

A Work Project, presented as part of the requirements for the Award of a Master's degree in
Management from the Nova School of Business and Economics

BUSINESS IN PRACTICE

STRATEGIC ANALYSIS AND SELF-REFLECTION ON AN

INNOVATIVE AUTOMOTIVE BUSINESS SIMULATION

MARTA GUEDES VAZ PINTO

Work project carried out under the supervision of:

João Loureiro Rodrigues

02-09-2024

Abstract

The automotive industry has been involved in a rapid transformation towards sustainability and more responsible workplaces. With the rise of new standards in electric mobility, NOVA's strategy of producing innovative EVs is crucial to maintaining a competitive advantage. By employing frameworks and feedback from professors we analyzed mistakes made throughout the simulation and acknowledged the goals we achieved. Additionally, a self-reflection was made to understand the challenges and how to learn from them. The findings suggest that aligning goals inside the company avoids inefficient investments and underlines the importance of preparation to achieve our goals.

Keywords: Business in Practice, ESG, Theory in Practice, Team Dynamics, Automotive Industry, Strategy Management, Innovation Management, Business Management, Experience-Based Learning, Crisis Management, Sustainability, Marketing, Operations Management, Vehicles Electrification.

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

1 Introduction to the company NOVA

The company NOVA is named after the astronomical event symbolizing a bright new star, we wanted to be synonymous with innovation and creativity (The American Association of Variable Stars Observers, n.d.). NOVA operates across three key regions: Europe, America, and Asia, and aims to drive its mission of pioneering new frontiers of technology and design in the automotive industry. The automotive industry is a main driver of macroeconomic growth and has been experiencing one of its biggest transitions, by turning to sustainable development and environmental protection (Lenort, Wicher, & Zapletal, 2023).

Governments are creating stricter environmental resource usage and carbon emissions regulations; the European Commission created a regulation that limits CO2 emission performance standards and companies are trying to adjust their strategies to create a green supply chain and more responsible workplaces (European Commission, 2023).

According to Deloitte (2023), the future of automotive is people-led and, throughout the years, consumer needs have been changing. According to the latest research, consumers seek more transparent and eco-friendly companies (Deloitte, 2023). As the industry continues to shift towards sustainability, companies like NOVA that embrace these changes will likely thrive in the automotive industry.

This chapter will delve into three critical areas of NOVA's performance: strategy, operations, and marketing through a timeline of six years. Through a comprehensive analysis of these areas, we will gain insights into the company's decision-making processes and developmental trajectory. Furthermore, real-life examples will also be presented to illustrate the practical applications and outcomes of these decisions.

2 Strategy

2.1 Strategy Formulation

'Without a strategy, an organization is like a ship without a rudder, going around in circles. It's like a tramp; it has no place to go (David, 2011). In our first week of Business in Practice, we embarked on the **strategy formulation**, an essential component of strategic management. Our first step was to craft NOVA's vision and mission, guided by the insights provided through the **Business Model Canvas** (Figure 1). This tool allowed us to map out key business components, enabling a clear identification of key values such as **sustainability** in both **consumer relations** and **profitability**, a commitment to **safety, leadership in high-tech innovation**, and adherence to **green production** practices.

2.2 External Analysis

Before entering into our company's strategy, we used the **PESTEL** framework (Figure 2) to better understand the macro-environmental factors in NOVA's industry (Hirani, 2023). Regarding **Political** and **Economic** factors, due to climate change awareness, many regulations were implemented. In Q4 a more rigid CO2 penalty regulation appeared, where every unit that exceeded the CO2 allowance of 47.50 g/mile got a \$60 penalty. NOVA started with penalties of around \$47M but, by Q13, had transformed the existing fleet into 100% electric leading to \$0 CO2 penalties (Graph 1). Furthermore, the ongoing Russian-Ukraine war heavily impacted the supply chain since Ukraine was one of the major suppliers of wiring harnesses and Russia was the biggest source of palladium and neon gas, essential to auto parts (Silberg, 2022). Also, the U.S. and China trade war led to imposed tariffs on Chinese-made car parts, consequently increasing NOVA's production

costs. This economic uncertainty creates a challenge in NOVA's business strategy (Silberg, 2022). The Social, Environmental, Technological, and Legal factors clarified NOVA that customers' needs were changing to an eco-friendlier type of automobile and that now in Asia, America, and Europe customers were looking for not only electric vehicles (EVs) but also aimed for superior technological improvements such as autonomous drive level IV. Therefore, in Q7 NOVA launched an EV with extended Sodium-ion and autonomous drive: level IV (ADL IV). Besides customer preference, the stringent emissions regulations have also forced manufacturers to innovate and invest in cleaner technologies.

We further analyzed external opportunities and threats using **Porter's Five Forces** framework (Figure 3), which brought a deeper understanding of the competitive landscape that NOVA operates within. We recognized that the company may face challenges regarding the high **bargaining power of buyers** since they had a wide range of options and could easily compare prices. **Substitute products** could emerge, like electric scooters and the improvement of public transportation, however, it would be riskier to invest in these products since they must ensure excellence and quality in an uncertain market, leading to a moderate threat. The **bargaining power of suppliers** is moderate because key component suppliers, such as batteries suppliers hold significant power. This power increased due to the recent shift to EVs as there was a higher demand for specific materials, such as cobalt and lithium. Furthermore, the **Threat of New Entrants** is moderate because, despite the huge capital investment needed for production facilities and R&D, there are investors that can sponsor companies entering the market as Lucid Motors did in 2016 with Saudi Arabia's Public Investment Fund (Lions Financial, 2021). Finally, **competitive rivalry** is high since it would be difficult to enter a saturated market with established car manufacturers like **BMW**, **Mercedes-Benz**, and **Toyota**.

2.3 Internal Analysis

“A company can outperform rivals only if it can establish a difference that it can preserve” (Porter, 1996). According to the **VRIO framework** (Figure 4) NOVA holds several tangible and intangible resources that provide competitive parity such as its strategically located **manufacturing facilities** across Asia, America, and Europe, and its **financial assets**, both aimed at supporting growth. The fleet of advanced vehicles and the technological infrastructure create competitive parity; they are valuable but no longer rare. Aiming for unparalleled **sustainability**, NOVA has differentiated itself from established automotive giants like Mercedes-Benz, Volkswagen, and BMW by **committing to zero CO2 emissions** and offering a fully electric fleet of vehicles. While this creates a **temporary competitive advantage**, it couldn't be done without the skilled workforce available inside the company that represents the same advantage. Additionally, NOVA has a **business-to-consumer (B2C) approach**, allowing NOVA to engage directly with customers and offer premium, fully electric vehicles directly to the market, representing a temporary competitive advantage in the company. Finally, NOVA's **brand reputation** holds a **sustainable competitive advantage**, meaning that this capability is difficult to duplicate or exceed (SolutionsHub, 2023).

2.4 Differentiation

To establish a strong market position, we carefully analyzed our competitors and the external and internal industry. According to **Porter's Generic Competitive Strategies**, NOVA chose to pursue a **differentiation** strategy by becoming a leader in the innovative electric vehicle (EV) market, offering vehicles with advanced features at a fair price (Figure 5).

Until Q5, NOVA's fleet didn't have distinct features that set it apart. However, with a new strat-

egy involving significant investments in improved Sodium-ion batteries, AI implementation, and improved charging infrastructure, NOVA is to offer next-generation e-drive modules. Companies such as BMW, Mercedes-Benz, and Tesla also employ a differentiation strategy by focusing on delivering a unique driving experience through their engineering excellence, technology, and design (BMW GROUP, 2022). However, NOVA and Tesla use a direct business-to-consumer (B2C) sales approach, engaging customers directly, and increasing customer loyalty and control over sales (McKee, Sands, Ian Pallant, & Cohen, 2023).

2.5 Cross-Functional Review & Lessons Learned

To succeed in strategy implementation, it is essential to create a detailed action plan that outlines specific tasks, timelines, and responsibilities across the organization (David, 2011). In our simulation, we implemented cross-functional teams (**CFTs**), where each department functioned as a cohesive unit working to achieve the same goals and objectives as the rest of the company (Suebsook & Chaveesuk, 2020). NOVA's success depended on a seamless collaboration between departments. The **Technology and Innovation** department functioned as a creator of innovative ideas and the development of vehicles with cutting-edge features. To complement these technological advancements the **Operations** department focused on optimizing the supply chain and stabilizing the Days of Inventory (DoI) of the existing vehicles and help bringing the new vehicles into the market. These efforts could not succeed if there wasn't a **Marketing** department that made sure both new and existing cars were priced competitively. Marketing was also responsible for enhancing brand recognition and positioning NOVA as a leader in the electric vehicle sector. None of this could be done without a **Human Resources** department, ensuring that each department had the expertise, and skills needed to achieve their objectives. Their strategy was to attract and retain

the most qualified candidates into the team ensuring excellence and quality (Ulrich, 1997). Finally, the **Finance** department ensured that all strategic initiatives were financially viable. The finance team meticulously monitored Return on Investment (ROI), and overall financial support to sustain long-term sustainability and growth (Brigham & Ehrhardt, 2014).

