

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:

Building a Successful Team; Strategic Management and Group Dynamics

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Building a Successful Team: Strategic Management and Group Dynamics

Abstract:

Although theoretical knowledge is essential, it is still not enough to be an effective manager. This thesis explores the Business in Practice (BiP) simulation conducted at Nova SBE, which was a practical, immersive experience. The first section is a reflection highlighting the personal growth and self-knowledge acquired through this activity. It will focus on what I did and how I reacted to certain situations using the Gibbs Reflective Cycle. The second section will focus on how the team performed by analyzing the Innovation, Human Resources and Operations departments of the firm.

Keywords:

Sustainability; Human Resource Management; Strategic Analysis; Competitive Advantage; Management; Critical Success Factors; Investment Strategy; Managerial Decision-making; Apply Theory in Practice; Business Simulation; Develop A Business Strategy; Integrate And Coordinate Decisions Across Business Functions; Managing A Business; Reflective Practice; Sustainability And ESG; Team Dynamics; Working In Teams; Critical Incidents Analysis; Gibbs' Reflective Cycle.

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Section one - Individual Personal Reflection

Introduction and Overview

This reflective journal is based on the immersive simulation experience at Nova SBE with the Business in Practice (BiP) program. This project was a considerable learning experience on self-knowledge, team dynamics, and conflict management. For two weeks, I took on the role of a Human Resources director in the automobile industry, which was an enriching experience. Additionally, I attended academic sessions on Marketing, Human Resources, Sustainability, Innovation, Finance, and Operations. Extra sessions complemented these classes on topics such as Sales, Strategy, and Leadership. These additional sessions had a hands-on approach in which we would practice what we were learning through exercises and reflect upon the experience. The Strategy and Leadership classes discussed team dynamics and what we could improve on. We had the opportunity to self-assess what type of team player we were to clarify group dynamics. After each person had a kind of personality defined, we would discuss if we agreed with it and debate if we were a balanced team with our characteristics. During the Sales classes, we gained insight and valuable learnings on how to market ourselves. Everyone had to speak up during the sales sessions and perform two role plays in which we had to convince a buyer to acquire our product.

This section is divided into two parts. Firstly, it will encompass an overview of the two incidents during this simulation that made me think deeply about how I work in teams and react to certain situations. This element of the thesis aims to overview the self-reflection made. I will analyze why I reacted a certain way, linking my behaviour with relevant literature and reflecting on how I could improve using Gibbs's Reflective Cycle; Literature will be used to explore the experience and gain insight by defining actionable changes in my behaviour through academic theory and practice.

The Gibbs Reflective Cycle

The critical incident reflection is done using Gibbs's Reflective Cycle. This cyclical model of reflection (Figure 1) has six steps to help analyze the critical incidents: description, feelings, evaluation, analysis, conclusion, and action plan (Jasper 2013). I chose this model because it will allow for a more in-depth examination of my Business in Practice (BiP) experience utilizing the six stages as a guide. Reflection is "an essential characteristic of teaching and learning" (Tsangaridou 1995). It is argued that critical reflection after an experience is a beneficial approach by which we can improve our behaviour (Taylor e Cranton 2012); We can only do this after deep thinking about how we act and why (Elbaz 2006).



Figure 1: The Gibbs Reflective Cycle (Bassot 2016).

First Critical Incident

Description

The first critical incident is an example of a lack of clear communication that could generate team dysfunctionalities. In quarter eight, the Finance director did not inform the other departments before discontinuing a model, negatively affecting the Human Resources and Operations department's performance. Employee diversity and satisfaction decreased because

the simulation automatically dismissed the whole team of managers for the car model (Appendix A). The diversity went down to twenty-seven percent, which made our team the worst ranked in terms of diversity compared to the others. There was also an additional issue: now that some managers got automatically discharged from their position, they did not have a task assigned to them, and keeping them in the company without any task was costly. I had no other option but to fire them to keep costs down. I took the lead, immediately addressed the situation, and discussed how we should communicate and commit to decisions during the following quarters. I explained how their decision affected the two departments. In quarter thirteen, the same situation happened again. Another car model was discontinued, and the Finance director did not warn the team before committing the decision. It had the same consequences as in quarter eight, and I had to fire more managers.

Feelings

Unfortunately, this situation created a tense environment. I was already stressed by the time constraint, and this problem only added extra pressure. I felt like my department was being ignored due to the chosen team strategy and their lack of commitment after I expressed how the situation first impacted the Human Resources department.

Evaluation and Analysis

I believe there was already a power dynamic affecting the communication within the team. When the first incident happened, the team did not take it seriously. Our company strategy was mainly executed by the Innovation and Finance departments. In general terms, our business strategy was to invest highly in Innovation and keep all the additional costs as low as possible. With this said, what happened in the other departments was less relevant. This situation allowed me to discuss why I was not enjoying the group dynamic; we had the chance to discuss further our communication strategy within the team, which made us reassess how we communicated.

Conclusion

Right from the beginning, I was not going to win the Human Resources prize. With our strategy of keeping costs as low as possible for the Human Resources department, I knew the award would not be possible. Still, I felt okay with it because it was the tactic chosen by our team to gain a competitive advantage. With this said, I was not much in control of my department; I knew I did not have the best performance indicators and could not change anything about those because I just had to keep everything cost efficient. Looking back at this critical incident, I was already feeling frustrated by not having much decision power within my department. I felt even more annoyed when I got negatively affected by the other's decision and then ignored, and the same situation happened again.

I was assertive and was able to explain my point of view clearly. Fortunately, this led the team to have an open discussion on how we should communicate to make sure this situation would not repeat. Similar situations happened after quarter thirteen, in which models were discontinued, but my team would ensure everyone agreed before making any decision affecting other departments. In the beginning, the decision-making was ineffective; most team members made decisions without consultation. After this incident, I contributed and led to change for a collective approach to improving team performance (Appendix B).

Action Plan

This critical incident resulted in a positive outcome because we became more efficient and started making decisions interdependently. It added value to our team. Right at the beginning of the simulation, I knew the decisions were not being committed with everyone's approval. Still, I did not say anything until it started negatively impacting my department. If a similar situation arose again, I would change the timing in which we discussed the communication strategy as a team. Instead of letting the situation escalate until that point, the

problem should have been addressed right in the beginning. This was an important lesson that could be applied in the future. I should express my concerns and opinions early to prevent a problem.

Second Critical Incident

Description

The second critical incident happened in quarter twenty-two. My team was doing very well in financial performance, and we had already made all the possible innovation investments. We were leading the rankings in terms of revenues. However, it was unclear what the subsequent decision was regarding the company product portfolio management. Therefore, a discussion was started to see if it was necessary to introduce a new car model or maintain the current portfolio until the end of the simulation. This decision had to be made this quarter because the simulation would end in a few quarters, so to see any profits from the car release, the decision had to be made at that moment so we would have time for production.

