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# BUSINESS IN PRACTICE

Business simulation of the transition to electrification and automation in a global car manufacturing company: A review and self-reflective analysis of team dynamics

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# EVOWAY towards the Future of Mobility: Intersectional Analysis of the Company and Personal Reflection on the Management Team Dynamics


## Abstract

This work project conducts a comprehensive analysis of the performance and operational dynamics of EVOWAY, an automotive manufacturer transitioning from traditional gasoline vehicles to electric vehicles (EVs).
The study underscores the challenges faced by management in balancing inventory management, operational costs, employee retention, and the imperative for sustainable practices in a rapidly evolving industry. Utilizing a 4Vs framework, alongside forecasts and observed metrics, the analysis reveals the company's adaptability to consumer demand and market fluctuations. Initial declines in revenues, EBIT margins, and employee satisfaction were followed by a notable recovery driven by strategic investments, characterized by enhanced operational efficiency, positive free cash flows, and a significant Green Capex Ratio. Furthermore, the project examines two critical incidents involving teamwork, providing valuable insights and points of reflection that may enhance individual professional experiences. The findings contribute to a deeper understanding of the complexities of navigating challenges in the automotive sector, particularly in the context of sustainability and innovation.



## Keywords

Business simulation, Apply theory in Practice, Cars, Finance, Operation, HR, Sustainability and ESG, Electric, Working in teams, Personality, Leadership, Team dynamics, Managing a Business, Integrate and coordinate decisions across business functions

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# INTRODUCTION

The first decades of the current millennium have experienced a radical change in mobility that is still ongoing, with consumers inundated by hundreds of alternatives and companies fighting a war of prices and quality. Temperatures are higher than they were some years ago, and world citizens reordered their priorities, traditional gasoline cars are visibly losing field, subject to severe fees and restrictions, and the urge for more sustainable solutions is resulting in a huge process of electrification. According to the International Energy Agency, this transition will require, inter alia, pursuit of global rail transport electrification, already underway, as well as at least 20 percent of all road transport vehicles globally to be electrically driven by 2030 – if warming is to be limited to 2 degrees or less. To achieve this goal IEA modelling says electric drive vehicles (…) need to represent 35 percent of global sales in 2030.

It is in the middle of this complicated environment that EVOWAY, a car manufacturer, started operating. In 2024, the company created and distributed cars in three markets: USA, Europe, and China, and it had 6 models of cars and 9 disposable factories in its portfolio.

The company needs to adapt rapidly and face unprecedented challenges.

The production of EVs currently generates higher emissions than traditional vehicles, primarily due to the energy-intensive battery manufacturing process. As demand for EVs increases, the industry must innovate to decarbonize the entire vehicle lifecycle, from raw material extraction to end-of-life disposal.

Company's directors need to get used to a different revenue landscape, with on-demand mobility services and data-driven solutions expected to create up to $1.5 trillion in additional revenue by 2030, while traditional car sales growth slows to 2% annually.

The following lines provide a detailed (albeit limited) analysis of the effect that such changes have had on the company, focusing on three out of six of its departments. The analysis will go further examining the dynamics of a teamwork, any generable complication and how to cooperate for more efficient outcomes.

# OPERATIONS

EVOWAY is a car manufacturer operating in the middle of a transition in the automotive sector, the need of moving from a traditional gasoline engine to an electric engine has pressured consistently the firm's directors during the FY period 2024-2030, leading them to overturn completely the previous direction followed by EVOWAY and to acquire market power by overtaking competition, that, in turn, has not been as fast and prompt to foresee and react to unprecedent changes that would inevitably have happened (in line with respecting the objectives set according to the Paris Agreement, specifically the goal of reaching Net Zero emission by 2050).

The operation department was crucial to facilitate this process and, albeit some difficulties, it was one of the main responsible for the late success of the company.

EVOWAY maintained its purpose to increase its revenues while not sacrificing its margins. The company started spending money, since the initial stage, in investments that would have guaranteed the best version of cars in circulation to the consumers; hence EVOWAY decided not to decrease the prices to become a price competitor, and the collaboration with the marketing department was essential to guarantee good revenues, evaluating consumer preferences in the three places of interest (America, China and Europe) to meet their demand and guaranteeing good visibility for new car models through appropriate advertisement operation, as studied by Hausman, W., Montgomery, D., & Roth, A. (2002).

Managing a vast array of components and parts is challenging. Operations directors needed to deal with the finance department and ensure efficient inventory levels to avoid stockouts or excess inventory. Moreover, essential has been the readiness of the human resources, to find new skilled talents to operate in the new factories opened or to deal with new technologies implemented and new cars created.

In this section the performance objectives, factory utilization, and CO2 emissions generated with company's day by day operations are going to be discussed and analyzed through a 4Vs analysis.

**4Vs Analysis**

4 Vs is an acronym intending: volume, variety, variation, and visibility (**Figure 1**).

**Volume** refers to the quantity of cars produced and sold. EVOWAY tried to be a premium quality car manufacturer and decided to spend money on new and more performing features rather than on the creation of new factories, indeed EVOWAY opened just one factory in China, costing 800 million USD, at the end of year 2026 (quarter #12 of operations), and only when the company's revenues had started to

grow at a constant rate (in the last two quarters of FY 2026 EVOWAY moved from 4.4B USD to 5.51B USD in revenues, registering an increase of 25%). EVOWAY recognized that its product was being particularly appreciated by consumers and found itself needing more active factories to satisfy the growing demand. However, albeit having only 11 factories opened and spread among the continents, at the end of the current direction EVOWAY managed to be leader in sales in all the geographic areas it was operating at, filling the top positions in the ranking of sales (if we assume to measure volume produced being 100% related to sales) with 6 out of 11 of its models of cars.

In terms of **variety**, EVOWAY ended its business cycle in 2030 with eleven different models of cars (even if EW-eB1 and City E were planned to be liquidated in the following FY), giving to the consumer high range of selection. EVOWAY had in its final portfolio many different models of cars: business cars, luxury models, city cars, SUV, pick-ups (**Figure *2***), to accommodate the branched preferences that were pooling together the diverse consumers of the company. Therefore, EVOWAY's production output was flexible to demand but it also was more costly than if the company had chosen to produce a reduced number of models and this is reflected with the company needing three fiscal years to increase its EBIT margin to significant levels.

The **variation** of the company's products, intended as the level of change in demand for the products due to external factors, resulted to be quite significant, independently from the nature of the vehicle. If observed (**Figure *3***), the curve of sales appears full of fluctuations and this is due to many factors, such as the economic environment (during its activity, the company faced two main economic incidents, one recession and one growing economic landscape, that affected negatively and positively the performance of the company overall), or, when considering electric lines of vehicles, to higher import-export tariffs. To be noted, in particular, is the trade of electric vehicles between Asia and America, notoriously in fractured relationship, which imposed a 100% tariff for e-vehicles exported from Asia to America and a 40% tariff vice versa. To keep sales and revenues to competitive levels, EVOWAY had to adapt by strictly monitoring changes in demand and consumer preferences, by lowering or increasing cars prices or downsizing or upsizing car models and keep a level of inventory that was not too high nor too low.

For what concerns **visibility** of the products, EVOWAY, due to the prime service offered and to the high prices charged, tried to be the clearest possible. Nevertheless, the company focused its management skills in Supply Chain Management (with a score of 71.8 in absolute value) and in Consumer Focus (with a score of 49.3 in absolute value). Higher visibility means consumers expects to have their car disposable sooner, they have less waiting tolerance, and we can see this from the days of inventory that decreased consistently starting from FY2027 (**Figure *4***).

**Factory Utilization**

Factory utilization is a measure of how well an organization uses its productive capacity. It's the relationship between potential or theoretical maximum output and the actual production output.

EVOWAY found it challenging during its operating activity to utilize fully its factories, it reached 100% factory utilization just in quarter #9 of operations; before and after this quarter, the company produced using around 70% and 80% of the factories it owned until it reached a stable level of 82% of factory utilization for the entire year 2029 (**Figure *5***).

There are many factors influencing capacity decisions, like: sales forecast, competition, industry trends, upstream limit for delivery, contribution margin of each vehicle, or existing stocks. The latter has been the main issue for EVOWAY, cars were overproducing and because the company wrongly predicted the movements in demand, too many cars have been produced and subsequently stocked in the warehouse, forcing the firm to momentarily interrupt the production of some of its model to keep inventory level to undangerous levels. This practice resulted to be effective, inventory level of the company was at its maximum level in quarter #13, with 6,374,731 units, and it ended up reducing its inventory level to 2,975,898 units in quarter #28.

This one incurred by EVOWAY is a huge challenge manufacturer encounters in any field of business where high fixed costs are necessary to start production. Having too much machinery leads to leaving production lines empty which in turn leads to high fixed costs which cannot be covered by the operating profit or high inventory which makes it impossible to stock new products and also entails high costs. Therefore, it is crucial to analyze the market to predict the right amount of machinery needed as closely as possible (Corbett and Claridge, 2002).

In the real world, Tesla has faced difficulties in aligning production with market demand, leading to excess inventory, like EVOWAY. Reports indicate that Tesla's first-quarter deliveries fell to approximately 425,000 vehicles, down from 484,000 in the previous quarter. This mismatch has contributed to a substantial decline in Tesla's stock price and raised concerns about the company's ability to sustain growth amidst increasing competition and waning demand for electric vehicles.

**Operations Performance Objectives**

A car manufacturing company can measure its performance in operations through different KPIs, among the others, of considerable importance, are: superior product quality and reliability, ability to produce new products quickly, dependable delivery premises, flexibility in the product to adapt to requirements, cost and sustainability. However, "since no organization can be the best at everything, all the internal aspects of a manufacturing company should be designed and aligned to reflect dimensions which they can be good at, recognizing their limitations" (Skinner 1974). Thus, the organization must decide upon areas of interest on which it wants to excel.