This final stage of strategic management identifies strategies that are not working well and allows managers to modify their strategy. Our initial strategic approach seemed promising, yet as we progressed, concerning trends emerged across key metrics like **Return on Sales (ROS)** (Graph 2) and **Free Cash Flow (FCF)** (Graph 3). While we anticipated negative cash flow due to substantial investments in technology, the magnitude and rapidity of the decline caught us off guard. Upon deeper analysis of our revenue streams, factory operations, and marketing expenditures relative to revenue, we realized our decision-making lacked the necessary boldness and adherence to our strategic guidelines. Therefore, we committed to rigorously manage inventory levels and adopt a more assertive pricing strategy for our vehicles.

3 Operations

Establishing a structured strategy before making any decision or moving forward is crucial to prevent day-to-day operational issues from steering your company (Institute of Directors, 2023). Following our strategy, we started to prepare our factories to receive new fully electric models with the best features. Nova started with six vehicles, three of them electric, and by the end of Q13, the fleet was fully electric finishing Q28 with seven EVs (Figure 6).

3.1 Environmental, Social, and Governance at NOVA

As an outcome of the sustainability growing trend in the 21st century, companies are adjusting their strategies and operations to reach sustainability goals (Juneja & Aggarwal, 2024). For example, **Mercedes-Benz** has made a huge commitment to develop battery-electric vehicles, by investing in battery cell factories and making partnerships to build a global network of battery production. The German brand has also partnered with steel suppliers to replace fossil fuels with green hydrogen (Reuters, 2021). **BMW** has been also shifting to greener production, with its latest step introducing electrically powered exhaust purification from paint booths and drying areas (BMW Group, 2024). **Toyota** is another great example of a company successfully turning their company into a sustainable and responsible organization. The Japanese company has been working to raise awareness about water conservation through its partnership with The Nature Conservancy (Toyota, 2023).

Similarly, NOVA's operations managers have also been affected and have been working to improve the present manufacturing system through a triple bottom line, by focusing on the social, profit, and planet dimensions (Dalibozhko & Krakovetskaya, 2018). NOVA adopted the UN program for sustainable development by following the 17 major Sustainable Development Goals (SDGs) to guide its sustainable efforts (Figure 7). The company's efforts go beyond the electrification of the vehicles, the company is committed to enhancing the education of the employees and local communities, focusing on promoting inclusion within its workforce and providing them with fair labor practices (Figure 8). Additionally, NOVA promised to become sustainable across all three scopes (Figure 9): Scope 1, direct emissions; Scope 2 indirect emissions from purchased electricity; and Scope 3 all other indirect emissions in the value chain. By the end of year 6, NOVA's

investment of \$1.9 billion in sustainable initiatives (Figure 10) had resulted in a 56% reduction in carbon emissions, 77% in energy use, and 45% in supply chain impact (Graph 4). The company's transition to full electrification has also steadily reduced CO2 penalties, with its sustainability rating improving from 14.7% to 81.7% by year six, reflecting comprehensive efforts across various domains and underscoring our commitment to sustainability (Graph 5).

3.2 Operations Performance

Before initiating the simulation, we were cautioned about the significance of **DOI**, a critical Key Performance Indicator (KPI) in operations management which estimates the number of days it would take to sell the inventory (Slack and Brandon-Jones 2019). In the initial years, we hoped to have a range between 30 and 90 days of inventory but quickly encountered significant challenges in controlling and stabilizing this metric (Graph 6). Our previous fleet was underperforming, requiring price reductions and cuts in marketing expenditures as we awaited the launch of new models. During this period, our operational decisions were **drastic** and **reactive**; we prematurely discontinued certain models and expanded production into new factories without allowing sufficient time for these models to gain traction in their respective markets. Additionally, NOVA built two new factories in two different regions, which ended up empty at the end of year 6.

Regarding DOIs, we started to investigate the big oscillations in the percentage of the **factory utilization** (Graph 7), defined as the ratio of actual production to maximum sustainable production (BiP Simulation 2024). Looking at the yearly reports we see a huge correlation between the high numbers of DOI and a decreasing curve in factory utilization. For example, in the case of Sport E a vehicle that has been in the company since the beginning until the last quarter, we see that the higher the DOI, the lower the rate of factory utilization (Graph 8). Concluding that overstocking

can force production slowdowns or even halts as warehouses reach capacity, causing a backlog and inefficient use of manufacturing resources (Tenório de Holanda Rocha Libório, 2021).

3.3 Cross-Functional Review & Lessons Learned

Not only did DOI affect many KPIs in the operation area but it also had a huge effect on other departments inside the company. A thorough review of the situation revealed that operations cannot be viewed in isolation; every decision made within operations had cascading effects on other departments. The first indication of this interconnectedness was a marked decline in **employee satisfaction** (Graph 9) that plummeted due to the abrupt cuts and rapid expansions. It is well understood that motivated teams are essential for maintaining productivity and efficiency and, on the other hand, **low motivation levels** can lead to **decreased productivity**, dissatisfied customers, and an increased need for a larger workforce to meet operational demands.

Our failure to maintain an optimal balance in inventory days resulted in fluctuating factory utilization rates, which in turn affected our ability to meet **production** and **financial targets**. Holding excess inventory increases storage costs, insurance, and taxes, which are all part of the total production cost per unit. Moreover, capital tied up in unsold inventory could have been invested in more productive areas, such as new technology or process improvements (Tenório de Holanda Rocha Libório, 2021). Consequently, in the first 4 years, the finance department underperformed, from a net income of 2,772.98M in Year 1 to 313.52M at the beginning of Year 4 (Graph 10).

After acknowledging that effective inventory management is essential to the company's ability to respond to market demands, manage costs, and optimize resource allocation, NOVA's business departments agreed, at the end of year 3, to keep inventory days between 30 and 70 (Slack & Brandon-Jones, 2019). This adjustment required prioritizing inventory days over the fair pricing of

the EVs and understanding the inherent trade-offs in operations. Additionally, we understood that speed inside operations is important as it can reduce inventory levels and minimize risks (Slack & Brandon-Jones, 2019). However, it can also be prejudicial, as in our simulation, the under-pressure environment and the fast-paced management rhythm forced us to make impulsive decisions that led to negative consequences in all departments. This analysis showed us, more than ever before, that a successful operations manager must create a flexible strategy adaptable to everyday situations and must be prepared to deal with stress without making impulsive decisions and capitalize on opportunities for optimal outcomes.

4 Marketing

Customers are a critical stakeholder group that directly impacts a firm's profitability (Binh Dao & Chau Phan, 2023). As a result, measuring and enhancing **customer satisfaction** is essential for increasing customer loyalty and retention, which is key for long-term success (Kotler and Keller, 2016).

4.1 Target Market

Today's customers are much more informed and conscious about the products they purchase. They seek the origins of the products, including where they were made, the conditions under which they were manufactured, and who produced them (Kotler and Keller, 2016). Consumers today want more than just a vehicle, they are looking for innovative features such as electric drivetrains, autonomous driving capabilities, enhanced connectivity, and superior safety systems. Moreover, depending on the region, there are different preferences. NOVA's marketing department found that

the Asian market prefers **ADL IV**, while in America **Battery Technology**: Extended Sodium-ion (NA) and ADL IV are more important. On the other hand, European customers prefer **Hybrid** and **ADL IV** vehicles.

Recognizing these diverse needs, NOVA has strategically segmented its customer base to better address these varying preferences. For tech enthusiasts, NOVA's innovation department created vehicles equipped with the latest autonomous driving and connectivity features. Sustainability-conscious consumers are targeted with our advanced electric models, which emphasize eco-friendly technology (Na-ion batteries and Li-ion batteries) and performance. Quality seekers, who prioritize luxury and reliability, are offered vehicles that combine superior craftsmanship with cutting-edge innovations, such as AI implementation and Vehicle-to-Vehicle communication (V2V).

4.2 Product Development

The **Ansoff Matrix** (Figure 11) was a crucial tool in planning our marketing growth initiatives, guiding us in making strategic decisions about how to expand our business (Peterdy, 2024). Although the existing market appeared to be the most attractive in terms of immediate opportunities, NOVA made a deliberate decision to focus on product development, opting to introduce new products rather than simply exploiting our current offerings (Takeuchi & Nonaka, 1986).

Additionally, the shift towards sustainability in the automotive sector, driven by evolving legislation and environmental goals, made product development a critical focus for NOVA. This approach not only keeps us ahead of market trends but also ensures compliance with regulatory pressures and aligns with our sustainability objectives, particularly in sustainable supply chain management (Lee, Veloso, Hounshell, & Rubin, 2010).

Major automotive players like **Tesla** and **Toyota** have consistently invested in product develop-

ment to stay competitive. Tesla's continuous improvements to its electric vehicles and the introduction of new models like the Cybertruck have kept it at the forefront of the electric vehicle (EV) market. Similarly, Toyota has been a pioneer in hybrid technology and is now focusing on hydrogen fuel cells and all-electric vehicles, reflecting its commitment to product innovation (Toyota, 2023).