I advocated launching a new car model because there were enough financial resources to do it. Launching the new car would address the portfolio product maturity issue, preventing falling behind the competition. The other three directors were against my opinion, defending that we were already the first-ranked team in the simulation, and they did not want to take the risk and invest in a new car model. There was also the additional issue that it would take a couple of quarters before launching, and we would benefit from it only for the last three-quarters of the simulation. Additionally, there was the possibility of that car model not selling well. We could be investing in launching a new model, which could not be profitable.

Feelings

Stress and anxiety impacted my decision-making ability (Appendix C). We were all stressed due to time constraints and did not discuss it much. We had to decide quickly, so instead of debating, we just voted for who agreed to do what. I disagreed with the group's decision to keep the same portfolio, but I felt I had to give in since the majority wanted to. Since I was also overwhelmed, I did not give much thought to it at the time; I was non-resistant to this decision. I just felt like we were tight on time and had to make a choice, which ended up being a significant turning point for our team.

Evaluation and Analysis

This situation did not create a tense environment; it was just a quick conversation. At the time, I did not even think much about it, but after reviewing our performance as a team at the end of year six, it was clear that we should have invested in launching a new model because that is when we started to fall behind the competition. At the time, I was exhausted, and performance was low, and I was not as prudent in my decisions as I should have been. My reaction to this critical incident aligns with my Insights Discovery colour (Earth Green) because I was not confrontational and appeared to have a conforming stance. I agree with this assessment because I tend to avoid conflict and value team cohesion.

This critical incident happened during the last day of the simulation, and I was not at the same performance level as the other days. I was already on "autopilot" during this situation according to the performance-stress level scale in Appendix D. I did not question the decision. On other simulation days, we would make decisions based on data in our detailed Excel and take time to debate these decisions before moving on. In this case, we just chose to solve the issue superficially, which was a mistake. We had to select a strategy; we just voted and went

with the majority's opinion. There is a clear link between stress and performance (Appendix D). In this case, our stress levels were higher, so our performance was low.

According to the peer review, my strong points are interacting with teammates and keeping the team on track, which I agree with (Appendix E). I believe I had this type of approach throughout the game. I was more vocal about my opinion and actively asked questions about the strategy before committing to the decisions. In this critical incident, I lacked in these two areas. I could not keep the team on track, and my interaction with them was minimal. I did not expose and effectively defend my opinion on the matter. However, throughout the simulation, I believe my role was vital in keeping the team on track and questioning the group's strategic decisions. The peer evaluation was an opportunity to reflect and analyze personal learnings and behaviours related to soft skills, not only to the game's role but also to understand how I am perceived in my professional life.

Conclusion

Not launching a new car impacted Einstein's performance indicators; our final score significantly decreased. By the last quarters, we were already noticing this decrease but had no time to react to that issue given that a new car development takes a few quarters, and the simulation was already in the last year. I did not act as I should have, and the team made a wrong decision. I believe that the main takeaway is that decisions should have been made considering more carefully the pros and cons of each choice. Unfortunately, I did not play an active role during this critical incident, and I believe if I had, the simulation final score outcome would have been different. In hindsight, I should have been more assertive. Our team could have maintained its competitive advantage if I had exposed my opinion better.

Action Plan

The decision not to release the new car model was made too quickly without considering future consequences. This incident brought me some deep thinking about how I need to improve my communication and persuasion skills. Assertive communication skills create opportunities to achieve a win-win solution to specific problems by allowing an open discussion with various opinions (Pipaş 2010). In retrospect, I should have insisted and focused on persuading the rest of the team by explaining my arguments better. It would have been beneficial for everyone if I could explain my point of view and how our portfolio was already in a declining sales stage using the data we already had.

Conclusion and Review of Learnings

If I were to do the simulation again, I would have improved on several points. The team dynamics would have been dealt with differently. This simulation was very intense, and I learned how I react in stressful situations. Participating in this experience gave me valuable insights and takeaways applicable to daily life. This section will highlight actions for improvement.

In the first critical incident, I learned the importance of expressing concerns early to prevent or anticipate a problem. Additionally, I concluded that being more assertive can positively affect everyone in the team. In this case, we started to work interdependently and with open communication. As discussed by several authors, synergistic teamwork offers the best outcome because the team creates something new and more significant than the addition of individual team members' resources (Nurmi 1996) (Tarricone e Luca 2002). Furthermore, I should express my concerns and opinions early to prevent a problem. Next time I face a similar situation, I will voice my concerns and ideas before it negatively impacts the team or me.

From the second critical incident, I discovered that improving my communication and persuasion skills is vital. I realized that I gave in to stress, and I did not partake in an active role within the team as I should have during the last day. I believe I was not being as effective as I should have been. Additionally, it made me value the utility of developing assertive behaviour by analyzing in a detailed manner the possible consequences, advantages, and disadvantages of each decision.

Section Two – Individual Firm Analysis

Introduction and Overview

Einstein is an international automobile manufacturer that operates in China, the USA, and Europe. This section will analyze its strategy through six simulated years. The following section will have academic theories and frameworks to clarify the decisions made by Einstein and how they reflect on the company's performance. This analysis will be using concepts and materials from three of the six main academic sessions. The three business functions that will be reviewed are Human Resources, Innovation, and Operations. I chose these three business areas because they provided a good overview of the company's performance and were vital for executing Einstein's strategy; additionally, it will compare the firm's decisions and performance with real companies.

Firms should anticipate future customer needs to be ahead of the competition (Kandampully 1999); There has been a market disruption in the car manufacturing industry, and Einstein aims to stay ahead of trends. Our goal was to be the most innovative automobile manufacturer in the market. The company focused all its resources on the Innovation department. This strategy was chosen because there has been a boom in electric vehicles (Shao 2021). This increase in demand for electric cars is making this segment more attractive; According to Boston Consulting Group (2022), the future of the automotive industry is electric. Additionally, sustainability concerns are gaining relevance in many industries, including automobile manufacturing. Therefore, transitioning from manufacturing internal combustion engine (ICE) automobiles to electric vehicles (EVs) seemed natural. In this way, Einstein aims to fulfil future potential market needs and be aligned with upcoming legal requirements (Epprecht e Wirth 2014).

Review of the Innovation Function

The Innovation Strategy

Innovation is the defining factor that makes companies gain a competitive advantage (Dereli 2015). Before the simulation started, we decided that our company should invest as much as possible in Research & Development; This strategy is based on closed innovation because all the improvements were developed within the company's Research & Development activities by our own investments (Santos 2018). Due to the importance of this department, the Innovation director was the key person responsible for conducting Einstein's strategy; They set the pace for what the other departments had to do. The rest of the team members would support its decisions by maintaining efficiency but using as few resources as possible for their departments.