In the case of EVOWAY (**Figure *6***), the firm decided to focus mainly on the quality of the product offered, to which it gave substantial importance. Nonetheless, the company invested immediately on new features thanks to which it cornered the market: in the first quarter of FY 2024, EVOWAY invested in the implementation of sodium battery for cars, which provided significant cost benefit thanks to the bigger reparability of the raw materials, and they also have a smaller environmental footprint and easier recyclability than lithium batteries (Prasant K. Nayak, et Al., 2017). Moreover, from FY 2027 EVOWAY had all his new vehicles being electric and with level 4/4 of Safety Extras, level 4/4 of Feature Package, level 4/4 of Autonomous driving and level 4/4 of Battery Technology (**Figure *7***). The company gained competitive advantage thanks to these implemented features, which functioned as order-winning factors (main competitors' products were equipped with Level I technology and safety measures).

The company did give medium emphasis to the speed of its services: factory utilization was less than 80% in average, meaning that there is idle capacity that has not been exploited by the company, and this would have fastened the process of action, considering that a big portion of its management skills on supply chain management.

Medium importance also given to dependability, in fact, the company maintained a quite high level of inventory all over the period of operation, allowing consumers to receive their vehicle independently of whatever unforeseen event, but once it had the opportunity, EVOWAY lowered its level of inventory.

Costs have never been an obstacle for the management board plans of the company, meaning that, conscious of being a premium quality manufacturer, EVOWAY spared no expense and invested in top quality features (still, of course, the firm's aim was to operate at a profit and to reach a return on asset and on investments that outweighed any cost). The firm was particularly generous with one model of car, LUCE, the most expensive in the history of the business, with an average material cost per unit of $40K and an average staff cost per unit of $27K.

In the real world, Tesla has significantly cut prices on its models, aiming to boost sales and maintain its market share amid increasing competition from other automakers entering the EV space. The company's strong profit margins allow it to reduce prices without sacrificing profitability, positioning Tesla as a formidable player in the evolving automotive landscape.

Sustainability was another great matter for the company, in fact much money has been invested to make the company more and more sustainable over the FY 2024-2030; in total, EVOWAY invested a comprehensive amount of $1100M to reduce the emissions released to the atmosphere as a direct result of a set of activities at the firm level; an amount of $500M to reduce all GHG emissions released in the atmosphere from the consumption of purchased electricity, steam, heat and cooling; and, finally, an amount of $1231.48M to reduce all indirect emissions – not included in scope 2 – that occurred in the value chain of the company, including both upstream and downstream emissions (**Figure *8***).

Moreover, as indicated by El-Khalil, R., & Mezher, M. (2020), a company that is keen on sustainability practices exhibits greater agility (the ability of a manufacturing organization to respond swiftly to market changes and customer demands) by promoting resource efficiency and reducing waste, ultimately leading to improved operational outcomes. Sustainability into manufacturing processes not only aligns with environmental goals but also contributes to better business performance.

## FINANCE

Financial directors in the automotive industry face a unique set of challenges due to the sector's complexity and rapid evolution. These challenges often culminate into disagreements between the various departments of the same company.

For instance, since a significant portion of capital is tied up in maintaining a diverse vehicle inventory, financial directors could find difficulties in balancing the costs of acquiring and storing vehicles while ensuring that inventory aligns with consumer demand, which can fluctuate widely. Interactions with the operation directors may be challenging even when dealing with high operational costs, including showroom maintenance and staff salaries, while maintaining service quality.

Moreover, together with marketing directors, finance people should make necessitating careful financial planning and forecasting to navigate these uncertainties about automotive sales, highly sensitive to economic conditions, consumer preferences, and financing rates.

The rise of fintech and digital solutions is reshaping the automotive finance landscape. Financial directors must adapt to these changes by conceding money to the innovation department, to invest in technology that enhances operational efficiency and meets evolving consumer expectations.

Lastly, increasing environmental regulations require automotive companies to invest in sustainable practices. Financial directors must balance these investments with the need for profitability, often requiring innovative financial strategies.

In light of this context, we can undertake a comprehensive analysis of the EVOWAY's financial performance for the Fiscal Years 2024 to 2030.

**Margins and Flows**

The situation of EVOWAY, in terms of revenues (the total sales or income generated by the company), operating margin (the operating profitability as a percentage of revenues) and free cash flows (FCF) has been alternating over the years, there has been an initial decline in both revenues and **EBIT** margin, with **FCF** being negative in the first quarters, suggesting a challenging business phase. After quarter #12, there has been a notable recovery that resulted in improved efficiency in the latest quarters of activity, where increased EBIT margin, alongside growing revenues implied a more effective conversion of sales into operating profit. Very positive FCF towards the end of the period indicates positive excess cash generated, together with better operational performance (**Figure *9***).

EVOWAY started investing as soon as it could, preferring longer term investment with a higher return on investment capital than shorter term investments that could have generated a faster return but with lower ROIC (Mauboussin, Callahan, 2022). The company invested immediately on new models of cars, with new features, more efficient and safer than the old ones, that would have given competitive advantage to the company over the other manufacturers, and on a new factory in China and in US (quarter #12 of operations).

**Capital Structure**

The firm chose to finance these investments only through **long-term debt** (short term debt has been 0 all over the period, and current liabilities corresponded only to accounts payable), which reached its peak in FY2028 and diminished thereafter; in 2030 long-term debt amounted to 16,000M, equivalent to 43.61% of total liabilities (the lowest level ever happened to the company).

The main policy of the company was turning into a more sustainable business; hence it is not surprising if the company balances registered a big capital expenditure in the first years (mainly in R&D). EVOWAY chose not to finance itself with equity, hence it never emitted shares, but only long-term debt because it was cheaper and it would not have damaged the value of the company's shares through dilution, in fact, when more shares are issued, the company's profits are spread over a larger number of shares, reducing the EPS. Lower EPS can lead to a decrease in share price because the stock may appear less valuable relative to its earnings (Bens et Al., 2003).

If we want to analyze the line of action of the company, we can see an almost linear pattern of debt-taking and debt-repaying, with new debt used to repay the old debt and, at the same time, an attempt to increase the value of the company to keep the debt-to-equity ratio to efficient levels to get cheaper borrowings. By not taking short-term debt, the company sacrificed some flexibility in favor of more advantageous interest rates. EVOWAY maintained a **credit rating** of A- for a big part of the current direction's operating period, paying attention to keep its debt ratio stable to less than 49% (over this percentage level the company would have fallen to rating BBB).[1] This level guaranteed to EVOWAY a good expectation of repaying its financial obligations, allowing the company to ask for loans to the bank

[1] NB: the only factor considered for the credit rating is the debt ratio (other factors, such as the interest coverage, are not taken into account)

with an interest rate of 4.85% (instead of a costlier interest rate for short term debt amounting to 6%). Compared to the automotive industry, and particularly to its real-life counterpart, Tesla, EVOWAY is well-placed; Tesla in fact has a credit rating of BB from S&P (because of its speculative grade, reflecting its higher risk profile despite strong market performance), Ford and General Motors have ratings around BBB from S&P. The only company with a competitive advantage in creditworthiness is Toyota, with a rating of AA from S&P, reflecting its strong financial position and market leadership.

**Profit and Value**

Independently of its financial structure, EVOWAY had an average NOPLAT (Net Operating Profit Less Adjusted Taxes) of $909.250M over the six years, which shows the firm's operating efficiency by measuring the profit generated from company's core operations after accounting for taxes but before interest expenses (**Figure *10***). NOPLAT metrics recovered just in FY2027, before it trended down, and the reasons can be multiple: in the initial years of operations the company was highly taxed due to its production of gasoline cars and relative greenhouse gas emissions, with a tax expense in FY2024 of $1188M; there have been some economic turn downs that put price pressure to the firm, forcing its marketing department to lower the price and ruin some margins; the company had to face some one-time costs (like investments in R&D and in infrastructures); and it did not utilize efficiently its assets, like its factories, generating less revenues relative to the capital invested and leading to lower operating income. The **economic value added** of the firm, an estimate of true economic profit or the amount by which earnings exceed or fall short of the required minimum rate of return that shareholder and lenders could get by investing in other securities of comparable risk (Mamilla et Al., 2019), is computed as

$$EVA = NOPLAT - (Cost\ of\ Capital \times Capital\ Invested)$$

and, as such, it moves like NOPLAT (in addition, in the last years cost of capital and total IC has both been relatively low). Value Added of the company in last quarter #28 was $4.42K, the highest amid all the other competitors.

**Weighted Average Cost of Capital**

EVOWAY started operating with a **weighted average cost of capital** (**WACC**) of 6.09%, weighted by the fraction of the firm's enterprise value that corresponds to equity and debt respectively. WACC is given by the formula

$$WACC = [(E/V) \times Re] + [(D/V) \times Rd \times (1 - Tc)]$$ [2] ;

after 24 quarters of operations, the firm has been able to take it down to 5.24% of financing (**Figure *11***). This reduction has been slow and continuous, and, as explained by Berk and De Marzo (2019), it is generally due to lower cost associated to debt or equity (by changing the capital structure of the company, by arranging more favorable terms for the debt, by improving clients' perception of the company, etc.). In the specific case of this company, EVOWAY, after having progressively redeemed its reputation (damaged by year 2024's poor performance), having improved its car features, its marketing campaigns, and having shifted towards a circular economy (that resulted in an augment of its share's value), can find a reason for the decrease in its WACC to having bought out its shares from the market in the amount of $2303M; this elevated the value of the firm and lowered its conceded cost of equity [the company was actor of two shares buybacks during FY 2024-2030; one happened to be in 2027 and the other in 2029, which changed the number of shares outstanding from 10M to 9.3M].

Another reason for the reduction in the cost of capital needs to be found in all the **sustainable investments** made by the firm, starting from liquidation of polluting lines of product and ending with infrastructures footprint optimization and formation of personnel to sustainability themes, which guaranteed to EVOWAY a more favorable financing through the concession of green bonds in larger amount, which decreased consistently its cost of the debt, and eventually reduced the cost of capital.

We can further analyze the sustainable impact of the company by looking at its green bonds concession, EVOWAY issued a total of $17,028M in green bonds by the FY 2030 at a 3.00% interest rate and with a maturity term of 4 years, which made them very attractive to all the companies and pushed EVOWAY to focus on green initiatives. In light of this, EVOWAY's Green Capex Ratio, the proportion of company's investments in physical assets directed towards environmentally friendly initiatives, was 64% in 2030, and its Green Capital Ratio reached 100%, suggesting that the entire company's financial resources are dedicated to green activities, including both current and planned investments (**Figure 12**).

