

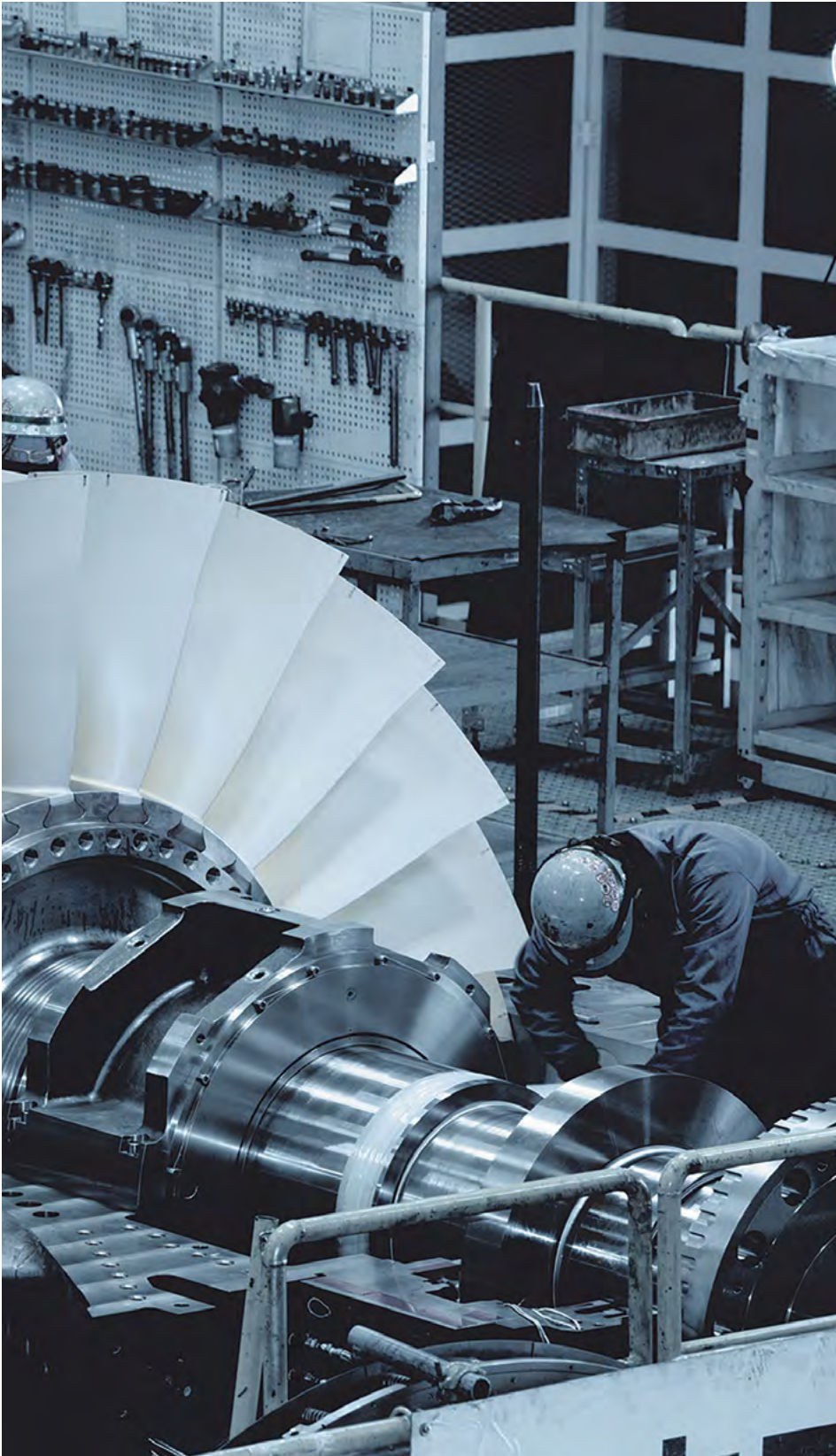


THE MHI VISION: 2021 AND BEYOND

# THE 2018 MEDIUM-TERM BUSINESS PLAN UPDATE

## AN UPDATE ON OUR PROGRESS

Midway through our three-year Medium-Term Business Plan, we share an update on our progress towards our vision: To solve society's issues through global integrated engineering, ensuring long-term wellbeing and security for humanity.



