Using Strategic Leadership and DMAIC to Transform a Global Hospitality Market Leader: A Case Study

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Abstract
This paper chronicles the transformations undertaken by outside help to turn XYC company's status from AAA's company worst performer to most successful partner worldwide. A more than two-year problem had senior management at XYC Company struggling to find the answer to what was causing them to potentially lose their largest client, AAA company, and stem the tide of employees leaving the company. This led XYC to seek outside help in the form of a consultant to address the problem. The objective of the research is to report and analyze the steps taken to identify and mitigate the root causes of these problems and find effective solutions to improve both customer satisfaction and reducing employee turnover and therefore keep a critical client, AAA. The Six-Sigma methodology DMAIC (Define, Measure, Analyze, Improve and Control) was selected as the process improvement framework. As a DMAIC tool, the Net Promoter Score (NPS) was used to assess the business problem (low NPS) which pointed to additional data that was collected using a lean approach for analysis. Over the three-months allotted for improvement, the researchers refined the process and implemented a highly effective analytical approach and solution design. The end results showed substantial improvements in customer- and employee satisfaction, NPS scores and employee efficiency. These solutions and the transformational leadership approach were then implemented across XYC companies globally, resulting in large-scale transformations in work process and culture.

Keywords: Strategic Leadership, Transformation, Change Management, Hospitality, DMAIC

1. Introduction

AAA (the name has been changed) is a US-based company founded in 2008 and operating an online platform for hosts and guests for short- and long-term homestays and experiences. It acts as a broker and mediator between its customers and is known in the hospitality industry for being innovating and for its world class services. By 2020, AAA had a customer support division of more than 10.000 employees. The entire division has now been outsourced to various partners, including XYC. AAA's global customer experience account handed over to XYC consists of 1000+ agents speaking 17 languages. XYC (the name has been changed as well), also a US-based company, is a global outsourcing leader in marketing communications offering the best talent, creativity, and digital innovation. Its portfolio includes more than 200 brands, including some of the world's most iconic. It handles a wide variety of customer service projects. In 2014, XYC won the bid to take over and develop company AAA's global customer support and service. Within two years, AAA became the largest project in XYC portfolio as measured by revenue and headcount.

However, as of late 2015, XYC's performance started to decline and problems to accumulate. The company responded by implementing stricter measures and embracing top-down management style. XYC could also have ended up losing its largest client, AAA. Although XYC managed to grow 300%, as measured by the number of employees, from 2015 to 2018 the Key Performance Indicators (KPIs) failed to follow this upward trend. For none, XYC was plagued with employee turnover issues. More than five hundred employees left, with the yearly attrition rate reaching 140% in 2018. Because of the high level of attrition, the company was forced to constantly hire and train new employees. Making matters worse, the time to agent competency was extremely long, 16 weeks in total, and a drag on contractual agreements. Many agents barely completed training by the time they resigned from XYC. Business problems were especially critical in Tier 2, the core tier, where the performance of agents promoted to Tier 2 was not in line with the targets set by AAA despite the various steps previously taken by XYC. Agents and junior managers were punished for not reaching their targets, and yet not reworded when they did reach their targets, much like a "carrot and stick" transactional leadership style. Managers were simply not trained in leadership and thereby not able to create strategic or operational resilience (Amankwah et al., 2020).

XYC senior management struggled for more than two years, from 2016 to 2018, to determine what caused these problems; to no avail. XYC eventually sought outside help and asked a consultant to address the problem. The consultant was hired in July 2018 as an Operations Manager. Additionally, a new director with a ambidextrous approach was hired to offer the needed support to continue operations and enable the exploration of new ways to run the business (O'Reilly & Tushman, 2004). The director agreed to change the title of the consultant to 'Head of Transformation' as transformation needed to be explicit. The consultant established a central transformation team.This study focuses on the transformational efforts undertaken by the consultant to turn things around. Specifically, using a mixed methodology, it aims to report and analyze the steps taken to identify and mitigate the root causes of these problems by finding effective solutions to improve both customer satisfaction and reduce employee turnover.

Company XYC three key metrics include (i) Time to Competency, (ii) NPS (Net Promotor Score), and (iii) SPD (Solved cases Per Day). These three metrics where set by AAA and are seen as best practice in the service industry (SPD is a measure of efficiency, NPS a measure of quality and Time to Competence is a combined measure of both efficiency and quality). AAA set official targets and XYC adjusted the targets to fit the ambitious transformation. To achieve these, the transformation set objectives more ambitious than required by AAA: They included:

1. Decreasing time to competency from 16 to 6 weeks: because of the exponential growth in head count, a significant decrease in time to competency could have a massive impact on all performance metrics.
2. Increasing Quality: The Net Promotor Scores (NPS) are expected to go from 42 up to 55 by week 12, from the start of the pilot project. That is, from implementing the actions to address the root cause, to start seeing the results.
3. Increasing Efficiency: Solved cases Per Day (SPD) to go up from 8 to 13 by week 12 from the start of the pilot project.
4. Developing an operational rhythm for Team Leaders to follow (a management system) as a standard set of procedures and best practices were sorely needed for those responsible for the operational teams.

As chronicled in this paper, this meant that many transformations had to be undertaken before XYC's status could be changed from AAA's worst performing to most successful partner worldwide.

2. Literature Review
- Transformation
It has been estimated that more than 70% of all transformational efforts fail (Kotter, 2007). Whilst companies keep trying to adapt to ever changing consumer needs, they are lacking a focus on long-term sustainability, thereby exposing their business models as they are delivering short term solutions and not modifying the model nor the system to sustain and deliver value generated by transformational efforts (Appelbaum et al., 2012). The key issue is whether transformation needs data or whether data needs transformation (Hanelt et al., 2021). Scholars' experience is that the latter is true. What is needed is less data (obesity) and more quality. In other words, when aiming to transform businesses in the non-manufacturing sector, it is necessary to move away from sitting behind the screens and get into the field instead. This means that individuals, not just data, should be at the center of the business' change process (Gale & Aarons, 2018). In an attempt to defy the odds and execute a successful transformation, this research study therefore employs a human-centered approach to successful strategic transformation. It explores how managers and business leaders can pioneer leading a strategic business transformation process. Since design thinking has been applied to strategic development and execution (Junginger, 2005), a human-centered design thinking approach is applied for new projects, even though company XYC currently employs a very data-heavy approach when it makes decisions. According to Tabrizi et al. (2019), while data-driven decision making is the correct approach, the low success rate of all transformations may be essentially due to the lack of quality of the data used and a lack of people actually involved in the process.

- DMAIC
The DMAIC Six-Sigma methodology is often described as a suitable approach for problem solving (Appiah, Amankwah-Amoah, & Liu, 2020; Mas & Lokkerbol, 2012; Tabrizi et al., 2019). The acronym stands for Define, Measure, Analyse, Improve and Control. Application of the Six Sigma. The DMAIC methodology can improve quality and customer satisfaction, reduce cost reduction, eliminate most defects, lower process variances, boost cycle time, and increase profitability and employee satisfaction (De Koning & De Mas, 2006). Linderman et al. (2003) defined Six Sigma as an organized and systematic methodology for strategic process improvement and good and service development, that relies on statistics and a scientific approach to make dramatic reductions in customer defined defect rates. Leadership is crucial for any transformation and for the application of DMAIC in non-manufacturing businesses (Porfirio, 2021).