In the real-world automotive industry, more than $210B has been announced for investments in EV manufacturing in the US alone in 2024, including investments in new and retrofitted factories, dedicated EV battery plants, and other green technologies. Companies like Volkswagen, Ford, and Stellantis are

[2] The effect of tax shield is not considered in the simulation

among the leaders in these initiatives, and if reaching the proportion of sustainable expenditure got by EVOWAY seems to be unrealistic for the time being, even for avant-garde companies like Tesla, undoubtfully there is an increasing attention to such delicate topic, driven by regulatory pressures, consumer demand for cleaner vehicles, and the need to address climate change.

One last important measure to determine the reduction in the business' cost of capital is its ability to pay back its short-term obligations, and we can anticipate that the firm is very liquid, since its short-term debt has been zero all over the period. If we look at the graph (**Figure *13***) we can notice that the **Current Ratio** (current assets over current liabilities) reaches peaks of over x12, meaning that if anything happens the company would be able to pay its immediate creditors 12 times, an impressive result justifiable by the missing benefits from tax shield and by the increasing amount of Cash and Cash Equivalents, which moved from $3.7M (FY 2024) to $6M (FY 2030). The company has been able to pass also more stringent tests, like the Quick Ratio (current assets of the company less inventory over current liabilities), where the big amount of inventory owned by EVOWAY has been taken apart and the Cash Ratio, where just the cash reserves of the company have been considered.

**Inventory and ROS**

The company found some difficulties in managing its level of **inventory**; lack of inventory can lead to stock-outs, causing stoppage of production, but a very high inventory, on the other hand, can result in increased cost of production due to high cost of carrying inventory (Bose C. 2006), and in FY2026 inventory reached a peak amounting at 17.78% of firm's total asset. This big amount is likely due to EVOWAY's initial overproduction of cars after having wrongly foreseen consumers' demand, which culminated in factories disuse and personnel's layoff. Anyways, the danger of unproduction has been soothed by the company once it had more cars on hand, EVOWAY could take out from its factories the cars that overproduced in the previous months and substitute them with the new cars ready to be put in production. In FY2030 the company's inventory level corresponded to 8.11% of total assets, the lowest level since the current direction (**Figure *14***).

The financial directors of EVOWAY cooperated very strictly with other departments of the firm, providing funds where needed (especially to the innovation department) and giving advice, once looking at sales performance, to marketing experts about the efficiency of their activities. It resulted that Return

on Sales (ROS) were not much linked to the marketing expenses/revenue, in fact in the quarter with the biggest expense in marketing registered (quarter #9 – quarter #14) revenues have been quite low compared to following years. Of course, this result may be caused by other factors, such as the minor efficiency of operations which generated less revenues (**Figure *15***).

## HUMAN RESOURCES

As previously stated, the automotive industry is undergoing a radical change, it is transitioning to more sustainable forms of energy; and other elements of the apparatus, such as infrastructures, regulations, and the market itself, need to adapt to these changes as well, to maintain their effectiveness. However, the most important factor of this change is the human element, specifically the role of Human Resources (HR) in developing a trained, motivated, and creative workforce (Jelti, Allouhi, & Tabet Aoul, 2023).

This department is essential for implementing the necessary training and management shifts to align with the new organizational values. The Human Resources director was primarily responsible for overseeing salary allocations and ensuring employee satisfaction and motivation.

The direction is tasked with recruiting new personnel to meet the operational demands of new factories, while also prioritizing equality and diversity initiatives.

With the innovation department always ready to develop new automation and technology, many traditional roles are becoming obsolete. HR must find ways to upskill existing employees to keep pace with technological changes and prevent skill redundancy. There is a critical shortage of skilled workers, particularly in technical and engineering roles. HR needs to implement innovative recruitment strategies to attract the right talent in a competitive market, but for doing this HR needs many funds and permission by the finance department.

The automotive industry experiences notably high turnover, with reports indicating that up to 46% of employees leave within a year. This poses a challenge for HR in retaining talent and developing a stable workforce accommodating the request of the operation department.

EVOWAY took care that each car had its own skilled management, composed by people chosen according to their abilities; for instance, the firm tried to revolute its model EW-eMicro1 by adding new features, such as the autonomous drive level IV, to leave competitors in the dust; hence, in March 2025, they hired

Paige Chen, who is very skilled in Innovation Management (with a score of 8.6 out of 10) to improve the existing model and create a new one, STELLA.

To forecast internal supply within the businesses, EVOWAY used the Markov Chain analysis. In the field of human resources, a Markov chain is a mathematical system that undergoes transitions from one job position to another within a finite or countable number of possible job positions (Li S., Du W., 2015). It is characterized by the property that the future job positions depend only on the current job position and not on the sequence of events that preceded it (memoryless property). Based on historical data, the analysis suggested a good exchange of roles within the companies, with employees having to accommodate the changes in demands and having to move from one factory to the other depending on the continental needs.

By analyzing the transition probabilities, the company could plan for future hiring requirements based on expected promotions, retirements, and separations. This helps in maintaining optimal staffing levels and ensuring that the right talent is available when needed.

The company gave the possibility to the employees to always improve themselves, offering training and development programs and giving promotions when deserved (the same Paige Chen as before, just as an example, had been promoted to Manager level VI after two years as a worker of the firm).

**Workforce**

EVOWAY's current board of directors aimed to make the future of the company completely electric in the shorter period possible and before 2030, by stopping to produce gasoline or hybrid cars and by slowly removing old models from production. At the beginning of FY 2024, EVOWAY had 3 electric models of cars and 3 gasoline & hybrid models4 in its portfolio, foretelling an imminent and drastic change in firm's lines of production and in the conduction of operations, with an unsurprising involvement of the firm's personnel, radically revolutionized. This is visible from the path of the graphs (**Figure *16***), which show a workload oscillating between 120% and 85%, as a result of the need to adapt to changes in the factories and to new hires.

During FY 2024 and 2025, EVOWAY has been subject to the most considerable restructuring of all the period analyzed, in terms of workforce and of car produced. The company has been forced to lay

off employees, hire new ones, and relocate other ones from one sector of the company to the other, sometimes causing dissatisfaction and disappointment among its stakeholders.

Specifically, between quarter 6 and quarter 7 with the current direction, the company has seen many of its employees resigning from their position, the company was struggling to keep its financials up and the changes made were not paying off, generating a feeling of uncertainty over all the members of the company, from the high tower to the warehouse, salaries were kept low, and employees asked for more benefits.

If observing the firm's employees' satisfaction this situation appears evident, while job rotation can enhance employee performance, excessive rotation may lead to job dissatisfaction, particularly if employees are hesitant to move (Suleman A. et Al., 2022). Satisfaction in the company has been low for three years, with lowest level being 92.3% (in quarter 8), before going up. However, likewise many other departments of the firm, HR director was ultimately able to raise personnel's contentment, by providing customized trainings to evolving needs and increasing salaries.

**Compensation**

EVOWAY made a commitment of highly rewarding their employees when the situation is economically favorable to the company, doing this increases their motivation and productivity, enhances their satisfaction, they start developing a positive emotional connection to the organization, which can foster their loyalty. Moreover, offering competitive monetary rewards can make a company more attractive to potential candidates, minimizing recruitment and training costs and identifying monetary reward as a clear performance metrics increases focus and drive, leading to improved overall performance and productivity within the organization.

EVOWAY's total compensation has increased over the years, starting in quarter 5 with a managers' payment of $123.3585K (per quarter), the company ended quarter 28 paying its managers a sum of $177.556K, registering an increase of 44%. By having a look at the average salary in the automotive industry we can notice that

One way to measure compensation is through the comparative ratio. This ratio compares the salary of an employee with the industry average or organizations pay of the market median of a salary range of the employees' department, organization or role (DeNisi and Griffin 2015). EVOWAY's compa-ratio for

managers is highly competitive, especially for its top positions, such as the one occupied by Weldon Wendler (Manager VII in operations) who earns an annual salary of 356,647$, 20% more than the average market compensation for the same job position (**Figure *17***).

To lift up the beginning complicated situation in EVOWAY, several changes have been made periodically to the operating lines, moving the production of cars from country to country based on changing consumer preferences and on new tax burdens emerged from tensions between states (especially between China and USA), this raised the stress level of employees, and Human Resources of the company needed to adjust their salaries to retain them and to avoid the problem of them leaving, detrimental for the company both in terms of reputation and in terms of leakage of sensitive information. Salary, combined with a right amount of workload and a delineated promotion path, were also useful to keep employees' motivation high such to assure an operational efficiency close to 100%.

**Diversity, inclusion and Sustainability**

As of the end of 2030, EVOWAY offers job to 123,658 people from all over the world.
EVOWAY is committed to promoting gender and racial diversity in its hiring practices; 46% of its management members are women, and they are from at least 12 different nationalities. The company cares to specify that it has no biases relatively to age, religion, sexual orientation, and physical ability.
Managing diversity may result in a competitive edge. Advantages of this diversity include improved decision-making, more creativity and innovation, stronger marketing success with international and local ethnic minority populations, and more equitable distribution of economic opportunities (Agolla, J. E., & Ongori, H. 2007).

In the real world, since 2019, Toyota has dedicated August to promoting a culture of inclusivity through various activities, networking opportunities, and training sessions for team members. Toyota emphasizes the importance of reflecting the diversity of society within its workforce. Initiatives include programs aimed at breaking stereotypes and encouraging underrepresented groups, such as women in STEM.

The shift towards sustainability deployed by the company in the production of cars, have been reflected also to its personnel. HR started soon to hire people with competence and knowledge in sustainability, which is indeed one of the strengths of the company's management skills, that could help

the company towards a path of awareness raising on the issue. Starting from zero, in six years' time the company created a sustainability policy (designed to promote environmentally responsible operations and comprehensive of goals, objectives and strategies for implementation), made a sustainability policy training for the employees (aiming to develop their skills to drive critical business decisions and craft successful strategy), and a sustainability awareness training (a healthy and sustainable workplace correlates to happier employees and as a result increases employee productivity, and lessens work-related illnesses).