4.3 Marketing Mix

Considering the highly competitive industry in which NOVA operates, we looked into its strengths and opportunities with the help of the SWOT Analysis framework (Figure 12) to leverage the company's unique position. After understanding our capabilities, the marketer's goal was to provide higher value to the customer and seek customer satisfaction (Gilaninia, Taleghan, and Azizi 2013).

PLACE: Unlike many competitors such as **Nissan** which offers B2B services, NOVA has the distinct advantage of engaging directly with consumers, by committing to a B2C service. To provide the customer with the best in-store experience possible, NOVA invested heavily in the training of the employees and built places where there is direct contact with customers. By engaging with buyers the company creates stronger relations and a bigger sense of loyalty. **PRICE:** The marketing department created a strategy of organizing the three types of cars according to their sales price inside the company, High-end Models, with high prices that are justified with all the advanced features, Mid-range Models, more attractive to a broader market segment, and Entry-level Models, more affordable price options designed to compete directly with the lower-end models from competitors. However, in the beginning, we were afraid of increasing the price of the products, therefore we did not commit to the High-End Models. Moreover, BMW at the turn of the century adopted a strategy where instead of just relying on the prestige of its brand, the company diversified its product line with more affordable compact cars to cater to specific market segments (Kotler and

Keller, 2016). **PRODUCT:** NOVA's products are split into the three sections previously explained. Besides the Entry-level Models, such as Luna E, all the new models were introduced with the best features and high quality. Additionally, NOVA managed the volume of production according to the type of product. It made sense to the company to increase the volume of Entry-level models and reduce quantities of the High-end Models. **PROMOTION:** Almost 50% of customers feel the need for the product after seeing it endorsed by influencers (J, C, and C 2023). NOVA's first-year marketing strategy was meticulously crafted to establish a strong brand presence. By partnering with social media influencers and stepping into TV campaigns, NOVA effectively tapped into niche audiences, leveraging the influencers' credibility and reach to build trust and excitement around the brand. A parallel can be drawn with Mercedes-Benz's partnership with Netflix, particularly in its involvement with the Formula 1 documentary series. This synergy between high-stakes racing and binge-worthy storytelling has reinforced the brand's narrative of performance, innovation, and global excellence (Kotler and Keller, 2016).

4.4 Analysis of Marketing Expenses

Over the years **marketing expenses** increased with a peak around Q19 (Graph 11) where NOVA focused on boosting the marketing of each car to increase sales and demand. However, by looking at the marketing expenses and sales charts we see in some cars a relationship between **marketing expenses** and **sales** performance. For the models with consistent or growing sales (like "Zephyr E" and "Luna E"), there is a clear alignment where higher marketing investments often precede or coincide with periods of sales growth. However, it also appears that models with more erratic sales patterns often show fluctuating marketing expenses, indicating that while marketing spend is a factor, it is not the only one influencing sales outcomes (Graph 12).

The data suggests that strategic and sustained marketing investments can positively influence sales performance, particularly for models with strong market potential. However, simply increasing marketing expenses is not always a guarantee of sales success, as evidenced by the mixed results for models like "PU 225G." This underscores the importance of not just the amount of marketing spend but also the **timing, targeting, and overall market strategy**.

4.5 Cross-Functional Review & Lessons Learned

Upon investigating the competition, we discovered that they were offering similar vehicle models with fewer features but at comparable prices. This could explain the decline in our **ROS**, which is the ratio used to determine the efficiency with which NOVA converts its sales into operating profit. (Wall Street Prep, 2024).

Our cash flow analysis revealed that NOVA was heavily investing in innovation, marketing, and workforce excellence. However, our vehicle pricing did not reflect these investments adequately, resulting in a drop in **ROS** to just 3% in Quarter 19. Recognizing the disconnect between our pricing strategy and its impact on ROS, we decided to increase the prices of the last two vehicles introduced to the market. As a result, ROS improved dramatically, reaching 14% by the final quarter of the simulation (Graph 2).

Marketing expenses are not just costs; they are strategic investments that build brand awareness, foster customer loyalty, and drive long-term profitability. Even though marketing strategies can influence a brand positively, e.g. by driving brand awareness and sales, sometimes they are not enough to guarantee a path of success (Armstrong et al. 2020).

Therefore, aligning marketing expenses with the rest of the company's departments especially the innovation department to better understand what type of product we are selling is key to avoiding

fluctuating sales (E. Porter 1980). We realized that before investing in marketing expenses, it is important to develop a marketing strategy, that considers the competitive landscape, the current state of the industry, and the available resources, to avoid ineffective investments.

5 Conclusion

After analyzing NOVA's performance through the lenses of three critical areas, several key insights were highlighted. Strategically, NOVA has aligned its plan to the dynamic market environment by focusing on advanced electric vehicles and adopting the Triple-Bottom-Line concept. Since the automotive sector continues to grow, the company ensured that its strategies were flexible to adapt to market changes. From an operations perspective, NOVA understood that operational decisions and regulations had to be rigorous and effective to manage better the capital employed and minimize the need for extra investments. In terms of marketing, NOVA adopted many strategies to enhance its market presence, including influencer partnerships, augmented reality experiences, and customer segmentation based on different regional preferences. However, to maintain profitability and market relevance, NOVA needs a more precise pricing strategy that reflects the value of its innovative offerings.

Overall, the findings suggest that NOVA must focus on creating value at every step of the value chain (Figure 13). This includes optimizing operations to reduce costs and environmental impact and investing in employee training to enhance customer experience. in-store This way NOVA can create a coherent strategy that fits with internal consistency, with the environment, and with the resources available, leveraging its core strengths (E. Porter 1980).

6 Overview of the Two Critical Incidents

After completing the three weeks of this intense simulation, I want to highlight two pivotal incidents that served as turning points in my journey. In this exercise, we were divided into groups of approximately seven members and challenged to lead a company for six years. For some of us, it was the first time we were meeting our teammates.

The objective of this simulation was to replicate the experience of entering a new work environment with a new team, pushing us out of our comfort zones. I entered the simulation with fear but with a strong desire to learn. We approached each challenge as a team, striving to respond most efficiently and professionally. While I hoped to excel in all the tasks, I encountered more failures than successes. Nevertheless, I finished these three weeks feeling stronger and enriched with new insights that will undoubtedly shape my future endeavors.

I chose to split this chapter into the two incidents that significantly contributed to my personal development. The first was the initial sales role play, where we had to pitch our company to potential customers. This exercise forced us to hone our communication and persuasion skills under pressure. The second incident occurred around the fourth year when our company started to underperform, resulting in a negative score. After describing both incidents, I will analyze each situation and how these critical moments were instrumental in improving my performance and altering the trajectory of our company, NOVA.

6.1 Critical Incident I – “The pitch that fell short”

6.1.1 Description

Before diving into the analysis of my first critical situation, it's essential to set the scene. We were tasked with a high-stakes sales role play, where we had just five minutes to present a compelling sales pitch to a client. The pressure was intense, as only three members of my team were selected for this crucial exercise. I volunteered to go as one of the three members who would present our company's value to the client and be prepared to answer any of his inquiries.

Our performance was evaluated not only against three critical criteria: 1) our ability to lead a persuasive and impactful conversation, 2) our proficiency in identifying and communicating our value proposition, and 3) the overall structure and effectiveness of our sales pitch (BiP Simulation), but also it would be meticulously assessed based on various skills, including our body and verbal language, and our ability to build rapport.

The immense pressure to perform, combined with the potential financial consequences, made this role play not just an exercise but a critical moment that could significantly impact our company's future. Depending on our ability to convince the client, we faced three possible outcomes: retaining the customer with no change to our business relationship, losing half of the customer's account, or losing the customer entirely. At the end, we lost the customer entirely, leading to a devastating revenue decline of \$1.92 billion and a gross profit reduction of \$768 million.

6.1.2 Analysis of the Critical Incident

After grasping the purpose and requirements of the sales pitch, I focused heavily on crafting our company's storytelling and developing a concise, visually appealing PowerPoint presentation.

My approach was to keep the presentation simple and precise, emphasizing the current challenges within the industry and positioning our company as the best solution to these problems.

On the day of the role play, **my lack of confidence** became immediately apparent. Nerves set in, exacerbated by last-minute issues such as a late team member and the fact that as we were allowed into the room none of us was prepared to start the presentation. Just there, we lost a minute opening computers, accessing WI-FI, and starting the presentation. Something we should have done before entering the room. Additionally, I had prepared for a standing presentation, but the client asked us to sit down, which further disrupted my confidence and composure.

During the presentation, I attempted to align our goals with the client's needs, but my efforts fell short. The feedback from the client, delivered in a detailed report, was clear: we had failed to make a convincing case. Many comments were made in the report: **lack of creativity, incapability to answer** the client's questions in a convincing way and **lack of empathy** (Figure 14). Initially, I felt a deep sense of frustration and guilt. Despite putting in significant effort, it felt as though I had let down my team. This experience marked the first time since the simulation began that I realized I needed to work harder and that perhaps what I was doing was not enough. My motivation and attitude toward the simulation were heavily impacted by this perceived failure.

