Hitachi, the Largest Japanese Conglomerate, and Its Transformation in the Innovation Era

By

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ABSTRACT

Hitachi has more than a hundred-year history since its foundation and 864 subsidiaries globally. It serves in a wide variety of industries including but not limited to information systems, social infrastructure and automotive systems as well as home appliances. In 2008, however, due to the financial crisis, Hitachi scored the largest loss ever in the Japanese manufacturing industry. I analyze how Hitachi returned from the brink of bankruptcy by comparing it with other domestic players. I also look back on Hitachi’s overall history to overview its growth.

Looking at today’s world, we see disruptive technologies shaped into the practical use to solve social problems. Global firms lead innovations by developing and absorbing the cutting-edge technologies, rebuilding their organization and business portfolio accordingly, and establishing new industrial standards. After its restructuring, Hitachi also started the same approach, but its momentum and boldness seem to be less than those of its competitors.

Through restructuring since 2009, Hitachi has returned to its position as a domestic champion in the industry. However, it falls far behind the global companies. Therefore, the aim of this thesis is to explore challenges Hitachi faces to be a globally competitive company, and solutions to those problems. My proposal starts from strategy planning. Social Innovation Business is Hitachi’s commitment to society, and I evaluate that it is a good strategy. In addition, to prepare for uncertainty, Hitachi should be equipped with the longer perspectives. To maintain competitiveness longer and to deliver value, I propose the organizational structure with which Hitachi can plan a better strategy and execute it accordingly.

Note: The views expressed in this thesis are solely my own and do not necessarily reflect the views of Hitachi, Ltd., my employer.

Thesis Supervisor: Michael A. Cusumano
Title: Sloan Management Review Distinguished Professor of Management
I would like to express my heartfelt appreciation to all the persons who generously supported me in completing this thesis.

First and foremost, I would like to thank my thesis supervisor, Professor Michael A. Cusumano for his continuous support of my study, his patience and immense knowledge. His guidance helped me during my research and the writing of this thesis. Throughout my work, I could touch his deep expertise in strategy as well as his abundant experience in Japanese industry, which will be a great asset for my future career.

My sincere thanks also go to Mr. Reddy Harry, who works for Hitachi Vantara Corporation in Waltham, MA. He also gave me thoughtful insight toward Hitachi’s strategy. He is not only my former colleague, but also an alumni of MIT Sloan School of Management.

During my 14-year career at Hitachi, I have worked in several business domains and with many colleagues. My work experience and communication with them have formed my professional ways of thinking and sense of value. I particularly wish to thank the following groups of people.

- Motoki Abe and Remi Ishida, who are my first colleagues after entering Hitachi. They shared their knowledge and views on the consumer business.
- Kenji Nakamura and Toshiyuki Suzuki, who gave me a great opportunity to work in San Diego, California for a year, where I learned about the overseas operation.
- Kenji Kondo, who was my colleague in Kaiyo Academy, a boarding school in Japan, where I was seconded in 2008. His work to establish a new school foundation inspired me.
- Hisaaki Ozaki, Katsuki Nishioka and Flavio Iwata, who gave me new experience in the Latin American market. Efforts to cultivate the market with them provided me a wide viewpoint.
- Yutaka Abe and Kazuyoshi Yamamoto, who have deep expertise on the global alliance in power and rail sectors. Thanks to their support, I could conclude technical collaboration agreements with overseas third parties. I also learned how to form and lead a team.
- Teruya Suzuki, Atsuyuki Fujii and Ryuta Noda, who were my colleagues just before coming to MIT. They provided me opportunities not only to acquire corporate management viewpoints through European business, but also to take on the challenge of an MBA program.

Last but not the least, I must express my very profound gratitude to my wife, Ema, and my daughter, Honoka, for providing me with unfailing support and continuous encouragement throughout my year of study. They have been my biggest supporters for many years. This accomplishment at MIT would not have been possible without them.

Masami Omuro
Cambridge, Massachusetts
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INTRODUCTION

PURPOSE OF THIS THESIS

Digitalization has changed the technology industry at a breakneck speed. This movement has caused previously successful companies to step back from their leading position because they failed to adapt in a timely manner. The master skill of strategy is now definitely required for every company more than ever.

Hitachi, Ltd. has faced crises in a variety of its business sectors during this century, but it seems to manage with management’s strong leadership and strategy so far. However, as all the factors related to the business—including but not limited to customers, competitors, technology, and values—can change at any time, strategy must always be reviewed and adapted. This thesis will explore how Hitachi should transform itself to be a global leading player in the industry by looking at its history and landscapes. I will make recommendations for Hitachi for both short and long term.

THESIS STRUCTURE AND METHOD

In the first chapter, I provide the overview of Hitachi. The company has a wide variety of businesses and large revenue. A comparison with domestic competitors can also help us understand the company and its position in the industry. Hitachi, at present, is in a good position among Japanese players.
Chapter 2 discusses the history of Hitachi. By tracing its footsteps over a century, I provide the significance of the company for Japanese society. After reviewing it from its foundation to 2008, I investigate in depth the most recent decade because Hitachi has experienced rapid transformation in this period. It is essential to understand this era to analyze Hitachi’s strategy in later chapters.

Chapter 3 describes new technologies and industrial standards, which strongly affect current global competition. In these trends, global players have moved quickly and boldly in the rapidly changing world. Compared with them, Hitachi is evaluated as still behind its global competitors.

With the facts and analysis from the previous chapters, Chapter 4 and 5 propose solutions for the challenges Hitachi faces. Chapter 4 focuses on Hitachi’s existing strategy. Hitachi has strengthened its Social Innovation Business since 2009, but I study this direction from a strategic point of view. In Chapter 5, I propose a new organizational design in longer perspective. Hitachi should establish an optimal organization to ready itself for any future changes by looking forward, and connecting its necessary actions.

Finally, the conclusion summarizes the thesis.
CHAPTER 1

OVERVIEW OF HITACHI

1.1 COMPANY PROFILE:

Hitachi, Ltd., headquartered in Tokyo, Japan, is a conglomerate company, providing solutions to customers in a broad range of sectors, including Power/Energy, Industry/Distribution/Water, Urban Development, and Finance/Government & Public/Healthcare. The company’s consolidated revenue for fiscal year 2016 (ending March 31, 2017) totaled 9,162.2 billion Japanese Yen (US$ 81.8 billion), which is the sixth largest among Japanese listed companies (see Table 1-1). At the end of fiscal year 2017 (ending March 31, 2018), Hitachi has 307,275 employees and 879 consolidated subsidiaries worldwide.

Table 1-1. Revenue Ranking in Japanese Listed Companies (FY 2016)

<table>
<thead>
<tr>
<th>Company</th>
<th>Revenue (million JPY)</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Toyota Motor Corporation</td>
<td>27,597,193</td>
<td>Transportation Equipment</td>
</tr>
<tr>
<td>2 Honda Motor Co., Ltd.</td>
<td>13,999,200</td>
<td>Transportation Equipment</td>
</tr>
<tr>
<td>3 Japan Post Holdings Co., Ltd.</td>
<td>13,326,534</td>
<td>Services</td>
</tr>
<tr>
<td>4 Nissan Motor Co., Ltd.</td>
<td>11,720,041</td>
<td>Transportation Equipment</td>
</tr>
<tr>
<td>5 Nippon Telegraph and Telephone Corporation</td>
<td>11,391,016</td>
<td>Information &amp; Communication</td>
</tr>
<tr>
<td>6 Hitachi, Ltd.</td>
<td>9,162,264</td>
<td>Electric Appliances</td>
</tr>
<tr>
<td>7 Softbank Group Corp.</td>
<td>8,901,004</td>
<td>Information &amp; Communication</td>
</tr>
<tr>
<td>8 Aeon Co., Ltd.</td>
<td>8,210,145</td>
<td>Retail Trade</td>
</tr>
<tr>
<td>9 Sony Corporation</td>
<td>7,603,250</td>
<td>Electric Appliances</td>
</tr>
<tr>
<td>10 Panasonic Corporation</td>
<td>7,343,707</td>
<td>Electric Appliances</td>
</tr>
</tbody>
</table>

Hitachi’s corporate slogan is “Inspire the next,” expressing what the group aims to become in the future. To be more specific, Hitachi Group aims to help create a society that is overflowing with vitality, by inspiring the world.\(^2\)

### 1.2 BUSINESS SEGMENT

Hitachi contributes in the following segments: Information & Telecommunication Systems, Electronics Systems & Equipment, Social Infrastructure & Industrial Systems, Construction Machinery, High Functional Materials & Components, Smart Life & Ecofriendly Systems and Automotive Systems. The revenue of each segment in FY 2017 and its main products and services are listed in Table 1-2 and 1-3 respectively.

<table>
<thead>
<tr>
<th>Segment</th>
<th>Revenue (Billion JPY)</th>
<th>Share of Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information &amp; Telecommunication Systems</td>
<td>2,009</td>
<td>20%</td>
</tr>
<tr>
<td>Social Infrastructure &amp; Industrial Systems</td>
<td>2,375</td>
<td>23%</td>
</tr>
<tr>
<td>Electronic Systems &amp; Equipment</td>
<td>1,087</td>
<td>11%</td>
</tr>
<tr>
<td>Construction Machinery</td>
<td>959</td>
<td>9%</td>
</tr>
<tr>
<td>High Functional Materials &amp; Components</td>
<td>1,658</td>
<td>16%</td>
</tr>
<tr>
<td>Automotive Systems</td>
<td>1,001</td>
<td>10%</td>
</tr>
<tr>
<td>Smart Life &amp; Ecofriendly Systems</td>
<td>540</td>
<td>5%</td>
</tr>
<tr>
<td>Others</td>
<td>558</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Hitachi Consolidated Financial Results for Fiscal 2017

---

## Table 1-3. Hitachi's Main Products and Services by Segment

<table>
<thead>
<tr>
<th>Segment</th>
<th>Products and Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information &amp; Telecommunication Systems</strong></td>
<td>Systems integration, Consulting  &lt;br&gt; Cloud services, Servers  &lt;br&gt; Storage, Software</td>
</tr>
<tr>
<td><strong>Social Infrastructure &amp; Industrial Systems</strong></td>
<td>Industrial machinery and plants  &lt;br&gt; Elevators, Escalators, Railway systems  &lt;br&gt; Transmission &amp; distribution systems</td>
</tr>
<tr>
<td><strong>Electronic Systems &amp; Equipment</strong></td>
<td>Semiconductor manufacturing equipment  &lt;br&gt; Measurement and analysis equipment  &lt;br&gt; Medical equipment</td>
</tr>
<tr>
<td><strong>Construction Machinery</strong></td>
<td>Hydraulic excavators  &lt;br&gt; Wheel loaders  &lt;br&gt; Mining machinery</td>
</tr>
<tr>
<td><strong>High Functional Materials &amp; Components</strong></td>
<td>Semiconductor and display related materials  &lt;br&gt; Printed wiring boards and related materials  &lt;br&gt; Energy storage devices</td>
</tr>
<tr>
<td><strong>Automotive Systems</strong></td>
<td>Engine management systems  &lt;br&gt; Electric powertrain systems  &lt;br&gt; Car information systems</td>
</tr>
</tbody>
</table>
1.3 SOCIAL INNOVATION BUSINESS

Hitachi calls “Social Innovation Business” (SIB) its core strategy. Today, SIB is defined as “resolving issues faced by society and customers by combining advanced IT with operational technology and products/systems, allowing Hitachi to provide total solutions.”\(^3\) In order to execute this strategy, Hitachi launched Lumada, an Internet of Things (IoT) core platform in 2016. Lumada is a comprehensive, enterprise-grade IoT core platform with an open and adaptable architecture. I will investigate the strategy more in Chapter 4.

