



# **The Digital Transformation of Siemens**

Sophia Tarkian

Dissertation written under the supervision of Patrícia Machado

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## **Abstract**

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**Author:** Sophia Tarkian

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In order to stay both competitive and profitable it is essential for companies to adapt to the continuous changes in the environment and to adjust the firm's strategy accordingly. Throughout the years, scholars have investigated the importance of strategic change as well as the impact that leadership can have on strategic change and thus firm performance. Additionally, the dynamic capabilities view that addresses the question of how firms can achieve and sustain competitive advantage in rapidly changing environments has gained increasing attention in recent years.

To demonstrate a real-life example of these theories, I developed a teaching case about the restructuring of Siemens. The case intends to demonstrate a strategic transformation of a major company in response to environmental changes, coming along with a new CEO. Joe Kaeser fundamentally reorganized the company and used in particular the digitalization trend to successfully boost performance and restore success after a series of setbacks under the leadership of Siemens' former CEO, Peter Loescher. The case clearly illustrates the importance of Siemens' dynamic capabilities for the transformation of the company and shows how especially the background and personality of the respective CEOs, Loescher first and then Kaeser, affected strategic change and, consequently, Siemens' performance.

## Sumário

**Título da dissertação:** A Transformação Digital da Siemens

**Autor:** Sophia Tarkian

**Palavras-chave:** mudança estratégica, liderança, *dynamic capabilities*, performance da empresa, digitalização

De forma a permanecerem competitivas e lucrativas, é essencial que as empresas se adaptem às mudanças contínuas no ambiente externo e ajustem a sua estratégia em conformidade. Ao longo dos anos, vários autores investigaram a importância da mudança estratégica, bem como o impacto que a liderança pode ter na mudança estratégica e, portanto, no desempenho da empresa. Além disso, a *framework* das *dynamic capabilities*, que aborda a questão de como as empresas podem alcançar e sustentar uma vantagem competitiva em ambientes em rápida mudança, ganhou atenção crescente nos últimos anos.

De forma a ilustrar com um exemplo real a aplicação dessas teorias, desenvolvi um caso de estudo sobre a reestruturação da Siemens. O caso demonstra a transformação estratégica de uma grande empresa em resposta a mudanças ambientais, ao mesmo tempo que é admitido um novo CEO. Joe Kaeser reorganizou profundamente a empresa e usou, em particular, a tendência da digitalização para melhorar a performance e restaurar o sucesso após uma série de contratemplos sob a liderança do ex-CEO da Siemens, Peter Loescher. O caso ilustra claramente a importância das capacidades dinâmicas da Siemens para a transformação da empresa e mostra como, em particular, a experiência prévia e a personalidade dos respectivos CEOs, Loescher primeiro e depois Kaeser, afetaram a mudança estratégica e, conseqüentemente, o desempenho da Siemens.

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# 1 Introduction

In order to remain competitive and stay profitable organizations are required to almost consistently adapt to new environmental conditions and adjust their strategies since they are embedded to and are affected by institutional and market systems that steadily change. These exogenous shifts happen frequently and are diverse in their dimension (Audia, Locke, & Smith, 2000). Failing to timely respond to these changes can negatively affect a company's performance and might even lead to its failure.

For many years, scholars have investigated strategic change and the reasons behind it. According to Snow and Hambrick (1980) strategic change does not only include the modification of a company's alignment with the environment, but also the implementation of several changes in different areas of the company coming along with it. It was found that poor organizational performance is a major initiator of strategic change as it indicates a misalignment between the company and its environment (Boeker, 1997; Mintzberg, 1978). Regarding the effect of the CEO on strategic change Miller's (1993) research has shown that CEO succession is often associated with organizational change. Building on that Zhang and Rajagopalan (2010) argue that CEOs hired from inside the firm in contrast to outside CEOs typically implement changes that are more in line with the existing organizational capabilities and that benefit the firm performance in a continuous way. In recent years especially the dynamic capabilities view, that is an extension of the resource-based theory, has gained increasing attention as it addresses the fundamental question of how firms can achieve and sustain competitive advantage in the context of changing environments (Barreto, 2010).

This dissertation focuses on showing a real-life example of a major company that carries out a restructuring in order to adapt to the changing environment. It is the aim of this thesis to understand how Joe Kaeser, the current CEO of Siemens, fundamentally reorganized the company and used in particular the ongoing digitalization trend, that is known as one of the main drivers behind business adaptations in today's world (Roland Berger, 2018), as an opportunity to boost performance and restore success after a series of setbacks under the leadership of Siemens' former CEO, Peter Loescher. In form of a case study this thesis will provide explanatory examination of the importance of dynamic capabilities for the success of a company, that is operating in a dynamic environment, as well as the effect leadership can have on strategic change and firm performance.

This thesis is divided into five different chapters. Following the introduction, the first section will cover the Literature Review, which provides an overview of the existing literature to set a

theoretical framework to sustain the analysis. As part of it, the concepts of strategic change, the impact of the CEO on strategic change and firm performance as well as the concept of dynamic capabilities are investigated. The next chapter will be the main part of this thesis, which will be the Teaching Case about the restructuring at Siemens. The third chapter will include the respective Teaching Notes for this case, which provide some guidance as to how the case can be used in class. Conclusively, this thesis will end with a Discussion and Conclusion.

## **2 Literature Review**

This chapter of the thesis presents an extensive literature review with the purpose of setting a theoretical framework to sustain the following case study. In this respect, the chapter gathers, contrasts and evaluates the existing academic literature. As part of it, three theoretical topics will be explored in more detail, including strategic change, the impact of the CEO on strategic change and firm performance, as well as the concept of dynamic capabilities.

### **2.1. Strategic Change**

In the academic literature many diverse definitions of a company's strategy as well as strategic change can be found. One of the first definitions of strategy was provided by Chandler (1962, p. 13) who describes it as "the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals." He argues that organizations should first identify the general objective of the enterprise and could then determine the most appropriate organizational structure in order to achieve this. Another definition was formulated by Mintzberg (1978) who focuses more on the decision-making process of strategies and interpreted strategy as a pattern of decisions about the organization's future. He defines strategy as "the set of consistent behaviors by which the organization establishes for a time its place in its environment" (Mintzberg, 1978, p. 941). According to Zajac, Kraatz, and Bresser (2000, p. 429) the appropriateness of a company's strategy can be determined by "its fit, match, or congruence with the environment or organizational contingencies facing the firm." However, environmental changes in the competitive, technological, social, and legal conditions may cause the ineffectiveness of a prior strategy. In order to restore the alignment with the new environmental conditions, organizations must anticipate environmental shifts and initiate strategic change (Audia et al., 2000). To maintain the current strategy and keep up with the status quo can only be beneficial if the firm's current strategy is successful and the company operates in a stable industry and economic environment (Haynes & Hillman, 2010).

Building on that, Mintzberg (1978, p. 941) views strategic change "as the organization's response to environmental change, constrained by the momentum of the bureaucracy and accelerated or dampened by the leadership." In contrast to this rather process-oriented definition Snow and Hambrick (1980, p. 529) use a more outcome-oriented perspective and define

strategic change as follows: “Strategic change occurs only when the organization (1) modifies in a major way its alignment with the environment and (2) substantially alters technology, structure, and process to fit the new alignment.” Accordingly, from their point of view strategic change involves process changes as well as alterations in technology and structure which are important to come up with a new strategic direction. Gioia and Chittipeddi (1991, p. 433) even go further and argue that strategic change involves “an attempt to alter the current way of thinking and acting by the organization's membership.” From their perspective, strategic transformation is not only about adapting the way of acting but does also imply changes in the current modes of cognition and thinking.

Regarding the reasons for strategic change, many scholars support the view that a poor organizational performance mainly initiates strategic change as it can be seen as an indicator for a misalignment between the company's current strategy and its environment, and therefore creates the necessity for strategic change (Boeker, 1997; Mintzberg, 1978). However, research of Gioia and Chittipeddi (1991) has shown that strategic change is not necessarily induced by a declining performance and a crisis. It rather aims at maintaining a company's viability in the long term under changing environmental conditions. As part of the same study, they argue that strategic changes without crisis might be more strenuous to implement and face more resistance as poor organizational performance can legitimate changes whose implementation might be difficult otherwise.

Further research has shown, that depending on the level of strategic change the effect of strategic transformations on firm performance can be different. As part of their research, Zhang and Rajagopalan (2010) found that the level of strategic change has an inverted U-shaped relationship with firm performance. They argue that slight to moderate changes increase the firm performance, while moderate to great changes lead to a decline in performance. These results stress that implementing the optimum scale and scope of strategic change is crucial for a firm's success.

## **2.2. The impact of the CEO on strategic change and firm performance**

In the academic literature most authors agree that strategic leaders have a crucial impact on firm performance. Hambrick (1989) points out that in order to understand why organizations perform the way they do, the people at the top, most notably the CEO, must be examined as they account for what happens to the organization. According to Gioia and Chittipeddi (1991, p. 433) the CEO of an organization can be characterized “as someone who has primary responsibility for setting strategic directions and plans for the organization, as well as responsibility for guiding actions that will realize those plans.” Also Weiner and Mahoney (1981) have found leadership to be a relevant explanatory variable for organizational performance. They suggest that organizational performance is determined by a function of influences, organizational characteristics as well as the choices of organizational leaders. Accordingly, in addition to company specific and environmental factors, it is the behavior and the strategic choices of the organizational leader that affect organizational performance and “that may make the difference between organizational success or failure” (Weiner & Mahoney, 1981, p. 456). However, some authors contradict the existence of a relevant relationship between leadership and corporate performance, as they assert that executive leadership is an inconsequential determinant of organizational performance. In their paper Meindl, Ehrlich, and Dukerich (1985) argue that the impact of leadership has been widely overstated and romanticized. They state that people tend to attribute variance in organizational performance to a single person, as this is an easier explanation than trying to understand the complex processes that caused the observed variance in organizational performance. This argumentation of Meindl et al. (1985) was criticized by Day and Lord (1988) as they argue that the data Meindl et al. (1985) base their conclusions on was misinterpreted and not analyzed in a methodologically sound way. Day and Lord (1988) concluded that when results are properly interpreted and several methodological concerns are addressed, executive leadership can explain as much as 45 % of an organization’s performance.

Regarding the effect of the CEO on strategic change, top executives are generally portrayed as playing a dominant role in formulating corporate strategy and determining the strategic direction of the firm (Westphal & Fredrickson, 2001). According to Gioia and Chittipeddi (1991, p. 446) “[t]he CEO (and ultimately the top management team) can be seen as architects, assimilators, and facilitators of strategic change.” They support the view that while implementing change, the CEO also has a symbolic role that especially implies making sense of, and giving sense about, the interpretation of a new vision for the institution and convincing the

organizational stakeholders of the change (Gioia & Chittipeddi, 1991). Westphal and Fredrickson (2001) argue that the content and direction of the strategic change the CEO takes is predicted by previous experiences and personal backgrounds. In addition, with respect to the results of strategic change Thomas and Ramaswamy (1996), building on the concept of Miles, Snow, Meyer, and Coleman (1978), show that firms that can achieve an alignment between managerial characteristics and strategic direction perform better than firms where such an alignment is missing. This again provides strong evidence about the impact that an organization's leader exerts in driving performance.

