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:
BUSINESS ANALYSIS OF THE ELECTRIFICATION TRANSFORMATION IN TRADITIONAL AUTOMOTIVE INDUSTRY & PERSONAL REFLECTION

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Abstract (100 words maximum)
In Business in Practice, my team and I managed a virtual automotive company, assisting it in transitioning from a conventional car manufacturer to a leading player in the electric vehicle industry. The first part of this paper elaborates on this transformation process from the perspectives of strategy, operations, and HR. The second the latter portion of this work includes two critical incidents that demonstrate my reflections and learning experiences as a member of the team throughout this journey.

Keywords: Business in Practice, Business Simulation, Sustainability, Human Resources, Operations, Strategy, Team Dynamics, Employee Satisfaction; Factory Utilization

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1. FIRM ANALYSIS

1.1 Introduction

Pantheon is a car manufacturer, operating across Europe, the United States, and China. Initially, the company's product lineup exclusively consisted of fossil fuel-powered vehicles, encompassing diesel, gasoline, and one premium hybrid car. While these vehicles were popular in the market at the time, it cannot be denied that they emitted quantities of CO2.

In 2022, it was observed that the worldwide CO2 emissions from fuel combustion and industrial activities rose by 0.9% compared to 2021, reaching a record peak of 36.8Gt. Notably, the CO2 releases from the electricity generation and transportation sectors increased by 261 million tons and 254 million tons respectively (IEA 2023).

In such a context, sustainability has become an ongoing concern across various industries. Within the automotive sector, numerous players have initiated transformative efforts. Brands such as Mercedes-Benz and Volkswagen have introduced hybrid and electric vehicles, while companies like Tesla and NIO exclusively offer electric cars.

As a participant in this industry, Pantheon believes that we have a responsibility to address emissions reduction and energy efficiency throughout the entire business value chain from production to user utilization, to achieve a sustainable future.

Therefore, we are committed to transformation, aiming to reduce zero CO2 emission in up and down value chain. To accomplish this goal, we invested in sustainability and electric vehicle research, improving performances such as connectivity and autonomous driving. We also reduced waste in operations, chose sustainable suppliers, and effectively utilized clean energy sources. Through this journey, we also provided sustainability skills training to our employees.

The following sections will take Strategy, operations, and HR as examples to have a more in-depth look at how we are accomplishing our goal, along with an analysis of the performance throughout the process.

1.2 Strategy Analysis

Strategy is about how an organization will move forward (Rumelt 2011). When contemplating the strategy of our company amidst the industry transformation, a holistic approach encompassing various external and internal factors has been adopted. The aim is to position Pantheon with competitive advantages within the industry for 6 years or even longer.

According to Rumelt (2011), a good strategy should contain three elements: a diagnosis, a guiding policy, and coherent action. In the following sections, Pantheon's strategy will be assessed in detail from these three aspects.

1.2.1 Diagnosis - What's going on here?

External Environment

Due to Industry 4.0 and the ongoing digitalization, the automotive sector is experiencing a substantial transformation. Vehicle manufacturers and OEMs around the world are investing colossal amounts of funds into making connected, autonomous, shared, and electric vehicles (Deloitte 2020).

In today's world where sustainable development is widely emphasized, the automotive manufacturing industry, which is known for its substantial carbon dioxide emissions, has been under significant scrutiny. Many countries have instituted policies to limit carbon dioxide emissions from the automakers. For instance, the U.S. Environmental Protection Agency (EPA) has introduced the GHG program (app. Figure 1), which uses GHG Credit Balance to incentivize manufacturers to reduce fleet emissions. Concurrently, for automakers that exceed pollution emission standards, the EPA imposes penalties through the Clean Air Act. For example, Volkswagen incurred $2.8 billion fine due to rigging diesel-powered vehicles to cheat on government emissions tests (Rogers and Spector 2017).

Besides the production, using vehicles can also generate emissions. Research found that a typical passenger car emits approximately 4.6 metric tons of carbon dioxide annually (EPA

2023). In order to reduce emissions caused by gasoline and diesel vehicles, many countries have implemented incentives to encourage consumers to use electric cars. For example, China has extended purchase tax breaks on NEVs (new energy vehicles: Plug-in electric vehicles that are eligible for public subsidies, including battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs) and fuel cell electric vehicles (FCEV)) until the end of 2027 to stimulate consumer purchases. The bought in 2024 and 2025 will be exempted from purchase tax amounting to as much as 30,000 yuan ($4,175) per passenger vehicle (China Daily 2023).

In fact, with technological developments, policy initiatives, and an increased environmental consciousness, consumers' acceptance of electric vehicles has significantly improved, particularly in regions where electric vehicles were introduced earlier. For instance, German actual users said they would be willing to pay an average premium of 35% for electric vehicles compared to conventional vehicles (Peters and Dütschke 2014). In China, nearly 60% of consumers have expressed their readiness to pay extra for safety, connectivity, and autonomous driving features (Deloitte 2020).

Internal Situation

As an automaker with production lines in Europe, China, and the United States, Pantheon possesses several evident strengths. Firstly, having factories on three continents allows us to reach consumers rapidly. It also enables us to conduct targeted market research for different regions, which greatly informs our product design. Secondly, our products are well-accepted by consumers; for example, in Q4, our Compact and Convertible models performed exceptionally well, with an average day of inventory of only 18 days. Thirdly, our employee satisfaction consistently remains above 90%, contributing to high production enthusiasm.

However, we cannot ignore our weakness. In Q4, we had 4 product lines with more than 60 days of inventory, and our entire car portfolio consisted solely of conventional cars. Additionally, our CO2 emissions are relatively higher when compared to our competitors.

The threats resulting from weaknesses are also evident. For instance, we may face a higher risk of carbon emission fines compared to our competitors, and the poor sales of certain vehicle models will lead to significant COGS (Cost of Goods Sold), directly impacting our profitability.

Certainly, there are some existing opportunities for Pantheon. Leveraging our strong credit rating, we can secure green bonds to support green investments. At the same time, we have two new art production lines nearing completion in Europe and China, which will soon be operational. Furthermore, we are actively working on the development of innovative hybrid vehicles.

Identify Key Challenge

Considering all external and internal factors mentioned above, we identified that the key challenge we are facing is the need to transition from a traditional automobile manufacturer to a competitive player in the rapidly growing and highly competitive electric vehicle sector, to improve our suitability and market share.

1.2.2 Guiding policy - What should we do?

To provide a clear direction for the entire company to meet the challenge, we have developed a guiding policy, which also serves as our **mission**: Consistently drive sustainable excellence by designing, manufacturing, and delivering high-quality vehicles that surpass customer expectations, while prioritizing environmental stewardship and contributing to a better future for generations to come.

As a complement to our mission, we define our **vision** as "Driving Sustainable Excellence for a better future." And our core **values** are established as sustainability, excellence, collaboration, and customer-centricity.

1.2.3 Coherent actions - How should we do it? & Did we execute it well?

With a clear objective in mind, we took corresponding actions. Overall, we have successfully followed the strategic direction we defined. However, some strategic gaps have appeared in implementation.

As mentioned in our strategy, we aimed to provide high-quality products with excellent performance to our consumers. We planned to differentiate ourselves from competitors by enhancing the technology factors in our products. Thus, In the first year, we invested $1310 million in Connectivity and Autonomous Driving (app. Figure 2). We also priced our products slightly higher than competitors to align with our premium brand positioning. This approach was driven not only by the need to protect the company's profits but also to maintain customer loyalty.