1.4 DOMESTIC COMPETITORS ANALYSIS

Because Hitachi has a wide variety of business segments, its competitors differ in accordance with the businesses: for example, Fujitsu or NEC in information business, Canon in healthcare products, and Komatsu for construction machinery. This thesis does not focus on specific business strategies, and I do not investigate these competitions individually. Instead, I analyze two companies here: Toshiba Corporation and Mitsubishi Electric Corporation, which

\(^3\) [http://social-innovation.hitachi/en/about/#none](http://social-innovation.hitachi/en/about/#none)
are manufacturing conglomerate companies. They used to be in the same industry and have the same history as Hitachi. They started their histories by developing electrical equipment and expanded their businesses through World War II and post-war recovery. With exportation, they further expanded with the Japanese economy over the 1960s. However, in accordance with the decline of the Japanese economy, they also suffered. The financial crisis in 2008 forced them to select and concentrate on certain businesses. Today, the three conglomerates are active in different sectors.

1.4.1 BUSINESS STRATEGY

Mitsubishi released its latest corporate strategy in November 2017. Its management policy was “Maintain Balanced Corporate Management for Sustainable Growth.” To achieve this, Mitsubishi established three business strategies: (1) Make Strong Businesses Stronger, (2) Continuously Create New Strong Businesses, and (3) Reinforce the Solutions Business Centered on Strong Businesses. Surprisingly, two of them, (1) and (3), are the same as what was written in its corporate strategy in 2009 even though Mitsubishi changed its CEO every four years during this period. The consistent strategy and execution realize the high profit ratio described in Section 1.4.3. Since 2009, Mitsubishi has acquired four foreign companies in the factory automation sector, which is the most profitable business for Mitsubishi, to reach global markets such as Europe and Asia. Now, Mitsubishi targets 5 trillion JPY of revenue and 8% operating profit ratio by 2020.

Toshiba defined its revenue target of FY 2019 at 4 trillion JPY. The number is smaller than Mitsubishi’s and considerably low compared with Toshiba’s result in FY 2007, 7.7 trillion JPY. It has faced many difficulties for this decade due to a fraud audit and losses by nuclear power businesses explained later. Toshiba had no choice but to sell its profitable businesses to improve its balance sheets, which made it reduce its scale and redefine its core businesses.

Toshiba’s priority has been stabilizing its financial platform rather than expanding the business. Accordingly, its management policies were newly defined in July 2016 as “Manage with Integrity” and “Construct a Healthy Management Platform for Growth.” Toshiba had to sell several businesses that had been defined as parts of its core.

Hitachi’s “2018 Mid-term Management Plan” aimed at a revenue of 10 trillion JPY in FY 2018. In this plan, Hitachi aimed to be an “Innovative Partner for the IoT Era” by accelerating collaborative relationships with customers through advanced Social Innovation Business. At the same time, it defined its four focus business domains: Power/Energy, Industry/Distribution/Water, Urban, and Finance/Public/Healthcare. Hitachi’s strategy is aligned with its belief that Social Innovation Business is the key to expand its global business. To accelerate growth, Hitachi established global front organizations by increasing its human resources of consultants, system engineers and maintenance personnel and by obtaining more customer channels and maintenance resources through M&A.
1.4.2 BUSINESS PORTFOLIO

A company's strategy and the execution should align with each other. Table 1-4 shows the number of transactions that involved stock transfers to external companies since January 2009, just after the global financial crisis. Transactions among Toshiba's and Mitsubishi’s group companies are not included because they do not greatly affect the group’s business portfolio. I categorized the transactions into three types: (A) withdraw/shrink business, (B) strengthen core business, and (C) improve the balance sheet. The result reveals an overall trend of business restructuring.

Table 1-4. The Number of Transactions Involving Stock Transfer

<table>
<thead>
<tr>
<th></th>
<th>Mitsubishi</th>
<th>Toshiba</th>
<th>Hitachi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>2009</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2014</td>
<td>2</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2015</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2016</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2017</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2018*</td>
<td></td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Press Release
Table: created by Thesis author
*Until February 28, 2018.
It is clear that Mitsubishi identified its non-core businesses and focused on investing in its core business at an earlier stage. As Figure 1-1 shows, Mitsubishi has not changed its business portfolio at all since 2007. This is because Mitsubishi established its optimal business portfolio in the early 2000s by ceasing production of personal computers (1999), splitting off System LSI and DRAM businesses (2003). It also exited from the mobile phone business in 2008. By splitting off such high volatility businesses, Mitsubishi achieved today's business portfolio with a higher profit ratio. Partly for this reason, Mitsubishi had not completed any M&A beyond 10 billion JPY since 2000 except for the 90 billion JPY acquisition in 2015 of DeLclima S.p.A., which designs and sells commercial HVAC equipment. Mitsubishi promised to accelerate its strategy by further M&A in the future. In FY 2017, its core businesses are Energy & Electric Systems, Industrial Automation Systems and Home Appliances with a more than 20% revenue ratio each. Industrial Automation Systems, the largest business segment, achieves a high operating income ratio (13.2%).

![Figure 1-1. Transition of Mitsubishi’s Business Portfolio](image)

Consolidated Financial Results for FY2017
Chart: created by Thesis author
Toshiba, on the other hand, has not stayed in the same position. As Figure 1-2 depicts, in the four years from 2009 to 2012, Toshiba executed 13 stock transactions with external partners to strengthen the businesses. Nine of them, however, have already been sold or reduced their business scale, 4 for nuclear power, 1 for energy, 3 for healthcare, and 1 for the display business. For instance, in May 2011. Toshiba acquired the entire equity of Landis+Gyr AG, a company in energy management solutions, for $2.3 billion. However, 6 years later, Toshiba sold all to enhance its financial structure.

On May 22, 2014, Toshiba published its mid-term strategies. In these strategies, it defined three core businesses for creative growth and innovation: Energy, Storage, and Healthcare. However, this vision would collapse. On May 8, 2015, Toshiba released news of its independent investigation committee to examine the appropriateness of its past accounting. In September, based on the investigation, Toshiba announced 224.8 billion JPY overstated profits in seven years. It released the “Toshiba Revitalization Action Plan” on December 21, 2015. With this, Toshiba restructured a weakened financial platform while it redefined its Energy and Storage businesses as focus areas. In 2016, Toshiba transferred all shares of its subsidiary healthcare business to Canon Inc. (665.5 billion JPY), and 80.1% of its subsidiary home appliances business to Midea Group Co., Ltd. (51.4 billion JPY). Toshiba lost one of its core businesses to compensate for its deficit.

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5 http://www.toshiba.co.jp/about/ir/en/pr/pdf/tpr20140522e.pdf
At the end of 2016, however, Toshiba announced the possibility of recognition of goodwill and loss related to its nuclear business. To recover from this crisis, Toshiba announced it would sell its memory business--its most profitable one--for 2 trillion JPY in September 2017. Also, its US subsidiary filed for a voluntary petition under Chapter 11 of the US Bankruptcy Code on March 29, 2017, by which Toshiba exited from its overseas nuclear business. In this way, Toshiba's second and third core businesses disappeared.

![Diagram](image)

**Figure 1-2. Transition of Toshiba's Business Portfolio**


Chart: created by Thesis author

Note: Amount of total revenue FY 2007 and 2012 is not the same as that of Figure 1-4 because Toshiba released “Notice on Restatement of Past Financial Results” on September 7, 2015 to revise its past financial statement including FY 2007 and 12, but did not publish revenues by segments. I used the original statement for above chart.

Hitachi has also changed its business portfolio as shown in Figure 1-3. Chapter 2 explains this in detail. Hitachi ceased several businesses after the financial crisis, but there are some
differences with Toshiba. First, Hitachi also sold its subsidiaries with high profit ratio such as Hitachi Global Storage Technologies ($5,773 million revenue and 8.0% operating income ratio) and Hitachi Capital Corporation (370 billion JPY revenue and 9.2% operating income ratio). Its purpose is, however, not to compensate for a corporate deficit, but to concentrate on its core businesses. Hard disk drive and financial service businesses earned profits but were not evaluated to create synergy with Hitachi's core business. In addition, Hitachi plans to invest the gain of business sales in its core business. Its acquisition of Ansaldo group companies in 2015 expanded its rail system business and was the largest M&A deal for Hitachi in its history. As a result, Information & Telecommunication Systems and Social Infrastructure & Industrial Systems are the main segments, which are the key domains for Social Innovation Business.

Figure 1-3. Transition of Hitachi's Business Portfolio
Source: Hitachi Annual Report (FY 2008 and 2013), Consolidated Financial Results for FY 2017
Chart: created by Thesis author
1.4.3 FINANCIAL PERFORMANCE

As shown, Mitsubishi has a consistent strategy and has designed itself accordingly while Hitachi and Toshiba have restructured throughout the decade. This was of course reflected in the financial result. Figure 1-4 illustrates the financial performances of the three companies since FY 2007. In terms of business scale, Hitachi has more revenue than the other two companies do. As a result of the financial crisis, all three companies' revenue declined until 2009. After this year, however, their results show different directions. Mitsubishi shows steady growth while Toshiba continues to decline and Hitachi fluctuates. Hitachi recorded drops two times in 2012 and 2016. This is because it reviewed its business portfolio and sold subsidiaries. After tentative decline, Hitachi achieved recovery, explained in detail in Chapter 2. In the case of Toshiba, on the other hand, it also sold its businesses but the revenue has still declined since the transformation.

![Figure 1-4. History of Revenue (Hitachi, Toshiba and Mitsubishi)](image)
Source: Annual Reports
Graph: created by Thesis author
Toshiba's FY 2017 data is the latest forecast
Viewing the operating income ratio in Figure 1-5, we can see the three companies’ competence more clearly. Mitsubishi’s ratio has remained high compared with the others; however, Hitachi has gradually caught up with this. Both possess a high earnings rate while Toshiba experienced difficulty during this decade.

![Figure 1-5. History of Operating Profit Ratio (Hitachi, Toshiba and Mitsubishi)](source)

Toshiba’s FY 2017 data is the latest forecast

Judging from the financial results, though the amount of revenue is low, Mitsubishi has kept a stable rate of return before and after the financial crisis. Hitachi suffered from great loss in the crisis, but has rapidly improved its profit level. Toshiba still has trouble establishing stable earnings. Mitsubishi’s superiority can be seen also in the result of net income shown in Figure 1-6.
Mitsubishi has kept positive net income for more than a decade, including the year of the financial crisis. It has established a stable business foundation. Hitachi recorded the nation's worst deficit in the manufacturing industry in 2008. After drastically restructuring, it realized net profits for 8 years. Toshiba had demonstrated small profit or large deficit for years. Its profit is estimated to jump in 2017, but this comes from the sale of its memory business.

By viewing domestic players' strategies and results, I find Mitsubishi has a smaller scale of business compared with the others, but realized stable profits and well-balanced portfolio at an earlier stage. It identified its strength and exited from volatile businesses by the early 2000s. Hitachi has earned the largest amount of revenue for decades, but its profit ratio had been
lower and net profits smaller than Mitsubishi’s. Hitachi has recently improved its position the most and reached Mitsubishi’s financial result. This is because Hitachi accelerated its selection of business. By splitting out its non-core business, Hitachi achieved this transformation while Mitsubishi has not changed its business portfolio. Toshiba heavily suffers from the effect of its past accounting fraud. It has to identify and invest in its core businesses other than healthcare, semiconductors and nuclear power.
CHAPTER 2
HISTORY OF HITACHI

Hitachi was founded more than 100 years ago. To grasp its overall trajectory better, I want to follow in its footsteps by dividing the history into four phases: Foundation (1910–1960), Expansion with Japanese economy (1961–1980), the Lost Decades (1981–2000) and Transformation (2001–present).

2-1. 1910 - 1960

The first phase is from the foundation to 1960. Hitachi started its history in 1910 as a machine repair shop at Kuhara Mining Company in Hitachi, Ibaraki, Japan. Namihei Odaira, the founder, had anxiety about the inferiority of Japanese technology and emphasized the technical development by itself. In 1911, Hitachi built a 2-kVA transformer by itself. Production of an AC ammeter and voltmeter in 1914 and completion of a 10,000-hp water turbine followed this. In 1920, Hitachi, Ltd was incorporated as an independent company from Kuhara. Then, Odaira defined the corporate credo: “Contribute to society through the development of superior, original technology and products.” Following this credo, Hitachi developed a variety of products and expanded its scope outside the mining industry. Large-scale DC electric locomotives (completed in 1924) elevators (produced in 1932), and electric refrigerators (completed in 1932) were new products which would become pillars of the company several decades later.
During the war, Hitachi was forced to make war material and many of the factories were destroyed by bombing raids.

