

Fiscal Year Ended September 2019

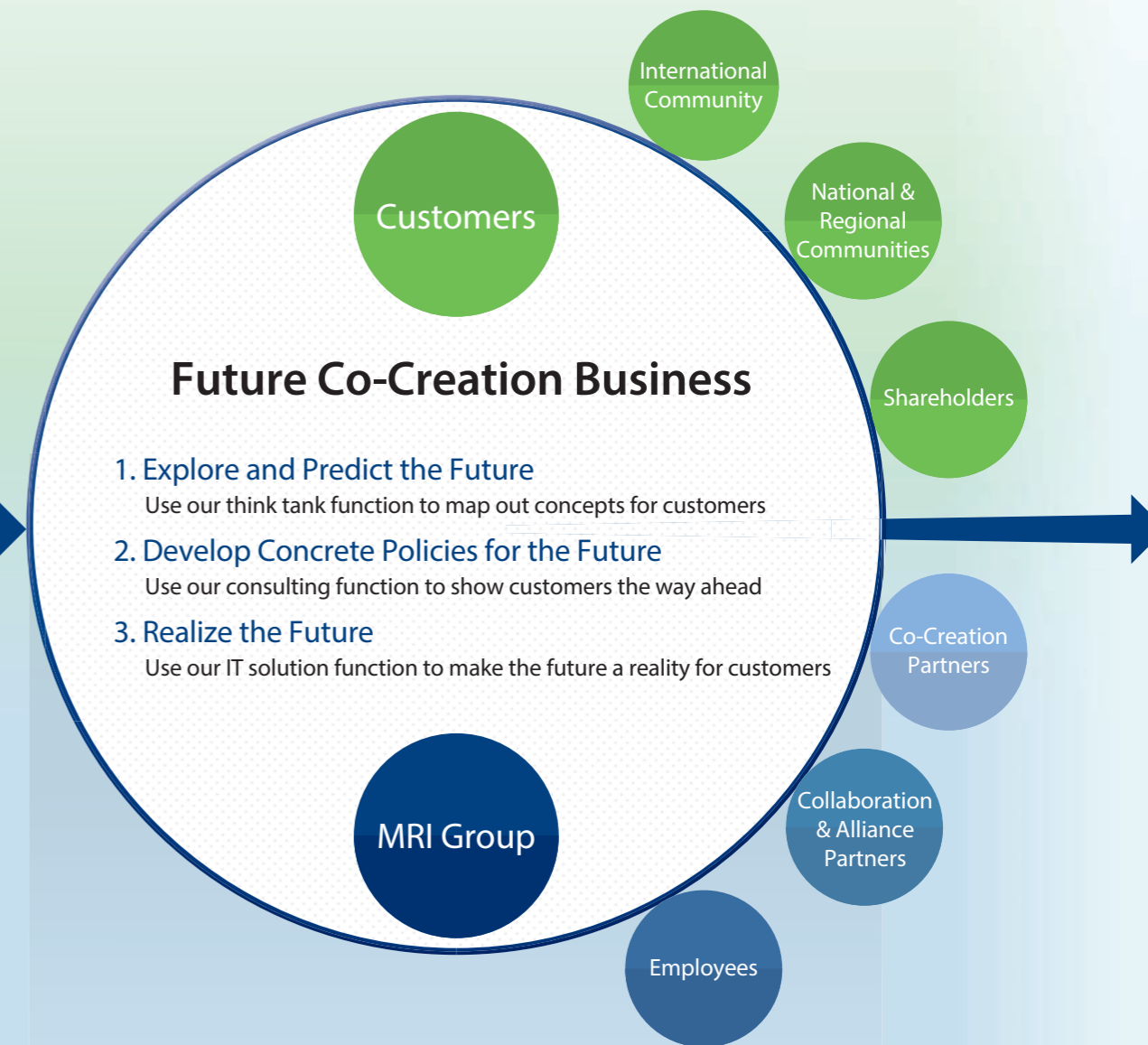
Mitsubishi Research Institute
Group Report 2019

THINK & ACT



The Mitsubishi Research Institute Group (MRI Group) uses its strengths and carries out business activities based on its unique expertise to contribute to the development of the 21st century civilization.

We are leading the way by co-creating a brighter future alongside customers, aiming to achieve the sustainable development of local communities, corporations, and society at large.



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Note on editorial policy and forward-looking statements

This report provides information on our business of helping resolve societal issues and is being published to enhance our corporate value. In line with its objectives, we have referenced the International Integrated Reporting Council's framework and the Ministry of Trade, Industry, and Economy's *Guidance for Value Co-Creation* in preparing this report. It is not intended to solicit investment in marketable securities, and in it Mitsubishi Research Institute, Inc., makes no guarantees or commitments whatsoever. All opinions and estimates reflect the judgement of Mitsubishi Research Institute, Inc., at the time of compilation. We make no guarantee of or claims to the accuracy of information provided. Readers should be aware that actual performance may differ substantially from forecasts contained herein.

Value Creation Process

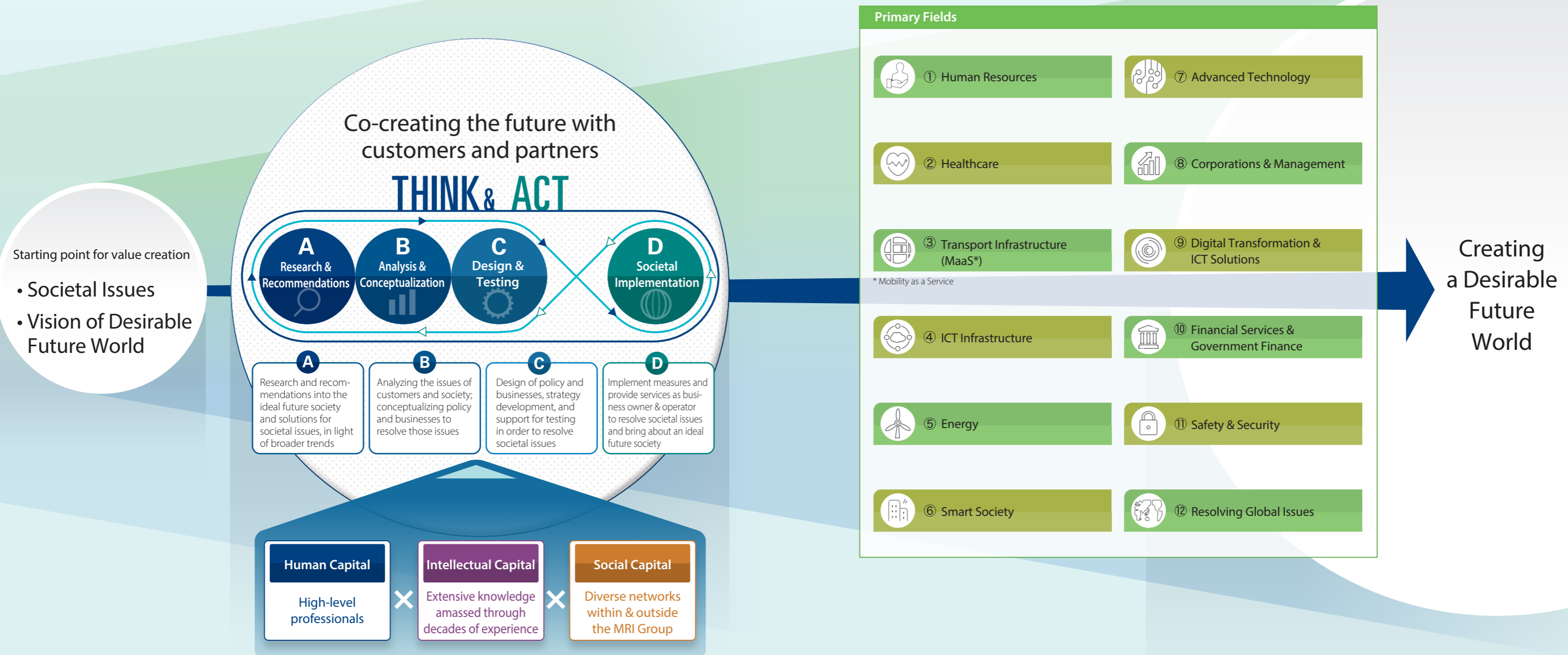
We research, conceptualize, and design a desirable future world and action plans for its realization (Think) and implement those plans in society (Act) in collaboration with customers and partners. Through this Value Creation Process, we help to realize a desirable future world.

To resolve the issues of our customers and society, the MRI Group provides value over a wide range of fields: Research and recommendations into the ideal future society and solutions for societal issues (A. Research & Recommendations), analysis and conceptualization of ways to resolve issues (B. Analysis & Conceptualization), design and testing of specific solutions (C. Design & Testing), and the actual societal implementation of solutions (D. Societal Implementation).

Applying our integrated strengths as a think tank, we have traditionally excelled at providing value in phases A. (Research & Recommendations), B. (Analysis & Conceptualization), and C. (Design & Testing). To better respond to the needs of society, in recent years we have extended the scope of our value creation to D. (Societal Implementation) by actively operating our own solution-oriented businesses through co-creation with customers and partners. We are doing more to help realize a desirable future world by leveraging our traditional strengths while expanding into societal implementation.

Value Creation Process: Conducting our Future Co-Creation Business with customers and partners

Creating a Desirable Future World



Source of Value Creation

The source of the MRI Group's value creation is our employees' advanced expertise, the knowledge we have acquired through many years of research & development and contract-based projects, and diverse networks within and outside the company group. We harness the integrated strength provided by these sources to offer new value to customers and society.

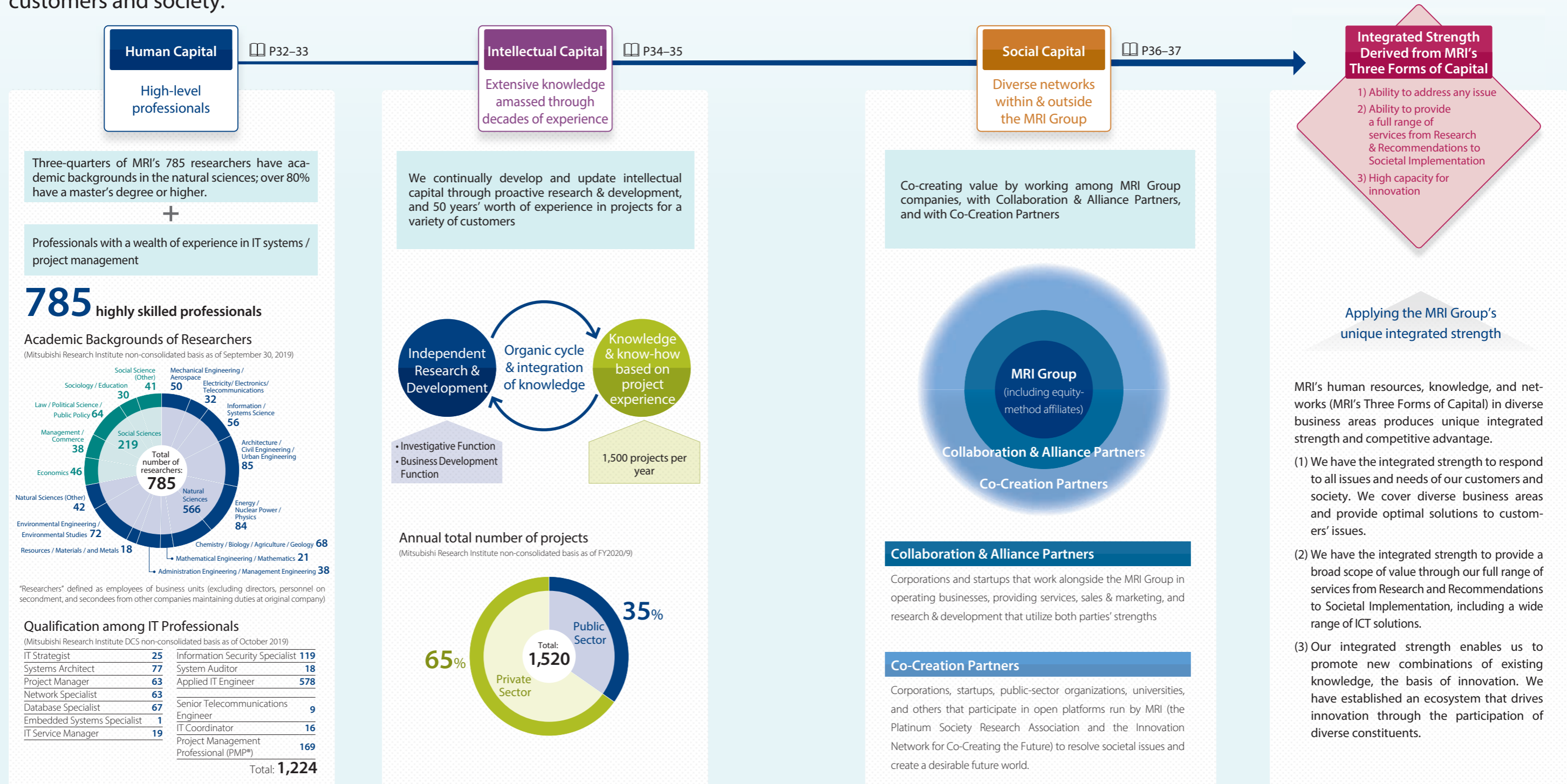
The source of the MRI Group's Value Creation is based on three forms of non-financial capital.

The first is our Human Capital: professionals with specialized knowledge and experience who provide value to our customers that is rooted in their mission to resolve societal issues and a sense of responsibility to help shape the society of tomorrow.

The second is our Intellectual Capital: we have accumulated knowledge and knowhow through years of providing services to a variety of public and private-sector customers and through our own research & development activities.

The third is our Social Capital: with an extensive network comprised not only of the MRI Group and partner companies, but also the public sector, corporations, startups, and academia, MRI is able to connect these diverse entities to promote co-creation.

These three forms of capital provide the source for our distinctive integrated strength. This integrated strength gives MRI the capacity to address any issue, the ability to provide broad-ranging value from Research & Recommendations to Societal Implementation, and the capability to innovate through new combinations of knowledge from a wide range of fields.



A Legacy of Growth

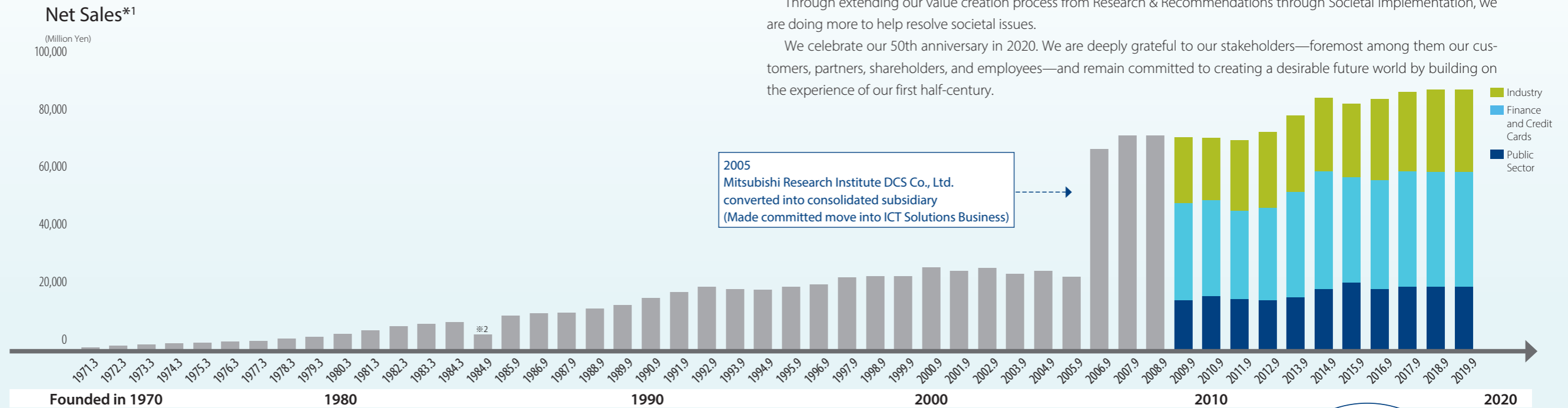
The MRI Group has grown over the years by helping to resolve societal issues with wisdom and information. We celebrate our 50th anniversary in 2020.

In anticipation of the coming advanced information-oriented society, MRI was founded in 1970 to commemorate the centenary of the Mitsubishi Group with investment from 27 group companies. Since then, by participating in major projects in Japan and abroad we have continued to help resolve the issues of our customers and society with wisdom and information.

In the 1990s, we established four fields of focus as a think tank (Economics & Management, Society & Public Sector, Science & Technology, and Systems & Information) and forged a solid position for ourselves in offering support services to the public sector for policy formation. In 2005, we made Mitsubishi Research Institute DCS Co., Ltd. a consolidated subsidiary as a committed move into the ICT Solutions Business.

Through extending our value creation process from Research & Recommendations through Societal Implementation, we are doing more to help resolve societal issues.

We celebrate our 50th anniversary in 2020. We are deeply grateful to our stakeholders—foremost among them our customers, partners, shareholders, and employees—and remain committed to creating a desirable future world by building on the experience of our first half-century.



*1 Figures up to fiscal year ended in September 2005 are nonconsolidated.
*2 Six-month fiscal year due to change of fiscal year-end.