### FIRST HALF 2019 HIGHLIGHTS

- ✓ Growth in Advanced Class GTCC
- ✓ Thermal Power Service business development
- ✓ Green energy investment in U.S. wind farm
- ✓ Strengthened logistics equipment business
- ✓ Innovation in reduction of CO2 in steel production
- ✓ Kaizen in commercial aircraft production
- ✓ Expansion of car air conditioning business, with focus on electric vehicles
- ✓ Strengthened aero engine parts business
- ✓ SpaceJet program development and product reveal

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## A MESSAGE FROM SEIJI IZUMISAWA, PRESIDENT AND CEO

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One of my favorite expressions is: “Think big, start small.” This is how I think of the Medium-Term Business Plan – an ambitious vision with a practical path forward. This approach will enable us to continue to provide value to our investors, our customers, our employees and society at large.

Since becoming CEO in April, I have seen the positive impact that the reforms we have undertaken during the past years have had on this company. We are executing as planned and have strengthened our financial foundations. While the global business environment presents us with a number of challenges, and while there are still actions we must take within the company, these reforms have prepared us well. Our progress despite these challenges gives me great confidence in the future.

Now, we are poised for the next stage of growth. In this Medium-Term Business Plan update, we share an expanded

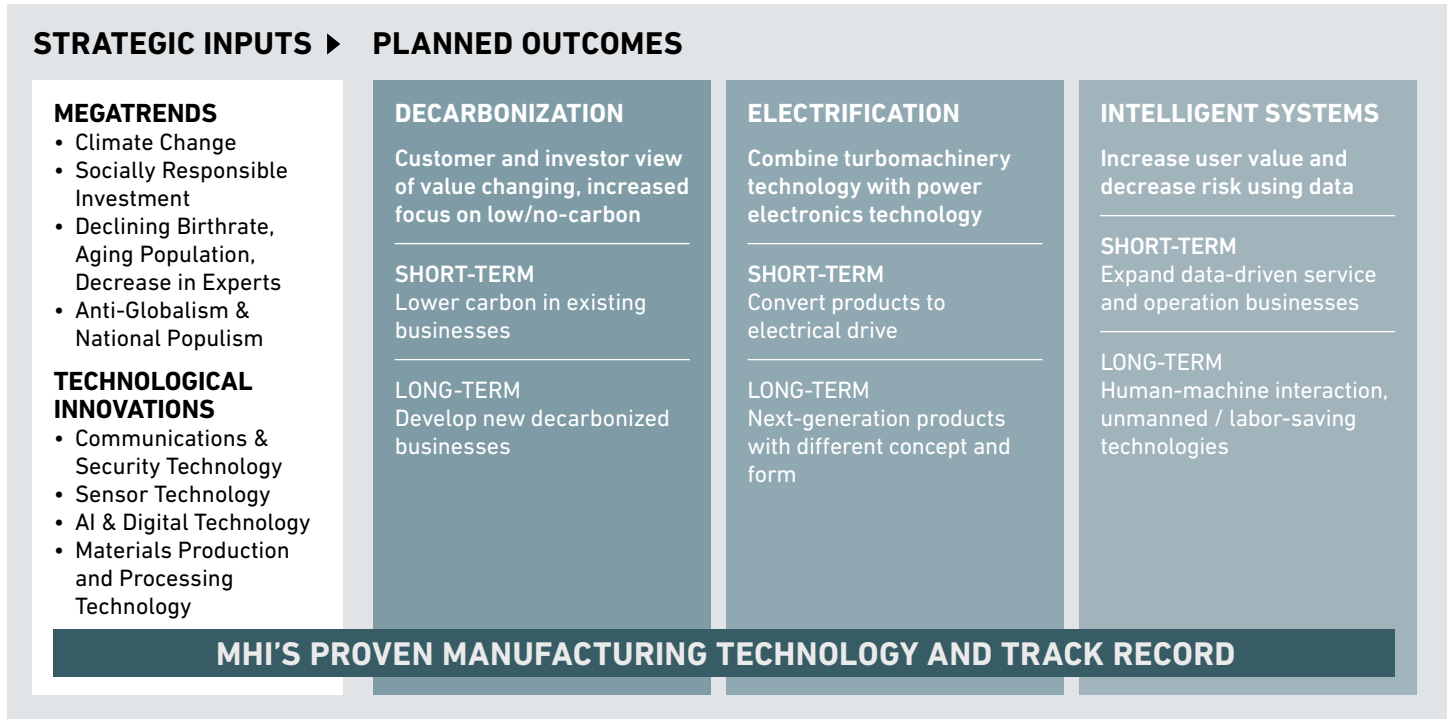
view of how global megatrends inform our business priorities. We will continue to focus our core competencies around society’s needs and enhance our capabilities in Decarbonization, Electrification and Intelligent Systems. Integrating our proven excellence in manufacturing and mechanical systems together with the latest technologies will position us to provide practical solutions to the world’s most pressing issues.

Our customers, investors and employees have high expectations for our company. As do I. We will continue to “think big, start small” as we drive efficiency and profitability, enabling successful growth for years to come.