EVOWAY aims to go further with these sustainability practices by implementing accessible recycling systems and composting programs to reduce waste and promote responsible consumption, and supporting alternative transportation options, such as biking or carpooling, to reduce emissions among employees.

## CONCLUSION

In conclusion, concentrating a significant portion of a company's finances on green investments may initially prove detrimental to its financial stability. The simulated case of EVOWAY exemplifies the path that an automotive manufacturer could undertake by actively embracing this transition. The firm may experience losses, diminished profit margins, and increase its risk of default, leading to employee insecurity and a focus on mitigating losses rather than fostering growth. However, if the company successfully navigates this challenging initial phase, it will ultimately reap the benefits of sustainable transformation. These benefits include reduced taxation penalties, access to lower interest rates on debt, decreased capital costs, and increased consumer demand for electric vehicles. Employee satisfaction is likely to improve, as working for a profitable company enhances motivation, allowing the organization to concentrate on producing superior and more efficient products without the fear of imposing higher prices. While EVOWAY is a fictitious company, it serves to reflect real-world dynamics, and it is my sincere hope that it encourages businesses contemplating whether to undertake this significant step or merely engage in superficial efforts such as greenwashing.

## PERSONAL REFLECTION

It is important for a man being to reflect on the actions taken during a work, especially if the work has been cooperative and characterized by interactions with colleagues. Self-reflection is a process in which individuals assess and evaluate their actions and experiences to improve future decision-making and behavior (Schon, 1983). This process encompasses not only contemplation and understanding but also the implementation of measures aimed at personal improvement in specific contexts, ultimately striving toward the realization of one's optimal self.

Empathy, communication, adaptability, emotional intelligence, and compassion are essential skills for succeeding in the business and being a successful leader (Bailey & Rehman, 2022), and they are of extreme importance when dealing with others, to create a more genuine working environment and make the best out of a collaboration.

I want to say that I based this section of the work project on the insights provided to me by the *Insights Discovery*® personality test, which all project members participated in during an early team-building and leadership session. The results of this assessment provided significant clarity regarding my worldview and demonstrated how my personality traits profoundly influence my approach to various situations. Furthermore, the test has facilitated a greater appreciation for differing perspectives, reminding me that each individual possesses a unique and valid approach to tasks, which may not necessarily align with my own.

According to the test, I predominantly identify as a "Cool Blue," characterized by introversion and a tendency toward overthinking. I require a comprehensive understanding of my surroundings and the events occurring within them, necessitating accurate information and sufficient time to contemplate the most effective course of action after evaluating all available data and potential outcomes. Notably, the results also indicate that I exhibit traits associated with other personality types, as evidenced by my position near the center of the Cartesian plane (**Figure *18*:** ). This suggests that I share certain characteristics with the "Fierce Red" type, including determination and a results-oriented mindset, as well as the "Sunshine Yellow" type's inclination for involvement and some aspects of the "Earth Green" type's empathy (**Figure *19***).

My working methodology, emotional responses, and expectations for my team can be traced back to the insights gained from this assessment. Additionally, the test has illuminated the causes and resolutions of

two critical incidents that occurred during the simulation period, which I consider particularly significant for my personal development. These incidents provide valuable opportunities for reflection on mistakes and unhealthy approaches I may exhibit when collaborating in teams.

**Critical Incident #1**, **"*A weak leadership"***

On the third day of the simulation, participants in the Leading Yourself Workshop were prompted to articulate their attitudes and attributes when performing at their best and at their worst. Personally, I find such self-assessments challenging, as they require individuals to disclose considerable personal information and to enumerate their shortcomings in the presence of peers, who will inadvertently agree to a consideration of weakness or inefficiency. My experiences, ranging from job interviews to academic group work within the Italian educational system, have exposed me to a highly competitive environment. Differences in backgrounds, personalities, and experiences can create perceptual and interpretational biases leading to different perception (James, James and Ashe, 1990). I have learned that success often hinges on the ability to project an image of strength, minimizing the visibility of any weaknesses or, if weaknesses are acknowledged, demonstrating that effective solutions to them have already been implemented.

It is likely due to this competitive background that I approached the self-assessment with a degree of insincerity, failing to fully disclose my attributes when presenting myself to my group colleagues. Bushe (2010) argues that people do not naturally describe what is going on in themselves because they have not been taught how to do it.

I recognize that this approach may have hindered my ability to derive the maximum benefit from the exercise. However, I am committed to treating others with the same respect and consideration that I wish to receive. Consequently, I paid little attention to the negative qualities my peers expressed, as I aimed to avoid biasing my developing perceptions of them.

Despite this intention, I often find myself perceiving a sense of superiority over my peers, unless presented with contrary evidence. This perspective led me to evaluate my group members through a lens of superiority, dismissing their contributions as superficial and their decisions as ineffective or erroneous from the outset. Such attitudes occasionally resulted in feelings of irritation, which I believed could have

been mitigated had I been able to undertake the work independently or delegate tasks solely to individuals whom I trust blindly.

Collaborating with six other individuals, each possessing distinct cognitive styles, intensified my compulsion to double-check every aspect of our collective work. This tendency ultimately resulted in unnecessary workload and stress for myself. I acknowledge that this approach is both unhealthy and inefficient, leading only to crises and a pervasive sense of frustration that has characterized my recent group projects, reducing my overall enjoyment of the collaborative process. My desire for control and input in all matters was at odds with the simulation's design, which was intentionally structured to foster collaboration among participants. Consequently, I found it impossible to attempt independent work or to demonstrate to my team how, solely through my contribution, we might arrive at effective solutions more efficiently.

**The event**

The aspects of my personality previously described became particularly evident during two specific instances: the drafting of our team's charts, which encompassed our values, potential challenges within the team, and ideal solutions to these challenges, if applicable.

During the initial brainstorming session for our first chart in the early days of the simulation, I observed a considerable degree of disorganization and chaos within the group. Each member was attempting to contribute original ideas; however, the process was slow, unfocused, and rife with distractions. I found the outcome we were approaching to be inadequate and superficial. It was my impression that we were not fulfilling our responsibilities, and I harbored concerns that we would be penalized for this lack of productivity. Although I attempted to express my concerns on several occasions, I was uncertain about how to articulate my thoughts beyond the observation that our efforts were subpar, resulting in my voice not being heard. As my colleagues engaged in idle conversations, my frustration grew, and I became increasingly anxious about how to enhance our work without belittling the contributions of others. I felt a loss of control over the situation and, rather than actively participating in what I perceived as a poorly executed task, I preferred to withdraw entirely. Consequently, I alienated myself and lost interest in the discussions occurring around me. While I allowed my peers to continue

their work, I was ultimately dissatisfied with the final result, yet I found some solace in the fact that I did not bear responsibility for the outcome.

In the following week, we were tasked with revising our team chart after several days of simulation, taking into account any new challenges that had arisen or might arise within the group. The approach adopted by my colleagues during this task mirrored that of the previous week, as we began to lose time discussing trivial matters at the outset of the meeting. However, my attitude during this session was markedly different; I was determined not to remain silent, waste time, or submit substandard work again. In a moment of resolve, I approached the whiteboard and began to document my ideas. Initially, my peers showed interest in my contributions, but this interest waned as I continued to complete the task independently while they engaged in discussions about their personal lives to foster camaraderie. Although I would have appreciated participating in that conversation, I felt it was not the appropriate moment, considering the work that remained to be done and my desire to avoid repeating the mistakes of the previous week. I believed that I could deliver a higher quality of work without the distractions posed by my colleagues, and I opted for this approach, even if it meant taking on a greater workload that was originally intended to be shared among team members.

**Personal Response analysis**

Later that day, while documenting my thoughts in my journal, I engaged in a process of reflection regarding my actions. I recognized that, despite the initial satisfaction derived from submitting a work product of which I was proud and demonstrating my value to my colleagues by completing the task independently with minimal interference, my behavior was not commendable.

It is true that my actions relieved my peers of the burden of expending their energy on this task, as I assumed full responsibility for its completion. However, I failed to consider that they may have genuinely wished to contribute actively to the endeavor. By initiating the process of writing on the whiteboard, I effectively isolated myself and precluded my colleagues from offering any form of help. The outcome of my actions did not elicit feelings of happiness or gratitude from my group; rather, I observed through their body language a sense of exclusion and a lack of trust. Understandably, they felt marginalized in that moment, which led to a noticeable disinterest in the task at hand, prompting them to shift the focus of conversation to personal matters.

My peers perceived my urgency to be correct and my reluctance to engage in collaborative efforts, which resulted in their passive acceptance of my approach. They allowed me to proceed with my intentions without attempting to counteract my actions, as I had effectively silenced their voices in the matter by assuming sole responsibility for the task's completion.

**Insight gained: key takeaways**

On this occasion, I felt compelled to take control of the situation, desiring that task to be executed according to my preferences. In doing so, I assumed a leadership role; however, as evidenced by the reactions of my colleagues, I did not fulfill the responsibilities of an effective leader.

Lencioni (2008) describes a good leader as communicative and able to delegate, Toor and Ofori (2008) as transparent, Sprous (2011) as humble and collaborative. Ultimately, there is no singular definition of good leader; however, one can discern that a leadership role has been assumed when one has successfully garnered the attention of team members and fostered their willingness to engage and collaborate within a harmonious environment.

Our team exhibited dysfunction on multiple levels, characterized by a significant lack of trust. This environment led me to act independently and refrain from disclosing my weaknesses to others. Additionally, there was an absence of constructive conflict, as no team member was willing to confront me during my moment of ego. Consequently, there was a lack of results; it appeared that no one cared enough to voice their concerns or acknowledge the substandard work we were preparing to present.

We began as a nonfunctional team, discouraged and apprehensive about being held accountable for our poor initial results. As a result, no one was willing to make firm decisions, and efforts were minimal. Actions were executed slowly, often justified by a reluctance to engage in competition. Teams can reduce the potential for dysfunction by establishing clear norms (…). Instilling such norms is especially important when team members operate across different national, regional, or organizational cultures (Haas M., Mortensen M., 2016).

I initially perceived my actions as a necessary convenience, believing that my teammates had implicitly fully delegated the responsibilities of the task to me. However, I failed to recognize that the

requisite level of trust was insufficient for such delegation to occur. I ultimately assumed a commanding role, consulting no one and making decisions unilaterally.