However, due to rapidly shifting market preferences, the two hybrid models we introduced in the following quarters lost their attraction in the marketplace quickly, resulting in a surge in our inventory. Since we didn't have the new electric cars ready to roll off the production line, we had to continue manufacturing the underperforming models. At the same time, due to an explosion in COGS, we had to temporarily suspend the training programs in sustainability skills for managers. What made the situation worse was that we suffered more CO2 Penalty (app. Figure 3) than our competitors due to the late introduction of the electric cars.

Clearly, our execution resulted in the emergence of strategic gaps, and we found ourselves lagging behind in this transformation. In response to this challenge, we halted the process of retrofitting other models into hybrid versions and expedited the introduction of electric vehicles. Furthermore, to uphold our brand positioning, we adhered to a relatively higher pricing strategy, irrespective of the sales performance.

Due to our timely adjustments and exceptional product quality, we secured major clients, resulting in an additional revenue of $960 million and an added gross profit of $384 million. Furthermore, we successfully met the sustainability standards mandated by BlackPebble and main investors, enabling us to maintain their investment of $250 million (app. Figure 4). Therefore, during the last six years, although there was a trough period of negative growth, our value-added demonstrated a rapid growth from year 4 to year 6. In comparison to Q17, our value-added in Q28 grew by an impressive 3509 million (app. Figure 5).

1.3 Operation Department

Operation is a “doing” place in the company, where strategy is translated into reality, shaping a company's performance and competitive edge. Decisions made with the operation department require a comprehensive consideration of both operations resources and market requirements, alongside personnel changes and financial support. As emphasized by Barnes (2018), the effectiveness of operations management significantly influences whether an organization succeeds or fails.

In the following section, the 4Vs Framework will be used to present an overview of Pantheon's operations. Particular emphasis will be placed on the challenges encountered in inventory management and the initiatives undertaken to enhance sustainability during the company's transformation.

1.3.1 4Vs Framework – Overview of Pantheon’s Operation Process

According to Slack and Michael (2002), the 4Vs Framework, comprised of Volume, Variety, Variation, and Visibility, can be used to easily demonstrate a company's operations. Based on this framework, Pantheon’s operational status is depicted in Figure 1 below.

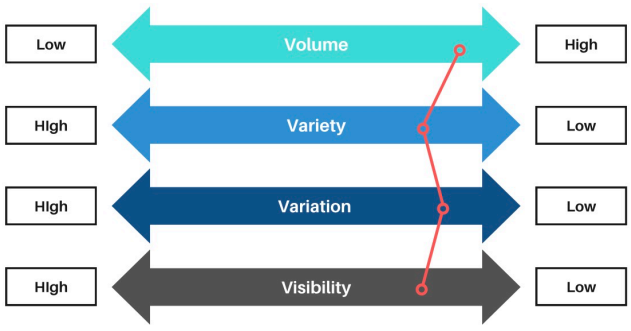

Figure 1: 4Vs framework for Pantheon’s Operation Process

Volume – As an automotive company with production across three major continents, Pantheon's production volume is quite substantial. Typically, in the same quarter, we have 6-7 different models in simultaneous production. Taking Hermes Mark 2 as an example, its production volume reached 45,000 units in Q17, Q8, Q22, and Q23 (app. Figure 6).

Variety – Pantheon aims to provide our customers with a wide range of choices within the same type of cars. Until now, Pantheon has provided customers with 6 types of cars, comprising a total of 18 different models. For instance, in the Athena (Compact) series, customers can choose from four different models: gasoline, hybrid, regular electric, and premium electric. However, we also have products like Hermes, which emerged after achieving transformation. These models are exclusively electric, with Hermes Mark 3 demonstrating improved performance in autonomous drive and connectivity compared to Mark 2 (app. Figure 7).

Variation – Due to our high production volume and overconfidence in hybrid models, our operations exhibited relatively low variability in the ever-changing market preferences, resulting in significant financial cost. This will be discussed in detail in the following inventory analysis.

Visibility – The automotive industry has less visibility into its production processes than other industries because production process are less exposed to customers. Even Toyota, a leader in operations, maintains low visibility (Singh 2022). However, Pantheon is actively increasing the transparency of our production, communicating our low-carbon production line and supply chains through our official website. We are also increasing test drive and factory visiting events to engage more with our customers.

1.3.2 Inventory Management - Challenges in Corporate Transformation

In operation management, there are several key indicators such as quality, dependability, speed, flexibility, and cost. Unfortunately, in the real business world, it is difficult for organizations to excel in all these indicators simultaneously. Therefore, trade-offs need to be made between these KPIs to achieve the optimal solution.

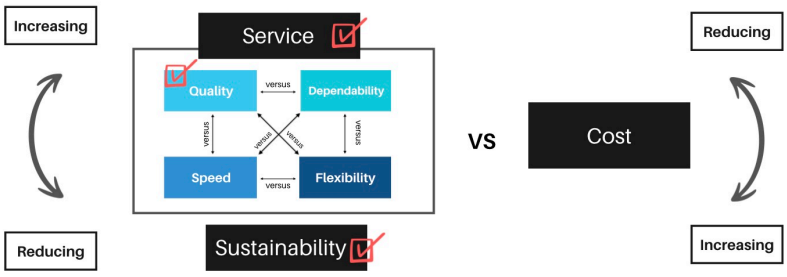

Figure 2: Trade-Offs within Operation and Pantheon's choice

As mentioned in the strategy section, Pantheon's strategic emphasis lies in delivering products of relatively higher quality and premium service to customers and "driving sustainable excellence for a better future". Hence, we are willing to invest more to provide our customers with superior service within the industry while meeting sustainability standards. Additionally, between the trade-off of quality and flexibility, flexibility was not our priority (Figure 2).

This relatively lower flexibility has led to challenges in mitigating the adverse impacts when our strategy and market predictions go awry. And in the first year, we speculated that hybrid cars, depending on market preferences at the time, would be the next highly demanded vehicle type. Due to these two reasons, our Innovation Department invested more in hybrid models compared to our competitors. This resulted in our delayed entry into electric vehicle development, and lagging market demands. Additionally, due to this R&D lag, we lacked sufficient new models to replace underperforming ones.

As a result, our days of inventory continued to rise from Q9. To address this issue, we attempted to halt production of overstocked vehicles and replace them with other existing models. However, such decisions not only failed to resolve the problem but also resulted in significant workforce fluctuations. By Q15, the days of inventory for the hybrid Apollo Mark 1 reached a staggering 257 days. Also in that quarter, our days of inventory reached 85 days, well beyond the normal range (app. Figure 8), significantly increasing our COGS.

Fortunately, upon recognizing the root cause of the problem, we accelerated our efforts in electric vehicle development. When we phased out gasoline and hybrid vehicles entirely (Q20), our inventory was reduced to around 30 days. In Q27 and Q28, factory utilization for the entire production line reached 100.00% (app. Figure 9).

In fact, when an operation is part of a global supply network, the issue of inventory can be especially important (Barnes 2018). Toyota's just-in-time (JIT) production can be an excellent example of well inventory management: Throughout Toyota's production sequence, the system

provides the types and quantities of items needed by different processes in the assembly sequence only when they are needed, with transportation occur simultaneously (Toyota 2013).

To avoid a tragedy of finished goods filling up our warehouses that could damage our operations again, Pantheon plans to implement our JIT production system in the future, aiming to reduce warehouse space, eliminate unnecessary cost burdens, and enhance our efficiency.