2-2. 1961 - 1980

In this period, Japan enjoyed exceptional growth. However, it suddenly stopped because of the Oil Crisis. Hitachi gained and lost its momentum in accordance with this macro trend.

After World War II, Japan achieved post-war recovery. Infrastructure was reconstructed and the supply of food became stable. Based on high educational standards and technologies as well as a large population, social production capability contributed to the economic growth directly. In 1968, Japan ranked the second largest country of Gross National Product followed by the US. Hitachi rode on the strength of this development. Just before the Tokyo Olympic Games opened in 1964, Hitachi manufactured cars of the Shinkansen, the Japanese bullet train, penetrating from Tokyo to Osaka. Hitachi also provided the computer-aided traffic control system for the Shinkansen. In the consumer sector, Hitachi sold a lot of home appliances such as black and white TVs, washing machines and refrigerators which were called the “Three Sacred Treasures.”

In 1973, the Oil Crisis brought a huge negative impact on the Japanese economy. That year, Japan experienced negative growth for the first time since World War II. Hitachi also suffered from the decreasing demand and high energy cost. As a countermeasure, Hitachi adjusted production and restructured its organization. In this phase, because the domestic market showed low growth, Hitachi made efforts to cultivate the foreign market. It succeeded
to export gas turbines to the Middle East and mainframes to China as well as to establish overseas factories for semiconductors in the US and TVs in the UK. It also increased technical collaboration with foreign partners in JVC and license agreements.

In contrast, Hitachi developed the technology of semiconductors by itself. Hitachi and other Japanese manufacturers invested in the technology so that they developed high performance LSIs and microcomputers. This innovation enabled manufacturers to develop better mainframes. This business became the main pillar for Hitachi’s revenue.


Hitachi expanded its revenue aligning with Japanese economic growth. However, the bursting of the bubble economy in the late 1980s led Hitachi to cease its expansion. In addition, two important events affected Hitachi’s business during these two decades: the Plaza Award and the beginning of Internet.

The Plaza Award in 1985 caused strong yen, and trade friction between US and Japan. Hitachi opened a corporate office in Washington DC in order to monitor the situation and have political conversations directly. Also, Hitachi established a factory for magnetic disks in Oklahoma to reduce the imbalance of the trade deficit. As a result, exports from Japan decreased and manufacturing facilities moved overseas through these decades. The second event was the commercialization of the Internet. In 1995, Windows 95 which enhanced both user interface and network connection was released and generated massive sales. Sales of mainframes decreased as Windows promoted an open network. In addition, Windows
computers installed Intel’s CPU. Because Intel ceased its DRAM business in 1985 and invested in MPU at this time, the popularity of DRAM decreased. Hitachi’s main information system products were mainframe and DRAM. In 1999, Hitachi merged its DRAM business with NEC, gradually exiting from the business by listing the new JVC’s stock in 2004, and sold enough stock that the JVC became its non-equity method company in 2005.

In 1995, Hitachi changed its organization into Group Systems. The purpose was to integrate developing, manufacturing and sales functions in each business organization. For instance, Hitachi absorbed its subsidiary in charge of sales of home appliance, in order to create a coherent internal business structure. Also, each Group was directed by its CEO for swift decision-making. However, as an effect of the Asian Financial Crisis originating in Thailand in 1997, Hitachi recorded a net loss of 338.8 billion JPY in FY 1998. This was the first time it had announced an annual net loss since 1985.

As a countermeasure for the rapidly changing business, in 1999, Hitachi reorganized into ten internal groups; Power & Electric, Industrial Products, Escalators & Elevators, Information Systems, Digital Media, Home Appliances, Displays, Semiconductors, Automotive and Measuring Instruments. This restructuring was executed based on the feature of the business to realize the optimal size.

2-4. 2001 – 2018

I emphasize this period, especially after the financial crisis in 2008, because it was the time when the world faced a strong headwind, which affected Hitachi so heavily that it was put
at the verge of bankruptcy. However, Hitachi revived rapidly by management’s strong leadership. Reviewing this time is necessary to think about Hitachi’s future at the latter part of my thesis.

Hitachi expanded its revenue during the early 2000s and reached its peak at JPY 11.2 trillion in FY 2007. However, it recorded a net deficit four times in FY 2001 and from 2009 to 2011. Going deeply by segments, Electronic Devices and Digital Media & Consumer Products recorded operating loss in some years. Electronic Devices recorded 164 billion JPY and 23 billion JPY operating loss in FY 2001 and 2002 respectively while Digital Media & Consumer Products had recorded operating loss since 2005. In 2003, Hitachi split off its large-scale integrated circuit business categorized as Electronic Devices by forming a JVC with Mitsubishi Electronic. Hitachi also formed JVCs in its core business. In 2007, Hitachi and General Electric announced that they had established JVCs so as to integrate their nuclear power business.

From April 2009, Takashi Kawamura took the role as Chairman, President and Chief Executive Officer. He defined himself as the “Last Man,” who was the final decision maker and had total responsibility for the decisions. To make the company resurge, he decided on an organizational restructure and a review of business portfolio.

Company was set in April 2010. This aimed to further clarify In-house companies’ responsibility and authority. Specifically, In-house companies were regarded as virtual companies inside Hitachi, Ltd. with the same independence and responsiveness as Group companies. Each In-house company had its CEO, who was the last man of the business. He had to make the final decision of the business strategy and explain it clearly in front of investors. Before adopting this system, unprofitable businesses were compensated by other profitable units and had less sense of risk and responsibility. CEOs of the In-house companies had responsibility to manage its business both operationally and financially. This enabled Hitachi as a whole to make quick actions and recognition of the business ownership.

Hitachi’s worst financial results came mainly from the flat panel display, automotive and semiconductor businesses. It withdrew these businesses by splitting them off and transferring holding shares. For instance, IPS Alpha Technology, Ltd., originally Hitachi’s wholly consolidated company which manufactured large size LCD panels, was transferred to Panasonic and renamed Panasonic Liquid Crystal Display Co., Ltd. Renesas Technology Corp was integrated with NEC Electronics Corporation as Renesas Electronics Corporation, in which Hitachi owns only a 5.55% share as of June 30, 2017.

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>October, 2007</td>
<td>Withdraw from consumer PC business</td>
</tr>
<tr>
<td>July, 2009</td>
<td>Split off Consumer Business Group and Automotive Systems Group and establish new wholly owned subsidiaries</td>
</tr>
<tr>
<td>July, 2009</td>
<td>Transfer manufacturing facilities and plant of Hitachi Plasma Display Limited</td>
</tr>
</tbody>
</table>
April, 2010 | Integrate business operation at Renesas Technology Corp and NEC Electronics Corporation.  
June, 2010 | Transfer IPS Alpha Technology, Ltd.  
June, 2010 | Integrate mobile phone business with NEC

Source: Hitachi IR  
Table: created by Thesis author

While splitting off the unprofitable businesses, it strengthened its core business, which is Social Innovation Business. In early 2010, five listed subsidiaries became wholly owned subsidiaries of Hitachi Ltd. This was not only to keep subsidiaries’ incomes in Hitachi Group but also to prepare for further restructuring for Social Innovation Business. Hitachi Software Engineering Co., Ltd. and Hitachi Systems & Services, Ltd. merged to form Hitachi Solutions, Ltd. in October 2010. Also, Hitachi Information Systems, Ltd. merged with Hitachi Electronics Services Co., Ltd and renamed itself Hitachi Systems, Ltd. in October 2011. Through these measures, Hitachi has strengthened its business structure by concentrating management resources with Information & Telecommunication Systems Company, to respond to changes in the IT environment and the diversification of customer needs.

In addition, Hitachi, Ltd. conducted an absorption-type merger of Hitachi Plant Technologies, Ltd. in April 2013. This was to promote the integrated management in Hitachi’s infrastructure systems business with Industrial & Social Infrastructure Systems Company, Information & Control Systems Company. An exception is Hitachi Maxell, Ltd., which was expected to expand the Lithium-ion batteries business that was essential to accelerate development of social and industrial system applications with the Group’s collective strengths. However, Battery Systems Company was abolished in 2012. Hitachi Maxell’s stock was sold in
public or transferred step by step, and as a result it became a non-consolidated company, renamed Maxell Holdings, Ltd. in October 2017.

Table 2-2. Hitachi Portfolio Realignment by Absorption

<table>
<thead>
<tr>
<th>March, 2009</th>
<th>Converted Hitachi Koki Co., Ltd. and Hitachi Kokusai Electric Inc. into consolidated subsidiaries</th>
</tr>
</thead>
</table>
| February - April 2010 | Made five listed subsidiaries wholly owned subsidiaries through public tender offers  
- Hitachi Information Systems, Ltd.  
- Hitachi Software Engineering Co., Ltd.  
- Hitachi Systems & Services, Ltd.  
- Hitachi Plant Technologies, Ltd.  
- Hitachi Maxell, Ltd. |

Source: Hitachi IR  
Table: created by Thesis author

Through these large-scale reforms, Hitachi improved its financial foundation and performance rapidly. Only two years after the financial crisis, FY 2010 recorded a net profit 238.8 billion JPY. As for the operating profit, it also hit a record 532.8 billion JPY in FY 2013. At the same time, Kawamura resigned his role as chairman as of March 31, 2014. He had achieved Hitachi’s revival just after a financial crisis. Further growth strategy was put into Mr. Hiroaki Nakanishi’s hands.

Nakanishi took the chair of President in April 2010 and initiated investment into core businesses in two ways: M&A and alliances. He sold Hitachi Global Storage Technologies (HGST), a wholly owned subsidiary, and obtained $3.9 million in cash and 25 million shares of transferee’s common stock valued at $0.9 billion. This amount is the biggest deal in Hitachi’s
history. The transaction was executed for two important reasons. First, Hitachi got a large amount of cash to invest in other areas. Following the transaction, Hitachi acquired several companies in Infrastructure and Information industries. One of them was a pair of Italian rail system companies, for which Hitachi paid the largest amount in its M&A history. Secondly, Nakanishi clearly delivered the message that Hitachi would cease non-core business even it was profitable. HGST recorded $5,773 million revenue and $464 million operating income. In addition, demand for HGST’s product was expected to grow in the Big Data era. However, Hitachi exited from this business making use of the past experience in personal computers and flat panel display TVs which had become commodity products that were less cost competitive.

Table 2-3. Hitachi Portfolio Realignment for Business Strengthening

<table>
<thead>
<tr>
<th>Month, Year</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>March, 2012</td>
<td>Transfer HDD business (Transfer price: $3.9 billion in cash)</td>
</tr>
<tr>
<td>November, 2012</td>
<td>Acquire Horizon Nuclear Power Limited in UK, planning to build nuclear power plants in UK (88.9 Billion JPY)</td>
</tr>
<tr>
<td>February, 2015</td>
<td>Acquire Ansaldo Breda S.p.A. (Euro 36 million), and Ansaldo STS S.p.A. (Euro 773 million) in Italy to strengthen its rail business</td>
</tr>
<tr>
<td>February, 2015</td>
<td>Acquire Pentaho Corporation, leading big data integration and business analytics</td>
</tr>
</tbody>
</table>

Source: Hitachi IR
Table: created by Thesis author

Nakanishi tried to develop the core business by not only M&A but also alliances. The establishment of a Joint Venture Company (JVC) was not new, but he executed this in a bolder way. If he evaluated it as necessary to expand the business, partnership with existing competitors and JVCs with minority stock would be acceptable. For example, the thermal
power generation business was one of its core businesses but Hitachi decided to integrate with Mitsubishi, a strong competitor of the industry. Moreover, Hitachi was the minority stock holder in the new JVC. This means that the JVC was under the control of Mitsubishi and was not Hitachi’s consolidated company.