We were the first team to achieve all the Innovation milestones and put most of our budget into this department. By quarter sixteen, all the research and development tasks in the simulation were complete. In Figure 2, we can acknowledge this incremental innovation process in which a series of investments were made to improve Einstein's product portfolio (Okuyama 2017).

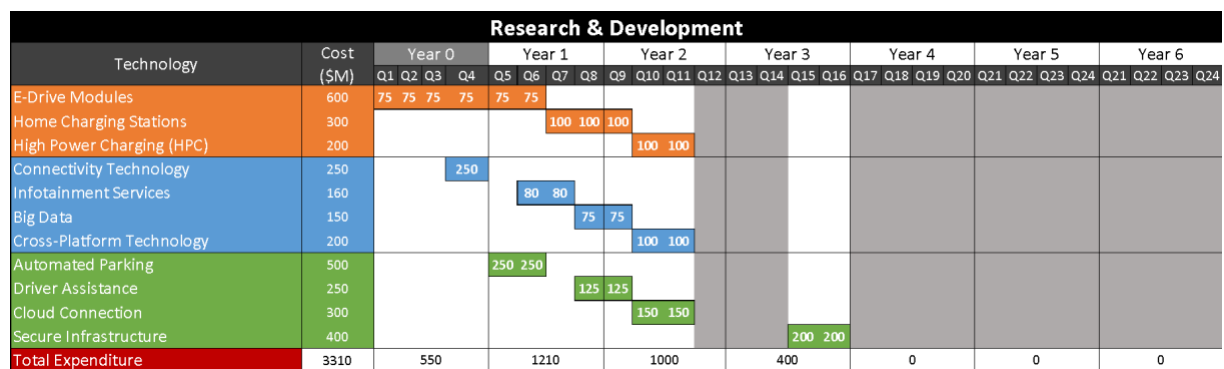


Figure 2: Einstein's Research and Development investments timeline.

Additionally, our product launches (Figure 3) were done in years one to three with all the possible innovative features. By year three, our fleet was one hundred percent electric,

composed of six car models: Micro, Lifestyle, Urban, Executive, Freedom and Deluxe (Appendix F).

Product Launch																													
Model	Cost (\$M)	Year 0				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q21	Q22	Q23	Q24
EINSTEIN Micro	550							275	275	x																			
EINSTEIN Lifestyle	650							325	325	x																			
EINSTEIN Urban	500									250	250	x																	
EINSTEIN Executive	550									275	275	x																	
EINSTEIN Freedom	650												217	217	217	x													
EINSTEIN Deluxe	715												238	238	238	x													
Total Expenditure	2250			0				1200				1505				910				0				0				0	

Figure 3: Einstein's product launch timeline.

Innovation Strategy and Comparison with Tesla

Our business benefited from the “first-movers’ advantage, which is the firm’s ability to be better off than its competitors due to being first to market a new product (Harvard Business Review 2005). Similarly, Tesla had a first-mover advantage by having an all-electric fleet which was highly successful. Tesla took the lead, and other companies such as Mercedes-Benz, Volvo, Fiat and Jaguar are investing in electric and hybrid vehicles (Boston Consulting Group 2022). Additionally, following Tesla’s positioning, Cadillac aims to go all-electric by 2030 (CNBC 2019). This is also a broad differentiation strategy in which Einstein and Tesla gain a competitive advantage by only producing EVs (Gali 2020).

Product Life Cycle and Comparison with General Motors

During these six simulated years, as it happens with many companies, Einstein had a hard time sustaining its performance as an innovator (Harvard Business Review 2015). As discussed in the previous section, our team had the opportunity to launch a new car model in year five, but we decided not to. This led to being behind the competition and losing this competitive advantage because we were no longer the most innovative brand. This happened because the car models we launched in years one, two and three were already in the maturity

stage (retirement), and in year six, they started to face a decline in sales (Figure 4). Similarly, General Motors could not innovate because Finance executives worried more about investment returns and did not push enough for continuous innovation (Forbes 2013) (The New York Times 2008).

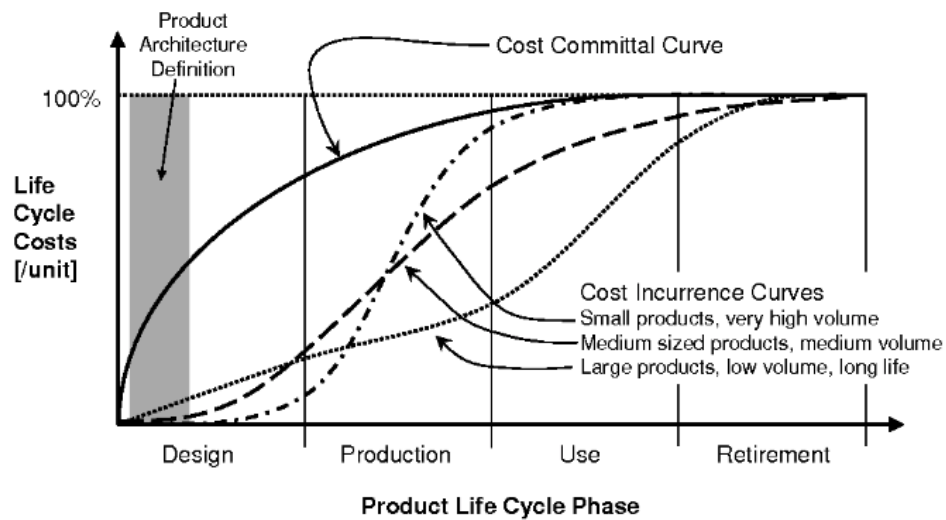


Figure 4: Product life cycle phases (Castro 2022).

The S-Curve

It is essential to understand the introduction, growth, maturity, and decline stages of Innovation to analyze Einstein's performance (Castro 2022). The S-curve (Figure 5) enables management to intervene competently by showing growth mapped against time (McKinsey & Company 2019). Einstein initially sustained a slow growth, followed by rapid and declining growth; The first technology stage required large amounts of investment, in which it was not feasible to invest in any other department; this stage was from the first year to the third. The second technology stage was in year four. In year five, there was a missed opportunity to restart the product life cycle with more vehicles. In year six, there was a high decrease in product sales performance.

