

Industry solutions

We provide safe and secure water environments to **70 million** people per day worldwide through water, sewage and seawater desalination technologies.



The Hitachi Group's Growth Strategy

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History of Management Reforms and Hitachi's Mid-term

2012 Mid-term Management Plan 2010-2012

Rebuilding Management Recovery

2015 Mid-term Management Plan 2013-2015

Building a Foundation for Growth The Swapping Out of Businesses

Initiatives and Results

- (1) Creating a product-specific system with clear lines of responsibility and authority
 - Clarified responsibility and authority through introduction of an in-house company system
 - Consolidated businesses into six groups, focused on growth fields under an integrated system of operations, and accelerated management
- (2) Rebuilding or withdrawing from unprofitable businesses
 - Automotive systems business: Rebuilt through structural reform
 - Flat-panel TV business: Ceased in-house production
 - HDD business: Sold off after rebuilding
- (3) Strengthening cost competitiveness
 - Launched Hitachi Smart Transformation Project
 - Expanded centralized purchasing and global procurement
 - Consolidated and optimized production base placement

Looking Back and the Challenges Ahead

Looking Back

After booking its largest losses ever in fiscal 2008, Hitachi during the period covered by the 2012 Mid-term Management Plan advanced the rebuilding of its business. The rebuilding of the automotive systems business, the withdrawal from the internal manufacturing of flat-panel TV business, and the transfer of the HDD business all served to improve profitability, allowing Hitachi to concentrate on the Social Innovation Business that so effectively leverages the Company's strengths. In fiscal 2012, Hitachi consolidated operations into six strong groups and worked to speed up management through an integration of operations.

Hitachi's operating income ratio in fiscal 2012, the final year of the Mid-term Management Plan, fell short of the 5% target due to write-off associated with a sharp drop in material prices, as well as the booking of structural reform costs and reduced capacity utilization amid economic slowdown in China and Europe. However, it improved to 4.7% thanks to cost structure reforms, Hitachi Smart Transformation Project, in line with the Smart Transformation Project. In addition, after dropping to 11.2% in fiscal 2008, the stockholders' equity ratio recovered to 21.2% in fiscal 2012, while the D/E ratio narrowed to 0.75x over the same period, indicating a clear improvement in Hitachi's financial position as the company worked toward the establishment of a stable earnings base.

Challenges Ahead

- Further improvements in business profitability
- Strengthening the service businesses
- Global business development and establishing a management base that makes that possible

- (1) Promoting the Social Innovation Business on a global basis by strengthening front-line functions
 - Expanded service businesses using digital technologies
 - Strengthened digital capabilities through the acquisition of Pentaho
- (2) Reviewing non-core businesses
 - Thermal power business: Established joint-venture firm with Mitsubishi Heavy Industries
 - Air conditioning business: Established joint-venture firm with Johnson Controls
 - Batteries business: Hitachi Maxell relisted, with Hitachi drawing down its stake in the company
- (3) Promoting the globalization of Hitachi
 - Shifted rail business headquarters to the UK
 - Launched Global Performance Management to more effectively utilize global human resources

Looking Back

Hitachi during the period covered by the 2015 Mid-term Management Plan substantially revised its business portfolio as if sought to build a foundation for growth. The Company acquired Pentaho, which develops and markets big data analytics software, as part of its aim to strengthen and expand the global value chain in big data utilization, while also removing from consolidation its thermal power, air-conditioning, and batteries businesses. In addition, Hitachi moved its rail business headquarters to the UK as part of its effort to promote the globalization of the Company, appointing Alistair Dormer, currently serving as executive vice president, as the global CEO of the Company's rail business. In personnel evaluation systems, Hitachi introduced "Global Performance Management" as a mechanism under which compensation directly reflects personal performance assessments as well as the global common standards for job roles.

In fiscal 2015, the last year in the mid-term plan, the target was not achieved due to a delayed response to changing market conditions, including in the telecommunication and networks business, as well as losses due to insufficient management at a large overseas project. Another factor contributing to underperformance was the greater-than-expected increase in structural reform costs due to an acceleration in structural reforms following a deterioration in the market environment for the infrastructure systems, power distribution, and construction machinery businesses. However, operating income reached ¥600 billion, with the operating income ratio at 6%, signaling stability in the profitability and an improved ability to generate cash.

Challenges Ahead

- Accelerate management's speed to more quickly respond to changes in the market environment
- Strengthen project management
- Take action regarding unprofitable businesses

	2012 Mid-term Management Plan ¹				2015 Mid-term Management Plan ¹			
	2010	2011	2012	2012 (target)	2013	2014	2015	2015 (target)
Revenues (¥ billion)	9,315.8	9,665.8	9,041.0	10,000.0	9,563.7	9,774.9	10,034.3	10,000.0
Overseas revenue ratio (%)	43	43	41	—	45	47	48	More than 50%
Adjusted operating income (¥ billion)	444.5	412.2	422.0	—	538.2	641.3	634.8	—
Adjusted operating income ratio (%)	4.8	4.3	4.7	More than 5%	5.6	6.6	6.3	More than 7%
EBIT (¥ billion)	443.8	573.2	358.0	—	585.6	534.0	531.0	—
EBIT margin (%)	4.8	5.9	4.0	—	6.1	5.5	5.3	More than 7%
Net income (loss) attributable to Hitachi, Ltd. stockholders (¥ billion)	238.8	347.1	175.3	200.0 level	264.9	217.4	172.1	More than 350.0
Total Hitachi, Ltd. stockholders' equity (%)	15.7	18.8	21.2	20	24.1	23.7	21.8	More than 30% ²
Return on assets (%)	3.3	4.4	2.5	—	3.5	2.9	2.4	—
Return on equity (%)	17.5	21.6	9.1	—	11.2	7.8	6.1	—
D/E ratio (including non-controlling interests) (times)	1.03	0.86	0.75	Less than 0.8 times	0.73	0.83	0.87	—
Operating cash-flow margin (%)	9.0	4.6	6.5	—	4.6	4.6	8.1	—

¹ The above figures are prepared in accordance with U.S. GAAP through fiscal 2013 and with the International Financial Reporting Standards (IFRS) from fiscal 2014.

² Manufacturing and services, etc.

Management Plans

2018 Mid-term Management Plan 2016-2018

Achieving Growth in Social Innovation Utilizing Digital Technologies

- (1) Transforming into a three-level structure, composed of front-line, platform, and product tiers
 - Introduced business unit system
- (2) Strengthening of global front-line functions
 - Bolstered global front-line operations through acquisitions (Ansaldo STS, Sullair)
- (3) Launching Lumada to expand the digital solutions business
 - Launched Lumada
 - Established Hitachi Vantara to deliver digital solutions
 - Lumada business revenues grew to about ¥1 trillion
- (4) Conducting an ongoing review of company businesses
 - Logistics business: Partial sell-off of Hitachi Transport System stock
 - Financial services business: Partial sell-off of Hitachi Capital stock
 - Power tools business: Sell-off of Hitachi Koki
 - SPE business: Partial sell-off of Hitachi Kokusai Electric stock
 - Automotive systems business: Sell-off of Clarion

Looking Back

With the goal of strengthening front-line functions, including the number of sales, system engineers, and consultants, and creating a system of collaborative cooperation with our customers, Hitachi from fiscal 2016 moved from a product specific company system to a three-level system, composed of front-line, platform, and product tiers. With the three-level system, Hitachi bolstered the management speed. Specifically, business units (BUs), which had been subdivided from the former in-house companies to develop and provide services closely to the customer, and group companies, including listed subsidiaries, were positioned to each level. We also strengthened project management and worked to improve profitability at individual businesses. With the aim of enhancing on a global basis the front-line functions central to the Social Innovation Business, we acquired 100% stakes in Ansaldo STS, which supplies signal equipment and control systems to 30 or more countries and regions, and Sullair, which manufactures, sells, and services air compressors to about 4,000 customers, mainly in North America. In December 2018, we signed an agreement for the acquisition of ABB's power grid business. The goal of each of these is the acquisition of a robust global sales network and the expansion of the Social Innovation Business.

To add to this, we launched Lumada in May 2016. Lumada takes the essential

technologies for delivering advanced solutions, including AI, analytics, security, robotics and control technologies distributed across the company and applies them to a common platform, creating a system that comprehensively and organically leverages the resources of the entire Hitachi Group to quickly and flexibly create new innovations. Thanks to a steady increase in customer collaborations, Lumada business revenues are trending as planned and have already exceeded ¥1 trillion. Moreover, in addition to reorganizing our business portfolio, including selling off listed subsidiaries with little connection to the core Social Innovation Business, we continued to reform our cost structure, which contributed to the adjusted operating income ratio meeting our Midterm Management Plan target and reaching a record level.

Challenges Ahead

- Aggressive investment in key areas of focus
- Improved capital efficiency
- Accelerated innovation and active use of digital technologies with a focus on Lumada

	2018 Mid-term Management Plan ¹⁾			
	2016	2017	2018	2018 (target)
Revenues (¥ billion)	9,162.2	9,368.6	9,480.6	10,000.0
Overseas revenue ratio (%)	48	50	51	More than 55%
Adjusted operating income (¥ billion)	587.3	714.6	754.9	—
Adjusted operating income ratio (%)	6.4	7.6	8.0	More than 8%
EBIT (¥ billion)	475.1	644.2	513.9	—
EBIT margin (%)	5.2	6.9	5.4	More than 8%
Net income (loss) attributable to Hitachi, Ltd. stockholders (¥ billion)	231.2	362.9	222.5	More than 400.0
Total Hitachi, Ltd. stockholders' equity (%)	30.7	32.4	33.9	—
Return on assets (%)	3.0	5.0	3.3	More than 5%
Return on equity (%)	8.1	11.6	6.8	—
D/E ratio (Including non-controlling interests) (times)	0.29	0.23	0.23	Less than 0.5 times
Operating cash-flow margin (%)	6.9	7.8	6.4	More than 9%

Outline of the 2021 Mid-term Management Plan

In May 2019, Hitachi announced its new Mid-term Management Plan, covering the three years from April 2019.

Key Points in Hitachi's New Mid-term Management Plan

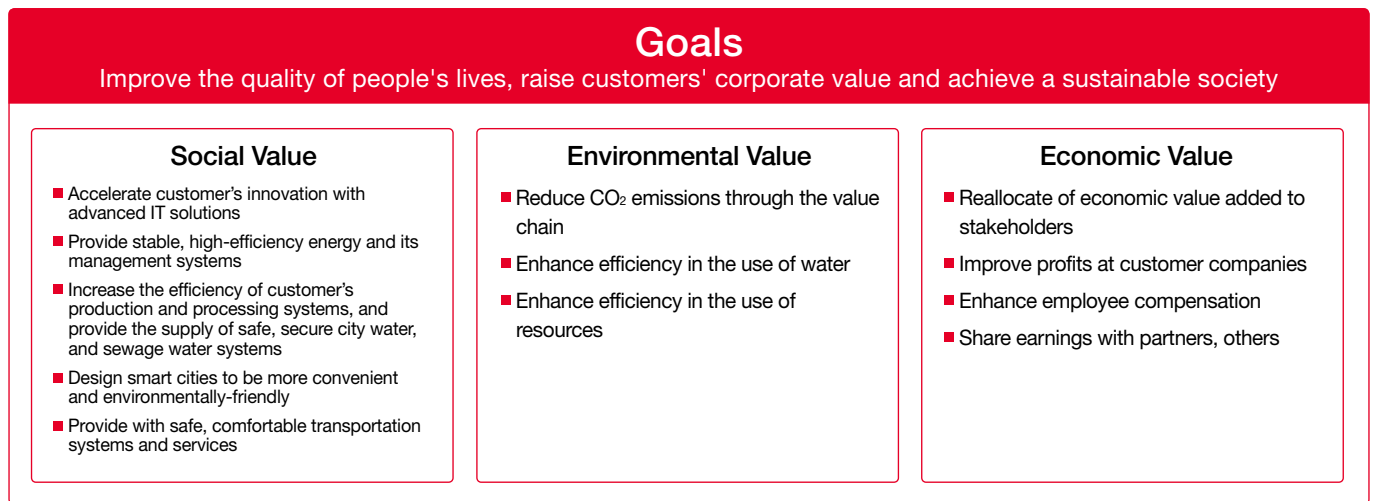
Aiming to be a global leader in the Social Innovation Business, Hitachi is focused on moving into a "growth mode" during the period covered by the 2021 Mid-term Management Plan.

Hitachi since its founding has contributed to improvements in people's quality of life by focusing on the social innovation business to resolve issues confronting society.

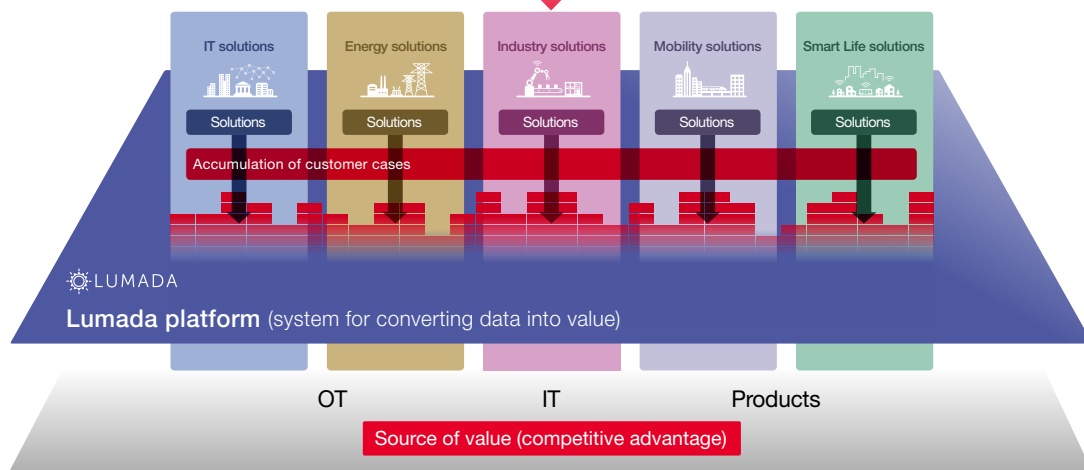
During the period covered by the 2021 Mid-term Management Plan, Hitachi will continue to advance the Social Innovation Business, placing an emphasis on improving social, environmental, and economic value for its customers.

We believe there are three factors that could accelerate growth.

The first of these is aggressive investment, including in M&A. We are increasing investment 4x–5x from the previous Mid-term Management Plan to ¥2.0–¥2.5 trillion. Second, to ensure implementation of this kind of large-scale investment, we will, while maintaining financial discipline, utilize financial leverage, and improve management awareness of capital costs by introducing ROIC as a management indicator. Finally, we will expand our digital solutions offerings on a global scale, centered on Lumada, and accelerate innovation through enhanced collaboration with our customers.



Increasing the three values of social, environmental and economic by five-sector business and technology solutions



Lumada-Based Model for Providing Solutions



Aggressively Invest in Key Areas of Focus Targeting investment	Introduce ROIC to Boost Capital Efficiency	Accelerate Innovation	Expand Our Decarbonization Business	Strengthen Lumada
<ul style="list-style-type: none"> ■ Including for M&A, of ¥2.0–¥2.5 trillion over the next three years. (vs. ¥0.5 trillion over the three years in the 2018 mid-term Plan) ■ In addition to acquiring the ABB power grid business, we intend to invest in the IT and Industry sectors. ■ Hitachi will further strengthen to an unprecedented degree R&D and human resources development. <p>Capital Allocation Strategy ▶ P.34</p>	<ul style="list-style-type: none"> ■ The 2021 Mid-term Management Plan introduces ROIC as a KPI as part of our effort to improve management awareness of capital efficiency. ■ In order to enable largescale investment, Hitachi will utilize financial leverage to reduce the weighted average cost of capital (WACC). <p>Financial and Capital Strategy ▶ P.36</p>	<ul style="list-style-type: none"> ■ Hitachi is supporting and accelerating open innovation through collaboration with start-up firms, universities, and activities at “Kyōsō-no-Mori.” ■ Based on our 2021 human resources strategy, we are promoting the hiring, training of diverse human resources and the creation of diverse organizations. <p>Accelerate Innovation ▶ P.38</p>	<ul style="list-style-type: none"> ■ We are promoting the expansion of our decarbonization business in line with our long-term environmental targets <p>Environmental Vision and the Decarbonization Business ▶ P.46</p>	<ul style="list-style-type: none"> ■ We will use collaborative creation with our customers to expand the provision of digital solutions, centered on Lumada. <p>Strengthen Lumada ▶ P.48</p>

Performance targets (consolidated)

	FY2018 results	FY2019 forecast	FY2021 targets
Revenues	¥9,480.6 billion	¥9 trillion	CAGR more than 3%
Adjusted operating income ^{*1} (Adjusted operating income ratio)	¥754.9 billion (8.0%)	¥765.0 billion (8.5%)	More than 10%
EBIT (EBIT margin)	¥513.9 billion (5.4%)	¥750.0 billion (8.3%)	—
Operating cash flows (3-year cumulative)	¥1,966.7 billion	—	More than ¥2.5 trillion
ROIC	8.5%	10.3%	More than 10%
ROA	3.3%	—	—
Overseas revenue ratio	51%	—	More than 60%

Performance targets by sector

Sector	Item	FY2018 results	FY2019 forecast	FY2021 targets
IT	Revenues	¥2,121.6 billion	¥2,060.0 billion	¥2,600.0 billion
	Adjusted operating income (Adjusted operating income ratio)	¥230.1 billion (10.8%)	¥220.0 billion (10.7%)	¥338.0 billion (13.0%)
	ROIC	19.6%	15.9%	15.0%
Energy ^{*1 *3}	Revenues	¥456.6 billion	¥384.9 billion	More than ¥1,700.0 billion
	Adjusted operating income (Adjusted operating income ratio)	¥35.9 billion (7.9%)	¥24.9 billion (6.5%)	More than ¥170.0 billion (More than 10%)
	ROIC	5.8%	6.0%	7.5%
Industry ^{*1 *3}	Revenues	¥843.6 billion	¥839.6 billion	¥1,000.0 billion
	Adjusted operating income (Adjusted operating income ratio)	¥58.2 billion (6.9%)	¥58.4 billion (7.0%)	¥91.0 billion (9.1%)
	ROIC	9.0%	10.1%	10.8%
Mobility ^{*1}	Revenues	¥1,238.1 billion	¥1,155.0 billion	¥1,270.0 billion
	Adjusted operating income (Adjusted operating income ratio)	¥100.2 billion (8.1%)	¥96.2 billion (8.3%)	¥124.8 billion (9.8%)
	ROIC	13.6%	11.6%	13.1%
Smart-life ^{*2}	Revenues	¥1,816.0 billion	¥1,723.2 billion	More than ¥2,100.0 billion
	Adjusted operating income (Adjusted operating income ratio)	¥93.4 billion (5%)	¥119.0 billion (7%)	More than ¥210.0 billion (More than 10%)
	ROIC	10.0%	10.0%	More than 15%

^{*1} It includes the control system business reported on IT sector. ^{*2} It includes the healthcare business of Hitachi High Technologies. ^{*3} Figures for FY2018 except one-time expenses.