Independent, multidisciplinary, future-oriented think tank

B
Analysis & Conceptualization

A
Research & Recommendations

C
Design & Testing

D
Societal Implementation

Future Co-Creation Business
THINK& ACT

Founded in 1970

- Founded to commemorate Mitsubishi Group's centenary through investment from 27 group companies. Founding principle was to be "an independent, multidisciplinary, future-oriented think tank." Started out with multidisciplinary work in research and analysis, consulting, and information analysis

Introduced think tank function to Japan

- Began offering policy recommendations with global perspectives (joint research by Japanese, US, and European think tanks)
- Introduced and utilized large-scale linear structural analysis program (NASTRAN) developed by US National Aeronautical and Space Administration (NASA)
- Launched permanent multi-customer macroeconomic project
- Developed global supply-demand models for food and ships
- Diamond Computer Service (now Mitsubishi Research Institute DCS) was established

Key projects in Japan and abroad

- Planning study for design of operation management system for the Suez Canal
- Advocated for and participated in establishing the Global Infrastructure Fund (GIF)
- Research and development on artificial intelligence and expert systems
- Began providing an information service as exclusive agent of National Technical Information Service (NTIS), US Department of Commerce
- Introduction of CRAY-1 supercomputer

Expansion of public-sector policy formulation support

- Study on promotion of intelligent transport systems (ITS)
- Study and research of global warming countermeasure policy
- Development support for systems that use GPS data
- Established Research Laboratory for Advanced Science and Technology to carry out experimental research
- Established Global Environmental Research Center
- Established Safety Engineering Research Center

Fully entered IT solutions business for co-creating of future society

- Mitsubishi Research Institute DCS converted into a consolidated subsidiary (2005)
- Listing on second section of Tokyo Stock Exchange (2009)
- Human genome analysis research, etc., advanced scientific research and promoting industrial applications
- Carbon emissions trading verification experiment
- System integration for megabanks
- Establishment of the Business Solutions Division
- Establishment of a committee to make recommendations on the society of the future

Expand services through to Societal Implementation as Think & Act Tank

- Listing on first section of Tokyo Stock Exchange (2010)
- Support for earthquake restoration projects
- Participation in mega-solar power generation business
- Testing & launch of AI-based chatbot service for local governments
- Development and testing of regional digital currency business
- Provided education and data management services
- Launched Platinum Society Research Association and Innovation Network for Co-Creating the Future

The MRI Group Today

MRI resolves a range of issues faced by our customers and society through our Think Tank & Consulting Services and IT Services.

The MRI Group offers its Think Tank & Consulting Services through Mitsubishi Research Institute and IT Services through Mitsubishi Research Institute DCS.

As an integrated think tank, we bring together diverse forms of expertise, a high degree of independence, years of experience in financial IT services, and the intelligence of a variety of partners. We strive to provide value by resolving complex and diverse issues alongside customers and society.

Two Business Segments: the think tank at its core

The Think Tank & Consulting Services Segment (centered on Mitsubishi Research Institute) provides a range of services including Research, Policy Support, Business Management Support, and Solution Oriented Services.

The IT Services Segment (centered on Mitsubishi Research Institute DCS) provides System Development, Maintenance, Operation, and Outsourcing services to industries including finance, distribution, and education.

A Wide Range of Customers

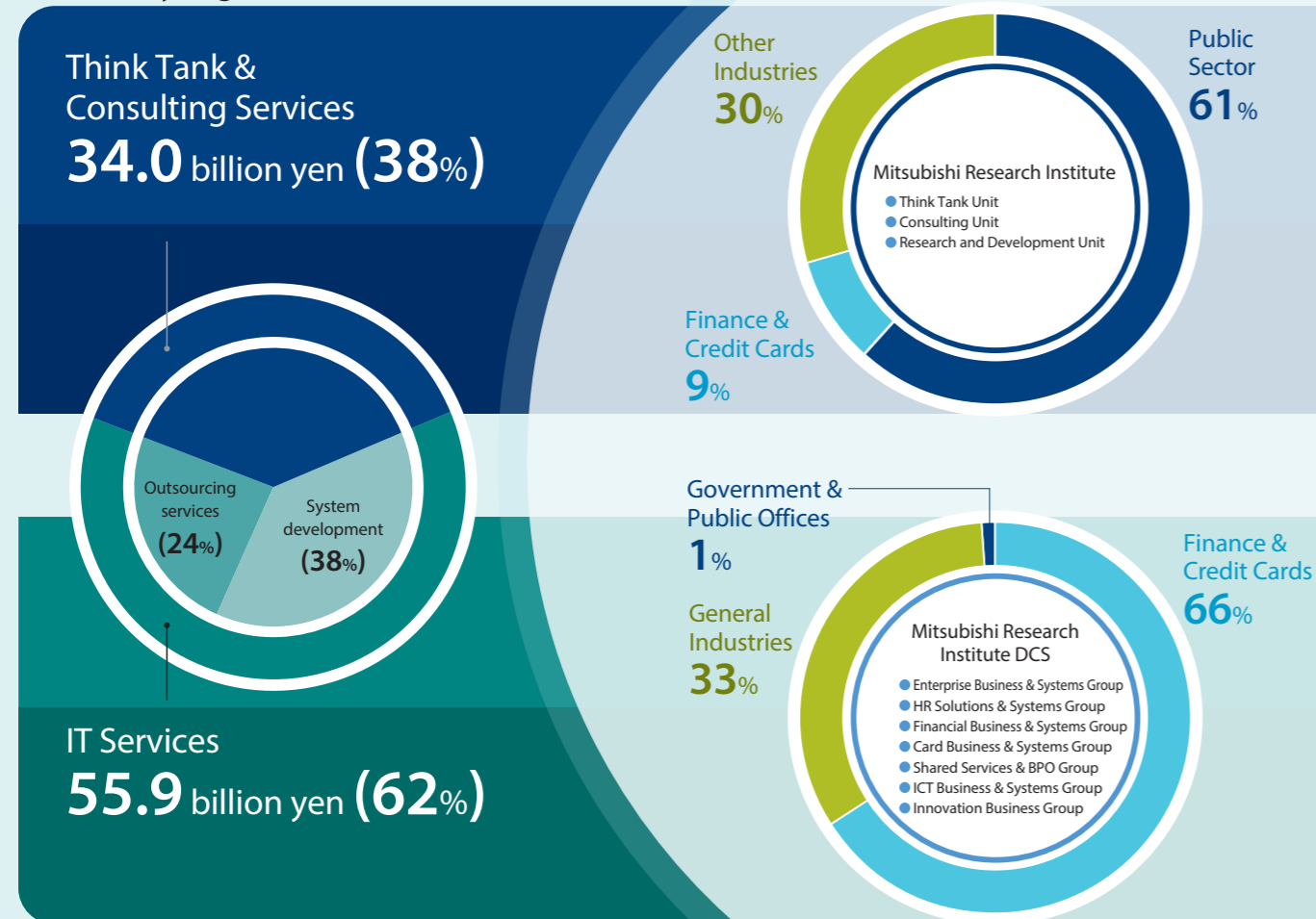
As an integrated think tank, we resolve issues for an extensive range of customers ranging from the public sector to financial institutions, credit card companies, and other business sectors by harnessing the diverse expertise of our researchers, a high degree of independence, years of experience in financial IT services.

Group Companies & Partners

With the Mitsubishi Research Institute at its core, the MRI Group is comprised of 11 consolidated and three equity-method affiliates (as of September 30, 2019).

In addition, we work with collaboration and alliance partners in sales, research & development, and other areas. We operate two co-creation platforms, the Platinum Society Research Association and the Innovation Network for Co-Creating the Future. Through these platforms, we facilitate collaboration among a range of partners that share the goals of resolving societal issues and creating the society of the future.

Sales by Segment (Fiscal year ended September 2019)




Collaboration & Alliance Partners

- Business Partners:** INES Corporation*, Tokio Marine & Nichido Fire Insurance Co., Ltd., Yokogawa Solution Service Corporation, Kintetsu Group Holdings Co., Ltd., Mynavi Corporation, NCS&A Co., Ltd., Nippon Care Supply Co., Ltd., Japan Digital Design, Inc., Mitsubishi UFJ Research and Consulting Co., Ltd., HR One Corporation, INFINIDAT, Inc., ITCS Co., Ltd., Actifio, Inc., Red Hat, Inc., SAS Institute Japan Ltd.
- Startups & Other Organizations:** Moff, Inc., Nextremer Co., Ltd., Institution for a Global Society Corporation, Lily MedTech Inc., Exergy Power Systems, Inc., Chaintope Inc., Mega Solar Power Plants SPC (4 companies), Regional Revitalization Solution, Inc., Aizu Forest Resource Promotion Co., Ltd.



Co-Creation Partners (open innovation platforms)

<p>Platinum Society Research Association</p>  <p>490 entities (as of October 2019)</p>	<p>Innovation Network for Co-Creating the Future (INCF)</p>  <p>175 entities (as of October 2019)</p>
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(As of September 30, 2019)
* INES Corporation: equity-method affiliate from FY2020/9

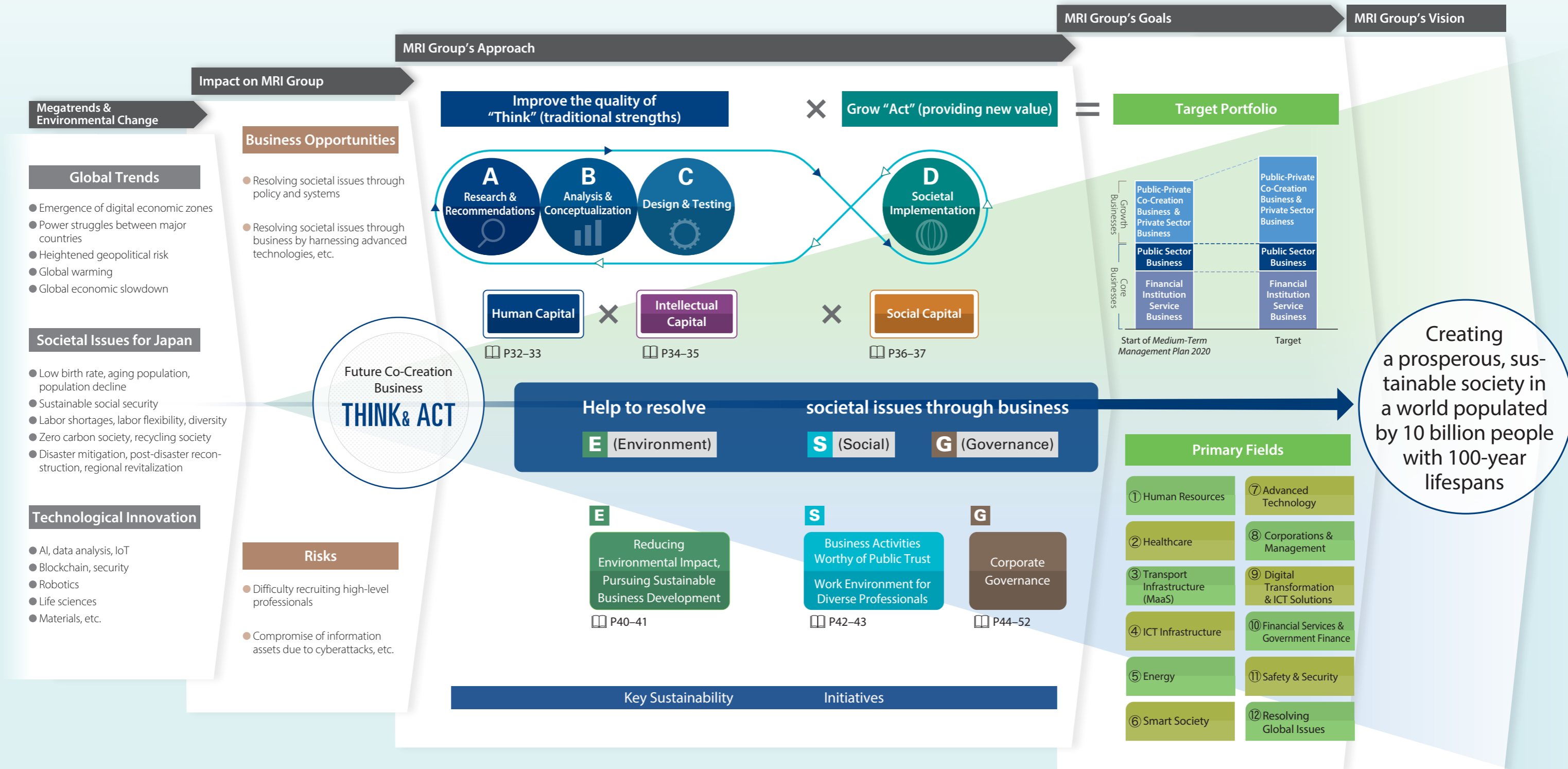
Toward Sustainable Growth

We are working to improve the quality of our Think Functions (our traditional strength) and grow our ability to Act (providing new value) in order to help bring about a prosperous, sustainable society in a world populated by 10 billion people with 100-year lifespans.

The MRI Group is working to create a prosperous and sustainable society in a world populated by 10 billion people with 100-year lifespans.

We aim to contemplate societal issues, envision the desirable world of the future, and realize that future world by cycling through the entirety of our Value Creation Process. All business operations that constitute the value creation process help to resolve societal issues (including ESG), and cycling through the entirety of the process ensures sustained growth of the MRI Group.

We are enhancing our performance by improving the quality of A. (Research & Recommendations), B. (Analysis & Conceptualization), and C. (Design & Testing), which are our traditional strengths, and adding the experience gained through D. (Societal Implementation). Amid growing demand from customers and society for D. (Societal Implementation) as a means to resolve issues, we are expanding this function as an area of growth for the MRI Group by prioritizing resource allocation and strengthening collaboration with partners.



A Message from the Management



MRI, reaching its 50th anniversary in 2020, will continue to take on the challenge of creating a prosperous future world

Looking Back on Our First Half-Century

Since our founding, our mission has been to resolve societal issues and create a prosperous future world

Giving Thanks for 50 years

To all our Stakeholders

MRI was founded in 1970 in anticipation of the advanced information-oriented society and to commemorate the centenary of the Mitsubishi Group. As the forerunner of the Japanese private-sector think tank, throughout the half-century since our founding we have taken on the challenge of creating a prosperous future world.

We are deeply grateful for the support and encouragement all stakeholders have given us over the years, foremost among them our customers and shareholders. We remain committed to harnessing the knowledge we have amassed over this half-century and our distinctive MRI value to create a prosperous future world for all.

MRI's Evolving Value

Resolving Societal Issues and Creating a Prosperous Future Society starting from Research & Recommendations through Societal Implementation

"Better Information – Brighter Future"—the motto encapsulating MRI's philosophy at its founding—expressed our resolve to help tackle societal issues and create a prosperous future society in the information-oriented age by combining our strengths of knowledge and information. Since then, we have tackled customers' challenges head-on to make policy recommendations and formulate strategies.

In 2005, we made Mitsubishi Research Institute DCS Co., Ltd. a consolidated subsidiary and moved into the ICT solutions business in earnest. After 2010, we sought a transformation from a think tank to a Think & Act Tank. Our essential "think" functions—research, conceptualization, and design—constitute essential value provided by the MRI Group, but alone they are insufficient in resolving issues facing humanity as a whole. The range of problems we could

address vastly increased when we began to "act" to solve them (Societal Implementation). These initiatives are helping to increase the MRI Group's value to society and accelerate the growth of its business by expanding the scope of value we provide beyond that of a traditional think tank.

Co-Creating the Future—realizing a prosperous and sustainable future society in close collaboration with customers and partners—is the mission of the MRI Group. Although there is a limit to what we can do on our own, Think & Act has become more of a reality through the enhancement of our co-creation with customers and partners, utilizing our networks with industry, government, and academia. In our quest for the desirable society of the future, we are deploying our Think & Act model in a variety of business domains—human resources, healthcare, transport infrastructure, ICT infrastructure, energy, and many more.

The United Nations' Sustainable Development Goals (SDGs) and Creating Shared Value (CSV) have captured the public's attention in recent years, but creating a prosperous future society by resolving societal issues has been the mission of the MRI Group from the beginning. The core purpose of the MRI Group's business is to co-create a sustainable society in collaboration with industry, government, academia, and partner companies by harnessing its knowledge of policy, science, and technology to form a vision of a desirable future world. In this respect, we believe there is no other corporate group like us in the world. In this age of VUCA—volatility, uncertainty, complexity, and ambiguity—diverse and complex societal issues have multiplied. The MRI Group is committed to helping create a prosperous future society by actively engaging in societal implementation as we respond to ever-growing customer expectations.

Progress of Medium-Term Management Plan 2020

Putting the Finishing Touches on Reforms and Laying the Groundwork for the Next Medium-Term Management Plan



The Three Reforms

Strategy Implementation on Track

Medium-Term Management Plan 2020 (FY 2018/9–FY 2020/9) tackled the Three Reforms in line with the basic policy of sustainable growth of individuals and the organization. The Three Reforms are comprised of reforms to our business portfolio, business model, and work style. Despite earnings falling short of our initial forecast (mainly in the IT Services Segment) due to a system development project with a quality issue that arose in FY 2018/9, the Three Reforms are making steady progress in the Think Tank & Consulting Services Segment, with tangible results.

In business portfolio reforms, we positioned ourselves as

a growth business and aggressively developed our Public-Private Co-Creation Business, which harnesses the MRI Group's strengths, including the application of policy and institutional knowledge to the field of consulting the private sector. This resulted in the sharp growth of our private-sector consulting. In our global business, we are preparing to launch major initiatives in the next medium-term plan. Our public sector business (the Group's base business) has expanded in scope as a result of operations that prioritize productivity improvement as well as work style reforms. The Group as a whole is revising its strategy for our private-sector IT solutions business following the aforementioned project with a quality issue.

As a part of our business model reforms, we have completed the full launch of our Subscription-Based Service Business in which we offer customers a range of ready-made solutions for immediate application that make use of advanced digital technologies such as artificial intelligence and blockchain. We are prioritizing collaborative partnerships to improve the "3Ss" (speed, scale, and scope) of our businesses to accommodate growing customer needs for digital transformation. In October 2019, we converted INES Corporation, a major systems integration company, into an equity-method affiliate, and together with Japan Business Systems, Inc., which became an equity-method affiliate in 2014, we deepened collaboration in the development and operation of products and services to boost synergies. We began making seed investments (investments in promising startups) in FY 2019/9 as well, and are expanding

our networks with promising startups in energy, human resources, healthcare, advanced digital technologies (e.g., AI and blockchain), and other areas of similar nature.

Under work style reforms, we are supporting more flexible and satisfying styles of work by utilizing smartphones and collaborative software; expanding opportunities for employees to engage in teleworking, second jobs, and side businesses; and providing more collaborative workspaces. These initiatives have resulted in reduced working hours and employees taking more of their allotted paid leave. Our multifaceted work style reforms include promoting diversity as well as training human resources to foster sustainable growth of individuals and the organization.