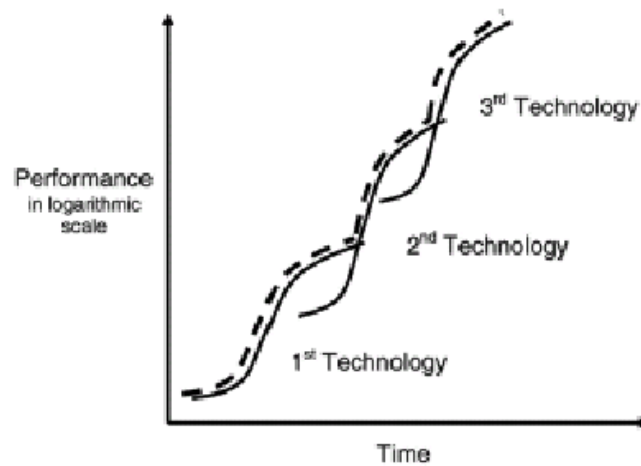


Figure 5: The S-curve (Castro 2022).

Green Innovation

Our fleet was completely electric by year three, so our CO2 emissions were reduced. From quarter thirteen onwards, our CO2 emissions as a percentage of sales were zero (Appendix F). We were consistently ranked first through the six years in the E-Mobility Project (%) and CO2 Fleet Emissions (g/mil) categories. Having our fleet one hundred percent electric (Appendix G) made us have a good sustainability rating (Appendix H) which is a factor that is starting to gain importance to achieve a competitive advantage in the car industry (Capgemini 2021). For this reason, some companies focus on connecting with consumers who support environmentally responsible businesses (Forbes 2021).

Conclusion

Like Einstein, many businesses were once innovative leaders but yielded their innovative capacity (Christensen 1997). Studies show that this happens due to their own organizational structures and leadership behaviour which does not foster innovation (Steiber 2013) (Forbes 2020). The main mistake made in this department was not questioning the status quo in year five and letting the sales performance of the portfolio decline in year six. The lack of flexibility in decision-making negatively impacted the company's performance.

Review of the Human Resources Function

The Human Resources Strategy

Workers are the backbone of organizations (Hong 2012); Hence, the Human Resources department plays a crucial role in companies. It is vital for any business that needs employees to recruit and retain talent effectively (Galang 1997). Einstein used a cost-saving strategy while maintaining efficiency through recruitment, selection appraisal, training & development, and management of rewards (Cunha e Kará 2022). This section will address four subtopics within the Human Resources theory and link them to Einstein's strategy: Workforce Planning, Compensation, Training and Green HRM.

Workforce Planning

This activity anticipates the organization's future talent needs to close skill gaps (Cunha e Kará 2022). Einstein's Human Resources strategy focused on cost saving and keeping efficient values. The HR director had to meet the supply-demand of staff through recruitment, retention, and succession (Cunha e Kará 2022). Before committing to any decisions, the directors of each department were involved in the decision-making process; For example, the factories' recruitment was closely aligned with the Operations department changes before moving on to a new quarter to ensure the factories were not overstaffed.

Compensation

Compensation is vital to keep staff motivated, efficient and engaged with their work (Rynes 2004). As was previously stated, the team's plan for this department was to keep everything stable with little investment as possible. Performance indicators such as employee satisfaction (Figure 6) were not a priority in our strategy. The factory workers' salaries were rarely increased; The first increase being in quarter seventeen. Despite the strategy chosen, our

employee satisfaction was not that different from the benchmark. Notwithstanding our policy of reducing salaries, the performance indicators were kept efficient and did not negatively affect the company's performance. If the wages were further decreased, it could lead to job dissatisfaction, lower performance, or resignations. In quarter seventeen, there was a significant decrease in employee satisfaction due to a lack of funding for remunerations; however, the satisfaction levels stabilised in the following quarters due to the slight increase in salaries. This situation was fixed before it could have any major repercussions affecting the company's performance, such as resignations.



Figure 6: Employee satisfaction adapted from Simulation Industry Masters Page (2022).

Additionally, the management motivation had some fluctuations, but most of the time, it was always above a ninety percent satisfaction level (Appendix I). The compa ratio of the salary of the management was always around one and two percent through the six years; this is slightly above market competitive pay. Einstein wanted to focus on the retention of skilled managers because if they became dissatisfied, they could resign, which negatively impacts the company's financial performance (Salleh 2015).

Training, Green HRM and Comparison to Volkswagen

Workers' aptitudes influenced Einstein's performance (Cunha e Kará 2022); for this reason, the qualification level of the factory workers was kept at one hundred percent in almost

all quarters (Appendix J). Additionally, the Green HRM was achieved through the training of the managers and the creation of sustainability policies. Einstein reached the three sustainability policy & training milestones by quarter nine (Appendix K). However, Einstein's sustainability efforts were insufficient, and our rating was below the benchmark in most quarters (Figure 7). There are four success factors for Green HRM (Appendix L), and Einstein lacked the availability of funding to train more managers. We focused on training the ones that were strictly necessary to reach the milestones. Contrarily to this approach, Volkswagen continually invests in sustainability training for its employees (Volkswagen 2022). Additionally, the simulation did not include change management & learning capabilities which could have led us to access data for efficient implementation of green decisions (Cunha e Kará 2022) (E. Jackson, Ren e Tang 2018).

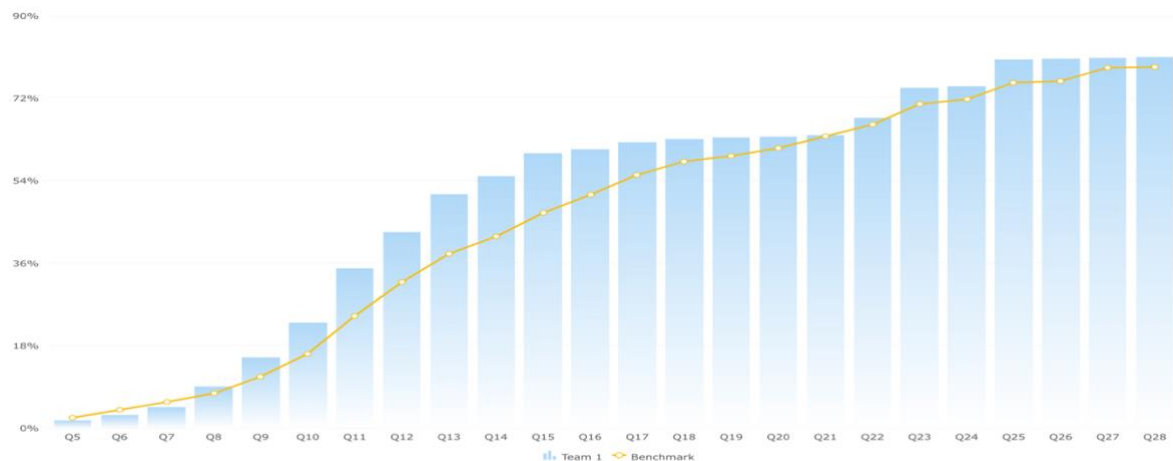


Figure 7: Sustainability Rating adapted from Simulation Industry Masters Page (Industry Masters 2022).