Nevertheless, I contend that my decision to take the lead was not entirely without merit. I believe it instilled a sense of motivation among my group members, who were inspired by my commitment and ultimately encouraged to perform and strive for success. However, I acknowledge that my approach was not the most appropriate. I could have articulated my dissent regarding the team's lackadaisical behavior to foster a constructive discussion. Furthermore, I could have assessed the willingness of each member to contribute and initiated a brainstorming session to ensure that all voices, including the quieter members, were heard. Communicating what one's feel can be key to the success and growth of a group (West, 2012).

**Critical Incident #2, *Successes are shared in a team***

**The event**

The stakes were particularly high during the Client Retention Role Play in preparation for Year 5 of the business simulation. A significant client of the company expressed dissatisfaction with the treatment received and scheduled a meeting with some of our directors to articulate his concerns and potentially reconsider his relationship with the firm. Should the client choose to remain with the company, there would be no adverse impact on the firm's financial standing. Conversely, the client could opt to transfer a portion of his business to a competitor or, in the worst-case scenario, cease to be a client altogether. The financial implications of failing to secure this critical client would amount to a loss of $1.9 billion, a substantial sum that would significantly affect our company's balance sheet.

It is pertinent to note that our group had previously lost the initial role play, the Sales Role Play, in which we were tasked with persuading a prospective client to engage with our company. We were among the few groups that did not generate any revenue from this exercise. However, I must clarify that during the initial days of the simulation, I was afflicted with a stomach virus, which hindered my ability to perform optimally and limited my involvement in preparing for the first pitch. As such, I do not feel justified in attributing blame to my colleagues for their performance, as the circumstances were beyond our control.

Nonetheless, I mention this prior event to highlight that our team was highly motivated to

retain the client; we were determined to avoid further penalties, especially given our recent progress in the simulation, where we had begun to ascend the rankings and gain recognition from our peers in other teams. The loss of this client would have represented a significant setback in our advancement, particularly considering that the $1.9 billion at stake exceeded our Net Income for Year 4 of the simulation (Net Income 2027: $1,552,956 million).

I was particularly fervent about this opportunity, as it marked the first time I genuinely believed we had a chance to succeed in the simulation. Consequently, I was eager to assume a leadership role during the Client Retention Role Play, filled with a sense of vindication. I volunteered to speak during the role play, only to find that my colleagues were also unusually eager to contribute. It seemed that my enthusiasm had been contagious, leading to a perception that my opportunity for recognition was being compromised. Unconsciously, I adopted a competitive stance, feeling the need to speak first and take the lead in the discussion.

I possess some experience in sales; in my hometown, I frequently visited the market and engaged in vigorous bargaining with sellers known for their stubbornness. I consistently managed to negotiate lower prices than initially offered. I did not fully appreciate how this rudimentary activity had equipped me for various forms of deal-making until I attended a negotiation course during my Erasmus experience, where my ability to succeed in bargaining was noted by the instructor. This background contributed to an inflated sense of confidence for the role play, leading me to believe that prior preparation was unnecessary and that I would perform better through improvisation.

According to Cannon and Edmondson (2005), the necessity to create a(n unrealistic) positive illusion of oneself is an implicit outcome of the human desire to preserve high self-esteem, through disassociation of one's own failures. However, building high levels of self-esteem at the expense of overestimating my actual capabilities was placing me in a position that Kruger and Dunning (1999) described as unskilled and unaware.

Once seated before the judges, given the limited time available, I assertively took the floor and, without hesitation, began proposing offers that I believed would benefit both parties, akin to my market experiences. However, this approach proved misguided. The fictional clients felt unduly pressured and promptly expressed their dissatisfaction with not being heard or considered, which resulted in

increasingly formidable barriers to effective communication. My persistent demeanor only served to compromise the outcome of the role play. Fortunately, one of my colleagues, a highly resolute individual, intervened and precisely articulated the sentiments the judges wished to hear, employing a calm and accommodating tone—essentially adopting a subservient approach.

Ultimately, we retained half of the client's business, which we regarded as a partial victory; however, I recognized that a portion of the responsibility for this outcome rested with me, and the credit for our result largely belonged to that resolute colleague.

**Personal Response analysis**

I felt as though I had been caught off guard when the clients began to react in a manner that was contrary to my expectations. I was at a loss for words, unsure of how to respond without exacerbating the situation, while simultaneously attempting to analyze what had gone awry in order to identify a remedy for my mistakes. However, time was of the essence, and the clients were pressing for a response. I recall this moment as an interminable interval of silence, during which none of us spoke, and the four of us exchanged uncertain glances and nervous laughter. Fortunately, I possess the ability to conceal my emotions effectively, thus I maintained my composure, although I was indeed struggling. As the silence lingered, I found myself on the verge of speaking, anxious to fill the void, despite the risk of saying something inappropriate. My colleague, however, was quicker to respond and offered a straightforward statement that seemingly satisfied the clients.

My initial reaction was one of incredulity; I was astonished to discover that all the clients sought was a simple affirmation: "We will consider your requests and endeavor to accommodate them." In contrast, I had been preoccupied with devising complex solutions that would benefit both our company and the clients, fabricating reasonable figures and outlining realistic scenarios. Ultimately, my efforts proved futile, as the clients merely desired an assurance that their concerns were being actively listened to and addressed promptly, without hesitation.

I must admit that my response was one of frustration and jealousy; I could not comprehend how the solution could be so straightforward and seemingly trivial. I struggled to maintain a clear perspective. People who seek for perfectionism are frequently disappointed and extremely afraid of failure (Campbell, 2020).

I needed to remind myself that I was participating in a simulation, which meant that I could have made extravagant promises to the clients without any obligation to fulfill them. It would have cost me nothing to listen to their concerns and agree to all their requests, thereby ensuring their satisfaction and fully retaining their business.

Evidently, my resolute colleague recognized this dynamic before I did, and there was no reason to be jealous, we were part of the same team, and I expressed my gratitude to him later that day for having saved us from what would have undoubtedly been a significant defeat.

**Insight gained: key takeaways**

I have come to recognize that I am not infallible; my approach is not always optimal. Engaging in discussions with others prior to taking action is highly beneficial. Social interdependence plays an important part in the effectiveness and success of a team within collaborative and teamwork environments (Tarricone and Luca, 2002).

When colleagues volunteer to participate in dialogue, it is likely that they possess valuable insights to contribute. Seeking assistance is not a sign of weakness; rather, achieving success through collaborative effort within a team is often more rewarding than accomplishing tasks in isolation.

After this Role Play, I have begun to adopt a more inclusive approach toward my colleagues. I have actively listened to their perspectives and recognized that they are capable of identifying issues that I may overlook. This diversity of thought is an asset rather than a liability.

I have also become more empathetic toward my group members, allowing myself to express the "yellow" traits of my character, which I typically reserve for those with whom I feel comfortable. I have developed an appreciation for team meetings, engaging in light-hearted banter with my peers and articulating my opinions, even when they differ from the majority, while justifying my viewpoints with conviction. I now view such exchanges as opportunities to challenge my skills rather than obligations, because, as stated by Toegel et Al. (2016), good conflict fosters respectful debate and yields mutually agreed-upon solutions that are often far superior to those first offered.

Additionally, I have taken to sitting near the team's marketing expert, exchanging ideas on various matters, which ultimately contributed to the company's success in the simulation.

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APPENDIX

(**click** on "***Figure***" from 1 to 20 below the figures to go back to the text)