In FY 2019/9, we also launched corporate culture reforms. We are working to build a legacy based on the company's 50th anniversary through company-wide participation in creating a new corporate vision and commemorative research projects. We are also focused on providing the climate and foundations conducive for all employees to maximize their personal capabilities.

knowledge acquired through our Think Tank & Consulting Services in risk-oriented and proactive operations.

Governance is a top priority in corporate management, requiring continual improvements to ensure compliance with the *Corporate Governance Code* (CGC). MRI has established a Governance Advisory Committee that evaluates the effectiveness of the Board of Directors and publishes its findings in the *Corporate Governance Report*. MRI is in full compliance of the CGC at present and will continue to maintain and improve its governance standards through reviews as necessitated by changes in the external environment.

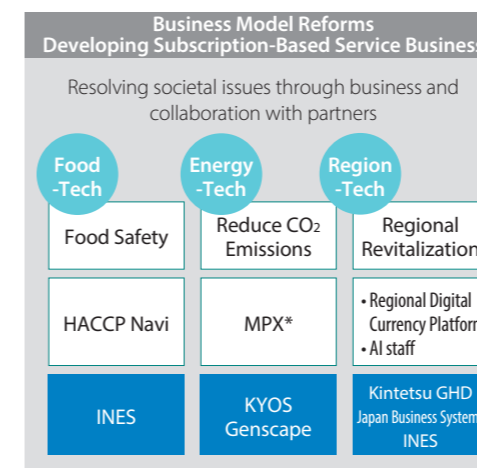
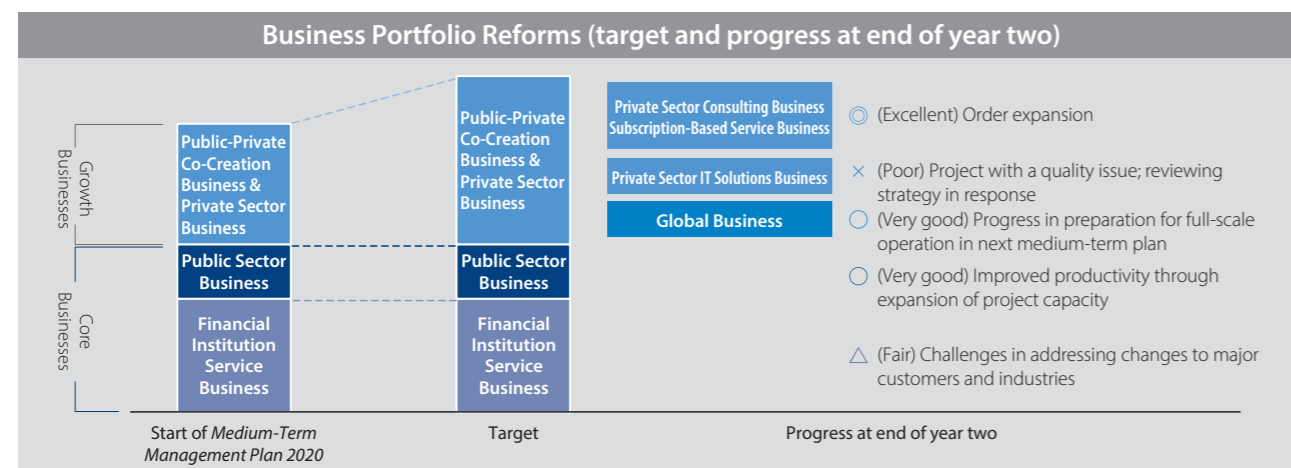
We are focusing especially on strengthening governance in the current FY 2020/9. In the wake of the project with a quality issue that arose in the IT Services Segment in FY 2018/9, the company is committed to preventing a reoccurrence.

Fiscal Year Ending September 30, 2020

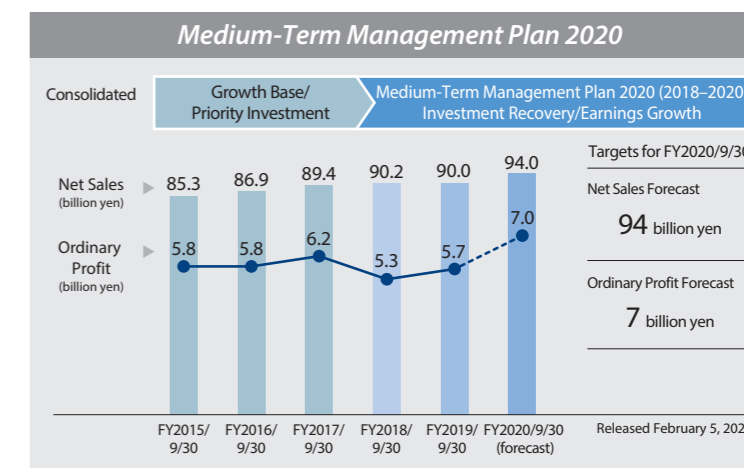
Finishing Touches to Medium-Term Management Plan 2020, Groundwork for the Next Medium-Term Management Plan

We regard FY 2020/9, the final year of *Medium-Term Management Plan 2020*, as a year for putting the final touches on the current medium-term plan and laying the foundation for the next one.

Our earnings forecast for the fiscal year ending September 30, 2020, although lower than our initial target of 100 billion yen in net sales and ordinary profit of 8 billion yen, is net sales of 94 billion yen and ordinary profit of 7 billion yen.



* MPX: MRI Power Price Index



On to Our Next Half Century

The MRI Value Creation Process: Making the desirable world of the future a reality

The MRI Value Creation Process

From Research & Recommendations Through Societal Implementation

The value creation process (pp. 2–3) is a comprehensive summary of the MRI Group’s many initiatives to resolve societal issues and co-create the future. We seek to resolve the issues facing our customers and society through our Think (A. Research & Recommendations, B. Analysis & Conceptualization, and C. Design & Testing) and Act (D. Societal Implementation) value creation process. This value creation process is the MRI Group’s own unique business model as well as a value chain shared by all group companies. Going forward, we plan to further refine our strengths within B. (Analysis & Conceptualization) and C. (Design & Testing), while strengthening A. (Research & Recommendations) and D. (Societal Implementation).

A. (Research & Recommendations) comprise the original reason for the existence of think tanks, whose true worth is being tested in the VUCA age. We seek to increase the value of our Research & Recommendations capabilities by creating a bold vision of a desirable future world and making concrete implementation recommendations. We will simultaneously expand the co-creation network of organizations engaged in the realization of those recommendations. We also go a step beyond conventional think tanks by providing more grounded knowledge and recommendations through the experience gained from our D. (Societal

Implementation) initiatives.

The Think processes alone are not enough to spark societal change. The MRI Group is expected to be the first to take the plunge. MRI taking the lead will allow others to join in, and together we will initiate reforms and carry out the societal implementation necessary to resolve societal issues. By taking on a central role of leadership and responsibility, MRI will develop a public following and approval, allowing for greater contribution.

On to Our Next Half Century

A New Vision: the 50th Anniversary Research Projects

To mark our 50th anniversary, we are conducting commemorative research projects and developing a new vision for our next half century. Since MRI’s founding, principles from “Better Information – Brighter Future” to “Co-Creating the Future” and “Think & Act” have guided our work and management. The vision now under development maintains these values while adding elements needed to pioneer a new future for the group. The new vision will serve as a compass to guide the Group throughout the next 50 years.

As the first of our commemorative research projects, MRI published *Future Society 2050* in October 2019. The document proposes six global trends and five priority initiatives for Japan with the goal of bringing about an “affluent and sustainable world.” A second research project is in the works

shedding light on the impact of technological innovation and future shifts in social values with the aim of contributing to the creation of a prosperous and sustainable society. A report is scheduled for release at the end of 2020. Through research projects like these, we will continue to fulfill our mission as a think tank utilizing our findings to formulate medium and long-term strategies for the greater good.

Next Medium-Term Management Plan

Backcasting & Forecasting Process, Financial & Non-Financial Targets

The next medium-term management plan starting in FY 2021/9 is positioned as the first step toward the next 50 to 100 years. In addition to the traditional forecasting process for planning, the new plan incorporates a novel backcasting process. We will develop our new medium-term management plan in reverse starting from our new vision of MRI and the future society developed through the 50th Anniversary Research Projects. Furthermore, we will set management targets that reflect our desired state for the company in the future including both traditional financial targets and a new set of non-financial targets such as social impact, a measure of our contribution in resolving societal issues and giving shape to the desirable world of the future.

On the business front, we will craft a group ICT strategy to fulfill growing customer demand for more advanced digital transformation and strengthen our alliances with partners.



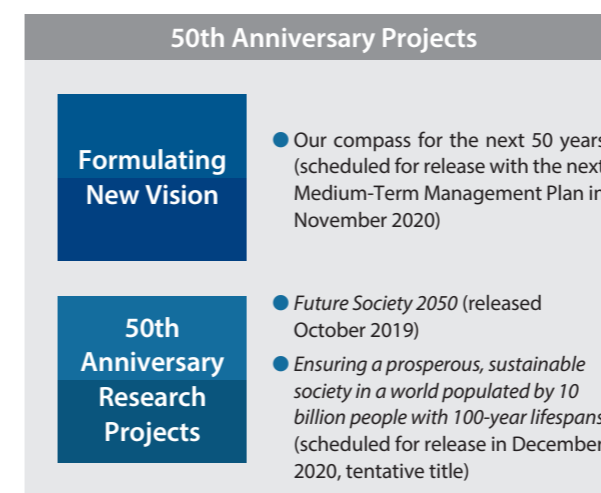
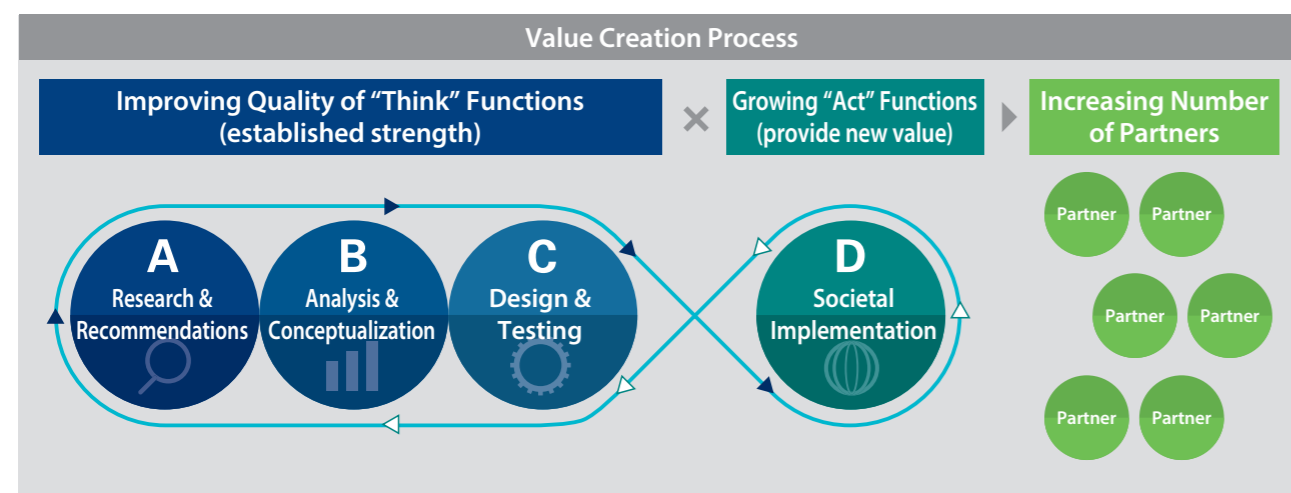
This will complement our strategies for the core businesses (Public Sector Business, Financial Institutions, and Credit Card Business) and growth businesses (the Subscription-Based Service Business and Global Business).

The MRI Group is formulating its next medium-term management plan and, for the longer term, engaging in research to develop both a new corporate vision as well as a vision of the desirable world in 2050. The goal of co-creating the future lies at the heart of both endeavors.

Looking back on our past 50 years of projects and experience, “providing knowledge,” our societal role as a think tank, and “sustainable growth,” garnered through resolving societal issues with business, will form the base of our work throughout the future. We will continue to take on the challenges of creating a prosperous and sustainable future society, and ensuring mutual progress throughout society, communities, and corporations.

We are deeply committed to these exciting tasks and look forward to the ongoing understanding and support of our stakeholders.

Takashi Morisaki
President and Representative Director
Mitsubishi Research Institute, Inc.

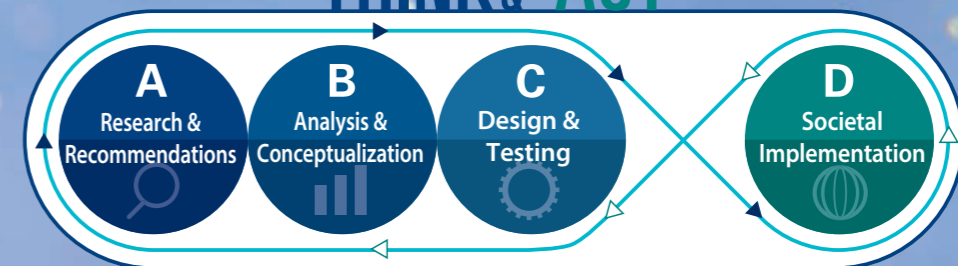


Business Strategy

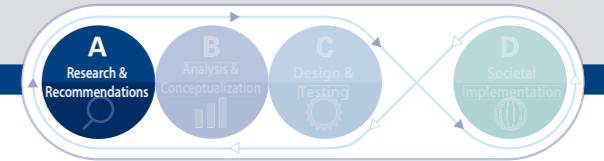


The MRI Group has long been engaged in resolving issues for society and our customers through the value creation processes of A: Research & Recommendations, B: Analysis & Conceptualization, and C: Design & Testing. Going forward, we will move beyond helping customers implement and commercialize solutions to become a business entity ourselves engaged in co-creation with our customers and partners, extending our coverage to D: Social Implementation. Leveraging our existing strengths as we move into the social implementation domain, we will work to develop solutions for societal issues as our contribution to the positive development of society and our customers. This, we believe, is the best way to achieve sustainable growth for the whole MRI Group.

THINK & ACT



- A**
Research & Recommendations
 Research and recommendations into the ideal future society and solutions for societal issues, in light of broader trends
- B**
Analysis & Conceptualization
 Analyzing the issues of customers and society; conceptualizing policy and businesses to resolve those issues
- C**
Design & Testing
 Design of policy and businesses, strategy development, and support for testing in order to resolve societal issues
- D**
Societal Implementation
 Implement measures and provide services as business owner & operator to resolve societal issues and bring about an ideal future society



Research & Recommendations

Research and recommendations into the ideal future society and solutions for societal issues, in light of broader trends

Through our A: Research & Recommendations, conducted in light of long-term economic, social, and technological trends, we identify societal issues and disseminate recommendations for the desirable world of the future. Our research and recommendations cover original, cutting-edge, effective solutions and processes based on our knowledge of public policy, knowledge of technologies, and experience gained through societal implementation projects.

Case Study 1 Future Society 2050

Envisioning an affluent and sustainable world

The world is changing at a dizzying pace amid rapidly evolving technology. This calls for setting a wise course based on an accurate view of the future.

As part of our co-creating the future initiatives, we published *Future Society 2050* in October 2019. The report projects global trends out to 2050 and makes recommendations for Japan's role in bringing about an affluent and sustainable world.

By 2050, the digital and platform economy is likely to spread worldwide. A new international order is called for as the hegemony of the US and China declines while the economies of Asia grow. A growing awareness of the resource and energy cycles is likely as the global population continues to increase.

Japan is faced with five serious challenges in such a future world:

1. Contribution to the world through Japan's strengths
2. Creating value through digital and physical integration
3. Management for sustainable local communities
4. Diverse values and the "true to oneself" concept
5. Fiscal and social security system to support the 100-year life era

The key to the future as we approach 2050 is persistence in working on these five challenges, maximizing Japan's strengths while applying new human-centric technologies.

As well as sharing this report and making recommendations, MRI works through government committees and other initiatives to make specific suggestions that assist in policymaking.

Future Society 2050
www.mri.co.jp/en/knowledge/insight/20200226.html

Case Study 2 Technology Megatrends

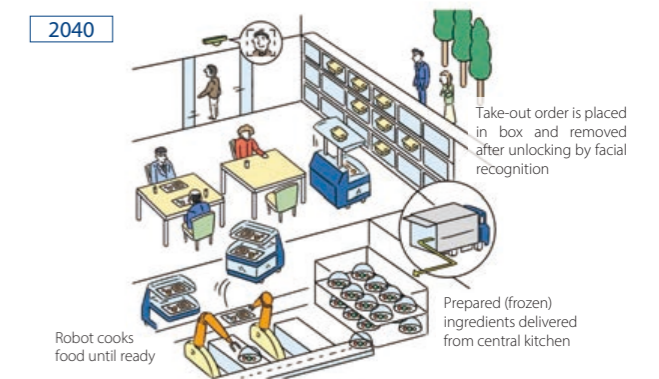
Envisioning the future of society created by advanced technology

The commercialization and societal implementation of technology have the potential to cast both light and shadow on the future society, the economy, and the humanity of individuals.

In four technological areas—genomic medicine, human augmentation (robotics), artificial general intelligence, and quantum computing—MRI keeps abreast of emerging developments to analyze and evaluate future projections and examine potential unexpected consequences. For example, building massive databases of cancer patients' genetic data has attracted much attention in the genomic medicine field, but if progress in cancer treatment outpaces that of dementia treatment, dementia patient numbers may rise. The spread of robots in the service sector may boost productivity and lower prices, but if robotics spreads faster than the working age population declines, unemployment numbers and economic inequality could grow. Amid

developing advanced technologies, it will be essential to conduct appropriate study of potential future societal impacts and establish measures to ensure the betterment of society.

Service Robots in the Future Foodservice Industry



Case Study 3 Listings of Societal Issues

Insights for creating businesses that resolve societal issues

MRI launched the Innovation Network for Co-Creating the Future (INCF) in 2017 and is working to resolve societal issues through innovation and business. We analyze and categorize such issues and publish annual listings* of those amenable to innovation.

The 2019 edition analyzes and structures issues in six areas: Wellness, Water and Food, Energy and Environment, Mobility, Disaster Prevention and Infrastructure, and Education and Human Resource Development. In addition to its focus on solutions, the 2019 edition also covers advanced technology trends and the outlook for commercialization and regulatory reform for each area.