6.1.3 The Importance of Preparation

The day before the role-play, our Professor Miguel said in class, "There is no such thing as too much preparation". He also shared key strategies for conducting impactful conversations, which included understanding the client's pain points, building rapport, clearly communicating our value proposition, projecting confidence, engaging in active listening, and maintaining a human touch. Despite having this "recipe" for success (Figure 15), I found myself fixated on the theoretical

aspects, neglecting the fundamental elements of effective communication when it mattered most, and arriving at the meeting unprepared. Reflecting on this, I realize that I may have underestimated the **true power of preparation**, which inevitably influenced the quality of my efforts (KAIZEN Workforce Solutions, 2022).

6.1.4 The Importance of Feedback

The **feedback** from our professors, though initially hard to accept, was instrumental in my growth (Figure 14). It served as a "punch in the stomach," but it also provided me with the clarity needed to move forward with a stronger, more informed approach. Simple yet impactful errors — such as poor eye contact, and insufficient engagement — were highlighted, revealing blind spots that hadn't crossed my mind during my preparation. This allowed me to understand that effective feedback helps us see our weaknesses, and it is crucial for our development, as noted by Kim Scott in *Radical Candor* (Scott 2019). By embracing this feedback, I understood that I would be able to refine my approach, and ultimately achieve greater success.

6.1.5 The Importance of Experience

"Failure is simply the opportunity to begin again, this time more intelligently" - Henry Ford. Gaining work experience, particularly through speeches, meetings, and presentations, both good and bad, is crucial for professional growth and development. These types of situations are where ideas are exchanged, decisions are made, and strategies are formed. The experiences we gain from them, especially when things don't go as planned, are invaluable learning opportunities. By participating in this role play, I gained resilience, and understood how to handle pressure, respond to criticism, and deal with guilt; skills that are essential in the management sector.

6.2 Critical Incident II – “Quarter 20: The Silence of Uncertainty”

6.2.1 Description

In the fourth year of managing NOVA, we encountered a turning point that would heavily influence both our business strategy and my personal growth. Until this point, my team had experienced some challenges, but never as severe as what happened in Year 4. The company had been underperforming since the beginning but at a slower pace, however, around Q20, NOVA reached negative values on the score, for the first time (Graph 12). It showed that despite our efforts to innovate and achieve excellence, these investments were not giving the expected returns. A particular decision I took of opening two new factories, proved to be a mistake and maybe was one of the causes for the negative values of NOVA's score.

Before this incident, the group environment had been demanding but enjoyable. There was a sense of unity, and I felt comfortable voicing my opinions and concerns. We promised ourselves to make decisions collaboratively, ensuring that everyone was aware of the strategic moves and was a part of it. However, when the company's performance began to falter, I noticed a shift in the team dynamics and my behavior.

6.2.2 Analysis of the Incident

As the company's performance declined, I became increasingly self-conscious about my decisions. This uncertainty made me more reserved in meetings, and hesitant to speak up or propose new ideas, as I feared that another misstep could worsen our situation. Our team's atmosphere which was once vibrant and collaborative started to feel strained. I could sense that my teammates were equally concerned, but there was a noticeable tension that made open dialogue diffi-

cult. This difference in dynamics was evident when I asked for feedback from my teammates in a meeting and was met with silence. This lack of response was discouraging, and it increased my self-consciousness, making it difficult to engage with the team's decision-making process.

There is a clear connection between my situation and the concept of psychological safety in teamwork: the belief that one can speak up without fear of embarrassment (Edmondson, 1999). When team members feel secure, it is more likely that they will share their ideas, and questions and take necessary risks. However, in our team's situation, the growing pressure related to the perceived failure diminished the sense of safety. My silence and hesitation were a clear sign of this, as I no longer felt as secure in voicing my thoughts.

6.2.3 The Importance of the Discovery Insights Practical Model

By committing from the beginning to our team and the simulation, I created a relationship of respect and responsibility with my teammates. With a team of seven members, I anticipated that it would be hard to manage everyone's opinions and emotions throughout the journey, especially after discovering our different personalities' colors with the help of the Discovery Insights Practical Model (Figure 16).

Our team was composed of individuals of three distinct color energies, Cool Blue, Fiery Red, and Sunshine Yellow, which made it even more challenging to work together (Figure 17). However, this diversity turned out to be a surprising strength. Each team member participated with a unique perspective that when combined allowed us to approach challenges more comprehensively. For example, during decision-making periods, the **Sunshine Yellow** would encourage creative thinking, which was crucial when brainstorming, **Cool Blue** provided the analytical rigor needed to evaluate our options and the **Fiery Red** would ensure that we were decisive and efficient in our actions

(Insights, n.d.).

Despite the overall benefits of this diversity, the incident in Year 4 highlighted the potential downsides when communication breaks down. The silence I encountered during that critical meeting could be attributed to the different ways we processed and reacted to stress. As Goleman (2006) suggests in his work on emotional intelligence, individuals with different personality types and emotional makeups will respond to pressure in varied ways. My retreat into silence was perhaps a reflection of the Sunshine Yellow energy's tendency to withdraw when uncertain, while the lack of response from others could have been due to a similar internalization of stress.

6.2.4 The Boots of Failure are Made for Walking

Following this incident, I understood that psychological safety was key to overcoming the fear of failure, the feeling that had been disrupting the supportive environment and open communication that I once enjoyed. Overcoming this feeling was vital for personal growth and organizational success, especially in dynamic work environments. As someone who identifies with the “yellow” personality, optimistic, social, and positive, I searched for some tools that helped me rebuild trust and open dialogue with my teammates. I shifted my perspective on failure from a negative outcome to a valuable learning opportunity, introduced a discussion where we talked about what went wrong without assigning blame, and understood the root causes of the problem (D. Cannon and C. Edmondson 2018). Also, we acknowledge that failure is a normal part of the journey toward success and that from now on we should embrace a mindset of shared responsibility, where we agree to share both our victories and failures, building a stronger sense of unity (Sorokina, 2016).

6.2.5 Personal and Peer Assessment

A pivotal moment of learning for me came through the peer & self-evaluation assessment (Figure 18). I noticed that my own assessment of my skills differed from the feedback I received from my teammates. While I had rated myself higher in certain areas, such as interacting with teammates, expecting quality, and having relevant knowledge, skills, and abilities the feedback from my peers was more critical. This discrepancy was explained when we confronted each other in a meeting with Professor Miguel, where I understood that my self-perception was somewhat inflated and that cultural differences may have influenced both my self-assessment and my peers' evaluations.

With this meeting, I realized that I needed to be more demanding with myself, particularly in maintaining open communication even when it is uncomfortable and providing excellence in all actions. As Hofstede (2001) discusses in his work on cultural dimensions, cultural backgrounds can significantly influence how individuals perceive leadership and teamwork. My relatively high self-assessment may have been shaped by my cultural background, which places a strong emphasis on individual achievement and assertiveness. However, some of my peers, who came from different cultural contexts, may have had different expectations regarding leadership, communication, and collaboration.

6.3 Conclusion and Future Actions

In any professional environment, situations such as those described here are inevitable. Reflecting on both incidents, I understood that there are some key lessons regarding leadership, personal development, and teamwork. Firstly, many mistakes can be avoided with preparation and experience, since you anticipate unexpected changes and come up to the situation with much more

confidence. Secondly, understanding that the challenges are not just tests with a pass/failure option but a moment of learning, an opportunity to grow (Goldsmith, 2007). According to Carol Dweck's research on growth mindset, individuals who view challenges as opportunities to develop are more likely to succeed in the long run (S. Dweck 2017).

Furthermore, even though team work brings strength and enhances decision-making, I realized that it is much harder to deal with and more complex than I realized. The constructive feedback and the amazing experience of understanding my and others' personality traits through the Discovery model, equipped me with the right insights to navigate future challenges with much more empathy and confidence. It was clear to me that in the future, psychological safety will be the first aspect to implement in my future group dynamics. It turned out that feeling safe to speak up, disagree openly and not be afraid to make mistakes is key to avoiding future failures. I found out that it is better to fear dangerous silence than mistakes, therefore, moving forward, I am committed to making open communication, acceptance, and respect non-negotiable aspects in my attitude toward team dynamics (C. Edmondson, 2019).

Upon completing the three weeks of simulation, although we finished in last place, I look to the path I have taken and to all I have overcome, and I conclude it without one regret, and gracefully, especially. The challenges we faced were not just obstacles to overcome, but opportunities to improve, both individually and as a team.