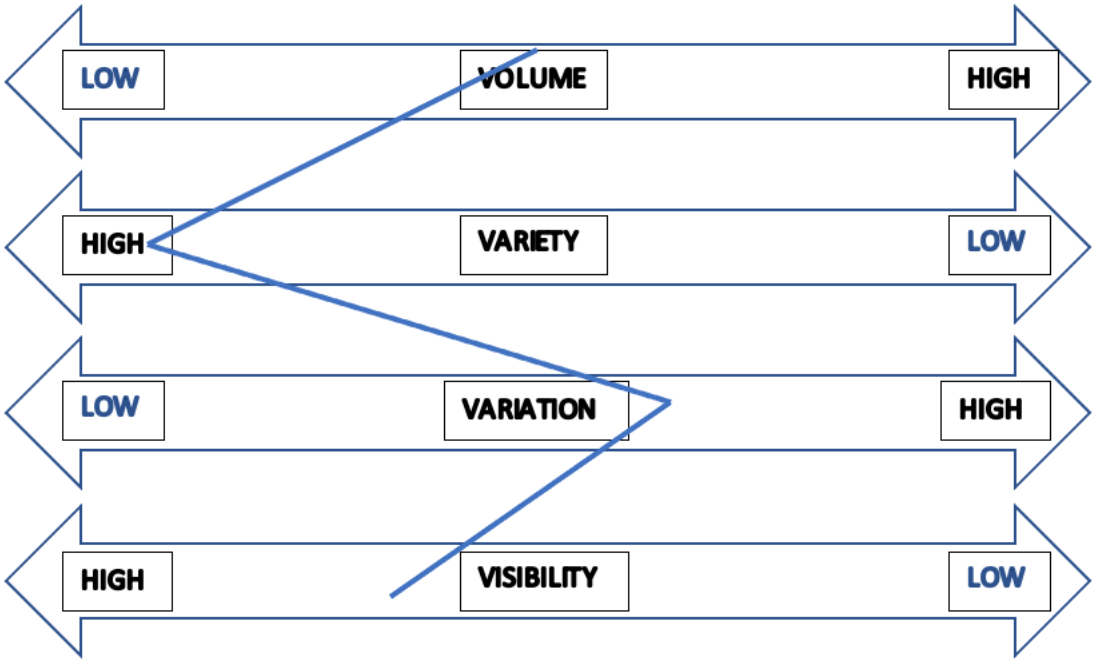



**Figure 1:** ***4V's model***

**Figure 1**

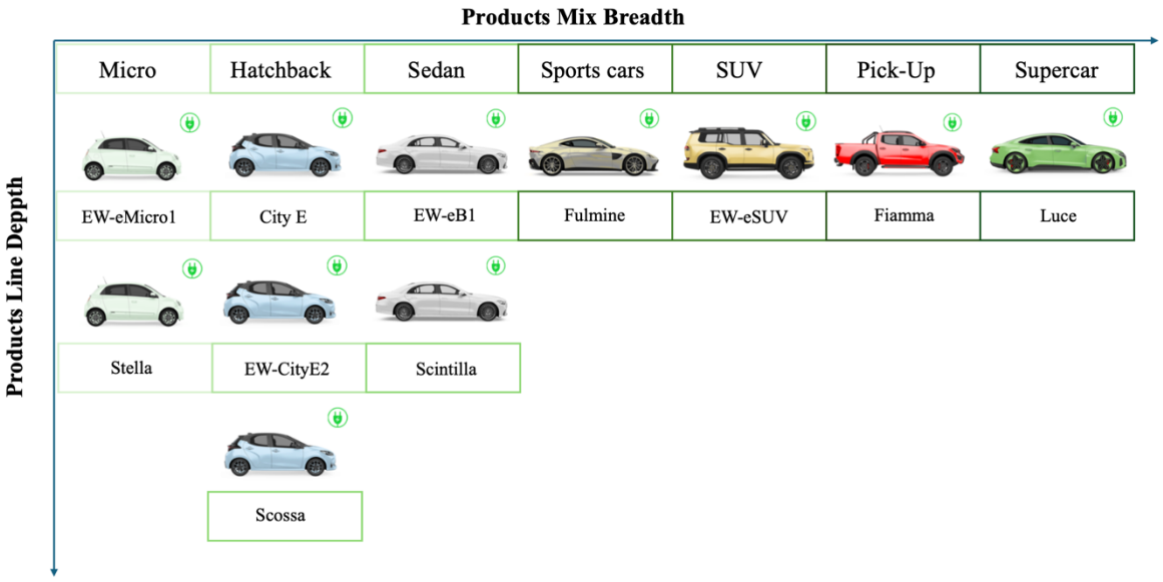



**Figure 2:** ***EVOWAY's portfolio of cars***

***Figure* 2**

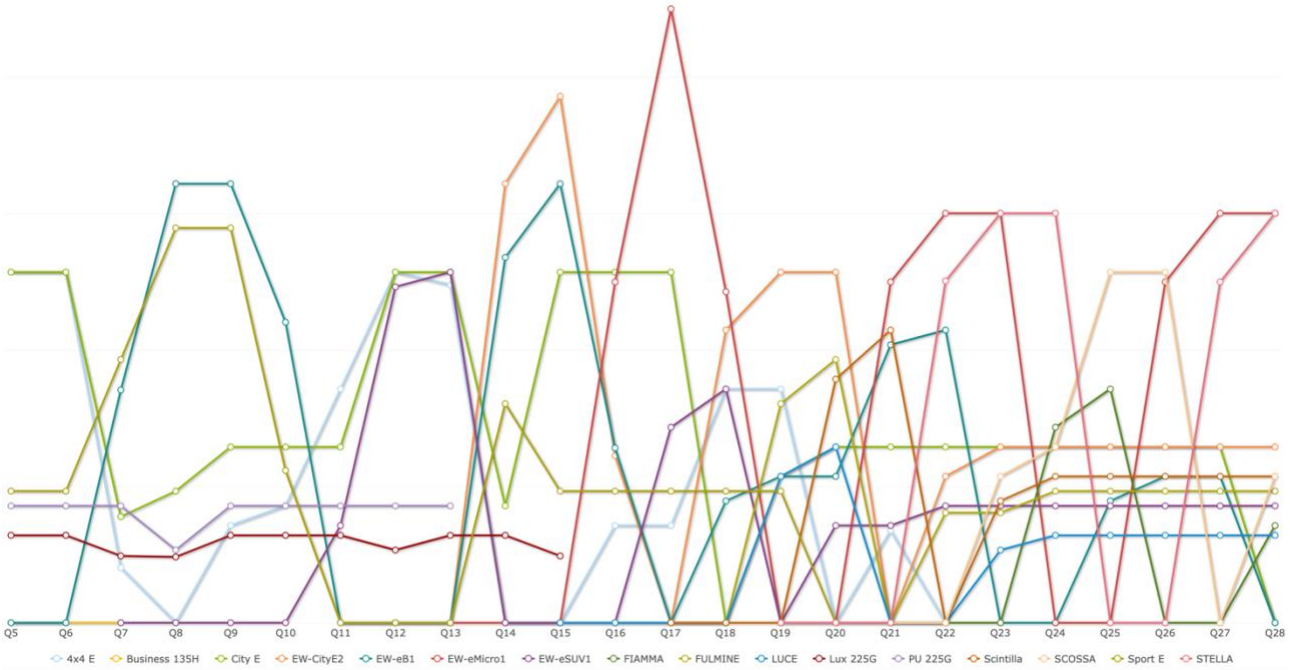



**Figure 3:** ***Curve of sales***

**Figure** ***3***

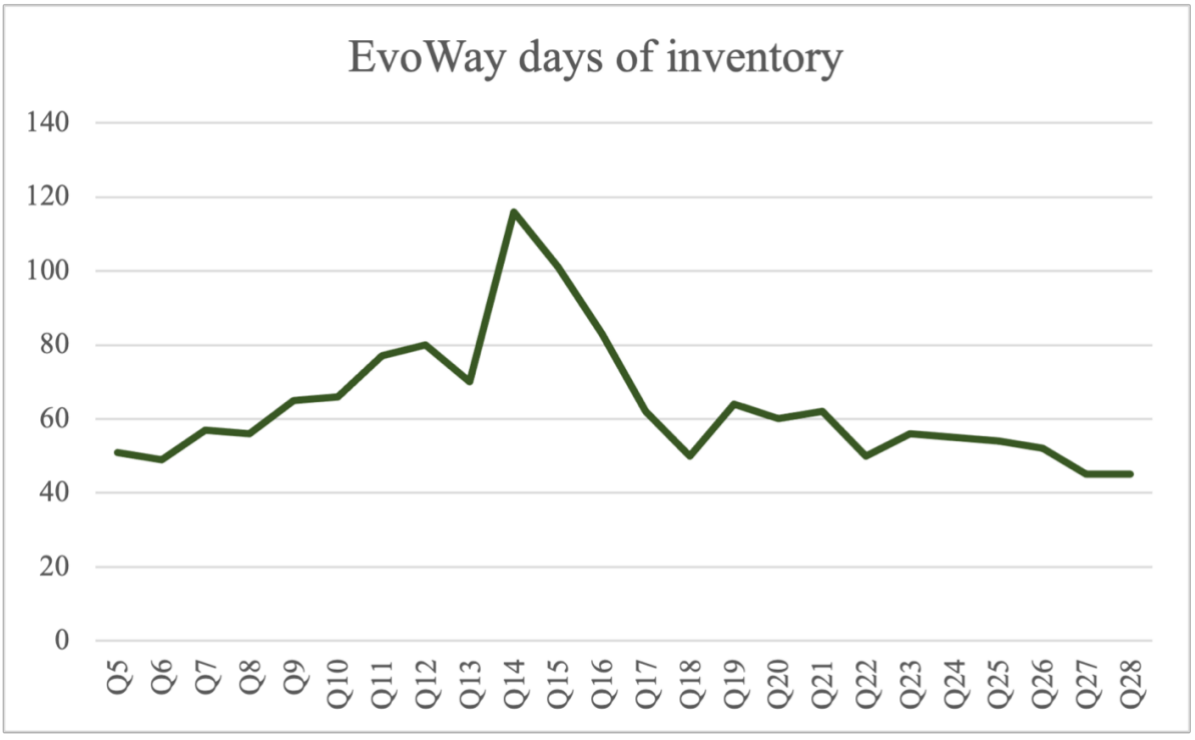



**Figure 4*: inventory curve***

***Figure 4***

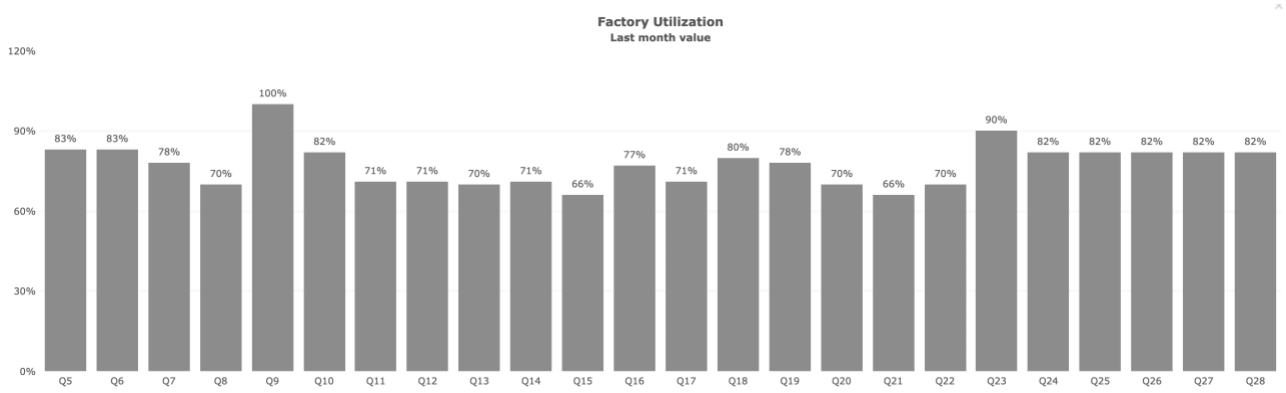



**Figure 5:** ***factory utilization***

**Figure *5***

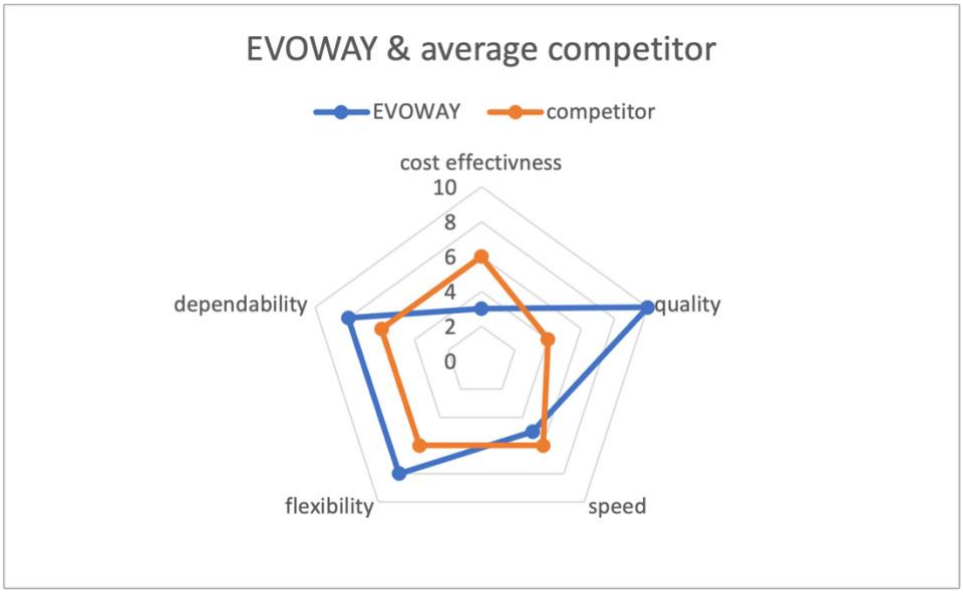



**Figure 6:** ***EVOWAY polar diagram***

**Figure *6***

**Autonomous Driving** (only EVs)

Level 1: Driver Assistance: At this level, the vehicle features driver assistance systems such as cruise control or lane-keeping assistance. The driver remains responsible for monitoring the environment and controlling the vehicle at all times.

Level 2: Partial Automation: Vehicles at this level can perform certain driving tasks, such as steering, acceleration, and braking, under specific conditions. However, the driver must remain engaged and ready to take over control of the vehicle at any time. Benefit: Demand (+)

Level 3: Conditional Automation: At this level, vehicles can perform most driving tasks under certain conditions or environments, such as highway driving. The vehicle can manage acceleration, braking, and steering without constant driver supervision. However, the driver must be prepared to intervene if the system requests, typically with a sufficient warning time. Benefits: Demand (++)

Level 4: High Automation: Vehicles at this level can perform all driving tasks under specific conditions or within defined environments without human intervention. The vehicle can operate autonomously without requiring driver intervention in most situations. Benefits: Demand (+++)

**Battery Technology** (only EVs)

Standard Li-ion: Lithium-ion batteries are known for their high energy density, which allows them to store a large amount of energy in a relatively small and lightweight package. They are relatively expensive compared to other battery technologies.
Benefit: Demand (+)

Extended Li-ion: Lithium-ion batteries are known for their high energy density, which allows them to store a large amount of energy in a relatively small and lightweight package. They are relatively expensive compared to other battery technologies.