Our selection of issues takes into consideration their severity and priority in Japan, a leader in societal issues. We also incorporated a global perspective in light of the Sustainable Development Goals of the United Nations.

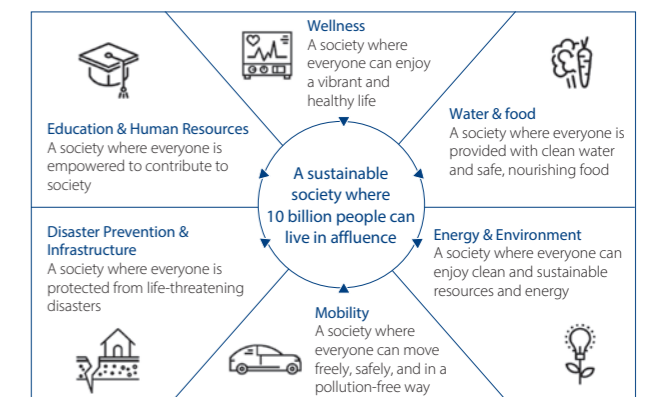
We build a comprehensive, systematic database of societal issues when creating the list and will maintain our scientific,

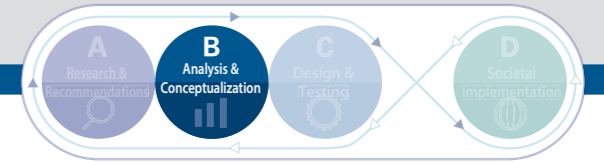
* Listings of societal issues: A list of issues facing society amenable to solution through innovation

evidence-based approach to tackling societal issues in the future.

[Link to application form to download listings](https://incf.smtkg.jp/public/application/add/112)
<https://incf.smtkg.jp/public/application/add/112>

Societal Issues by Field





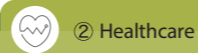
Analysis & Conceptualization

Analyzing the issues of customers and society; conceptualizing policy and businesses to resolve those issues

Under B: Analysis & Conceptualization, the MRI Group provides services spanning analysis of societal issues, policy support for solutions, support for creating business concepts and potential solutions, and business and management consulting. We leverage our knowledge in resolving societal issues gained through policy related work for the public sector to spearhead and support industry restructuring and the creation of business opportunities accompanying policy and institutional changes.



Case Study 1 Improving Productivity among Nursing Care Providers



Promoting improved productivity and workflows among nursing care providers that assist elderly independent living

Societal Issue

As society ages and the nursing care shortage becomes increasingly prevalent, it will be necessary to maintain and ensure the quality of nursing care services so that the elderly can continue to live independently in the same area. Improvements must be made in nursing care productivity to provide better services in the face of limited resources.

Solution

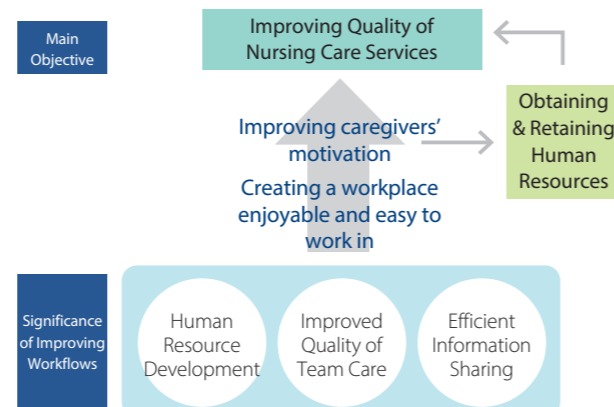
We analyzed real-life cases of measures to boost the quality of nursing care and help the elderly live independently. We identified methods and expertise used in improving workflows and productivity which we summarized in guidelines. By sharing these widely, we are supporting efforts to improve workflows and productivity. We are raising the quality of nursing care services by enabling effective improvements.

Value Provided

Improving the quality of nursing care services fulfills the intent of the Long-Term Care Insurance Act, independent living by the elderly, and enables more effective use of the

public's nursing care insurance financial resources. Further improvements are in prospect as caregivers gain a real sense of their contribution to the community and society at large.

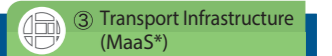
Workflow Improvement in Nursing Care Services



Source: Created by MRI based on Ministry of Health, Labour and Welfare, Bureau for the Elderly, "Guidelines on Improving Workflows to Boost Quality of Healthcare Services," March 2019

www.mhlw.go.jp/content/12301000/000487519.pdf (in Japanese)

Case Study 2 Creating a Diverse Mobility Society



Creating a mobility society that offers a diverse range of opportunities for social participation and activity

Societal Issue

Domestic transport demand is likely to continue transforming due to the low birthrate, aging population, and lifestyle changes accompanying digitalization. In some regions daily transport options are already disappearing. The current transportation systems—developed in response to strong demand of the past—are at a turning point.

Solution

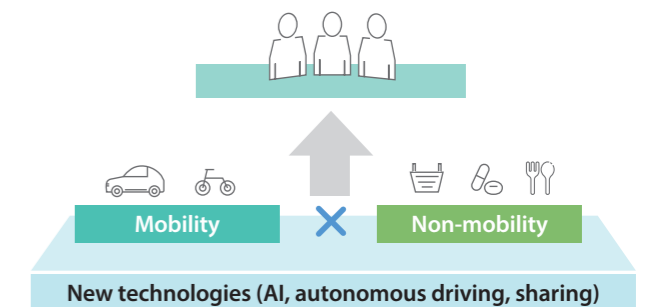
With the advent of new technologies in recent years such as artificial intelligence, autonomous driving, and car sharing, new mobility services have emerged to offer more efficient and sophisticated transportation options. To solve future transport system issues, MRI is conducting research into policy for new mobility services, consulting on MaaS* business strategy, and supporting the development and standardization of new technologies such as autonomous driving and wireless charging. We are applying new technologies to help reconfigure transportation services and improve everyday transportation.

* MaaS: Mobility as a Service

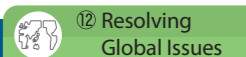
Value Provided

The ability to move freely is a prerequisite for a prosperous life and underpins community vitality. Through these initiatives, we are helping to bring about a mobility society where everyone can enjoy a diverse range of opportunities for social participation and activities.

Resolving Societal Issues by Creating & Improving Services



Case Study 3 Sustainable Management Support



Contributing to corporate globalization and creation of a sustainable society

Societal Issue

The globalization of supply chains and financial activities are inevitable and could pose a challenge for corporate management. Investors are increasingly seeking ESG (Environmental, Social and Governance) investments, following the United Nations' creation of the Sustainable Development Goals (SDGs). Global NGOs and NPOs as well as vocal shareholders abroad are fortifying their monitoring of corporate activities from the viewpoint of sustainability and respect for human rights. This trend greatly impacts Japanese companies.

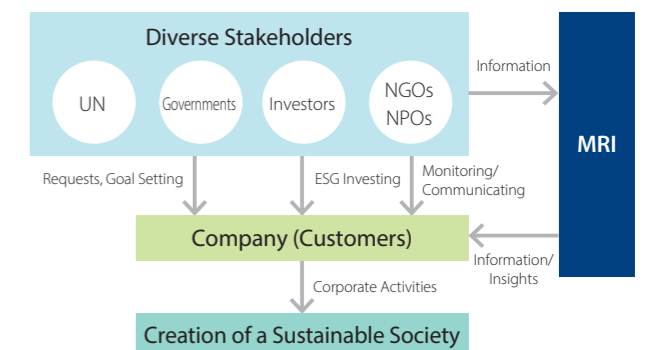
Solution

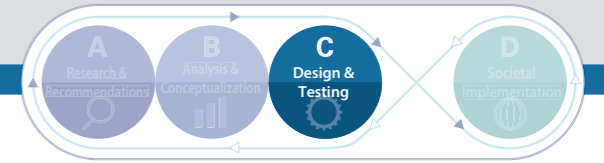
MRI is constantly monitoring and analyzing the activities of such diverse group of players. In addition to providing our customers with important information for their businesses, we offer a wide variety of consulting services, from stakeholder communications to development of corporate and public relations strategies.

Value Provided

Through our services, MRI contributes to the globalization of businesses, thus leading to the creation of a sustainable world.

Providing Information and Insights that Contribute to the Creation of a Sustainable World





Design & Testing

Design of policy and businesses, strategy development, and support for testing in order to resolve societal issues

Under C: Design & Testing, MRI Group helps the public sector design policy and systems, devise strategies, and test these with a view to resolving societal issues. We also support private sector customers in business design, strategy planning, and testing. Our business consulting makes use of the knowledge and expertise we have amassed in providing policy services to the public sector, and we feed back the knowledge and issues found in our work for private sector customers into developing new policies for the public sector.

Case Study 1 Risk Management for 2020 Tokyo Olympic & Paralympic Games ⑪ Safety & Security

Providing a safe and comfortable experience for the many visitors from Japan and abroad

Societal Issue
Smooth operation of Tokyo 2020 requires stable lifeline utilities, maintenance of sanitation services, and measures to deal with the heat to provide a safe, comfortable experience for visitors while minimizing the effects on the lives of residents.

Solution
We are providing assistance in the design of organizational, operational, and ICT infrastructure aspects of the new City Operation Center set up by Tokyo for the 2020 Olympics. We are developing procedure manuals to ensure activities are carried out safely in the last mile* by collecting city information, trends in crowd behavior via security camera footage, and social media posts. We are also devising responses and conducting training to deal with serious incidents such as disasters, terrorist attacks, cyberattacks, and outbreaks of infectious disease to enable a seamless connection with existing crisis management systems.

* Last mile: Route on foot from sports venue to designated nearby station

Value Provided
Through our support of the City Operation Center, we will ensure the success of the Games. The lessons learned will be employed to develop safe, comfortable cities of the future starting with the 2025 Osaka-Kansai Expo.

Comprehensive Risk Management for Tokyo 2020 Games

City Operations	Security
<p>We are providing assistance in the design of organizational, operational, and ICT infrastructure aspects of the City Operation Center responsible for centralized management of city information, security cameras, and crowd analysis to keep the city operating smoothly during the Games.</p>  <p>Source: Bureau of Olympic and Paralympic Games Tokyo 2020 Preparation, Rio de Janeiro 2016 Olympic & Paralympic Games Inspection Report (October 2016)</p>	<p>Specify crisis scenarios (disaster, terrorism, cyberattack, infectious disease) and set up countermeasures and training to ensure spectator safety and security, city service operations, and Games continuity.</p>  <p>Note: MRI photo of counter-terrorism drill for Tokyo 2020 (November 29, 2018)</p>

In case of serious incident

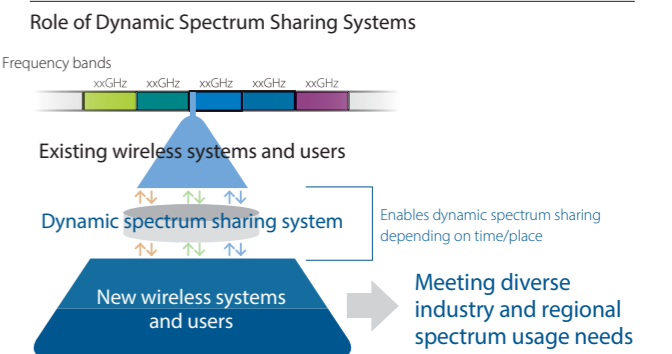
Case Study 2 Addressing depletion of spectrum resources through effective spectrum use ④ ICT Infrastructure

Resolving societal issues and creating market by transforming wireless resources into social infrastructure

Societal Issue
The supply of wireless spectrum, a limited resource, is increasingly tight amid burgeoning demand for wireless telecommunications systems due to factors such as the explosive spread of smartphones. One potential solution is to share spectrum dynamically to meet the constantly fluctuating demands of usage environment. The US and Europe are beginning to implement this concept.

Solution
Dynamic spectrum sharing requires building systems that enable more users to easily and safely use frequencies and prior coordination among them. MRI is developing applications and providing consulting services to meet regional and industrial needs ahead of future dynamic spectrum sharing.

Value Provided
We are on the cusp of the 5G era. As we move into a world where objects and services are interconnected, optimal use of frequencies in time and space will impact various sectors and business models in addition to the communications industry itself. MRI aims to transform wireless resources into social infrastructure to help resolve societal issues and create new markets.



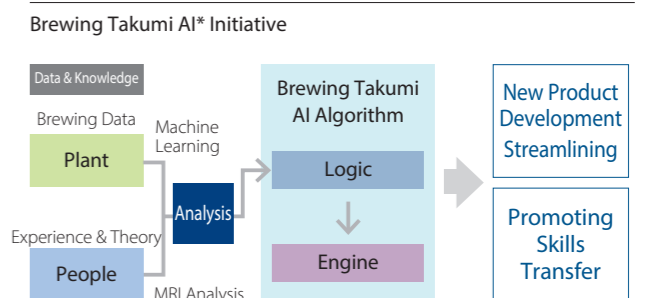
Case Study 3 Passing on Skills of Veteran Workers ⑨ Digital Transformation & ICT Solutions

Introducing Takumi AI

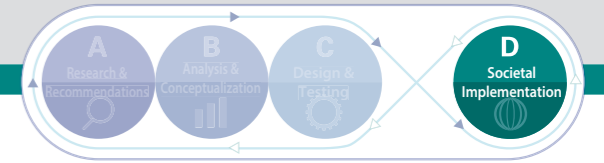
Societal Issue
Recent AI success stories are almost all based on Big Data. However, without large volumes of data, AI is not as accurate as hoped for when it comes to classification, identification, and evaluation, and has failed to make inroads in some workplaces.

Solution
MRI is developing a prototype called Takumi AI to support the adoption of AI. In workplaces without masses of data, Takumi AI absorbs the knowledge and expertise of seasoned masters of a skill ("takumi" in Japanese) to improve AI accuracy. Extracting such knowledge and expertise is no easy task. We show these master craftsmen the accurate results of data-analysis for various hypotheses, and repeating this process both sharpens their ability to pick up on potential problems and formalizes their expert knowledge and know-how into explicit knowledge.

Value Provided
In industries that face the retirement of veteran workers or labor shortages accompanying the aging of society, AI can do more than streamline business processes. The AI building process, making veterans' knowledge and expertise explicit, assists with the transfer of their skills to new practitioners and thereby contributes to resolving societal issues.



* Case study of using Takumi AI in beer product design

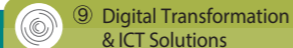


Societal Implementation

Implement measures and provide services as business owner & operator to resolve societal issues and bring about an ideal future society

Under D: Social Implementation, we directly provide solutions needed in the execution of policy and business to bring about the world of the future and resolve societal issues. In addition to our broad lineup of ICT services, the MRI Group participates as a business principal to provide services, effectively contributing to resolving societal issues, and feeds back the knowledge acquired into A: Research & Recommendations, B: Analysis & Conceptualization, and C: Design & Testing, resulting in a cyclical value-creation processes.

Case Study 1 Digital Local Currency Business



Revitalizing regional economies through the use of local digital currency

Societal Issue
Japan's population has been shrinking since 2005, especially in regional cities. This is eroding communities and inflicting serious damage on regional economies.

Solution
MRI used blockchain technology to develop platforms enabling local governments and companies to issue and operate numerous digital coin, e-money, and loyalty point schemes. The schemes include the ability to award limited time premiums to stimulate consumption.

For example, in the local digital currency business we collaborated with Kintetsu Group Holdings to issue the Kintetsu Shimakaze Coin.

Value Provided
Revitalization of regional consumption activity is necessary to stem the decline of local economies. We are helping to

revitalize them by tapping into local residents' spending patterns and maximizing the intraregional circulation of money.

Area covered by Kintetsu Shimakaze Coin; local flyer



Ago Bay (Shima, Mie Prefecture)

Kintetsu Shimakaze Coin
www.mri.co.jp/news/press/20191016.html (in Japanese)

Case Study 2 AI Staff Project



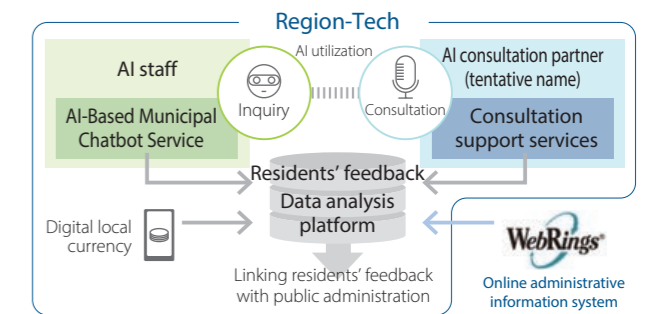
Strengthening links between public administration and residents' feedback

Societal Issue
In the future, labor shortages will intensify due to the aging of society and will likely affect public administration. Meanwhile, the diversifying needs of citizens and changes to communications methods due to the spread of smartphones call for changes in how administrative services are run.

Solution
Together with Japan Business Systems and INES Corporation, MRI put forward the Region-Tech concept. Its aim is to solve local issues and build sustainable communities by digitizing communications with residents. One initiative is the AI-Based Municipal Chatbot Service, with chatbots* that use AI to answer residents' inquiries automatically.

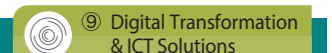
Value Provided
The Region-Tech concept enables one-stop procedures via smartphone, offers multilingual support, and strengthens the links between public administration and residents' feedback. We aim at modeling expected future issues and risks, enabling users to address such problems before they arise, in addition to resolving existing issues.

Overview of Region-Tech concept



* Chatbot: A computer program that uses AI to interact with people and automatically answers their written or verbal inquiries.

Case Study 3 Work Style Reform Business



Backing up work style reforms with RPA and paperless operations

Societal Issue
In April 2019, the Labor Reform Laws were put into full effect. Companies need to improve productivity and reduce long working hours by working more efficiently.

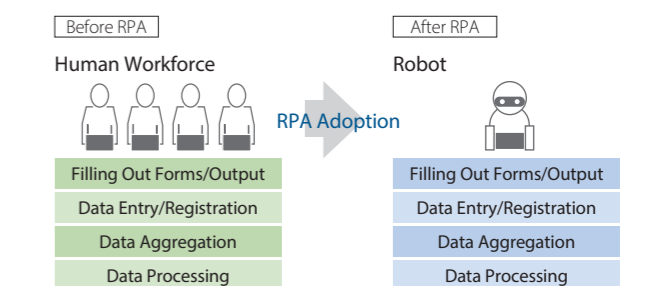
Solution
We support the adoption of Robotic Process Automation (RPA).