Over the past decades, scholars have also addressed the question, whether the change of the CEO has an effect on strategic change and firm performance. On the one hand, research results have shown that CEO succession is associated with organizational change as “new CEOs are more likely than their predecessors to disperse power and to process more information in response to poor performance” (Miller, 1993, p. 656). In contrast to this, as part of his study Boeker (1997) found evidence that CEO tenure had a significant effect on strategic change and therefore can be seen as an important predictor of strategic change, whereas chief execution succession apparently had no significant effect. Consistent with Miller's (1993) argumentation also Westphal and Fredrickson (2001, p. 1131) argue that the initiation of change is mainly considered during leader succession as “[t]he departure of the CEO may leave a power vacuum that enables board members to assert their strategic preferences by selecting new CEOs from outside the organization who have experience with the strategy that board members favor.” This argumentation also supports the fact that especially CEOs hired from outside the organization initiate change and define the new direction for the organization, as identified by Greiner and Bhambri (1989). According to Westphal and Fredrickson (2001), directors who favor strategic change should select outside successors who have experience with their preferred strategy in contrast to insiders who have experience with the current strategy. However, Zhang and Rajagopalan (2010) found evidence that CEOs hired from inside the firm in contrast to outsiders are more likely to introduce and implement strategic changes that are in line with the existing capabilities of the organization since they have a better understanding of the firm. Thus, changes of the strategy initiated by CEOs coming from inside the firm “tend to benefit firm performance in a relatively incremental but continuous way” (Zhang & Rajagopalan, 2010, p. 343).

### 2.3. Dynamic Capabilities

The field of strategic management has always been interested in understanding how firms achieve and sustain competitive advantage (Barney, 1991; Teece, Pisano, & Shuen, 1997). An influential theoretical framework used to understand this question is the resource-based view (RBV). It focuses on the internal organization of firms, assuming that a firm's bundle of resources and capabilities is the main source of achieving sustainable competitive advantage by implementing value-creating strategies that are difficult to imitate by competitors (Eisenhardt & Martin, 2000). The RBV supposes that these resources and capabilities are heterogeneously distributed across firms, and thus particular to a firm (Barney, 1991). As long as they are valuable and rare as well as costly to imitate and non-substitutable they can provide sustainable competitive advantage to a firm (Eisenhardt & Martin, 2000). However, the RBV was criticized for being inadequate to explain a firm's competitive advantage in situations of changing environments as the RBV is fundamentally static in its nature (Barreto, 2010; Eisenhardt & Martin, 2000). To overcome that limitation, Teece et al. (1997) were the first scholars who introduced the concept of dynamic capabilities as an extension of the RBV. After the publication of Teece et al. (1997), the dynamic capabilities view has gathered increasing attention in the management literature leading to a flow of research and diverse definitions that vary significantly in terms of the nature, specific role, relevant context, creation and development mechanisms, heterogeneity assumptions, types of outcomes, as well as purpose of dynamic capabilities (Barreto, 2010).

Teece et al. (1997, p. 516) first defined dynamic capabilities as “the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.” In contrast, Eisenhardt and Martin (2000, p. 1107) do not see dynamic capabilities as abilities but rather as “[t]he firm's processes that use resources - specifically the processes to integrate, reconfigure, gain, and release resources - to match and even create market change; dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die.” From their point of view, dynamic capabilities are not only relevant in highly dynamic markets as suggested by Teece et al. (1997), but also in moderately dynamic ones. Zollo and Winter (2002) even go further and state that dynamic capabilities are also used in environments characterized by lower rates of change. They describe a dynamic capability as “a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating

routines in pursuit of improved effectiveness” (Zollo & Winter, 2002, p. 340) highlighting the fact that dynamic capabilities are structured and persistent. From their perspective, dynamic capabilities are not a disjointed way to respond to crisis, but rather stable activities to improve effectiveness.

As the immense growth of research lead to a proliferation of definitions as well as the emergence of a complex and disconnected body of research, Barreto (2010) introduced a new concept of dynamic capabilities as an aggregate multidimensional construct to address some of the limitations of other definitions. Drawing on past research of dynamic capabilities, he defines a dynamic capability as “the firm’s potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base” (Barreto, 2010, p. 271). Accordingly, the four dimensions – propensity to sense opportunities and threats, propensity to make timely decisions, propensity to make market-oriented decisions and propensity to change its resource base – represent the concept of dynamic capabilities and should be taken into account for the construct. This multidimensional construct avoids framing the concept in a dichotomous way and allows different firms to have different levels of dynamic capabilities as there can be a low or high potential level for each dimension (Barreto, 2010).

### 3 Teaching Case

#### Rebuilding Siemens for the digital age

*“If you want to set the course, you can’t be guided by what others have done. You’ve got to anticipate changes and seize the opportunities they provide.”<sup>1</sup>*

– Joe Kaeser, President and CEO, Siemens AG

It was Friday morning, November 2, 2018. Joe Kaeser entered his office in the headquarters of Siemens AG in Munich, Germany, thinking about the pending appointments of the day. It was exactly three months ago that he had announced the new strategic program, Vision 2020+, that should set the future course for Siemens even after his tenure that would end in 2021.<sup>2</sup> Already one month ago the new structure went into effect and Siemens was on track with the execution of the new strategic plan. Later that day, he would have a meeting with the Supervisory Board to discuss how to further proceed with the implementation of the new changes. Kaeser started to think about the past and how the announcement of the new strategic plan was received by the public three months ago. On the one hand he got support for the ongoing strategic development and Vision 2020+ was seen as an outstanding concept that would enable Siemens to rapidly develop from a position of strength and prepare it for the next decade.<sup>3</sup> But on the other hand, rumors arose that the new strategic plan would involve the cut of further 20,000 jobs.<sup>4</sup> It has already happened several times during his tenure that Kaeser was criticized for placing too much value on capital markets and cutting jobs although the company registered profits in the billions.<sup>5</sup>

Kaeser leaned back on his chair and questioned himself: What have I achieved since I replaced Peter Loescher five years ago? Have I implemented the right strategic changes? And how did these changes affect the firm performance?

#### Background of Siemens

Siemens has a history that goes way back to 1847 when Werner von Siemens and his partner Johann Georg Halske founded Telegraphen-Bauanstalt von Siemens & Halske in Berlin.<sup>6</sup> Since then Siemens has served as an impressive innovation and technology force. Over its history Siemens came up with several innovative inventions that immensely shaped the technological

evolution of the world<sup>7</sup>, such as the first pointer telegraph in 1847, the first dynamo in 1866 and the first magnetic resonance imaging scanner in 1983<sup>8</sup>.

From the very beginning, Werner von Siemens aspired to market his innovations not just in Germany but also internationally. Envisioning a global enterprise, he opened the company's first representative office in London in 1850 and expanded his business eastward to begin the construction of the Russian telegraph network just three years later.<sup>9</sup> Further international activities followed in the next years so that in more than 170 years, Siemens has grown from a simple startup in Berlin to a global player that operates in more than 200 countries.<sup>10</sup> Throughout its history Siemens has enjoyed phases of great success but has also proven the strength to survive business failures as well as economic downswings and social changes.<sup>11</sup>

Since 2013 the business development, as well as success of Siemens, have been primarily shaped by its CEO, Joe Kaeser, who successfully led Siemens into the digital age and returned the company to its former glory after a series of setbacks under the leadership of its former CEO, Peter Loescher. Focusing on the areas of electrification, automation and digitalization Kaeser developed Siemens into a global powerhouse that is positioned along the electrification value chain - from power generation, transmission and distribution to smart grid solutions and the efficient application of electrical energy - as well as in the areas of medical imaging and laboratory diagnostics.<sup>12</sup>

### **The era of Peter Loescher (2007-2013)**

Peter Loescher was appointed as CEO of Siemens AG in July 2007. He was the first outside CEO of Siemens since its founding in 1847 by the German inventor Werner von Siemens<sup>13</sup> and largely unknown in Germany prior to his tenure at Siemens<sup>14</sup>. He was a native of Austria and studied economics at the Vienna University of Economics and Business and at the Chinese University of Hong Kong. He holds an MBA degree from Vienna University and graduated from the Advanced Management Program at Harvard Business School.<sup>15</sup> After studying economics and business, Loescher began his professional career at the consulting firm Kienbaum und Partner and worked later for the German chemicals and life sciences company Hoechst as well as the British life sciences company Amersham plc. After Amersham was acquired by General Electric (GE), he joined GE's Executive Board and was appointed President and CEO of the company's healthcare sector. Prior to joining Siemens, he served as a member of the Executive

Committee and President of Global Human Health at the pharmaceuticals company Merck & Co.<sup>16</sup>

### *The first years of his tenure*

When Peter Loescher was appointed as CEO in 2007, Siemens highly suffered from the consequences of one of the greatest corporate scandals in German business history.<sup>17</sup> In 2006 Siemens faced widespread corruption and bribery allegations after investigations of the German state attorney's office disclosed an amount of more than € 2.3 billion of suspicious payments to foreign governments.<sup>18</sup> It turned out that Siemens had bribed governmental officials, as well as private business people, in several countries such as China, Russia, Argentina, Israel and Venezuela to win contracts and to gain favorable conditions over more than three decades.<sup>19</sup> The shock was particularly deep since prior to the corruption scandal Siemens was considered a model company in Germany as it was renowned for its innovative technological products and reliable services.<sup>20</sup> However, it was proven that for many years Siemens pretended to do business according to the highest ethical and legal standards, but the reality looked completely different.