Table 2-4. Hitachi Alliance with External Partners

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>January, 2014</strong></td>
<td>Set up JVC with Mitsubishi Heavy Industries for Thermal Power</td>
</tr>
<tr>
<td></td>
<td>Generation Systems business (Hitachi owns 35% minority stock)</td>
</tr>
<tr>
<td><strong>October, 2015</strong></td>
<td>Set up JVC with Johnson Controls for Air-conditioning systems</td>
</tr>
<tr>
<td></td>
<td>business (Hitachi owns 40% minority stock)</td>
</tr>
<tr>
<td><strong>November, 2015</strong></td>
<td>Set up JVC with ABB for High-Voltage DC power transmission</td>
</tr>
<tr>
<td></td>
<td>(Hitachi owns 51% majority stock)</td>
</tr>
</tbody>
</table>

Source: Hitachi IR
Table: created by Thesis author

As a result, Hitachi realized a stable increase in profitability. In April 2016, Nakanishi transferred the CEO role to Toshiaki Higashihara who had been president and COO since 2014. As Nakanishi did for HGST in 2012, he split off several group companies. None of them recorded deficits in those days, but Higashihara evaluated them as companies that would not create synergy with Social Innovation Business.
Table 2-5. Hitachi Portfolio Realignment by Higashihara

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May, 2016</td>
<td>Transfer of common stocks of Hitachi Transport System, Ltd. HTS changed to Hitachi's equity method subsidiary (30% ownership)</td>
</tr>
<tr>
<td>October, 2016</td>
<td>Transfer of common stocks of Hitachi Capital Corporation. Capital changed to be Hitachi’s equity method subsidiary (33.4% ownership)</td>
</tr>
<tr>
<td>March, 2017</td>
<td>Transfer of all shares of common stock of Hitachi Koki Co., Ltd. Koki ceased to be consolidated subsidiary of Hitachi</td>
</tr>
<tr>
<td>March, 2017</td>
<td>Transfer of common stock share of Hitachi Maxell, Ltd. Maxell ceased to be an equity method company of Hitachi (14.62% ownership). Announcement to additional transfer in November 2017. (decrease to 3.01% ownership)</td>
</tr>
<tr>
<td>April, 2017</td>
<td>Announced transfer of all share of common stock of Hitachi Kokusai Electric Inc. HKE ceased to be an equity method company of Hitachi.</td>
</tr>
</tbody>
</table>

Source: Hitachi IR
Table: created by Thesis author


Higashihara renewed Hitachi’s organizational structure, which was effective from April 2016. The In-house company system introduced in 2009 encouraged each manager to demonstrate responsibility, authority and autonomy. The system also realized rapid decision-making, which allowed Hitachi to achieve recovery. This structure helped to overcome the management crisis, but led each business to become a silo, which made it difficult to create

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7 http://www.hitachi.com/New/cnews/month/2016/02/160203a.html
synergy across the businesses. A new organization was designed to build a business structure with strengthened front-line functions to accelerate collaborative creation with customers. Twelve front business units (BU) were established under four markets: Power/Energy, Manufacturing/Water, Urban Development and Finance/Public/Healthcare. Each front BU in the same market can collaborate with the others for customer service. Other than the front BUs, the Service & Platform BU was also established to develop a platform for the front BUs. Because products were also a factor for the SIB, the Industrial Products BU selects and supplies innovative and globally competitive products to other BUs or customers.

Figure 2-1. Hitachi’s Organizational Structure (Left: until March 2016 Right: from April 2016)
Source: Hitachi Press Release

Summarizing the above strategies, three presidents in this decade since the financial crisis executed restructuring in the following direction. Taking into consideration that Hitachi suffered from the huge crisis in 2008, it recovered rapidly and got on a growth trajectory. For Kawamura, it was promptness that was required the most after the huge loss. That is why he
restructured the business portfolio within the Group. Based on basic restructuring, Nakanishi executed further development by M&A and alliances with external partners. Higashihara decided on a group portfolio realignment to focus on its core business, which led some companies which were profitable but unrelated to the core business to exit from Hitachi Group.

Figure 2-2. Hitachi’s Restructuring and Financial Result Since 2007
Source: Hitachi IR Library
Graph: created by Thesis author
In this chapter, I examine new standardization movements in the US, Germany and Japan. Facing technical innovation and social problems, each country has tried to take initiative to establish new standards for the next generation. Due to the complexity of new technologies and problems, such movements are beyond the boundaries of the industry and require collaboration among academia, government and corporations. GE, Siemens and Hitachi play key roles in each association. A common feature is that each standard requires cutting edge technologies. That is why I first explain the technologies related to the standardization movements.

3.1 TECHNOLOGY TREND

In the early 2010s, Big Data became popular. Big data is a term that describes a large volume of data. However, Gartner defines this not as simply a large volume but with two other Vs: “high velocity and/or high-variety information assets that demand cost-effective, innovative forms of information processing that enable enhanced insight, decision making, and process automation.” As technologies have rapidly developed with digitalization, more data has been created through the operation. Accordingly, the speed of creation has increased. Furthermore, not only the business world but also private lives produce data, which increases its volume and

8 https://www.gartner.com/it-glossary/big-data
formats There are two reasons the term got so much attention at the time from a variety of industries: IoT and Artificial Intelligence

The Internet revolution led to information expansion in cyber space, and the Internet of Things (IoT) accelerates the trend. For example, industrial equipment with sensors transmits operation data. Smartphones measure heart rate, location and moving distance of users. Such information had always existed, but we could not find or recognize it. Now devices collect and visualize data as well as monitor and control it remotely. Though IoT gives us a huge amount of data, it seemed impossible to see and analyze all of it. Artificial Intelligence solves this problem.

By enhancing the capability of machine learning and deep learning, AI can analyze a huge amount of data to find patterns and rules among it. This is a breakthrough technology because AI can predict the future from past or real time information. A commercialized example of AI is a platform called Watson developed by IBM. “With Watson, you can conduct rigorous, domain-specific research faster, uncovering insights and new opportunities by combing through diverse data sources and extracting the information you find most important”, IBM explains.9

In short, IoT brings access to hidden and unstructured data. AI enables researchers to analyze Big Data for insights, which leads to better decision and strategic business transformation. Hitachi’s IoT platform “Lumada”, named from “Illuminate the data”, expresses this feature. Not only Hitachi, but other companies also launch such a solution to leverage their businesses. New business and disruptive innovation have been developed with IoT and AI, including but not limited to Autonomous Driving and Block Chain, as well as required cyber

9 https://www.ibm.com/watson/about/
security. These areas have been researched by many firms. In the next sections, I focus on the global trend, which tackles existing or near future problems with the new technologies.

### 3.2 GLOBAL MOVEMENT OF STANDARDIZATION

Now even developed countries have many social problems such as aging and urbanization, but new technologies have been developed that can solve these problems. From now on, I explain how the US, Germany and Japan try to solve their problems with new technologies.

#### 3.2.1 INDUSTRIAL INTERNET

In 2012, GE announced its strategy, industrial Internet. GE says that the world has experienced two waves of innovation over 200 years. The first wave is the Industrial Revolution and the other is the Internet Revolution. These innovations have set the foundation for the third wave, that is the Industrial Internet. Its concept is based on the new technologies such as IoT and Big Data analysis. GE has offered much infrastructure and industrial equipment for a long time. GE aims to collect and analyze operational data from this equipment, and utilize it for new businesses. In other words, intelligent machines and advanced analytical capability enable GE to commercialize the concept of the Industrial Internet. GE defined key sectors for the Industrial Internet as Aviation, Power, Healthcare, Rail and Oil & Gas. If the Industrial Internet achieves just one percent efficiency improvement, the results will be substantial. GE
estimates that in the commercial aviation industry alone, only one percent improvement in fuel savings would yield a savings of $30 billion over 15 years.\textsuperscript{10}

The motivation for GE to promote the Industrial Internet is to change itself from a manufacturing company to a service provider. It becomes difficult to differentiate hardware products so the manufacturing industry always faces cost competition, which leads to less profit for the manufacturer. Instead, GE puts emphasis on software to create new value for customers. In order to collect and manage a huge amount of data from operating machines in a secure way, GE invented Predix, its IoT platform. Industrial Internet Consortium, an open membership organization to accelerate the development of standardization, has more than 270 member companies. With these members, GE has made great efforts to standardize its

\textsuperscript{10} https://www.ge.com/docs/chapters/Industrial_Internet.pdf
Industrial Internet. As some of them develop their unique application on Predix, value delivered through Predix increases.

3.2.2 INDUSTRIE 4.0

Industrie 4.0 is a national strategic initiative from the German government through the Ministry of Education and Research, and the Ministry for Economic Affairs and Energy. The initiative explains that Industrie 4.0 is a fourth industrial system, following mechanization, mass production, and computer and automation. Industrie 4.0 was released in July 2014 as a part of German Cabinet’s High-Tech Strategy 2020. This strategy defined ten projects to drive digital manufacturing forward. Industrie 4.0 aims to secure Germany’s leading position in industrial manufacturing and to promote digital structural change. To be more specific, Industrie 4.0 supports the integration of cyber physical systems and IoT with an eye to enhancing productivity, efficiency and flexibility of production processes.\(^\text{11}\) It means that a factory with a capability of Industrie 4.0 can achieve mass customization throughout a flexible production line linked to the Internet.

Why did Germany start the initiative? The country traditionally has a strong manufacturing industry. A large portion of German GDP is made up of not only large companies such as Volkswagen, Daimler, Siemens and Bosch but also small and medium-sized enterprise called “Mittelstand.” Facing digitalization, the German government, industry and academia must collaborate to realize Industrie 4.0.

\(^{11}\) https://ec.europa.eu/growth/tools-databases/dem/monitor/sites/default/files/DTM_Industrie%204.0.pdf
3.2.3 SOCIETY 5.0

Society 5.0 was proposed and approved by the Japanese Cabinet in January 2016 in the fifth Science and Technology Basic Plan, which depicted a future society that Japan should aspire to. Society 5.0 was defined as “A human-centered society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space.” The number 5.0 represents that this society follows the paradigm shifts of human society (1.0), agricultural society (2.0), industrial society (3.0) and information society (4.0).

In the information society, cross-sectional sharing of knowledge and information was not enough, and cooperation was difficult. Society 5.0 will solve this issue by connecting all the people and things by IoT, sharing the information to create new value. AI will enable us to be provided necessary information. Robotics and autonomous driving will help solve the problems of an aging society, depopulation and differences between the rich and the poor. In other words, Society 5.0 achieves advanced convergence between cyberspace and physical space, enabling AI-based on big data and robots to perform, or support as an agent, the work and adjustments that humans have done up to now.
Compared to Industrial Internet and Industrie 4.0, Society 5.0 is not limited to the manufacturing industry. Moreover, it focuses on problem solving in society. Japan faces the most rapidly aging generation, leading to a variety of problems that other countries will also struggle with in the future. To be competitive in this field, the Japanese cabinet promotes the strategy to standardize internationally by accumulating knowledge.

3.3 GLOBAL COMPETITOR ANALYSIS

As explained, global players have been the center of the initiatives. Their purposes are to establish industrial platforms by leveraging digitalization. Because this transition will change the business model, each company promotes it by aligning its strategy. In the following sections, I analyze GE and Siemens as I did Toshiba and Mitsubishi.
3.3.1 BUSINESS STRATEGY

General Electric Company was formed in 1892 as a result of the integration of Edison General Electric Company and Thomson-Houston Company. It has been the world’s largest conglomerate company, but was changed to focus on digital industrial business by Jeffrey R. Immelt, the 9th Chairman of GE who served as CEO for 16 years until 2017. Being a digital industrial company means that GE refocuses on the manufacturing sector combining its digital capability. During Immelt’s tenure, GE’s business portfolio was reshaped, putting digitalization into the centerpiece of its strategy. In 2011, GE announced the opening of a new global center called GE Software in California to develop software for the Industrial Internet. This software would be developed as the platform, Predix, aiming for maximization of asset performance. In 2015, GE software, which belonged to a corporate global research center, was transformed to GE Digital, merging all GE’s digitalization development function. These activities are based on the assumption that IT vendors would access the manufacturing industry with data analytic capability, which would put manufacturers in a lower position. In August 2017, John Flannery succeeded Immelt, but he faced a big downturn. Flannery decided to make GE smaller and simpler. He emphasized focusing on industries of Power, Aviation and Healthcare.