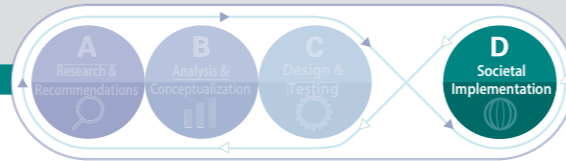
In addition to automating and speeding up routine tasks such as filling out forms and data entry, RPA is expected to reduce operational errors.

We also support paperless operations by digitizing paper documents and adopting document management systems. Paperless systems make customers not only utilize office space and documents more efficiently, but also improve the teleworking environment.

Value Provided
Improving productivity not only reduces long working hours, but also enhances competitiveness, eliminates chronic labor shortages, and contributes to achieving a work-life balance.

Example of RPA Adoption





Case Study 4 Integrated Data Management Services (IDMS) Business



Contributing to realization of corporate digital transformation and the advanced digital society

Societal Issue

As the digital transformation is progressing, social and business structures are undergoing a major change with systems that collect and analyze big data from various devices such as smartphones, drones, and drive recorders and analyze them with artificial intelligence. On the other hand, many companies are facing issues of the Cliff in 2025, such as shortage of IT engineers and legacy systems with black boxes.

Solution

We provide integrated data management services that combine storage*1 that accumulates big data and cloud services*2 that serve as the platform for data collection and analysis.

We also support customers from the system planning and concept stages to utilize big data, and achieve smooth and optimal digital transformation.

Value Provided

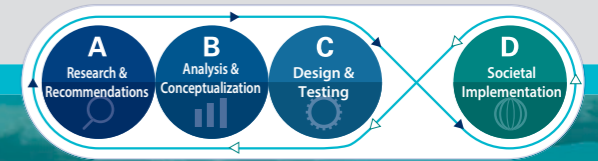
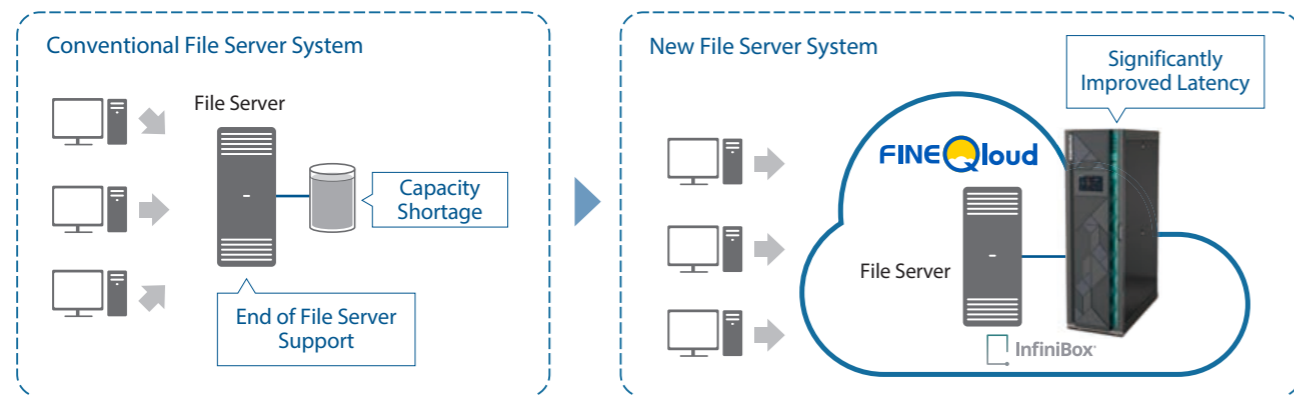
We help customers overcome the Cliff in 2025 and realize digital transformation and the advanced digital society.

*1 High performance, low TCO, hyperscale capacity InfiniBox® storage
 *2 FINEQcloud: Private cloud services that have been adopted by clients of major financial institutions and public utility companies

Optimal Big Data Analysis Platform



Case study of migrating from on-premises file server to MRIDCS cloud environment



From Research & Recommendations through Societal Implementation

Moving beyond support to leadership and in-house implementation for resolving societal issues —Initiatives in Energy—

A distinctive MRI Group characteristic is our ability to provide end-to-end services in the value-creation process from A: Research & Recommendations through D: Societal Implementation. For example, we have the following initiatives in the energy field.



Societal Issue

Amid a global trend toward decarbonization, Japan is under pressure to reduce greenhouse gas emissions by 80% by 2050. Decarbonization requires renewable energy as the main source of power and a means to balance supply and demand fluctuations smoothly. Further, initiatives should take into account Japan's "3E+S" perspective on energy policy, emphasizing the importance of energy security, economic efficiency, environment, and safety.

Solution

A Research & Recommendations
 Energy Vision Proposal

MRI has put forward a proposal, the *Energy Vision*, from a long-term perspective to achieve the 3Es+S and a decarbonized society. The vision offers an outline of the steps forward based on evaluation of innovative technologies for a decarbonized society and analysis of energy supply and demand using our in-house developed MARKAL-JAPAN-MRI energy model.

B Analysis & Conceptualization

Policy Support for Reforming Energy Supply Structure

We support the development of policies to make renewables the key source of power, including those regarding post-FIT*1 arrangements and the balancing market. We advise customers entering the renewable generation business with our business feasibility studies. Furthermore, we provide support for new inspection systems aimed at safe nuclear power generation and are investigating concepts on coexisting with nuclear power in areas where such plants are located.

C Design & Testing

Testing for Next-Generation Supply & Demand Adjustment Systems

Increasingly flexible mechanisms for adjusting supply and demand are required for the widespread adoption of renewables, and we are testing VPP*2 as one such promising mechanism. We are also looking into the proper configuration for an electricity network that would use renewables as the main power source, thus supporting responses to societal changes and resolving issues.

D Societal Implementation

Societal Implementation Business for Reforming Energy Supply Structure

MRI itself is running a renewable power generation business as well as providing asset management services for other renewable generation businesses. In order to stimulate wholesale electricity trading, MRI also publishes the MRI Power Price Index, or MPX*3, providing information on price metrics to support decision-making in trading.

Value Provided

In addition to our Energy Vision proposal to achieve the 3Es+S and a decarbonized society, MRI offers end-to-end services from roadmap formulation to implementation, thus resolving societal issues and helping to establish a decarbonized society.

*1 Post-FIT arrangements: In 2009 a fixed price trading mechanism, or FIT, for renewable power generation was launched ahead of the spread of renewable power generation. Once the system ends, policies to promote autonomous growth for power companies in the renewable energy market are necessary.

*2 VPP (Virtual Power Plant): A system that functions as a single power plant by linking up numerous small-scale plants and power demand control systems.

*3 MPX (MRI Power Price Index): Information service that supports decision-making in wholesale power markets. Estimates the theoretical market price of power at a particular time by simulating operating conditions for individual power sources. Developed in-house by MRI, the service was launched in 2016.

<https://www.mpx-web.jp/index/e>

The Source of the MRI Group Value Creation

The MRI Group's Human Capital, Intellectual Capital, and Social Capital provide the source of the Group's value creation and contribute to our integrated strength. Our Human Capital consists of our high-level professionals who come from a wide range of backgrounds. We have amassed our Intellectual Capital through decades of experience and knowledge as Japan's think tank industry leader. Our Social Capital is characterized by our partnerships within the group as well as with external entities such as our collaboration & alliance partners and our co-creation partners for open innovation.

Integrated Strength Derived from MRI's Three Forms of Capital

- 1) Ability to address any issue
- 2) Ability to provide a full range of services from Research & Recommendations to Societal Implementation
- 3) High capacity for innovation

Human Capital

High-level professionals

📖 P32-33



Intellectual Capital

Extensive knowledge amassed through decades of experience

📖 P34-35



Social Capital

Diverse networks within & outside the MRI Group

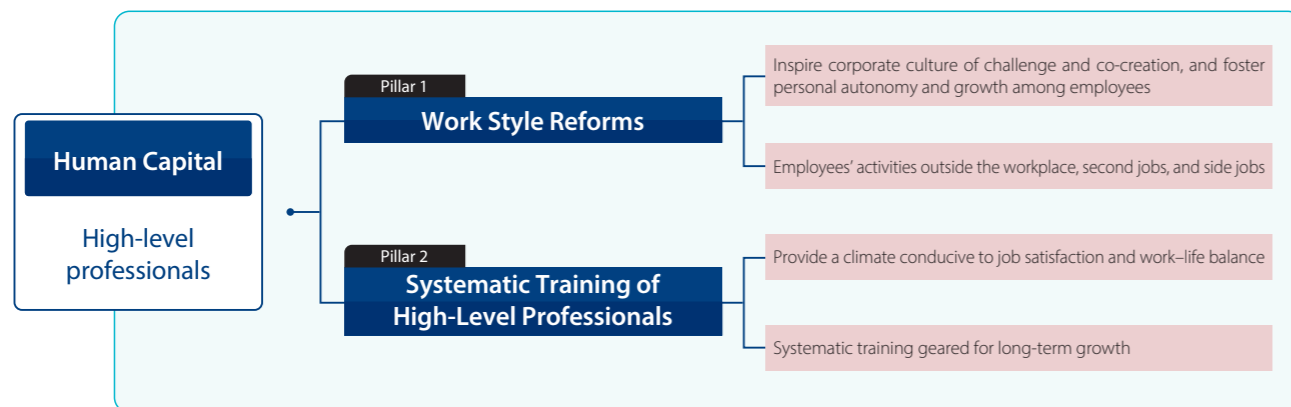
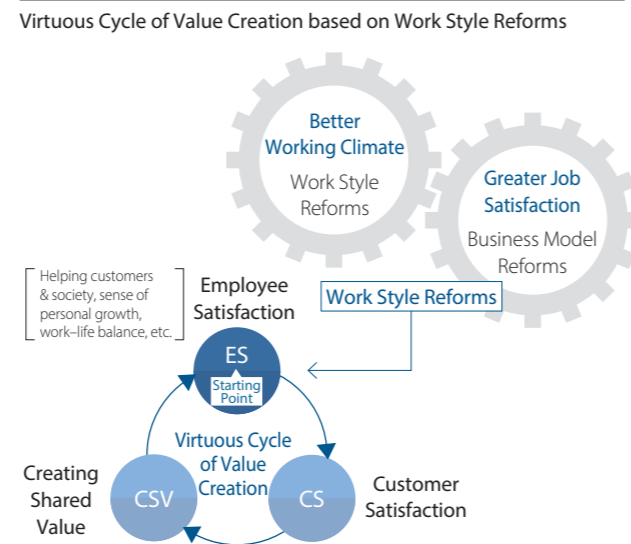
📖 P36-37

Human Capital

Honing our competitive edge by recruiting and training high-level professionals

The quality of our professionals is what gives the MRI Group its competitive edge. We take a long-term, systematic approach to recruiting and training the outstanding human resources responsible for our core business operations. Since we believe this is crucial to achieving our strategic goals, we provide quality training and actively invest in the people who work for us, while fostering a climate that makes MRI an enjoyable place to work. We also take steps to enhance motivation that directly relate to the Group's larger business strategy, and we promote diversity in an effort to raise the competitiveness of the Group.

We pursue sustained growth of individuals, our customers, and society through a virtuous cycle of value creation: raising employee satisfaction (ES) through work style reforms leads to enhanced customer satisfaction (CS) and ultimately contributes to the creation of shared value (CSV) from the resolution of societal issues through business.



Pillar 1 Work Style Reforms

We take an integrated approach to work style and corporate culture reform to provide an environment for training high-level professionals. We promote communication and collaboration across the organization and between different levels and entities within the Group to inspire a corporate culture of challenge and co-creation, as well as to foster personal autonomy and growth among employees.

<Initiatives>

- Create opportunities for direct communication between management and employees
- Provide socializing opportunities for employees using communal spaces
- Set and share personal challenge goals; provide awards for achievement of goals

We encourage employees to engage in public-facing activities, such as giving lectures, publishing books, contributing articles, appearing on television & radio, and serving as visiting professors.

As an extension of this policy, in October 2018 we established guidelines for second jobs and side jobs. The guidelines lay out criteria for activities that contribute to employees' career development and can be approved as second jobs and side jobs.

In an effort to create an environment in which employees can spend as much time as possible on creating value and making sustainable growth, we offer employees with a range of IT-based business support tools, harnessing technologies like AI and robotic process automation (RPA).

Pillar 2 Systematic Training of High-Level Professionals

The MRI Group's management philosophy includes the principle of "Apply integrated strengths by combining the ability of diverse individuals". To this end, we continually strive to provide work environments where all employees can maintain their own work-life balance and thrive in their jobs. We offer employees a range of flexible working hours and remote-work options that allow them to choose where and when they work to accommodate different life stages, such as taking care of children or elderly family members.

We also provide diverse training programs designed to foster employees who can reinvent themselves according to changing

times and environments. In a bid to transform all employees into professionals with advanced expertise in a diverse range of fields, we set our educational base in on-the-job training (OJT) and provide supplementary education based on career level to enhance basic skills, specialist training for specific roles, assignments to other organizations to gain knowledge and practical experience not available within the Group, and programs for studying at universities and specialist organizations in Japan and abroad.

In addition, we provide five days of skills-development leave per year and various programs for skill development with few restrictions on the content of courses attended.

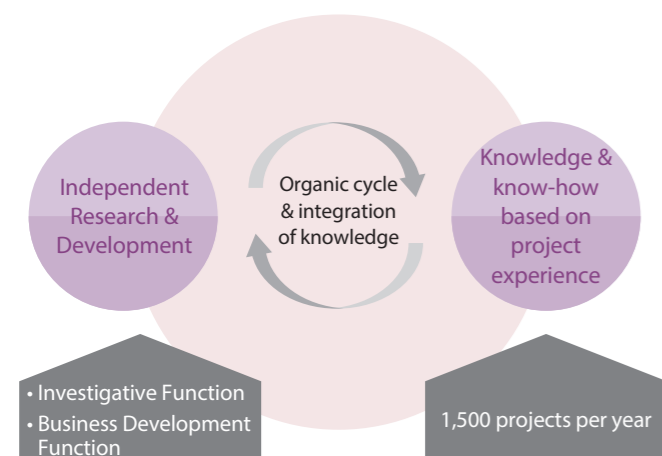
Activities		
Organizations to which employees were dispatched for training purposes in 2019		
Universities & Research Institutions	INSEAD*1 Stanford University University of California San Diego	University of Tokyo National Cancer Center Japan Lawrence Berkeley National Laboratory*2
Corporations	Kyushu Railway Company IBM Japan Ltd. Mitsubishi Estate Co., Ltd. Mitsubishi Corporation (Tokyo, North America, and Vietnam) Mitsubishi Electric Corporation Kirin Holdings Co., Ltd.	Mitsubishi Chemical Holdings Corporation Kyushu Electric Power Co., Inc. Zenrin Co., Ltd. Nextremer Co., Ltd. AEON Topvalu (Hong Kong) Co., Ltd. NEXCO-West USA, Inc.
International Organizations	United Nations Industrial Development Organization (UNIDO)	

*1 INSEAD is a France-based business school

*2 Lawrence Berkeley National Laboratory is a research center of the US Department of Energy in California.

Intellectual Capital

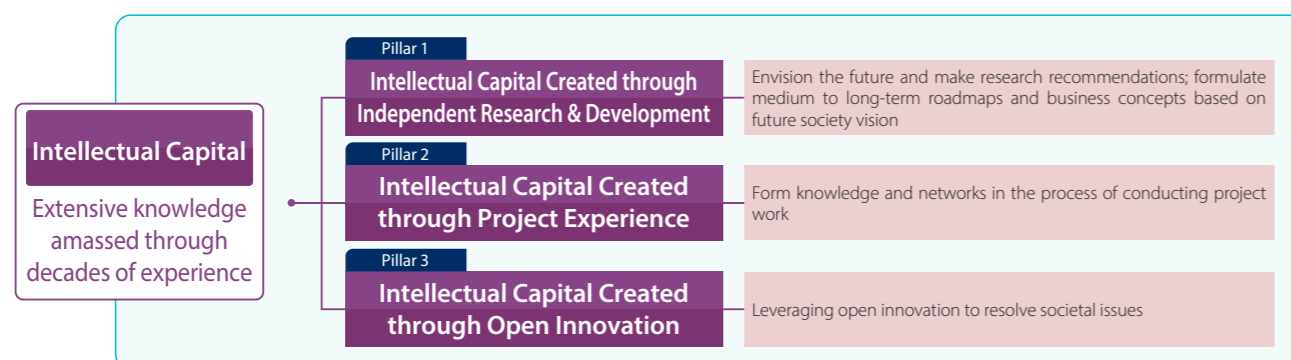
Based on knowledge and know-how amassed through R&D and research projects



We continually fortify our capacity for conceptualizing and making pertinent recommendations through our endeavors in independent research & development activities such as envisioning the future society and analysis of social, economic, and technological trends. Going forward, we will further enhance our investigative and business development functions in order to strengthen the A: Research & Recommendations aspect of our Value Creation Process.

- Investigative Function: Research of public policy & the economy; research of societal issues; comprehensive analysis & assessment of the societal impact of technology; envisioning the desirable future world and recommendations toward its realization
- Business Development Function: Research & development, conceptualization, and recommendations focused on primary fields of Value Creation Process in order to support creation of new business, societal implementation, and partner co-creation

We also create intellectual capital based on knowledge and know-how acquired in the course of providing services to diverse customers (some 1,500 projects per year).



Research & Development Structure

In our Research & Development structure, the Research & Development Unit and Policy & Economic Research Unit are mainly responsible for the Investigative Function and the business units for the Business Development Function. The Research and Development Committee oversees and directs research & development across the organization (including the work of the Research & Development Unit) to maximize the value created by the MRI Group. Hiroshi Komiyama (the 28th president of the University of Tokyo) and Research Fellows with extensive knowledge and experience as well as broad networks in industry, government, and academia (see p. 47) drive the effort to raise the standard, sophistication, and specialization of research by the Company as a whole.