Consequently, when Loescher became CEO of Siemens in 2007, he was faced with a great challenge. At the beginning of his tenure, it was his main task to root-out bribery, clean-up the company and re-establish trust in corporate policy. Loescher believed that Siemens made the right choice to hire an outside CEO. The company was down on its knees due to the corruption scandal, so that a CEO was needed who was absolutely clean to resolve the situation and drive fundamental change.<sup>21</sup> In his first term as CEO, between 2007 and 2012, Loescher successfully guided Siemens through this very challenging period, first marked by the consequences of the corruption scandal and later by the global financial and debt crisis.<sup>22</sup> He won much praise as under his leadership Siemens substantially improved its performance and profitability so that his contract was extended by five years until 2017 in 2012.<sup>23</sup>

### *A culture of integrity*

To rebuild trust in his company after the involvement in the bribery scandal, Loescher not only collaborated with state authorities to reveal all details of the bribery scandal and replaced the old management in cases where there was suspicion that they had been involved in the bribery affair or had tolerated the corrupt practices<sup>24</sup>, but also renewed the organization's culture focusing on integrity as a cultural value. The first actions undertaken by Loescher included an

open communication about the former problems and the way in which they should be addressed in the future. As part of it, Loescher launched a 100-day tour around the world to be visible and to meet with employees and clients in order to listen to them.<sup>25</sup> It was his aim to terminate the corrupt culture as fast as possible.<sup>26</sup>

In the years following the scandal the Siemens management reformulated the company's general code of ethics and implemented various new codes of conduct concerning, among others, new regulations for donations, financial affairs and its environmental standards.<sup>27</sup> To inform its employees about the new organizational rules and to sensitize them to the problems accompanying corrupt behavior, Siemens initiated several training programs for employees and managers.<sup>28</sup> Aiming at establishing new values at Siemens, the new educational trainings were seen as one of the most important levers for fostering cultural change among employees. Furthermore, Loescher strengthened the internal monitoring of Siemens. He established a new compliance committee at the Supervisory Board to monitor the new anticorruption policy and employed about 500 people in the compliance office to terminate the corrupt culture.<sup>29</sup> Additionally, ethics hotlines and "help-desks" were installed to assist managers in the decision-making process and to give employees the opportunity to anonymously report code violations if there was a case of suspicion.<sup>30</sup> With the slogan "only clean business is Siemens business" Loescher tried to establish a new sense of awareness about corruption and to appeal to the communal spirit of the Siemens employees.<sup>31</sup>

Although Siemens was involved in one of the biggest bribery scandals in Germany, its actions to rebuild corporate reputation under the leadership of Loescher were not only seen as an example of best-practice by the European Commission<sup>32</sup> but also gained increasing attention in the corporate world. Overall, compared to Siemens no other company has acted under comparable circumstances and pressure and has invested that much in compliance. Therefore, at this time the leading role of Siemens in the setting of compliance standards and fighting corruption was generally accepted.<sup>33</sup>

### *Siemens' strategic direction and organizational structure under Loescher*

In 2005 Loeschers predecessor, Klaus Kleinfeld, gave Siemens a new orientation and ordered a change in focus to the megatrends of urbanization, demographic change and climate change. Loescher followed this strategic direction and incorporated it into Siemens' organizational structure in 2008 (see Exhibit 1).<sup>34</sup> In this context, the businesses of Siemens were reorganized and the operations were grouped into three sectors, Industry, Energy and Healthcare, consisting of 15 divisions in total.<sup>35</sup> Also, the structure of the Board was changed and a new executive

leadership model introduced. As part of it, the number of members of the Managing Board was reduced from eleven to eight and the Corporate Executive Committee of the Managing Board was eliminated.<sup>36</sup> While the former centralized Board had no direct responsibilities for the operative business, these responsibilities were now assigned to single Board members. Each member of the Managing Board headed a clearly defined chain of command with unambiguous escalation paths. With this new organizational structure, it was Loescher's aim to simplify structures, clarify respective responsibilities and accelerate decision-making.<sup>37</sup>

After three years in the top spot, Loescher also focused on sustainable infrastructure and green technology - ensuring Siemens did not miss the opportunity to get a spot at the table when it comes to green initiatives.<sup>38</sup> In 2011 Loescher added the sector Infrastructure and Cities to the organizational structure which mainly included products and services for green cities. Loescher believed that there was enormous growth potential in this area as the biggest 600 cities made up half of the global economic output.<sup>39</sup> To take advantage of this business opportunity, Siemens developed the so called "Green-City-Index" that revealed the strengths and weaknesses of cities and emphasized the role of Siemens as a solutions provider.<sup>40</sup> Furthermore, Loescher made major investments in renewable energy such as solar power plants. As an example, in 2009 Siemens acquired Israel's Solel Solar and purchased a stake in Archimede Solar Energy, an Italian solar thermal specialist.<sup>41</sup>

Throughout his tenure Loescher was known for setting ambiguous objectives in growth and cost savings for Siemens.<sup>42</sup> It was his aim to become a global leader, not only in technology but also in earning power.<sup>43</sup> To achieve this goal and to strengthen the global competitiveness, he set up a target system, the so called "One Siemens" that defined metrics for revenue growth, capital efficiency, profitability and the optimization of the capital structure in 2010.<sup>44</sup>

### ***When criticism mounted***

It all seemed to go pretty well for Loescher. He successfully guided Siemens through the challenges of the bribery scandal and the financial crash in 2008.<sup>45</sup> However, in the upcoming years the performance reached a turning point. The success of Siemens was clouded by a series of mishaps and setbacks as well as managerial decisions that later turned out to be a mistake so that criticism over Loescher mounted.

Many people did not see in Loescher a strong entrepreneurial leader.<sup>46</sup> Under his leadership Siemens evolved into a plaything of financial interests and vain managers<sup>47</sup> – and that was partly down to Loescher's shortcomings. He was constantly travelling to clinch an export deal and always in touch with governments so that he could be rather seen as the company's chief

lobbyist than the big playmaker the company had hoped for. He never worked himself deeply enough into issues. In contrast, the chief executive relied on his sector heads and left a lot of responsibilities up to them.<sup>48</sup> Loescher was highly criticized for not defining a long-term vision for the company. Based on the financial results it was evident that Siemens did not make any progress. The company was losing its profitability and competitiveness, and its innovativeness in particular. But the Management Board under Loescher took no action.<sup>49</sup>

Also, the new organizational structure implemented by Loescher fell short of expectations. He gambled away much money with the purchase and sale of company shares that later turned out to be mistaken investments.<sup>50</sup> In particular, this has been the case in the solar business where due to changed regulatory conditions, lower growth and strong price pressure in the market, the company's expectations could not be met. As a consequence, in 2013 the solar power division of Siemens, which lost €1 billion, had to be shut down.<sup>51</sup>

Even the investments in the new sector Infrastructure and Cities that was mainly addressed to growing megacities have been unsuccessful as in the course of the financial crisis the cities and their governments suffered from a lack of money.<sup>52</sup>

In the first term of his tenure, Loescher successfully trimmed down the company and boosted efficiency. But this success did not last because of no discernible vision behind it and as it was purely driven by costs and figures, at the expense of the workforce as many jobs were cut.<sup>53</sup> It was said that since he was the first outside CEO of Siemens, he could neither connect to Siemens nor to the overall workforce during his time as CEO.<sup>54</sup>

The financial situation of Siemens was even made worse by a series of business mishaps that were putting Siemens' technological reputation at risk and cost Siemens a fortune in fines.<sup>55</sup> In 2013 Siemens did not only have difficulties to connect North Sea wind parks to the electricity grid, but also delayed delivery of 16 urgently needed high-speed ICE trains to rail operator Deutsche Bahn.<sup>56</sup> Initially, the trains with a value of € 3.7 billion were expected to be completed in 2011. But because of electronic problems the trains could not be delivered before 2014.<sup>57</sup>

However, it appeared that the biggest mistake of Loescher was the missed profit margin target in July 2013. Already in 2011, he was accused of misjudging market developments with his goal of expanding sales by almost a quarter to €100 billion.<sup>58</sup> He then set an ambitious profit-margin goal of 12 % by 2014, up from 9.6 % in 2012. In July 2013 it was clear that this target could not be reached so that the forecast had to be adjusted downward.<sup>59</sup>

As a consequence of the precarious situation Peter Loescher was fired by the Supervisory Board and replaced by Joe Kaeser.<sup>60</sup> Loescher left Siemens with a smaller market value when he was removed (€83 billion) than when he arrived in 2007 (€103 billion).<sup>61</sup>

## **New leadership – strategic change under Kaeser**

When Joe Kaeser replaced Peter Loescher as CEO on October 1, 2013, there was great hope that Siemens would return to “calm waters” under his leadership.<sup>62</sup> However, many people believed that Kaeser was the right successor and could manage to bring the old success of Siemens back.

Contrary to Loescher, Kaeser was an inside CEO who has never worked for a different company. After his studies in Business Administration at the University of Applied Sciences Regensburg, he directly started his career at Siemens in 1980 and was lately the Chief Financial Officer.<sup>63</sup> During his time at Siemens Kaeser has earned a reputation as a hands-on pragmatist and was seen as having an understanding of Siemens' business and culture that Loescher has always been felt to lack.<sup>64</sup> He did not only have a good relationship to investors and the capital market<sup>65</sup>, but also went down well with people in general. While Kaeser was known for being entertaining and ironically looking at himself, Loescher acted mostly stiff and showed little humor.<sup>66</sup>

### ***Vision 2020***

To restore Siemens to its old glory and gear the company to the future, Kaeser saw the necessity to create an entrepreneurial concept aimed at strengthening Siemens and achieving profitable growth in the long term. He did not want to focus on the next one or two quarters or the next reporting season but on the years and, perhaps, even decades to come.<sup>67</sup>

In May 2014 he introduced the so-called Vision 2020. It was a huge reorganization plan that should enable Siemens to consistently occupy attractive growth fields, sustainably strengthen the core business and outpace its competitors in efficiency and performance.<sup>68</sup> For Kaeser it was the path to a successful future. He hardly left anything of the Siemens structure under Loescher.<sup>69</sup>

The company-wide reorganization should be implemented in three phases.<sup>70</sup> It was the first task to boost performance by focusing on business excellence. Kaeser wanted to get even those businesses that were not reaching their full potential back on the track and make them competitive again.<sup>71</sup>

In the medium term, it was the aim to strengthen the core business. According to Kaeser, it was important to focus on the things that made Siemens strong and put other things aside to achieve long-term success. To reach this aim, Siemens should allocate resources in a more rigorous way in order to expand in strategic growth fields.<sup>72</sup>

Last but not least, in the long-term Kaeser wanted to scale up the company. Siemens should intensify its efforts to seize further growth opportunities and tap new promising fields in the future.<sup>73</sup>

To measure the progress of Siemens' reorganization, the success of Vision 2020 was linked to the attainment of seven overarching goals (see Exhibit 4).<sup>74</sup> In addition, the original "One Siemens" financial concept was further expanded to make it a comprehensive management model encompassing the overarching goals and priorities with which the new strategy should be implemented throughout the company.<sup>75</sup>

#### *A clear mission statement*

When Kaeser rethought the company's purpose, and why it actually existed, he clearly saw the need for defining a clear mission statement for Siemens. For him a clear mission was important for a successful future as it expresses the company's self-understanding and defines its aspirations.<sup>76</sup> As part of Vision 2020, he announced the following mission to its employees:

*"We make real what matters by setting the benchmark in the way we electrify, automate and digitalize the world around us. Ingenuity drives us and what we create is yours. Together we deliver."*<sup>77</sup>

With this mission Kaeser emphasized that by partnering with Siemens' customers he not only wanted to improve people's lives today, but also in the generations to come. According to Kaeser, it was his goal and at the same time responsibility, to shape the future and leverage sustainable business practice in cooperation with its partners. Furthermore, he wanted to set benchmarks by using Siemens' power of innovation, its leading technologies, its global presence as well as its financial solidity.<sup>78</sup>

He saw this mission as the foundation on which Siemens has been tackling the challenges of the time ever since it was founded by Werner von Siemens more than 170 years ago. And it should also make Siemens successful in the future.<sup>79</sup>