At first, DMAIC was applied in the manufacturing sector as a 12-step model (Power, 2014). Although DMAIC was originally created by engineers to improve quality in production facilities, it has gained popularity in the service sector, most notably in the healthcare, education, and retail sectors and has been applied in service industries to improve quality and customer satisfaction (Ülen & Gülmez, 2020). The main differences between manufacturing and non-manufacturing are a lack of tangible outputs and products, limited or no established measurements, and a greater focus on the human element (Snee & Horel, 2005). Compared to the Six Sigma as implemented in the manufacturing industry, there is lesser research and problem-solving case studies in the service

industry since many processes in the service sector are intangible and difficult to measure (Trimarjoko, Purba, & Nindiani, 2020).

Table 1, created by the authors based on the literature reviewed, provides an overview of the DMAIC methodology. It shows the DMAIC five phases and indicates the objectives of each phase. The focus is on non-manufacturing firms and on an approach that does not lean heavily on statistics.

Table 1: DMAIC Five Phases

Phase	Objective	Question to be Asked	Common Tools
Define	- To define problems and goals. - To align team and stakeholders.	- What are we trying to achieve?	- Project charter - Communication plan - Supplier, Input, Process, Output, Customer(SIPOC) - Stakeholder map
Measure	- To measure the size and scope of the problems. - To understand the current state of the problems.	- What must be measured and how? - Which measurement system is to be used?	- Process map - Value stream map - Data collection plan - Measurement validation
Analyze	- To understand why there are problems. - To identify and prioritize root causes.	- What factors are likely to be the root causes? - Is it related to one or more? - Is one/more root cause(s) having a greater impact than others?	- Fishbone diagram - Brainstorming - Pareto chart - Statistical Process Control (SPC)
Improve	- To address proven key root causes - To find solutions to drive efficiency and quality.	- Which solutions will solve our business problems in the long term? - How will we go from the current state to the desired future state?	- Brainstorming - Experiment design - Idea cards - Mistake proofing - Design thinking - Prioritization
Control	- To sustain improvements. - To ensure transition from project to Business As Usual (BAU).	- How do we ensure that the operational team will be able to sustain the improvements?	- Control plan - Responsible, Accountable, Consulted, Informed (RACI) matrix - Kaizen - 5S system - Voice of the Customer ((VOC) and Critical to Quality (CTQ)

Source: Authors' creation

When DMAIC is applied, it is important that business problems be addressed in the order of the phases. The final phase, Control, is about how to sustain improvements and requires the operational teams to have new processes in place and keep improving using the Six Sigma tools, such as VOC and translate VOC into CTQ. This can also be used in the Analyze and Measure phases (Smith, 1988).

Table 2: DMAIC as Applied to the Service Sector

Author	Sector	Result
Mansur dos Reis et al. (2022)	Healthcare	This study seeks to understand the impact of DMAIC on direct patient care. Using DMAIC and leadership proved to be common facilitators in improving patient care.
Limsirivallop et al. (2019)	Retail	DMAIC was applied to improve a global retailer's in-store deliveries. Based on poor customer reviews, DMAIC was used to improve the cycle time. The results showed significant improvements.
Bloja, Monica, & Veres (2019)	Energy	DMAIC was used to improve customer service in a large energy company. Its application pushed the actualization rate up from 2.6% to 20%, outperforming the 10% target in just 3 months.

Source: Authors' creation

While DMAIC is often used in production as a method of improvement, the above studies and results demonstrate that DMAIC can also be successfully applied to various activities in the service sector.

- *Strategic Leadership*

Strategic leadership is viewed upon as the foundation for the successful performance of any organisation operating in the constantly changing and complex environment of the 21st century (Jaleha & Machuki, 2018). Hitt, Keats, & DeMarie (1998) and Ireland and Hitt (1999) described the capabilities needed for effective strategic leadership in the new competitive landscape expected for the 21st century. They argued that effective strategic leaders had to: (1) develop and communicate a vision, (2) build dynamic core competencies, (3) emphasise and effectively use human capital, (4) invest in the development of new technologies, (5) engage in valuable strategies, (6) build and maintain an effective organisational culture, (7) develop and implement balanced controls, and (8) engage in ethical practices (Hitt et al.; Ireland & Hitt, 1999). It is clear from a review of the relevant body of literature that there is no common understanding of strategic leadership (e.g. Hitt et al., 1998; Ireland & Hitt 1999; Hambrick & Quigley, 2014). Schlosser et al. (2023) argues that strategic leaders should develop ambidextrous characteristics to exploit, explorer and to develop organizational resilience. Scholars have yet to agree on the conceptualization and operationalization of the contextual conditions that strategic leaders face, and more research is needed to understand how much influence top executives have over performance (Singh, Darwish, & Potocnik, 2016). There is also no common understanding among researchers of the conditions and factors impacting the operations of strategic leaders (Quigley & Graffin, 2017). Table 3 provides an overview of the definitions of strategic leadership over time.

Table 3: Definitions of Strategic Leadership

| Author	Year	Definition
Bass	2007	A group of chief executive officers (CEO) who set overall policies for acquiring and integrating resources for an organization.
Ireland, Hoskison & Hitt	2013	A leader's ability to anticipate, envision, and maintain flexibility and empower others to create strategic changes as necessary.
Schoemaker & Krupp	2015	Having the adaptive capacity to appropriately respond to the dynamism and complexity of the external environment.
Fernandes et al.	2022	A significant contribution to strategic leadership arises from social responsibility and the sustainable development of organizations.

Source: Authors' creation (2022)

Comparing definitions over time makes it quite clear that scholars have yet to agree on a single definition (Hambrick & Quigley, 2014). As can be seen in Table 3, the definition of strategic leadership has evolved from focusing on activities within the organization to understanding both the internal and external environments all the while being able to respond to changes and empower others to implement strategic changes. While there is no mutual understanding of strategic leadership, it is evident, looking at the literature, that the responsibilities of strategic leaders have become wider, and deeper as strategic leadership has developed from a focus on financial performance to employee motivation and dealing with societal challenges.