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1. Abbreviations

ADL IV	Autonomous Drive Level IV
AR	Augmented Reality
B2C	Business-To-Customer
BiP	Business in Practice
CFTs	Cross-Functional Teams
DoI	Days of Inventory
EVs	Electric Vehicles
FCF	Free Cash Flow
KPI	Key Performance Indicator
PESTEL	Political, Economic, Social, Technological, Environmental and Legal
R&D	Research and Development
ROI	Return On Investments
ROS	Return On Sales
SDGs	Sustainable Development Goals
SWOT	Strengths, Weaknesses, Opportunities, Threats
VRIO	Valuable, Rare, Inimitable and
V2V	Vehicle-to-Vehicle

Table 1: Abbreviations

2. Figures

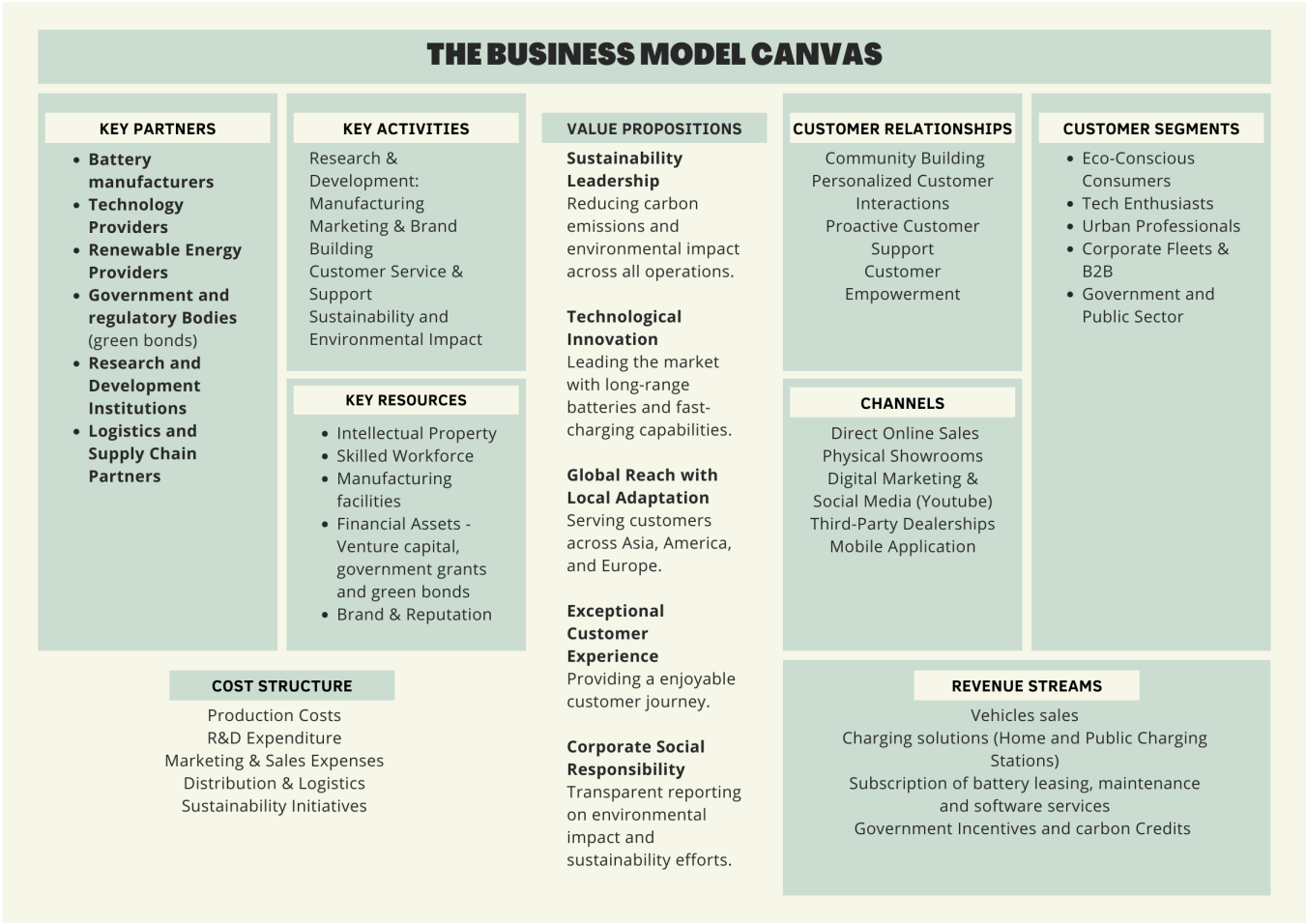


Figure 1: Nova’s Business Model Canvas (own illustration 2024)

POLITICS	ECONOMY	SOCIETY	TECHNOLOGY	ENVIRONMENT	LAW
P	E	S	T	E	L
Government Regulations	Consumer Income and Purchasing Power	Consumer Preferences	Innovation in EVs	Environmental policies	Emissions Regulations
Government Subsidies and Incentives	Economic Fluctuations	Urbanization and Demographic Shifts	Connectivity and Smart Features	Sustainable Sourcing	Protection of Intellectual Property Rights
International Conflicts	Global Economic Growth	Environmental Awareness	Manufacturing Automation	Resource Scarcity	Safety Standards
Tariffs	Upward Trend in Inflation	Lifestyle	Development of big data management mechanisms	Carbon emissions rates (carbon neutral)	Labor Laws and Regulation

PESTEL ANALYSIS OF THE MARKET INFLUENCES

Figure 2: NOVA's PESTEL Analysis (own illustration 2024)

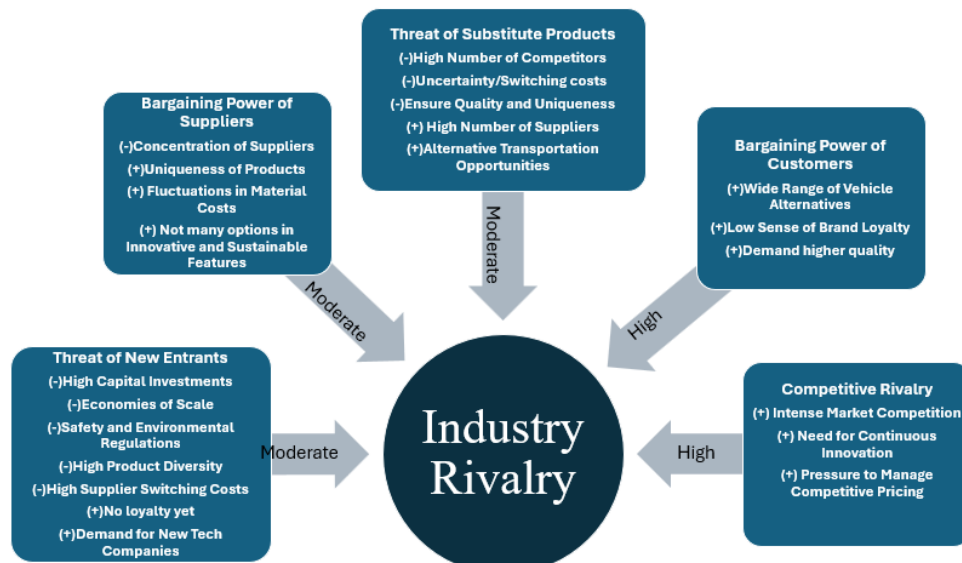


Figure 3: NOVA's Porter Five Forces (own illustration 2024)

Resources/ Capabilities	Valuable	Rare	Inimitable	Organized	Competitive Implications
Manufacturing Facilities	YES	NO	NO	NO	Competitive Parity
Advanced Technology Infrastructure	Yes	NO	NO	NO	Competitive Parity
Sustainability Policy	YES	YES	NO	NO	Temporary Advantage
Business to Customer (B2C) approach	Yes	Yes	NO	NO	Temporary Advantage
Brand Reputation	YES	YES	YES	YES	Sustained Competitive Advantage
Advanced Vehicle Models	YES	NO	NO	NO	Competitive Parity
Skilled Workforce	YES	YES	NO	NO	Temporary Advantage
Enhanced Customer Engagement	YES	YES	NO	NO	Temporary Advantage
Financial Assets	YES	NO	NO	NO	Competitive Parity

Figure 4: NOVA's VRIO Analysis (own illustration 2024)

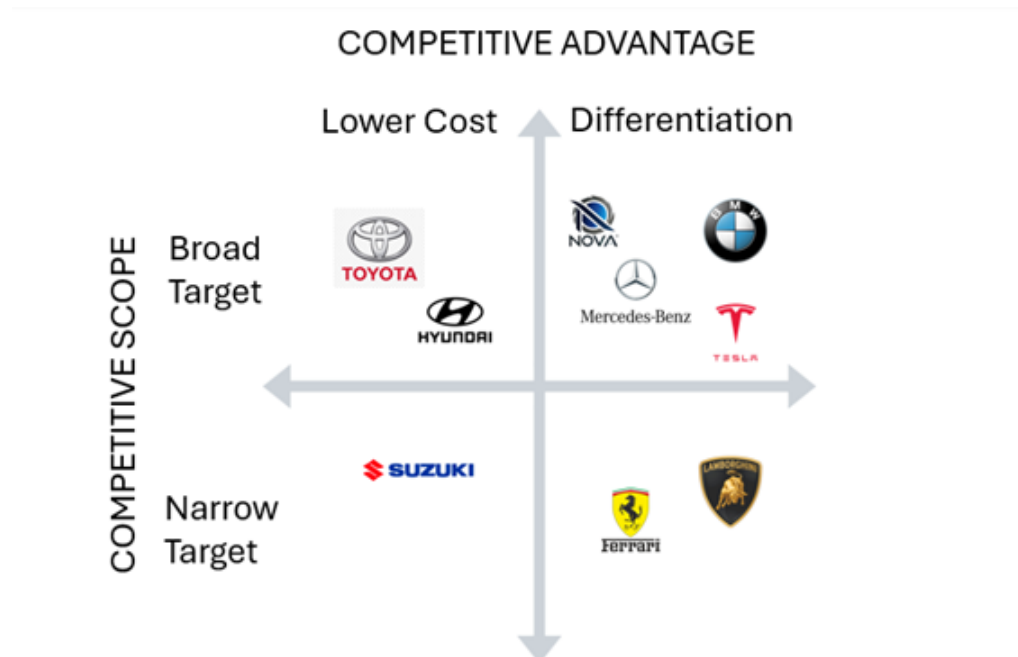


Figure 5: Porter's Generic Competitive Advantage Framework positioning NOVA in Differentiation (own illustration 2024)