#### *Strategic direction and positioning*

According to Kaeser the reorganization of Siemens was mainly prompted by two developments. First, Siemens has not lived up to its economic potential in the last years and was therefore lagging behind its competitors as they were growing faster and achieving higher profit margins. Second, the progressive digitalization fundamentally transformed and affected all aspects of the economy and society, and thus Siemens as well. Siemens was facing forays into its domain by

software companies like SAP, Microsoft, IBM as well as players like Google and Apple, as these new competitors started to enter new markets such as in the area of manufacturing and building technologies.<sup>80</sup> Kaeser's answer to that threat of new entrants was the positioning of Siemens along the electrification value chain. He wanted to align the portfolio of Siemens to the areas of electrification, automation and digitalization.<sup>81</sup> For many years, Siemens had been focusing on the megatrends of urbanization, demographic change, globalization and climate change. With the emerging megatrend of digitalization, Siemens also wanted to play a key role in shaping the digital transformation in the future, as Kaeser saw digitalization as the key driver for industrial growth.<sup>82</sup>

From the very beginning, Siemens has been an electrification company and has achieved to become a major player in the field of automation over the years. For Kaeser it was clear that if Siemens wanted to be successful in the future, it was essential to also master digitalization and to use it to create value for customers.<sup>83</sup>

The new set up should help Siemens to close the gap between its competitors and make Siemens strong again. With the aim of creating sustainable value for its employees, customers and shareholders, Kaeser highly increased the investments in R&D and market access (see Exhibit 5).<sup>84</sup> Furthermore, in October 2016 a separate unit for startups, the next47, was set up to foster disruptive ideas more vigorously and to accelerate the development of new technologies.<sup>85</sup>

### Organizational structure

Kaeser also wanted to reflect the new strategic direction of Siemens in the company's organization (see Exhibit 2). As a first step, he removed layers from the organizational structure to bring the business closer to customers and key markets. As part of it, the 14 Regional Clusters were replaced by 30 Lead Countries that generated more than 85% of the business and should now report directly to the Managing Board.<sup>86</sup>

In addition, the sector level was eliminated and the business activities were bundled into nine divisions. With this new organization, Siemens hoped to reduce complexity and bureaucracy, cut costs, as well as to make the company more customer-oriented by speeding up decision-making processes. In the future, a stringent governance should make sure that Siemens' methodologies to continuously improve performance were rigorously applied company-wide in all Siemens businesses and projects.<sup>87</sup>

In order to adapt to the digitalization trend, Kaeser dedicated a division solely to the Digital Factory, offering a comprehensive portfolio of seamlessly integrated hardware, software and technology-based services. Since Siemens was the first company to bundle all the requirements

for the factory of the future under one roof, Kaeser believed that this division would be Siemens' main driving force for the much discussed Fourth Revolution in which every aspect of production - from idea, development and manufacturing to services and recycling - would be totally integrated.<sup>88</sup>

As part of the new organization it was further announced that the Healthcare sector would be managed independently in the future. This would provide greater flexibility required for the volatile healthcare markets and technologies and therefore give them better prospects for the future.<sup>89</sup>

Furthermore, Kaeser substantially strengthened the international organization of Siemens. In view of the growing strategic importance of the U.S. energy markets, Kaeser relocated the management of the energy business as well as the responsibility for supporting Siemens' marketing activities throughout America to Houston, Texas.<sup>90</sup>

However, the reorganization highly affected the workforce of Siemens. In February 2015 Kaeser announced 7,800 jobs were to be cut worldwide as part of the streamlining of administrative and overhead functions.<sup>91</sup> Further job cuts followed in the subsequent years (see Exhibit 6). In addition, with the ongoing reorganization also the structure of the workforce was changed. While Siemens used to primarily hire engineers and physicists, Siemens started to mainly recruit software specialists for new positions especially in the development department. Already in 2016 around 5 % of the Siemens employees worked as software developers.<sup>92</sup>

#### Acquisitions, divestments and partnerships

To sharpen the business focus in electrification, automation and digitalization, Siemens constantly developed its portfolio with determination under the leadership of Kaeser. In the medium term it was Kaeser's aim to strengthen the core business and to divest activities that yield few or no synergies for the company.<sup>93</sup> The first steps were taken with the acquisitions of Rolls-Royce's aero-derivative gas turbine business in 2014<sup>94</sup> and the decision to acquire U.S. compressor and turbine manufacturer Dresser-Rand in 2015<sup>95</sup>. The two acquisitions closed important gaps in the electrification portfolio for the oil and gas industry as well as for decentralized power generation.<sup>96</sup> Also, the sale of the audiology business<sup>97</sup> and the divestment of the stake in BSH Bosch and Siemens Hausgeräte<sup>98</sup>, the joint venture focusing on household appliances, that were both finalized in 2014, were further signals that Siemens was intent on implementing its Vision 2020.

Additionally, Siemens used acquisitions and partnerships in a great extent to broaden its digital capabilities under Kaeser. With the acquisition of leading software specialists such as Mentor

Graphics in 2017<sup>99</sup> as well as J2 Innovations<sup>100</sup> and Mendix in 2018<sup>101</sup> Siemens complemented its growing digital portfolio and strengthened its position as a leading driver in digital transformation.

Furthermore, several partnerships were set up in the field of digitalization. For instance, a cooperation with IBM in 2016 enabled Siemens to integrate new analytics tools into the digitalization platform MindSphere, the cloud-based Siemens operating system for the Internet of Things, which was seen as a key element in the Vision 2020's innovation strategy.<sup>102</sup>

### *The ownership culture*

According to Kaeser, it was not only the corporate strategy that made the difference but also the company's values and what the company stands for. Accordingly, he saw a strong culture as the most important engine of long-term success and sustainable business as it forms the origin and foundation of all considerations in the company.<sup>103</sup>

To support the concept of Vision 2020, Kaeser initiated a fundamental culture change at Siemens - a change toward a true ownership culture, the kind of culture typically lived by well-run family businesses.<sup>104</sup> With the motto "Always act as if it were your own company" he encouraged every employee, from Managing Board member to trainee, to take personal responsibility and give his or her best in his or her position in order to help building Siemens' long-term success.<sup>105</sup>

He believed that the following five principles were especially important for a successful ownership culture:<sup>106</sup>

First of all, he supported a modern understanding of leadership. He expected managers to serve as role models for the company's strategic direction, to act like entrepreneurs and to inspire and empower employees to give their best for the company.<sup>107</sup> Second, ownership culture meant employee orientation. That involved communicating management decisions transparently, encouraging employees to ask questions, promoting an open dialogue, and standing by employees and fostering collaboration in good as well as bad times.<sup>108</sup> Third, with an employee stock plan Kaeser wanted to turn more and more Siemens employees into Siemens shareholders to enable them to profit from the company's success. He was convinced that employee shareholders were more motivated and committed because they directly participated in "their" company's success.<sup>109</sup> As the first employee profit-sharing program at Siemens was already introduced back in 1858, the equity culture has already had a long tradition at Siemens.<sup>110</sup> However, Kaeser saw the need to further strengthen and extend the equity culture. In 2014 144,000 Siemens employees were shareholders. By 2020, it was his aim to increase this number by at least 50 % to

around 200,000.<sup>111</sup> Fourth, Siemens' values "responsible, excellent, innovative" were supposed to be the foundation of the ownership culture. From Kaeser's perspective, only companies that act responsibly could produce excellent results and be innovative in the long-run.<sup>112</sup> Last but not least, the fifth principle was about promoting entrepreneurial behavior in order to bring the ownership culture to life. He encouraged employees to think and act as an entrepreneur, to seek and seize opportunities rather than always staying inside the own comfort zone and to always focus on what creates value for customers and society.<sup>113</sup>

The ownership culture turned out to be a great success factor. In April 2018 80 % of all Siemens employees worldwide were Siemens shareholders. In total, around 300,000 of the company's 377,000 employees worldwide hold Siemens shares. Siemens has exceeded the target of around 200,000 employee shareholders in 2020 by a clear margin.<sup>114</sup>

### ***Siemens in the end of 2018***

When Vision 2020 was presented by Kaeser in 2014, Siemens was not exactly in great shape - neither strategically, nor operationally, and certainly not from the point of view of business leadership.<sup>115</sup> However, the implemented strategy program helped to bring growth back to Siemens. In particular fiscal 2018 was a successful year as Siemens was in better shape than ever.<sup>116</sup> The forecast for the year that was even revised upward at mid-year was met at every single point.<sup>117</sup> The company had lean structures, delivered reliable and good products, stood out with high earning power and was ahead of time in many areas.<sup>118</sup> Kaeser believed that especially the record order backlog of €132 billion would provide a solid foundation for the next fiscal year.<sup>119</sup>

Furthermore, the goals of Vision 2020 were largely reached. It was a great achievement that the completion took place much faster than originally expected.<sup>120</sup> The greatest successes included among others that Siemens managed to increase the customer satisfaction index by 55 % over 2013<sup>121</sup>, raised investments in R&D by nearly 40 % compared to 2014<sup>122</sup> and had increased the profit margin for Industrial Business by 290 basis points since 2013<sup>123</sup>.

Regarding the financial results the great majority of businesses were doing very well, including several that were outstanding.<sup>124</sup> The Building Technologies division posted its all-time best year for operations<sup>125</sup> and Mobility was the world's most successful vertically integrated mobility company<sup>126</sup>. Nevertheless, it was especially the Digital Factory which contributed highly to the company's success (see Exhibit 7).<sup>127</sup> As part of Vision 2020, Siemens started early and built up eagerly a powerful industry-shaping and fast-growing industrial software business.<sup>128</sup> These efforts payed off as the digital business recorded an extraordinary growth of 80 % in

three years<sup>129</sup> and outpaced its competitors, growing more than twice as fast<sup>130</sup>. The Digital Factory division was seen as the world-market leader in the field of industrial digitalization.<sup>131</sup> Siemens was the only company in the world that could create complete “digital twins” of products and of all factory processes.<sup>132</sup> Kaeser was sure that the Digital Factory would provide further growth opportunities in the future as in the digital industrial world there would be a “digital twin” for every real thing.<sup>133</sup>

In spite of the great achievements, the Power and Gas division was facing major structural challenges and a massive shift of investments from conventional fossil power generation to renewable sources and distributed energy systems.<sup>134</sup> However, Kaeser immediately took steps to adapt the business to changed market conditions and make it fit for the future. In the market for renewables, Siemens recognized the signs of the times before anyone else and actively shaped consolidation.<sup>135</sup> The announcement of future changes in the Power and Gas division and the associated job cuts caused a decline in share price in the end of 2018.<sup>136</sup> Nevertheless, compared to the average of competitors the share price was still relatively good. Additionally, when the share price development was tracked over a long period, the increase in value achieved with Vision 2020 was very clear (see Exhibit 8).<sup>137</sup> It was evident, that Kaeser had created a company that was more profitable and doing much better than in 2013 (see Exhibit 6).<sup>138</sup> As a further proof of this achievement, Siemens was voted again as the most respected and admired company by the highly regarded Fortune magazine in 2018.<sup>139</sup>