Table 4: Strategic Leadership's Main Theoretical Directions and Contributions

| Main Theoretical Direction	Contribution
Performance Strategic Leadership Hernandez et al. (2011); Hiller et al. (2011)	• Focus on financial performance • Strategic Planning • Employee performance • Firm Vision • Standardization and efficiency
Transformational Strategic Leadership Bass (1997); Geer, Lusch, & Hitt (2017); Burgelman & Grove (1996)	• Learning and employee development • Behavioral change through inspiration • Support moral positions of employees • Drive transformation
Dynamic Strategic Leadership Menz (2021); Burgelman (2018); Schoemaker & Krupp (2015)	• Socially responsible • Engaging with stakeholders and external focus • Digital technology adoption
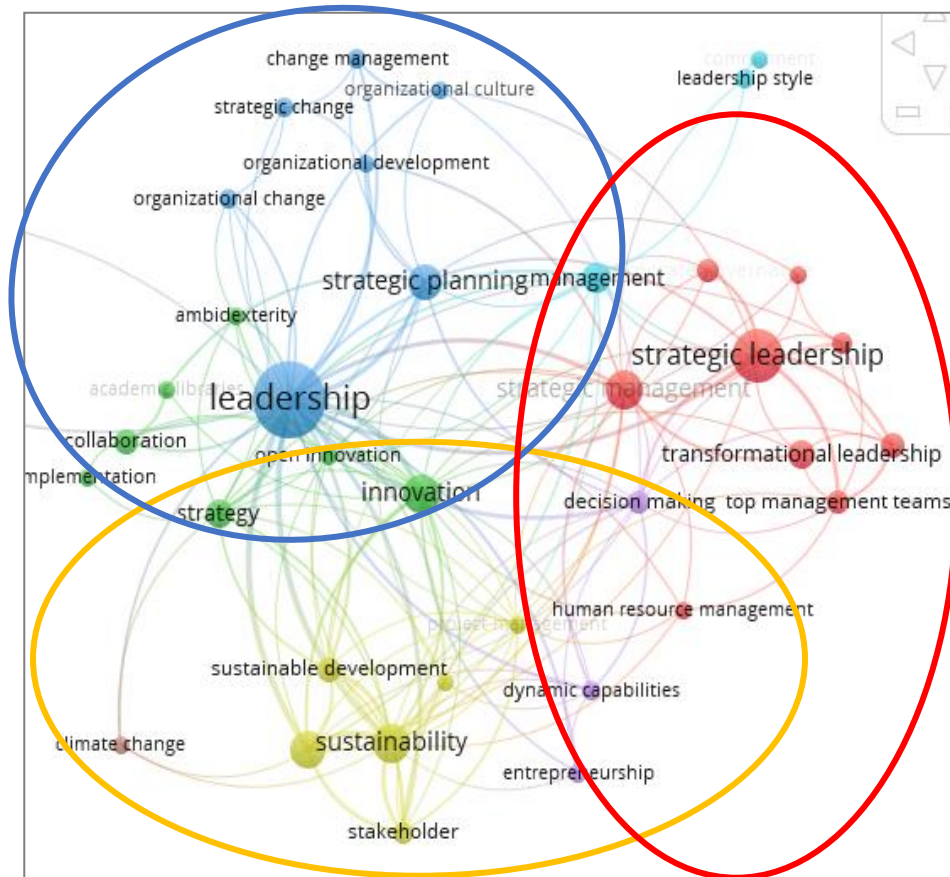
Figure 1: Bibliometric Analysis of Strategic Leadership Literature (Authors' creation)

As depicted in Figure 1, the intersection between the main theoretical directions of strategic leadership indicates that to ensure organizational change and employee development and address societal challenges, leaders must have a large degree of ambidexterity. Driving companywide transformations requires dynamic capabilities as such transformations cannot simply rely on situational leadership. Transformational strategic leadership also promotes ambidexterity, whereby the strategic leader focuses on the internal resources of the firm and how to exploit those, while at the same time exploring new opportunities and trends in the market (O'Reilly & Tushman, 2008).

3. Methodology

This study employed a mixed methodology to meet the research objectives. A sequential explanatory design was applied for gathering data and identifying solutions within the DMAIC method. A sequential explanatory design involves collecting and analysing quantitative data to find meaning and direction in that data. The findings could then be used to design a qualitative data gathering process. The focus was on explaining quantitative results by using qualitative data to explore certain results. For example, an analysis of secondary NPS data may suggest that some agents are performing better than others. Consequently, qualitative data, interviews, focus groups, etc, were designed in a way that enabled the researchers to explore these results. This was done by

using follow-up interviews to better understand certain parts of the findings. The sequential process is depicted in Figure 2, below.
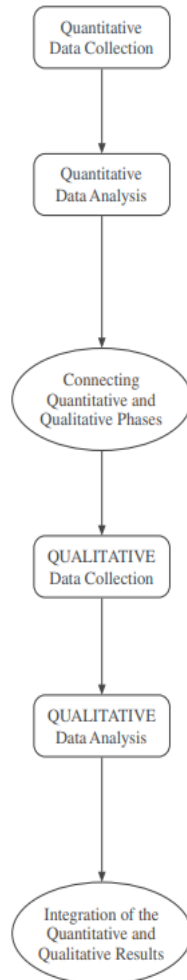
Figure 2: Sequential Explanatory Design (Ivankova, Creswell, & Stick, 2006).

First, secondary data in the form of historical NPS data was collected from the population. A large sample was drawn with more than 450 people part of the sample (Salkind, 2018, p. 138-142). That resulted in having several thousand data points required that a cluster analysis be performed. This made it possible to create clusters with high similarities based on previous data collection efforts. Applying this strategy enabled rules to be adopted and used for further analysis on what areas to target next with qualitative research.

A survey was then designed and sent out to the population sample. The population consisted of Tier 2 agents, middle management, and senior management. One of the advantages of a survey research is that it is possible to collect a wide variety of unobservable data, such as for example, traits, beliefs, attitudes, preferences in relation to leadership, performance (Babbie, 2016). Moreover, it was possible to remotely reach the population, when necessary, and when members were not accessible in person due to remote work. Tier 2 was selected because this was the core

Tier of the project. Tier 2 handled incoming calls from guests and hosts who were already traveling. These calls thus dealt with urgent matters that needed immediate resolving. Company AAA made it expressly clear to company XYC that NPS had to be improved in Tier 2, or else the contract would be cancelled due to a breach of contract as a result of poor customer satisfaction score, as stipulated in the contract.

The sample size for this study was based on probability sample. For any given study, the sample size depends heavily on the purpose of the study. According to Salkind (2018), a common prejudice is that the bigger a sample is, the more representative it will be. The size of the sample, however, is not necessarily the key factor in terms of representativeness. Representativeness essentially depends on how homogeneous the population is. Constraints in this research stemmed from the fact that the research objects were located in two different tiers. But, since the focus was on Tier 2, the sample was selected from this tier. It is important to note that because of the urgency of the project, the sample size was affected by scarce resources such as time and budget as well as the availability of respondents, a common occurrence according to Han, Kamber, and Pei (2012).

The size of the representative sample was calculated Based on Salkind's (2018) formula. The total Tier 2 population consisted of 600 agents. A Confidence level of 95% was applied. It produced a Z-score of 1.96 and a margin error of 5%, which equalled to a sample size of 235 agents.

Table 5: Desired Confidence Level Scores

Desired Confidence Level	Z-Score
90%	1,65
95%	1,96
99%	2,58

Source: Developed by authors based on Salkind (2018)

NPS data, the research survey, observations, and interviews were all especially useful to draw meaningful implications and conduct inductive exploration of novel insights (Eisenhardt, 1987). The one-on-one semi-structured interviews with experts were used to deep dive into the population sample. They provided a valuable opportunity to further explore the questionnaire results (Salkind, 2018). In qualitative research the number of interviews is generally determined by the point at which saturation is reached. This is also known as the point of diminishing returns as little to no novel information is learned about the topic by conducting more interviews. Since more interviews would not provide new insights, no further interviews are needed (Guest, Bunce, & Johnson, 2006).