1.3.3 A Sustainable Supply Chain – For our Society, For our Company

Pantheon is committed to investing in projects that enhance our sustainability. Over the course of six years, we have allocated a total of 1587.31 million towards initiatives within scopes of production, energy, and supply chain (app. Figure 10). These investments are aimed at reducing our carbon footprint both in our own operations and throughout the upstream and downstream supply chain, fostering our environmental and social impact.

Through continuous investment, we have not only reduced CO2 emissions in energy and supply chain to zero (app. Figure 11) but have also increased our company's sustainability rating, which enabled us to secure a substantial amount of green bonds to support further investments.

In the years to come, there are evident signs that corporations will encounter increased scrutiny from governments, customers, and investors. Investors, in particular, appear inclined to favor companies that are elevating their ESG supply chain standards (Tett, et al. 2020).

Pantheon committee that we will continually optimize our supply chain for efficiency and sustainability. We pledge to provide relevant reports that enhance transparency. This commitment is driven not only by our own financial benefits, but also by our aspiration of "Driving Sustainable Excellence for a better future".

1.4 Human Resources department

The Human Resources (HR) department played a pivotal role in talent acquisition and retention across different regions. . It also maintains a close collaboration with the operations department. As an HR director, I was responsible for adjusting salaries and workload to maintain

employee motivation and developing sustainability skills among managers for informed decision-making on sustainable projects within Operations.

This analysis delves into the vital contributions made by the HR department in both Factory Staffing and Sustainability Development, exploring how HR department has influenced the team's overall success and effectiveness.

1.4.1 Factory Staffing -- Challenges in Synergy with Operations

Factory staff management is closely intertwined with the Operations department. Every decision made by the Operations department regarding the factory has a direct impact on the recruitment of factory staff. Large-scale hiring and layoffs will inevitably result in large financial expenditures. Therefore, this is an important cross-departmental decision. From HR's perspective, factory staffing changes can be used as a measure to analyze the management of the plant's workforce over the past six years (Figure 3).

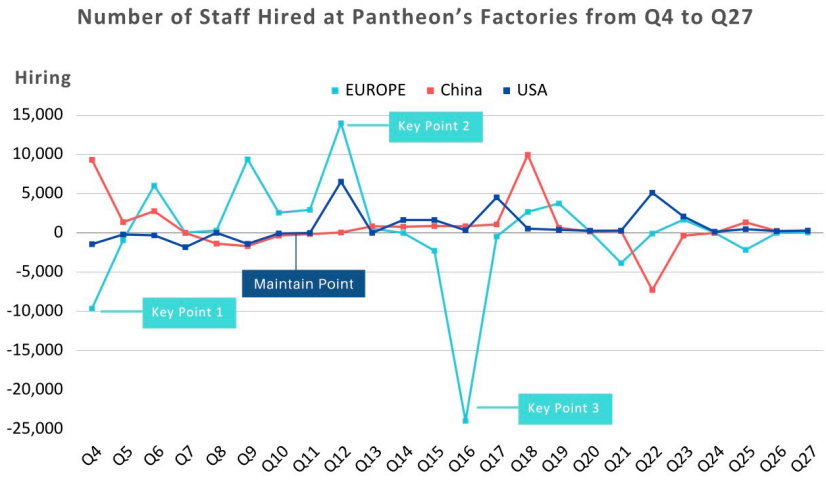

Figure 3: Number of Staff Hired at Pantheon's Factories from Q4 to Q27

During Q4 (*key point 1*), our initial decisions were guided by market preferences at the time. We chose to manufacture Compact car models in Europe, the convertible series in China, and the Lux and SUV series in the USA. This decision changed the production line a lot and led to the first significant workforce transition, resulting in a total staff change of 20,391 individuals.

However, due to the frequent changes in decisions made by Operations department during the following period, such as adding a Lux car production line in Europe, the European factory

had to undertake extensive recruitment efforts during Q6, Q9, and Q12. Similarly, the contrasting workforce changes happened in the Chinese factory during Q18 and Q22 were a result of introducing and subsequently retracting the production of Lux model.

In our company, there are two peaks in terms of workforce fluctuations. The largest recruitment surge in our company occurred during Q12 (*key point 2*), because it was the first production cycle of electric car models, necessitating an increased workforce. On the contrary, In Q16, based on our insights into market preferences and our determination to reform the company's production line, we decided to replace the lux model with the Micro Electric in Europe. While this strategic shift indeed yielded substantial gains over the following three years, it also marked a painful period of downsizing for the European factory during Q16 (key point 3), incurring an expenditure of approximately $136 million.

Nonetheless, the HR department managed to mitigate such extensive workforce adjustments through cross-departmental communication and negotiation. For instance, during Q10-Q11, despite the workload in USA factory was only 96% of its capacity, I refrained from implementing layoffs in these two quarters (*Maintain Point*) because we will have a new plant in the US in Q12. This approach effectively alleviated the personnel recruitment demands of Q12, circumvented the need for layoffs, and resulted in considerable financial savings.

In fact, layoffs are often inevitable when companies facing economic and transformation challenges, because it can be an efficient way to sustain productivity and simultaneously increase profits (Schmitt, Borzillo and Probst 2011). For instance, in 2018, General Motors shifted its manufacturing focus towards electric vehicles and autonomous vehicles, and discontinued poor-selling models. This strategic realignment led to the closure of five North American factories and a 15% reduction in the workforce (Youn and Cook 2018).

Pantheon tried our best during this inevitable transformation. For employees affected by layoffs, we provided them with appropriate financial compensation. For those who remained and

newly joined, we focused on enhancing their job satisfaction through adjustments in salaries and workload. As a result, we observed a consistent rise in Employee Satisfaction over the following three years, reaching a remarkable 100% satisfaction rate by Q28 (app. Figure 11).

1.4.1 Sustainable Development – Investment & Talent Management

Green Investment for HRM

As a first step, we allocated an investment of $10M in Q4 to establish a sustainability policy, signaling our commitment to integrating sustainability into all our decision-making processes. To ensure comprehensive awareness of sustainability throughout the company, we have allocated $30M over the subsequent quarters for Sustainability Policy Training and Sustainability Awareness Training (app. Figure 12).

Our goal is to cultivate employees that not only understand and promote eco-friendly practices within the company (Mathapati 2013), but also contribute positively to society at large.

We believe that employees who embrace sustainability can produce sustainable products. Only when our employees and products lead in sustainability that we can influence the entire society. In doing so, we can eventually realize our long-term vision of "Driving Sustainable Excellence for a better future."

Talent Management

	Sustainability Skill Level	Average Compa Ratio	Diversity	Gender ratio	Management Motivation
Q4	0.95	-3%	28.0%	38.0% F	86%
Q28	95.5	6%	45.6%	41.8% F	99%

Figure 4: HRM KPIs Comparison of Q4 and Q28 (source: app, Figure 13)

Pantheon placed significant emphasis on providing sustainability skill training for management across various production lines. As depicted in the above Figure 4, our managers' sustainability skills have shown remarkable growth from an initial value of 0.95 to 95.5 by Q28.

With the deepening of training, our managers have developed enhanced overall capabilities, which naturally translates to their demand for higher compensation. By Q28, we have elevated managers' salaries by 6% above the industry average, which is a substantial improvement compared to the -3% in Q4. Due to salary increases and stable operations, our management motivation reached 99% in Q28.

Pantheon places a strong focus on diversity, equity, and inclusion within the company. During our recruitment processes, we hired global talents from various regions, firmly believing that each unique individual brings forth distinct value. As industry leader Tesla has emphasized, diversity can spark creativity, and our collective mission is to expedite the world's transition to sustainable energy (Tesla 2020).