Capital Allocation Strategy

2018 Mid-term Management Plan Achievements and Issues 2018

■ Profitability Improves, Leading Toward Further Growth in Corporate Value

Under the 2018 Mid-term Management Plan, Hitachi promoted structural reforms in unprofitable businesses, enhanced project management and engaged in other efforts aimed at improving profitability. The Company also disposed of assets with earnings not expected to generate a return on equity or invested capital and implemented measures aimed at improving the Cash Conversion Cycle (CCC). These efforts resulted in ROA, a financial indicator, reaching 6.2% (excluding the temporary impact of a nuclear power station project in UK), which exceeded the 5.0% target set for fiscal 2018. In addition, the D/E ratio, a measure of financial discipline, was maintained at a level well below 0.5 times. However, we recognize that there are further challenges to maximize corporate value.

Retained earnings increased, while the dividend payout ratio and labor's share of income remained at the same level. To achieve further growth going forward, we must strategically allocate capital in investment areas.

To increase capital efficiency, we will further reduce assets not expected to meet investment capital, promote utilization of external capital markets using financial leverage, make an effort to understand risks according to changes in the business environment and attempt to strike a balance between efficiency and risk management.

Furthermore, we will promote management that is more aware than ever of capital costs, engage in a financial strategy aimed at further reductions in capital costs and monitor stock risk and return indicators represented by the β -value and manage them with the goal of optimizing them.

Corporate Governance Code revisions have been in effect since June 2018 and the way of dialogues with capital markets has changed, thus we recognize the necessity of innovation in conventional management methods. In addition to our basic approach to earnings plans and capital policies, we will indicate targets related to profitability and capital efficiency and explain how much shareholder returns in excess of capital costs we will generate over the medium to long term in light of business portfolio reorganization and the strategic allocation of management resources based on precise ascertainment of capital cost.

Measures Under the 2021 Mid-term Management Plan

■ Promoting ROIC Management with a Higher Awareness of Capital Costs

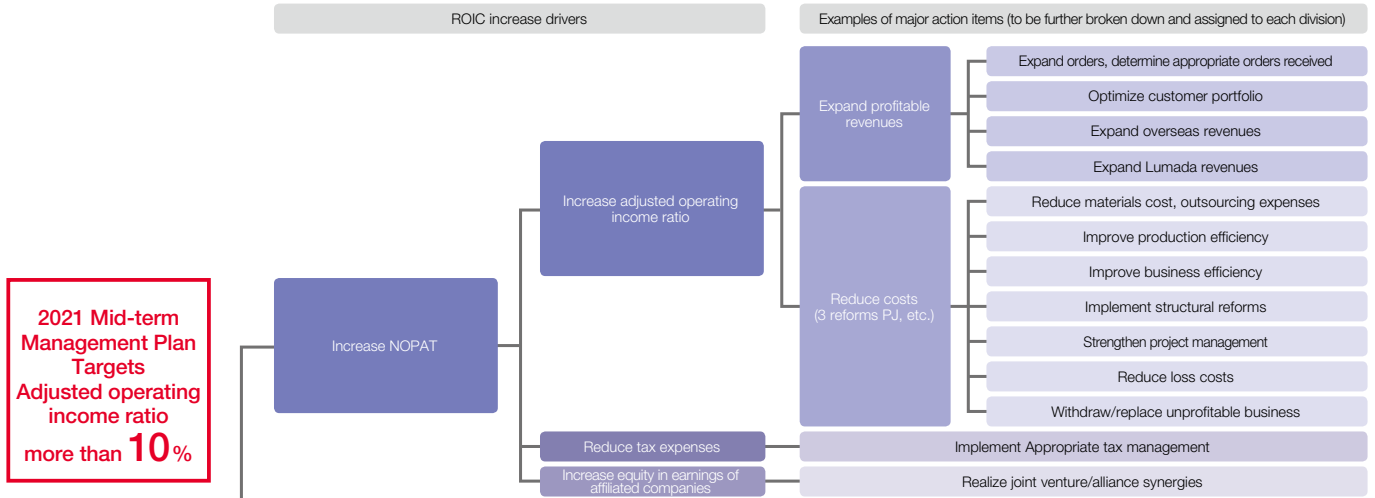
Under the 2021 Mid-term Management Plan, Hitachi Group will introduce Return on Invested Capital (ROIC) as a management indicator and promote the improvement of capital efficiency and the growth of highly profitable businesses through our management. ROIC is an indicator that evaluates returns generated by invested capital calculated by dividing business profit after taxes by invested capital. To increase returns, ROIC needs to exceed the weighted average cost of capital (WACC), which is the cost of raising invested capital.

Going forward, aiming for ROIC above 10%, we will strive to increase the difference between ROIC and WACC (ROIC spread) and increase shareholder value by strengthening profitability and reducing WACC through the use of financial leverage. To achieve this, we will improve adjusted operating income, while at the same time continuing to promote the disposition and sales of owning shares as well as real estate and other idle assets aimed at improving business asset efficiency with the aim of appropriately structural reforms of unprofitable businesses and countermeasures to businesses with challenges.

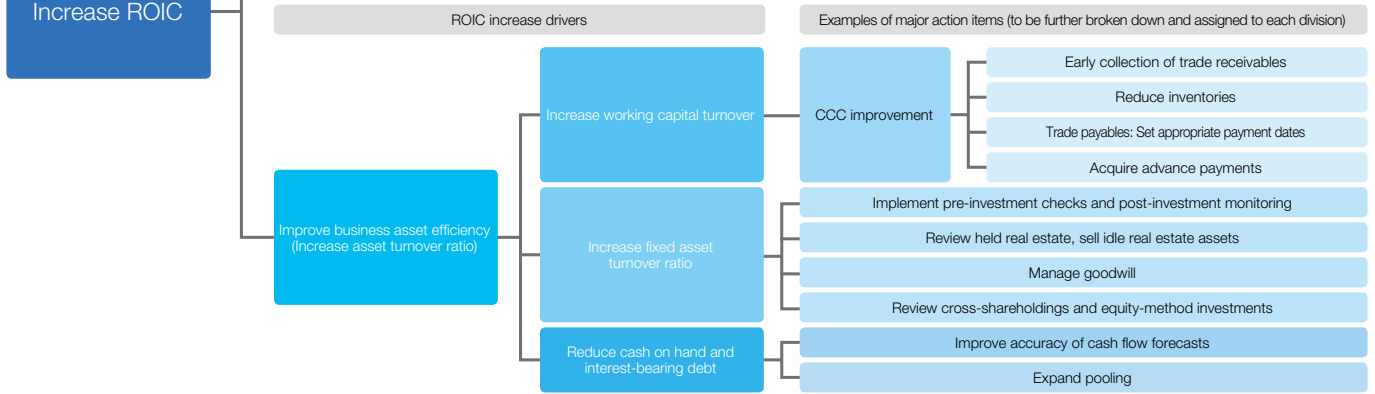
Proactive Investment in Growth Areas

While promoting management with an awareness of capital costs, we will make large-scale growth investments of approximately ¥2.0 to ¥2.5 trillion over the next three years using financial leverage that targets an optimal capital structure. Of this amount, we have already announced the investment of ¥1 trillion in the ABB power grid business, and positioning IT and industry as priority investment areas, we will attempt to expand our digital solutions business focused on Lumada, while at the same time targeting growth by strengthening services and products required for the provision of solutions. In terms of regional strategies, we will make the necessary investments focusing on the North American and Asia-Pacific regions, making bigger investments than ever before in an attempt to strengthen R&D and human resource development.

Improve profitability
(Increased NOPAT + equity in earnings of affiliated companies)

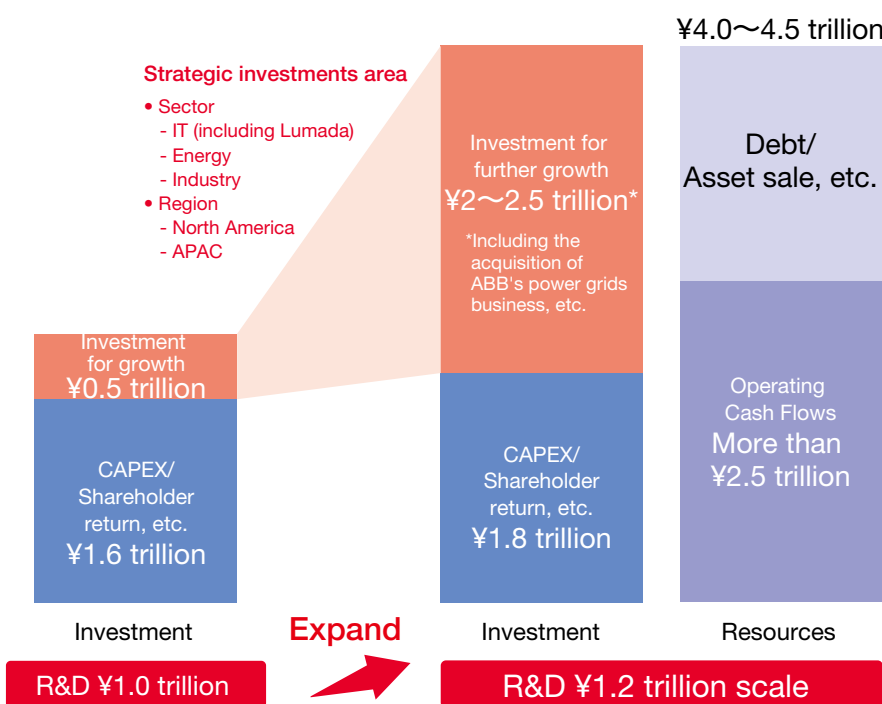


Improve asset efficiency
(Improved invested capital \approx business asset efficiency)



2018 Mid-term Management Plan

2021 Mid-term Management Plan



Basic investment policy

M&A

- Expand the digital solutions business while strengthening products and services and securing human resource development, which are efforts essential to providing solutions

R&D

- Strengthen development focused on AI (image analysis, voice recognition, machine learning, etc.), robotics, electrification and security to establish a Cyber Physical System (CPS)

Human resources

- Produce and strengthen human resources who can create new innovation using digital technology and provide optimal digital solutions to customers through external recruitment and internal human resource development

Financial and Capital Strategy

Financial Analysis of Past Five Years

The following is a summarized financial analysis of the Hitachi Group over the past five years.

- In addition to the adoption of CCC as a management indicator, the strategic reorganization of Group companies has led to the realization of streamlined assets over the past five years.
- Specifically, this includes an approximately ¥2.55 trillion reduction in interest-bearing debt and an improvement in the D/E ratio from 0.83 to 0.23.
- Although the cumulative dividend payout ratio was below 30%, the total amount of dividends paid increased. Most of operating cash flow was used to repay debt.

	(¥ billion)				
	FY2014	FY2015	FY2016	FY2017	FY2018
Revenues	9,774.9	10,034.3	9,162.2	9,368.6	9,480.6
Adjusted operating income	641.3	634.8	587.3	714.6	754.9
EBIT	534.0	531.0	475.1	644.2	513.9
Net income (loss) attributable to Hitachi, Ltd. stockholders	217.4	172.1	231.2	362.9	222.5
Total assets	12,433.7	12,551.0	9,663.9	10,106.6	9,626.5
Cash and cash equivalents	701.7	699.3	765.2	697.9	807.5
Total Liabilities	8,137.3	8,425.4	5,566.9	5,594.9	5,212.1
Interest-bearing debt	3,557.3	3,604.4	1,176.6	1,050.2	1,004.7
Total Equity	4,296.3	4,125.5	4,096.9	4,511.6	4,414.4
Non-controlling interests	1,354.0	1,390.4	1,129.9	1,233.6	1,151.8
Total Hitachi, Ltd. stockholders' equity	2,942.2	2,735.0	2,967.0	3,278.0	3,262.6
Total Hitachi, Ltd. stockholders' equity ratio	23.7%	21.8%	30.7%	32.4%	33.9%
D/E ratio (Including non-controlling interests) (times)	0.83	0.87	0.29	0.23	0.23
Capital expenditures (Completion basis)	431.2	528.5	377.5	374.9	414.7
Depreciation	350.7	366.5	302.7	265.4	271.6
R&D expenditures	334.8	333.7	323.9	332.9	323.1
Ratio to revenues	3.4%	3.3%	3.5%	3.6%	3.4%
Net cash provided by operating activities	451.8	812.2	629.5	727.1	610.0
Net cash used in investing activities	(612.5)	(730.7)	(337.9)	(474.3)	(162.8)
Free cash flows	(160.7)	81.4	291.6	252.8	447.1
Net cash provided by (used in) financing activities	233.2	(26.4)	(209.5)	(321.4)	(320.4)
Dividends to Hitachi, Ltd. stockholders*	55.5	57.9	57.9	67.5	77.2
Dividends to non-controlling interests*	32.5	39.5	38.2	34.3	42.9
Total cash dividends paid	88.1	97.4	96.2	101.9	120.2

* Those figures are reported in the Consolidated Statement of Changes in Equity presented on P.100.

As a result of the above, in terms of formulating strategy going forward, Hitachi will maintain an awareness of three issues:

(1) Further improvements to profitability and capital efficiency through ROIC management, (2) lowering WACC using moderate leverage within appropriate financial discipline and (3) reducing capital costs and increasing Total Shareholder Returns (TSR) through the execution of rational shareholder return measures with consideration for share buybacks in addition to dividends.

Ensuring Financial Stability

Hitachi recognizes that ensuring the stability of our financial base is an important management issue in terms of realizing the growth investments (approximately ¥2.0 –¥2.5 trillion over three years) and continuous return of profits targeted in the 2021 Mid-term Management Plan. To this end, we must maintain an A-rating on our corporate bonds and a D/E ratio of about 0.5 times.

The Hitachi Group's ability to generate cash has increased steadily over the past five years with improvements in our financial structure leading to ratings improvements as shown in the table on the right, with S&P upgrading its ratings from A- to A and from A-2 to A-1 in August 2018, and Moody's maintaining its rating of A3 and P-2, while R&I changed its ratings from A+ to AA- and a-1 to a-1+ in August 2019.

Rating Company	Long term	Short term
Standard & Poor's Ratings Japan (S&P)	A	A-1
Moody's Japan K.K. (Moody's)	A3	P-2
Rating and Investment Information, Inc. (R&I)	AA-	a-1+

As of August 31, 2019

Financial and Capital Strategies and Shareholder Returns Going Forward

Basic Approach to Funding Procurement

Funding procurement is conducted by the most appropriate means in light of a variety of conditions, including the timing and funding required for business. When procuring funds through borrowing, our financial discipline policy is to maintain a D/E ratio of less than 0.5 times and an interest bearing debt/EBITDA ratio of less than 2.0 times.

Furthermore, over the next three years leading up to fiscal 2021, we plan to make large-scale growth investments of around ¥2.0–¥2.5 trillion, which will be procured through our own capital, borrowings and asset sales amounting to approximately ¥4.0–¥4.5 trillion.

Basic Approach to Capital Costs

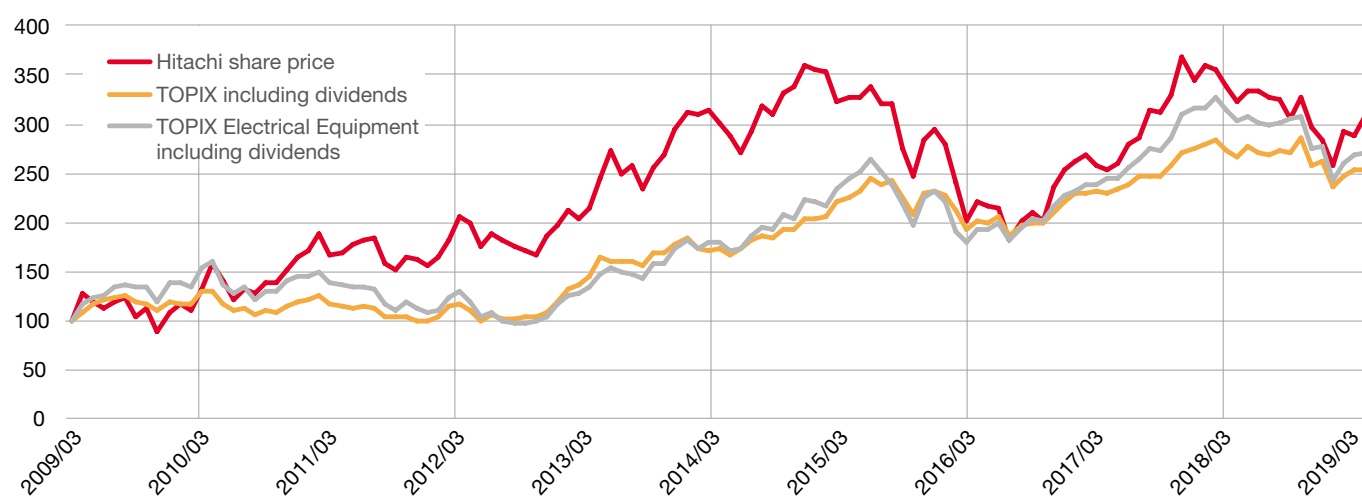
Regarding the cost of capital (hurdle rate) used for individual investment decisions, calculations are made on a case-by-case basis in light of interest rates, country risks and the expected stock market returns in the country where the investment will be made.