Hiroshi Komiyama
Chairman of the Institute

Pillar 1 Intellectual Capital Created through Independent Research & Development

When envisioning the future and conducting research for recommendations, we apply long-term and broad perspectives developed through overview and analysis of megatrends. We also analyze trends in advanced technologies, explore societal implementation scenarios and issues, analyze their impact on society, and communicate our findings within and outside the Group. The results of such research, released to the public through *Phronesis**, seminars, and the Platinum Society Research Association, lead to projects for our business units. We also develop ideas for new businesses by creating medium to long-term roadmaps and business visions, and undertake studies to gauge the feasibility of the proposed new businesses.

* *Phronesis*: a periodical that explores ideas for making the world a better place from a long-term perspective

www.mri.co.jp/knowledge/magazine/ (in Japanese)

Activities	
Fields Subject to Advanced Technology Megatrend Analysis	
Gene & cell therapy, genome analysis	
Human augmentation (robotics)	
General-purpose AI	
Quantum computers	
Publication of Phronesis	
<i>Phronesis 20</i> "New infrastructure theory: creating a smart future through 'Interstructure'"	
<i>Phronesis 21</i> : "Companies Chosen by the Future"	
Feasibility Study Themes	
Business Succession in Regional Farming	
Food Platforms	
Wood Biomass Power Generation	

Pillar 2 Intellectual Capital Created through Project Experience

MRI undertakes some 1,500 projects per year for public and private sector entities, providing partners in industry, government, and academia with support through the entire process of addressing issues from conceptualization of solutions to implementation. We continually improve the effectiveness of our services by drawing on the intellectual capital created through the latest knowledge and networks gained from project experience.

Activities	
Public Sector Projects (orders in FY2018/9)	
Ministry of Internal Affairs and Communications	57
Ministry of Land, Infrastructure and Transport	57
Ministry of Economy, Trade and Industry	52
Ministry of Health, Labour and Welfare	27
Ministry of the Environment	24
Cabinet Office	13
Ministry of Education, Culture, Sports, Science and Technology	9
Cabinet Secretariat	7
Ministry of Foreign Affairs	5
Reconstruction Agency	2
Ministry of Justice	2
Ministry of Finance	2
Ministry of Agriculture, Forestry and Fisheries	2

Pillar 3 Intellectual Capital Created through Open Innovation

The Platinum Society Research Association and the Innovation Network for Co-Creating the Future (INCF) are open innovation platforms for resolving societal issues.

Members of these platforms collaborate to provide business solutions to large-scale societal issues that cannot be resolved by one company alone. Examples of their activities are the structuring of problems, setting hypotheses, testing and deepening hypotheses through fieldwork, competition analysis, and evaluating effectiveness through pilot testing. MRI advances these activities through its role as a coordinator, producer, and member, and uses the knowledge acquired in the process to add depth and detail to policy recommendations.

Activities	
Production of 2019 edition of <i>Listings of Societal Issues</i>*—Addressing Sustainable Development Goals (SDG) through Business	
This document provides a comprehensive analysis of issues of significant societal impact (including SDGs), with hints for developing solutions through business to resolve societal issues that are of growing concern.	
Pilot Test Themes	
Pilot test of congestion reduction through distributing discount coupons (Fujiyoshida, Yamanashi Prefecture)	
Pilot test of "workation" concept designed to create innovation (Beppu, Oita Prefecture)	
Platinum Career Award	

* *Listings of Societal Issues*: Listings of societal issues with potential for innovation-driven solutions

A free download of *Listings of Societal Issues* can be requested at following link:
incf.smktg.jp/public/application/add/112

Social Capital

Strengthening collaboration within the Group and with external partners

As of September 30, 2019, the MRI Group consists of the Mitsubishi Research Institute, Inc., 11 consolidated subsidiaries, and three equity-method affiliates.

We work closely with a diverse range of partners including both Collaboration & Alliance Partners that we cooperate with at the businesses level, and Co-Creation Partners that are members of our open innovation platforms.

Collaboration & Alliance Partners

MRI is strengthening collaboration with partners outside the Group to respond to more complex and diverse needs, and to enhance the speed, scope, and scale of our business. In particular, we work with partners featuring strengths that we currently lack (e.g. specific technologies and platforms) so that we can develop and provide new businesses harnessing the latest technologies. We look for partners and move forward with specific collaborations that fit our business strategy by adhering to our Partnership Policy (below).

In addition to working with business partners one-on-one, we hold an annual MRI Group Partner Event to facilitate communication among partners and deepen their understanding of our business strategy.

<Major Collaboration & Alliance Partners>

- Business Partners: INES Corporation*, Tokio Marine & Nichido Fire Insurance Co., Ltd., Yokogawa Solution Service Corporation, Kintetsu Group Holdings Co., Ltd., Mynavi Corporation, NCS&A Co., Ltd., Nippon Care Supply Co., Ltd., Japan Digital Design, Inc., Mitsubishi UFJ Research and Consulting Co., Ltd., HR One Corporation, INFINIDAT, Inc., ITCS Co., Ltd., Actifio, Inc., Red Hat, Inc., SAS Institute Japan Ltd.
- Startups & Other Organizations: Moff, Inc., Nextremer Co., Ltd., Institution for a Global Society Corporation, Lily MedTech Inc., Exergy Power Systems, Inc., Chaintope Inc., Mega Solar Power Plants SPC (4 companies), Regional Revitalization Solution, Inc., Aizu Forest Resource Promotion Co., Ltd.

Co-Creation Partners (Open Innovation Platforms)

We orchestrate open innovation for resolving societal issues through business and policy by collaborating with industry, government, and academic partners that are members of the Group's two platforms: the Platinum Society Research Association and the Innovation Network for Co-Creating the Future.



* INES Corporation became an equity-method affiliate in the fiscal year ending September 30, 2020

Our Fundamental Policy towards Partner Collaboration

- Enhancement of ICT functions: We expand the variety of our ICT functions through agile development*, package development, etc.
- New business creation and expansion: We enhance our service creation technologies and expertise and improve our service provision platforms (sales channels, post-sales service)
- Existing business advancement and expansion: We expand our business fields and sales channels, improve our productivity, and enhance our new technologies and resources

* Agile development: Development method that achieves implementation and improvement through rapid cycles of design and testing

Pillar 1 Group Collaboration: Mitsubishi Research Institute, Mitsubishi Research Institute DCS, Japan Business Systems, and INES

Four companies—Mitsubishi Research Institute, Mitsubishi Research Institute DCS, Japan Business Systems, and INES—comprise the MRI Group's internal collaborative structure, and we aim to provide Integrated Solutions and develop Subscription-Based Services that address societal issues through each company's strengths. We are focusing on developing new businesses, particularly in regional revitalization and the food industry, to complement fields in which we already have a solid track record, such as financial services. We also facilitate interaction, reciprocal education, and sharing of skills between employees of all group companies.

Activities

- Developing a regional digital currency platform (DCS); pilot project scheduled to start in 2020 for the Kintetsu Shimakaze Coin (with Kintetsu Group Holdings), a scheme that uses the platform
- Started providing the Municipal Chatbot Service, an AI-based response service for inquiries from residents for local governments (Japan Business Systems, INES)
- Developing support service for local governments' resident consultation services (AI Consultation Partner (tentative)) (Japan Business Systems, INES)
- To launch HACCP Navi food safety management system in 2020 (INES)

Pillar 2 Collaboration & Alliance Partners: Theme-based collaboration

We engage in collaboration on a business-domain and theme basis with partners that have strengths the MRI Group currently lacks. To make a start on developing future businesses, we work closely with technology startups in fields with numerous issues such as energy, healthcare, fintech, human resources, and education. Amid the process, we also invest in certain startups and support interaction among employees of companies involved.

Activities

- Began providing Total Support Program for Manufacturing Digital Transformation to companies located in Japan and Japanese companies in Southeast Asia (Yokogawa Solution Service Corporation)
- Collaboration on equipping storage batteries with rapid response functionality, which is essential for transitioning principal energy sources to renewables (business and capital alliance with Exergy Power Systems, Inc.)

Pillar 3 Co-Creation Partners: MRI-Run Open Platforms

The Platinum Society Research Association, a leading platform in Japan particularly in the field of regional revitalization, features membership from 172 local governments (more than 10% of the total in Japan), corporations, universities, and research institutions.

The Innovation Network for Co-Creating the Future (INCF) is a platform whose members include major corporations, startups, universities and research institutions, public-sector entities, and NPOs. It has built a network of over 500 startups through five Business Accelerator Programs organized so far, expanding connections between startups and major corporations, universities and research institutions, public-sector entities, and NPOs to engage in a range of co-creation projects.

Open platforms

Platinum Society Research Association Membership

490 entities (as of October 2019)
Breakdown: 177 corporations, 172 local governments, 141 universities research organizations, etc.

platinum.mri.co.jp/ (in Japanese)

Innovation Network for Co-Creating the Future Membership

175 entities (as of October 2019)
Breakdown: 25 major corporations, 105 startups, 17 entrepreneurs, 28 public-sector entities, research organizations, NPOs, etc.)

incf.mri.co.jp/en/

ESG Initiatives

The MRI Group works to reduce society's burden on the global environment and to resolve societal issues through its business activities. With human resources as its primary business asset, the MRI Group believes that maintaining the sustainable growth of individuals and the organization, as well as managing risk and improving governance, are vital to achieving this mission. For the MRI Group, *sustainability* means achieving sustainable growth for both society and the Group through its environmental, social, and corporate governance (ESG) initiatives.



Environmental Initiatives

Working to be a leader in building an economy in harmony with the environment

Fundamental Principles

The Mitsubishi Research Institute Group aims, through its business activities, both to reduce burdens on the global environment and to contribute to the realization of a sustainable society. The MRI Group aspires to be a leader in creating an economy that is in harmony with the environment.

Environmental Policy

The Mitsubishi Research Institute Group contributes through knowledge to building a sustainable society, as it complies with relevant laws and regulations and strives for continual improvements through the efforts of all its employees.

1. Advancing Sustainable Environmental Management

Our activities to reduce energy consumption, paper consumption, and waste generation contribute to conserving the global environment while also reducing unnecessary expenses.

2. Undertaking a Variety of Environmental Businesses

We contribute to conserving the global environment by expanding our product, service lineups, and businesses that contribute to the creation of a sustainable society.

3. Contributing to Environment & Society by Providing Knowledge

We leverage our integrated strengths as a think tank to make leading environmental conservation recommendations as well as to undertake activities that contribute to the environment.



MRI acquired ISO 14001 certification (the international standard for environmental management systems) in December 2002 to solidify its commitment to environmentally conscious business operations.

Pillar 1 Shrinking Environmental Footprint

The MRI Group strives to reduce the environmental burdens generated in conjunction with our corporate activities. We regularly monitor our electricity consumption, paper consumption, and waste output levels. If we notice any trends that indicate a growing environmental burden, we undertake measures to reduce them.

These efforts have resulted in a consistent decrease of electricity consumption, paper consumption, and waste output over the past several years. Through ongoing pursuit of more efficient operations, better productivity, and work style reforms, we are working to reduce our environmental load even more.

We reuse books and run bottle cap drives to promote recycling. We also actively endeavor to improve our employees' working environment through programs such as the Warm & Cool Biz initiatives.

Figures*			
Electricity, Paper, & Waste Levels			
	FY2017/9	FY2018/9	FY2019/9
Electricity Consumption (kWh/m ²)	82.04	81.29	73.11
Paper Consumption (sheets/person)	5,259	4,721	4,416
Waste Output (kg/person)	43.73	37.27	34.49

* Totals for the entire MRI Group.

Pillar 2 Growing Businesses that Contribute to the Environment

MRI Group works to help protect the environment through business activities conducive to reducing the environmental burdens caused by our customers and society. Through the research and consulting projects undertaken by MRI, we help formulate and implement public policy, develop management strategies, and assist with the implementation of strategies designed to reduce environmental burdens. The Mitsubishi Research Institute DCS also helps customers reduce their environmental footprint with total IT solutions.

Activities	
Environmental & Energy Projects	
Main Themes	
Global Warming Countermeasures	
Resources & Recycling (waste processing)	
New Energy & Renewable Energy	
Assistance in Achieving SDGs	

Pillar 3 Contributing to the Environment & Society by Providing Knowledge

The MRI Group actively engages in community actions that contribute to the environment. Leveraging the results from our projects in the environmental and energy fields, we work to raise public awareness of related issues and their solutions through broad-based communications. For instance, MRI researchers present accessible commentary on sustainability and related issues through our *MRI Monthly Review**.

Communications*			
Publication on Environmental Issues			
	FY2017/9	FY2018/9	FY2019/9
Articles and Reports	29	29	43

* Totals for the entire MRI Group

Sustainability in the MRI Monthly Review

Bioeconomy & Resolving Global Issues
Making Genuine Commitments to SDG Initiatives
Addressing Inherent Tradeoffs of Biodegradable Plastics
Overcoming the Plastic Waste Problem

* *MRI Monthly Review*: Selected insights drawing on the knowledge and information gained through MRI's research activities delivered in concise reports featuring the latest news and commentary on diverse themes.

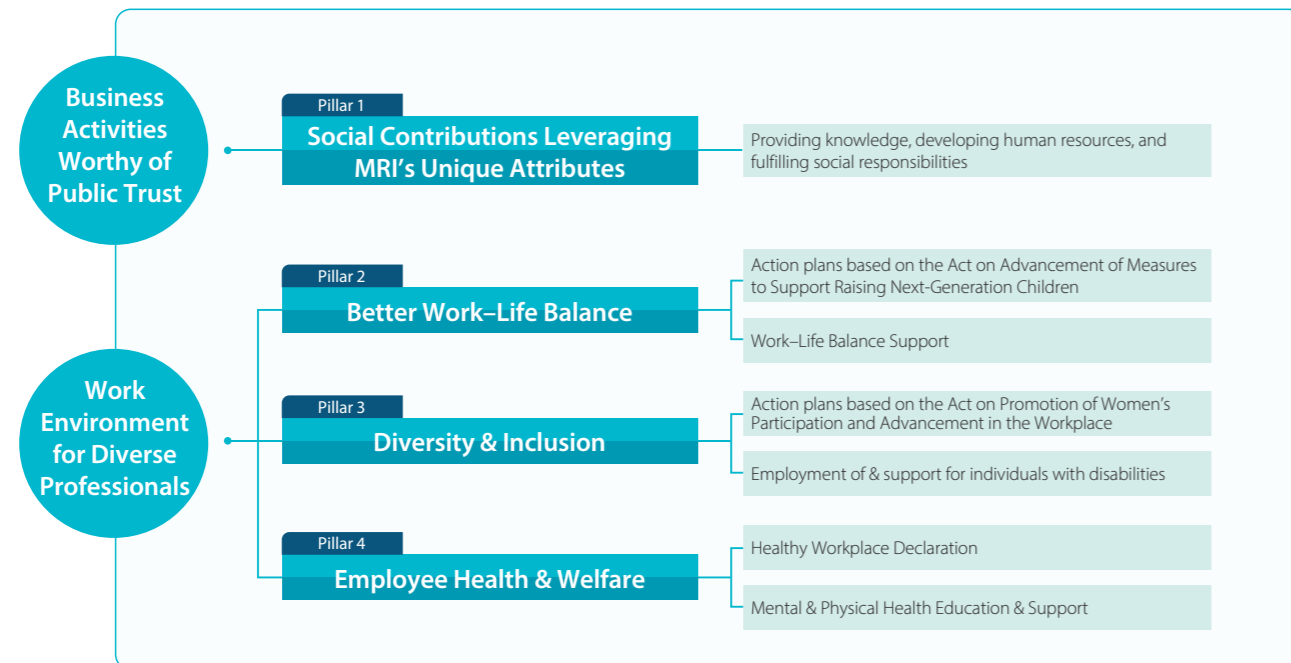
www.mri.co.jp/en/knowledge/mreview/

Social Initiatives

Fulfilling our corporate social responsibilities, drawing on diversity of professionals, and maintaining a motivating work environment

The MRI Group contributes to the development of a sustainable society through its business activities. We go beyond merely meeting our corporate social responsibilities in order to promote business activities worthy of the public's trust. MRI leverages our distinctive attributes to provide knowledge, develop human resources, and ultimately benefit the broader public wellbeing.

We also undertake work style reforms designed to make working at MRI a rewarding experience conducive to the sustainable growth of individuals and the organization. We maintain an efficient, productive, and comfortable work environment and support work-styles conducive to a balance with personal life. This is meant to help employees spend newfound time thanks to increases in productivity on personal development that contributes to co-creating the future, innovation, and family.



Pillar 1 Social Contributions Leveraging MRI's Unique Attributes

The two core principles of our CSR-driven business practices are contributing to the development of a sustainable society through our business activities and engaging in business activities in a manner that earns public trust. Our CSR work's fundamental objectives are benefitting society by providing knowledge and developing human resources, as well as meeting our corporate social responsibilities; and, in addition to resolving societal issues through our primary businesses of making policy recommendations, communicating information, and carrying

out projects, we contribute to university education, participate in academic societies and committees, and help educate junior and senior high school students through our Future Co-Creation Seminars.

Our CSR-driven business practices take a global perspective. As well as complying with ISO 26000, the international standard for corporate social responsibility, we have endorsed the UN's SDGs and are a signatory to the UN Global Compact.

Pillar 2 Better Work–Life Balance

MRI implements various programs—including those for remote work, skill development support, childcare & long-term nursing care, and parental leave—in an attempt to improve employee work–life balance and to ensure a highly productive work style suitable to the group.

By promoting productivity improvements, we generate “future co-creation time,” which our employees can freely use for sustainable personal growth. We also continue creating environments in which each employee can demonstrate their advanced expertise over the long term.

Figures

Maternity Leave Usage

100% (FY2019/9)

Childcare Leave Usage

100% of female employees (FY2019/9)

3.8% of male employees (FY2019/9)

Average Overtime Per Worker Per Month

6 hours, 24 minutes (FY2019/9)

Paid Leave Usage

52.5% (FY2019/9)

Pillar 3 Diversity & Inclusion

Based on one of the fundamental principles of our management philosophy—to apply integrated strengths by combining the ability of diverse individuals—we advance policies to create and realize an environment in which diverse employees can maximize their skills, regardless of age, gender, or other attributes.