### ***Looking into the future - Vision 2020+***

As Siemens was in great shape and Vision 2020 was largely achieved, Kaeser believed it was time for the next level. From his point of view, it would have been irresponsible to rest on laurels as the world was changing too fast and those who hesitated or stood still would be passed by.<sup>140</sup> Consequently, on August 2, 2018 Kaeser announced the next-generation Siemens, the so-called Vision 2020+, to sustainably shape Siemens’ future. While it was the main goal of Vision 2020 to rebuild the old success and to fix underperforming businesses by providing strategic direction and strengthening the “inner order” of the company, Vision 2020+ aimed at leading Siemens to the excellence.<sup>141</sup> As part of it, Siemens would shift from a one-size-fits all setup to a purpose-driven and market-focused setup that could readily create and adapt to disruption, foster consolidation and increase customer-orientation.<sup>142</sup> A new company structure should provide Siemens’ individual businesses with greater entrepreneurial freedom under the strong Siemens brand in order to focus on the respective markets (see Exhibit 3).<sup>143</sup> Under the changes Siemens was reorganized into three operating companies Gas and Power, Smart

Infrastructure and Digital Industries that were managed under the Siemens umbrella, as well as three majority-owned strategic companies Siemens Healthineers, Siemens Gamesa Renewable Energy and Siemens Alstom.<sup>144</sup> Additional three service companies, Financial Services, Global Business Services and Real Estate Services should support the six Siemens companies in transactional activities.<sup>145</sup> In the future, the company headquarters would be considerably leaner as a result of tasks being outsourced. For example, many support and operational functions would be allocated to the respective companies to give them full entrepreneurial responsibility and accountability.<sup>146</sup> Kaeser believed that in 2013 the Siemens businesses were not ready to take on more responsibility, but now they were.<sup>147</sup> The new structure went into effect on October 1, 2018 and aimed to be completed by the end of March 2019.<sup>148</sup>

Furthermore, Siemens aimed at further looking on growth areas, such as robotics, decentralized energies and e-mobility, and expanding the digitalization business to meet the digital revolution transforming industry and shape the Fourth Industrial Revolution. It wanted to infrastructurally contribute to the megatrends of the world and shape the future, instead of being shaped by the future.<sup>149</sup> As an early step, with the newly formed Business Unit for IoT Integration Services it was Siemens' goal to provide comprehensive support to customers in their digital transformation and rigorously expand its market leadership in industrial digitalization.<sup>150</sup> Kaeser was convinced that it was essential to stay a pioneer and master in the field of industrial digitalization to reach the excellence in the future.<sup>151</sup>

## **Was it the right direction for Siemens?**

Having reflected on all the changes he had implemented at Siemens over the last years, Kaeser concluded that Siemens had achieved much progress, although the company was still changing and the transformation had not been completed.

In the past Siemens' competitors were often the trendsetters and Siemens oriented itself on what other companies have done, but not anymore. In 2019, people looked at Siemens as a pacesetter that defined and shaped the trends in the industrial world, not only in the field of digitalization, but also when it came to topics like compliance, profitability as well as the legality and orderliness of a company.<sup>152</sup> Kaeser was positive that with Vision 2020+ Siemens could even become stronger in the future.

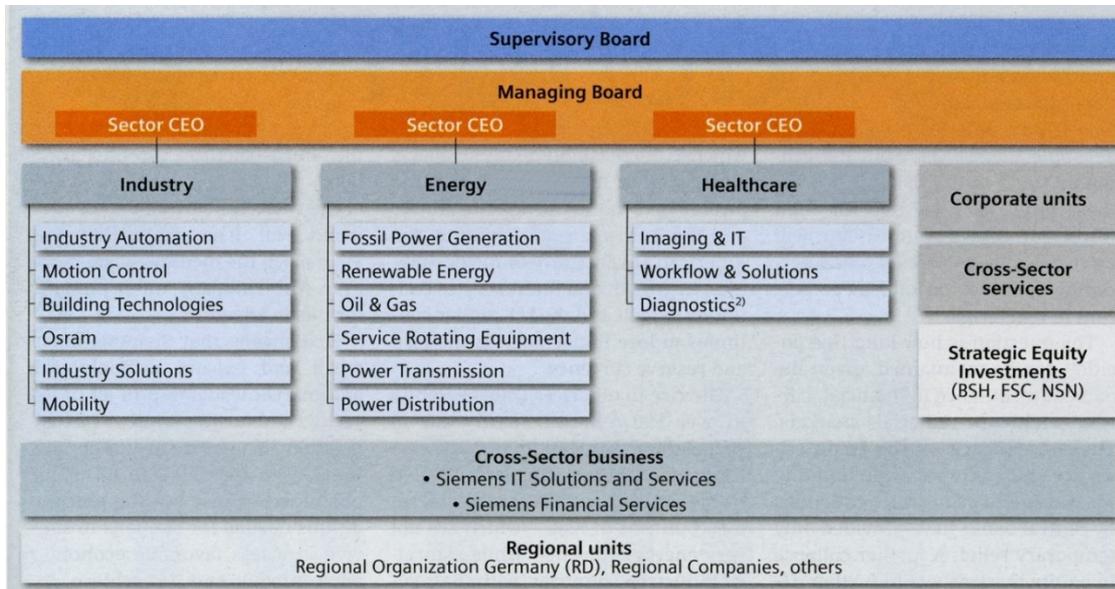
However, he was still thinking about the frequently recurring criticism regarding the job cuts at Siemens in the last years and whether it was acceptable to cut jobs although a company

registered profits in the billions. From his point of view, companies bore social responsibility and had the obligation to provide jobs for the community.<sup>153</sup> On the other hand, he believed that only those firms which operated profitably could secure long-term and sustainable jobs.<sup>154</sup> In a fast-changing world it was essential to proactively tackle foreseeable structural issues and seek long-term solutions in order to be successful.<sup>155</sup> As the trend of more automation implied the need of less people to do the same amount of work and therefore a shift in jobs, politicians, executives and economists should work together to find solutions and support those who were affected by the move.<sup>156</sup> For Kaeser it was clear: “It won’t be the biggest companies that survive, but the most adaptable.”<sup>157</sup>

## Exhibits

### Exhibit 1:

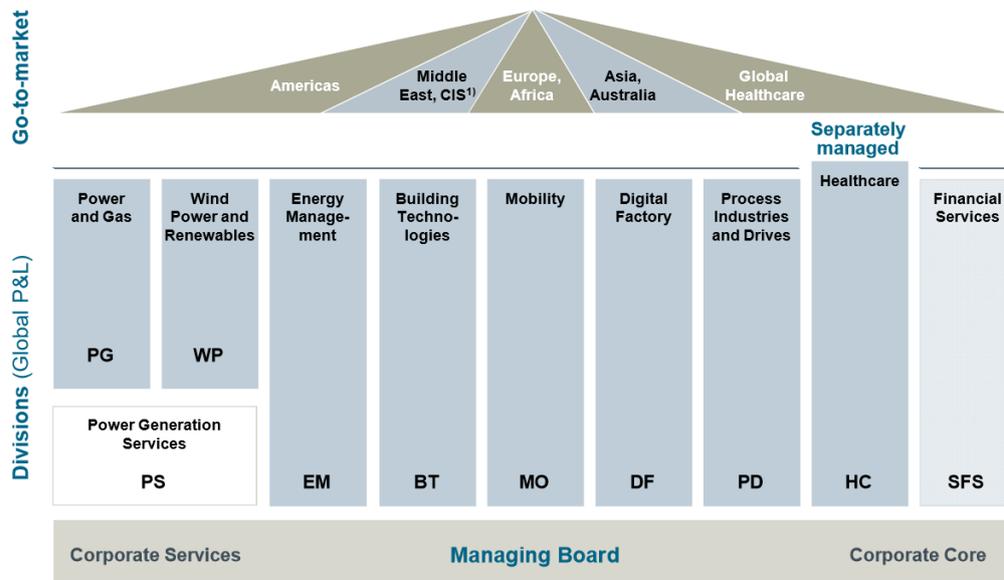
Organizational structure of Siemens since 01/2008



**Source:** Siemens AG. 2007-2018: Defining digitalization. Retrieved from <https://new.siemens.com/global/en/company/about/history/company/2007-2017.html>

### Exhibit 2:

Organizational structure of Siemens since 10/2014 (Vision 2020)

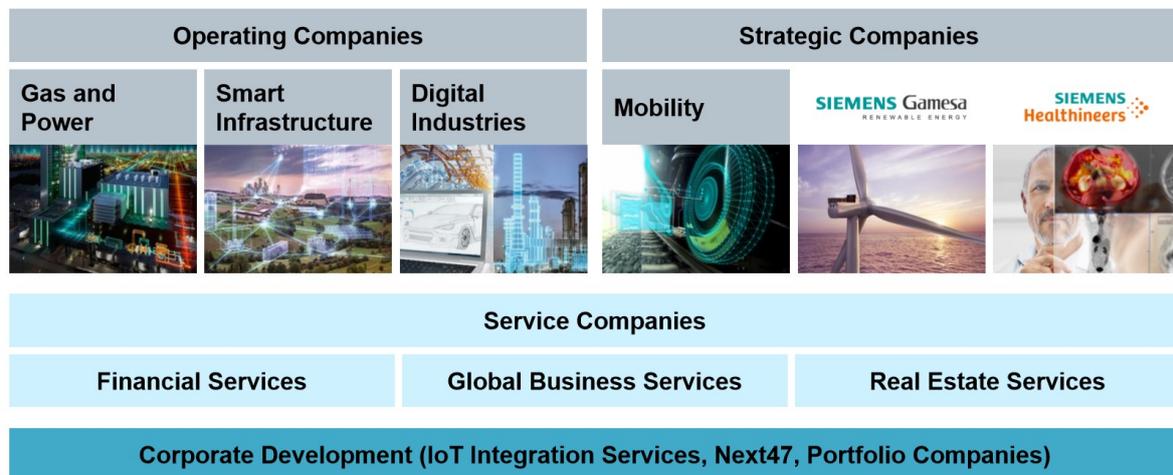


1) Commonwealth of Independent States

**Source:** Siemens AG. (2014). Siemens - Vision 2020: Bernstein Strategic Decision Conference May 29th, 2014. Retrieved from [https://www.siemens.com/investor/pool/en/investor\\_relations/financial\\_publications/speeches\\_and\\_presentations/140529\\_bernstein\\_ny\\_presentation.pdf](https://www.siemens.com/investor/pool/en/investor_relations/financial_publications/speeches_and_presentations/140529_bernstein_ny_presentation.pdf)

### Exhibit 3:

Organizational structure of Siemens since 10/2018 (Vision 2020+)



**Source:** Siemens AG. (2019). The Company: April 2019. Retrieved from <https://www.siemens.com/press/pool/de/homepage/siemens-company-presentation.pdf>, p. 39