Basic Approach to Shareholder Returns

Returning profits to shareholders through the medium- to long-term enhancement of corporate value and ongoing dividends is an important management priority for Hitachi. With regard to dividends, our policy is to attempt to provide stable dividend growth, while ensuring funding necessary for investments. Under this policy, we make decisions based on overall consideration for performance trends, financial conditions, dividend payout ratios and other factors. Share buybacks are conducted flexibly to supplement dividends in accordance with funding demand and the business environment. Internal reserves are used for M&A, R&D, capital investments and other activities to ensure Hitachi's competitiveness and growth as a global company based on medium- to long-term strategies.

The total amount of shareholder returns over the next three years up to fiscal 2021 is planned to exceed levels in the previous three years.

Total Shareholder Returns (TSR) for Hitachi, Ltd., Over the Past 10 Years



	Past 1 Year	Past 3 Years		Past 5 Years		Past 10 Years	
	Cumulative/annual rate	Cumulative	Annual rate	Cumulative	Annual rate	Cumulative	Annual rate
Hitachi share price	-4.6%	44.9%	13.2%	3.3%	0.6%	209.6%	12.0%
TOPIX	-5.0%	26.2%	8.1%	47.1%	8.0%	153.3%	9.7%
TOPIX Electrical Equipment	-10.8%	40.9%	12.1%	51.3%	8.6%	170.6%	10.5%

Note: The graph and table above show return on investment for investments made from the fiscal year ended March 31, 2009, taking into account dividends and stock prices as of the fiscal year ended March 31, 2019. Hitachi, Ltd., investment performance, including stock prices and dividends, is indexed using 100 as investment amount as of March 31, 2009. The TSE Stock Price Index (TOPIX), which is a comparative indicator, is similarly indexed using data including dividends for electrical equipment.

Total shareholder returns (TSR), including dividends and stock price, are shown above.

Looking at the past 10 years, the annual rate of return is 12.0%, which is higher than the market average (Tokyo Stock Price Index and Tokyo Stock Price Electrical Equipment Index). In the most recent fiscal year 2018, the market share price fell, resulting in almost the same negative return as the TOPIX. Also, although the stock price has entered an adjustment phase due to declines in business performance over the past five years in the fiscal years ended March 31, 2016, and March 31, 2017, the stock price recovered in line with stronger performance and TSR has exceeded the market average over the past three years.

Hitachi will continue efforts to improve shareholder value with management and financial strategies enabling us to realize a TSR that exceeds the cost of shareholders' equity.

Accelerate Innovation

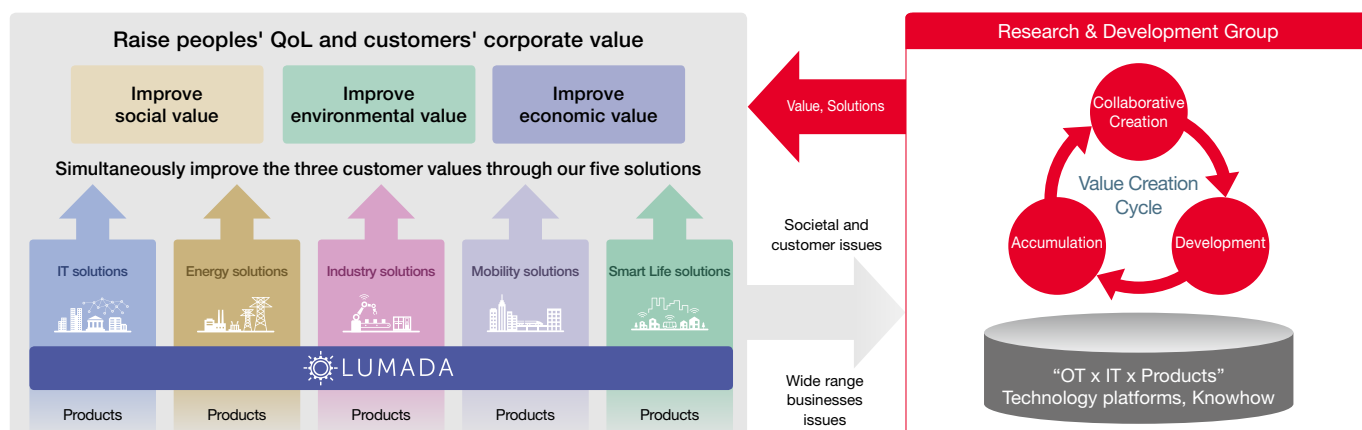
An R&D Strategy to Accelerate the Global Creation of Value

For more than 100 years since the Company's foundation, Hitachi's R&D has been putting the Hitachi Mission – "Contribute to society through the development of superior, original technology and products" into practice, developing the most cutting-edge technologies and fostering innovations that ushered in the future. As part of our 2021 Mid-term Management Plan, Hitachi aims to become a global innovation leader advancing the realization of the United Nations' Sustainable Development Goals (SDGs) and Society 5.0. Moreover, to contribute to enhancing social, environmental, and economic value for our customers, the Hitachi Group will invest ¥1.2 trillion in R&D to establish an ecosystem for driving innovation and enhance our core

technologies to expand Lumada business during the three years covered by the Plan.

The strength of Hitachi's R&D lies in its centralized ownership of the technology platforms and knowhow integral to the Hitachi Group's operational technology (OT), IT, and products, as well as the five Hitachi sectors, allowing the Company to establish a value creation cycle that extends from collaborative creation to development, and further accumulation. Moreover, as Hitachi creates solutions that provide value to our customers, R&D efficiency continues to improve through the value creation cycle.

To become a global innovation leader advancing the realization of SDGs and Society 5.0



1. The Evolution of Collaborative Creation to Accelerate Innovation

The Evolution of Collaborative Creation Accelerating Innovation

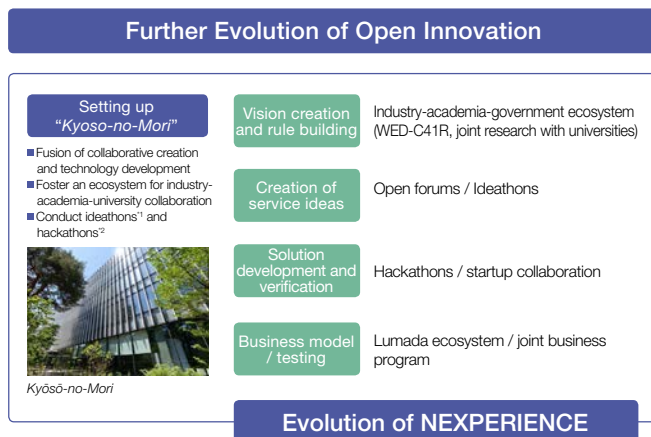
Building an Innovation Ecosystem

In the 2021 Mid-term Management Plan, we will accelerate open innovation where we will grow together with partners by using Hitachi's technology platforms and knowhow, and bringing in external knowledge, as we work to create the three values of social, environmental, and economic value by raise peoples' quality of life and customers' corporate value.

To accomplish this, we are developing NEXPERIENCE, Hitachi's original customer collaborative creation methodology to promote delivery of Lumada solutions. We expect to realize this through *Kyōsō-no-Mori*, the new research initiative launched from the Central Research Laboratory, and through stronger collaboration with industry-academia-government initiative and startups.

In April 2019, we established a new Corporate Venturing Office to promote collaboration with external startups, and in June established a corporate venture capital fund. By promoting investment in and collaborative creation with startups, especially in Europe and the US, we are bringing in disruptive technologies and business models.

Evolving Collaborative Creation through Open Innovation with Stakeholders



¹ Ideathon: A competitive event to generate ideas

² Hackathon: A competitive event to develop commodities such as services, systems, and applications

■ Creating Visions through Industry–Academia- Government Collaboration

Joint laboratories were established with the University of Tokyo, Kyoto University, and Hokkaido University in 2016 for the purpose of creating value to resolve future societal issues.

The Hitachi The University of Tokyo Laboratory holds open forums under the themes covering societal issues such as “urban planning” and “energy” to publish books and policy proposals to share visions, as well as conducting verification trials in Matsuyama City, Ehime Prefecture, to resolve regional challenges. The Hitachi-Kyoto University Laboratory developed a “policy-proposing AI” focusing on issues in society in the year 2050m and is verification trials in Nagano

Prefecture. The Hitachi-Hokkaido University Laboratory is also working on themes such as “regional issues” and “food and health.” Further, in 2018, we also signed a collaboration agreement with Tsinghua University to resolve future societal challenges in China.

Through such efforts, we hope to gain insight into future societal issues, and by innovation, we will communicate to the world new visions to achieve both the resolution of those challenges and while realizing economic development.

■ Launching *Kyōsō-no-Mori* to Accelerate Collaborative Creation with Partners and Customers

To foster an innovation ecosystem, Hitachi launched a new research and development initiative, *Kyōsō-no-Mori*, from the Central Research Laboratory in Kokubunji, Tokyo. The Company consolidated the customer collaboration functions of the Akasaka facility in Kokubunji, to facilitate agile development of value by deepening the fusion with cutting-edge research.

At the *Kyōsō-no-Mori* Opening Ceremony, a panel discussion was held on “smart city initiatives” with the ambassadors from Thailand and Australia participating in dialog on the value and significance of smart city initiatives. Further, to generate ideas and accelerate innovation, ideathons¹ and hackathons² are being held both in and

outside of Japan in areas such as FinTech and blockchain applications. In parallel, Hitachi is cooperating with Kokubunji City to evaluate local digital currencies, while in North America, the Company has started developing technology such as remote control for 5G solutions, and will continue to expand open innovation globally from *Kyōsō-no-Mori*.

2. Enhancing Core Technologies to Expand the Lumada Business

■ Strengthening Core Technologies Supporting Lumada

In addition to promoting innovation through collaborative creation, we are focusing investment on the “5 sectors x Lumada,” Lumada core technologies and strengthening products, to expand Lumada business.

Lumada is being deployed in each sector. For the IT sector, we are focusing on data utilization solutions for financial, social, and public systems. In the financial area, we are working with state-owned banks in India for next-generation digital payment platforms and developing solutions based on next generation blockchain technology in North America. In the energy sector, we are aiming for a low-carbon or decarbonized society through system stabilization solutions suitable for introducing renewable energy. Meanwhile, in the industry sector, to realize the “smartification” of priority areas such as manufacturing, maintenance and logistics, we are working to maximize customer KPIs through the seamless connection of on-site operations with management. Notably, we have achieved practical predictive maintenance technologies to improve the operating efficiency of industrial and medical equipment, which represents

successes that we are achieving through OT X IT X Products. In the mobility sector, “Dynamic Headway” which is currently undergoing field tests will be further advanced so that it can be provided to not only trains but also as an facility planning optimization solution for building facilities such as elevators. In the smart life sector, we are focusing on smart therapies, smart cities, and connected cars, including autonomous driving and software updates via Over the Air (OTA).

Accelerate Innovation

Sector	IT	Energy	Industry	Mobility	Smart Life
Solution examples	<ul style="list-style-type: none"> Financial solutions Predictive maintenance simulations 	<ul style="list-style-type: none"> System stabilization Automated power distribution Energy management P2P Electric power trading 	<ul style="list-style-type: none"> Next-generation manufacturing Next-generation maintenance Next-generation logistics 	<ul style="list-style-type: none"> Building/facility solutions Smart ticketing 	<ul style="list-style-type: none"> Connected cars Smart therapies Smart cities
Lumada (core technologies)					5G Robotics Security
Products	<ul style="list-style-type: none"> Storage 	<ul style="list-style-type: none"> High voltage transmission systems HVDC Circuit breakers, transformers Large centralized power sources 	<ul style="list-style-type: none"> Air compressors Marking 3D printing 	<ul style="list-style-type: none"> Global railway vehicles Railway vehicle inverters High-speed elevators Service robots 	<ul style="list-style-type: none"> EV components Diagnostic and treatment systems Home electronics and air-conditioning equipment

HVDC: High Voltage Direct Current

To strengthen Lumada core technologies, our efforts are directed towards realizing Lumada CPS (Cyber Physical System) which connects cyberspace with the real world, focusing on AI and audiovisual analytics, sensing, electrification, 5G, robotics and security.

The strength of Hitachi's AI is that its development is based on equipment control technology, product design, and maintenance technology that the Hitachi Group has built-up over the years. For example, in predictive maintenance technology for industrial equipment, the AI visualizes the difference between a normal state or an abnormal state which could lead to material degradation or failure, from real-world operational data. This helps to determine whether there is a high probability of industrial equipment failure. This technology already has a good track record in Hitachi's medical equipment and is being used in regions such as North America.

In the area of audiovisual analytics, video images from stations and buildings are analyzed in real time, allowing specific people to be searched or tracked, as well as human flow analysis. In sensing, we have realized an extremely sensitive vibration sensor that can detect and measure very small signals even in large spaces exceeding 100 meters by applying MEMS^{*1} technology based on semiconductor device technology fostered at the Central Research Laboratory. We are currently proceeding with water leakage detection field tests using this device. Such technologies will be key in realizing safety and security in smart cities.

With regard to products, we are aiming to deliver world No. 1 technology. For example, with inverter technology which is central to electrification, we have created and commercialized the world's most efficient full SiC inverters for use in railway cars. For diagnostic and treatment systems, Hitachi has developed the world's smallest particle accelerator for the treatment of cancer, and it is currently in operation at a heavy ion therapy center in Japan. Furthermore, we have realized wear- and corrosion-resistant material which was unachievable with existing alloys, and have started applying it in the 3D printing of industrial machinery parts.

By accelerating such efforts, we hope to contribute to the global expansion of Lumada business based on OT x IT x Products.

^{*1} MEMS : Micro Electro Mechanical Systems

Sensing

Ultrasensitive vibration sensor that can measure very small status changes in large spaces exceeding 100 meters.

Digital city monitoring/Ultrasensitive sensors

- World's highest sensitivity* (15ng/√Hz)
- Wide detection range (>100m)

* MEMS sensor

Data analysis, AI technology X Semiconductor device technology

■ Creating Disruptive Technologies

Solving societal issues also requires the creation of disruptive technologies. In collaboration with the University of Cambridge in the UK and CEA-LETI in France, Hitachi has successfully demonstrated the world's first silicon quantum bit² system which promising advantages for system integration for quantum computers. In the near future, we believe this will contribute to resolving complex societal issues. In 2017, the Hitachi established the Hitachi Kobe Laboratory in the Kobe Biomedical Innovation Cluster to achieve practical applications in regenerative medicine. The Laboratory has already created technologies contributing to a healthy society, including the world's first successful automated culture of retinal cells derived from human iPS cells.

Globally, we are promoting joint research with many universities based on their respective strengths to create disruptive technology and enhance technology platforms. For example, in the area Fintech, we are working with Stanford University and in the smart manufacturing area, with a research institute in Germany.

We are also actively participating in the open communities, contributing to open projects and consortiums in areas such as blockchain and edge computing. Also, through participation in organizations such as WEF-C4IR,³ we are also actively involved in forming rules.

^{*2} Quantum bit: the smallest unit of encoded quantum information, including in the direction of the electron spin
^{*3} WEF C4IR: World Economic Forum, Center for the Fourth Industrial Revolution Network

■ Initiatives in Intellectual Property

Amid an ongoing international pro-patent shift, Hitachi is strengthening its intellectual property activities in products and solutions. To demonstrate our OT x IT x Products strengths, we have drafted an intellectual property masterplan that defines areas of focus and bolsters our patent creation activities. This has resulted in Hitachi being awarded the National Invention Award three years in a row, including for railway cars and particle beam cancer treatment equipment. Under the 2021 Mid-term Management Plan, we will be accelerating the creation of solutions to further drive the global

deployment of Lumada solutions. We aim to move ahead of other companies to acquire intellectual property rights for core technologies supporting Lumada, centering on Lumada CPS. We will also promote an open policy for intellectual property related to public matters to contribute to the design of future societies, and the maintenance and progress of societal norms. Further, we will aim to establish an intellectual property strategy for a new era, “IP for Society,” by working with international organizations.

3. R&D Investment, Portfolio and R&D structure

With the goal of enhancing competitiveness in the five core Social Innovation Business sectors, the Hitachi Group’s R&D investment amounts to about 4% of total revenue. Approximately ¥1 trillion was invested in R&D during the period covered by the 2018 Medium-term Management Plan and the aim is to increase this to ¥1.2 trillion during the 2021 Mid-term Management Plan. This includes corporate-led R&D investment focused on collaborative creation with our customers, global No. 1 technology, and exploratory research, as well as investment to accelerate the global development of Lumada business which is our engine for growth. To realize this, we are establishing a common digital platform for efficient global development, as well as enhancing our research resources worldwide.

The R&D structure to achieve these goals includes the Global Center for Social Innovation (CSI) that will lead through ideation and solution development, the Center for Technology Innovation (CTI), responsible for building world No. 1 technology platforms, and the Center for Exploratory Research (CER), addressing the challenge of resolving challenges faced by future societies, together with the research bases in North America, Europe, China, and Asia. In FY2019, a North American employee was appointed to be head of CSI to further accelerate the global deployment of Social Innovation Business. Through such measures, Hitachi will aim to simultaneously realize improvements in social, environmental, and economic value.

Trends in R&D Spending

	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019 (forecasts)
R&D expenditures (¥ billion)	334.8	333.7	323.9	332.9	323.1	335.0
Share of revenues (%)	3.4%	3.3%	3.5%	3.6%	3.4%	3.7%

R&D spending has remained generally flat due to portfolio restructuring, including the sell-off of listed subsidiaries, and the fact that investment has been carefully focused in targeted areas. Moving forward, we will continue to focus investment in the field of digital solutions, including Lumada.

[Recognition for Outstanding Technology and Design]

Hitachi was bestowed the Imperial Invention Prize in the National Commendations for Inventions for its global railway vehicles, which was highly evaluated for design and technologies focused on analyzing comfort and safety. In addition, Hitachi has been granted prestigious awards for semiconductor measuring equipment, X-ray fluoroscopy equipment, open MRI equipment, and storage equipment, with Kazuo Hiramoto receiving the Medal with Purple Ribbon award for his development of an innovative particle therapy system.