Benefit: Demand (+)

Standard Sodium-ion: Sodium-ion batteries have the potential to be more cost-effective than lithium-ion batteries, as sodium is more abundant and less expensive than lithium.
Benefit: Demand (++), Cost (-)

Extended Sodium-ion: Sodium-ion batteries have the potential to be more cost-effective than lithium-ion batteries, as sodium is more abundant and less expensive than lithium.
Benefit: Demand (+++), Cost (--)

**Feature Package** (only EVs):

Level 1: Autonomous Valet Parking (AVP): AVP enables vehicles to autonomously find parking spaces, park, and retrieve themselves when summoned by the driver via a smartphone app. Biometric Driver Identification: This system use facial recognition or fingerprint scanning to authenticate the driver's identity, allowing for personalized vehicle settings and enhanced security.

Level 2 includes Level I, plus Vehicle-to-Infrastructure (V2I) Communication: Allows vehicles to communicate with infrastructure such as traffic lights, and traffic management systems, providing real-time traffic information and optimizing traffic flow. Dynamic Vehicle Morphing: Dynamic vehicle morphing technology enables vehicles to change their shape or size based on driving conditions, optimizing aerodynamics, and energy efficiency.
Benefit: Demand (+)

Level 3 includes Level I+II, plus Biometric Health Monitoring: Tracks the driver's vital signs such as heart rate and blood pressure, providing alerts and recommendations to ensure driver well-being and safety. Augmented Reality Windshield Display: Displays overlay digital information, such as navigation directions, traffic alerts, and points of interest, onto the windshield, enhancing situational awareness and reducing distraction.
Benefit: Demand (++)

Level 4 Feature Package includes Level I-III, plus Modular Battery Design: Electric vehicles with variable battery enables automakers to customize the size and capacity of the battery pack to meet different vehicle specifications and performance requirements. Flexible Placement: Variable battery installation allows for flexibility in the placement of battery packs within the vehicle. Batteries can be located in different areas, to optimize weight distribution and vehicle handling.
Benefit: Demand (+++)