On May 7, 2014, Siemens released its strategy “Vision 2020.” In this strategy, Siemens clearly defined three markets as its core sectors: Electrification, Automation and Digitalization. Siemens recognized the global megatrends globalization, urbanization, demographic change and climate change. By aligning its business with these trends, Siemens achieved long-term

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success. In Vision 2020, digital transformation was added as a new megatrend. As a key resource to compete in this megatrend, Siemens selected digital-twin software as growth field.

3.3.2 BUSINESS PORTFOLIO

After the financial crisis, GE reorganized its business portfolio by M&A and business transfers. Major portfolio changes since Immelt took chair are listed in Table 3-1. These transactions were in accordance with the transformation to the digital industrial company. The biggest impact was a transfer of GE Capital, which consisted of more than 30% of GE's total revenue. Immelt evaluated that the finance business was volatile and would not create synergy with the digital industrial business. On the other hand, GE completed the acquisition of Alstom’s power and grid businesses in November 2015 for 9.7 billion Euro. This was not only to strengthen its energy business, but also to expand its service business with Alstom’s installed base turbines.

Table 3-1. GE’s Major Portfolio Change Since 2001

<table>
<thead>
<tr>
<th>Investment</th>
<th>Dispositions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power &amp; Water</strong></td>
<td><strong>Media</strong></td>
</tr>
<tr>
<td>Alstom Gas turbines (2015)</td>
<td></td>
</tr>
<tr>
<td><strong>Oil &amp; Gas</strong></td>
<td><strong>Plastics, Silicones &amp; Security</strong></td>
</tr>
<tr>
<td>Velco Gray ($1.9bn, 2007)</td>
<td>Plastic business</td>
</tr>
<tr>
<td>Dresser ($3bn, 2011)</td>
<td>Silicones</td>
</tr>
<tr>
<td>Wood Group Well support ($2.8bn, 2011)</td>
<td></td>
</tr>
<tr>
<td>Wellstream ($1.3bn, 2011)</td>
<td>Security</td>
</tr>
<tr>
<td>Lufkin ($3.3bn, 2013)</td>
<td></td>
</tr>
<tr>
<td>Healthcare</td>
<td>Home Appliance</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Amersham ($9.5bn, 2003)</td>
<td>Sold to Haier</td>
</tr>
<tr>
<td>Instrumentarium ($2.4bn, 2004)</td>
<td></td>
</tr>
<tr>
<td>IDX (2006)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aviation</th>
<th>Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smiths Aerospace ($4.8bn, 2007)</td>
<td>Sold Reinsurance</td>
</tr>
<tr>
<td>Avio ($4.3bn, 2013)</td>
<td>Sold FGIC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy Management</th>
<th>Consumer Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converteam ($3.5bn, 2011)</td>
<td>Synchrony</td>
</tr>
<tr>
<td>Alstom's grid management (2015)</td>
<td></td>
</tr>
</tbody>
</table>

Source: GE Annual Report  
Table: edited by thesis writer

New CEO Flannery presented at his first investor update on November 13, 2017 that GE would jettison more than $20 billion worth of assets within the next two years. The lighting and transportation business were included in the list. In addition, to rebound Flannery declared that GE would focus on Power, Aviation and Healthcare industries. This restructuring will make GE’s revenue in FY2018 and FY2019 half of that in FY2007.

Figure 3-3. Transition of GE’s Business Portfolio  
Chart: created by Thesis author
For a decade, Siemens's business has been active mainly in industry, energy, healthcare and infrastructure as shown in Figure 3-4. To focus on these areas, Siemens sold non-core businesses. To name a few, automobile supplier business (agreed with Continental for 11.4 billion Euro in July 2007\(^{13}\)) and IT service (agreed with Atos in December 2010) were transferred. Siemens also completed a spin-off and listing of Osram, a wholly-owned subsidiary for lighting products. It had held the remaining 17% stock but sold all of it in October 2017.

\[76.5 \text{ Billion Euro} \quad 78.3 \text{ Billion Euro} \quad 87.4 \text{ Billion Euro}\]

\[\text{IT} \quad \text{Lighting} \quad \text{Building Tech}\]

\[\text{Osram (6%)} \quad \text{Transfer} \quad \text{IPPO}\]

\[\text{Transportation (6%)} \quad \text{Windturbine Gamesa}\]

\[\text{Building Tech (7%)} \quad \text{Gasturbine Rolls Royce}\]

\[\text{Medical Solutions (13%)} \quad \text{Siemens Gamesa} \quad \text{Renewable Energy (10)}\]

\[\text{Power Transmission & Distribution (10%)} \quad \text{Energy Management} \quad \text{(16)}\]

\[\text{Power Generation (16%)} \quad \text{Power & Gas} \quad \text{(15)}\]

\[\text{Industrial Solution & Services (12%)} \quad \text{Digital Factory} \quad \text{(13)}\]

\[\text{Automation & Drives (20%)} \quad \text{Process Industries & Drives (10)}\]

\[\text{FY2007} \quad \text{FY2012} \quad \text{FY2017}\]

**Figure 3-4. Transition of Siemens's Business Portfolio**

Chart: created by Thesis author

In addition, Joe Kaeser, who has chaired CEO since 2013, accelerated a review of the portfolio. As Vision 2020 says, Siemens has taken steps to create value for short, medium and

long term, by driving performance, strengthening core, and scaling up, respectively. For the first two, Kaeser decided to sell its business for water technologies, hospital information systems, hearing aids and home appliances. Siemens received more than 7 billion Euro by these four transactions. On the other hand, Siemens has acquired many software firms to realize a digital twin solution: merging digital and virtual production. Few of the purchase prices have been disclosed, but it must be huge: for instance, Siemens paid $3.5 billion for UGS acquisition only.

Major transactions appear in Table 3-2.

Table 3-2. Siemens’s Acquisition of Software Firms

<table>
<thead>
<tr>
<th>Date</th>
<th>Firm</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2007</td>
<td>UGS Corp</td>
<td>Product Lifecycle Management software and service</td>
</tr>
<tr>
<td>August 2008</td>
<td>Innotec GmbH</td>
<td>Digital engineering software and service</td>
</tr>
<tr>
<td>April 2009</td>
<td>Elan Software Systems SA</td>
<td>Manufacturing Execution Systems software</td>
</tr>
<tr>
<td>September 2011</td>
<td>Active SA</td>
<td>Manufacturing Execution Systems software</td>
</tr>
<tr>
<td>November 2011</td>
<td>Vistagy, Inc</td>
<td>Engineering software and service</td>
</tr>
<tr>
<td>October 2012</td>
<td>Kineo CAM</td>
<td>Computer-aided motion software</td>
</tr>
<tr>
<td>November 2012</td>
<td>LMS International NV</td>
<td>Test and mechatronic simulation software</td>
</tr>
<tr>
<td>June 2013</td>
<td>Preactor Group</td>
<td>Advanced Planning and Scheduling software</td>
</tr>
<tr>
<td>December 2013</td>
<td>TESIS PLMware</td>
<td>Product lifecycle management software</td>
</tr>
<tr>
<td>January 2016</td>
<td>CD-adapco</td>
<td>Engineering simulation software</td>
</tr>
<tr>
<td>November 2016</td>
<td>Mentor Graphics Corporation</td>
<td>Automation and industrial software</td>
</tr>
<tr>
<td>August 2017</td>
<td>TASS International</td>
<td>Simulation software aimed at the automotive industry</td>
</tr>
<tr>
<td>September 2017</td>
<td>Infolytica</td>
<td>Electromagnetics simulation software</td>
</tr>
</tbody>
</table>

Source: Siemens Press Release
Table: Created by Thesis author

By reshaping its portfolio, Siemens focuses on Industry, Energy, Healthcare and Infrastructure. However, Siemens does not keep its cores inside. In September 2017, Siemens
and Alstom agreed to combine Siemens’s mobility business with Alstom. The integration is expected to close at the end of 2018; Siemens will own 50% stock of the new entity. In March 2018, Siemens raised 4.2 billion Euro from the initial public offering of 15% of its healthcare unit. Michael Sen, Chairman of Siemens Healthineers AG, explained that the “goal is to grow sustainably and profitably while actively shaping the paradigm shift in the healthcare industry.” Through evaluating the healthcare business as a core business, Siemens thought an IPO would enable collaboration with external partners in rapidly changing circumstances.

Both GE and Siemens have strengthened their core businesses by M&A as well as by selling non-core businesses. They have reconstructed more quickly and boldly than Hitachi. The deal amount of the acquisitions and sales by GE is huge. Siemens acquired many software companies to strengthen its digital capability.

3.3.3 Financial Performance

As a consequence of these business transformations, the financial performance has changed. Figure 3-5 shows the revenue trend of GE, Siemens and Hitachi since FY 2007. As for GE, its finance business had been a large business for its total revenue and profit but was split off in 2015. I distinguish GE’s data into two versions: with and without the finance business.

---

Since the financial crisis, Hitachi and GE with the financial business have not recovered yet. On the other hand, Siemens has steadily increased revenue. Taking into consideration that Siemens sold several non-core businesses and acquired software companies, such transformation effectively encourages its revenue scale. GE without the financial business has also expanded. GE seems to be succeeding in the current core business.
As discussed in Chapter 1, Hitachi has caught up with its domestic competitors. In the global market, however, GE and Siemens are always far beyond Hitachi. A notable point is that Siemens increases both revenue and profit at the same time. While Siemens has improved its earnings for a decade, GE’s operating profit without the volatile financial business had been stable but has declined for a few years due to falling global demand for gas turbines. As a countermeasure, in December 2017, GE announced that it would cut 12,000 jobs from its power division. In addition, GE now plans to sell several businesses that account for $20 billion.

This difficult situation is the same for Siemens, but its profit ratio has not fallen. There are two reasons. The first reason is that Siemens’s FY 2017 ended in September 2017. Because the demand for gas turbines fell rapidly at the end of 2017, Siemens was not affected more heavily by the downturn than GE for which FY 2017 covers the whole year. The more important reason is that Siemens has realized a well-balanced business portfolio as shown in Figure 3-4.

Siemens’s revenue comes from eight segments ranging from 8% to 16% composition ratio. GE, on the other hand, depends on its energy business more highly. More than half of its revenue comes from energy businesses totally including power.

3.4 DECISION MODEL

The business portfolio is a part of the results of the decisions made by the companies. Allison (1971) explained three models by which decisions are made in different ways: the rational actor model (Model 1), organizational process model (Model 2) and governmental politics model (Model 3). Utilizing these models, I evaluate why Hitachi has fallen behind GE
and Siemens with an example of its home electronics business, which I was in charge of from 2004 to 2008.