Our diversity score has increased from 28% in Q4 to 45.6% in Q28. Additionally, the proportion of female managers has also seen improvement. However, gender equality remains a problem that the entire industry continues to address. For a long time, male executives have dominated the automotive industry. For instance, in 2021, 8 out of 10 executive positions at Tesla were held by men. Similarly, Ford and General Motors had 74% and 79% male executives, respectively (Guynn and Fraser 2023).

Pantheon is acutely aware of this situation and we committee to maintaining a fair environment in our future recruitment processes. We will ensure that we will provide candidates from diverse ethnicities, genders, and backgrounds with equal opportunities.

1.5 Conclusion

In our journey, Pantheon has conducted a comprehensive assessment of both internal and external factors when establishing our strategy and steadfastly followed our guiding policy. Along the path of strategy execution, we encountered challenging phases and identified strategic gaps. However, we proactively adjusted our production methods to align with our objectives.

We insist on delivering high-quality vehicles that surpass customer expectations. Simultaneously, our dedication to sustainability has seen notable enhancements, thanks to the concerted efforts of our Operations, Human Resources, and other departments. We are steadily realizing our vision of "Driving Sustainable Excellence for a better future."

Based on the analysis presented in the preceding report, we can easily tell that corporate governance discussions inevitably intertwine with various departments within the broader business value chain. This interconnection arises from the fact that decisions across all departments necessitate a comprehensive assessment, making it nearly impossible to isolate any single department entirely from the overarching context of the organization. As Hausman (2002) mentioned, inter-functional cooperation and communication are essential antecedents of business success.

Indeed, different functional units within the company have their own strategic focuses, often with some conflicts of interest. For instance, HR and the financial department may not advocate for frequent production line changes by the operations department, while innovation and marketing departments might want the operations department to quickly incorporate new trends and technologies into production. And the operations and marketing departments may have different opinions about switching product lines due to their distinct perspectives.

However, what holds greater significance is that transcending these minor divergences, all the departments are working towards a common direction built upon our vision, mission, and values. This collective alignment empowers Pantheon to successfully transition from a traditional automotive manufacturer to a high-quality, profitable electric vehicle manufacturer.

During my time as HR Director at Pantheon, I realized the importance of cross-functional collaboration: Only by working together and utilizing resources effectively can a company implement its strategy correctly and respond quickly to any changes.

2. PERSONAL REFLECTION

2.1 Introduction

Business in Practice is a program that not only provides students with a platform to simulate the operations of a company, but also provides us with an opportunity to learn valuable lessons from teamwork.

This program attracted students from diverse majors and backgrounds. For instance, our team was consisted of four management students, one finance student and one innovation student from five different countries. As we bring together diverse knowledge and perspectives, couple of obstacles arise due to the differences.

I consider myself as an introvert who is good at doing the best I can within my function but may have difficulty in communicating and interacting effectively with others. This is my most obvious limitation in teamwork.

In the following sections, I selected 2 critical incidents from work-related and non-work-related scenarios to demonstrate my experiences, reflections, and learnings during this four-week period. I will also analyze the peer evaluations to enhance my reflective process.

2.2 First Critical Incident: Afraid to speak up

2.2.1 What happened?

In the first year of the simulation, our operations performed exceptionally well, and by the end of the year, our value added ranked first among the 12 teams. During those four quarters, we had many discussions, and each team member performed their roles efficiently and harmoniously. However, as we entered the second year of the simulation, our value added started declining. Consequently, there was a slightly tense atmosphere among our team members. We provided mutual support and, after the second year, revisited our six-year plan. We noticed deviations from our initially formulated sustainable approach, but we believed these adjustments could lead to higher returns.

At that point, as the HR Director, I considered that the Operations Director and Marketing Director bore more significant responsibilities in reversing the company's situation. I decided to align the factory staff adjustments with the needs expressed by the Operations Directors. During their intense discussions, I opted to speak less and agreed without raising any questions to the adjustments proposed by the Operations Directors.

In the third year, however, our value-added continued to decline swiftly, reaching -649.9M in Q16. During our team's analysis of what went wrong, a crucial issue was identified: our Revenue was insufficient, while our COGS remained relatively high. Consequently, our Finance Director suggested that I should express my opinions and ideas more actively to help reduce COGS. At the same time, the Operations Directors also raised their concerns about my lack of proactive communication was a significant factor contributing to these outcomes.

Under pressure from both sides, I took the initiative for the first time and gathered all team members together to explain the contributions that HR could make in this simulation. Through my explanation, they understood that HR could only control factors such as the number of factory employees, their work quality, and wages. Without laying off employees, we couldn't exclude certain employees from production.

Subsequently, we found that efficient inventory management in the operations department was the key to controlling COGS. As a HR Director, I need to express my views on employee changes in the factory optimization process. it is crucial to leverage market trend insights from the Marketing department to achieve higher revenue. Only through this approach could we ultimately increase our value added.

2.2.2 Analysis:

Different Culture Background

I believed that cultural background differences were the main reason behind my silence. According to ethnographic accounts, individuals within the Chinese cultural context often

perceive emotions as potentially dangerous, prioritize temperance in emotional responses, and place collective harmony above personal expression (Klineberg 1938). Since childhood, I have been taught to "think third before acting," not to interrupt others while speaking, and to avoid speaking loudly. These mindsets have deeply influenced me, causing me to habitually spend quite a long time contemplating a perfect answer in my mind before I speak up in team discussions.

The consequence of such behavior is that I often hesitate to participate in team discussions actively and tend to speak up only when it is time to make decisions. Additionally, during sales speeches, I experienced awkward pauses and silences before responding to the professor's questions. While my team members reassured me that they appreciated my answers, these pauses still resulted in point deductions.

Different Personality Color

Analyzing my personality from a cultural background perspective has its merits, but it can be somewhat narrow. During the "Lead yourself" workshop, I learned a more comprehensive approach that categorizes everyone's personality into four different colors. This approach provides managers with a convenient way to identify employees' personalities and has a great benefit to optimize teamwork.

Through the assessment, I discovered that my personality aligns more with the " earth green ", which means I care more about harmony and consensus. Interestingly, our Marketing Director，Finance Directors and one of the Operations Director belong to the "cool blue", while another Operations Director belongs to the "fiery red", and the Innovation Director is classified as "sunshine yellow".

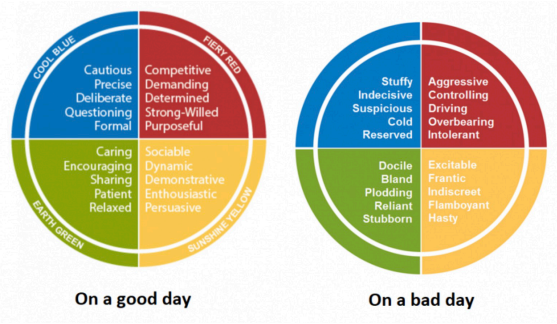

Figure 5: four personality colors on their good day and bad day (source: Insights Discovery)

It was because of my mild “earth green" personality, that I tended to avoid voicing dissenting opinions to steer clear of conflicts, believing that harmony can enhance efficiency. And as Thomas Erikson (2019) pointed out, I felt extremely uncomfortable, especially when members with dominant "red" personalities questioned and pressured me to speak up or make rapid decisions. In fact, avoidance of conflicts is one of the five dysfunctions of a team, and healthy conflict leads to growth and results (Lencioni 2002).