The measure phase (data collection) was done in combination with direct observations, termed Gemba Walks in the DMAIC jargon. Since observation data is free from participant reporting problems and bias, direct observation has been described as the gold standard among qualitative data collection techniques (Murphy & Dingwall, 2007). While non-observation (self-report) qualitative methods, such as interviews or focus groups, are typically less challenging to undertake, they are subject to participant reporting problems. Both observations and semi-structured interviews are good for small data scale where the sample size is small or when it is easy to reach

the sample which is why they were selected for this study. Table 6 summarizes the data collection process.

Table 6: Sample and Data Collection

Method	Information Source	Sample Size	DMAIC Phase	Description
NPS Data	Secondary data sources	1000	D/M	To define the problems, historical NPS data was collected from the past three years. Any NPS below 45 pointed to a significant issue since the agreed service level should be 55.
Survey	Primary data sources	235 agents	M/A	To understand the business problems, 235 Tier 2 agents were surveyed to determine their job satisfaction and support levels and review own performance.
Observation	Primary data sources	25	M/A	Gemba walks were carried out on the Tier 2 operational floor to observe interactions between agents and the leadership.
Interview	Primary data sources	5	M/A	5 expert interviews were conducted: 3 with agents, 1 with a team manager, and 1 with an operations manager.
NPS Data	Primary data sources	700 agents	I/C	To ensure that improvements were effective and sustained, the NPS was constantly measured. All those in the Lagoon and all Tier 2 agents were measured and visual management was put in place to create visibility for all.

After collecting data, the responses were cleaned in an attempt to fill in missing values and smooth out noise while at the same time identifying outliers and correct inconsistencies in the data (Han et al., 2012). In the event of a missing value, a central tendency for that attribute would be used to fill in the missing value. Boxplots and scatter plots or SPC charts were used to identify outliers. Typically, where values are organized into clusters, those whose values fall outside of the cluster may be considered outliers and removed or further analysed (Han et al., 2012).

4. Results and Discussion

The DMAIC methodology was used under the Lean Six Sigma umbrella in the planning and execution phase of the project. The main objectives were to: (1) decrease time to competency from 16 to 6 weeks as a massive growth in head count, a significant decrease in time that could have a huge impact on all performance metrics; (2) improve Quality: NPS from 42 to 55 by week 12; and (3) improve efficiency: SPD (Solved tickets Per Day) from 8 to 13 by week 12.

Table 7: Results Based on DMAIC Phases

| Phase	Description
Define	Company XYC needed to improve Quality (NPS) and Efficiency (SPD) in order to keep its contract with company AAA. A core project team was established.
Measure	The process was documented, and the size and scope of the problems measured. Collected secondary NPS data for a baseline indicated that the problems were significant, and no obvious root cause was identified. A survey and interviews were conducted and Gemba walks made.
Analyze	A quantitative analysis was conducted to lay the ground for further research, determine the variances in the process, and identify 25th and 75th percentile outliers at both ends to map both good and bad behaviors and understand which behaviors drove good performance. The analysis showed that the sample mean was below the performance target for the site and the sample variance was high, meaning there were significantly more outliers below the 25th percentile. When data was entered in an SPC chart, it became obvious that with this amount of variance, the process was not under control. A key finding was that there were positive outliers above the 75th percentile, that had very low variances. This meant that observations (Gemba walks) could be made and collect data on whether this group performed well and consistently. This was followed by interviews with good performing agents, their team leaders and operations manager.
Improve	The analysis phase made it clear that company XYC needed to build foundations to implement the findings. A new organization was therefore set up. It required a governance structure to implement the "good behavior" and low variances, and benefits from the high performance of the agents observed. For this, project Lagoon was developed and clear KPIs, live data monitoring, and onsite dynamic support were provided to all Tier 2 agents. A light and lean structure was also put in place to remove obstacles and avoid creating an additional workload for the workforce whilst simultaneously focusing on metrics and the drive to excellence.
Control	Once improvements were implemented and results improving, a control system was put in place. The key KPIs, NPS and SPD were monitored and displayed on large screens on the operational floor. Attrition and speed to competence were measured by managers. Finally, an employee satisfaction survey was introduced and followed up by regular focus groups, zeroing in on employees' well-being.

As Figure 3 shows, the sample was drawn from the population and data collected from this sample analyzed and then inferred back to the population. This ensured that the results were valid and reliable and could be scaled within the population.
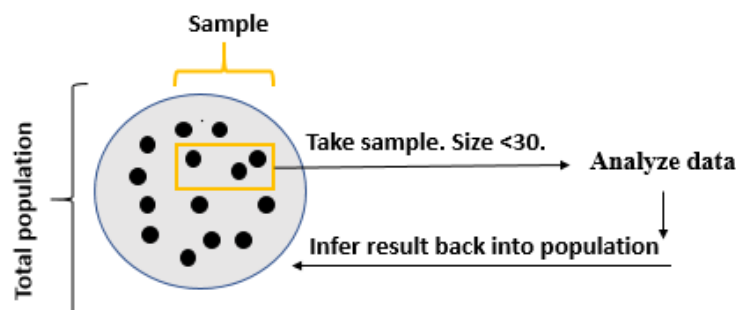
Figure 3: Sequential Explanatory Design (Authors' creation)

The first step after being hired to solve the problems was to create a new position, "Head of Transformation" (HoT), together with a small team called "The Transformation Unit." This was the first time both companies had such a unit. It was paramount that the HoT had decision making power at director level and that the Transformation Unit became the heart of the organization. When the new Transformation unit was first established, it consisted of a small team with a desk. Later, though, it became the core of the company and consisted of a large central department with decentralized "Transformation Squads." Today, the Transformation Department is part of the overall value proposition and acts as breeding ground for strategic execution at the tactical and operational levels. After the Transformation unit was formed, the HoT defined its responsibilities. While accountability lies mainly with the HoT and the director, the Transformation unit is also partly accountable. As Figure 4 shows, its responsibilities fall into four main categories:

1) *Management System*: The system is designed for and by management. There is a system for all levels, from agents to senior management. It includes leadership, processes, metrics (Performance, Attrition, etc.), and procedures and behaviors. It aims to deliver what was promised to key stakeholders.

2) *Service Delivery*: It includes end-2-end agent pipeline, support staff (mentors) and metrics delivery as mentioned above.

3) *Enabling Activities*: They include strategic leadership, leadership development and alignment, metric analysis, and ensure that the working environment is designed to improve worker satisfaction, reduce attrition, and provide a feeling of belonging and job security.