Accelerate Innovation

Human Resource Strategies Supporting Innovation Creation

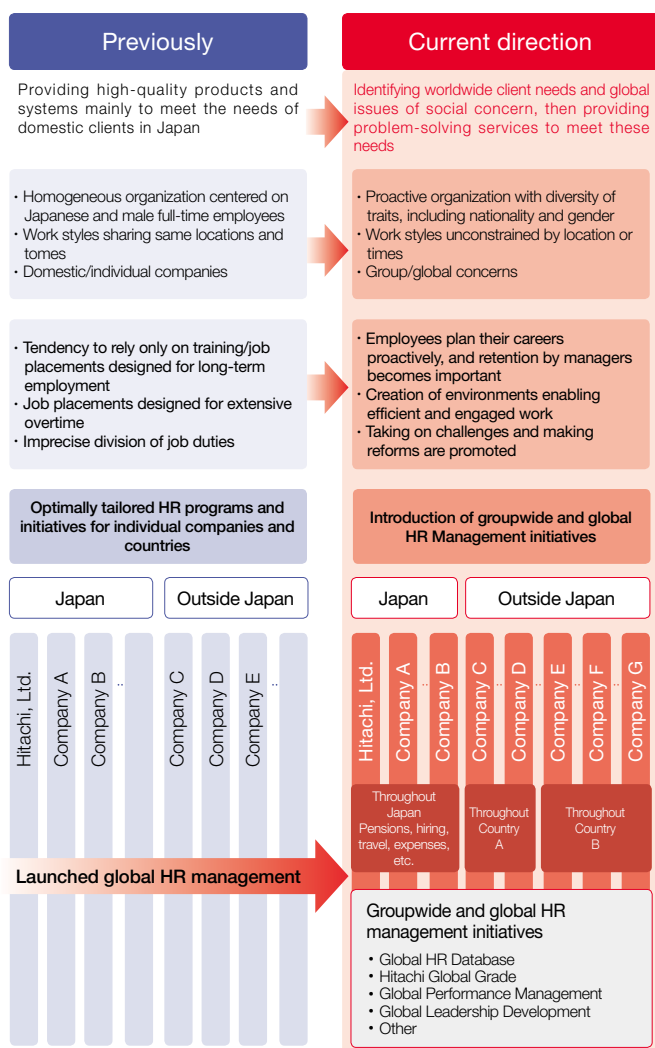
With the goal of creating innovation and new value in the global and digital era, Hitachi is focused on securing and fostering a diverse workforce and the organizations capable of driving sustainable growth. We have established a firm relationship between employees and the Company by providing places of employment that offer a favorable work-life balance, focusing on worker safety and health, and respecting the basic rights of employees and ensuring equal opportunities. Hitachi is also proactively engaged with all its employees regarding compensation and career advancement.

Transforming Human Resources Management

The development of the Social Innovation Business requires us to actively investigate social and customer issues, and then cooperate with customers to create all new solutions.

Hitachi is working to transform human resources management with the aim of placing the right person in the right position anywhere in the world. Clarifying through a global standard the role, responsibilities, and reporting lines of each position, and embracing a common understanding serves to accelerate the creation of a solid global structure for Hitachi. In addition, it fosters an organizational culture that recognizes and makes best use of its diverse and self-motivated individual workers.

The Transformation in Human Resources Management



Global Human Resources Management

To create a global common platform for HR management, Hitachi has introduced a Global HR Database, as well as Hitachi Global Grade and Global Performance Management since 2012.

Hitachi launched in full human capital management integrated platform in January 2018, centralizing processes and measures enacted to date. The three main benefits of this platform are as follows.

(1) Improving Talent visibility

Until very recently, it was quite difficult to quickly get a handle on the skills and abilities of employees in a given country, region, or company. Improved visibility in this respect allows us to make appropriate placements and provide training suited to a particular individual, to find and develop future leaders, and facilitate better communication between managers and employees.

(2) Strengthening the "I will" culture

The platform allows employees to enter their own experiences and skills, with all employees having access to that information at all times. This expands the likelihood of employees taking on challenges in work areas of interest, resulting in the creation of a workforce of proactive employees able to think and act for themselves.

(3) Improving Speed and Efficiency

The use of global common data allows us to quickly and smoothly launch a new project by rapidly and efficiently placing the human resources necessary to that project.

Human Resources Management Initiatives

Fiscal 2012	
Global Human Resources Database	Goal: Create a database of human resources information
Global Leadership Development	Goal: Create a pool of leading global talent and foster their development
Fiscal 2013	
Hitachi Global Grade	Goal: Use of a uniform Group standard to assess position weightings for managers and those in higher job positions
Hitachi Insights (Employee survey)	Goal: Improve employee engagement
Fiscal 2014	
Global Performance Management	Goal: Promote growth and sustained improvement in both the business and the individual by linking the goals of the two
Fiscal 2015–2018	
Hitachi University (educational platform for Hitachi Group employees all over the world)	Goal: Use HR development to contribute to sustainable global growth
Global Hiring Support System	Goal: Ensure hiring of the best individuals as business expands, improve efficiency in hiring, lower costs
Human capital management integrated platform	Goal: Improve HR visibility, strengthen the “I will” culture, improve speed and efficiency

2021 Human Resources Strategy

The mission of the human resources division is “contributing to the business through talent and the organization.” The division formulated its 2021 HR Strategy based on the goals of the 2021 Mid-term Management Plan announced in May 2019. The HR Strategy focuses on achieving growth throughout the world through a diverse workforce that is happy and proud to work at Hitachi and creating for all employees a safe and vibrant workplace that respects a wide range of diverse values.

Hitachi is committed to building a company where employees with different cultural backgrounds, as well as experiences and ways of thinking can work together. We aim to instill in all our employees around the world a shared sense of values, including the “Harmony, Sincerity, and Pioneering Spirit” values central to the Hitachi Group identity, with the “One Hitachi” idea crossing national, regional, and departmental borders and contributing to the betterment of society. We are also promoting measures aimed at the optimal placement of personnel through the visualization of HR data, the use of analytics based on accumulated data and HR technologies,¹ and improved efficiency. Finally, we are focused on advancing initiatives for fiscal 2021 based on the four key concepts of Talent, Culture, Organization, and HR Transformation.

¹ HR technology refers to technologies using new forms of IT, including big data and AI in human resources to create new value.

Ensuring Fair Evaluations and Compensation

Amid the ongoing globalization of business, there is an increased need to establish a global human resources system that ensures fair evaluations and compensation. In order to attract a diverse and highly engaged workforce, Hitachi is focused on building a consistent management system and accordingly follows a common “Global Compensation Philosophy” based on “maintaining market competitiveness,” “pay for performance,” and “ensuring transparency.”

We are developing a compensation system that is fair and competitive in the context of each country or region’s labor market, with an individual’s compensation determined after an evaluation of their performance. Individual assessments are conducted annually to set each employee’s compensation, and feedback on their performance results is provided to inspire them to develop and grow even further.

We ensure compliance with the laws and regulations of each country in which we operate when determining compensation. Starting pay for new graduates in Japan—representing about half of all new graduates recruited each year across the Group’s global operations—was roughly 20% higher than the weighted average of Japan’s regional minimum wages.

Fostering the Next Generation of Leaders

In addition to Hitachi University, the Group’s global learning management system, we have developed a variety of educational programs tailored to different jobs and positions. We are also focusing resources on selective training courses aimed at developing future managerial candidates at an early stage. In these courses, participants discuss what is necessary for the growth of Hitachi. The opportunity to generate ideas to present to senior management helps to cultivate the next generation of leaders—people with a unique perspective and determination.

In addition, we have identified a group of about 50 employees from around the Hitachi Group with next-generation development potential. People in this “Future 50” group are selected on merit, regardless of age, gender, or nationality.

They are given challenges to help expand their horizons and build their perspective, including tough assignments, different types of work, and internal and external training opportunities. The Future 50 group members receive one-on-one mentoring opportunities with independent directors to benefit directly from their extensive business experience and global perspective. Our aim is to change mind-sets so that we can develop people for important positions in the future.

Accelerate Innovation

■ Strengthening Front-Line HR and Establishing a Digital HR Training Policy

Hitachi in April 2016 shifted to a business structure with strengthened front-line functions to accelerate collaborative creation with our customers as part of the drive to advance the Social Innovation Business. Hitachi's technologies and know-how must be developed so that they can be provided as a service by front-line personnel, who are closest to our customers. With this in mind, we have strengthened the front-line talents we expect to drive the Social Innovation Business moving forward.

While there are a number of companies focused on achieving a digital transformation through digital technologies such as AI, IoT, and big data, one key challenge throughout the world is the shortage of data scientists specializing in data analysis. In addition to its digital solutions focusing on the fusion of OT (operational technology) and IT, Hitachi has launched measures to foster a digital workforce that can be expected to drive digital transformations.

With a target of increasing the number of data scientists to 3,000 by fiscal 2021, Hitachi's strengthening of its data scientist workforce at group companies in Japan and overseas will allow us to further support our customers and drive the expansion in digital solutions.

■ Strengthening Front-Line HR and the Digital HR Training System

Before the 2016 start of the new front-line structure, discussions on bolstering front-line talents were initiated by a preparatory committee, which includes officers and business unit managers and was created in 2015. The committee defined front-line functions, roles, and personnel qualifications necessary to bolster the front-line workforce. Based on these discussions, the Company also identified the need to develop human resources, from leaders to practitioners, to promote the Social Innovation Business, and in 2016 created the Social Innovation Business Front Talent Development Program, consisting of four phases, as well as action learning, group training, and e-learning programs. Phase 1 and Phase 2 focused on action learning using real-world projects for leaders expected to drive the collaborative creation business, with Phase 3 and Phase 4 focusing on employees in the Hitachi Group as a whole based on the results of the first two phases.

Integrating its training institutions to further strengthen and foster its digital workforce, including front-line workers, Hitachi newly launched Hitachi Academy in April 2019, which will now be charged with training the human resources expected to drive digital transformations. The new entity will combine measures designed to foster digital human resources with on-the-job-training as it seeks to build a new digital transformation training system and accelerate the Social Innovation Business.

■ Diversity & Inclusion

Diversity is the wellspring of innovation at Hitachi and our growth engine. Hitachi regards personal differences—gender, nationality, race, religion, background, age, and sexual orientation—as facets of people's individuality. By respecting our employees' individualities and positioning them as an advantage, Hitachi frames its diversity and inclusion as conducive to both the individual's and the Company's sustainable growth. We will adapt to the diverse needs of our customers by using our diverse capabilities, our outstanding teamwork, and our extensive experience in the global market.

We are promoting diversity management as a key management strategy under the initiative slogan "Diversity for the Next 100." We believe it important to share opinions and recognize diverse values if we are to provide optimal solutions based on an accurate understanding of the complex issues confronting society and our customers. With the goal of having members with different values on the same team sharing the same goals, we are working not only to secure and train a diverse workforce, but also to create an environment where each of these individuals can work to the best of their abilities.

Hitachi, Ltd., and 15 major group companies jointly operate the Advisory Committee and the Diversity Development Council, which focus on accelerating the promotion of diversity across the Hitachi Group as a whole, including in regard to supporting diverse human resources and providing work-life management. The Advisory Committee implements to the fullest the Company's diversity management policies, while the Diversity Development Council shares best practices and discusses specific diversity-related activities. Each committee meets every six months. Group companies and business groups/sites have also set up their own diversity-promotion organizations and projects, such as those to help develop women's careers, to enhance initiatives geared to the challenges faced by individual workplaces. Hitachi from fiscal 2018 has broadened the sharing of diversity promotion policies across the entire group, with Group companies around the world working together to accelerate implementation.

Diversity Activities and Developing Women's Careers

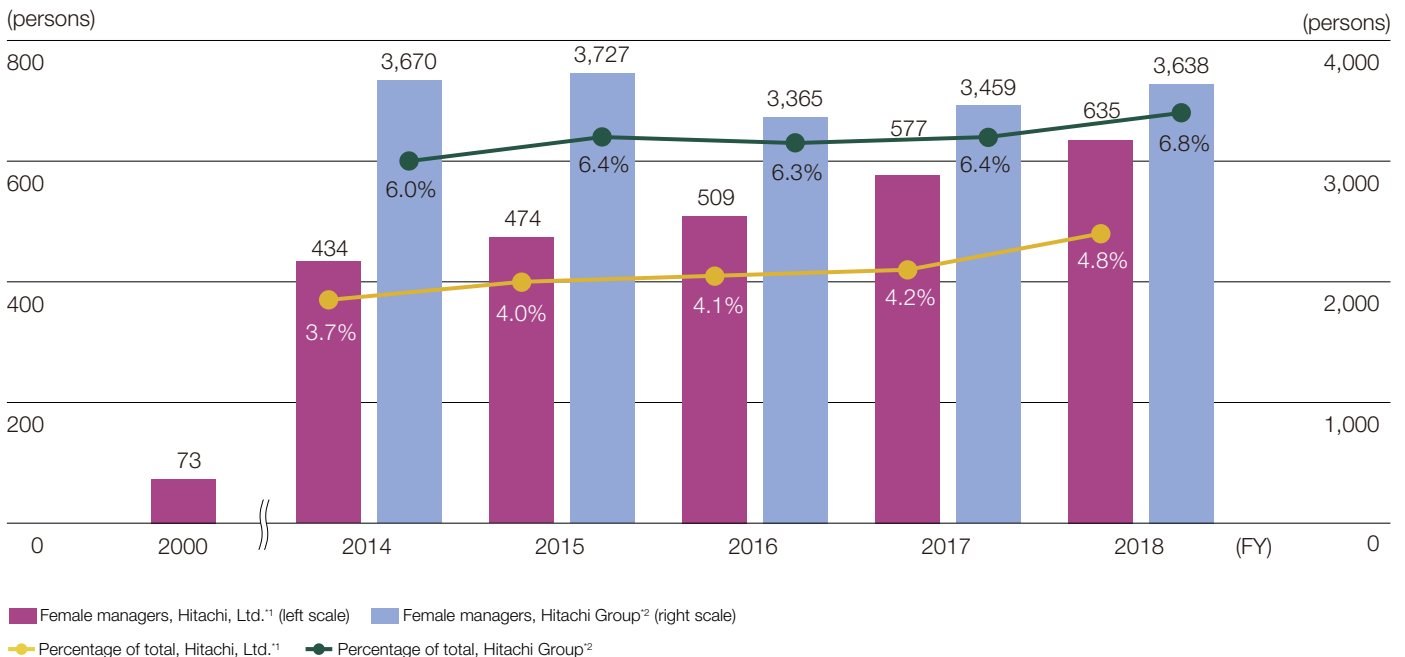
With the goal of promoting participation in management decision-making by people with differing backgrounds and enabling as many female employees as possible to take up leadership positions, Hitachi, Ltd., has created two key performance indicators (KPIs) for the appointment of women in executive and managerial positions.

In fiscal 2013, Hitachi set a goal of promoting women to executive positions by fiscal 2015. In April 2015, the Company appointed its first female corporate officer, a position equivalent to the executive level. We will continue to promote this goal to ensure that diverse views and values will be reflected in our management. In November 2017, we publicly announced our commitment to increasing the rate of female executive and corporate officers to 10% by fiscal 2020. We are also working to promote more female employees to managerial positions, aiming to double the number of female managers to 800 by the end of

fiscal 2020 compared with fiscal 2012. These efforts demonstrate our commitment both internally and to the world to improve our diversity management.

As part of our efforts in this area, we have been hosting since 2016 the Global Women's Summit, inviting 100 or more female employees from Hitachi Group companies around the world. The event is held in different areas of the world and is focused on improving awareness in leadership and career planning, and to enhance motivation through the formation of a global support network. The day the summit is held features a message from President and CEO Toshiaki Higashihara, the participation of executives, and the exchange of opinions among the many female employees attending.

Number and Ratio of Female Managers



Note: Figures include section chiefs and above.

¹ "Female managers" in fiscal 2017 include managerial employees dispatched from Hitachi, Ltd. to non-Group companies and those accepted from non-Group companies by Hitachi, Ltd. Figures prior for fiscal 2016 and earlier include regular managerial employees dispatched to non-Group companies but exclude those accepted from non-Group companies.

² All full-time, regular female managers excluding those dispatched to non-Group companies.

Ratios for Female and Non-Japanese Executives and Corporate Officers (Hitachi, Ltd.)

	June 2017	June 2018	June 2019
Number of female executive and corporate officers (persons)	2	2	4
Ratio of female executive and corporate officers	2.4%	2.6%	5.0%
Number of non-Japanese executive and corporate officers (persons)	3	5	7
Ratio of non-Japanese executive and corporate officers	3.7%	6.4%	8.8%

Environmental Vision and the Decarbonization Business

The Environmental Vision and Hitachi Environmental Innovation 2050

As climate change, resource depletion, ecosystem destruction, and other environmental issues grow more serious, the responsibilities and contributions of companies are growing, given the increasing demands and expectations for reductions in the environmental burden of their business activities.

In response to global demands for a reduced environmental burden, we created a management strategy called the Environmental Vision, which declares, "Hitachi will resolve environmental issues and achieve both a higher quality of life and a sustainable society through its Social Innovation Business in collaborative creation with its stakeholders." We aim to achieve a low-carbon society, a resource efficient society, and a harmonized society with nature in accordance with this Vision. To guide our efforts toward 2030 and 2050, in September 2016 we established long-term environmental targets called Hitachi Environmental Innovation 2050. To achieve these long-term goals, we have been updating our Environmental Action Plan every three years. We are strengthening and promoting our environmental activities under the Environmental Action Plan for 2021 (covering fiscal 2019–21), created in line with the 2021 Mid-term Management Plan.

Hitachi's Environmental Vision

<http://www.hitachi.com/environment/vision/index.html>

Efforts to Achieve a Low-Carbon Society

Hitachi Environmental Innovation 2050 sets targets for reducing CO₂ emissions to help the world meet the challenge of climate change. In line with a scenario to keep the increase in global temperatures below 2°C, we have established reduction targets of 50% by fiscal 2030 and 80% by fiscal 2050 (compared to fiscal 2010 levels) throughout the value chain.