Conclusion

Despite having the policy of minimizing costs, this department successfully made the best use of its resources. During the six years, there were no major issues within this domain, and everything was successfully managed. There was a small mistake in quarter seventeen in

which salaries were heavily reduced, which affected the job satisfaction levels, but in the following quarters, this performance indicator was stabilized. The Green HRM practices could have been improved with access to more tangible and intangible resources (E. Jackson, Ren e Tang 2018), such as more funding or access to data to make better decisions.

Review of the Operations Function

The Operations Strategy

The Operations function was essential for Einstein's success. The Operations director managed and reviewed the production, energy, and supply chain investments (Costa 2022). Additionally, they had to administer the factories in the three locations and determine which lines should expand or downsize production. Einstein won the operations prize for the highest average factory utilization (Figure 8), which means we were the most efficient company in production capacity usage. This was considered the most valued performance indicator because the team with the best performance would get the Operations prize. Einstein was able to get one hundred percent factory utilization in ten quarters (Figure 12).

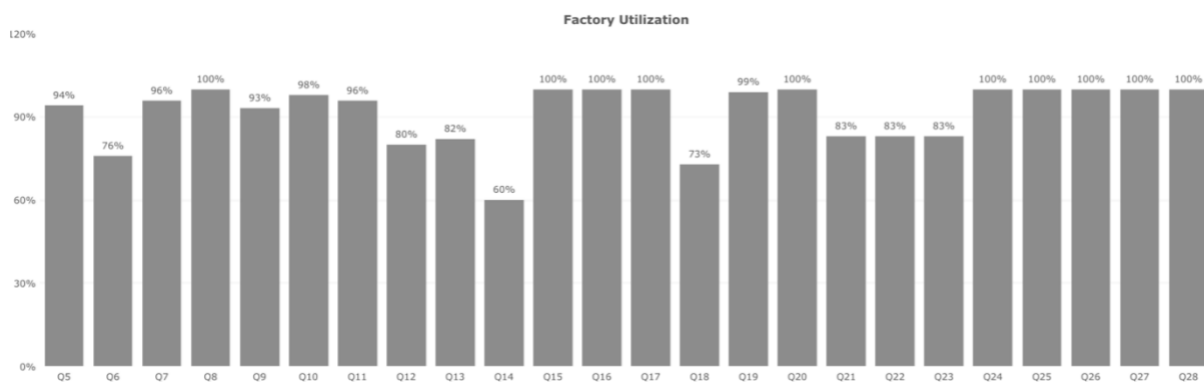


Figure 8: Einstein's factory utilization score by quarter adapted from Simulation Industry Masters Page (Industry Masters 2022).

This section will review additional relevant performance indicators for the operations function (Appendix M). Our company defined performance objectives in terms of speed,

flexibility, and cost (Costa 2022). Each KPI had to be tackled differently due to the challenges they imposed. With our operations strategy, Einstein prioritized flexibility performance indicators (factory utilization, production volume and inventory units) (Appendix N). We met demand by using Toyota's Just-in-time (JIT) manufacturing production model (Battini 2013); our aim was to keep speed performance indicators such as days of inventory (DOI) efficient by not overproducing.

Logistics and Comparison to Tesla

Our car production was also divided between locations. The biggest factory was in China with five production lines, followed by Europe with four. The smallest factory was in the USA, with two production lines (Appendix O). All the locations were producing different models because we wanted to be efficient regarding tariffs and shipping costs. Similarly, Tesla's biggest factory in Shanghai is currently being upgraded to make more than one million EVs yearly (Bloomberg 2022). With this factory, Tesla is reducing labour costs to as low as one-tenth what the electric car manufacturer currently pays in wages at its California factory (CNBC 2019).

The Operational Expansions

The operational expansions were done from year two to year four (Figure 9). These expansions were made gradually in line with the rise in demand for our products. In years five and six, our demand started declining, so there was no need to expand the factories because we needed to be cost-efficient.

Operational Expansions																													
		Year 0				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
Technology	Cost (\$M)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q21	Q22	Q23	Q24
China Expansion	800										267	267	267	X															
China Expansion	800														267	267	267	X											
China Expansion	800																		267	267	267	X							
Total Expenditure	2400		0			0					800			800				800				0				0			

Figure 9: Einstein's operational expansions timeline.

The Operational Investments and Green Operations Management

The automobile industry is a significant source of environmental impact and as a result, companies such as GM, Toyota and Volkswagen are being pressured to invest in green operations (Nunes 2010). Green operations are methods that contribute to the enhancement of companies' environmental operational performance (Nunes 2010). As stated above, the Einstein team, invested in green operations during years one and two. We aimed to make operational investments in the first quarters to take advantage of cost-efficiency benefits. These investments brought significant benefits in reducing energy costs and qualifying us to secure green bonds (Figure 10). Furthermore, converting to a sustainable value chain as soon as possible allowed us to benefit from long-term effects, such as a better sustainable rating in the following quarters.

		Operational Investments																											
Technology	Cost (\$M)	Year 0				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q21	Q22	Q23	Q24
Water Consumption Reduction	200					100	100																						
Waste Reduction	400							200	200																				
ISO14001 / EMAS certificates	500									250	250																		
Energy Efficiency Investment	150						75	75																					
Install Solar Panels	250									125	125																		
Energy Management System	10																												
Offset Suppliers CO2	-							-																					
Choose Sustainable Supplier	10							10																					
Co-Invest with Supplier	50																			50									
Total Expenditure	1570																												

Figure 10: Einstein's operational investments timeline.

Conclusion

Einstein was very successful in managing the Operations department. We prioritized efficiency and profit maximization, which led us to win the operations prize for maintaining the highest percentage of factory utilization. We benefited not only from producing only EV's but also by applying Toyota's Just-in-time (JIT) manufacturing production model. Similarly to Tesla, we divided the manufacturing of the models between locations according to where it was more cost-efficient to produce.

Learning Outcomes from BiP

The knowledge gained from the simulation is substantial. The five functions of the company are interrelated, and effective communication between them is needed to be successful. This project allowed us to put into practice theoretical concepts of Marketing, Human Resources, Sustainability, Innovation, Finance, and Operations. Having a clear overview of the company's strategy and knowing each function's role is helpful because it allows an understanding of the contribution from each area to achieve the business objectives. As a team, we earned second place in the rankings for the simulation final score.