4) *Improvement Skillset*: This represents the methodology used by the Transformation unit to design prototypes and deliver and improve people and processes. Six Sigma is the main methodology used to address root causes based on business problems. The Lean version of Six Sigma was selected to keep the projects free from waste while allowing the project governance structure to deliver agile solutions. Since change management is key to successful change delivery, Kotter's 8-step change model was applied (Appelbaum et al. 2012), together with design thinking principles (Brown, 2008).
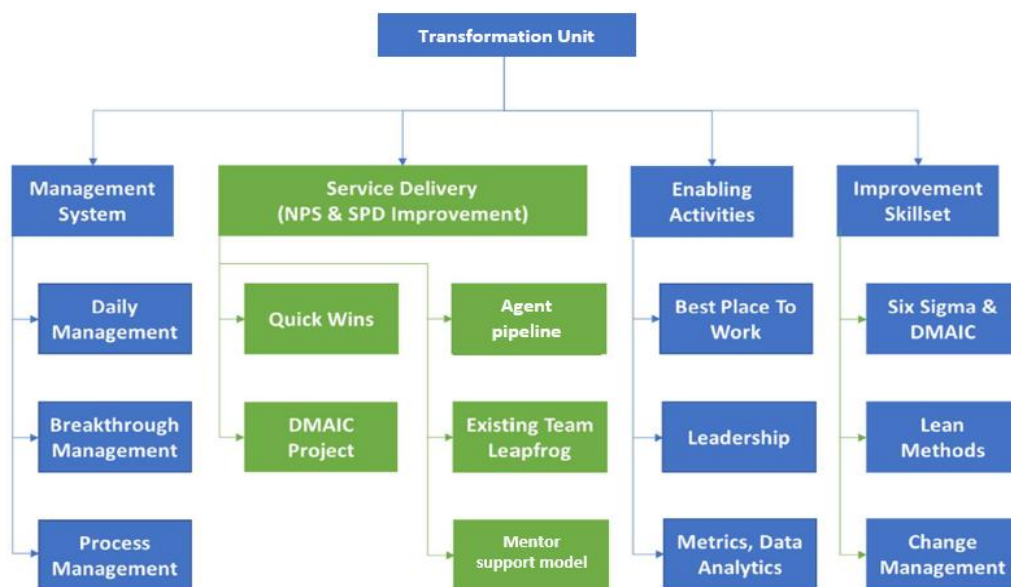
**Figure 4**: Transformation Unit Responsibilities (Authors' creation)

The planning lasted 2 months and produced an initial project structure that engaged all relevant departments to create alignment. All the data from previous relevant attempts to solve problems were analyzed and evaluated. First, a quantitative analysis was conducted to lay the ground for further research. It sought to determine the variance in the process and identify 25th and 75th percentile outliers. The purpose was to map both positive (better performing) and negative (poorer performing) outliers. The analysis showed that the sample mean was below contractual performance target for the site and the sample variance was high, meaning there were significantly more outliers below the 25th percentile. When entering the data on a SPC chart it became obvious that with this amount of variance, the process was not under control. However, data also showed a few stable, positive outliers – consistent top performers were identified. The focal point was clear. Company XYC already had 20 Quality Analysts conducting analyses on negative outliers, so the focus for the transformation unit was on the small, but high-quality sample of good performers. This meant the Transformation unit could make observations (Gemba walks) and collect data on the reasons why this group performed so well and so consistently. The behavioral analysis began, and a large amount of qualitative data was collected for analysis. Collection methods included, but were not limited to, focus groups, semi-structured interviews, observation (participant and structured) and workshops.

Based on the data and their analysis, project "Lagoon" was designed. Lagoon became a two-week intensive program utilizing a mix of theory and practice. A unique and customized live educational environment was created.

**Figure 5**: Lagoon Program (Authors' creation)

As can be seen in Figure 5, the Lagoon program was supporting Tier 2 agents. Later two additional programs were implemented as shown in Figure 6.
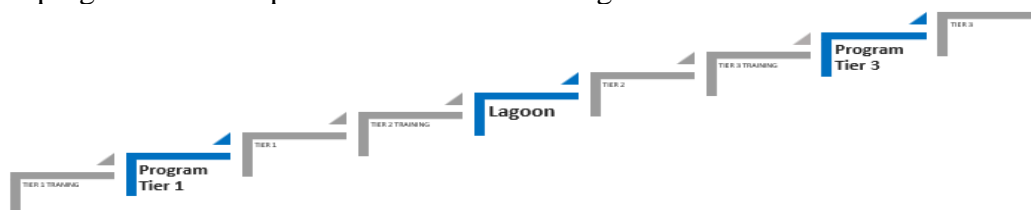
**Figure 6**: Spinoff Programs Based on Lagoon (Authors' creation)

The two additional programs were "Program Tier 1" training and "Program Tier 3" created later. Both were spinoffs from Lagoon and equally successful. The idea was simple – develop top performers through mentorship and use these as live case studies of both good and poor examples of CX performance. At the end of the first period of the Lagoon (W4 to W12), for the first time in 7 years, all KPIs were exceeded. Time to competency was decreased to just 5 weeks (down from 16) and higher SPD rates were recorded than from any other agents in the past 12 months.

Moreover, NPS improved significantly while in the meantime attrition decreased and employee satisfaction increased.
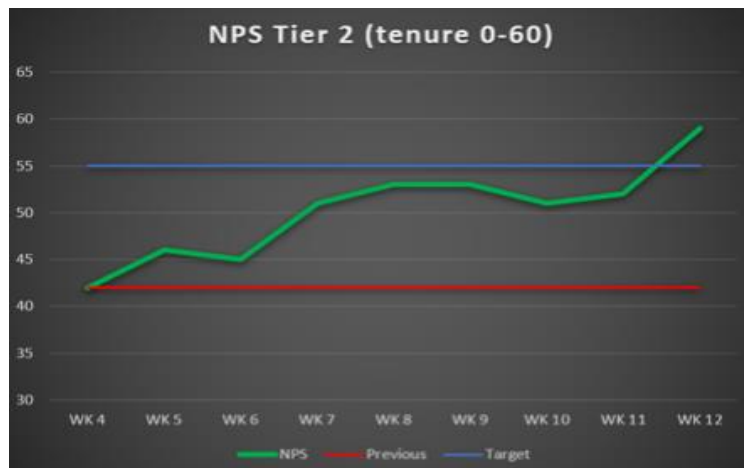
**Figure 7**: NPS Tier 2 Evolution as of Lagoon Kick-Off (Medallia, 2019)

Figure 7 shows a substantial improvement of more than 15 points from the beginning of the project as compared to the previous year's performance. The 0-60-day tenure bucket had historically been the worst performer on all key metrics. After Lagoon, they were the best performing.
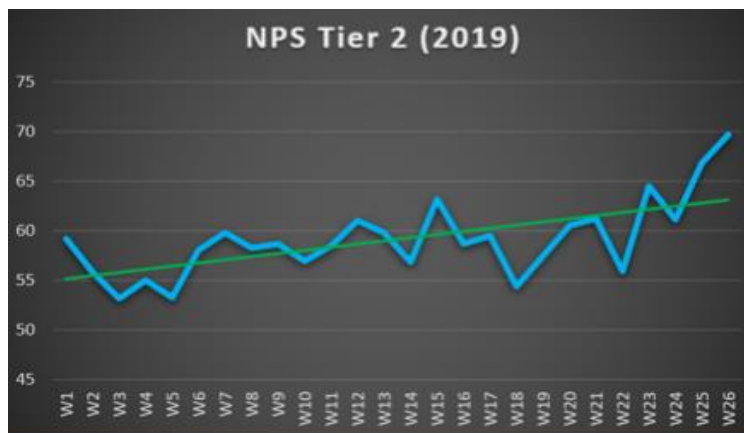
Figure 8: Overall NPS Tier 2 as of Lagoon Kick-Off (Medallia, 2019)