### Table 3-3. Hitachi’s Strategy by Corporate and Consumer Business Division

<table>
<thead>
<tr>
<th>Year</th>
<th>Planned by</th>
<th>Strategy/Policy</th>
</tr>
</thead>
</table>
| 2003 | Corporate | “i.e. HitACHI Plan II” (January)\(^{15}\)  
- Goal in FY2005  
  1. Net sales: 8 trillion JPY level  
  2. Operating margin: At least 5\%  
  3. ROE: At least 8\%  
- Key initiative: Realized a highly profitable earnings structure through business portfolio realignment |
| 2004 | Corporate | “Progress on the “i.e. HITACHI Plan II” (February 4)\(^{16}\)  
- Forecast in FY2005  
  1. Net sales: 9 trillion JPY level  
  2. Operating Income: More than 400 billion JPY (= 4.4%) |
|      | UPS       | “The Consumer Business Moving Forward” (July 14)\(^{17}\)  
- Sales target: 2 trillion JPY in FY2010 |
| 2005 | UPS       | “Hitachi’s Flat-panel TV Business Strategy” (December 20)\(^{18}\)  
- Business targets  
  1. FY2006/2\(^{nd}\) half: Return to profitability  
  2. FY2008: Capture leading global share in Plasma High-definition TVs (30\%), Win 7\% share of global market for LCD TVs |
| 2006 | Corporate | “Hitachi Corporate Strategy: Establishment of Stable, High Profit Structure” (November 16)\(^{19}\)  
- Goal: Establishment of stable, high profit structure  
- Key Initiatives  
  1. High profitability through rigorously FIV-based management (Restructuring and reappraisal, with no area sacrosanct)  
  2. Building of stable, high profit structure  
  3. Evolution to group management for high profitability |

<table>
<thead>
<tr>
<th>Year</th>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
</table>
| 2007 | CBG   | "Hitachi’s Flat-panel TV Business Strategy" (April 18)\(^{20}\)  
- Stabilizing earnings in flat-panel TV business with optimal business  portfolio mix in terms of products/regions centered on plasma TVs  
- Targeting 20% market share for plasma TVs in FY2010 |
| 2008 | CBG   | "Hitachi’s Flat-panel TV Business Strategy" (February 8)\(^{21}\)  
- Return to positive FIV in Digital Media & Consumer Products by  developing value-added products, ensuring cost savings outstrip sales  price falls and strengthening cost competitiveness |
| 2009 | Corporate | Announcement of business structural reforms by splitting-CBG |

Source: Hitachi Press Release, IR  
Table: Created by Thesis author  
\*FIV (Future Inspiration Value): Hitachi’s economic value-added evaluation index in which the cost of capital is deducted from after-tax operating profit.  
\*CBG: Consumer Business Group  
UPS: Ubiquitous Platform Systems

Table 3-3 shows the history of Hitachi’s corporate and consumer business strategies from 2003 to 2009. In accordance with “i.e. HITACHI Plan II,” a medium-term management plan published in January 2003 toward FY 2005, realigning the business portfolio to improve profitability was Hitachi’s key policy. In 2004, Hitachi established a Consumer Business Strategy Division led by Etsuhiko Shoyama, who was, at the same time, president and CEO. In 2006, after the management plan, Hitachi announced its new corporate strategy, declaring that it targeted 5% operating income ratio in FY 2009 by restructuring and reappraising its business portfolio without any area being sacrosanct. The financial results before and after this plan appear in Figure 3-7. From 2002 to 2004, Hitachi’s consumer business performed worse than its total average for the operating income ratio. Moreover, it recorded net deficit for four successive years since 2005.

Operating Income (Digital Media & Consumer Products)
Operating Income Ratio (Total)
Operating Income Ratio (Digital Media & Consumer Products)

Figure 3-7. Financial Result of Hitachi’s Consumer Business
Source: Hitachi IR (Financial Results)
Graph: created by Thesis author

Analyzing this example with Model 1, we cannot find a reasonable explanation why Hitachi had not reformed fundamentally or split its consumer business until July 2009. Hitachi decided that it would improve profitability by any method while the consumer business had recorded net debt in 5 years since FY 2001 and less profit ratio until FY 2009. Thinking rationally, Hitachi should have made a value-maximizing choice. To understand this contradiction, Allison offers the other two models.

Hitachi’s mid-term target toward FY 2009 was to achieve 5% operating income ratio. However, we cannot find any such goal in “Hitachi’s Flat-panel TV Business Strategy” announced in April 2007. As for the financial target, the announcement said the business would achieve positive operating income in FY 2007, but it did not touch on any further financial goals or strategies. This gap can be solved with Allison’s Model 2. Companies consist of internal semi-feudal, loosely allied organizations, which have different operating procedures, rules and
cultures. The consumer business has unique features compared with Hitachi’s B2B businesses. Reflecting my experiences in the Flat Panel TV sector, we first estimated the future market size, defined our target market share and sales unit volume accordingly. Finally, the target cost of products was calculated. Throughout this process, we seldom discussed operating income targets, but figured out whether our business would earn a profit. As a result of looking at this example through the Model 2 lens, we come up with a new view of Hitachi’s inconsistent strategy.

The Model 3 brings a different view. Shoyama had been president and CEO of Hitachi from 1999 until 2006, and chairman from 2006 to 2009. Before becoming a president, he had been in charge of the consumer business. Additionally, during his tenure as president, he had the additional post as general manager of the Consumer Business Strategy Division. Shoyama had to rebuild consumer business as a person in charge while he was also responsible for all Hitachi’s businesses at the same time. The CEO’s concurrent duties in a specific business domain seem to have made it difficult for other members of management to evaluate his future prospects and judge his strategy objectively.

Internal members dominate the majority of the board in this period, as shown in Table 3-3. Under this structure, Hitachi could not acquire external information and insights. Furthermore, Hitachi had a practice to make decisions with the agreement of many members of management and retirees. (Koitabashi 2014), which process took a longer time that was called “Hitachi Time.” This corporate culture seems to have prevented management from prompt
decision-making and execution. As a result, though the performance had slumped for several years, the consumer business had stayed inside Hitachi until July 2009.

Table 3-4. Hitachi's Board of Directors

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Directors</th>
<th>External</th>
<th>Internal</th>
<th>Non-Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003*</td>
<td>13</td>
<td>4</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>14</td>
<td>4</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>14</td>
<td>4</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>2006</td>
<td>14</td>
<td>4</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>13</td>
<td>5</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>2008</td>
<td>13</td>
<td>5</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>12</td>
<td>5</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>12</td>
<td>5</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>13</td>
<td>4</td>
<td>9</td>
<td>1</td>
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<tr>
<td>2012</td>
<td>13</td>
<td>7</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>2013</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>2014</td>
<td>12</td>
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<td>5</td>
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<td>2015</td>
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<td>2016</td>
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<td>9</td>
<td>4</td>
<td>5</td>
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<tr>
<td>2017</td>
<td>13</td>
<td>9</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2018*</td>
<td>12</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Hitachi Press Release
Table: Created by Thesis author
Note: In 2003, Hitachi adopted the Committee System under Japanese Law. The numbers in 2018 means candidates. They will be proposed at the annual general meeting of shareholders in June 2018.

While Hitachi suffered from suboptimal portfolio design, global players promoted their reforms. As shown in Figure 3-4, Siemens, for example, defined its core businesses before the financial crisis, and acquired companies as written in Table 3-2 to focus on them. Allison's Model analysis needs internal and non-disclosed information, but using Model 3, I will study what made the difference in the process of business realignment between Hitachi and Siemens.
First, I cast a spotlight on the management for the analysis. Between 2007 and 2012, Siemens sold its Lighting and IT solution business consisting of 13% of its total revenue while it started acquiring software firms. During this period, Peter Löscher had become CEO and President. There are two reasons why he could carry out the significant reform. First, while the past CEOs at Siemens had been promoted internally, Löscher was president of Global Human Health, Merck & Co. Inc before becoming the top of Siemens. This background enabled him to plan and execute business strategies free from any internal constraints. Second, its stakeholders expected Löscher to promote drastic business reform because Siemens had struggled with business difficulties. To sustain the German conglomerate which hold hundreds of thousands of employees, rapid and drastic decision-making was required.

Löscher's case is similar to Kawamura's in 2009. Kawamura achieved Hitachi's dramatic recovery as explained in Chapter 2. He retired from Hitachi, Ltd. in 2003, and was chairman of Hitachi Maxell before becoming CEO of Hitachi, Ltd. In other word, like Löscher, Kawamura came from outside of Hitachi. As soon as he became CEO & president of Hitachi, Kawamura defined a "100 day plan" in which he and five executive vice presidents made important decisions. Before 2009, there had been more than ten executive officers involved in decisions so that management needed "Hitachi Time" to plan and execute their strategies. On the other hand, a difference was that Löscher took the top position two years earlier than Kawamura, which enabled Siemens to manage the financial crisis in 2008 better than Hitachi.

In Model 3, other stakeholders should be taken into consideration for the decision-making process. In Germany, labor unions have strong power so employers are threatened by possible strikes. For example, in January 2018, IG Metall, a German Union, called for all-day walkouts by industrial workers across the country, which would affect the production of cars.\(^2\)

In February 2015, Siemens announced the reduction of 7,800 jobs, and in May 2015,\(^2\) that an additional 4,500 jobs would be cut. In a recent case, Siemens plans to cut 6,900 jobs in its power and gas division.\(^2\) Such reorganization would strongly affect employees and be difficult to execute.

Siemens had to change its plan of cutting jobs from 7,800 to 7,400 after discussions with the employee representatives. Siemens still has risks that it cannot achieve its planned reorganization due to the labor union.

In Chapter 1, I concluded that Mitsubishi was adept at finding its strength. It selected its non-core business earlier than other domestic players, and has held its core business only. However, it has not invested much in the core business. As a result, the amount of revenue and its breakdown by business domains has kept stable—in other words, no growth. The differences between Mitsubishi and global players are that (1) GE and Siemens have always reorganized their business portfolio even if they have earned profits, and (2) they achieved revenue growth in their current core businesses. Siemens, for example, realized revenue expansion in its


important sectors: Industry, Energy, Healthcare and Infrastructure. Now, Siemens does not
have any other businesses at all. While it sold its other businesses, it acquired many companies
in its four core domains. In the case of Mitsubishi, it does not seem to have executed constant
self-evaluation or been equipped for bold and prompt decision-making systems like Siemens.

From Hitachi’s point of view, Hitachi recovered from the financial crisis and has
structured a healthy portfolio. Hitachi is a champion at the National Athlete Meet, but cannot
be in the Olympic Games. The gaps of the profits have widened among Siemens, GE and
Hitachi. To be a global player, Hitachi still has margins to improve its operation. In the following
chapters, I point out major challenges Hitachi faces, and propose solutions for them.
CHAPTER 4
HITACHI’S CHALLENGE (1): STRATEGY

4-1. PRINCIPAL OF STRATEGY

The meaning of strategy differs among people, but based on my experiences and learnings, Rumelt and Porter depict the core and essence of strategy. Rumelt (2011) explained that the core of strategy is a choice. A good strategy “pushes resources toward some ends and away from others.” Conglomerate companies often miss this lesson. They engage in a wide range of products and services ranging from home appliances to power plants. Such companies used to be admired for their large business scope, but they could not maintain themselves as all-around companies. As I described in Chapter 3, multi-market corporations have pursued selection and concentration of their businesses. This work was indispensable especially in financial difficulties to gain a global competitive advantage. Without any selection, a company will become a simple aggregation of unrelated businesses that cannot create any synergy, causing an inefficient business portfolio.

In addition, Porter (1996) mentioned another point that “[c]ompetitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value.” This is because best practices can be easily imitated by competitors. If a company differentiates itself by cost, best practices enabling low cost production will diffuse rapidly. As a result, the competition will fall into cost reduction and no companies will win.
This risk has increased by digitalization, in which manufacturing itself cannot be a
differentiation factor. To give an example, I was in charge of the sales planning of Flat Panel
Display TVs until 2007. In those days, the FPD TV business had grown rapidly by replacing old
boxed-shape TVs. Analogue TVs with high picture quality were difficult for mass production.
Japanese manufacturers realized high performance TVs and held large market share. However,
an FPD TV is not only flat, but also digitalized, and manufacturers can realize improved picture
quality easily. In this new market, Japanese brands lost their unique strengths and fell into cost
competition. To exit from such attrition, a company should realize its unique value to make
itself different from competitors. This is one aspect of strategy.

4-2. IS SOCIAL INNOVATION BUSINESS A STRATEGY?