TYPE	NAME	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28
Electric	Luna	4x4	4x4	4x4	4x4	4x4	4x4	4x4	4x4	4x4	4x4	4x4	4x4	4x4	Luna	Luna	Luna	Luna	Luna	Luna	Luna	Luna	Luna	Luna	Luna
Gasolin	PU 225	PU 227	PU 228	PU 229	PU 230	PU 231	PU 232	PU 233	PU 234	PU 235															
Hybrid	Business 135																								
Gasolin	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225	Lux 225
Electric	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport	Sport
Electric	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City	City
Electric	Aurora																								
Electric	Astro																								
Electric	Atlas																								
Electric	Orion																								
Electric	Zephyr																								

Figure 6: NOVA's Portfolio over Time (own illustration 2024)



Figure 7: UN 17 Sustainability Development Goals (Nations, n.d.)

PRESENT



- NOVA invested in water consumption reduction, adopting advanced water recycling systems to reduce water usage in manufacturing processes.
- With the installation of solar panels, the company aims to reduce CO2 emissions.
- NOVA uses carbon offset schemes to invest in global environmental projects, primarily in developing countries, to balance out our carbon footprint.
- NOVA invested in Energy Efficiency to decrease energy consumption, which lowered greenhouse gas emissions and reduced utility bills.

FUTURE PLANS



- NOVA aims to reduce poverty by supporting local communities through job creation, fair wages, and economic opportunities.
- Nova is committed to improving public health and well-being by ensuring safe, healthy working conditions, promoting mental and physical health programs, and supporting healthcare initiatives in the communities where they operate.
- Nova is focused on reducing inequalities by promoting diversity, equity, and inclusion within the organization and across its supply chains.

Figure 8: Nova's Sustainability Goals (Nations, n.d.)



Figure 9: Three Scopes of Nova's Sustainability Goals (BiP NOVA Simulation 2024)

SUSTAINABILITY INVESTMENTS

Production Investments (Scope 1)	Energy Investments (Scope 2)	Supply Chain Investments (Scope 3)
Water Consumption Reduction \$200M Demand (+) Material Costs (-) CSR (+)	Energy Efficiency Investment \$150M Demand (+) Material Costs (-) CSR (+)	Offset Suppliers CO2 \$81.06M Demand (+) Material Costs (+) CSR (+)
Waste Reduction \$400M Demand (+) Material Costs (-) CSR (+)	Install Solar Panels \$250M Demand (+) Material Costs (-) CSR (+)	Sustainable Suppliers \$20M Demand (+) Material Costs (+) CSR (+)
ISO14001 / EMAS Certificates \$500M Demand (++) CSR (++) Motivation (+)	Energy Management System \$100M Demand (+) Material Costs (-) CSR (+)	External Battery Recycling \$200M Demand EVs (+) CO2 (-) CSR (+)

Figure 10: NOVA's Sustainable Investments in Three Scopes (own illustration 2024)



Figure 11: Ansoff Matrix (Peterdy 2024)



Figure 12: NOVA'S SWOT ANALYSIS (own illustration 2024)

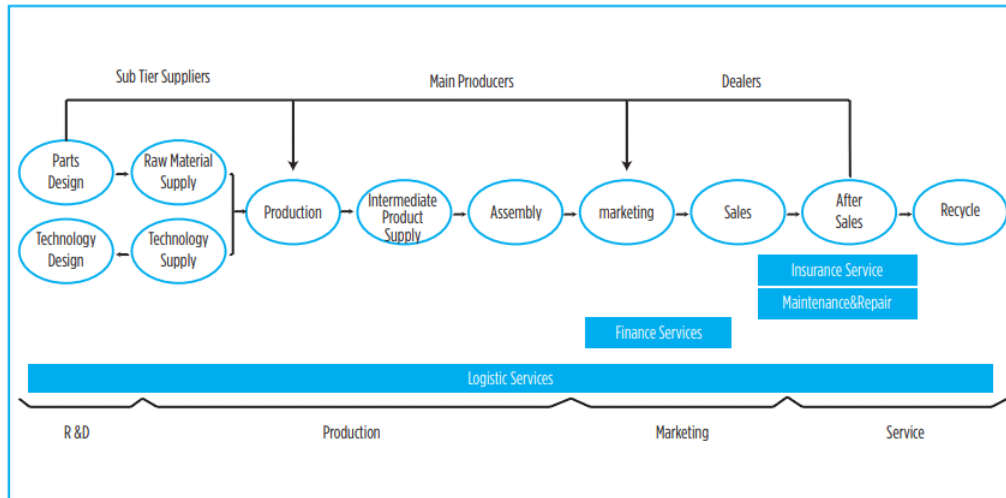


Figure 13: General Value Chain Flow of the Automotive Industry ((Ministry of Industry and Technology General Directorate of Development Agencies 2021))

Nova Skill / Behaviour	Very unsatisfying					Very satisfying				
	1	2	3	4	5	1	2	3	4	5
Body language: eye contact, smile, gestures, body position			x							
Verbal Language: assumptive, relevant, straight to the point, brief, simple, confident			x							
Rapport: establishing trust, keep it natural and familiar, conversational			x							
Value proposition: clear, persuasive, clear USP, relevant, short, unique			x							
Content: focus on customer needs and seller's differentiators, not focus on product specificities		x								
Form: simplicity, uniqueness, story telling, creativity, engagement, time management ...				x						
Extra 2min: Ability to answer posed questions, objections, etc.		x								
Comments										
professional approach, but lack of empathy and human touch										
very stiff approach, not very friendly										
difficult to build rapport (did not present the team or the company)										
Vague USP, not very clear										
very focused on company and brand, not so much on client's needs (e.g. geographical expansion)										
lack some creativity										
did not addressed the customer's questions fully, not very convincing explaining promises on sustainable initiatives										

Figure 14: Professors' Feedback from Sales Role-play (BiP Simulation 2024)

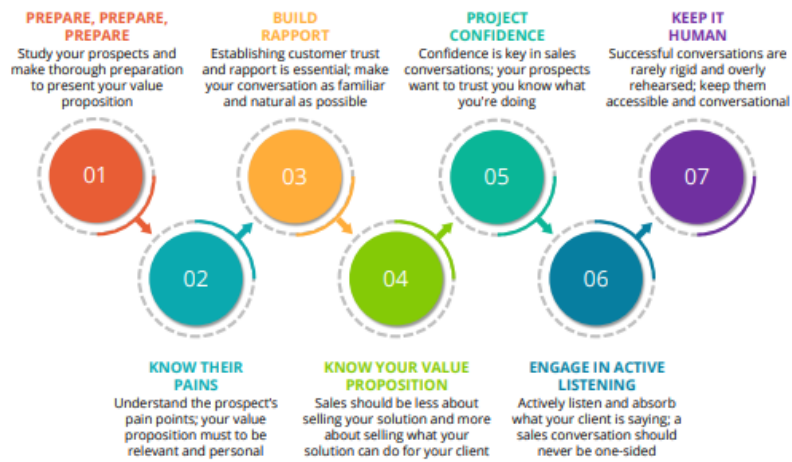


Figure 15: Key Characteristics for Impactful Conversations (Miguel Pinto Fernandes 2024)



Figure 16: Colors of the Group Members According to the Discovery Insights Practical Model (own illustration,2024)