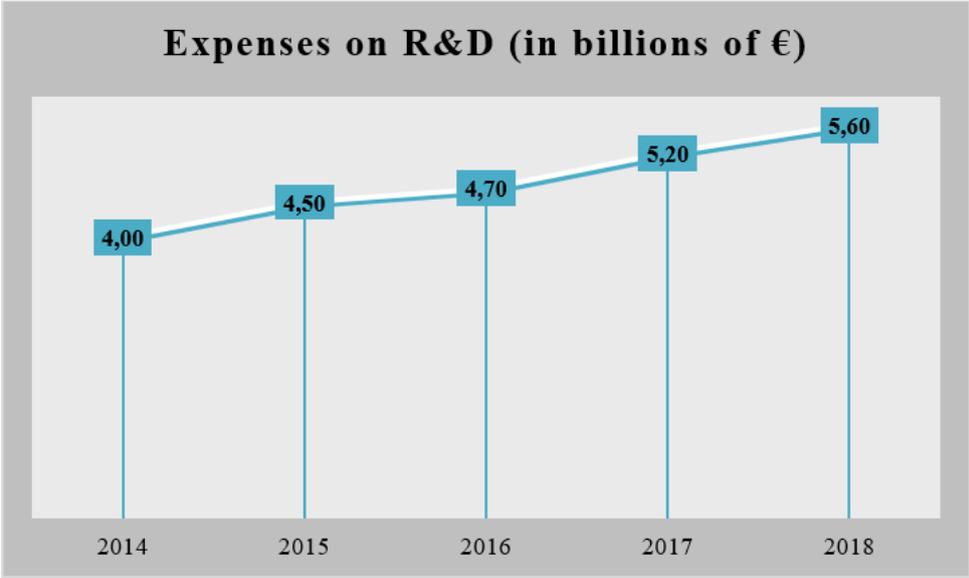
### Exhibit 4:

Overarching goals Vision 2020

<b>1</b>	<b>Implement stringent corporate governance</b>		€1 billion in cost savings achieved by FY 2016
<b>2</b>	<b>Strengthen portfolio</b>		Tap growth fields > 8% margin in underperforming businesses
<b>3</b>	<b>Execute financial target system</b>		ROCE 15-20% Growth > most-relevant competitors
<b>4</b>	<b>Expand global management</b>		> 30% of Division and Business Unit management outside Germany
<b>5</b>	<b>Be a partner of choice for our customers</b>		≥ 20% improvement in Net Promoter Score
<b>6</b>	<b>Be an employer of choice</b>		> 75% approval rating in "leadership" and "diversity" areas in global employee survey
<b>7</b>	<b>Strengthen Ownership Culture</b>		≥ 50% increase in number of employee shareholders

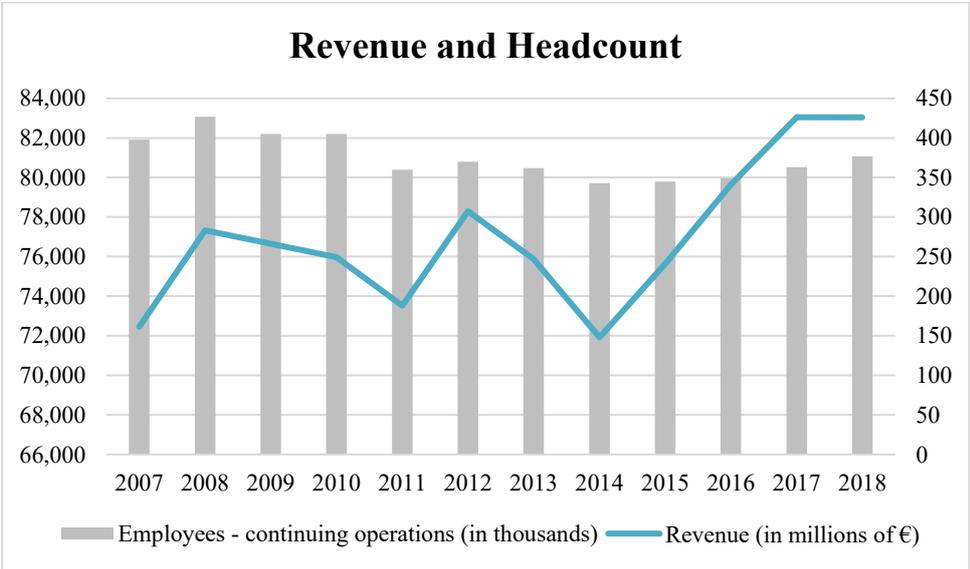
**Source:** Kaeser, J. (2018, February). *VISION 2020+ Shaping the future Siemens: Press and Analyst Conference*. Siemens AG, Munich. Retrieved from <https://www.siemens.com/press/pool/de/events/2018/corporate/2018-Q3/2018-q3-speech-kaeser.pdf>, p. 9

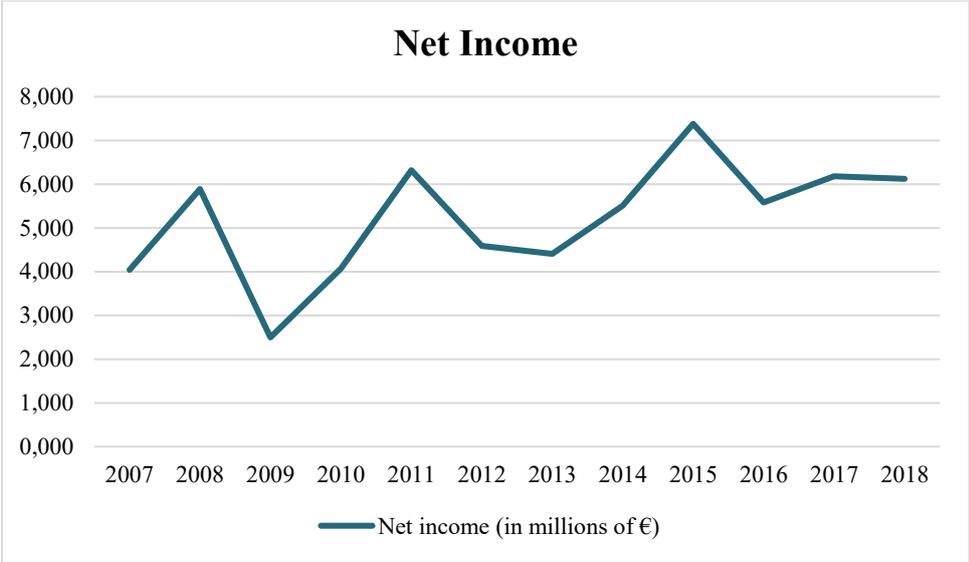
**Exhibit 5:**  
Siemens' expenses on R&D (Fiscal 2014-2018)



Source: Annual Reports 2014-2018

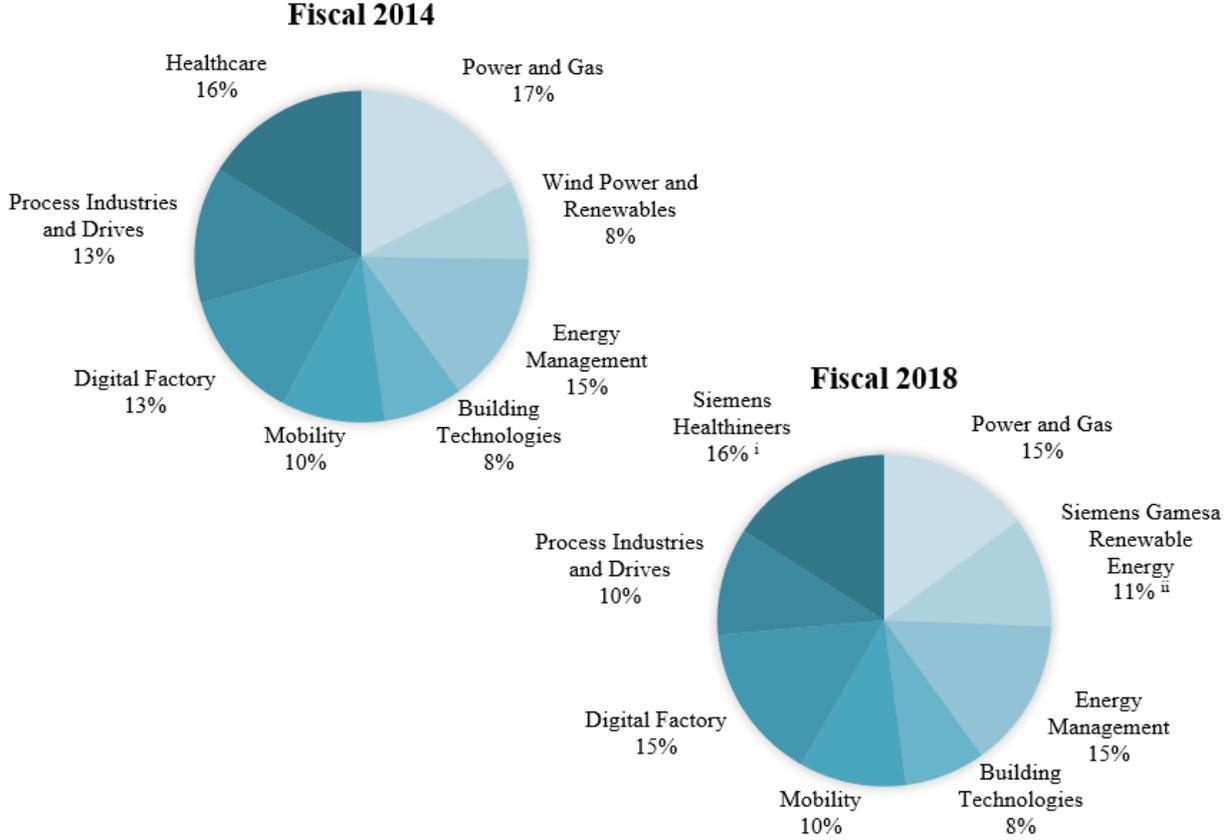
**Exhibit 6:**  
Siemens worldwide revenue, net income and headcount development (Fiscal 2007-2018)





Source: Annual Reports 2007 – 2018

**Exhibit 7:**  
Revenue by Industrial Business (Fiscal 2014 and 2018)

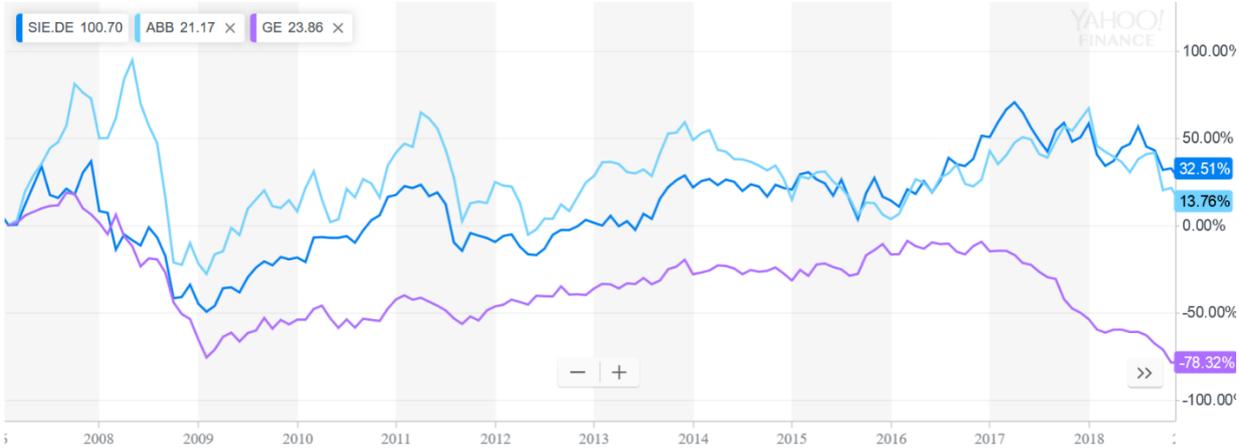


<sup>i</sup> In May 2016 the Healthcare business changed its name to Siemens Healthineers.  
<sup>ii</sup> In April 2017 Siemens Windpower merged with Gamesa.