As shown in Figure 8, all tenure buckets are included from 0 days to 365+ days. The Lagoon now accounts for more than 70% of the population in Tier 2, causing Company XYC to be the best performing NPS partner in the partner network – a global network of more than 10.000 CX agents.
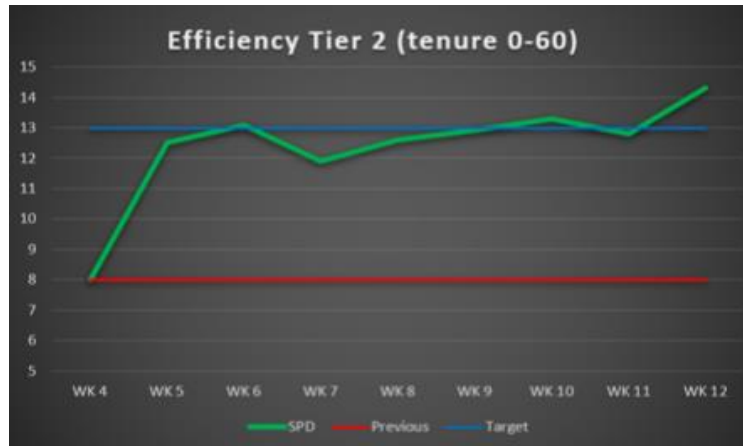
Figure 9: SPD (Efficiency) Tier 2 as of Lagoon Kick-Off (Tableau, 2019)

Figure 9 shows dramatically strong results rising from a low 8 SPD to a high 14.2 SPD in the 0-60-day tenure bucket. While historically the young tenured bucket group was consistently the worst set of performers, it is now in line with the more experienced tenured agents in the 180 and 365+ day buckets. These results were clear and beyond expectations. However, resistance was building among existing senior managers. While implementing the new processes, the existing top management team showed fierce resistance to both the new way of working and the new leadership style. Consequently, Kotter's (1995, 2007) 8-step change model was applied. At first, the Lagoon pilot and the transformation unit were asked to move to the basement, as senior managers did not believe in the project. However, after results kept improving, the HoT and the team made radical changes to amplify the results. A guiding coalition was formed. Communication was extensive. For example, the Lagoon moved to the main floor of the building. The floor was decorated with palm trees, beach chairs etc. These changes in the decor seemed to engage people and add to the feeling of belonging. Screens we installed on all four floors to show the results of the Lagoon. The Transformation Office was established with extensive visuals on walls and portable whiteboards. Social event and NPS competitions were implemented. Awards and diplomas were designed and handed out to all those who completed the Lagoon program.

Despite this, resistance continued. At the end, according to Kotter (2007), resistance must be removed and if management does not align with the new culture, there were ways in which they would be removed from their current role, that is, if they did not leave themselves. The results are in line with findings in previous research on DMAIC in the service sector. For example, in their study in the energy service sector, Bloja et al. reported results that exceeded their defined target in just three months. Several retail researchers determined that applying DMAIC to improve in-store delivery significantly improved the cycle time and customer satisfaction (e.g. Bloja et al., 2020; limsirivallop et al., 2019) What is more, previous research on DMAIC provides evidence that the improvements and KPIs applied in the control phase are scalable (De Koning & De Mas, 2006; Appiah, Amankwah-Amoah, & Liu, 2020; Mas & Lokkerbol, 2012; Tabrizi, et al., 2019).

Since the pilot program was highly successful, it was time to scale and develop new best practices for the team managers. The project delivered what it promised and new processes were in place; a new Daily Management System for Team Leaders was developed. It included a RACIB (Responsible, Accountable, Consulted, Informed and Backup) matrix, a schedule ('the perfect week'), Standard Operating Procedures (SOPs), and new tools to motivate, inspire, and lead their teams to a higher performance level.
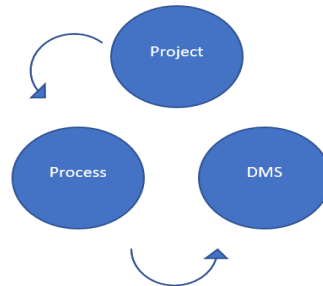
Figure 10: Daily Management System (Control Phase) (Authors' creation)

Figure 10 shows the cycle whereby the Daily Management System (DMS) is created as part of the Control phase. A strategic committee decides on a business strategy. Projects are considered at the tactical level. Both Process and DMS represent the operational level of a strategy. A high degree of change management is required in most situations when changing the DMS. It appears that while people and their systems want to change, but they do not want to *be* changed. To ensure that the Lagoon program continues, the whole organization was redesigned to create synergies between Lagoon and the remainder of the 1000-people organization. Figure 11 shows the resultant new organizational chart below.
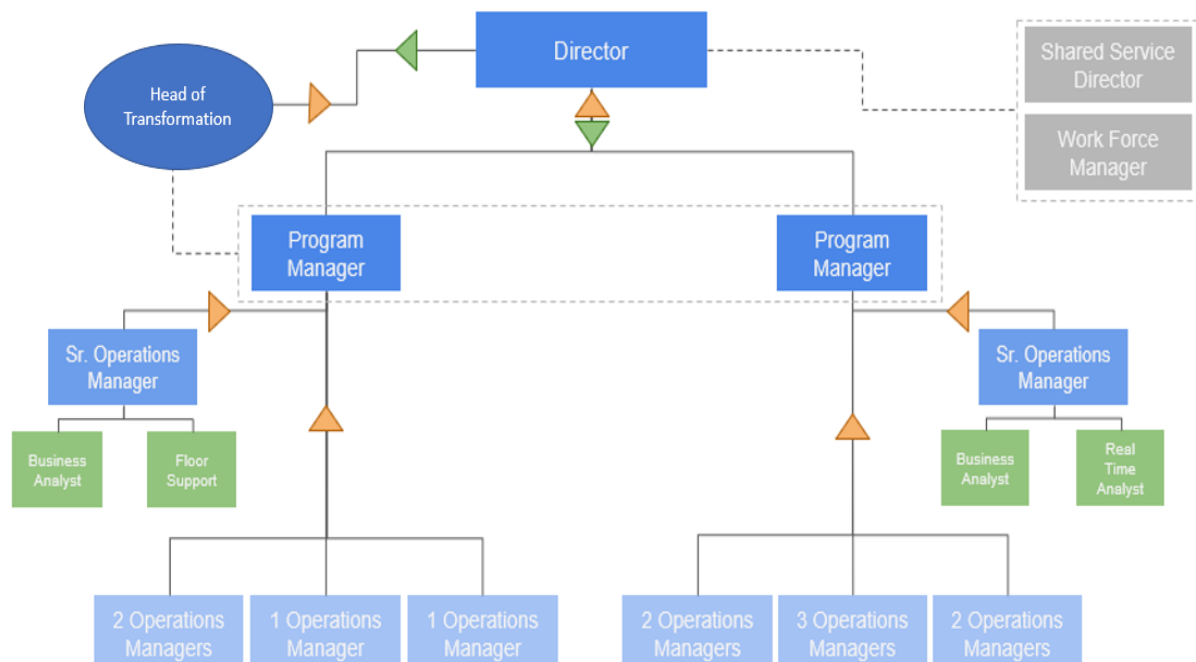