Hitachi defines the Social Innovation Business as its core. SIB appeared for the first time
in its Annual Report 2008 (year ending March 31, 2008). Since the financial crisis in 2008,
Hitachi has announced mid-term management plans every three years. In these plans, the
definition of SIB has changed as shown in Table 4-1. While the descriptions of SIB differ from
one another, common points are that SIB needs a combination of OT, IT and products, and
delivers solutions to customer.
### Table 4-1. Definitions and Images of Social Innovation Business

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 Mid-term Mgmt Plan</td>
<td>Made up of fusion of social infrastructure and IT, and materials and key devices</td>
</tr>
<tr>
<td>2015 Mid-term Mgmt Plan</td>
<td>Identify issues from customer perspectives and work on solutions together with customers, as &quot;One Hitachi&quot;. Realize innovations by providing solutions that combine products, services, and highly sophisticated IT (Cloud)</td>
</tr>
<tr>
<td>2018 Mid-term Mgmt Plan</td>
<td>Deliver innovations to customers and society through fusion of OT, IT, and products/systems</td>
</tr>
</tbody>
</table>

#### Priority Areas

<table>
<thead>
<tr>
<th>Social Innovation Business</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Infrastructure Business</strong></td>
</tr>
<tr>
<td>Power Systems</td>
</tr>
<tr>
<td>Railway Systems</td>
</tr>
<tr>
<td>Government Systems</td>
</tr>
<tr>
<td><strong>Industrial Infrastructure Business</strong></td>
</tr>
<tr>
<td>Automotive Equipment</td>
</tr>
<tr>
<td>Urban Systems</td>
</tr>
<tr>
<td>Industrial Systems</td>
</tr>
<tr>
<td>Financial Systems</td>
</tr>
<tr>
<td><strong>Life Infrastructure Business</strong></td>
</tr>
<tr>
<td>Health Care</td>
</tr>
<tr>
<td><strong>Information Infrastructure Business</strong></td>
</tr>
<tr>
<td>IT Platforms</td>
</tr>
<tr>
<td>System Solutions</td>
</tr>
</tbody>
</table>

#### Annual Report 2008

- **Social Innovation Business**
  - Identify issues from customer perspectives and work on solutions together with customers, as "One Hitachi".
  - Realize innovations by providing solutions that combine products, services, and highly sophisticated IT (Cloud).

#### 2012 Mid-term Management Plan

- **Social Innovation Business**
  - Industrial transportation and urban development systems
  - Energy (Thermal, nuclear, renewable)
  - Information and Telecommunication systems
  - Power systems
  - Consulting
  - Data centers
  - Green mobility
  - Elevators and escalators machinery
  - Cloud computing

#### 2015 Mid-term Management Plan

- **Social Innovation Business**
  - Deliver solution to our customers from maintenance operation and outsourcing to management support
  - Create solution through analysis and evaluation of collected data using cutting-edge IT
  - Provide base of solution with broader systems expertise and technologies

#### 2018 Mid-term Management Plan

- **Social Innovation Business**
  - Materials and key devices


Table created by Thesis author

In the Annual Report 2008, SIB was defined as one of Hitachi's key business domains, and the other was Infrastructure Technology/Products. However, this strategy covered almost all
Hitachi’s businesses so that we could not call it a strategy. A strategy should not be such a general statement, as explained above. Rumelt (2011) says “(a) good strategy has coherence, coordinating actions, policies and resources so as to accomplish an important end.” Most companies do not have enough resources to focus on many business domains. If they aim at multiple targets that are not connected with one another, their investments will be completely scattered and become smaller and less effective than other companies’. The definition of SIB now has become simpler than the one in 2008, but it is still unclear and can cover anything and everything. “Deliver innovation” sounds great to customers and employees, but we cannot figure out from the statement what Hitachi can do and what we have to do for customers. A strategy should be more directive.

One more concern on this point is Hitachi’s relationship with Society 5.0. In January 2016, just after the Japanese Cabinet approved Society 5.0, Nakanishi explained the SIB in alignment with it at the World Economic Forum Annual Meeting at Davos, Switzerland. He expressed Hitachi’s plan to play a central role in establishing Society 5.0. Since then, Hitachi has expressed that SIB can contribute to the realization of Society 5.0. Japan faces numerous social problems and other countries are expected to do the same in the future. If Hitachi can solve them by SIB, Hitachi can obtain great benefits. However, Hitachi should understand the risks. First of all, as explained in Chapter 3, Society 5.0 is designed to cover many areas across the society. Hitachi should not provide solutions to the whole. Otherwise, its strategy will again expand its range and become less effective. A good strategy works by focusing energy and resources on one, or a very few, pivotal objectives. Second, solutions in Society 5.0 should not be too specific or highly
developed. Society 5.0 is a strategic policy of the Japanese government to enhance Japan's growth potential. As a developed country facing challenges, the government expects to develop solutions for them, and export them in the future. Hitachi has a capability of developing them, and wants to expand its overseas revenue because it is dependent on the domestic market as shown in Figure 4-1. In this regard, the solution should be flexibly designed in order to be easily transferred to other countries. For example, Japanese companies have struggled with the problem called Galapagosization. This word, which means that if solutions are customized or optimized in isolated area, they will be behind the global standard, and become difficult to sell to customers outside of the isolated area. NTT Docomo's iMode, the world's first internet service for mobile phones which was available in Japan only, realized high performance, but was too specific to the Japanese market to be expanded to the overseas market. Packing many functions into the solution will lose flexibility as well as reasonable introduction cost.

Figure 4-1 Revenue by Region in FY2017 (Hitachi, GE and Siemens)

Source: Annual Report, Hitachi Consolidated Financial Results for Fiscal 2017
Chart: created by Thesis author
4-3. HITACHI’S CORE BUSINESS DOMAINS

Hitachi has to manifest and narrow down the coverage of its SIB to concentrate on its resources as well as its contribution in Society 5.0. Hitachi accelerates collaborative creation with customers through SIB, but Hitachi should keep in mind what Porter, Takeuchi and Sakakibara wrote (2000). “Although customer attentiveness is a strength, Japanese executives have bought into the notion that every customer need is equally valid. The tendency, therefore, is to respond to any need expressed by any customer,” but “the essence of strategy is choosing which customers to serve and which of their needs to address.” SIB engages with various social problems, but Hitachi should align its activities to unique needs of its chosen customers to realize their profits.

In addition, Hitachi should narrow down its scope due to the recent global landscape of M&A. We have seen some mega M&A deals. In November 2015, GE announced that it had completed its acquisition of Alstom’s power and grid businesses. GE paid $10.6 billion for this transaction, its largest-ever industrial acquisition. In the rail sector, Siemens and Alstom announced in September 2017 that they had signed the Memorandum of Understanding to combine mobility business. The estimated revenue of this integration will be 15.3 billion Euro. Adding Bombardier, these three companies are collectively called the Big 3 in the industry. However, China’s state-owned CRRC Corp Ltd, established in 2015 by integrating two domestic companies, has $35 billion in annual revenue, bigger than the Big 3’s rail revenues combined.

CRRC had previously focused on the huge domestic market, but had won some overseas projects. The business integration of Siemens and Alstom is to counter CRRC.

Hitachi now identifies the energy and rail sectors as its core businesses as shown in Figure 4-2. Comparing with the deals, Hitachi has never executed a large-scale M&A (the largest record is to acquire Ansaldo Group by 800 million Euro). Hitachi is still behind in the operating profit ratio, meaning it has less cash in hand and less credibility against lenders than GE and Siemens. Moreover, Hitachi has less Investment capability than competitors. Hitachi has allocated 1 trillion JPY for M&A until the end of FY 2018, but its impact is small if Hitachi focuses on multiple domains. To expand SIB, Hitachi needs to obtain necessary technical capability but also customer bases to access them and understand their problems. M&A is one method to seize them in a relatively short term.

Figure 4-2. Hitachi’s Focus Areas

Source: Hitachi 2018 Mid-term Management Plan
Then, which area(s) should Hitachi focus on? Rumelt says (2011) that strategy is at least as much about what a company does not do as it is about what it does. Judging from business opportunities by global megatrend, and technology movement with Hitachi's capability, prospective markets seem to be Industry and Rail.

Industrial Internet and Industrie 4.0 have become an overwhelming global shift to combine IoT with manufacturing. Because the value of manufacturing will decrease through the total value chain by digitalization, all the manufacturers have to enhance their new capability toward the megatrend. Chapter 2 shows Hitachi's long history in the manufacturing industry. Hitachi not only provides equipment to factories, but also operates manufacturing facilities. In this sector, Hitachi possesses both customer base and know-how of operation.

Hitachi also has a capability to solve social problems. For instance, Hitachi has a wide line-up of rolling stocks such as Shinkansen, commuter train, metro and monorail as well as of signaling systems. The proportion of people living in cities is expected to increase globally. Urbanization has several negative impacts, such as air pollution, crime and lack of jobs to name but a few. Under this condition, more mobility solutions will be required. Currently, the urban transportation system solves many problems occurring in dense population areas. IoT will help rail operators to improve their operation and asset management by reducing downtime. Among four SIB domains, Hitachi does not have any major products or services that hold global top market share. In addition, Hitachi's business spreads across many areas. By limiting the target areas, Hitachi should invest in them to become a major global major.
Whatever Hitachi chooses for its target segment(s), deciding itself is not a strategy. A strategy has to contain required actions, and Rumelt (2011) states the kernel of a strategy contains three elements: diagnosis, guiding policy and set of coherent actions. I discuss these steps in detail in Chapter 5.
CHAPTER 5
HITACHI’S CHALLENGE (2): LOOK FORWARD, REASON BACK

In the previous chapter, I examined how Hitachi should plan and revise its current strategy. In a rapidly changing world, every company has to decide what it should be now and take prompt action to realize it. However, the long-term view is as important as the short-term one in business planning. In this Chapter, I focus on Hitachi’s strategy planning from a longer perspective.

5-1. LOOK FORWARD, REASON BACK

Great leaders such as Bill Gates, Andy Grove and Steve Jobs have an ability to look forward and reason back for market and innovation (Yoffie and Cusumano 2015). They try to look forward to decide the direction of their companies in the future, and then look back to identify how to get from here to there. To take advantage of new opportunities, they constantly update their forecast. Compared with these three CEOs’ companies, Hitachi has a more diversified business portfolio, which makes it difficult to exercise the same ability. Instead of following one strong leader, Hitachi should establish an organizational structure in order to look forward and reason back.

Currently, the lack of organizational structure to look forward causes its business transfer to be slower than those of its competitors. For example, GE advocated the Industrial Internet in
2011 and started inventing Predix, and Siemens has acquired software companies since 2007
and accelerated, while Hitachi only just released its IoT platform Lumada in 2016.

Planning for the future, Hitachi should face two directions: market and technology. One
can affect the other and vice versa, and we have to be careful of both views.

5-2. LOOKING AT FUTURE MEGATRENDS

First of all, because Hitachi engages with SIB, it should predict and understand global
megatrends at an early stage. SIB aims to solve customers' problems. Without looking forward,
Hitachi cannot be ready for customers' incoming problems. By understanding the future picture
of the world, Hitachi can assume which areas or customers will be annoyed with new problems,
and invest more in a specific industry to solve such problems. The earlier Hitachi discovers
problems, the earlier and better it can develop solutions for them. Capturing a big wave
enables Hitachi to become a partner with the customers all over the world. If not, Hitachi's
competence in SIB will be wasted because other well-prepared SIB providers will prevail and
capture customers in emerging markets.

Understanding megatrends, however, is quite different from periodical mechanical
prediction. Hitachi attempts to predict the future world when it makes mid-term management
plans, but this approach has not been sufficient to identify megatrends, which can change the
world dramatically. A true SIB provider should always keep in mind what will happen next and
become dominant in the mid- and long-term view. In this regard, I propose that Hitachi should
establish a special department in charge of the analysis and prediction of megatrends. Based on
its suggestions, Hitachi’s business portfolio should be reviewed and if necessary changed by selling business domains or acquiring external resources before the change really happens. This will help Hitachi establish competitive advantages over other companies.

Since 2003, Siemens has planned its business strategy by defining megatrends. It issues a report named “Pictures of the Future” semiannually. For this report, through discussion with internal and external experts, Siemens sketches the future of various sectors. This report offers key technology trends and insight into the research conducted by Siemens. In accordance with defined megatrends, Siemens has established its long-term strategy and sold businesses outside of the megatrends. For instance, in 2014 Siemens identified five megatrends: globalization, urbanization, demographic change, climate change, and digital transformation. As shown in Figure 3-5, Siemens’s business is divided into four domains linked to the megatrends. Infrastructure (Mobility and Building Technology) corresponds to urbanization, Healthcare to demographic change, and Energy (gas turbines and renewable energy) to climate change. Siemens accelerated acquisition of software companies after it had identified digital transformation as the fifth trend. As for globalization, Siemens has the highest global revenue ratio among the three companies.