Moreover, considering that we have attended academic conferences together, presumed that every team member would be well-acquainted with HR's responsibilities. My assumption was extremely erroneous and led to an information gap between us, and I realized that the knowledge shared is the key to the effective collaboration (Haas and Mortensen 2016).

2.2.3 Learnings and Future Improvements

Improvements in Decision-Making

After realizing the above-mentioned problems, we devised a well-structured decision-making sequence. The "fiery red" Operations Director would create a preliminary plan for factory changes based on our strategy and then consult with me about the required personnel adjustments. After reaching consensus with her, I would inform the Finance Directors about the cost. Meanwhile, the "cool blue" Marketing Director would have completed their market analysis for this round and would share insights with the Operations Director of the same personality type. At this stage, the Innovation Director would also be informed about market

trends which can help to make decisions. If minor adjustments to the factory were necessary, we could swiftly implement them and report the latest figures to the Finance Directors.

During this process, I tried to be more active and share my insights as HR Director in the team discussion. By applying the relaxing and patient in my personality, I eased the sense of urgency of the "Fiery Red" Operations Director and made her less impulsive. And she also asked ed for my opinions softly, providing me with more opportunities to voice my ideas.

This method proved highly efficient and impactful, enabling us to make quick and rational decisions. As a result, our company's operations thrived and experienced continuous rapid growth from the fourth to the sixth year.

Learning in the Future

Having an extroverted personality does not necessarily mean it is more beneficial for team cooperation (Curşeu 2019). There is no such thing as a "good" or "bad" personality.

Reflecting on the entire simulation, I learned the optimism of "sunshine yellow", the carefulness and data sensitivity of "cool blue", and the decisiveness and courage of "fiery red". I realized that in order to do well in my future teamwork, I need to acknowledge my personality strengths, improve on my weaknesses, and learn from the positive traits of other personalities. Thus, I created the following chart (Figure 6) to show what can I improve as an "earth green" in my future work and life, as well as the aspects I should learn from other personalities.

Earth green	*Sunshine yellow*	*Fiery red*	*Cool blue*
What can I improve?	*What can I learn?*	*What can I learn?*	*What can I learn?*
• Don't always avoid conflict.	• Be more optimistic.	• Building Leadership.	• Be more cautious.
• Practice assertiveness to express my needs and opinions more openly.	• Enhance social skills by engaging in more social and networking]activities.	• Cultivate a sense of urgency in tasks to complete them timely.	• Learn to conduct thorough planning before embarking on new initiatives.
• Don’t get too caught up in seeking harmony.	• Try to be more energetic and creative.	• Be direct with my opinions in discussions.	• Focus more on accuracy and precision.
• Learn to set boundaries to avoid being too accommodating.	• Be more confident and interactive during presentations	• Be more determined and focused	• Evaluate situations from multiple angles before forming an opinion.

Figure 6: What can I improve as an “earth green “and what can I learn from other personalities?

2.3 Second Critical Incident: Disinclination for Social Activities

2.3.1 What happened?

Our classes often started at 9 o'clock and our team meetings always concluded at 6 o'clock in the afternoon. However, I was the only one in our team who resided in the city center of Lisbon, requiring approximately 2 hours to go to the campus and another 2 hours to return home every day. Such a lengthy commute made it challenging for me to participate in team activities following the meetings.

During the first week, my group members often invited me to relax at the beach after our meetings. However, considering the exhaustion from my long workday and the need to take the train back home, I declined their invitations. I also refrained from attending the first party that organized by Professor João for the same reason.

On that afternoon, our Marketing Director expressed his concern sincerely after the other group members had left the classroom. He said, “Actually, I am not a party person, but I would be willing to attend the party to chat with people." I responded, "Didn't you mention that you don't drink?" He replied, "Even without alcohol, I can have enjoyable conversations with people. A party doesn't solely revolve around alcohol."

Although I did not attend the party that day, his words deeply influenced me. In my perception, our Marketing Director was also introverted and reserved, and he always held opposing views from the rest of us during the simulation. Thus, I assumed he might not like parties. However, I was completely mistaken. I realized that he effectively separated work and personal life. This is an important approach to promoting effective teamwork. By doing so, we can be close friends after work and can express different opinions without any reservations during work.

2.3.2 Analysis:

<u>Reasons Behind Aversion to After-Work Socializing</u>

In fact, from a physical well-being perspective, mentally switching off during off-job time contributes to generating positive emotions and improving sleep quality (Sonnentag and Bayer 2005), which aids in enhancing work efficiency the following day. Especially as mentioned earlier, with my introverted personality and heightened sensitivity to others' emotions, excessive interpersonal interactions throughout the day tend to leave me more drained than others. Consequently, I naturally prefer returning home directly after work.

Another layer of reasoning lies in my aversion to post-work socializing, stemming from two distinct reasons:

Firstly, the approach of using drinking and dining as a means of conducting business negotiations, which was prevalent from the late 20th century into the early 21st century, was considerably popular in my country. Having witnessed instances during my parents' business activities where individuals exhibited uncontrolled behavior after consuming alcohol, I had a strong aversion to after-work gatherings involving alcohol.

Secondly, with the introduction of "Team Building", many Chinese corporations began to emulate this approach. However, to prevent a decrease in employee workloads, companies tend to schedule team building activities after work or on weekends. Moreover, employees who refuse to participate in the activities will be treated differently in their future working lives. This method has sparked resistance among the younger generation, including me, due to the desire to protect our leisure time and overall well-being.

2.3.3 Learnings and Future Improvements

After-Work Interaction is Still Important

I must admit that I held biases toward after-work socializing. However, according to West (2012), the four elements of teamwork are interacting, information sharing, influencing, and ensuring safety. And it is worth noting that interaction includes both work-related and social interactions.

During the initial phase, our team demonstrated commendable interaction. We discussed our holidays, life at university, as well as family and friends in several coffee chats before the project officially began. And this experience helped us in creating a harmonious team dynamic during the first week. However, as challenges surfaced within our operations during the second week, I seemed inclined to avoid discussing beyond working hours. Coupled with my disinterest in parties, I intentionally shied away from those social engagements.

This, as it turned out, formed a detrimental cycle. Owing to my absence from certain activities, other team members notably grew more acquainted with one another. I distinctly sensed their burgeoning bonds and a proliferation of shared topics, resulting in a deeper rapport and enhanced synergy within their work interactions.

Improvements within Team

Our Marketing Director inspired me profoundly. His words made me reflect on my disinterest in joining after-work events. I gradually recognized the importance of engaging with my team members in various settings beyond our formal meetings.

I was motivated by this awareness to be more open-minded and receptive to team activities such as parties and coffee breaks during the project because I knew that they would be helpful with our friendship and overall effectiveness as a team. Throughout these social events, we not only talked about how to improve our company's performance and celebrated its achievements, but also shared our favorite music and talked about future career plans.

By doing so, we developed a better understanding of each other during the following weeks and became more in sync with each other when dealing with challenges. I also became more confident in expressing my opinions directly, because I feel relaxed in an environment that was created by people I knew well.

Learning in the Future

To be honest, in the majority of companies around the world, we will unavoidably need to join our colleagues for dinner, coffee, or a party. After-work socializing is not just a platform for casual interaction, it's an integral part of strengthening team dynamics. I shouldn't consider such activities as an invasion of my personal space and shouldn't be too categorical to refusse to participate in any of these events.