Figure 11: New Organizational Chart to Support the Lagoon Program (Authors' creation)

The Transformation Unit acts as a stab function with decentralized squads across the organization. The Lagoon program trains and delivers high performing agents to the operations manager and their team leaders. A rigorous feedback loop was created to constantly collect data from agents, managers, support staff and clients. This allowed for constant adjustment as needed and ensured a resilient and agile structure which could withstand and rebound from any disruption. Of course, there were challenges along the way. One of the first teams, after leaving the support structure, saw its post Lagoon performance collapse and it was not clear why. After data were collected and analyzed, a vulnerability was identified in the communication system between departments that created misunderstandings during transition from the Lagoon to the base team – the exit guidelines were flawed. Thanks to the further involvement of the Team Leaders, this gap was filled and results continued to improve. This showed that failing at an early stage could be beneficial as a leadership style based on the ambidextrous leader had been implemented (see Figure 11). Also, as can be seen in Figure 12, by then authority was also delegated to subordinates to ensure agility in decision making.

Figure 12: Leadership Training System (Authors'creation)

This came with a risk. Mistakes can be made. Therefore, a system was developed to address this possibility. Figure 13 shows the process that is applied if an agent or mentor makes a mistake.
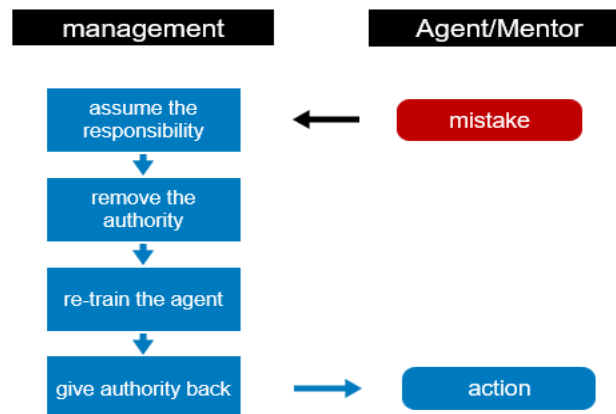
Figure 13: Leadership System to Address Mistakes (Authors' creation)

In the event an agent, mentor, or leader with extra authority failed, that authority would be taken away temporarily. This individual would then have to retrain before his/her authority could be restored. This turned out to be conducive to forming initiative-taking leaders who could make

decisions in a psychologically safe environment. At the annual strategy review meeting between Company AAA and XYC, AAA's senior leader made the following statement: "you have created the gold standard for CX and this is for others to follow."

5. Conclusion and Limitations

To date, over 700 agents have gone through the Lagoon program, and even more are participating in the spin off programs. True transformation is alive and well at Company XYC. This initiative not only achieved the strategic objective of reaching the top tier position, it also took the company to the new height of being the top global partner of one of the world's most exciting and disruptive companies, Company AAA. Using DMAIC for non-manufacturing and with a light statistical approach turned out to be extraordinarily successful. Except for the HoT, the Transformation unit, had no prior experience with DMAIC. Sticking to each sequential phase, constantly focusing on addressing the root causes, and ensuring that improvement could be sustained, enabled the team to define, measure, analyze, and improve the business problem as well as design measures to control and sustain the improvements, under the ambidextrous leadership.

Taking a people centric approach to transformation was key. Making employees and customers the center of all analysis – sitting among them, listening, and observing was really what made the difference. Moreover, while implementing sound solutions, a focus on change management must not be overlooked. Change management is about people and how they respond and adapt to change. Sustained improvements were made possible because of the processes and documentation that were created. Clearly, ensuring a successful transition from project to operations requires organizational resilience, a focus on education, and an understanding of how to work with SOPs, Kaizen, and data as DMAIC and transformation are about process and method. However, the main focus should always be on people and behaviors.

- Limitations

In conducting this research, limitations were identified and highlighted. Firstly, this research was conducted using DMAIC and a single research object was used. Hence the limited generalization of this single study, which may not be applicable or generalizable to a larger population or applied in other situations. Moreover, with the researchers playing a key role in solving the business problems, there is potential for researcher bias. Since the interpretation of the results was beyond what was quantifiable, this could lead to biased results. Lastly, there may be a lack of replicability as this situation was context specific. Therefore, it may be difficult to replicate the same conditions in other settings, which can affect the reliability of the findings.

References

Appiah, G., Amankwah-Amoah, J., & Liu, Y. L. (2020). Organizational Architecture, Resilience, and Cyberattacks. *IEEE Transactions on Engineering Management*, *99*. 1-16

Appelbaum, S. H., Habashy, S., Malo, J.-L., & Shafiq, H. (2012). Back to the future: Revisiting Kotter's 1996 change model. *Journal of Management Development*, *31*(8), 764-782.

Babbie, E. (2016). *The practice of social research*. Cengage Learning.

Bass, B. M. (1997). *Full range leadership development: Manual for the multifactor leadership questionnaire.* Menlo Park, CA: Mind Garden.

Bass, B. (2007). Executive and Strategic Leadership. *International Journal of Business, 12*, 34-52.

Bass, B. M., & Avolio, B. J. (1993). Transformational leadership: A response to critiques, in Chemers, M. M., & Ayman, R. (Eds.), *Leadership theory and research: Perspectives and directions* (p. 49-80). Cambridge, MA: Academic Press.

Bloja, M., Monica, S., & Veres, C. (2019). Lean Six Sigma in the energy service sector: A case study. *Procedia Manufacturing, 46*, 352-358.

Brown, T. (2008), Design thinking. *Harvard Business Review, 86*(60), 84-92.

Buckminster Fuller, R. (1975). *Synergistics: Explorations in the geometry of thinking*. Macmillan Publishing Co.

Burgelman, R. A., & Grove, A. S. (2007). Let chaos reign, then rein in chaos-repeatedly: Managing strategic dynamics for corporate longevity. *Strategic Management Journal, 28*(10), 965-979.

Burgelman, R. A., Floyd, S. W., Laamanen, T., Mantere, S., Vaara, E., & Whittington, R. (2018). Strategy processes and practices: Dialogues and intersections. *Strategic Management Journal, 39*, 531-558.