In 2016 the Minister of Health, Labour and Welfare recognized our efforts to advance women in the workplace with a level three Eruboshi Certification, the highest award for outstanding companies in the advancement of women in the workplace.

We are also working to realize a universal working environment for all our human resources.

Figures

Women in Management & Project Manager Positions

14.5% of project managers & 12.9% of general managers (FY2019/9)

Female New Graduates Hired

30.3% (FY2019/9)



Eruboshi Certification Mark

Pillar 4 Employee Health & Welfare

The mental and physical health of our employees is a foundation of our business activities, so our management team invests in their health and welfare in line with our Healthy Workplace Declaration.

Promoting health is an essential project for all our employees, one that they should undertake independently and continuously, with an interest in their personal health, and that of their families, friends, and colleagues. Casting the independent actions of our employees as the focus of our health initiatives, we promote health education and actively assist employees with individualized support.

Figures

Health Check-Up Uptake

100% (FY2018/9)

Retest Rate

22.9% (FY2018/9)

Employees Reporting High Stress

8.7% (FY2019/9)

Governance Initiatives

Corporate Governance

Basic Approach

MRI's basic corporate governance policy is to ensure the proper execution, based on our management philosophy, of activities that sustainably improve corporate value, which is the aggregate of four values: social value, customer value, shareholder value, and employee value.

Outside directors make up more than one-third of MRI's directorship, and outside audit & supervisory board members form a majority of our audit & supervisory board members. This composition allows us to actively employ an outside perspective in our management decisions. Management meetings settle matters concerning the execution of business in line with the

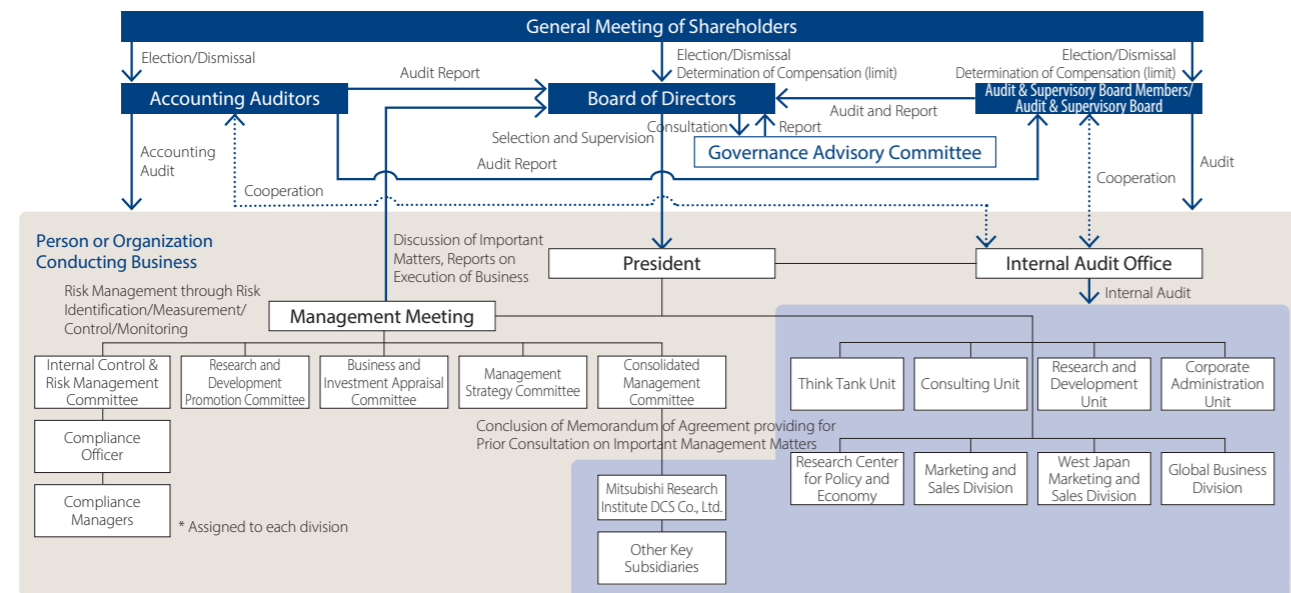
basic management policy established by the board of directors. Executive officers then implement decisions. When deciding on crucial matters, we consult with various internal committees before the management meetings.

MRI also has a common Code of Conduct (see p. 49), the Mitsubishi Research Institute Corporate Governance Guidelines, and a System to Ensure Appropriate Conduct of Operations (Internal Control System) that are shared with Mitsubishi Research Institute DCS and all other Group subsidiaries and affiliates. These shared codes, guidelines, and systems serve as the foundation of our common values and ethics.

Corporate Governance Report

www.mri.co.jp/company/sustainability/governance/corporate-governance.html (in Japanese)

Corporate Governance Structure



Board of Directors, Officer Structure, and Governance Advisory Committee

MRI's Board of Directors consists of eight directors (including three outside directors), and it has the authority to make decisions about our management and to supervise directors in the execution of their duties. Two of the three current outside directors have experience as managers of other companies, and one is an educator with extensive experience in governmental agencies. This structure allows the outside directors to make decisions and monitor management from a broad perspective, based on their individual positions, experience, and knowledge.

We work to make efficient and accurate decisions, and to clarify responsibility for business execution by selecting eight executive officers and by separating management from execution.

We have also established a Governance Advisory Committee to serve as an advisory body to the Board of Directors. The board may ask for opinions on the election/dismissal of officers and on officer compensation, and it may request that the committee analyze and evaluate the effectiveness of the Board of Directors.

Effectiveness Analyses & Evaluations of the Board of Directors

To improve the effectiveness of MRI's Board of Directors, our Governance Advisory Committee conducts reviews and uses these results to analyze and evaluate the effectiveness of the board of directors and provide suggestions for improvements.

The analysis and evaluation conducted for the fiscal year ended September 30, 2019, confirmed that our Board of Directors is structured in a way that enables it to engage in constructive and open discussions and to fulfill its supervisory functions, and that it has fulfilled these functions appropriately. An analysis and evaluation of last year's actions confirmed that substantial progress in enhancing inside and outside directors'

situational understanding through measures intended to provide them with more accessible and pertinent information. The measures offer relevant data and visually rich materials, and they enable officers and general managers to provide detailed commentary when reporting on their areas of responsibility.

To further improve the effectiveness of the Board of Directors, we consider it vital that the board continue to strengthen group governance and remain involved in planning for successors.

Based on this awareness, MRI will continue striving to make ongoing improvements to the effectiveness of the board of directors.

Independence Evaluation Standards for Outside Directors and Audit & Supervisory Board Members

MRI considers outside directors and outside auditors to be independent only when none of the following conditions apply to them.

Independence Evaluation Standards for Outside Directors and Audit & Supervisory Board Members

- (1) Main business partners
 - (a) Persons whose main business partners are MRI or MRI subsidiaries, or persons who execute business on their behalf
 - (b) MRI's main business partners or persons who execute business on their behalf
- (2) Experts

Consultants, accountants, or legal experts who receive a

large amount of remuneration or other assets other than officer compensation from MRI (in the event that said assets are received by corporations, associations, or other organizations, this condition applies to members of said organization)

- (3) First and second degree relatives of persons one or more of the following applies (excluding persons not classified as important)
 - (a) Persons to whom (1) and (2) apply
 - (b) Persons executing business on the behalf of MRI subsidiaries
 - (c) Persons to whom (b) have recently applied, or who have recently executed business on behalf of MRI

Officer Compensation

Our officers' compensation is based on the Basic Policy below. Specifically, after deliberations by the governance advisory committee, the board of directors decides on directors' compensation, and the audit & supervisory board determines its board members' compensation through discussion.

Basic Policy Regarding Officer Compensation

- (1) To put in practice a management policy that responds to the mandate of the shareholders, we will have a fair compensation system that motivates officers to execute their duties.
- (2) To ensure accountability to our stakeholders, we will decide officer compensation through an appropriate process that guarantees transparency, fairness, and reasonableness.
- (3) To secure talented individuals essential for our continued growth, we will aim to set officer compensation at levels that are attractive over the long term.

The breakdown of officer compensation is as follows.

- Internal officers: Basic compensation will consist of base pay, variable monetary compensation, and variable stock compensation. The intent of variable stock compensation is to motivate and incentivize officers to enhance business performance and corporate value over the medium to long term by linking their compensation to Group performance.
- Outside officers: Because these positions are independent of business execution, their compensation consists only of base pay.
- Audit & supervisory board members: To ensure independence, their compensation consists only of base pay.

Directors & Senior Management

Directors			
Name	Position & Responsibilities at the Company	Attendance at Board of Directors Meetings	Main Business Experience
Kyota Omori	Chairman of the Board	100% (10 of 10 meetings)	Career Summary Joined The Mitsubishi Bank, Ltd. in April 1972. Deputy President of Mitsubishi UFJ Financial Group, Inc., President and Representative Director of the Company in December 2010. Chairman of the Board and Representative Director of the Company in December 2016. Chairman of the Board of the Company in December 2017 (incumbent). Important Concurrent Positions Outside director at INES Corporation and at NCS&A Co., Ltd.
Takashi Morisaki	President and Representative Director Officer in Charge of Internal Audit Office	100% (10 of 10 meetings)	Career Summary Joined The Mitsubishi Bank, Ltd. in April 1978. Deputy President of The Bank of Tokyo-Mitsubishi UFJ, Ltd., Executive Vice President and Executive Officer of the Company in October 2016. President and Representative Director of the Company in December 2016 (incumbent). Important Concurrent Positions Chairman of the Board of Mitsubishi Research Institute DCS Co., Ltd.
Shigeaki Yoshikawa	Executive Vice President and Representative Director General Manager, Corporate Administration Unit	100% (10 of 10 meetings)	Career Summary Joined Mitsubishi Corporation in April 1977. Executive Vice President and Regional CEO, Middle East & Central Asia of Mitsubishi Corporation. Executive Vice President and Representative Director, General Manager, Enterprise Management Unit of the Company in December 2016. Executive Vice President and Representative Director, General Manager, Corporate Administration Unit of the Company in October 2019 (incumbent).
Takehiko Matsushita	Managing Director	100% (10 of 10 meetings)	Career Summary Joined the Company in January 1989. Personnel Division Manager and Corporate Planning Division Manager. Director and Executive Officer in December 2011. Managing Director and Representative Director, General Manager, Corporate Administration Unit of the Company in December 2016. Managing Director of the Company in October 2019 (incumbent). Important Concurrent Positions Representative Director and President, Mitsubishi Research Institute DCS Co., Ltd.
Nobuo Kuroyanagi	Outside Director	100% (10 of 10 meetings)	Career Summary President & CEO of Mitsubishi Tokyo Financial Group, Inc. and President of The Bank of Tokyo-Mitsubishi, Ltd. in June 2004. Director of the Company in December 2009 (incumbent). Important Concurrent Positions Senior Corporate Advisor of MUFG Bank, Ltd., Outside Director of Tokio Marine & Nichido Fire Insurance Co., Ltd., Outside Corporate Auditor of Tokyo Kaikan Co., Ltd.
Mikio Sasaki	Non-Executive Director	90% (9 of 10 meetings)	Career Summary Member of the Board, President & CEO of Mitsubishi Corporation in April 1998. Director of the Company in December 2010 (incumbent). Important Concurrent Positions Senior Corporate Advisor of Mitsubishi Corporation
Kazuo Tsukuda	Outside Director	90% (9 of 10 meetings)	Career Summary President and CEO (Member of the Board) of Mitsubishi Heavy Industries, Ltd. in June 2003. Director of the Company in December 2010 (incumbent). Important Concurrent Positions Executive Corporate Advisor of Mitsubishi Heavy Industries, Ltd., Outside Director (Audit and Supervisory Committee Member) of Yamaguchi Financial Group, Inc., Outside Director of FANUC CORPORATION
Mariko Bando	Outside Director	— (New appointment)	Career Summary Joined the Prime Minister's Office in July 1969. Director General of Gender Equality Bureau, Cabinet Office in January 2001. Chancellor (Rijicho) of Showa Women's University in April 2014 (incumbent). Chancellor (Socho) of Showa Women's University in July 2016 (incumbent). Outside Director of the Company in December 2019 (incumbent). Important Concurrent Positions Chancellor (Rijicho) of Showa Women's University, Chancellor (Socho) of Showa Women's University, Outside Director of MS&AD Insurance Group Holdings, Inc.

Note: Directors Nobuo Kuroyanagi, Kazuo Tsukuda, and Mariko Bando are outside directors as defined in Article 2, Item 15 of the Companies Act.

(As of December 18, 2019)

Audit & Supervisory Board Members			
Name	Position & Responsibilities at the Company	Attendance at Board of Directors Meetings	Main Business Experience
Koichi Nishioka	Audit & Supervisory Board Member	100% (10 of 10 meetings)	Career Summary Executive Officer, Deputy General Manager, Corporate Administration Unit (concurrently) General Manager, Risk and Quality Management Division of the Company in October 2015. Audit & Supervisory Board Member in December 2016 (incumbent). Important Concurrent Positions Audit & Supervisory Board member of Mitsubishi Research Institute DCS Co., Ltd.
Michio Atsuda	Audit & Supervisory Board Member	100% (10 of 10 meetings)	Career Summary Joined The Mitsubishi Bank, Ltd. in April 1982. General Manager, Credit Examination Office, Internal Audit Division of The Bank of Tokyo-Mitsubishi UFJ, Ltd., Executive Managing Officer of ACOM Co., Ltd., Audit & Supervisory Board Member of the Company in December 2018 (incumbent).
Toshihiko Matsumiya	Outside Audit & Supervisory Board Member Independent Officer	100% (10 of 10 meetings)	Career Summary Registered as Certified Public Accountant in March 1983. Established Toshihiko Matsumiya Certified Public Accountancy Office in October 2011 (incumbent). Audit & Supervisory Board Member of the Company in December 2012 (incumbent). Important Concurrent Positions Representative of Toshihiko Matsumiya Certified Public Accountancy Office, Outside Audit & Supervisory Board Member of Daiichi Jitsugyo Co., Ltd.
Kenji Matsuo	Outside Audit & Supervisory Board Member Independent Officer	100% (10 of 10 meetings)	Career Summary Director, President, Representative Executive Officer of Meiji Yasuda Life Insurance Company in December 2005. Audit & Supervisory Board Member of the Company in December 2015 (incumbent). Important Concurrent Positions Senior Advisor of Meiji Yasuda Life Insurance Company, Outside Director (Audit & Supervisory Committee member) of MUFG Bank, Ltd., External Auditor (Audit and Supervisory Board member) of Daido Steel Co., Ltd.
Kunio Ishihara	Outside Audit & Supervisory Board Member Independent Officer	— (New appointment)	Career Summary President & Chief Executive Officer of Tokio Marine & Nichido Fire Insurance Co., Ltd. in October 2004. Counsellor of Tokio Marine & Nichido Fire Insurance Co., Ltd. in June 2013 (incumbent). Auditor of the Company in December 2019 (incumbent). Important Concurrent Positions Counsellor of Tokio Marine & Nichido Fire Insurance Co., Ltd., Outside Director of Japan Post Holdings Co., Ltd., External Director (Audit and Supervisory Committee Member) of NIKON CORPORATION Outside Audit & Supervisory Board Member of Tokyu Corporation

Note: Auditors Toshihiko Matsumiya, Kenji Matsuo, and Kunio Ishihara are outside corporate auditors as defined in Article 2, Item 16 of the Companies Act.

Executive Officers		
Kotaro Nagasawa	Managing Executive Officer	General Manager, Think Tank Unit
Hiroshi Iwase	Managing Executive Officer	General Manager, Consulting Unit
Taro Kamagata	Managing Executive Officer	Senior Managing Director, Mitsubishi Research Institute DCS Co., Ltd.
Hiroyuki Seyazaki	Executive Officer	Deputy General Manager, Think Tank Unit
Toshiyuki Ogawa	Executive Officer	President of MRI Research Associates, Inc.
Shuji Nakamura	Executive Officer	General Manager, Marketing and Sales Division
Yoshihiko Ito	Executive Officer	Deputy General Manager, Consulting Unit
Jun Nobe	Executive Officer	Deputy General Manager, Corporate Administration Unit

Research Fellows	
Hiroshi Komiyama	Chairman of the Institute
Kiyooki Murakami	Senior Research Fellow
Yoshihiro Mori	Senior Research Fellow
Yoshihiro Oishi	Senior Research Fellow; General Manager, Research and Development Unit
Shin-ichi Kamei	Research Fellow
Kazuo Hiyane	Research Fellow; General Manager, AI Innovation Laboratory

Business Risks & Responses

MRI Group appropriately manages risk using its Advanced Risk Management System (ARMS) that combines risk identification, measurement, control, and monitoring processes. The monitoring process promotes active risk management with a focus on perceiving and preventing threats rather than responding to ex post facto reports. For our responses during times of severe crisis, we have created a Business Continuity Plan (BCP) that takes into account for situations such as large-scale natural disasters, disease outbreaks, or system failures due to cyberattack. This BCP includes a framework for smoothly responding to any crisis from the initial stages until business recovery.