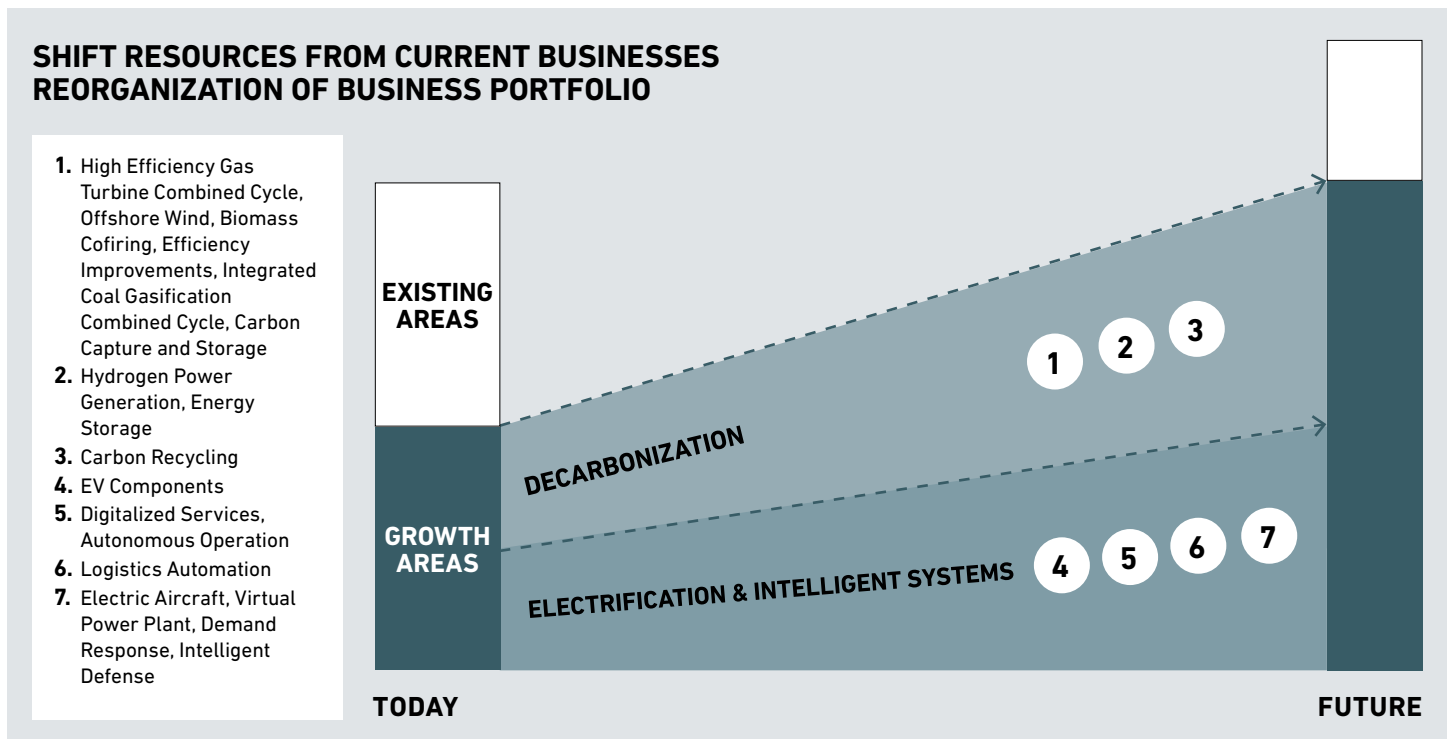
**SEIJI IZUMISAWA,**  
PRESIDENT AND CEO

# A STRATEGIC APPROACH TO GROWTH VIA MEGATRENDS

Global 'megatrends' and technological innovations inform strategic areas of focus. With manufacturing at our core, we will expand business areas that can contribute to short and long-term progress. Decarbonization, Electrification and Intelligent Systems emerge as key themes.



Opportunities in Decarbonization, Electrification and Intelligent Systems represent growth areas and will become central to core competencies as we shift resources from current businesses towards growth businesses over time.







# DECARBONIZATION, ELECTRIFICATION AND INTELLIGENT SYSTEMS AT WORK





## DECARBONIZATION

We are balancing increased demand for electricity with lower carbon emissions using zero and low carbon technology:

### ZERO CARBON

- Hydrogen Gas Turbine** 
- Carbon Capture, Utilization and Storage** 
- Light Water Nuclear Reactor** 
- Offshore Wind** 




### LOW CARBON

- Next-Gen GTCC** 
- Integrated Gasification Combined Cycle** 
- Upgrade Existing Steam Power** 
- Organic Rankine Cycle** 

## ELECTRIFICATION

We are making industry and infrastructure sustainable by contributing to environmentally conscious growth markets like EV components, next-generation forklifts, low Global Warming Potential chillers, and more.