The Innovation department had the most influence on organization-level decisions, such as the strategic direction of the business and investments. The Human Resources department could keep its performance indicators stable with a cost-saving strategy, which enabled the team to invest more in the Innovation department. Having an all-electric fleet was an advantage for our Operations department, which had the benefit of not having a broad portfolio of cars. This facilitated the management of stocks, avoided overproduction and extra expenses. Einstein also won the Operations prize for having the best factory utilization performance. It is also relevant to mention the company's efforts to be more environmentally friendly with various sustainability investments across departments. The team benefited from the first-movers advantage, which helped us establish ourselves in the market. However, we failed to foster innovation in the last years of the simulation and did not launch new products. After reviewing Einstein's performance, it decreased sales in years five and six due to a lack of flexibility in the decision-making process.

Besides the academic knowledge and technical skills, it is essential to mention the practical learnings from the simulation. This challenge stimulated cooperation in which we could learn by doing in a risk-free environment. Additionally, we had to work together, so inevitably this simulation improved our soft skills, such as communication and teamwork,

which are relevant to our professional lives. We also assessed our strengths and weaknesses and gradually improved team dynamics by correcting unfavourable behaviours like lack of communication. We took accountability for how we interacted with our teammates through peer assessment feedback, which equipped us with skills to self-assess and enhance our work. To conclude, Business in Practice (BiP) highlighted team dynamics and the necessity of all functions being organized and working for a common objective. We benefitted from accelerated learning by working under pressure and making real-time decisions with time constraints.

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Appendices

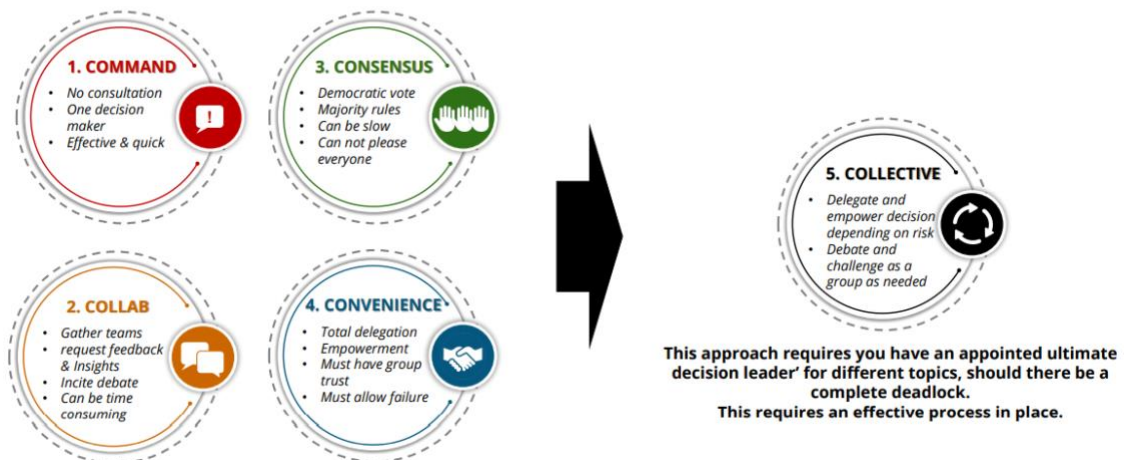
Appendix A: Diversity decrease in quarter nine from Simulation Industry Masters Page (2022).



Appendix B: Leadership and Decision-Making involves choosing between solutions to a problem (Fernandes 2022).

BUSINESS IN PRACTICE | EFFECTIVE DECISION MAKING

Decision making is the act of choosing between two or more courses of action; it involves choosing between possible solutions to a problem



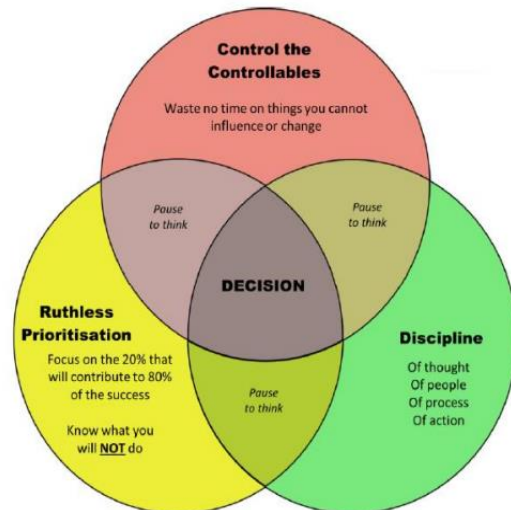
Appendix C: Stress and Anxiety impact on Human Behavior (Fernandes 2022).

BUSINESS IN PRACTICE | EFFECTIVE DECISION MAKING

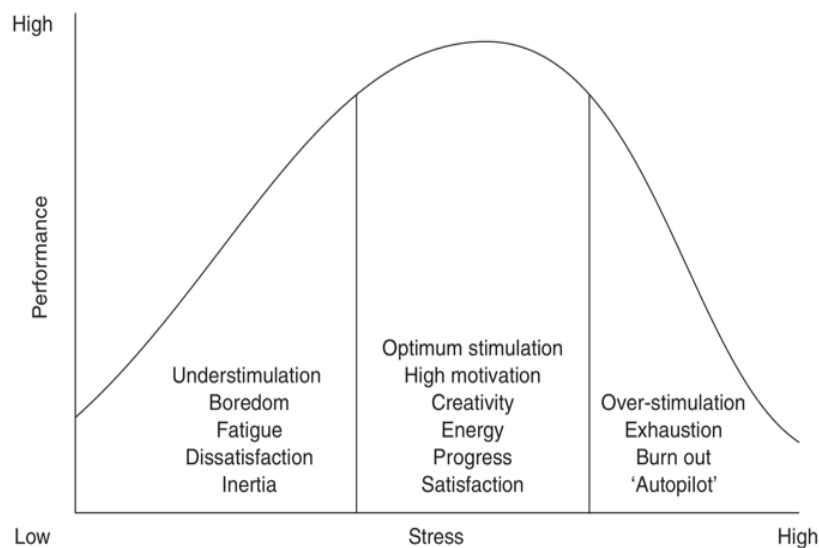
Stress and anxiety have interfering effects on human behaviour, and can affect your decision-making ability

→ In a crisis or highly stressful situation

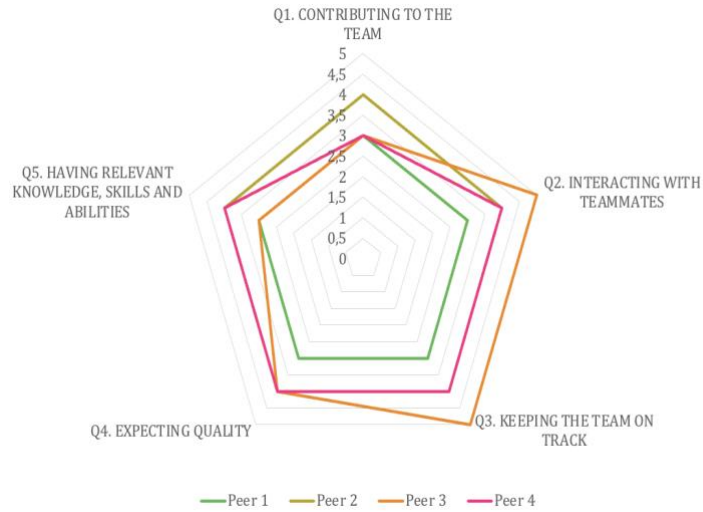
- Focus on controlling the controllable
- Keep a ruthless prioritization
- Have discipline – know your process
- Pause to think, take a breath, elevate your view
- Decide and unify



Appendix D: The Stress Curve (Bassot, 2016).