I have discarded my biases. In the future, I will be proactive in engaging in a variety of team building activities while ensuring that I adequate rest is prioritized. I believe this will be a good way to show my engagement with the teams, demonstrate my respect for colleagues, and will give me the opportunity to cultivate new friendships and access to different perspectives and cultures.

2.4 Conclusion

To begin my summary of my experiences and learning in Business in Practice, it is essential to consider the Peer and Self-Assessment Analysis (Figure 7) as a valuable complement.

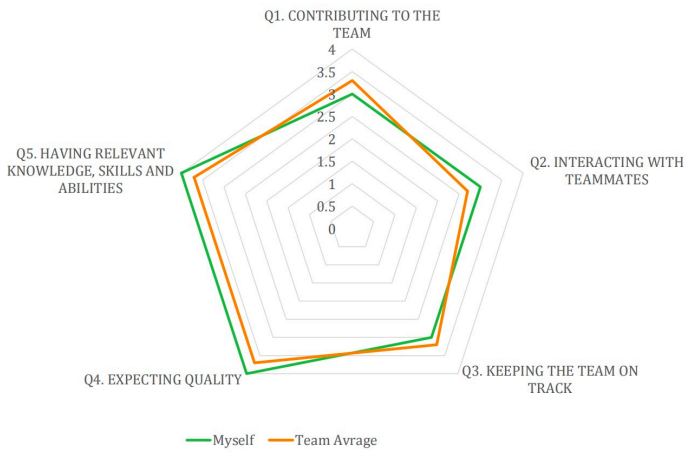

Figure 7: Peer and Self Evaluation

At first glance, the pentagon formed by my self-assessment scores and those of my group members exhibits a generally similar shape, indicating that I have a relatively clear self-awareness. However, in general, my average scores are not very high, which suggests that my teamwork skills could be improved.

My scores for "interacting with teammates" are quite low due to my reserved nature and absence from social activities after work, as I mentioned in the two critical incidents. it's worth noting that the evaluations provided by my teammates are even lower than my self-assessment scores, suggesting that my silence had a more significant negative impact than I initially perceived. Following this feedback, I proactively made corrections. As highlighted in critical incident 2, I actively engaged in social activities and expressed my opinions more directly.

Additionally, due to the ripple effects caused by my silence, I missed a lot of opportunities to explain myself. Consequently, I received lower ratings in "having relevant knowledge, skills, and abilities" and "expecting quality" than anticipated. However, as mentioned in critical incident 1 and in the firm analysis, I addressed this feedback by improving my communication skills during subsequent operations. And eventually, I helped the HR department and the whole company achieve outstanding performance.

During the four-week Business in Practice program, I had the privilege of benefiting from excellent guidance from our professors and the support of team members. The valuable understanding different personalities including their strengths and weaknesses motivated me to learn from the strengths of other team members while confronting my own shortcomings. I also recognized my shortcomings in terms of socialization and is practicing being more engaged with my collogues.

Overall, this simulation is an extremely starting point of my professional career. I will defiantly apply the reflections and learnings obtained from this program on my future teamwork to achieve effective communication and excellent cross-functional collaboration.

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Appendix

6. All large manufacturers have achieved compliance with the GHG standards through at least model year 2020

EPA's GHG program is an averaging, banking, and trading (ABT) program. An ABT program means that the standards may be met on a fleet **average** basis, manufacturers may earn and **bank** credits to use later, and manufacturers may **trade** credits with other manufacturers. This provides manufacturers flexibility in meeting the standards while accounting for vehicle design cycles, introduction rates of new technologies and emission improvements, and evolving consumer preferences.

Within a model year, manufacturers with average fleet emissions lower than the standards generate credits, and manufacturers with average fleet emissions higher than the standards generate deficits. Any manufacturer with a deficit at the end of the model year has up to three years to offset the deficit with credits earned in future model years or purchased from another manufacturer.

Figure ES-6. GHG Credit Balance for Large Manufacturers, after Model Year 2021

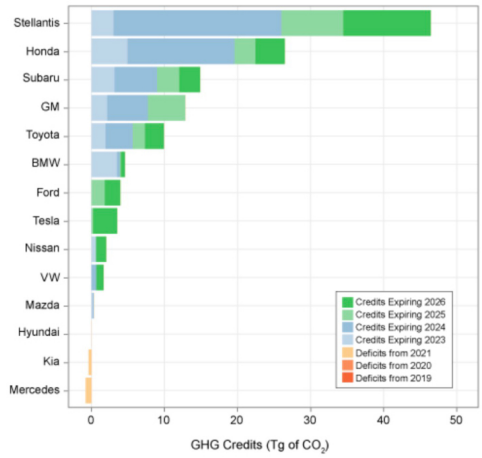

Figure 1: Description of the GHG program, source: (EPA 2022)

RESEARCH & DEVELOPMENT

Technology Scope	Technology Name	Cost ($M)	Year 0	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28
Electrification	E-Drive Modules	600																									
	Home Charging Stations	300								300																	
	High Power Charging (HPC)	200													200												
Connectivity	Connectivity Technology	250	250																								
	Infotainment Services	160		160																							
	Big Data	150				150																					
	Cross-Platform Technology	200													200												
Autonomous Driving	Automated Parking	500			500																						
	Driver Assistance	250					250																				
	Cloud Connection	300												300													
	Secure Infrastrucutre	400														400											

Figure 2: Pantheon's R&D Investment

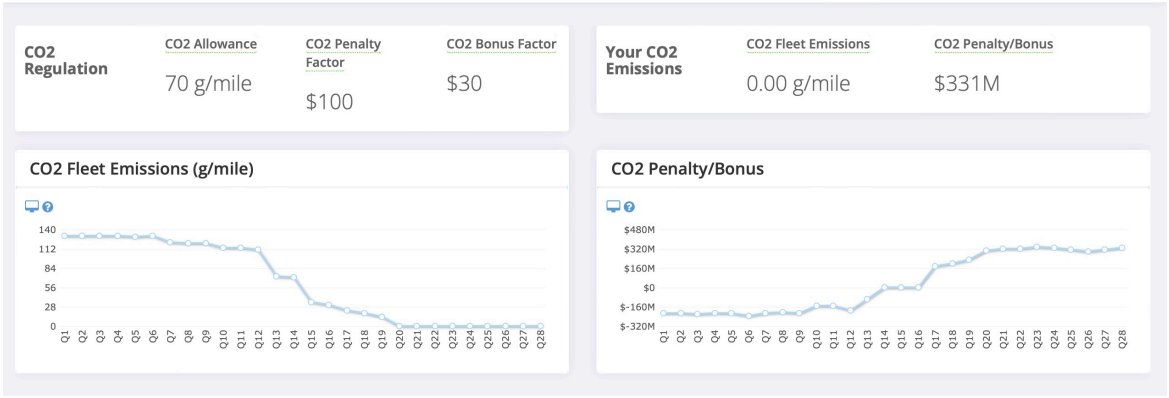

Figure 3: Pantheon's CO2 Report

New Customer Sales Pitch

You won a pilot project with a new customer. The new customer generated an extra revenue of $960M, and an additional gross profit of $384M.

ESG Creditation

Thank you for completing the ESG report document. We have reviewed the information you provided and are satisfied that your company meets the sustainability standards required by BlackPebble and our investors. As a result we will maintain our current investment of $250M in your company.