Approximately 90% of the value-chain emissions of our products and services—from the procurement of raw materials and parts to production, transportation, use, disposal, and recycling—result from the use of our products and services after they were sold. For this reason, reducing CO₂ emissions during the stage of use is crucial to reducing emissions across the value chain.

We will further enhance the energy efficiency of our products and services to reduce CO₂ emissions during their use. We will also seek to expand our decarbonization business, utilizing IT and other innovative technologies to offer system solutions that collectively contribute to decarbonization.

We are advancing reduction measures for CO₂ emissions during production and other stages as well, introducing the Hitachi Internal

Environmental Vision

Hitachi will resolve environmental issues and achieve both a higher quality of life and a sustainable society through its Social Innovation Business in collaborative creation with its stakeholders.

The aim of Hitachi's environmental management

Low-Carbon Society
Climate Change Mitigation/Adaptation

Resource Efficient Society
Saving and Recycling Resources

Harmonized Society with Nature
Preservation of Ecosystems

Long-term Environmental Targets

Hitachi's resolution looking toward 2050 and 2030

Hitachi Environmental Innovation 2050

For a low-carbon society

Through the value chain CO₂ emissions

FY 2050
80% reduction

FY 2030
50% reduction
(compared to FY 2010)

For a resource efficient society

Build a society that uses water and other resources efficiently with customers and society

Efficiency in use of water/resources
FY 2050
50% improvement
(compared to FY 2010 in the Hitachi Group)

For a harmonized society with nature

Impact on natural capital

Minimized

Environmental Action Plan

Set environmental action items and targets every 3 years in order to achieve the long-term targets

Carbon Pricing (HICP) framework in fiscal 2018 to provide incentives for raising production efficiency at factories and offices and making energy-saving investments. And we are taking a variety of steps to accelerate the shift to renewable energy sources at our business sites both in and outside Japan.

In light of heightening investor interest in the financial impact of climate change on corporate operations, in June 2018 we announced our support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). We are actively disclosing climate-related information in accordance with these recommendations and conducting dialogues with investors.

■ Expanding the Decarbonization Business to Address Climate Change

To help build a sustainable society through the Social Innovation Business, the 2021 Mid-term Management Plan cites the goal of simultaneously increasing social, environmental, and economic value for our customers by supplying solutions in the five sectors of IT, energy, industry, mobility, and smart life. It also sets a reduction target of more than 20% for our value-chain CO₂ emissions by fiscal 2021 compared to fiscal 2010.

We are utilizing Lumada to expand our decarbonization business. Through collaborative creation, we will help the world mitigate and adapt to climate change.

In the IT sector, we are contributing to building a low-carbon society by transforming social systems and lifestyles by providing innovative digital solutions.






With regard to energy, we are contributing to CO₂ emission reductions through the provision of power generation systems using non-fossil energy, such as renewable energy and nuclear power, and creating smart grids that transmit and distribute power efficiently and stably and can optimize local supply and demand.


In the industry sector, along with improving the overall efficiency of clients' factories through the provision of high-efficiency industrial products, we are using IoT and AI to optimize entire factory operations and helping our customers reduce their CO₂ emissions.

In the mobility sector, we are promoting energy savings by making trains lighter and introducing operating systems that use cutting-edge IT technologies to improve overall efficiency.

For smart life solutions, we are providing clean-energy vehicles, smart home appliances, and other highly efficient, energy-saving products and services to make people's lives safer, more convenient, and comfortable by improving connectivity through the use of IT. In addition, we are working with our business partners to build smart cities and smart mobility systems that bring those technologies together, thereby helping to create decarbonized cities that improve the lives of all residents.

Decarbonization Business: A Hitachi Focus

 IT solutions	 Energy solutions	 Industry solutions	 Mobility solutions	 Smart Life solutions
<ul style="list-style-type: none"> ■ Finance and public-oriented solutions <ul style="list-style-type: none"> • Promoting digital solutions ■ Data center <ul style="list-style-type: none"> • Developing smart data centers ■ Servers/storage <ul style="list-style-type: none"> • Enhancing energy-saving features of servers and storage 	<ul style="list-style-type: none"> ■ Power grid solutions <ul style="list-style-type: none"> • Enhancing efficiency of power transmission/distribution ■ Energy management <ul style="list-style-type: none"> • Advancing smart energy management to reduce peak electricity demand ■ Power generation <ul style="list-style-type: none"> • Promoting power generation systems using wind and other non-fossil energy sources 	<ul style="list-style-type: none"> ■ Smart logistics <ul style="list-style-type: none"> • Improving energy-saving features through fully IT-enhanced logistics ■ Factory automation <ul style="list-style-type: none"> • Enhancing energy efficiency through shorter lead times ■ Water business <ul style="list-style-type: none"> • Enhancing efficiency of water and sewage systems ■ Industrial products <ul style="list-style-type: none"> • Enhancing efficiency of industrial products 	<ul style="list-style-type: none"> ■ Railways <ul style="list-style-type: none"> • Enhancing energy-saving features of rolling stock • Developing smart operating systems ■ Elevators <ul style="list-style-type: none"> • Enhancing energy-saving features of elevators and escalators through replacement • Enhancing energy efficiency through total building solutions 	<ul style="list-style-type: none"> ■ Smart cities <ul style="list-style-type: none"> • Reducing CO₂ through comprehensive urban energy management solutions ■ Vehicle electrification <ul style="list-style-type: none"> • Promoting electrification through electric powertrain systems ■ Home appliances <ul style="list-style-type: none"> • Enhancing energy efficiency of home appliances • Promoting connected home appliances ■ Smart therapies <ul style="list-style-type: none"> • Enhancing energy-saving features of medical devices



Strengthen Lumada

As society and business continue to generate more data, Hitachi's Lumada acts as an engine that creates new value from these data and accelerates innovation. We launched the Lumada business in 2016, and its revenue has grown rapidly in three years, from ¥900.0 billion in fiscal 2016 to ¥1,127.0 billion in fiscal 2018. Under the 2021 Mid-term Management Plan, we are promoting measures aimed at expanding our business with the goal of achieving revenue of ¥1,600.0 billion.

What is Lumada?

Lumada creates value from customers' data and drives digital innovation

Hitachi will develop a global Social Innovation Business that will improve the quality of people's lives, raise corporate value for our customers and contribute to resolve social issues. We will accelerate innovation in each of the five business sectors, creating solutions that provide new value.

Lumada is a general term for the solutions, services and technologies that utilize Hitachi's advanced digital technologies to create value from customers' data and drive digital innovation. It is derived from the words "illuminate" and "data" and was created based on the idea of combining the strengths of the operational technology (OT), IT and products

cultivated within Hitachi. Along with the development of information technology (IT) and the Internet of things (IoT), social and business activities continue to generate data at an increasing rate of speed. Hitachi has focused on these data as a new source of value in future society and launched the Lumada business in 2016 with the goal of using large volumes of data to create innovation for the world.

With Lumada as a common platform, we will create new value and establish an advanced cyber-physical system that links digital and real spaces (actual physical things) in real time.

Lumada business model

The Lumada business provides value by analyzing business issues and combining Hitachi's digital technologies to solve customer problems with the lowest amount of customization as possible. In fiscal 2018, revenue in the Lumada business was ¥1,127.0 billion, and its adjusted operating income ratio had already exceeded 8%, the level of the entire Hitachi Group. Rather than relying merely on product sales, we will build a profit model based on value created through the provision

of solutions, such as income from fees. To this end, Hitachi will leverage its strengths in OT x IT x Products to commoditize its expertise in various industries and operations. At the same time, we will make the shift to digital solutions that can be provided to a number of customers, thereby expanding the Lumada business. Furthermore, we will intensify our collaborate efforts to build new ecosystems with our customers and partners.

Lumada Revenues

	FY2016	FY2017	FY2018	FY2019 (Forecast)	FY2021 (Target)
Revenues (¥ billion)	9,162.2	9,368.6	9,480.6	—	—
Lumada revenues (¥ billion)	900.0	1,006.0	1,127.0	1,170.0	1,600.0
Share of total revenues (%)	10%	11%	12%	—	—

* Lumada revenue is included within Hitachi's consolidated revenue.
The IT sector comprises about 80% of Lumada revenue while the Industry sector accounts for about 20%.

Strengthening our overseas business structure

Currently, about 90% of Lumada business revenue comes from Japan. We are strengthening our overseas business structure, primarily in North America and Asia, with the goal of accelerating the global expansion of the Lumada business moving forward. In the future, we will continue to recruit new personnel while acquiring companies capable of collaborating with customers to produce digital solutions and investing in partners. These efforts will contribute to our goal of nearly doubling our number of relevant overseas personnel from its current level of 23,000 to 40,000.

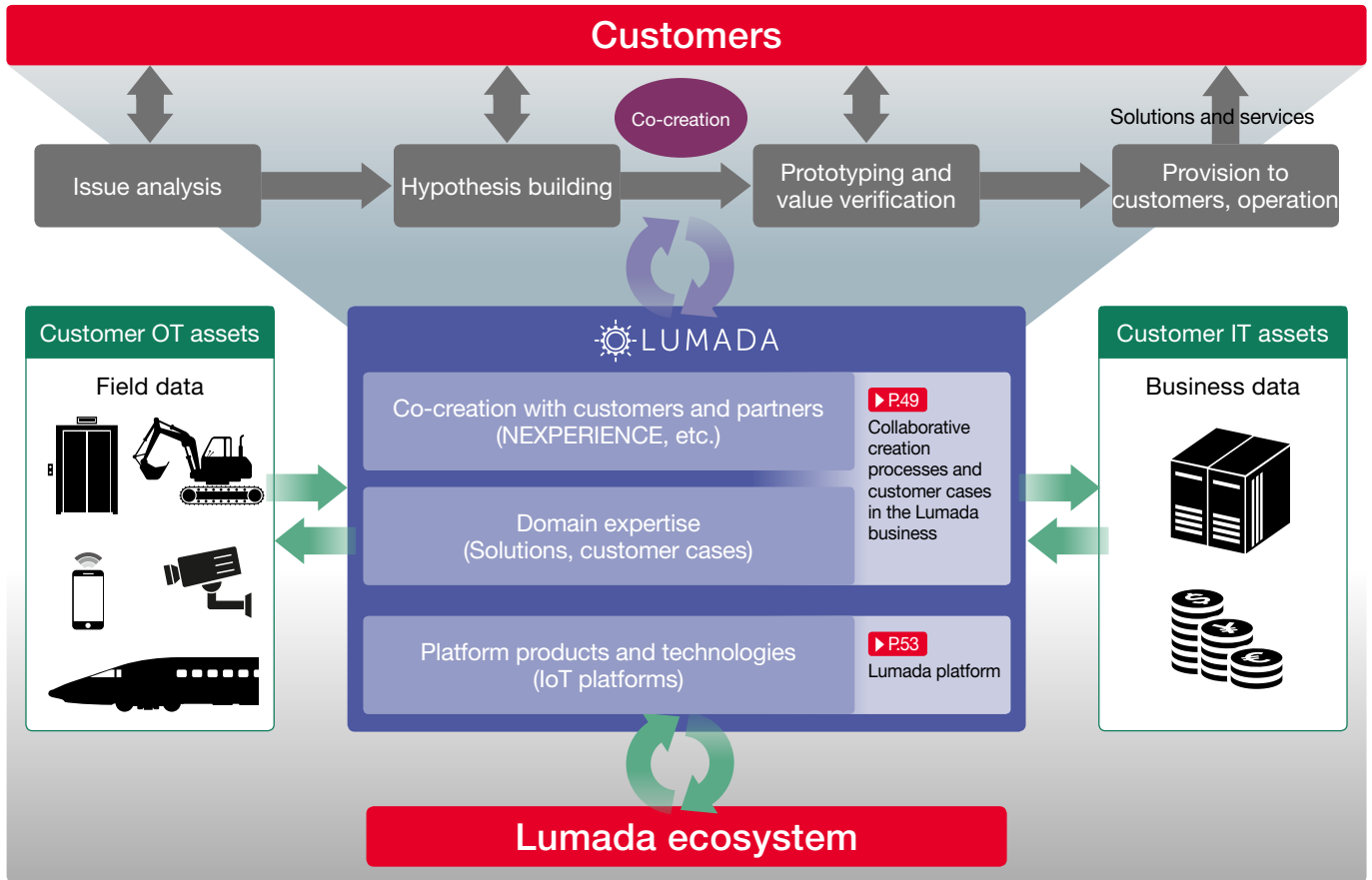
As an example of collaboration with overseas partners, in January

2019, we established a joint venture with India's largest state-owned commercial bank, State Bank of India (SBI). Through this venture, we aim to build a digital payment service platform for the next generation. By collaborating with SBI, which has about 400 million customers (equivalent to roughly one third of India's population), we are analyzing and utilizing vast amounts of digital payment data obtained from point-of-sale (POS) systems, e-commerce and transportation fare payment systems in an effort to provide high value-added services in India.

Collaborative creation processes and customer cases in the Lumada business

Here, we will introduce collaborative creation processes of the Lumada business, as well as customer cases that are models of the digital solutions that we have cultivated thus far.

Concept of Lumada



Methodology and services aimed at accelerating collaboration with customers and partners

Support ranging from the discovery of potential issues and strategic planning to value verification

(1) Issue analysis and hypothesis building through NEXPERIENCE, a collaborative creation process

Before creating innovation, one must first discover potential issues. However, corporate issues are becoming more complex as society globalizes and diversifies. When collaborating using Lumada, Hitachi uses NEXPERIENCE, its unique collaborative creation process, discover issues, propose solutions and verify value.

To solve a variety of issues through collaboration with customers, NEXPERIENCE combines the perspectives of service engineering researchers and designers and systematizes methods and IT tools that support the entire collaborative creation process. Specifically, NEXPERIENCE involves analyzing issues related to management and business operations through workshops with customers and partners and designing measures, such as new services and business, that solve these issues.

Overview and Process of NEXPERIENCE



Strengthen Lumada

(2) Prototyping and value verification conducted through the Lumada Competency Center

If we can clarify issues facing customers and society, as well as hypothesized solutions, through NEXPERIENCE, we can use resources including the Lumada Competency Center to determine whether we are capable of solving these issues by using them to build solution prototypes that help us analyze whether proposed solutions will produce their intended results.

The Lumada Competency Center provides system testing environment services that support rapid prototyping conducted through the use and application of data and hypothesis verification. We support the speedy establishment of the system environments

necessary for PoC^{*1} that follows hypothesis planning by offering a variety of services, including Pentaho, a data integration and analysis platform that is also Lumada's core software; services with development and management tool environments that support agile development^{*2}; and Hitachi AI Technology/H, our own artificial intelligence technology.

^{*1} Proof of concept

^{*2} A group of development methods employed in software engineering with the goal of achieving rapid and adaptive software development.

Accumulation of industrial and operational expertise

■ Quickly providing reliable digital solutions to customers' management issues by utilizing our abundant cache of customer cases

(1) Customer cases

Hitachi has accumulated a wide range of industry and business expertise and knowledge in the form of Lumada customer cases with the goal of rapidly utilizing them to collaborate with customers in a variety of fields. Lumada customer cases are models of digital solutions that have created new value through collaborative creation with customers. Each customer case organizes elements such as how value was created using data and which technologies were applied in terms of artificial intelligence and analytics.

When promoting new collaborative creation with customers, Hitachi makes use of Lumada customer cases that fit customers' management issues, as well as Lumada solutions based on an abundance of expertise, to establish appropriate mechanisms for each customer and swiftly achieve digital solutions that create true value.

(2) Customer cases that support the entire value chain

As of the end of March 2019, we have established more than 650 customer cases and are continuing to steadily expand this number. We are also pushing forward with our establishment of customer cases that can be used by customers to support efforts common to a wide variety of industries, such as predictive maintenance for equipment and devices. Examples include cases related to medical devices, power generating equipment and other machinery equipment.

In the future, we will continue to conduct investment aimed at further strengthening our lineup of reusable solutions while working to solve customer problems throughout the value chain, including in management, sales, planning, design, procurement, manufacturing, logistics and maintenance.

Customer Case Examples

Customer Case	Industries	Goals and issues
Revenue/Loss simulation	Manufacturing industry	Manufacturing plan, inventory management
Streamlining of cybersecurity monitoring operations	Common across industries	Security enhancement
digitalization of refined skills	Manufacturing industry	Improvement of product quality
Customer-centered marketing	Retail industry	Marketing
Improve credit analysis	Financial industry	Decision-making support
Inventory optimization	Wholesale, retail and manufacturing industries	Manufacturing plan, inventory management
Analysis of fan club member information	Service industry	Marketing
Crop growth analysis	Agriculture	Productivity improvement
Predictive maintenance	Common across industries	Preventive maintenance
Improvement of operating rates and fault diagnosis	Electricity, gas, heat and water supply industry	Facility management
Delivery optimization	Transportation industry	Delivery and transformation management

(3) Lumada customer cases

CASE 1 Overall optimization of production sites used for high-mix, low-volume production in the manufacturing industry

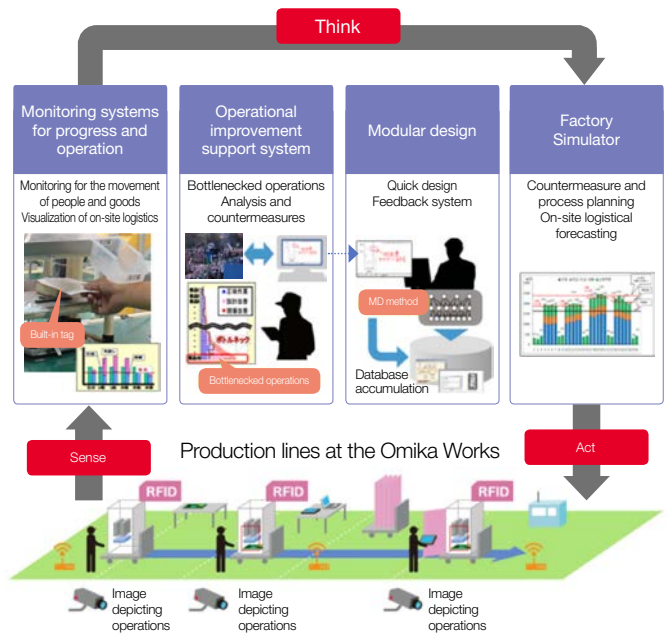
Collect and analyze various data on people and other elements of the production process to improve its efficiency

Customer needs are diversifying and digitalization is progressing at a rapid rate while global competition intensifies. These trends have resulted in demand for high-mix, low-volume production that reaches the same level of productivity as mass production through mass customization. Hitachi's Omika Works handles controls systems manufactured for social infrastructure such as electric power, railways and water and sewage systems through high-mix, low-volume production, and, under these circumstances, faces the need to monitor the progress of production processes in real time. In response, the Omika Works installed about 80,000 RFID tags and approximately 450 RFID readers, collecting detailed data concerning the progress of work conducted by employees and the flow of goods. Furthermore, the Omika Works combined and shared a variety of information gathered by existing systems, including process and production management systems, and analyzed the movement of people and goods throughout its production site. This enabled the establishment of a more precise production plan.