Appendix E: Peer Assessment made by the Einstein team.



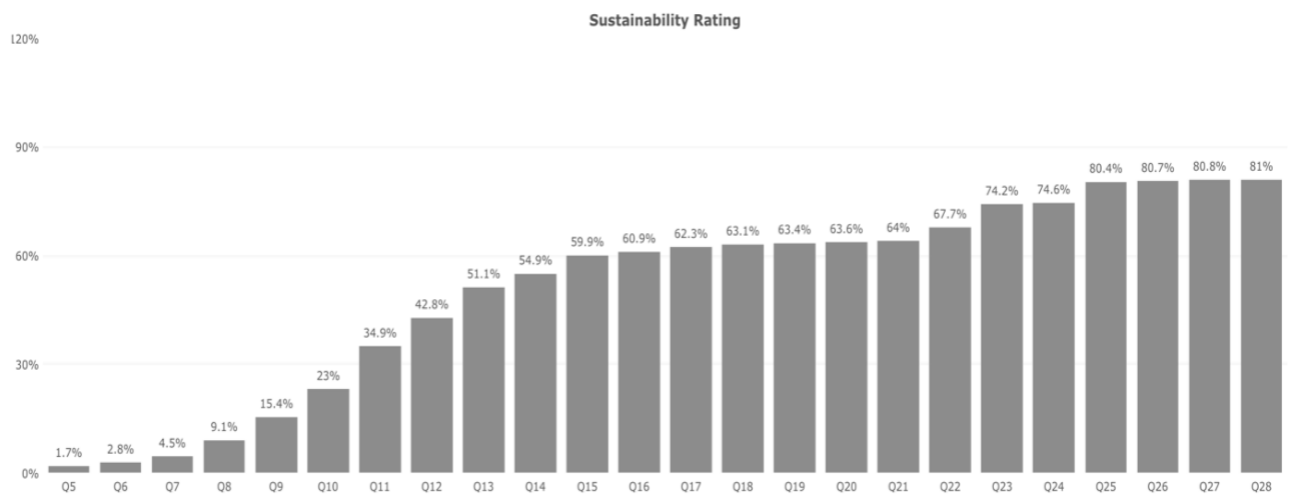
Appendix F: Einstein's CO2 average emissions as a percentage of sales.

CO2 Average Emissions (% of Sales)																													
Model	CO2	Year 0				Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
	Emissions	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q21	Q22	Q23	Q24
Lux 225H	150	-	-	-	14,3%																								
Air 135G	142	-	-	-	16,7%																								
Biz 135D	126	-	-	-	21,2%																								
City 75G	114	-	-	-	33,5%																								
4x4 100D	144	-	-	-	14,3%																								
EINSTEIN Mini	0	-	-	-	0,0%																								
EINSTEIN Lifestyle	0	-	-	-	0,0%																								
EINSTEIN Delux	0	-	-	-	0,0%																								
EINSTEIN Executive	0	-	-	-	0,0%																								
EINSTEIN Urban	0	-	-	-	0,0%																								
EINSTEIN Freedom	0	-	-	-	0,0%																								
Total Sales in Units		-	-	-	90278																								
Average CO2 Emissions		-	-	-	re									0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CO2 Allowance (g/mile)		-	-	-	95	95	95	95	90	90	90	90	90																
CO2 Penalty Factor (\$/g)		-	-	-	60	60	60	60	60	60	60	60	60																

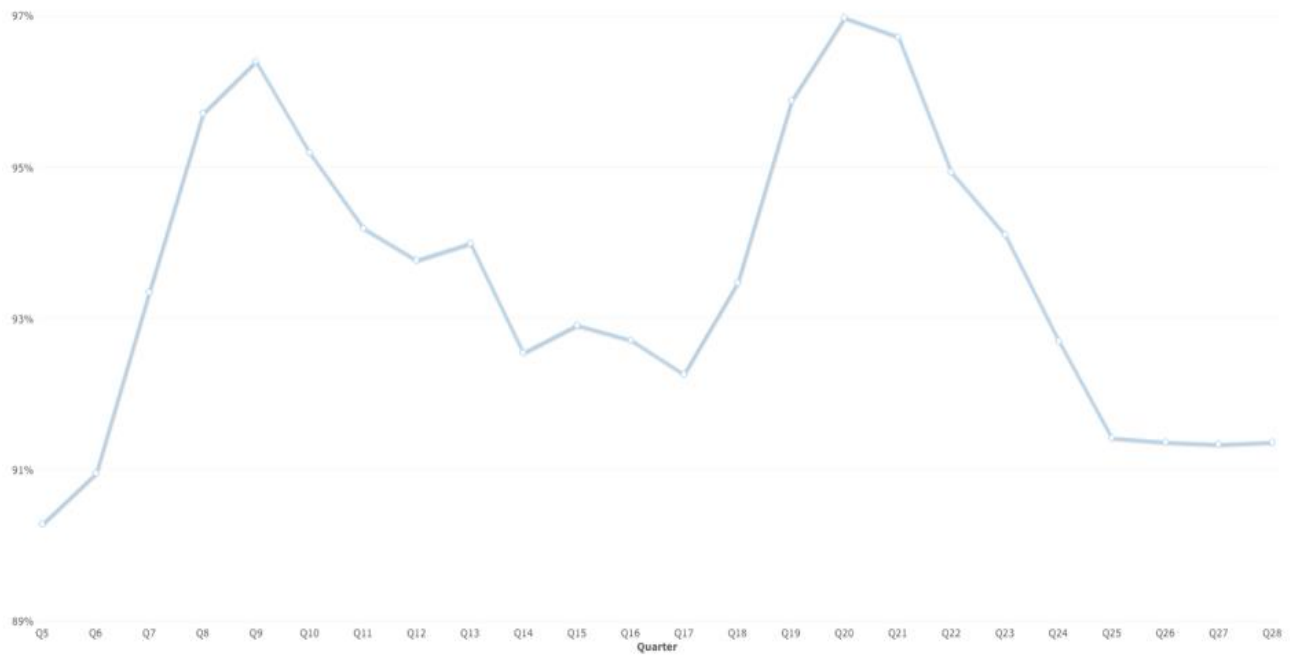
Appendix G: Einstein's Product Portfolio from Simulation Industry Masters Page (2022).