Figure 4: Pantheon's Sales Pitch Feedback & ESG Creditation Feedback

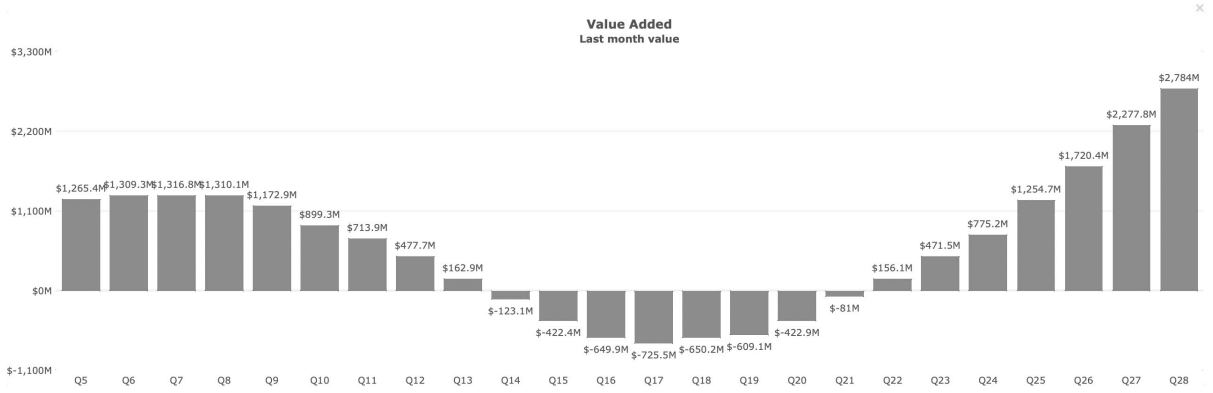

Figure 5: Pantheon's Value Added report

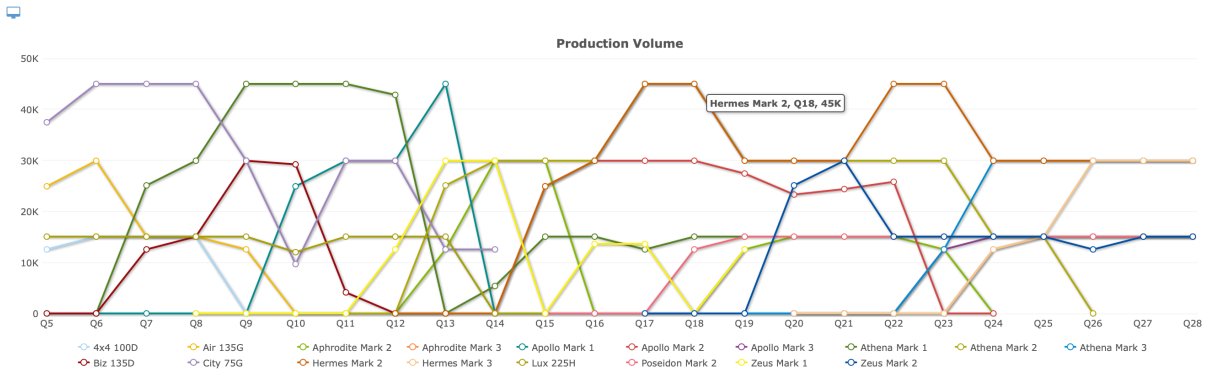

Figure 6: Pantheon's Production Volume from Q5 to Q28

Pantheon's Car Portfolio

Type	Original Name	New Name		
	Conventional	Hybrid	Electric - Regular	Electric - Premium
Compact	Ciry 75G	Athena Mark 1	Athena Mark 2	Athena Mark 3
Executive	Biz 135D	Zeus Mark 1	Zeus Mark 2	Zeus Mark 3
Convertible	Air 135G	/	Apollo Mark 2	Apollo Mark3
Luxury	Lux	/	Aphrodite Mark 2	Aphrodite Mark 3
SUV	4X4	/	Poseidon Mark 2	/
Micro	/	/	Hermes Mark 2	Hermes Mark 3
Total cars : 18				

Figure 7: Pantheon's Car Portfolio

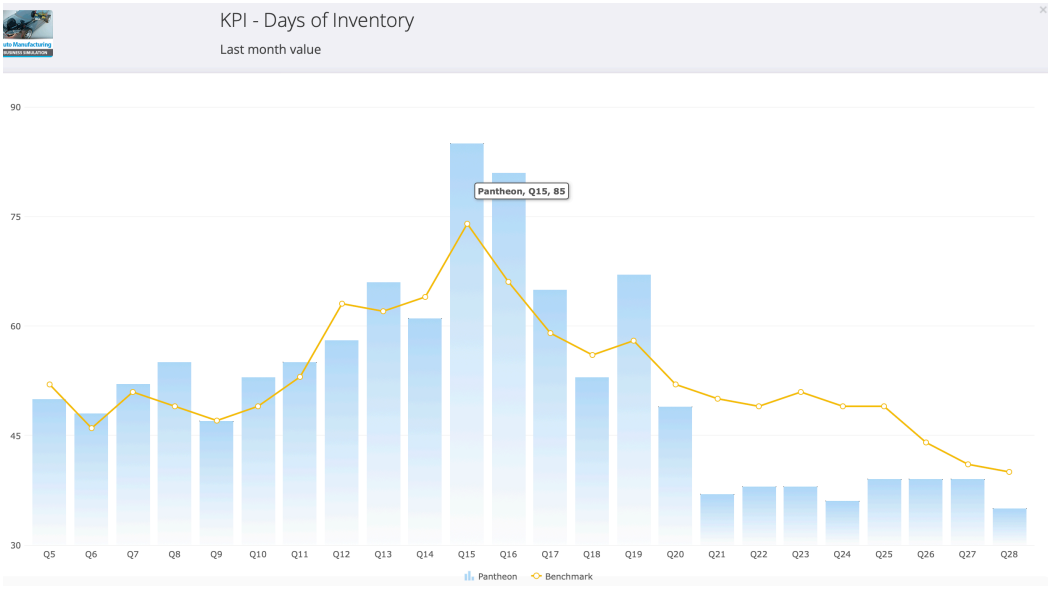

Figure 8: Pantheon's Days of Inventory from Q5 to Q28

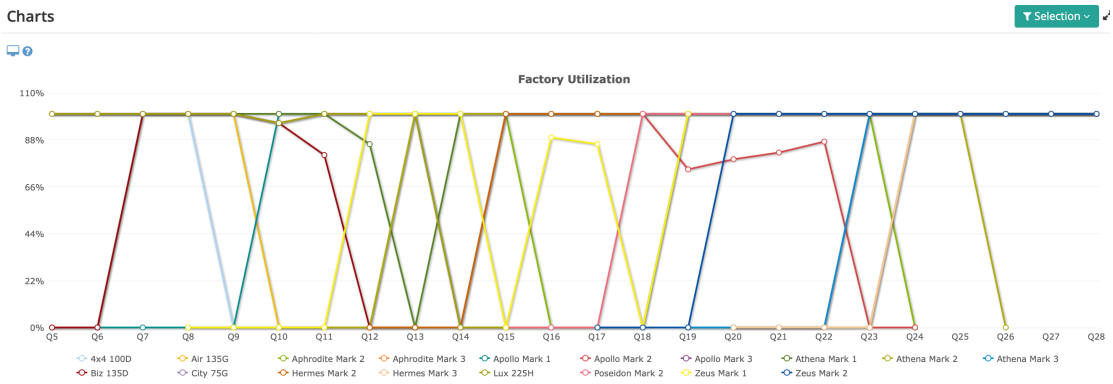

Figure 9: Pantheon's Factory Utilization from Q5 to Q28

Operation - Investment（in $Million）

Investment Name	Sustainbility Score Needed	Investment(M)	Time
Production Investments (Scope 1)			
Water Consumption Reduction	10	200	Q5
Waste Reduction	15	400	Q7
ISO14001 / EMAS certificates	20	500	Q17
Energy Investments (Scope 2)			
Energy Efficiency Investment	15	150	Q9
Install Solar Panels	20	250	Q15
Energy Management System	10	10	Q10
Supply Chain Investments (Scope 3)			
Offset Suppliers CO2	20	17.31	Q5
Choose Sustainable Supplier	10	10	Q5
Co-Invest with Supplier	20	50	Q9
		1587.31	