Furthermore, the Omika Works improved the efficiency of its design process through the effective use of design assets and improved the precision of its production plans using a factory simulator. Through these efforts, the Omika Works established a high-efficiency

production model using IoT technology and succeeded in reducing the production lead times of its flagship products by 50%.

Overall optimization of production sites using Lumada



CASE 2 Predictive maintenance for machinery and equipment

Collecting data from sensors installed in machinery and equipment to diagnose and detect issues, thereby avoiding failure and reducing maintenance costs

Failures and unplanned downtime at facilities that compose our industrial and social infrastructures have a major impact not only on our businesses but also on society. Accordingly, we recognize the need to ensure the continuous and stable operation of these facilities, which requires proper equipment maintenance and quality control.

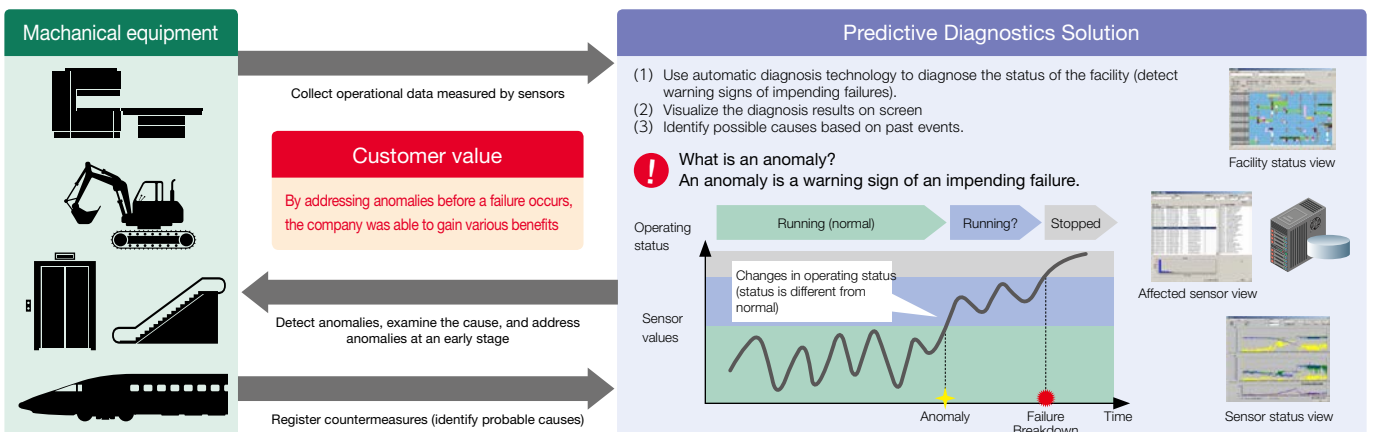
However, many operators do not have analysis methods despite having gathered data indicating the status of their equipment and resort to conducting analysis manually. This results in a large workload that prevents the proper use of valuable data.

With this customer case, we examine and analyze large volumes of

data collected from sensors attached to equipment and detect signs of abnormalities. We also color code and display various information, including equipment operation statuses, relevant changes and indications of possible defects, making it easier to view and identify.

This will enable the customer to detect situations in which equipment statuses or product quality differ from the norm at an early stage, thereby preventing breakdowns and unplanned downtime. As a result, we can expect to be able to reduce maintenance costs by raising equipment operation rates and ensuring the suitability of replacement parts.

Note: P. 39-41 "Strengthening core technologies supporting Lumada."



Strengthen Lumada

CASE 3 Raising credit analysis accuracy through the use of AI

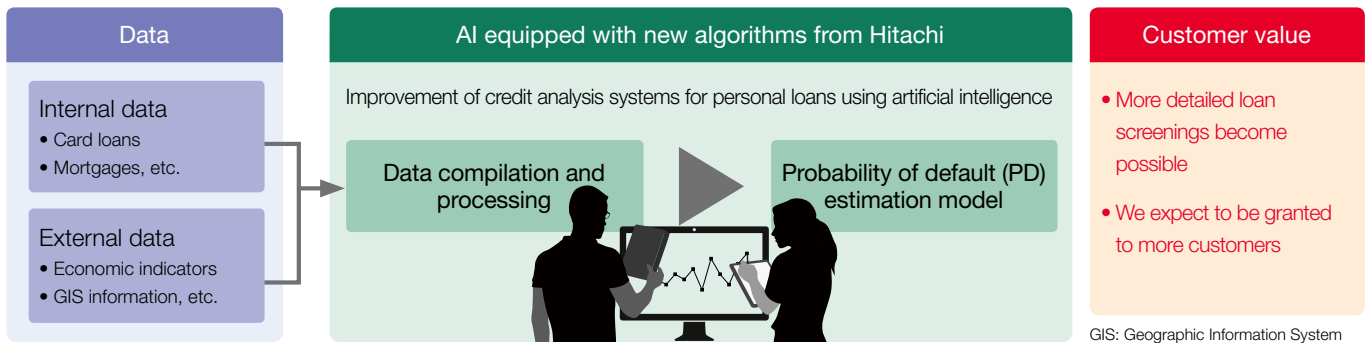
Improve the accuracy of personal loan screenings through AI-based data analysis

Upon understanding customer income and financial conditions, it becomes necessary for financial institutions to predict future credit losses based on factors such as global economic trends. This requires high-level expertise. Mortgages have been particularly difficult to predict using conventional data analysis methods due to their long payback periods.

With this customer case, Hitachi utilizes internal data from financial institutions (e.g., card loans, mortgages), as well as external data (e.g., economic indicators, GIS information) using "Hitachi AI Technology/ Prediction of Rare Case," an artificial intelligence it developed in-house to predict the occurrence of rare events, thereby ensuring highly accurate screenings. This allows for more detailed screenings, which

we expect will allow loans to be granted to more customers than was previously possible.

One developmental effort involving this customer case is Hitachi's May 2019 establishment of Dayta Consulting Co., Ltd., a joint venture formed through collaboration with SBI Sumishin Net Bank, Ltd., that provides screening services using artificial intelligence. The Company plans to provide screening services for various types of lending, including mortgages and card loans, to financial institutions including regional financial institutions.



Development of an AI-based production planning system through collaborative creation with Suntory Beverage & Food Ltd.

In recent years, beverage manufacturers have faced the need for prompt and flexible product supply in response to diversifying consumer requirements and fluctuations in demand caused by changes in weather and climate. In addition to fulfilling these needs, it is necessary for these manufacturers to formulate optimal production plans that account for complex constraints, such as delivery times, production capacity and production and transportation costs. Suntory Beverage & Food Ltd. ("Suntory") has been basing its production plans on the experience of responsible staff. However, creating plans that account for complicated restraints requires a high level of planning ability and a huge amount of time. Furthermore, production plans are drawn up for each area, which means that the most optimal conditions will differ for each location. For these reasons, Suntory has been unable to formulate an optimal plan that effectively utilizes all of its production resources.

Under these circumstances, Suntory and Hitachi have begun collaborative creation based on the concept of "Harmony between People and AI," combining the former's expertise regarding planning and the latter's AI technology to develop a system that enables the creation of optimal production plans in the face of changing demand and complex constraints. We applied this system to production planning conducted at Suntory's actual manufacturing bases and verified that it was possible to reduce the amount of work time put into planning from its previous average of approximately 40 hours per week to approximately 1 hour. Aiming to optimize its production plans throughout Japan, Suntory launched full-scale operation of this system in January 2019 and is currently working to build a stable supply system that can provide immediate response to fluctuating demand and to improve productivity by raising operational efficiency.

Lumada platform

■ Quickly build appropriate systems by utilizing open and secure IoT platforms

(1) IoT platform architecture

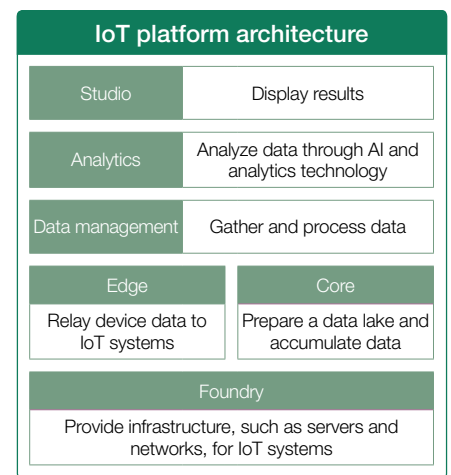
Lumada has established an open and secure IoT platform that can quickly provide digital solutions by swiftly combining advanced products and technologies from both inside and outside Hitachi Group. This platform enables us to comprehensively provide a variety of mechanisms, such as advanced analytics technology and asset management functions, thereby allowing for the prompt realization of appropriate digital solutions.

The platform's structure for flexibility combining technologies is defined by six elements. These elements make the achievement of an open and flexible platform possible with architectural specifications and connection methods that meet global and industrial standards.

Thanks to these attributes, digital solutions utilizing Lumada's IoT platform are intelligent, composable, secure and flexible.

Features of Lumada's digital solutions

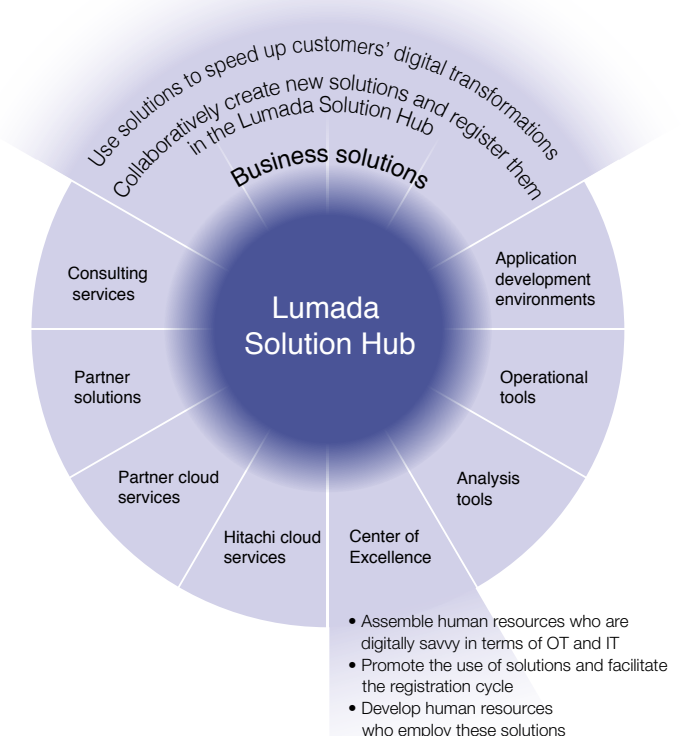
Intelligent	Analytics technology such as machine learning and artificial intelligence allow for deep insight and awareness that leads to action.
Composable	Hitachi's core technologies can be widely combined with OSS* and third-party technologies to maximize outcomes (results). <small>* Open Source Software</small>
Secure	Users can ensure high levels of security by confirming the appropriateness of connecting equipment, managing the security of stored data and controlling access.
Flexible	We can provide flexible solutions that fit equipment, devices and IT environments currently in operation both through the cloud and on-site*. <small>* Involves installing equipment inside company facilities and implementing and operating systems from within.</small>



(2) Lumada Solution Hub, a mechanism enabling the speedy composition of solutions

Launched in 2019, the Lumada Solution Hub is a system that packages Lumada solutions and application development environments in forms that are easy to implement and then registers and provides them on cloud platforms. Easy-to-reuse packages that combine business solutions and application development environments are registered and stored in the Lumada Solution Hub catalog. This system enables smooth transitions from the speedy verifications of solutions, which are conducted through collaboration with customers, to production environments. Furthermore, it allows for efficient rollout to multiple locations, including those that are situated overseas.

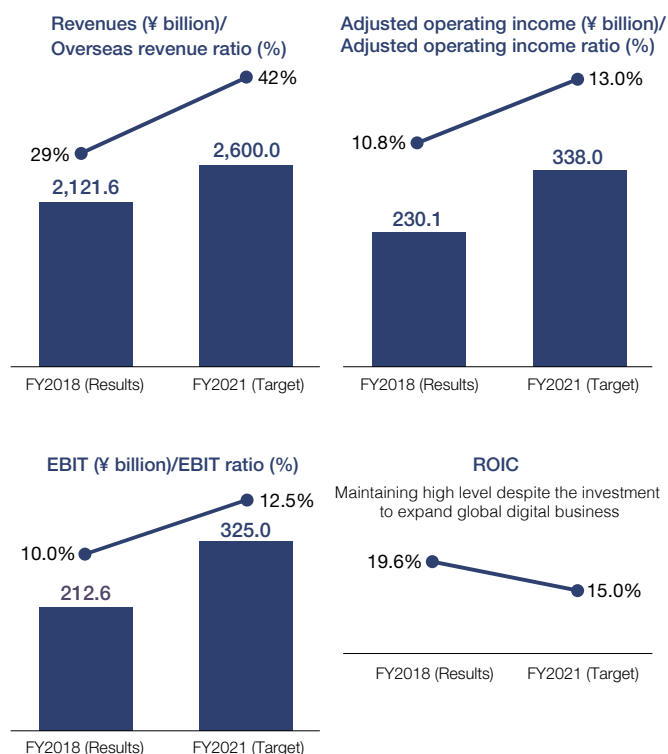
In the future, the Lumada Solution Hub will be opened up to partners and register solutions that they have developed, in addition to the Hitachi solutions that are already a part of the Hub's catalog. With these solutions, Hitachi will accelerate the creation, distribution and utilization of digital solutions while speeding up the construction of Lumada ecosystems.



Story of Value Creation in the IT Sector

The use of digital technologies such as 5G, AI, IoT and robots is essential for companies aiming to continuously raise their corporate value amid dramatic environmental changes and a focus on digital transformation, or the revolutionization of corporate management through digital technology, is rising even further. In Japan, where the birthrate is rapidly declining and the population is aging at an alarming rate, IT-related market is expected to be necessary for improvement in productivity and work-style reforms.

Results and Targets



Note: Figures for each subsegment include intersegment transactions.

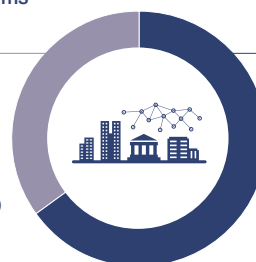
Principal Products and Services

FY2018 Revenues **¥2,121.6 billion**

Services & Platforms **35%**

Front Business **65%**

- IoT platform
- Data analytics
- AI
- Cloud service
- Security
- IT products (storage server)
- Control systems



- Financial systems
IT for banking, insurance and securities
 - Public systems
IT for public offices, municipalities and educational institutions
 - Systems for social infrastructure
IT for power generation/energy, transport and communication carriers
 - Defense systems
 - IT functions commonly used for all companies
Application development, engineering, operation and maintenance, project management and quality assurance
- * Defense systems are included in "others" for accounting



Vision and Targets under the 2021 Mid-term Management Plan

Accelerate customer innovation with advanced IT

In the IT Sector, we will meet the expectations of customers in Japan and overseas with the power of digital technology, achieve a sustainable society and aim to become a top-class global solution provider. Moving forward, we will aim to improve social value through advanced digital solutions operations in the financial and social infrastructure fields. At the same time, we will strive to create environmental value by raising environmental efficiency throughout the lifecycle of our products and services.

Growth Strategies under the 2021 Mid-term Management Plan

Digital transformation, which involves attempting to produce reforms in corporate management and business models, is receiving an increasing amount of attention. Under these conditions, mobile payment systems utilized in mobile phone networks, which have a global penetration rate of more than 100%, are becoming commonplace in people's lives and are becoming gigantic infrastructures that generate large amounts of data every day. In addition, new discoveries and expansion are expected in a wide range of domains within the X-Tech (crosstech) market, where FinTech, HR Tech and other digital technologies are used to develop new services in various fields and industries and transform industry structure itself. Furthermore, we anticipate growth in the information and communication technology-related market moving

forward. Under these circumstances, we have steadily improved profitability and created the cash necessary for growth investment in the IT Sector by reinforcing front functions and manufacturing capabilities through reorganization of SI businesses; withdrawing from or concluding low-profit businesses such as the communication network equipment business; and reducing loss cost through thorough and enhanced project management. Moving forward, we will continue to expand the Lumada business, which acts as the core of growth, and invest one trillion yen over the three years covered by the 2021 Mid-term Management Plan to accelerate global expansion.

■ Expansion of the Lumada Business

The Lumada business will serve as a growth engine for all of Hitachi through the utilization of data and co-creation with customers and partners. The digital tools and wide-ranging industry and business expertise used to make this possible are being condensed into customer cases adjusted so they can be reused by many customers.

Lumada's customer cases have been accumulated as "workplace knowledge" of "OT × IT × Products," which Hitachi has refined through its customer-centered policies. By using Lumada as a starting point, we can minimize customization and develop and implement speedy solutions. Furthermore, the ability to expand Lumada into a wide range of areas, such as mobility, smart life, energy and industry, is a major factor that distinguishes Hitachi from its competitors.