Source: Annual Report 2014 and 2018

**Exhibit 8:**

Share price development of Siemens in contrast to its main competitors ABB and GE (01/01/2017 – 02/11/2018)



Source: Yahoo Finance

## 4 Teaching Notes

### 4.1. Overview of the Case

This teaching case is about the restructuring of Siemens under the leadership of the current CEO Joe Kaeser. It analyses how Kaeser lead Siemens into the digital age and returned the company to its former glory by using the company's dynamic capabilities after it suffered from a series of setbacks under the leadership of the former CEO, Peter Loescher. It further shows the effect that leadership can have on strategic change and firm performance.

The first part serves as an introduction to the case. It describes Kaeser's situation after the announcement of the new strategic program Vision 2020+ who is questioning his past achievements as well as the frequently recurring criticism regarding job cuts at Siemens since he became CEO in 2013. The introduction is followed by a short section about the background of Siemens.

The second part focuses on the era of Peter Loescher. It starts with a short description of Loescher as a person and outlines the first years of his tenure, in which he won much praise. The newly built up culture of integrity as well as the strategic direction and organizational structure under Loescher are covered. The part ends with an illustration of the arising criticism in the subsequent years and the resulting dismissal of Loescher in July 2013.

The third part, which forms the main body of the case, explains the most important changes Kaeser has implemented as soon as he had become the new CEO of Siemens. This includes a short characterization of Kaeser as well as a description of the new entrepreneurial concept Vision 2020 under Kaeser. As part of the description of Vision 2020, the new mission, strategy and positioning, organizational structure, culture, as well as the acquisitions, partnerships and divestments coming along with it are covered.

The fourth part is a snapshot of Siemens' performance in the beginning of November 2018. It is followed by an overview of the newly introduced follow-on program on Vision 2020, the so-called Vision 2020+. The case closes with some thoughts Kaeser has concerning the future and criticism on job cuts at Siemens.

## **4.2. Teaching Objectives**

This case is designed to be taught to undergraduate as well as graduate students in the field of Business Administration and Management. It is especially suited for courses in the area of Organizational Behavior, Strategic Management and Leadership.

After analyzing the case students should be able to:

- Examine the ability of a major company to rebuild the company's success after a series of setbacks and adapt successfully to ongoing trends
- Be aware of the importance of constantly sensing environmental changes and trends and interpreting them correctly
- Assess the role of dynamic capabilities for a company's success
- Understand how the background and personality of the respective CEO affects the strategic choices of the company and thus firm performance
- Investigate the effect of different strategic decisions on firm performance and success

## **4.3. Intended Contribution**

The focal contribution is to demonstrate how a major company, was able to restore the company's success after it was lagging behind its competitors due to a series of bad managerial decisions. It gives an example of a CEO who senses the need for a fundamental strategic reorientation, due to certain internal and external factors, and implements the right changes in order to adapt successfully to the trend of digitalization and, consequently, have a positive impact on firm performance. Furthermore, the effect the CEO's background and personality can have on strategic change and firm performance are shown and different changes, which can be implemented as part of a strategic renewal, are demonstrated.

Moreover, the theoretical concept of dynamic capabilities can be applied to this real-life scenario. It is illustrated in particular, how the availability of dynamic capabilities can fundamentally change a company's performance and rebuild success.

#### 4.4. Pedagogical Overview

To be able to efficiently analyze and discuss the teaching case the instructor and the students should prepare the case including the assignment questions and some readings in advance. A basic knowledge of the students about strategic management, strategic change, firm performance and dynamic capabilities is assumed.

First of all, it is recommended that the instructor and the students read the academic paper “Dynamic Capabilities: A Review of Past Research and an Agenda for the Future” (Barreto, 2010, JM). It provides a review of the different research streams on dynamic capabilities and introduces a new framework of dynamic capabilities as a multidimensional construct, that is relevant for the case discussion.

Furthermore, the corporate website of Siemens is a useful source to get additional information about Siemens’ businesses as well as strategic orientation. Especially the strategy overview of Vision 2020<sup>i</sup> and the video “Siemens CEO Joe Kaeser on the implementation of Vision 2020+”<sup>ii</sup>, that are both available on Siemens’ homepage, are helpful to get a better understanding of the implemented, as well as planned, changes under Kaeser’s leadership. To make the lecture more varied, the instructor could also show the video in class. Overall, the company’s annual reports can provide insights about the financial and market performance.

<sup>i</sup> Available on [https://www.siemens.com/annual/14/en/download/pdf/Siemens\\_AR2014\\_Vision2020.pdf](https://www.siemens.com/annual/14/en/download/pdf/Siemens_AR2014_Vision2020.pdf)

<sup>ii</sup> Available on <https://new.siemens.com/global/en/company/about/strategy/overview.html>

## 4.5. Assignment Questions and Analysis

*Question 1: What challenges did Siemens face? Why did Kaeser see the need to initiate strategic change at Siemens?*

To answer this question external as well as internal factors, that lead to the implementation of strategic change at Siemens, can be distinguished.

### External factors

- The unstoppable digitalization trend fundamentally affected and transformed all aspects of economy and society.
- New competitors entered the market. These included especially software companies like SAP, Microsoft, IBM as well as players like Google and Apple that expanded its businesses in areas such as manufacturing and building technologies.

### Internal factors

- Siemens was not in a great shape – neither strategically nor operationally, and neither from the point of view of business leadership. It especially lacked a long-term vision.
- Siemens was lagging behind its competitors, namely in profitability, growth and innovativeness. Siemens' competitors were the trendsetters and defined the trends in the industrial world. In contrast, Siemens oriented itself on what others had done and did not play an important role in shaping technological trends.
- Siemens did not live up to its economic potential and missed the profit margin target under Peter Loescher's leadership.
- The series of bad managerial decisions under Loescher's leadership had caused a situation of unrest in the company.

Overall, Siemens faced the challenge that the world was becoming increasingly digitalized and connected and that it could not keep up with its competitors with respect to profitability and innovative capacity. For Kaeser it was clear, that in the future it was essential to focus on the megatrend of digitalization in order to be successful, as he saw digitalization as the key driver for industrial growth.

**Question 2:** Analyze Siemens at the time of Kaeser's tenure by applying Barreto's framework of dynamic capabilities to the case.

Regarding this question it is expected that students analyze and evaluate each dynamic capability propensity individually in the context of Siemens' strategic transformation under Kaeser.

<i>Propensity to sense opportunities and threats</i>	<ul style="list-style-type: none"> <li>- Siemens sensed the threat of new competitors entering the market and of lagging behind in innovation, profitability as well as growth.</li> <li>- Siemens sensed megatrends such as the digitalization as an opportunity to create more value for the customers.</li> <li>- Siemens sensed the threat of a major shift in investments from conventional fossil power generation to renewable sources and distributed energy systems in the Power and Gas division.</li> </ul>
	→ <b>high</b> propensity to sense opportunities and threats
<i>Propensity to make timely decisions</i>	<ul style="list-style-type: none"> <li>- Siemens was the first company to bundle all the requirements for the factory of the digital future under one roof.</li> <li>- Siemens immediately took steps to adapt the Power and Gas business to changed market conditions. It was the first company to observe the signs of the times in the market for renewables and could therefore actively shape consolidation.</li> </ul>
	→ <b>high</b> propensity to make timely decisions
<i>Propensity to make market-oriented decisions</i>	<ul style="list-style-type: none"> <li>- Siemens focused on the megatrends of urbanization, globalization, digitalization as well as demographic and climate change. It was Kaeser's aim to continuously tap new promising fields and look on growth areas.</li> <li>- Especially the introduction of the Digital Factory division and the expansion of the digital business turned out to be a great success as the digitalization trend affected all aspects of the economy and society.</li> </ul>
	→ <b>high</b> propensity to make market-oriented decisions

<i>Propensity to change the resource base</i>	<i>Reconfigure resources</i>
	<ul style="list-style-type: none"> <li>- The foundation of next47, a separate unit for startups, to foster innovation and accelerate the development of new ideas</li> <li>- Changes in the organizational structure of Siemens as part of Vision 2020 and Vision 2020+</li> <li>- Changes in the workforce structure as Siemens started to increasingly hire software specialists instead of engineers and physicists in the development department</li> </ul>
	<i>Releasing resources</i>
	<ul style="list-style-type: none"> <li>- Divestment of businesses that yield few or no synergies for the company such as the audiology business and BSH Bosch and Siemens Hausgeräte</li> <li>- Reduction of jobs</li> </ul>
	<i>Gaining resources</i>
	<ul style="list-style-type: none"> <li>- Acquisitions of businesses such as Rolls-Royce’s aero-derivative gas turbine business, Dresser Rand as well as software specialists like Mentor Graphics, J2 Innovations and Mendix to sharpen the business focus</li> <li>- Partnership with IBM to broaden its digital capabilities</li> </ul>
	→ <b>high</b> propensity to change the resource base

Overall, students should understand that under Kaeser’s leadership Siemens was able to reach a high propensity in all four dimensions of Barreto’s framework of dynamic capabilities which resulted in a successful adjustment to the new environmental conditions and an improvement in performance.

**Question 3:** Taking into account the last two CEOs of Siemens, evaluate how each one's personality and background affected the strategic choices of Siemens and thus the company's performance.

With this question, students should elaborate on the effect the background and personality of the respective CEO can have on strategic change.