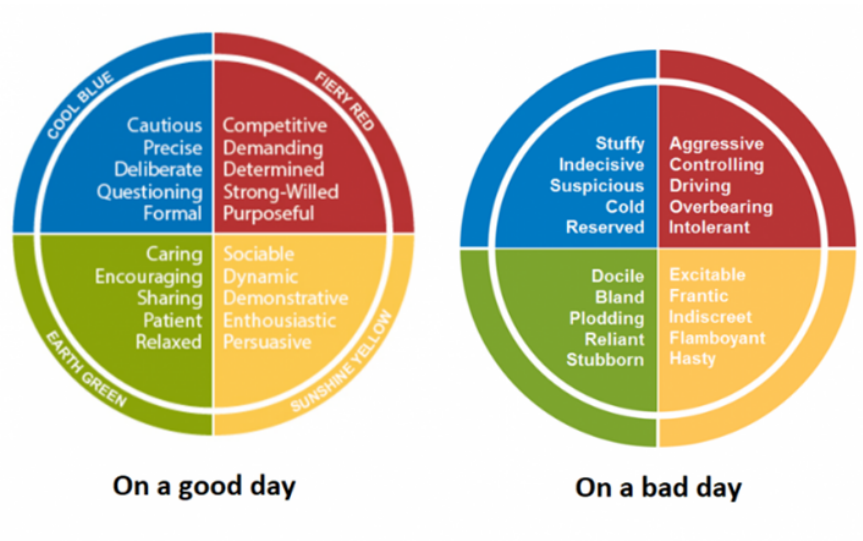


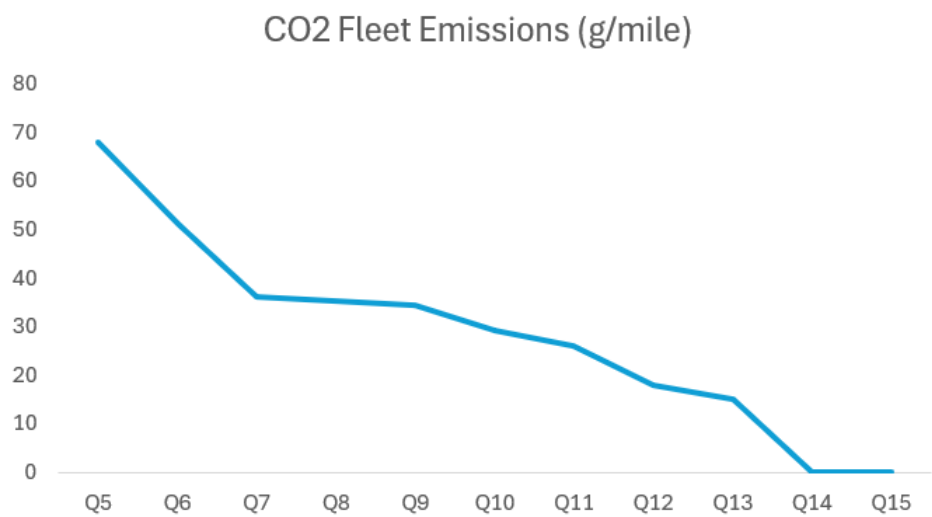
Figure 17: Discovery Insights of Different Colors in Good/Bad Day (Insights Newsroom 2024)

PEER & SELF EVALUATION

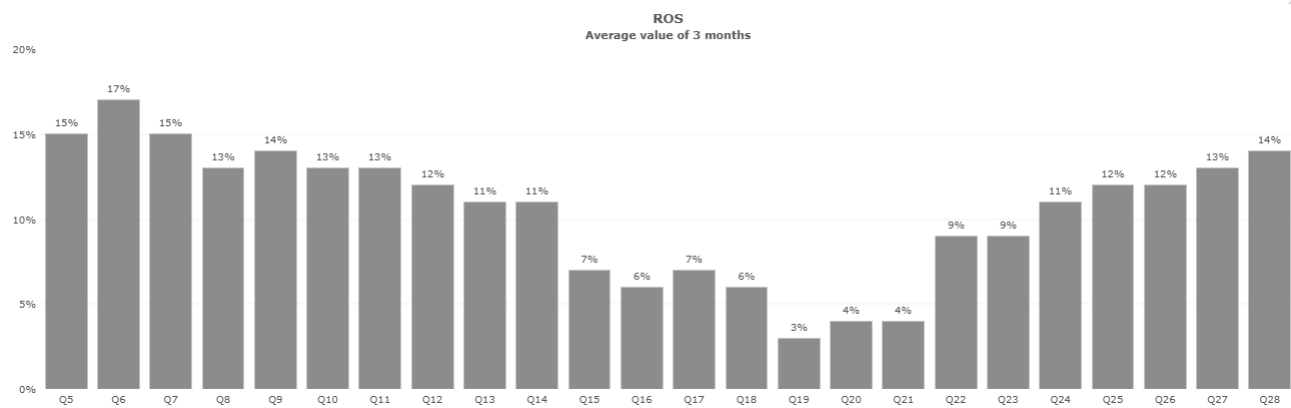


Figure 18: Peer & Self Evaluation (BiP Simulation 2024)

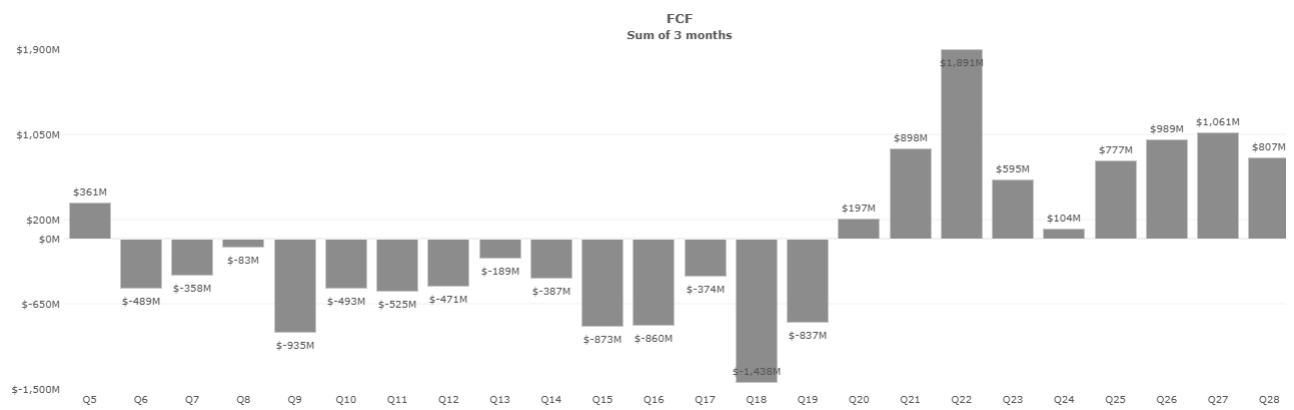
3. Graphs



Graph 1: NOVA’s CO2 Fleet Emissions Reduced to 0 by Q14 (own illustration 2024)



Graph 2: NOVA’S Return on Sales (BiP Simulation 2024)



Graph 3: NOVA'S Free Cash Flow Fluctuations (BiP Simulation 2024)