	Product	Price	CO2 Emissions	CO2 Premium per unit	CO2 Premium Ratio	Profit Margin
	EINSTEIN Deluxe	\$80,314	0 g/km	\$2,100	2.6%	20.4%
	EINSTEIN Executive	\$40,474	0 g/km	\$2,100	5.2%	30.9%
	EINSTEIN Freedom	\$61,261	0 g/km	\$2,100	3.4%	31.9%
	EINSTEIN Lifestyle	\$46,000	0 g/km	\$2,100	4.6%	25.6%
	EINSTEIN Micro	\$27,846	0 g/km	\$2,100	7.5%	32.2%
	EINSTEIN Urban	\$30,400	0 g/km	\$2,100	6.9%	27.8%

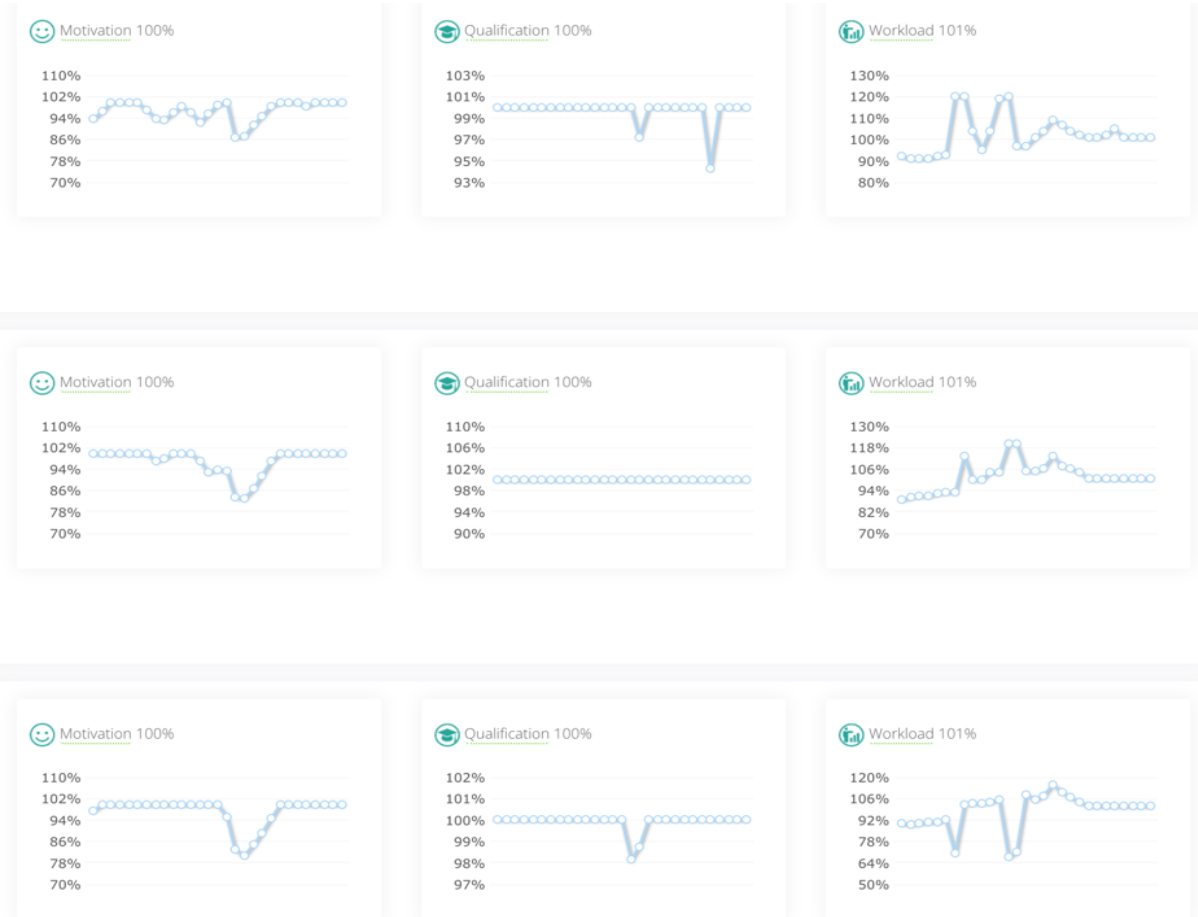
Appendix H: Einstein's Sustainability Rating from Simulation Industry Masters Page (2022).



Appendix I: Management Motivation from Simulation Industry Masters Page (2022).



Appendix J: Einstein’s Factory Staffing Data with Motivation, Qualification and Workload
Percentage of Europe, China and the USA respectively from Simulation Industry Masters
Page (2022).



Appendix K: Sustainability Policy & Training adapted from Data Einstein Simulation
Industry Masters Page (Industry Masters 2022).



Appendix L: Success Factors for Green HRM (Cunha e Kará 2022).



Appendix M: KPIs for the Operations function (Costa 2022).

Operations performance objectives: KPIs

Examples of KPIs

Quality	Speed	Dependability	Flexibility	Cost
For example ...	For example ...	For example ...	For example ...	For example ...
Defects per unit	Customer query time	Mean time between failures	Time to market	Transaction costs
Customer complaints	Order lead time	Lateness	Product range	Labour productivity
Scrap level	Throughput time	complaints	Customization	Machine efficiency
Warranty costs				Variance against budget

+ Sustainability

Environmental (Planet)

For example
CO₂ emissions
Packaging waste
Water usage
Biodiversity

Appendix N: Performance indicators for the Operations function with highest and lower values achieved by Einstein.

<i>KPI</i>	Model performance: Highest and lowest values
<i>Quality</i>	Not part of the simulation
<i>Speed</i>	Days of inventory: The lowest average was 30 days (Lifestyle, Micro and Urban models); The highest average was 56 days (Deluxe model).
<i>Dependability</i>	Not part of the simulation
<i>Flexibility</i>	Production volume: The highest was 30000 (Executive, Lifestyle, Micro and Urban models); The lowest was 12500 cars (Freedom model). Inventory units: The highest was 18812 (Deluxe model); The lowest was 7746 (Freedom model). Factory utilization: 100% for all models.
<i>Cost</i>	Production cost per unit: The highest was \$53242 (Deluxe model); The lowest was \$15743 (Micro model) Staff cost per unit: The highest was \$22,568 (Deluxe model); The lowest was \$5,477 (Micro model) Material cost per unit: The highest was \$30,674 (Deluxe model); The lowest was \$10,266 (Micro model)

Appendix O: Einstein's car production adapted from Data Einstein Simulation Industry Masters Page (Industry Masters 2022).