De Koning, H., & De Mast, J. (2006). A rational reconstruction of Six Sigma's breakthrough cookbook. *International Journal of Quality and Reliability Management 23*(7), 766-787.

Eisenhardt, M. K. (1987). Building theories from case study research. *The Academy of Management Review*. *14*(4), 532-550.

Fernandes, C. I., Veiga, P. M., Ferreira, J. J. M., Rammal, H. G., & Pereira, V. (2022). Assessing strategic leadership in organizations: Using bibliometric data to develop a holistic model. *Journal of Business Research*, *141*, 646-655.

Gale, M., & Aarons, C. (2018). Why people matter far more than digital technology or capital. *Strategic HR Review, 17*, 29-32.

Greer, C., Lusch, R., & Hitt, M. (2017). A service perspective for human capital resources: A critical base for strategy implementation. *Academy of Management Perspectives, 31*(2), 137-158.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods. 18*(1). 59-82.

Hambrick, D. C., & Quigley, T. J. (2014). Toward more accurate contextualization of the CEO effect on firm performance. *Strategic Management Journal*, *35*(4), 473-491.

Han, J., Kamber, M., & Pei, J. (2012). *Data mining: Concepts and techniques (3rd Ed.)*. Burlington, MA: Morgan Kaufmann.

Hanelt, A., Bohnsack, R., Marz, D., & Antunes Marante, C. (2021). A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change. *Journal of Management Studies*, *58*(5), 1159-1197.

Hernandez, M., Eberly, M. B., Avolio, B. J., & Johnson, M. D. (2011). The loci and mechanisms of leadership: Exploring a more comprehensive view of leadership theory. *The Leadership Quarterly*, *22*(6), 1165-1185.

Hiller, N. J., DeChurch, L. A., Murase, T., & Doty, D. (2011). Searching for outcomes of leadership: A 25-year review. *Journal of Management*, *37*(4), 1137-1177.

Hitt, M. A., Keats, B. W., & DeMarie, S. M. (1998). Navigating in the new competitive landscape: Building strategic flexibility and competitive advantage in the 21st century. *Academy of Management Perspectives, 12*(4), 22-42.

Ireland, R. D., & Hitt, M. A. (1999). Achieving and maintaining strategic competitiveness in the 21st century: The role of strategic leadership. *Academy of Management Perspectives*, *13*(1), 43-57.

Ireland, R. D., Hoskinson, R. E., & Hitt, M. A. (2013). *The management of strategy: Concepts and cases.* Cincinnati, OH: South-Western College Publishing.

Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From Theory to Practice. *Journal of Management Scientific Reports, 18*(1), 3-20.

Jaleha, A. A., & Machuki, V. N. (2018). Strategic leadership and organizational performance. *European Scientific Journal*. *14*(35), 124-149.

Junginger, S. (2005). A Different Role for Human-Centred Design Within the Organization. Conference: EAD06 (European Academy of Design).

Khan, Z. A., Nawaz, A., & Khan, I. U. (2016). Leadership theories and styles: A literature review. *Journal of Resources Development and Management*, *16*, 20-27.

Kotter, J. (1995). Leading change: Why transformation efforts fail. *Harvard Business Review*.

Kotter, J. P. (2007). Why transformation efforts fail. *Harvard Business Review*, *85*(1), 96-103.

Linderman, K., Schroeder, R. G., Zaheer, S., & Choo, A. S. (2003). Six Sigma: A goal-theoretic perspective. *Journal of Operations Management, 21,* 193-203.

Limsirivallop, K., Roach, S. S., & Srisarkun, V. (2016). Using DMAIC to improve an in-store delivery service. *Journal of Supply Chain Management Research and Practice*, *10*(2), 28-43.

Mansur dos Reis, M. E. D., de Abreu, M., F., de Oliveira, O., Neto, B., Valdiviezo Viera, L. E., Torres, L. F., & Calado, R. D. (2022). DMAIC in improving patient care processes: Challenges and facilitators in the context of healthcare. *International Federation of Automatic Control, 55*(10), 215-220.

Mas, J. D., & Lokkerbol, T. (2012). An analysis of the Six Sigma DMAIC method from the perspective of problem solving. *International Journal of Production Economics*, *139*(2), 604-614.

Medallia. (2019, September). *Medallia.com*. Retrieved Jan. 12, 2022, from https://www.medallia.com/net-promoter-score/

Menz, M., Kunisch, S., Birkinshaw, J., Collis, D., Foss, N., Hoskisson, R., & Prescott, J. (2021). Corporate strategy and the theory of the firm in the digital age. *Journal of Management Studies, 58*(7), 1695-1720.

Murphy, E., & Dingwall, R. (2007). Informed consent, anticipatory regulation and ethnographic practice. *Social Science & Medicine*, *65*(11), 2223-2234.

O'Reilly III, C. A., & Tushman, M. L. 2004. Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives 18*(4): 77-92.

O'Reilly, III, C. A, & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, *28,* 185-206.

Porfírio, J. A., Carrilho, T., Felício, J. A., & Jardim, J. (2021). Leadership characteristics and digital transformation. *Journal of Business Research*, *124*. 610–619.

Power, B. (2014). *How GE stays young*. Harvard Business Review.

Quigley, T. J., & Graffin, S. D. (2017). Reaffirming the CEO effect is significant and much larger than chance: A comment on Fitza. *Strategic Management Journal*, *38*(3), 793-801.

Salkind, N. J. (2018). *Exploring research*. Harlow, England: Pearson.

Schlosser, K., Volkova, T., Noja, G. G., & Maditinos, D. (2023). Strategic leadership attributes for adopting digital technology and ensuring organisational resilience. In *Digital Transformation, Strategic Resilience, Cyber Security and Risk Management*, p. 159-173.

Schoemaker, P. J., & Krupp, S. (2015). Overcoming barriers to integrating strategy and leadership. *Strategy & Leadership*, *43*(2), 23-32.

Smith, G. F. (1988). Towards a heuristic theory of problem structuring. *Management Science, 34*, 1489-1506.

Snee, R. D., & Hoerl, R. W. (2005). *Six sigma beyond the factory floor*. New Jersey: Pearson Prentice Hall.

Singh, S., Darwish, T. K., & Potocnik, K. (2016). Measuring organizational performance: A case for subjective measures. *British Journal of Management, 27,* 214-224.

Tableau (2019). Tableau.com. Retrieved Jan. 14; 2022, from https://www.tableau.com/es-es/trial/tableau-software?utm_campaign_id=2017049&utm_campaign=Prospecting-CORE-ALL&utm_medium=Paid+Search&utm

Tabrizi, B., Lam, E., Girard, K., & Irvin, V. (2019). *Digital transformation is not about technology.* Harvard Business Review.

Trimarjoko, A., Purba, H. H., & Nindiani, A. (2020). Consistency of DMAIC phases implementation on six sigma method in manufacturing and service industry: A literature review. *Management and Production Engineering Review*, *11*(4), 34–45.

Ülen, M., & Gülmez, M. (2020). Six Sigma approach to improve service quality and a practice study in hospitality sector. *Business and Management Investigations Journal, 8*(3), 3150-3182.