CO2 in Production

Scope 1



CO2 in Energy

Scope 2

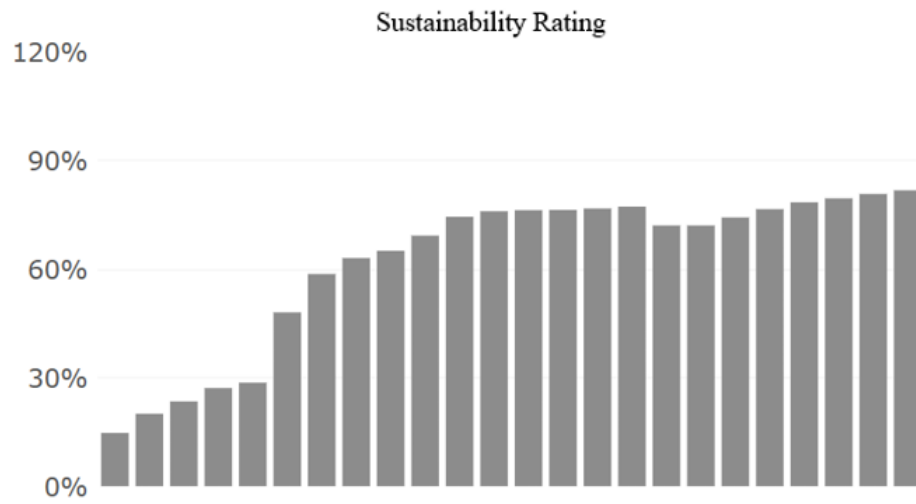


CO2 in Supply Chain

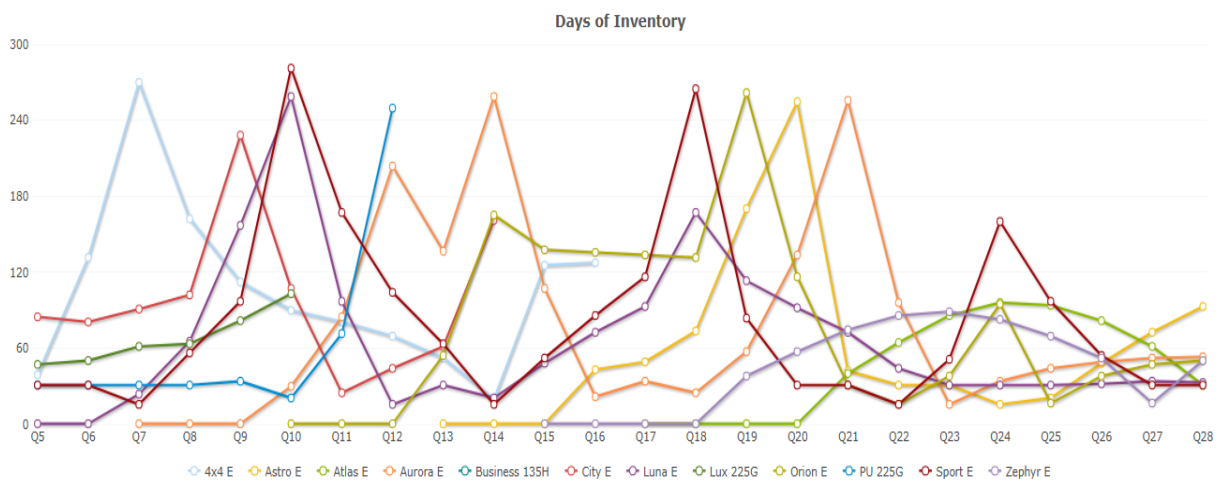
Scope 3



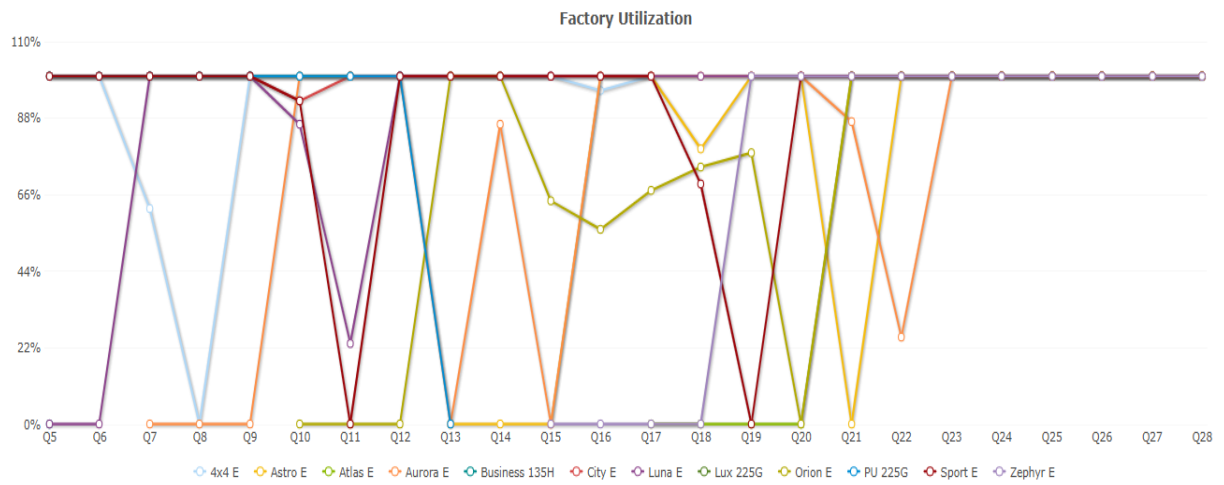
Graph 4: NOVA'S Decreasing CO2 Emissions in all Scopes (BiP Simulation 2024)



Graph 5: NOVA’S Increasing Sustainability Rating (BiP Simulation 2024)



Graph 6: NOVA’s Days of Inventory (BiP Simulation 2024)



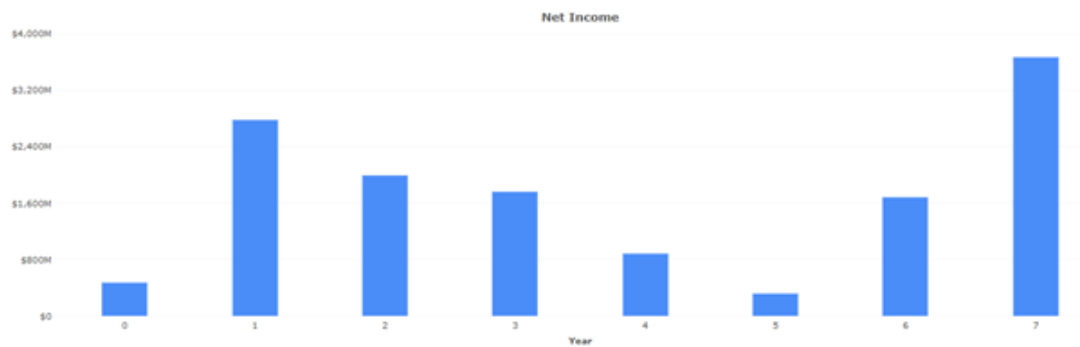
Graph 7: NOVA's Factory Utilization (BiP Simulation 2024)



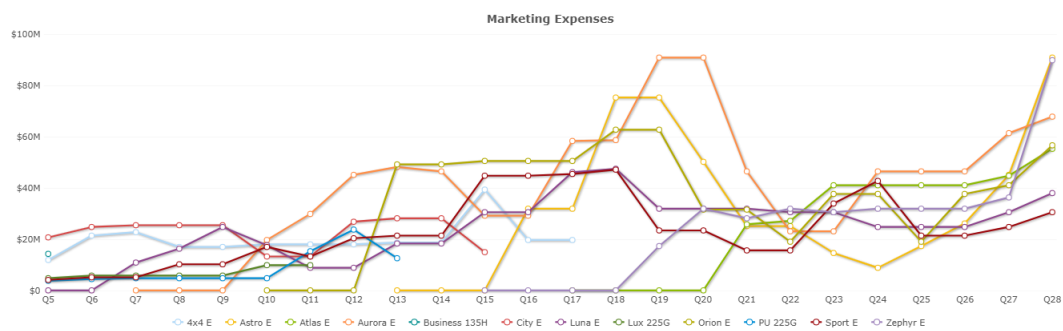
Graph 8: Sport E Days of Inventory and Factory Utilization Correlation (BiP Simulation 2024)



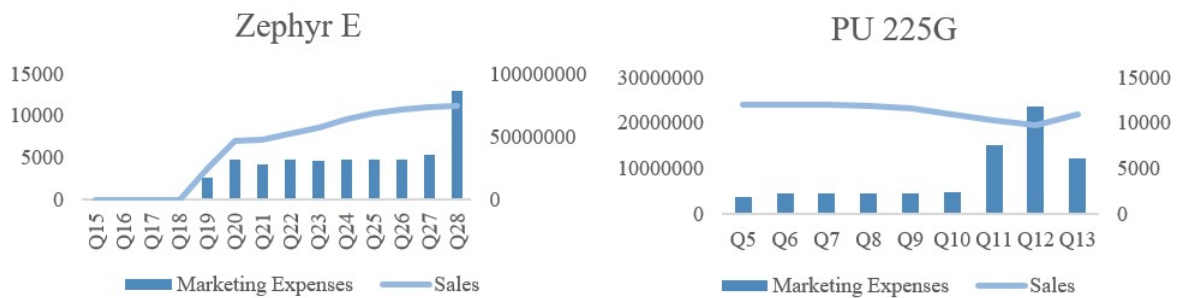
Graph 9: NOVA's Employee Satisfaction (BiP Simulation 2024)



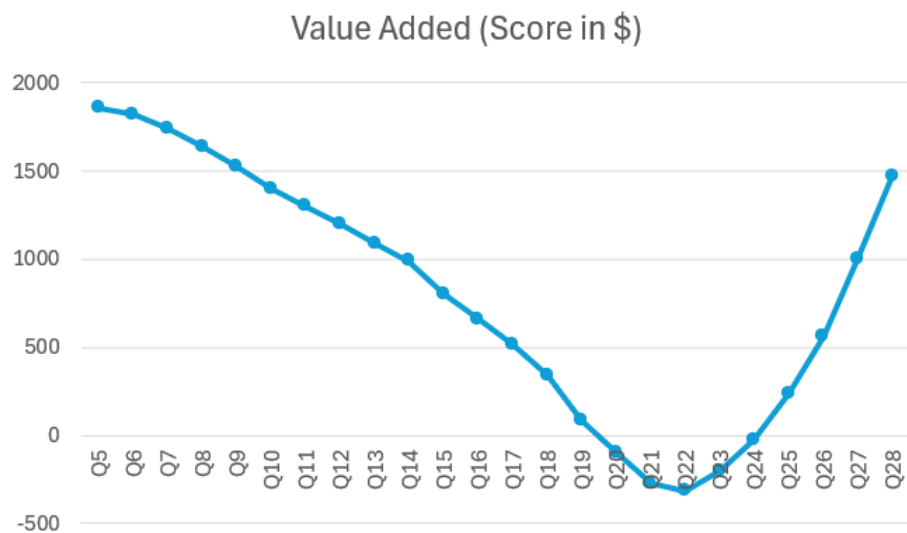
Graph 10: NOVA's Fluctuations in Net Income (BiP Simulation 2024)



Graph 11: NOVA's Marketing Expenses (BiP Simulation 2024)



Graph 12: Zephyr E and PU 225G Marketing Expenses and Sales (own illustration 2024)



Graph 13: NOVA's Score with Negative Values From Q20 to Q24 (BiP Simulation 2024)