We worked to expand digital solutions using Lumada during the three years covered by the 2018 Mid-term Management Plan, launching the business globally in 2016 and investing about ¥100 billion into the launch of related businesses. Currently, we have amassed more than 650 customer cases (as of the end of fiscal 2018), which are examples of co-creation with users. On the other hand, we must refine Lumada's customer cases and the solutions that embody them on an ongoing basis as the management and business issues facing our customers continue to change constantly. As we move forward, we will strive to expand the Lumada business by accumulating new customer cases and solutions through co-creation with customers and partners.

Over the three years covered by the 2021 Mid-term Management Plan, we will continue to invest ¥150 billion in the Lumada business and related projects, aiming to expand the use of Lumada in other sectors and to develop and expand the digital specialists/human capital essential to the acceleration of the Lumada business. In fiscal 2021, we will increase our number of digital specialists to 30,000.

■ Acceleration of Global Expansion

Previously, in the IT Sector, we established Hitachi Vantara in 2017, followed by Hitachi Global Digital Holdings in 2018. Also, in 2018, we acquired REAN Cloud, a cloud-related service provider in the United States, and, in 2019, we started collaboration in the digital business with Virtusa, a global IT service company in the United States. We have also established a joint venture with State Bank of India, the largest state-owned commercial bank in India, and are working to develop platforms for cutting-edge next-generation digital payment services. Over the three years covered by the 2021 Mid-term Management Plan, we will invest approximately ¥830 billion into efforts aimed at further strengthening our overseas business and will target further business expansion through M&A and other initiatives.

Collaborative Creation of Value within the IT Sector

Lumada plays a core role in our efforts to provide social, environmental and economic value and to achieve social innovation. On the other hand, Hitachi cannot achieve objectives related to the SDGs and Society 5.0 on its own. We believe that these objectives can only be achieved through co-creation with a wide range of customers and partners.

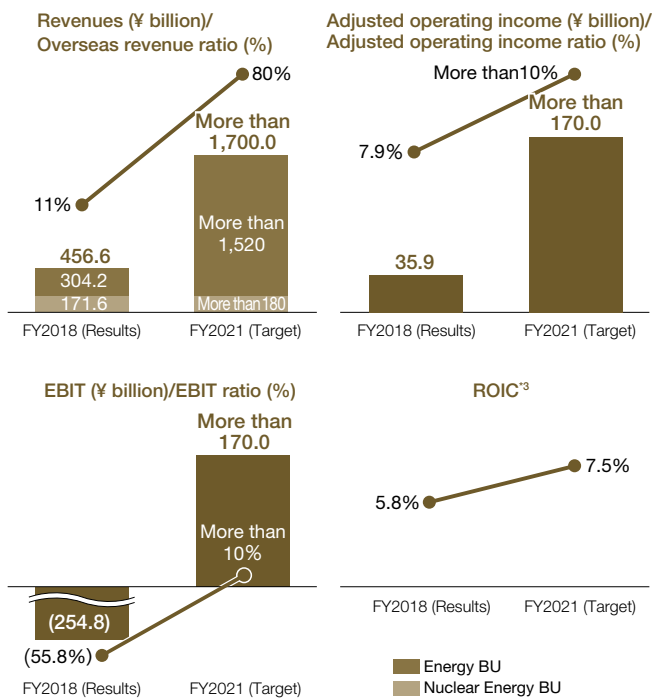
For example, since 2017, we have been supporting the digitization of subsidy payment operations and other financial services offered by the state-owned Vietnam Post. In fiscal 2018, we expanded the scope of this digitization to include social security subsidy and pension payment operations and are currently promoting further expansion on a nationwide scale. Through this co-creation, Hitachi will combine its technologies with Vietnam Post's services to improve the quality of people's lives. We aim to help improve convenience for 6 million subsidy recipients starting in 2020.

Together with our customers and partners, we will form a Lumada-centered ecosystem that enables expertise, resources and skills to be shared while further accelerating social innovation.

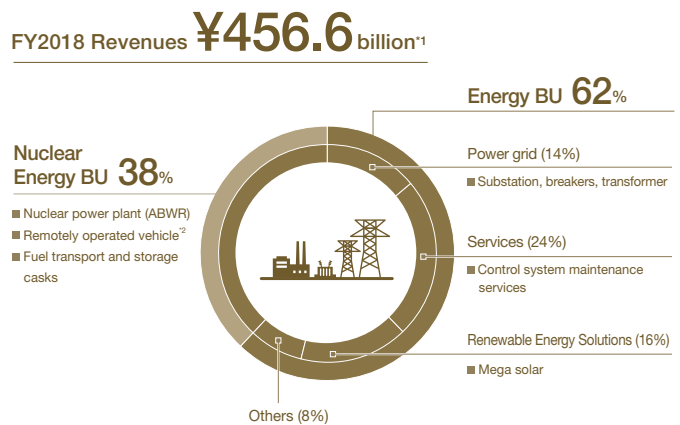
Story of Value Creation in the Energy Sector

The world's energy demand continues to expand against a backdrop of population growth and economic development, as well as social innovation such as the recent expansion in the scale of data centers and the spread of electric vehicles. On the other hand, serious power shortages in developing countries remain a problem and one billion or more people are forced to live without electricity. Furthermore, movements to reduce CO₂ emissions and decarbonize are picking up speed throughout the world in the midst of response to global climate change. Hitachi will respond to these issues with energy solutions that leverage the strengths of "OT x IT x Products" in business fields such as renewable energy and power grids.

Results and Targets



Principal Products and Services



^{*1} Includes the control systems business, which is posted in IT Sector
^{*2} Developed as operations of International Research Institute for Nuclear Decommissioning. This development was conducted using business expense subsidies provided by the Agency for Natural Resources and Energy in connection with decommissioning efforts and water pollution countermeasures.
^{*3} FY2018 figures except one-time expenses.

Vision and Targets under the 2021 Mid-term Management Plan

Providing energy solutions that contribute to a stable energy supply and efficient facility management

The energy business forms the core of the Social Innovation Business and contributes to the achievement of the SDGs. In the Energy Sector, we will provide energy solutions that make use of the strengths of "OT x IT x Products," such as nuclear power generation systems, renewable power generation systems, power grid systems for receiving and transforming, transmitting and distributing electricity, predictive diagnostics for equipment and remote monitoring services. Providing these solutions will enable us to contribute to a stable energy supply for customers, efficient facility management and the cutting of CO₂ emissions, as we work toward a low carbon or decarbonized society.



The Chugoku Electric Power Company, Inc.'s Shimane Nuclear Power Station Unit 3, under construction



Ultra-high voltage gas insulated switchgear (UHV GIS)

Growth Strategies under the 2021 Mid-term Management Plan

Previously, in the Energy Sector, we have been converting our business portfolio in response to changes in the market environment surrounding energy while promoting the launch of high-value-added service businesses and the enhancement of the solution business. In the future, the power transmission and distribution market is expected to expand significantly both in Japan and globally against a backdrop of the spread of renewable energy and the expansion of distributed power supply. In response to these projections, we plan to acquire ABB's power grid business during the first half of 2020. Digital technology is indispensable for the achievement of advanced energy management, and power grids are an area in which Hitachi can fully utilize its digital technology. Hitachi's energy business had been primarily concentrated in Japan. However, we will accelerate global business expansion by utilizing the expertise and resources of the power grid business of ABB which has the largest share of the global power grid market. At the same time, we will also focus on strengthening and expanding our solution and service businesses using Lumada. In addition, Hitachi will continue to engage in initiatives aimed at providing a stable energy source through its nuclear energy business while using its advanced technological capabilities and abundant knowledge to contribute to the decommissioning of the Fukushima Daiichi Nuclear Power Plant. Furthermore, we will use these same attributes to promote construction that is compliant with new regulatory standards and aims to support the early resumption of operations at domestic nuclear power plants.

■ Enhancement and Expansion of the Solution and Service Businesses Using Lumada

In the energy solution business, we received orders for a management platform for high-temperature parts for gas turbines used in privately owned industrial power generation equipment in 2019. This platform uses Lumada to improve the efficiency of inspection and maintenance work while raising the maintenance capabilities of operators. Following the acquisition of ABB's power grid business, we will aim to develop solutions on a global scale by utilizing its customer base, engineering, technologies and systems.

Service business

In 2017, we concluded contracts in the service business with customers. Through these agreements, we will provide solutions that combine power generation systems with integrated energy and equipment management services to provide total solutions for energy conservation issues. Moving forward, we will combine Lumada with our on-site capabilities and digital technologies to develop a variety of service solutions that improve the efficiency of inspection planning upgrade and accelerate maintenance and provide predictive diagnostics aimed at preventing failure, as well as remote monitoring.

In the renewable energy business, Hitachi will strengthen its partnership with Germany-based wind turbine manufacturer Enercon, combining its services and Enercon's wind turbines to develop wind power solution business, which will stabilize operation and reduce maintenance costs.

Power grid business

In the power grid business, we will promote the expansion of businesses in industrial fields, including the expanding data centers and electrification of factories and the provision of solutions related to electric vehicles. In the HVDC (High Voltage Direct Current) transmission business, we will conduct active development related to the offshore wind power market and interregional and international DC power transmission. In addition, we will work on the development and deployment of new solutions that fuse DC transmission and digital technologies.

■ Further Demonstration of Our Competitive Advantage

Taking advantage of its "OT × IT × Products" strengths, Hitachi will provide solutions, including power generation and power grid systems, to all customers involved in energy production, distribution and consumption. Furthermore, following the acquisition of ABB's power grid business, which has the largest share in the global market, we will accelerate new innovation by combining its products and software with Lumada.

Collaborative Creation of Value within the Energy Sector

Promotion of open innovation

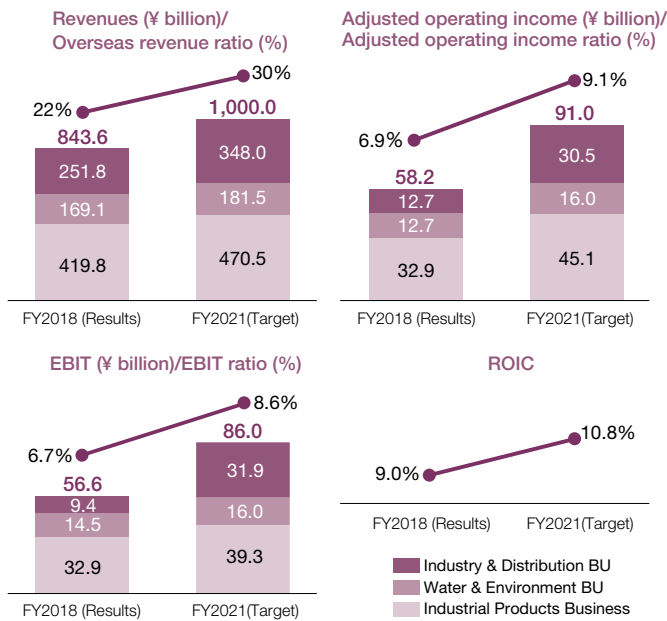
Hitachi is promoting industry-academia collaboration in pursuit of new value creation in the Energy Sector. Targeting the realization of Society 5.0, we are working to create a new vision and produce new innovation at the "Hitachi the University of Tokyo Laboratory", which we established with the University of Tokyo in 2015. In the Energy Sector, we are building a platform with the goal of simulating long-term energy supply and demand. These simulations will allow different renewable energy implementation methods to be evaluated and verified, enabling authorities to determine which method is most effective in terms of achieving the goals of the Paris Agreement.

Hitachi will contribute to social, environmental and economic values by expanding its provision of energy solutions that utilize Lumada, including grid and renewable energy solutions, energy management solutions and energy conservation and decarbonization solutions. Furthermore, we will aim to contribute to the management of 25% of the world's substations and the supply of stable energy to about 1.8 billion people.

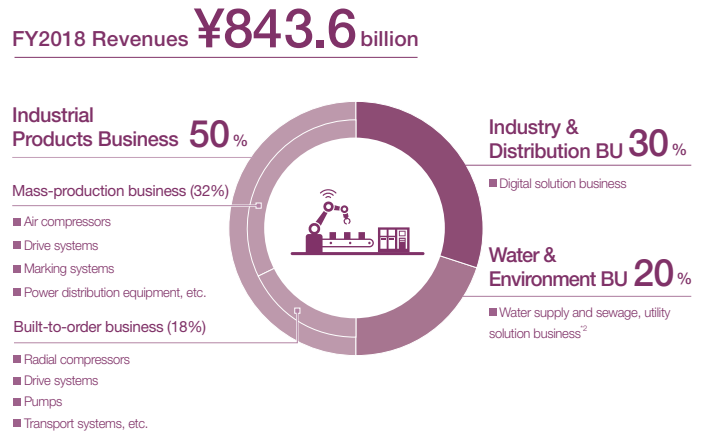
Story of Value Creation in the Industry Sector

In the world of industry, the speed and complexity of market changes caused by factors such as climate change and resource shortages are increasing along with the working-age population decreases and global competition intensifies. Under these circumstances, the creation of new services and innovations using advanced digital technologies, such as AI, IoT and big data analysis technologies, is in demand in a variety of different fields. As a result of this demand, the global IoT market is expected to experience a high rate of growth.

Results and Targets¹



Principal Products and Services



¹ The impact of a large-scale overseas Engineering, Procurement, Construction (EPC) project of the Industry & Distribution BU has been excluded. Figures for Hitachi Plant Services and Hitachi Plant Mechanics, which were transferred in FY2019 from the Industry & Distribution BU to the Water & Environment BU and Hitachi Industrial Products, respectively, were revised retroactively. Figures for each subsegment include intersegment transactions. Figures for each BU include the control systems business, which is posted in the IT Sector.
² Air conditioning and water treatment facilities for factories, social infrastructure, etc.

Vision and Targets under the 2021 Mid-term Management Plan

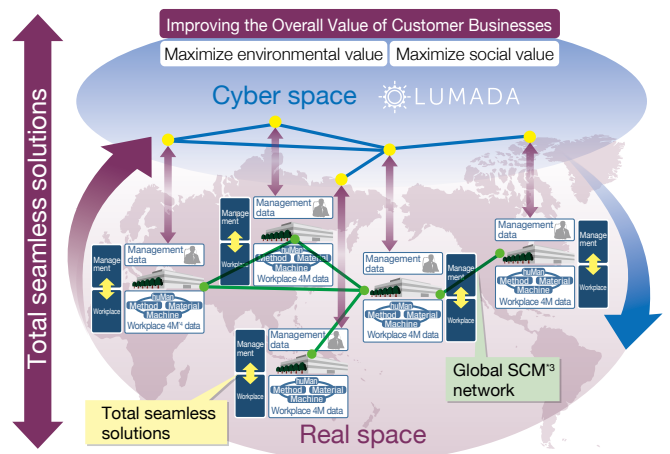
“Increasing the efficiency of customers’ production and processing systems,” “providing safe and secure water environments” and “reducing CO₂ emissions”

In the Industry Sector, we aim to become the best solution partner for customers in the industrial field by utilizing our strengths in “Products × OT × IT.” Furthermore, we will create social and environmental value by “increasing the efficiency of customers’ production and processing systems” through the provision of solutions that contribute to productivity and quality improvements in the manufacturing and distribution fields; “providing safe and secure water environments” to 70 million people per day worldwide using water and sewage infrastructure and seawater desalination technology; and “reducing CO₂ emissions” through energy-saving products.

Growth Strategies under the 2021 Mid-term Management Plan

As the world changes and customer needs diversify and become more high-level, we face various issues that arise between the workplace, management and the supply chain. In the Industry Sector, we recognize these issues as “boundaries.” By connecting cyber spaces and real spaces using digital technology, we will solve “boundary” issues and provide total

seamless solutions that achieve overall optimization. The keys to achieving these goals are the Industry Sector, which is a business entity that simultaneously possesses products, OT and IT; the use of Lumada and robotic SI, which drives digital innovation; and the construction of value chains that range from management to workplace and from procurement to manufacturing while spanning across fields such as logistics, sales, services and maintenance. With these keys in place, we will aim to become the best solution partner for customers in the field of industry.



Vision of the Industry Sector

³ Supply Chain Management (SCM)
⁴ 4M: huMan, Machine, Material and Method

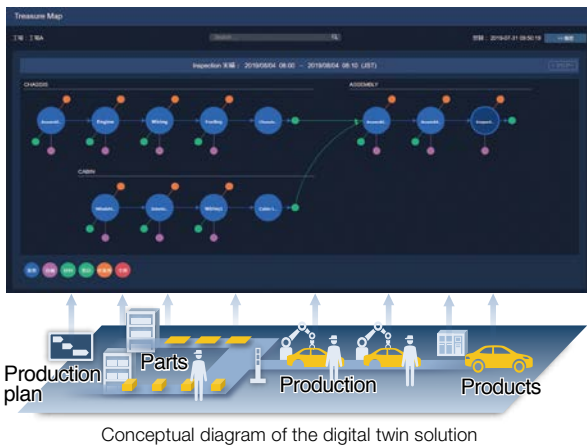
Collaborative Creation of Value within the Industry Sector

Total Seamless Solutions that Solve “Boundary” Issues

In the Industry Sector, we will provide total seamless solutions while focusing on four next-generation solutions (manufacturing, logistics, maintenance and utility) and connected products, thereby helping to improve the overall value of our customers’ businesses.

One Lumada solution contributing to the achievement of these goals is the digital twin solution, which was launched in November 2018. The solution facilitates AI analysis and simulation by using an advanced data model to link manufacturing workplace OT and IT data in cyber space, supporting the optimization of the entire production process.

Data Modeling of Business Operations and 4M and the Optimization of Production Processes through Digital Twin



One example of the application of Lumada at manufacturing workplace is our collaboration with the AMADA Group, a major metalworking machinery manufacturer. After delivering servo motors used in pressing machines, we constructed a tooling IoT production line by applying robotics in 2017. We also contributed to the improvement of productivity and operational efficiency in 2019, when we built Assembly Navigation System with the goal of upgrading manufacturing workplaces.



Assembly Navigation System at the AMADA Group's Fujinomiya Works

Furthermore, because of the importance of connected products in the Industry Sector, in 2017, we worked to increase our global strength in terms of connected products by acquiring Sullair, an air compressor manufacturer in the United States.