Figure 10: Pantheon's Operation Investment

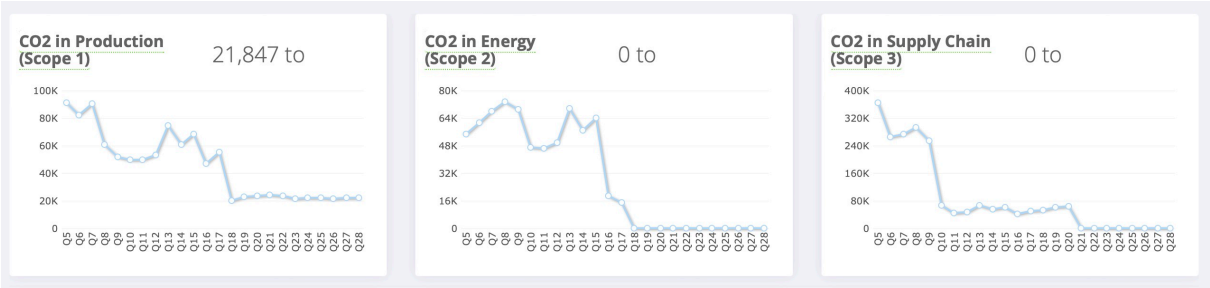

Figure 11: CO2 emission from Pantheon's 3 Operation scopes

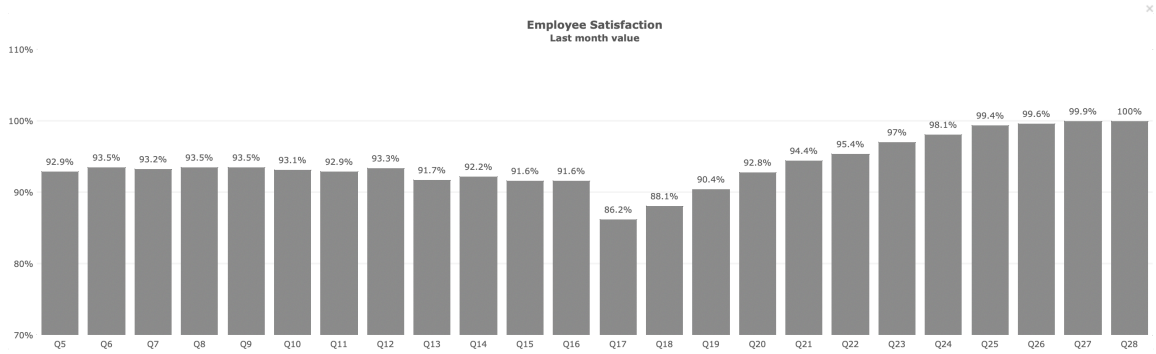

Figure 12: Pantheon's Employee Satisfaction

HR - Investment（in $ Million）

Investment Name	Sustainbility Score Needed	Investment(M)	Time (Plan)	Time (actual)
Create Sustainability Policy	4	10	Q5	Q5
Sustainability Policy Training	8	15	Q7	Q7
Sustainability Awareness Training	12	15	Q9	Q9
Push the environmental projects		200		Q16
		240		

Figure 12: Pantheon's HR Operation Investment

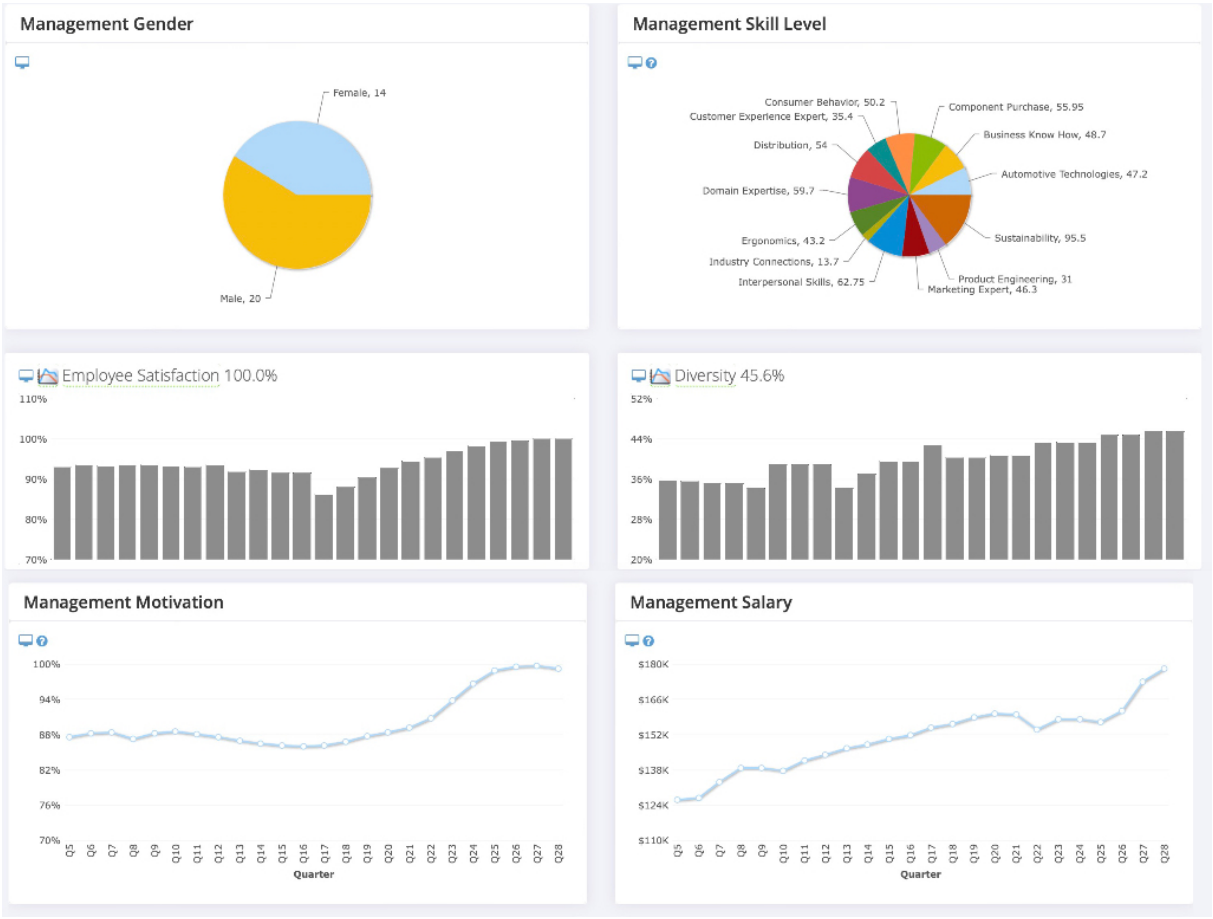

Figure 13: Pantheon's HR Report