Another benefit of the process of strategy planning is that corporate and business units can have the same understanding of the trends and strategies. This reduces the time for internal adjustment so that Siemens can be agile to make decisions and operate businesses. On the other hand, if Hitachi makes mid-term plans without viewing the megatrends but by following the financial results of previous years, the future outlook and strategy will never be
consistent between the corporate and business units. Also, considering future market
conditions along with periodical mid-term management plans, companies may use preferable
information only for themselves, and establish the strategy intentionally or accidentally.
consciously and unconsciously. Rosenzweig defines the halo effect as the way in which a
compANY'S performance creates an overall impression that shapes how we perceive its
strategy. For example, we tend to infer that a company doing well has a sound strategy or a
visionary leader. When this company’s performance drops, we reevaluate its strategy as wrong
or its leader as incompetent even if they may not have changed much. We can see this effect
when we evaluate companies, but this is also the case when companies make their strategies.
Companies may look for data and information that support their existing strategies, and
announce that their strategy and market trends correspond to each other. Regular mid-term
planning can fail in this way because strategy planning becomes a seasonal event so that
employees fall into a routine. By carefully analyzing for megatrends, we can avoid overlooking
undesirable information, and reflect upon it in the early stages of strategy planning.

5-3. LOOKING TO FUTURE TECHNOLOGIES

As we look to the future of the market, we also have to investigate technological trends
because disruptive technologies change the market. As IoT and Big Data created the new
industrial horizon as explained in Chapter 3, we also have to observe the birth of innovation.
We have to acquire superior knowledge of technology trends to address future customers’
needs. GE is an example of this success. GE succeeded in looking to future technologies
especially in the early stage of the IoT trend. In November 2012, Immelt introduced its concept and launch of the Industrial Internet. GE found that enabling Internet-connected machines to communicate and operate automatically can bring substantial efficiency gains. Since then, GE invested heavily in this segment, hired IT professionals and set up the special software center in California, which would bring GE to a leading position in the digital era.

Hitachi also has high capability of technology with many PhD-holding engineers and a large R&D budget. However, when it comes to innovation, not only Hitachi but also other Japanese companies are evaluated as low capability. MIT REAP (Regional Entrepreneurship Acceleration Program) analyzes capabilities of innovation and entrepreneurship by country. Its Tokyo team reported that large Japanese corporations had cutting-edge technologies but had struggled to keep-up with the pace of innovation or to embrace new paradigms of technological innovation.\(^{28}\) Cusumano (2016) realized this contradiction and wondered why Japanese companies could not initiate innovation. One of the reasons is that experimentation and risk-taking that are required for innovation and entrepreneurship are not highly valued in Japan. Because lifetime employment is still common in Japan, people tend to be afraid of failure. In such a culture, the number of new start-up companies and entrepreneurs are not so many, which prevents innovations from occurring.

As an example, there is a huge difference of mindset between the Japanese and Israelis. In Fall term 2017 at MIT, I joined Israel Lab where I learned much about the Israeli innovation ecosystem. One renowned factor of Israeli innovation is the military, but I was more impressed

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\(^{28}\) http://reap.mit.edu/assets/MITREAP_Tokyo_Report_Executive_Summary_201707.pdf
with the Israeli mindset of entrepreneurship. As a part of the class, I traveled to Tel Aviv, Israel for three weeks in January 2018. I worked in a start-up company that had less than 10 employees. Its founder, who was younger than me, launched his company in 2016 to develop a device to help immobilized patients communicate with others freely. He said he had not been worried about his probability of success when he had started his business even though there were established competitors in the industry.

Two points really astonished me. One thing is that he eagerly wants to change the world with his business; he even quit his job in a global consulting firm. I feel this sense of value is critical to Israeli success. The other point is that he regarded failure as important to his career. Senor and Singer described the same point (2009), that even though Israelis understood the probability of success as entrepreneurs was low, mistakes do not cause shame but are an important part of learning processes. From my viewpoint, the Japanese do not have this mindset and cannot acquire it in the short term.

Under this assumption, Hitachi should be as open as possible to external circumstances to realize coming technical innovations. Investment in venture capital can be a solution to this problem. The aim of this suggestion is not only to establish relationships with start-ups or acquire them, but also to recognize the next trend of innovation before it appears in the market, and to predict major shifts in the future. In addition, Hitachi focuses on SIB to solve social and customer problems so that it can acquire the latest accessible technology to tackle difficulties. In both ways--technology changes the market, and the market requires the technology--Hitachi has to read the signs of innovation to be ready for it. Hitachi announced on
March 22, 2018 that it invested in a venture capital fund in Silicon Valley. By investing in the fund, Hitachi will help to accelerate open innovation with start-up companies using its partner’s extensive network. The investment will enable Hitachi to access the epicenter of innovation in Silicon Valley. However, Silicon Valley is not the only innovation birthplace. There are many regional innovation ecosystems across the globe such as Boston, Israel, and London. Each region has its own unique, vibrant circumstances and systems for innovation. Because we are not sure what comes next, Hitachi should participate in other venture capital fund(s) to cover a variety of innovations.

Looking forward is a diagnostic process. Diagnosis of the future can eliminate some uncertainty and complexity and make the landscape simpler. Needless to say, all companies experience ups and downs due to uncertainty, but they have to be able to respond promptly and effectively to changes, which may be subtle but steady shifts in their industry. Based on this diagnosis, companies can pay attention to crucial points and launch solutions.

To conclude, contrary to the competitors’ process of strategy planning, Hitachi defined SIB as its core first because “this is one of the sources of our strength and we will therefore concentrate business resources on the SIB going forward.” (Hitachi Annual Report 2009) This way of thinking is far from GE’s and Siemens’s ways of looking to the future. While GE and Siemens predict the future and plan their strategies accordingly, Hitachi focuses on SIB because Hitachi possesses internal strength in that area. Taking into consideration that Hitachi was in danger of bankruptcy after the financial crisis, Hitachi could not create its management plan

with a longer and wider view, and had no choice but to rely on its internal resources. Hitachi should, however, grasp the future picture in order to predict the problems and new technological waves, decide which areas to engage with, and invest to create solutions.

5-4. REASON BACK TO PLAN ACTIONS

By looking forward, we can determine where we want our company to be in the future. The next step should be to establish an actionable plan: reason back to identify necessary movement to reach there. First of all, Hitachi has to connect “Look Forward” with “Reason Back” functions internally. Even if Hitachi can precisely see the future, without adding this in its strategy, strategy planning will not work at all. In this regard, “Look Forward” departments should possess the authority to make decisions or be tied closely with strategy planning departments, and have close contact with each business unit that executes the strategy. Also, Hitachi has to ensure that it possesses a capability to deliver solutions against future assignments emerging from market and technology trends. Based on these suggestions, I draw a strategy organization chart of Hitachi as Figure 5-1.
To view a future picture, Hitachi should establish a special department, just under executives, with the mission of strategy planning. I call it “Corporate Strategy Department (CSD).” This is made up of two divisions: one in charge of viewing global megatrends (Div 1), and the other in charge of technology waves (Div 2). Div 1 of CSD facilitates discussion in joint sessions among external experts, executives, board members, CSD and Strategy division in BUs to get consensus on the image of the future. Div 2 also monitors technology trends through communication with venture capital and start-ups. Combining these two activities, CSD as a whole is responsible for building a future picture.

It is clear that the most important phase in strategy planning is to discover and agree on the megatrends the world and Hitachi will face. Participants in the session should be experts in diversified areas. Hitachi should establish a variety of networks to gain correct, deep and wide
perspectives. Among others, the board of directors will be important because they know Hitachi with their unique background. Board members are made up of thirteen directors as of March 31, 2018: four internal directors and nine outside directors. There are only five foreign directors and no academic professors or scholars, so Hitachi should encourage hiring more nationalities and academics.

CSD also has to identify corporate strategies corresponding to the future picture and technologies. CSD possesses authority to define core businesses that should be invested in more, and non-core businesses that can be transferred in the short term. In this process, internal discussion is required to measure Hitachi’s capability. Even if Hitachi figures out business opportunities from its future analysis, Hitachi may not have capabilities to reach them. CSD has to talk with the R&D Department to match the predicted customer needs and Hitachi’s capabilities. If both exist, Hitachi should focus on the area. If not, Hitachi has to decide whether it should develop or enhance required technologies.

Based on this strategy, Hitachi has to decide how to acquire necessary resources to pursue its goal. One way is to develop internally, and the other is to access external partners. That is why I put the R&D Department under CSD. In 2015, Hitachi reorganized its R&D into three centers, but it should make sure how much technology it can and should develop and own internally based on this corporate strategy. Not only technology but also other resources, such as sales channels and customer base, can be covered by alliances or M&As. Deep expertise in law and industries and abundant business experience are required in negotiation and discussion with potential partners and investment banks, so I propose that a department for
these missions should be established in the corporate section. However, because alliance

divisions in Hitachi are dispersed in each BU, a great deal of work will be required. I belonged to

the global alliance division in a certain BU, and found it difficult to share knowledge with the

same division in different BUs. Even if the products and services are different among BUs,

fundamental knowledge for establishing JVCs is almost always the same. Such expertise should

be managed in one corporate section.

Strategy Planning divisions in BUs play the role of translating the corporate strategy into

business strategies. As explained, key members in these divisions participate in the session to
determine megatrends, and thus BUs strategies should be aligned with the corporate one. BUs

also have relationships with PSD to get external assets through alliances.

In this process, the joint session works as the diagnosis, and CSD decides a direction of

the company. In other words, CSD defines the guiding policy to face to challenges and

overcome obstacles emerging from the diagnosis. In the guiding policy, how to grapple with the
difficulties--internal development or alliance with partners--should be determined. Finally, PSD

and each BU have to take actions based on the guiding policy. Managers set a policy as

actionable and feasible enough that the actions are coherent with one another.
I entered Hitachi, Ltd. in 2004. Since then, I have been exposed to a variety of businesses. For the first three years, I was in charge of sales planning of flat panel display TVs for the European market. I stayed in San Diego, California in 2007 and learned about the US FPD-TV market. In those years, I did not realize that I was in a tiny part of the company. Hitachi for me was a company of home electronics, and its logo I saw in elevators was not mine.

While the competition became keen in the FPD industry, I transferred to a regional strategy planning division in the group corporate office in 2009. Then, I had awareness of the crisis against Hitachi for the first time. As explained, Hitachi suffered from the industry-record loss due to the financial crisis. All the employees were forced to reduce their salary and take mandatory vacation without compensation. My ex-business, FPD-TV, was split off from the company. As Hitachi’s performance had been a V-shaped recovery under Kawamura and Nakanishi, I felt the corporate atmosphere had become better.

From 2012 to 2014, my mission was to conduct alliance negotiation with third parties in power and rail industries. During this period, Hitachi and Mitsubishi Heavy Industry integrated their thermal power business. Though the business was one of its cores, Hitachi agreed to be a minority shareholder of the new entity. My division was divided into two, and the other one was transferred to the JVC. I remained in Hitachi.
Hitachi has more than a hundred years of history, and it has survived in the era of significant change for the recent decade. Though Hitachi was forced to transform itself ten years ago by the financial turmoil, it has executed the active and advanced reconstructing, and the profit has increased. Such reform and recovery are evaluated as a symbol of the Japanese manufacturing revival. Crossing the waters, however, global giants had already completed such transformation. Moreover, as disruptive technologies have appeared, been embedded in existing industries and changed the business models, Hitachi has to enhance its capability of solution delivery. The right strategy at the right time is required. In this regard, Hitachi has to update its future vision constantly in accordance with new information and analysis to take advantage of coming business opportunities. Figuring out the future, Hitachi has to set priorities and match its capability toward the market and customer.

Japanese leadership is characterized by a consensus. Decision-making process takes a longer time to get approval from all responsible members. Hitachi is surrounded by many stakeholders in various engaged sectors. Changes in the corporate strategy can make some departments worse off. Some people may be unwilling to accept the strategy. If Hitachi does not execute transformation due to opposition, and avoids the hard work of choice and sets nothing aside, it will not able to catch up with GE, Siemens and other global companies. Holding a wide range of capabilities is not the strength of Hitachi. Such a business portfolio may be the result of the lack of choices in the past. One of the fundamental challenges is to embrace strategy. Not only strategists but also the other employees have to understand the significance
of the strategy, and take consistent actions. As a member of the largest Japanese
conglomerate, I want to establish a better strategy by looking forward and reasoning back.
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