Risk Area	Detailed Risks	Responses
Project Management	Any potential decreases in product quality, flaws that arise after delivery, or customer requests for specification changes or additions during development could cause a decline in customer satisfaction or a reduction in project profitability.	Line managers perform project management reviews to control upfront expenses and manage the execution of projects.
Information Processing Services	When investing in new devices or updates for devices involved in information processing services, any potential changes to economic conditions beyond those forecast, or to the economic conditions of our key customers, could lead to an inability to recoup these investments. Additionally, natural disasters or human error could cause errors or faults in systems.	Decisions to execute investments are based on a comprehensive analysis of factors that includes customer needs, business forecasts, and potential investment returns. We also use a framework that allows for rapid recovery from faults or errors.
New Businesses	While we expect an increase in new business projects that require business or capital partnerships, unexpected changes in the business environment or to our business partners' circumstances could impact our business planning. Moreover, insufficient management at sites where work is performed could lead to accidents.	We make decisions to develop businesses after third parties review our business forecasts, potential investment returns, and overall risks. We also conduct business with sufficient care for worker health and safety at worksites.
Outsourcing	In the case of any unexpected circumstances involving our subcontractors, we might have to burden extra costs to maintain acceptable quality levels or compensate a customer due to delay in delivery.	We periodically review our subcontractors for their quality standards and management systems, and we provide instructions for improvement, where necessary, as part of our continuing effort to stably secure outstanding subcontractors.
Human Resources	Recruitment challenges, the growing fluidity of the labor market, and deteriorating employment conditions could lead to an inability to adequately secure the highly specialized and creative human resources that MRI demands.	We promote multifaceted human resource policies that include a full lineup of recruitment and training programs, diversity initiatives, and a complete employee welfare package. We strive to maintain a rewarding, comfortable work environment for our employees.
Information Security	Unauthorized access through cyberattacks or other means, natural disasters, and inadequate information management could lead to compromise of information assets. Any such possibilities could destroy public confidence in the MRI Group or provoke liability claims from our customers or other stakeholders.	We work to improve and thoroughly implement information management practices by establishing security policies for information and network devices, managing access to offices using security cards, and conducting periodic training for employees.
Intellectual Property Rights	Violations of the intellectual property rights or other rights of others could destroy public confidence in the MRI Group or provoke liability claims.	We strive to ensure that our employees respect and do not infringe on the intellectual property rights of third parties by conducting regular training, as part of our active efforts to protect intellectual property.
AI Utilization	Any potential deficiencies in the fairness, transparency, or safety of AI applications and in our response to our obligation to explain how we achieve these attributes could lead to the cancellation of related projects or precipitate liability claims from service users, and they could destroy public confidence in MRI Group.	We aim to improve the quality of our AI business and to promote the application of AI across society. Therefore, we have established Guidelines for Promoting AI Businesses, and we use these when considering AI development projects and applications.

Compliance

Basic Approach

The MRI Group considers compliance to be a critical management issue that serves as a foundation of our corporate activities. We strive to improve compliance across the entire group by sharing our Code of Conduct, among other activities.

To improve compliance efficiency, we place compliance managers in every business unit. These individuals work with the Risk Management & Compliance Management Department to provide continuing employee training through e-learning workshops and compliance discussions, in which employees in the field discuss compliance with their colleagues through cases that may arise in every-day operations.

We have also emplaced internal reporting and consultation frameworks as part of our efforts to quickly identify and rectify compliance violations.

Code of Conduct

1. We leverage integrated strengths rooted in diverse, advanced expertise, and contribute to society through our high quality, creative results.
2. We engage in environmentally conscious activities to contribute to the sustainable development of society.
3. We always demonstrate social accountability and maintain integrity and fairness in our business activities. We are resolutely committed to opposing antisocial forces and to blocking any relationship with such forces.
4. We respect the intellectual property rights of third parties and actively create and use our own intellectual property.
5. We comply with laws and internal rules and respect social norms.
6. We respect human rights and never engage in any discrimination or prejudice.
7. We thoroughly maintain confidentiality and manage information. We appropriately manage information obtained from both inside and outside the company.
8. We maintain a clear separation between private and public matters, and strictly refrain from behavior that benefits only specific organizations or individuals.
9. We act with the propriety and judgment of members of the community.

We never overlook any infractions of the above Code of Conduct.

www.mri.co.jp/en/about-us/sustainability/governance/guideline.html

Business Management Systems

Three Management Systems

The MRI Group uses three business management systems: a Personal Information Protection Management System (PMS), a Quality Management System (QMS), and an Environmental Management System (EMS). We continue contributing to society, improving our business activities, raising our quality and productivity standards, and enhancing compliance through the integrated operation of these three systems.

We regularly review the entries and procedures within the systems and constantly make upgrades through repeated PDCA (plan → do → check → act) cycles.

With the PMS, we have acquired the PrivacyMark System based on JIS Q15001 for rigorously managing and appropriately handling the personal information we receive from our customers or through our own data-gathering.

The QMS is part of our initiative to improve quality across all our companies via collaboration between each department and

its QMS administrator. This initiative also entails further raising of our customer satisfaction scores by conducting regular customer satisfaction surveys and incorporating the results into strategies for improving product quality. Our QMS is certified as ISO 9001 compliant.

Through the EMS, we work to reduce the environmental burdens generated in conjunction with our corporate activities. Part of these efforts includes regular monitoring of electricity and paper consumption, waste generation, and CO₂ emissions. We use the results of this monitoring as internal feedback to further decrease our environmental impact. Our EMS is certified as ISO 14001 compliant.

Information Security

As a corporate group that generates value by providing information, we must defend the security of our information, given that information security is a source of trust in our business activities.

Information security requires strategies that offer both defenses against external attacks and the prevention leaks from within. As external attacks continue to grow in intensity, their methods are also becoming more ingenious.

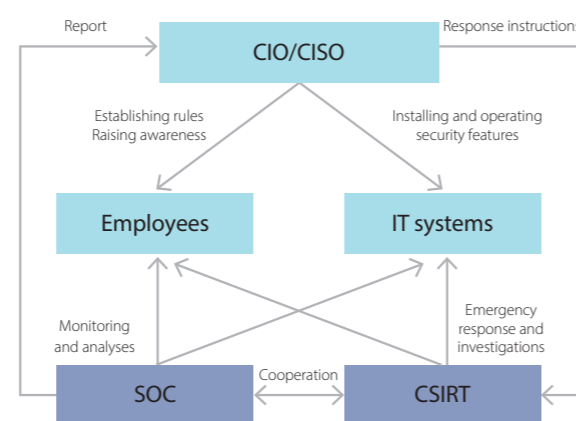
We have therefore replaced a Computer Security Incident Response Team (CSIRT) and a Security Operation Center (SOC) under the leadership of a Chief Information Security Officer (CISO). These organizations and individuals continue to improve our information system platforms and frameworks to realize the highest productivity, functionality, and security available.

We improve both software and hardware responses to external attacks by installing security software, building systems with multilayered defenses, and conducting training in mock situations for employees. We will also continue to carry out our policies according to plan.

To prevent information leaks, we have multifaceted policies in place, including confidential information management,

computer behavioral detection, and employee education. We will continue to upgrade these policies as needed.

Information Security Management Framework



Communication with Shareholders and Investors

Basic Approach

We respect fair disclosure rules and disclose vital information in a timely, accurate, fair, and impartial manner to ensure that not just shareholders and investors, but all our stakeholders are better informed and can correctly value the MRI Group.

Basic Rules for Information Disclosure

- (1) Timeliness: Information about significant events must be disclosed without delay after the events have occurred.
- (2) Accuracy: All information disclosed must accurately reflect the facts.
- (3) Impartiality: All important information, whether favorable or unfavorable to the MRI Group, must be disclosed in accordance with the timely disclosure rules of the stock exchange.
- (4) Fairness: All stakeholders, including stockholders and investors, must have equal access to information.

ir.mri.co.jp/en/policy.html

Improving Communication with Shareholders

At our 50th Regular General Shareholders' Meeting (December 2019), we focused on reporting our business performance in an accessible way, using images and videos, and we released the report via our website the same day.



We are working to improve our communication with all shareholders by issuing a semiannual Shareholder Report, publicizing our performance, showcasing our business activities and policy recommendations, and conducting shareholder surveys.

Investor Relations

- Based on our basic principles of information disclosure, we strive to have our investor relations (IR) activities offer more accessible explanations of our activities, to help further the understanding of our business operations and management strategies. The opinions we have received from all our shareholders and investors have been valuable feedback for our management team, which is using it to further boost corporate value.
- We hold semiannual results briefings for institutional investors and analysts after the release of the final and second quarter financial results. At these meetings, the President and Representative Director gives a presentation on our activities, including financial results and the medium term management plan.
- To promote fair disclosure, we strive to expand our information communication aimed at international investors. We are making our financial results presentation materials and meeting minutes available in English and posting them to our website's IR page.

Website Renovation

In September 2019, we updated our corporate website to encourage a broader understanding of our business activities and management strategies among shareholders, investors, and the general public. With a fresh design in both English and Japanese, the new site offers compatibility with smartphones and tablets too. We post useful and timely information throughout the site, including selected insights from our leading researchers.



www.mri.co.jp/en/index.html

On our Investor Relations webpage, we offer detailed commentary on our management policies, performance, financial information, and specific business initiatives. We also strive to expand our communication geared for international investors, as evidenced by the English Investor Information page we launched in October 2019.

ir.mri.co.jp/en/index.html

Messages from Outside MRI

On Assuming an Outside Directorship

Japan faces many societal issues in the new Reiwa era. What will we aim for now, after achieving the tangible wealth and convenience that has been our goal since the late Showa period? After a period of searching during Heisei era, we are now facing a society that has seen falling birth rates, an aging and declining population, the shift to information technology, and globalization.

In my many years as a public servant and academic, I have taken an active role in gender equality, education of women, local government, statistics, and problems facing the elderly. However, there is still so much to do, and it feels as though we still have a mountain of problems to solve.

Amid such circumstances, MRI, which is approaching its 50th anniversary, promises sustainable business development and growth in its role as a pioneer leading the way toward an era of new values. I hope to somehow serve as many stakeholders as possible as I engage in frank discussions with MRI's management and participate in the new issues that arise.



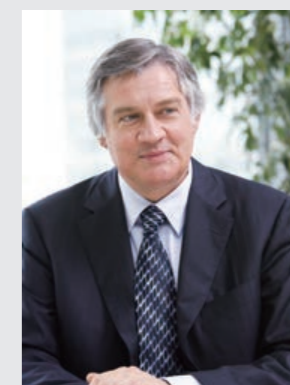
Mariko Bando
Outside Director

Toward the Open Innovation Initiative

I have been happy to cooperate closely with MRI since 2014 and to serve as an advisor for its Innovation Network for Co-Creating the Future (INCF) since 2017, and, recently, for M50 Research to commemorate its 50th Anniversary.

When I give public lectures about emerging technology trends, I often receive the question, "Will AI (artificial intelligence) be good for society or bad for it?" Questions like that remind me of the importance of MRI's research. MRI is working to develop answers to questions about AI that go beyond just "good" or "bad." MRI's analysis of the complex and changing interrelationships between technology, business, policy, and society are aimed at developing carefully formulated standards for a human-centric networked society. Such standards will enable future innovators to have a clearer predictive understanding of how their ideas may impact environmental and economic security and the importance of basic human dignity before they bring new solutions to market.

I look forward to cooperating on these important efforts with MRI.



Richard B. Dasher
Director
US-Asia Technology Management Center
Stanford University

Advisor
Innovation Network for
Co-Creating the Future (INCF)
Mitsubishi Research Institute

Key Financial Data (consolidated)

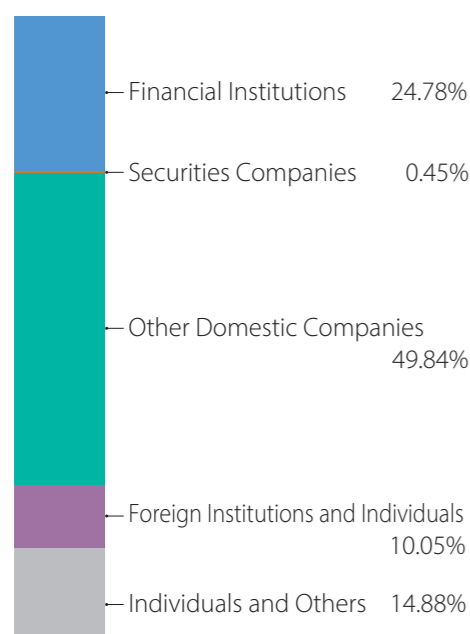
	FY2010/9/30	FY2011/9/30	FY2012/9/30	FY2013/9/30	FY2014/9/30	FY2015/9/30	FY2016/9/30	FY2017/9/30	FY2018/9/30	FY2019/9/30
Statement of Income (Millions of yen)										
Net sales	73,323	72,503	75,365	81,127	87,400	85,354	86,904	89,466	90,250	90,029
Operating profit	4,875	2,537	3,091	5,370	6,079	5,552	5,495	5,731	4,963	5,130
Ordinary profit	5,030	2,905	3,262	5,566	6,442	5,813	5,877	6,258	5,364	5,718
Profit attributable to owners of parent	2,516	1,255	1,140	2,885	3,405	3,692	3,425	3,833	3,402	3,599
Statement of Financial Position (Millions of yen)										
Total assets	51,531	53,185	56,088	61,047	65,354	67,094	71,777	75,654	78,600	84,568
Net assets	33,868	35,366	36,458	40,115	42,155	44,134	46,910	50,395	53,284	54,843
Statement of Cash Flows (Millions of yen)										
Net cash provided by (used in) operating activities	4,931	4,247	4,157	5,518	5,056	7,778	5,052	6,582	7,013	8,726
Net cash provided by (used in) investing activities	(4,079)	(1,889)	(3,165)	(3,216)	(5,733)	(1,608)	(996)	(5,368)	(3,129)	(2,768)
Net cash provided by (used in) financing activities	(895)	(1,124)	(830)	(787)	(1,127)	(1,319)	(1,335)	(2,164)	(1,826)	(2,360)
Financial and Management Indicators (%)										
Equity ratio	56.8	56.3	55.1	55.7	55.9	57.3	56.9	57.8	59.1	56.7
Return on Equity (ROE)	8.8	4.2	3.7	8.9	9.7	9.9	8.6	9.1	7.5	7.6
Ordinary profit / net sales ratio	6.9	4.0	4.3	6.9	7.4	6.8	6.8	7.0	5.9	6.4
Dividend payout ratio	26.1	39.2	43.2	19.9	21.7	24.5	31.2	31.9	40.6	42.9
Per Share Data (yen)										
Basic earnings per share (EPS)	153.22	76.45	69.45	175.67	207.36	224.83	208.55	235.08	209.46	221.58
Net assets per share (BPS)	1,783.02	1,822.74	1,882.39	2,072.18	2,222.92	2,340.10	2,488.48	2,692.31	2,859.70	2,950.94
Annual cash dividends per share	40.00	30.00	30.00	35.00	45.00	55.00	65.00	75.00	85.00	95.00
Index of Stock Price (Multiples)										
Price Earnings Ratio (PER)	10.96	18.13	23.89	12.16	13.21	13.07	15.20	14.10	20.91	16.18
Number of Employees at End of Current Period (Persons)										
Total	3,159	3,408	3,423	3,458	3,580	3,659	3,741	3,842	3,918	4,011

Mitsubishi Research Institute, Inc.

Head Office	10-3, Nagatacho 2-Chome, Chiyoda-ku, Tokyo 100-8141 Japan
Date of Establishment	May 8, 1970
Representative Directors	Takashi Morisaki, President Shigeaki Yoshikawa, Executive Vice-President
Chairman of the Institute	Hiroshi Komiyama
Capital Stock	6,336 million yen
Number of Employees	(Consolidated) 4,011 (Non-consolidated) 930 (as of September 30, 2019)
Group Companies	Mitsubishi Research Institute DCS Co., Ltd. MRI Business, Inc. MRI Research Associates, Inc.

Share-related Information (as of September 30, 2019)

- Authorized Shares Capital: 60,000,000
- Number of Shares Issued: 16,424,080
- Number of Shareholders: 4,174
- Shareholder Composition



■ Principal Shareholders (Top 10 shareholders)

Shareholder's Name	Number of Shares	Shareholding Ratio (%)
Mitsubishi Corporation	975,076	5.93
Mitsubishi Heavy Industries, Ltd.	975,000	5.93
Mitsubishi Electric Corporation	902,200	5.49
Mitsubishi Chemical Corporation	834,000	5.07
Mitsubishi Research Institute Group Employee Shareholding Association	732,380	4.45
Mitsubishi Materials Corporation	698,300	4.25
Mitsubishi UFJ Trust and Banking Corporation	598,574	3.64
Mitsubishi Estate Co., Ltd.	598,500	3.64
AGC Inc.	598,500	3.64
The Master Trust Bank of Japan, Ltd. (trust account)	586,100	3.56

(Note) The Shareholding Ratio is calculated after deducting treasury stocks (296 shares)
The number of treasury stock does not include the Company stock (177,900 shares) owned by Board members' compensation BIP trust.

■ Shareholder Composition

	Number of Shareholders	Composition Ratio (%)	Number of Shares Held (Thousands of Shares)	Shareholding Ratio (%)
Financial Institutions	26	0.62	4,070	24.78
Securities Companies	25	0.60	74	0.45
Other Domestic Companies	107	2.56	8,185	49.84
Foreign Institutions and Individuals	138	3.31	1,650	10.05
Individuals and Others	3,878	92.91	2,443	14.88
Total	4,174	100.00	16,424	100.00

Mitsubishi Research Institute DCS Co., Ltd.

Head Office	12-2, Higashishinagawa 4-Chome, Shinagawa-ku, Tokyo, 140-8506 Japan
Date of Establishment	July 10, 1970
Representative Directors	Takehiko Matsushita, President & CEO Toru Ito, Managing Director
Capital Stock	6,059 million yen
Number of Employees	(Consolidated) 2,890 (Non-consolidated) 2,149 (as of September 30, 2019)
Group Companies	MRI Value Consulting & Solutions Co., Ltd. MD Business Partner Co., Ltd. Touhoku Diamond Computer Service Co., Ltd. UBS Co., Ltd. IT-One Co., Ltd. DCS Information Technology (Shanghai) Co., Ltd. MRIDCS Americas, Inc. HR Solution DCS Co., Ltd.

MRI Business, Inc.

Head Office	Sanno Park Tower 5F, 11-1, Nagatacho 2-Chome, Chiyoda-ku, Tokyo 100-6105 Japan
Date of Establishment	October 1, 1970
Representative Directors	Naoko Sakamoto, President
Capital Stock	60 million yen
Number of Employees	55 (as of September 30, 2019)

MRI Research Associates, Inc.

Head Office	Sanno Park Tower 5F, 11-1, Nagatacho 2-Chome, Chiyoda-ku, Tokyo 100-6105 Japan
Date of Establishment	May 31, 1984
Representative Directors	Toshiyuki Ogawa, President
Capital Stock	60 million yen
Number of Employees	136 (as of September 30, 2019)



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Mitsubishi Research Institute, Inc.
Corporate Communications Division
10-3, Nagatacho 2-Chome, Chiyoda-ku,
Tokyo 100-8141 Japan
TEL: +81-3-6705-6000
www.mri.co.jp/en/index.html
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