### REDUCE ENVIRONMENTAL BURDEN & EXPAND BUSINESS

Logistics	Mobility	Air Cond.
<p>Answering customer needs with next-generation forklift trucks</p> 	<p>Speed up compatibility with EVs</p> 	<p>Reduce environmental burden through high efficiency, low Global Warming Potential</p> 



## INTELLIGENT SYSTEMS

We are optimizing business operations and realizing efficiencies and safety via sophisticated automation. One example is for automated power plants, as shown here.

<b>LONG-TERM</b>	<p><b>Autonomous operation</b></p> <ul style="list-style-type: none"> <li>Optimize operations in response to environment</li> <li>Respond to diverse KPIs, automatic optimization with simulation technologies using digital twin</li> </ul>
<b>NEAR-TERM</b>	<p><b>Advanced operation and maintenance</b></p> <ul style="list-style-type: none"> <li>Minimize costs, increase reliability</li> <li>AI identifies problems instantaneously and offers solutions</li> <li>Assists operations via optimization of performance and environmental impact</li> </ul>
<b>TODAY</b>	<p><b>Remote monitoring/status visualization</b></p> <ul style="list-style-type: none"> <li>Driving performance through digitalization of information</li> <li>Remote monitoring</li> <li>Detect abnormalities, offer solutions</li> <li>System visualizations</li> </ul>

## ONGOING OPTIMIZATION OF CORE COMPETENCIES

In recent years, reforms have reduced the number of business domains from nine to three. We will continue to strengthen these domains by aligning innovation and core competencies within each to Decarbonization, Electrification, and Intelligent Systems.



**POWER**



**INDUSTRY & INFRASTRUCTURE**



**AIRCRAFT, DEFENSE & SPACE**

### DECARBONIZATION

- Energy systems integration
- Carbon recycling
- Innovative catalyst technology (using materials & infomatics)
- Energy carrier production technology (hydrogen, ammonia, methanation, etc.)
- Renewables, hydrogen GTs, fuel cells, energy storage, CCUS

### ELECTRIFICATION

- Electromagnetic field measurement & analysis
- Inverter circuit design & analysis
- Electrification system control tech
- Energy management tech

### INTELLIGENT SYSTEMS

- Digital technology
- Data analysis, AI
- Sensing, image recognition tech
- Systems security tech
- Robotics & mechatronics

## MANAGING AND DEEPENING GLOBAL REFORM

The start of the current Medium-Term Business Plan marked the conclusion of a period of significant reform and restructuring. Now we are focused on deepening reforms throughout our global organization in order to support our growth strategy.



### ESTABLISH GROWTH PROMOTION DEPARTMENT

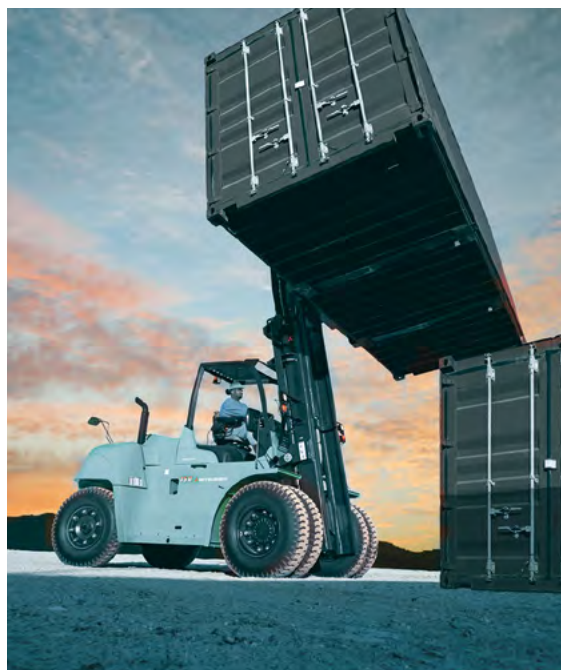
- Establish agile business development department with direct CEO oversight to strengthen HQ-driven incubation
- Support growth of existing businesses by rolling out technological trends and new business models across the Group

### REORGANIZE BUSINESS STRUCTURE

- Explore reorganization of business structure to drive global expansion of businesses in growth strategy
- Drive synergies by placing Mitsubishi SpaceJet, CRJ and Tier 1 businesses under same commercial aviation segment management

### HR MANAGEMENT

- Acquire talent that can thrive in businesses focused in electrification, intelligent technologies and further globalization
- Develop plans to nurture self-directed talent, HR systems and shared platforms that support growth strategy



**RISE TO MEET THE FUTURE**

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