	3	24	6
2005		7	1	13%	2	3	26	6
2006	Introduced one year tenure system for directors and revised articles of incorporation to reduce number of directors (25⇒15)	9	1	10%	2	3	27	7
2007	Increased number of outside directors Introduced takeover defense measures	8	2	20%	2	3	29	5
2008		7	2	22%	2	3	28	5
2009	Increased number of outside directors Renewed takeover defense measures	7	3	30%	2	3	15	5
2010		5	3	38%	2	3	14	3
2011	Renewed takeover defense measures Sold shares of a listed affiliate	4	3	43%	2	3	15	2
2012		4	3	43%	2	3	14	3
2013		4	3	43%	2	3	12	1
2014	Established Nomination and Compensation Committee (voluntary advisory body) Discontinuation (non-renewal) of takeover defense measures Introduced standards to ensure independence of outside directors	6	3	33%	2	3	12	3
2015	Established Nomination Advisory Committee and Compensation Advisory Committee (voluntary advisory bodies) Conducted outside evaluation of Board of Directors Established Yokogawa Corporate Governance Guidelines	6	3	33%	2	3	11	3
2016	Increase number of outside directors Introduction of a Restricted Stock Compensation Plan	6	4	40%	2	2	12	3
2017	Appointed a woman as an outside member of the Audit & Supervisory Board Appointed 2 foreign nationals as officers	6	4	40%	2	3	17	4
2018 (Plan)	**Abolishment of the Senior Advisor, Advisor, and Honorary Corporate Associate Positions An Outside Director will be nominated for the position of chairman of the Board of Directors Introduction of new performance-linked stock compensation plan (performance share unit plan)**	**5**	**4**	**44%**	**2**	**3**	**17**	**4**

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Reference: Yokogawa's main ESG indexes

As of May 2018

DJSI-Asia Pacific
FTSE4Good Index Series
MSCI ESG Leaders Indexes
CDP
MS-SRI
FTSE Blossom Japan Index
MSCI Japan ESG Select Leaders Index
MSCI Japan Empowering Women Index

MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM

FTSE4Good

MSCI 2017 Constituent MSCI ESG Leaders Index

CDP DISCLOSURE INSIGHT ACTION

MS-SRI モーニングスター社会的責任投資株価指数 Morningstar Socially Responsible Investment Index

FTSE Blossom Japan

MSCI 2017 Constituent MSCI Japan ESG Select Leaders Index

MSCI 2017 Constituent MSCI Japan Empowering Women Index (WIN)

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The information pertaining to our business plans and forecasts that has been provided in this presentation and at analyst meetings contains forward-looking statements that are based on our management's current knowledge and require the making of assumptions about future events.

As such, it cannot be guaranteed that these statements will not differ materially from actual results.

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The information has not been restated to reflect the revision of the initially allocated acquired costs that was decided upon finalization of the tentative accounting treatment.

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