Strengthening of OT Area through the Acquisition of the Robotic SI Business

In the Industry Sector, we believe that the manufacturing industry will evolve from “manufacturing through people and machines” to “manufacturing through people and robots” before progressing to “manufacturing that connects management with the workplace.” Under these circumstances, we have decided that OT areas related to the Robotic SI business, which accumulates field data, will become increasingly important in addition to rising needs for advanced and optimized manufacturing conducted using robots. In accordance with this judgment, we reached acquisition agreements in 2019 with JR Automation, a United States-based robotic SI business operator, and Japan-based KEC.

The industrial world is facing a growing need for automation due to labor shortages and rising labor costs, and the robotic SI market is expected to grow rapidly as a result. In the Industry Sector, we will work to expand the Robotic SI business on a global scale by mutually utilizing the resources of JR Automation, KEC and Hitachi Industrial Equipment Systems and the research and development capabilities of Hitachi.

In the Industry Sector, we will globally develop Lumada solutions that utilize digital technology based on 4M data obtained workplace from customers by acquiring technology, expertise and customer bases from these two companies in the robotic SI market. This will enable us to contribute to the improvement of our customers' management and to help raise the overall values of their businesses through seamless collaboration between workplace and management.



KEC's Robotic SI business

In Pursuit of Further Growth in the Industry Sector

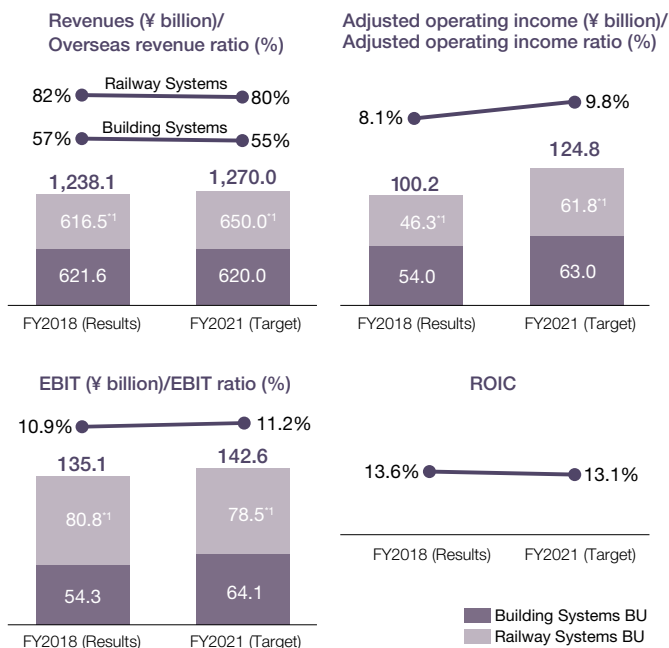
In the Industry Sector, we will strengthen and expand total seamless solutions that leverage the strengths of “Products × OT × IT” and accelerate and enhance global expansion in pursuit of further growth. Furthermore, we will aim to become a business entity that provides high added value by expanding recurring business⁵ and improving capital efficiency.

⁵ Cycling business that exists after sale service market and continual replace demand such as replacement parts.

Story of Value Creation in the Mobility Sector

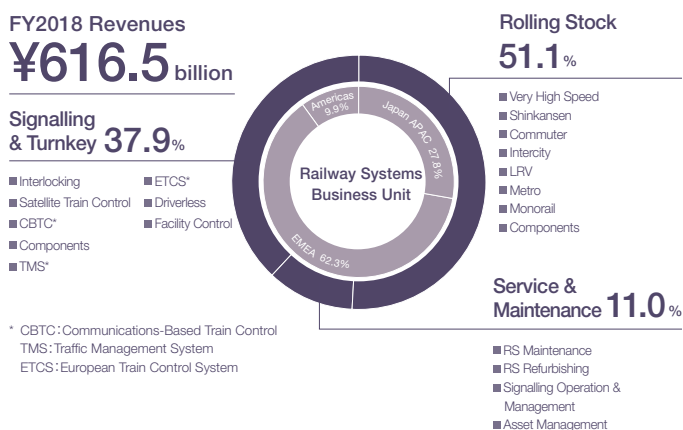
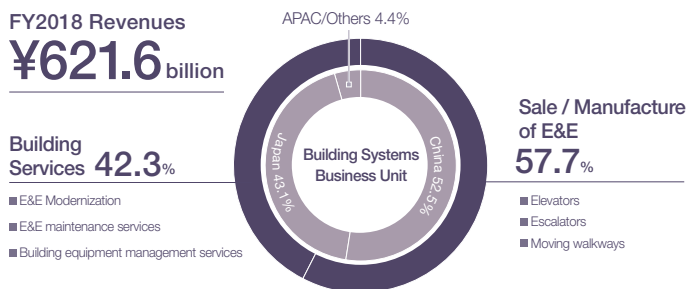
Global population is growing and urbanization is advancing rapidly, so that the proportion of people living in urban areas is expected to rise to 68% by 2050, from around 55% today. In addition, the negative impact from climate change is causing environmental, economic and social damages. Against this backdrop, in the mobility realm, the demand for clean and highly efficient mobility solutions such as one for faster and more environmentally friendly intercity transportation and alleviation of dependency on car use within city centers, and smart solution to manage the people flow in high-rise buildings.

Results and Targets



¹ Figures for Railway Systems BU include the control systems business, which is posted in the IT segment.

Principal Products and Services



* CBTC: Communications-Based Train Control
 TMS: Traffic Management System
 ETCS: European Train Control System

Our Ideal under the 2021 Mid-term Management Plan

Providing People with Safe, Secure and Comfortable Transportation Services

In the Mobility Sector, we deliver social value by providing people with safe, secure and comfortable transportation services, and products and services for urban spaces such as buildings. At the same time, we create environmental value by realizing transportation services that have a low environmental impact and contribute to, for example, reducing CO₂ emissions.

Growth Strategies under the 2021 Mid-term Management Plan

In the Building Systems Business Unit, we expand technologically advanced and competitive products and services, which include the world's fastest elevator (according to our research as of September 2019) with the speed of 1,260 meters per minute, and Lumada solutions leveraging Hitachi Group's robust resources on digital technologies such as Internet of Things (IoT) and artificial intelligence.

Meanwhile, in the Railway Systems Business Unit, we realize the differentiation from other competitors by providing total solutions spanning the manufacture of rolling stock to operational control, IC ticketing and seat reservation system, and solutions utilizing IoT and digital technologies for operation optimization, driverless operation and digital ticketing.

■ Building Systems Business Unit

The market for elevators and escalators (E&E) is expected to continue expanding steadily. Particularly high rates of growth are expected in the Asian market, especially in India, which has the world's second largest market scale. In the largest market, China, the expected growth area has been shifted from new installation to maintenance and modernization of E&E. In Japan, the demand for E&E modernization is expanding and the expectation for new solutions leveraging digital technologies for workers and tenants in buildings is increasing.

Against this backdrop, the Building Systems Business Unit has achieved growth globally based on its sophisticated products and technologies, which are exemplified by the top share (Hitachi research) of order received in fiscal 2018 by unit in China, the world's largest market for new installation of E&E, accounting for more than 50% of the total. Going forward, we plan to combine manufacturing and sales of E&E with building services to realize business growth and increased profitability. To this end, we are stepping up investment centering on digitalization. Specifically, we are accelerating investment in a global control center that functions as a basement for providing leading-edge building services, such as a sophisticated remote monitoring service which utilizes digital technologies and a solution which realizes efficient and comfortable movement by using sensors in buildings and analyzing the flow of people.

In addition, in Asia and Middle East, where demand for new installation of E&E is surging, we are deploying our sales and service bases, and expanding our business through maximizing the capacity utilization of factories in China and utilizing sophisticated maintenance and modernization technologies which we have developed in Japan.



■ Railway Systems Business Unit

Demand in the railway market is expected to expand throughout the world thanks to economic development. Growth, mainly for rolling stock, signaling system and control system, is expected in Europe, Middle East, Africa and Americas.

In fiscal 2018, the Railway Systems Business Unit set records for rolling stock deliveries and orders, revenue and adjusted operating income ratio, highlighting our efforts to build a firm global business platform. In the future, we intend to move forward with rolling stock, signaling system and turnkey business as core businesses. We will also concentrate investment in digital technologies and IoT to enhance our competitiveness further. We are encouraging our Dynamic Headway, which optimizes operations based on demand, autonomous

operation, and digital ticketing utilizing location information and other data to realize automatic payments via smartphones. In addition to further reinforcing services and solutions such as these, we will augment the value for customers and provide safe, secure and comfortable transportation services.

In January 2019, we acquired Ansaldo STS (now Hitachi Rail STS), an Italian leader in railway signaling systems, converting the company to a wholly owned subsidiary and delisting it. In addition to further enhancing our strength in the signaling and turnkey businesses, we expect this move to generate synergies through organizational optimization and increased production efficiency, allowing us to further expand our global operations.



Value Co-Creation in the Mobility Sector

In the Building Systems Business Unit, we are working on enhancing our products and services through the analysis of the data gathered from elevators, escalators and building equipment, increasing added value of maintenance services such as sophisticated remote monitoring and control, providing data to building owners and managers, and creating new businesses leveraging Lumada.

By positioning the global control center as a core competence and deploying new solutions leveraging Lumada to the customer base we have built in E&E business, we aim to develop our business further and realize the expansion of building service business other than E&E and differentiation from manufacturers specializing in E&E.

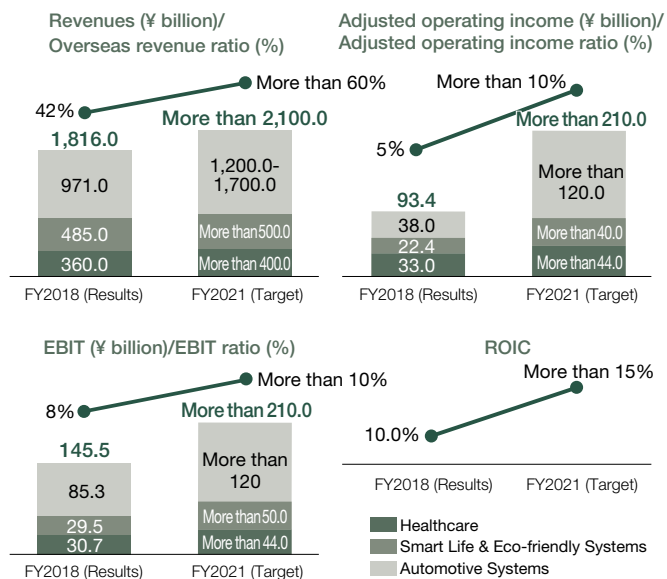
In the Railway Systems Business Unit, for Denmark's Copenhagen Metro we are working on the maximization of transportation capability, congestion alleviation and cost reduction through detecting demand based on the number of people waiting at station platforms and realizing autonomous and flexible operation. With core products such as this, we aim to expand business in the urban transport market in Europe, where business volume is the highest in the world. Demand is also expected to flourish in Americas. There, we aim to secure growth opportunities by utilizing existing manufacturing bases and leveraging our market presence in services and maintenance.

In the Mobility Sector, through social innovation businesses such as these, we will provide people around the world with products and services that are safe, secure, comfortable and environmentally friendly.

Story of Value Creation in the Smart Life Sector

While global economic development continues, societal issues such as global warming, traffic jams and accidents, aging and nursing care have become more prominent. Progress is being made on the development of technologies aimed at resolving these issues, including electrification, autonomous driving, AI, robotics and personalized medicine. This progress is giving rise to a variety of business opportunities. We are confident that IoT solutions related to daily life will be integrated within smart cities and will comprehensively support the lives of people living in urban areas. In fact, the global smart city market is expected to reach \$2 trillion or more in 2025.

Results and Targets



Principal Products and Services

FY2018 Revenues **¥1.8 trillion**

Healthcare **20%**

- Diagnostic systems
- Treatment systems

Automotive Systems **53%**

- Powertrain
- Chassis parts
- Safety systems

Smart Life & Eco-friendly Systems **27%**

- Home appliances
- Air-conditioning systems

* The healthcare and related business includes revenues of healthcare-related businesses of Hitachi High-Technologies Corporation ("Hitachi High-Tech")

Vision and Targets under the 2021 Mid-term Management Plan

Accomplishing business structural reform in support of our next stage of growth through digital technology

We have promoted business structural reforms in the Smart Life Sector over the past several years, including the deconsolidation of the air-conditioning systems business and the sale of the car navigation and automotive battery businesses. During the period covered by the 2021 Mid-term Management Plan, we will accomplish business structural reform by improving profitability through business replacement and operational restructuring. At the same time, we will establish a business model for Lumada and develop our digital service business, leading us into our next stage of growth.

Growth Strategies under the 2021 Mid-term Management Plan

Significant Improvement in Profitability through Business Replacement and Operational Restructuring

Automotive Systems business

Chief Executive Officer Koch assumed his position at Hitachi Automotive Systems, Ltd., during fiscal 2018, ushering in structural reforms. He promoted the classification of core and non-core

businesses, establishing the powertrain, chassis and safety systems businesses as core businesses. Meanwhile, the energy station, car navigation, automotive lithium-ion battery and cargo handling materials businesses were sold as non-core businesses.

In terms of core business products, we will form strategic alliances and conduct M&A with the goal of achieving one of the world's top three market shares and improve profitability by pursuing economies of scale in both procurement and manufacturing. As a first step toward these goals, we decided to acquire Chassis Brakes International in June 2019 in an effort to strengthen the competitiveness of the chassis and safety systems businesses. We will expand the safety systems business, which integrates electric steering and suspensions, while giving due consideration to the market environment, where the shift to electric brakes is under way.

Competition in product development utilizing electrification and automation technologies is intensifying both in the automotive system business and throughout the industry. For this reason, rising research and development costs are proving to be a primary cause of reduced profitability. As a corporate organization, the Research & Development Group of Hitachi acts as a common foundation for research and development, reducing investment overlap between businesses and improving efficiency.

In addition, we are promoting the use of Lumada customer cases with the goal of streamlining operations such as marketing, design, procurement, production and quality improvement using digital technologies.

We will achieve our target adjusted operating income ratio of more than 10%

by boosting business efficiency through scale expansion, raising research and development efficiency and improving operations through the use of Lumada.

Smart Life & Eco-friendly Systems business

The Smart Life & Eco-friendly Systems business, which has a long history of developing products from consumer perspectives, is a core business aiming to improve the quality of people's lives in the Smart Life Sector. We will create solution businesses using "design thinking," which involves coming up with methods for improving our lives without being shackled by preconceptions.

In April 2019, Hitachi Consumer Marketing, Inc., which had been in charge of home appliance sales, merged with Hitachi Appliances, Inc., which had been handling design and manufacturing. This merger led to the establishment of Hitachi Global Life Solutions, Inc., which is venturing into challenging new fields.

We are already launching a lineup of new connected products, including robotic vacuum cleaners and refrigerators that can be controlled and managed using smartphones. Furthermore, we are accelerating efforts aimed at creating solution businesses, launching services such as "Doshiteru," a monitoring service for elderly individuals who live alone, and "Peloridge," a smartphone app for sharing experiences and emotions related to food.

In addition to expanding solution businesses, it is essential that we improve business efficiency. In October 2015, Hitachi's air-conditioning systems business was merged with the air-conditioning systems business of Johnson Controls in the United States, creating Johnson Controls-Hitachi Air Conditioning, an unconsolidated subsidiary of the Hitachi. By combining the sales channels, technical capabilities and research and development of these two businesses, we strengthened the global competitiveness of our air-conditioning systems business. Additionally, in the home appliances business, we will promote collaboration with strategic partners overseas under a flexible capital policy and conduct business operations with an emphasis on investment efficiency.

Healthcare business

Many hidden and unmet needs exist within the healthcare business field, and high rates of growth are expected to continue in the future. On the other hand, technology in the existing diagnostic imaging systems business has matured, and the business has entered a stage of competing for business scale expansion. Accordingly, selection and concentration are becoming increasingly important.

The strength of the Hitachi Group in this field lies in its measurement and analysis technologies, which originated from research and development concerning electron microscopes that was continuously conducted from 1942, when the Group's Central Research Laboratory was initially established. All of the major healthcare products that we have developed so far, including products related to X-ray and ultrasonic diagnostics, MRI, CT, mass spectrometry, DNA sequencing, bioimmune analysis and optical topography, were all

created from these technologies. Our basic strategy is to create innovative healthcare solutions by combining AI with our measurement and analysis technologies. Hitachi will develop healthcare business on the basis of a measurement and analysis technology portfolio, which the Research and Development Group of Hitachi and Hitachi High-Technologies have built.

Hitachi's top priority in the healthcare business is to minimize the invasiveness (generally, invasiveness refers to stimuli that can disrupt the homeostasis of the body's internal environment) of diagnosis and treatment. In the medical treatment field, we are focusing on cancer treatment solutions using less invasive radiation. In accordance with this focus, we integrated Mitsubishi Electric Corporation's particle therapy systems business in June 2018. Moving forward, we will continue to strengthen investment related to this business, including the development of technologies that greatly reduce equipment costs, with the goal of expanding the use of particle therapy.

■ Establishment of a Lumada Business Model

Machine data is collected via the Internet from Smart Life Sector products, including connected cars, connected home appliances and healthcare equipment. Using Lumada's analytics and AI to process this big data, we can create new economic value by automating product operation, as has been done in the case of autonomous driving systems.

Once devices that support our daily lives are automated and various solutions are provided, subsequently these devices are integrated into smart cities and a new data economy is created. Under the 2021 Mid-term Management Plan, we will invest approximately ¥30 billion in the Smart Life Sector, focusing on the smart city market in Asia, a region that continues to urbanize. Furthermore, we will aim to secure ¥100 billion in orders of the Lumada business.

Collaborative Creation of Value within the Energy Sector

Focusing on the three themes of health, safety and comfort, the Smart Life Sector creates social, environmental and economic values by creating communities that are easy to live in, which helps improve the quality of people's lives. We also provide particle therapy systems, allowing people to live normally while receiving cancer treatment, and contribute to the elimination of fatal traffic accidents through autonomous driving technologies. Furthermore, we will contribute to the prevention of global warming by reducing the CO₂ emissions of our products through electrification and IoT technology.