	<i>Peter Loescher</i>	<i>Joe Kaeser</i>
<i>CEO Origin</i>	First outside CEO of Siemens and largely unknown in Germany prior to his tenure at the company	Inside CEO who joined Siemens in 1980 and has never worked for a different company
	This background helped Loescher to succeed in guiding Siemens through the challenges of the corruption scandal as a CEO who was totally clean was essential to root-out bribery at Siemens. However, after winning much praise in the early part of his tenure criticism mounted in the later years. Loescher was good at trimming down the company and boosting efficiency in the short-term, but he lacked to define a long-term vision for Siemens. Furthermore, Loescher made a series of bad managerial decisions during his tenure that might have been the consequence of a lacking understanding of Siemens' culture and existing capabilities due to his origin.	Kaeser was seen as having a deep understanding of Siemens' business and culture because of his origin. He implemented strategic changes at Siemens that built upon existing organizational capabilities and benefited firm performance in a continuous way. Kaeser succeeded in building and sustaining long-term growth instead of focusing on the short-term.
<i>Educational Background</i>	Degree in business administration and economics	Degree in business administration

	The business background of both CEOs might be the reason that Loescher as well as Kaeser placed much value on capital markets during their tenure.	
<i>Personality</i>	Characterized as mostly stiff and little humorous	Characterized as a hands-on pragmatist who is entertaining and ironically looking at himself
	This personality traits could have further aggravated Loescher's ability to connect to Siemens and to the overall workforce during his time as CEO.	Kaeser's personality might have helped him to build up good relationships with investors, the capital market and people in general.

Students should understand that the personality and especially the background of the individual CEOs largely affected their strategic choices at Siemens and, consequently, the firm performance. While Loescher as an outside CEO performed very well in the early part of his tenure by guiding Siemens through the challenges of the bribery scandal and boosting efficiency, his success broke in to a great extent in the latter part, as he lacked to define a long-term vision for Siemens and made decisions that turned out to be a mistake. In contrast, Kaeser as an inside CEO initiated strategic changes that benefited firm performance in a relatively incremental but continuous way.

**Question 4:** *In your opinion, is it acceptable that Siemens cut a large amount of jobs under Kaeser's leadership although the company registered profits in the billions?*

The purpose of this question is that students learn to build an opinion based on what they have studied and share it with their fellow students. A discussion of the question will further deepen their understanding of the case and the taught topic.

Possible arguments that can be put forward by the students as part of a discussion are that on the one hand Siemens might have social responsibility for its employees and as a major engine of the economy the obligation to provide jobs to the community.

On the other hand, restructures were inevitable at Siemens in order restore the company's success and increase its competitiveness. Adaptation, that also implied changes in the workforce strategy, played a key role in the economic recovery of Siemens. As Kaeser said: "Only those who operate profitably can secure long-term and sustainable jobs." Under his leadership Siemens was aiming at increasing the total market value rather than focusing on the short-term impact of the taken measures. Consequently, according to his strategy Kaeser performed better by cutting jobs in order to assure the survival of the company.

Further topics that could be included in the discussion by the instructor are whether students see alternatives to layoffs and how the problem of the increasing automation trend and the resulting need of less workers could be solved in the future.

#### **4.6. Board Plan**

The case is designed for a 90-minute lecture. The following table shows the proposed activities and the duration of each task.

<b><i>Activity</i></b>	<b><i>Time (min)</i></b>
Theoretical Review	15
Siemens Case Review	10
Question 1	10
Question 2	20
Question 3	15
Question 4	10
Conclusion and Summary of Take-aways	10

## 5 Discussion

The results of this thesis support the importance of strategic change within a company in order to restore success and maintain the company's viability in the long-term. Furthermore, they exemplify the effect of leadership on strategic change, and thus on firm performance. The Siemens case shows a real-life example of a strategic transformation of a major company and the implementation of possible changes to adapt to changing environments. It also illustrates the role of dynamic capabilities for a company's success.

According to the definition of strategic change by Snow and Hambrick (1980), Siemens definitely underwent strategic change under Kaeser's leadership. Kaeser did not only adapt to the changing environmental conditions, but also implemented changes in the technology, structure and processes to come up with an overall strategic transformation. The Siemens case is also in line with Gioia and Chittipeddi's (1991) view on strategic change, as in addition to changes in the mode of acting, Kaeser made alterations in the way of thinking by introducing a culture of ownership and a new mission at Siemens.

Regarding the reason for strategic change, the case supports the findings of Boeker (1997) and Mintzberg (1978), which identified poor performance as a main initiator for strategic change. When Kaeser became CEO of Siemens in 2013, Siemens was not in great shape signaling Kaeser that the existing strategy did not meet the requirements of the environment and therefore strategic change was necessary.

Moreover, several authors in the literature (Day & Lord, 1988; Gioia & Chittipeddi, 1991; Hambrick, 1989; Weiner & Mahoney, 1981) emphasize the impact leadership has on strategic change and firm performance, that can also be underlined by the Siemens case. Both CEOs, Loescher first and then Kaeser, set the strategic direction for the organization and made managerial decisions that highly affected firm performance. However, it has to be considered that it is not only the CEO who has an effect on strategic change and thus firm performance as for a successful implementation of strategic change the CEO heavily relies on the company's stakeholders, most notably the firm's employees as they are seen as one of the company's greatest assets. Therefore, it is impossible that the CEO implements strategic change on his own. However, managers often face resistance to change by their employees as they fear moving from the known to the unknown and prefer to keep the status quo. In this case, the CEO especially depends on other managers, including the lower management, to pass on core values and make the motives and necessity for change explicit to every single employee.

Furthermore, the case confirms the findings of Miller (1993) who argues that CEO succession is associated with organizational change. After being announced as CEO, Loescher as well as Kaeser implemented major organizational changes at Siemens. This, however, contradicts Boeker's (1997) theory of no significant effect of CEO succession on strategic change.

Concerning the impact of the CEO origin on strategic change, the case of Siemens is not in line with the findings of Greiner and Bhambri (1989) that especially CEOs coming from outside the company are the ones who initiate change and define the new direction. Kaeser who introduced a new entrepreneurial program and implemented major strategic change at Siemens, was hired from inside the company and has never worked for a different company. On the other hand, it confirms the study of Zhang and Rajagopalan (2010) who argue that a CEO hired from inside the firm in contrast to an outside CEO is more likely to implement strategic change that is in line with the existing capabilities. While Loescher as an outside CEO was good at trimming down the company in the short-term, he lacked to define a long-term vision for Siemens. In contrast, Kaeser who was hired from inside the firm succeeded in building long-term growth and therefore had a more continuous and positive effect on firm performance. However, it has to be taken into account that the origin of Loescher was an important requirement for successfully rooting-out bribery at Siemens in the beginning of his tenure.

With respect to the dynamic capabilities view, the Siemens case seeks to illustrate the importance of each dimension defined by Barreto (2010) as part of his concept on dynamic capabilities. By applying Barreto's (2010) framework to the Siemens case, it becomes clear that under Kaeser's leadership Siemens was able to reach a high propensity in all four dimensions, namely the propensity to sense opportunities and threats, the propensity to make timely decisions, the propensity to make market-oriented decisions as well as the propensity to change its resource base, which resulted in a successful adjustment to the new environmental conditions and an improvement in performance.

Teece et al. (1997), as the first scholars who introduced the concept of dynamic capabilities, argue that dynamic capabilities are only relevant in highly dynamic markets in contrast to environments characterized by lower rates of change. Siemens is in fact operating in an industry that is highly dynamic, being affected by digitalization and therefore characterized by advancing and changing technologies.

The Siemens case further supports Zollo and Winter's (2002) definition of dynamic capabilities as structured, stable and persistent decisions in contrast to being a disjointed way to respond to crisis. Under Kaeser's leadership Siemens showed its ongoing effort, to sharpen the business focus and continuously tap new promising fields. The Siemens case illustrates the importance

of recognizing opportunities and threats as well as environmental changes on a continuous basis and not just in response to a decline in performance in order to be successful in the long-term.

However, there are some limitations regarding the analysis of the CEO's effect on strategic change as well as the role of dynamic capabilities for a company's success. First of all, the effect of some of the implemented changes at Siemens might not be apparent in the short-term as the full implementation and integration of changes is typically a lengthy process. Consequently, the final impact of the initiated changes on Siemens' performance might only become more visible in the long-term.

In addition, some implemented changes might look successful after the first five years, but an exogenous shock could change the perspective on the outcome. In a fast-changing world shifts in the environmental conditions are rather unpredictable and may render current strategies ineffective.

Furthermore, the effect of the CEO on strategic change was evaluated by only using qualitative research instead of quantitative measurements such as in form of a survey. This might cause a restricted objectivity of the effect of Siemens' CEOs on strategic change and thus firm performance.

Concerning the dynamic capabilities view, it is a major limitation that so far, no quantitative framework for the analysis of dynamic capabilities exists in the literature. This lack of quantitative framework hampers the precision of the evaluation. On account of this, the quantitative measurement of dynamic capabilities should be addressed in future research.

Another aspect future literature could include is whether the results of this dissertation also apply to smaller companies. Siemens as a major company is characterized by strong financial and R&D capabilities that might make it easier to adapt to changing environmental conditions giving Siemens a competitive advantage compared to companies that are less resourceful.

## 6 Conclusion

Overall, literature has shown that adaptation to the continuous changing environment and thus strategic change are crucial for a firm's survival and success. In recent years especially the dynamic capabilities view has gained increasing attention in explaining how a company can achieve and sustain competitive advantage in changing environments. Moreover, scholars have investigated the impact the CEO can have on strategic change and thus firm performance. As the top executive the CEO formulates the corporate strategy and determines the strategic direction of a firm. Scholars found out that the content and direction of the strategy the CEO takes is generally affected by previous experiences as well as the CEO's personal background.

To support the existing theories with a real-life example, I selected the case of the restructuring of Siemens under the leadership of its current CEO, Joe Kaeser. The case intends to demonstrate a strategic renewal of a major company in response to changed environmental conditions. Kaeser fundamentally reorganized Siemens and implemented major changes, not only in the company's strategy, but also the mission, culture and organizational structure. He used in particular the digitalization trend to boost performance and restore success after a series of setbacks under the leadership of Siemens' former CEO, Peter Loescher. The transformation of Siemens under Kaeser's leadership is an example of a positive effect the CEO can have on strategic change and the resulting performance. Through the case analysis it becomes clear, how the experience and personal background of the different CEOs, Kaeser and Loescher, affected their respective strategic decisions and thus Siemens's performance. Furthermore, the case exemplifies how the disposability of dynamic capabilities at Siemens contributed to the company's success. Under Kaeser's leadership Siemens was able to sense opportunities and threats, make timely and market-oriented decisions as well as change the resource base at the same time.

The main conclusions of this thesis are that the CEO indeed can have a great effect on strategic change and the resulting performance, in the case of Kaeser even a positive one. However, different types of leaders are required for different challenges. While Loescher as an outside CEO lacked to define a long-term vision, his background and origin were beneficial for cleaning-up the company after the bribery scandal.

Furthermore, it has become clear to me that dynamic capabilities are crucial for achieving a sustainable competitive advantage and that managers must pay attention to all four dimensions of dynamic capabilities at the same time in order to succeed and survive in the long-term.

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## Teaching Case

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