**Figure 7:** ***EVOWAY cars' features***

**Figure** ***7***

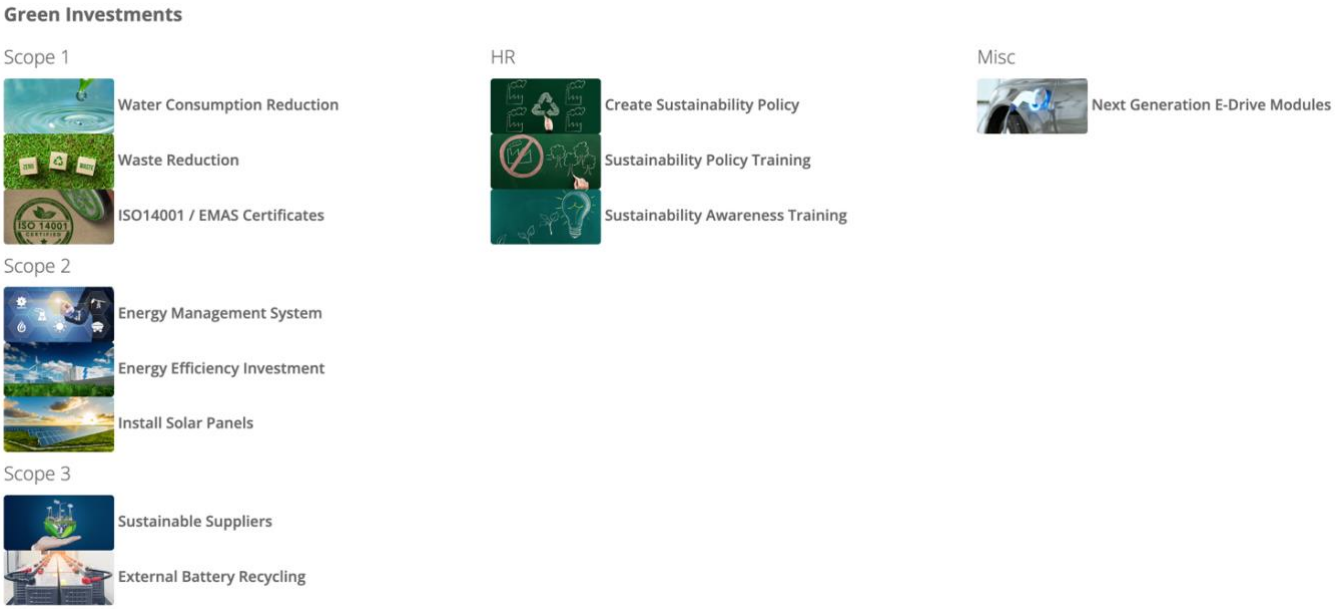



**Figure 8:** ***sustainability scopes***

***Figure 8***

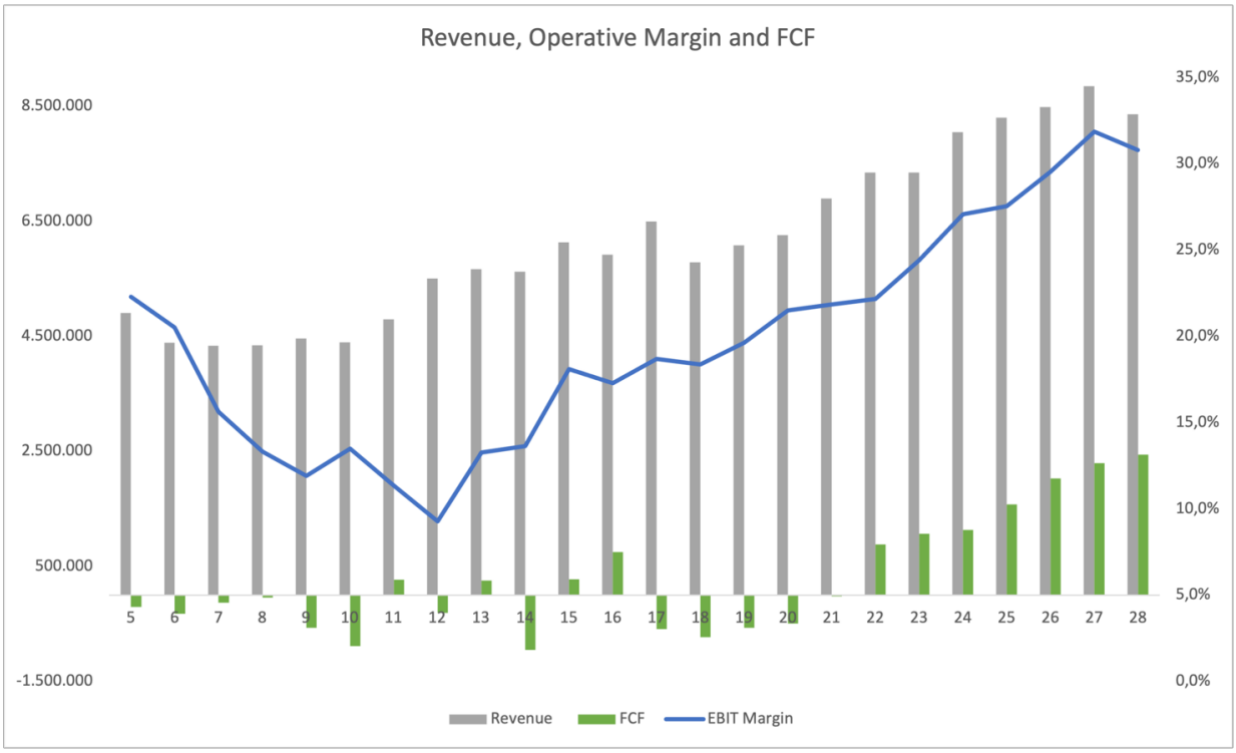



**Figure 9:** ***revenue, FCF, EBIT margin***

**Figure *9***

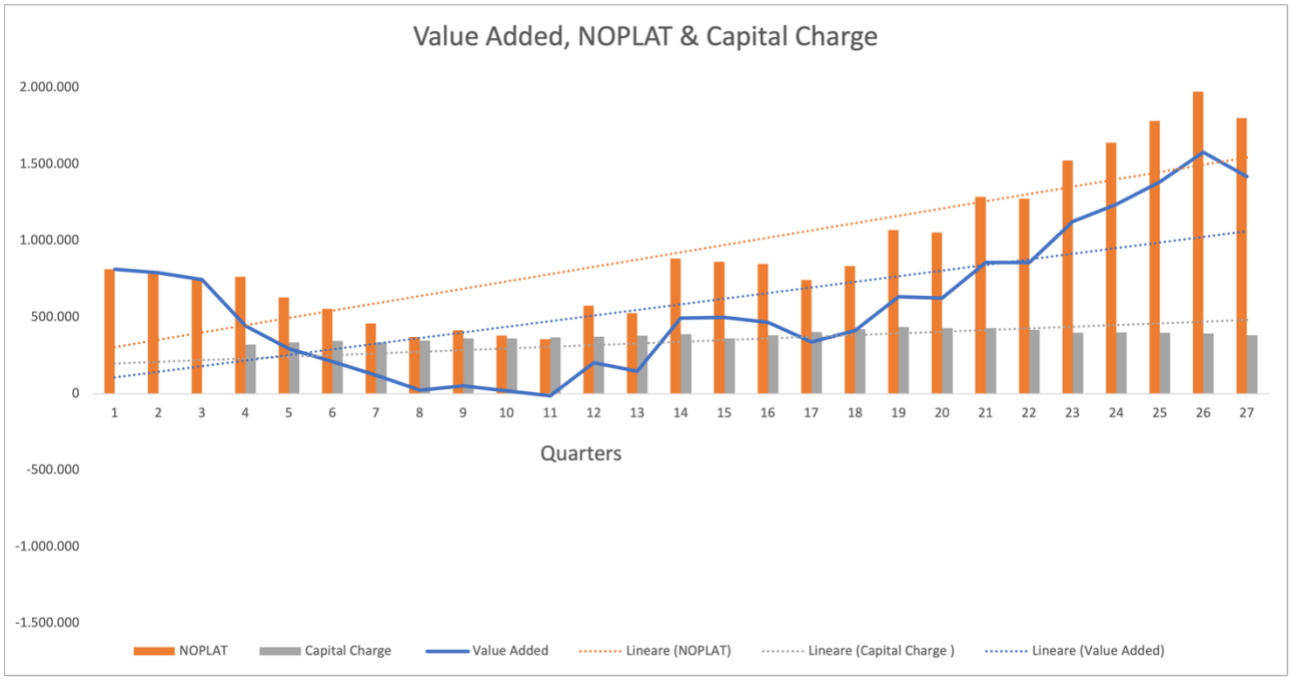



**Figure 10:** ***Value added, NOPLAT & Capital Charge***

**Figure *10***

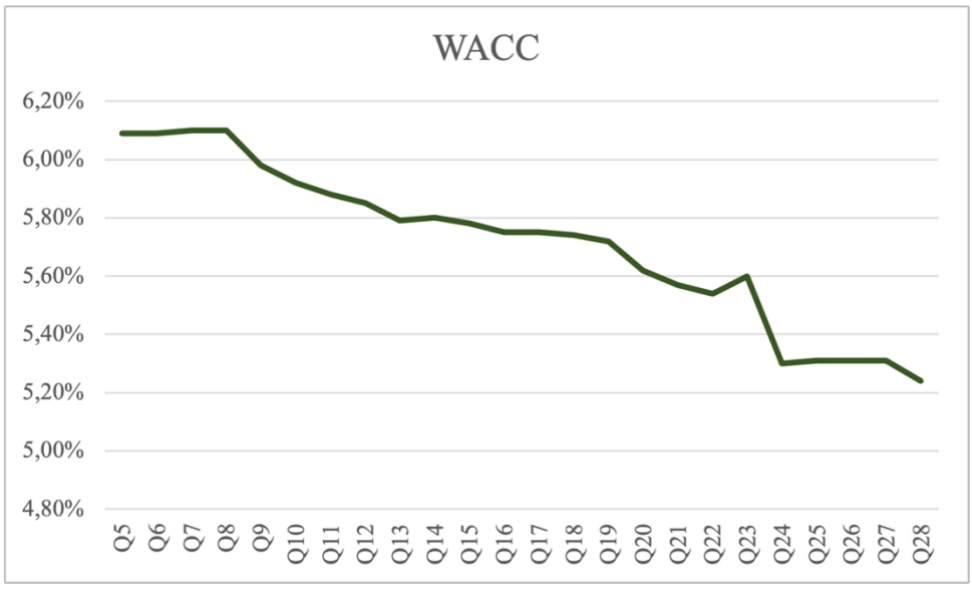
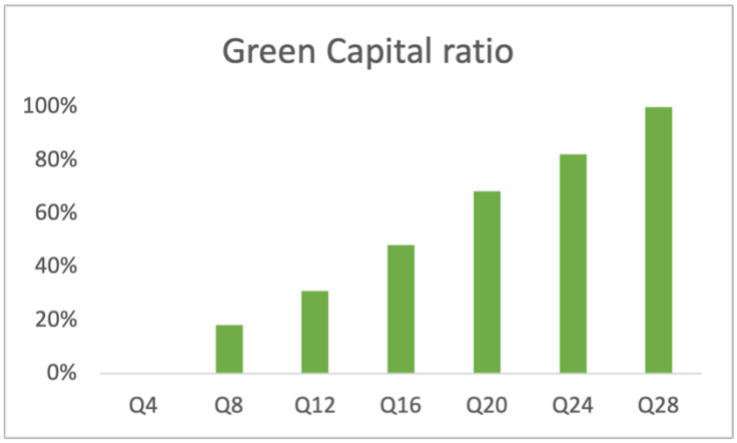



**Figure 11:** ***WACC curve***

**Figure *11***



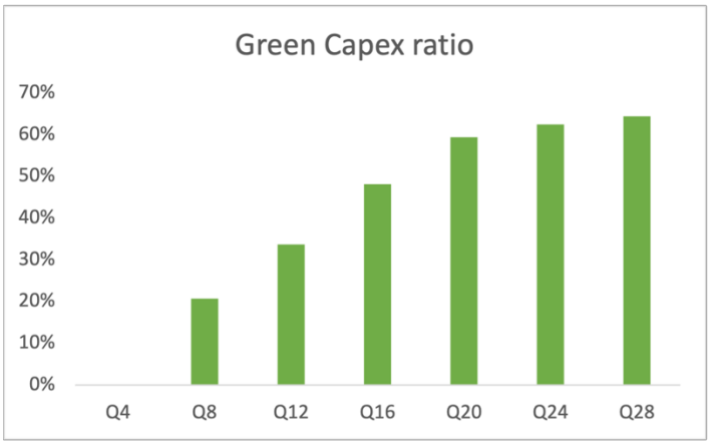




**Figure 12:** ***Green ratios***

**Figure 12**

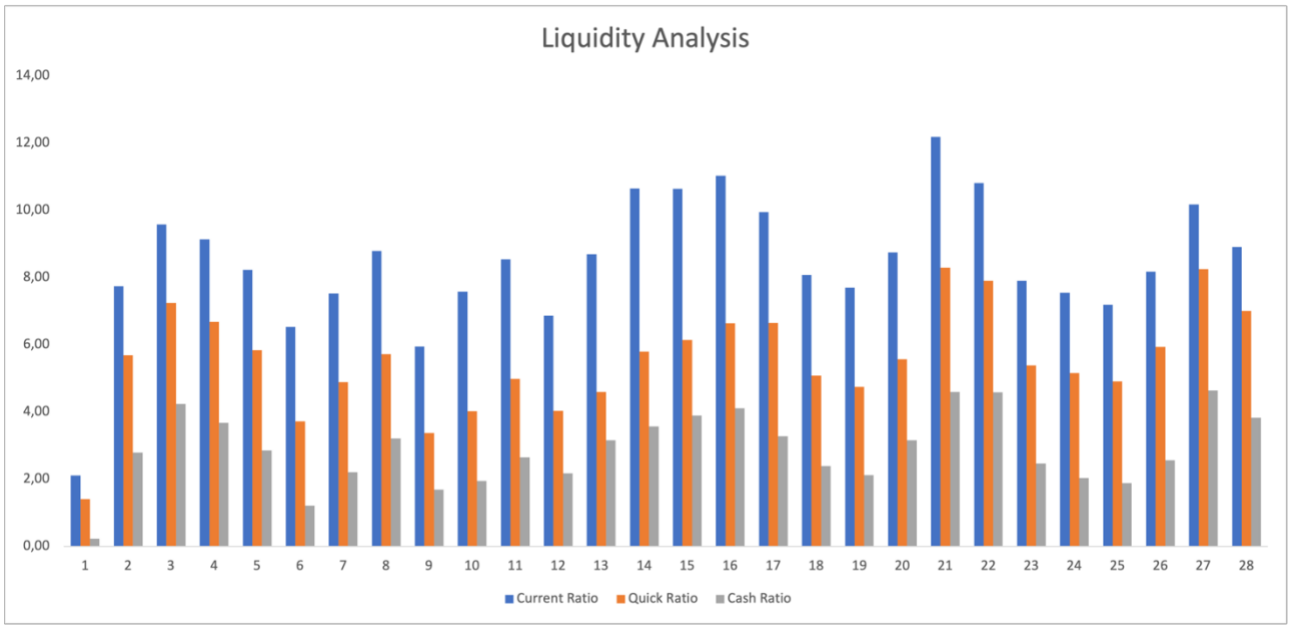



**Figure 13:** ***liquidity analysis***

**Figure *13***

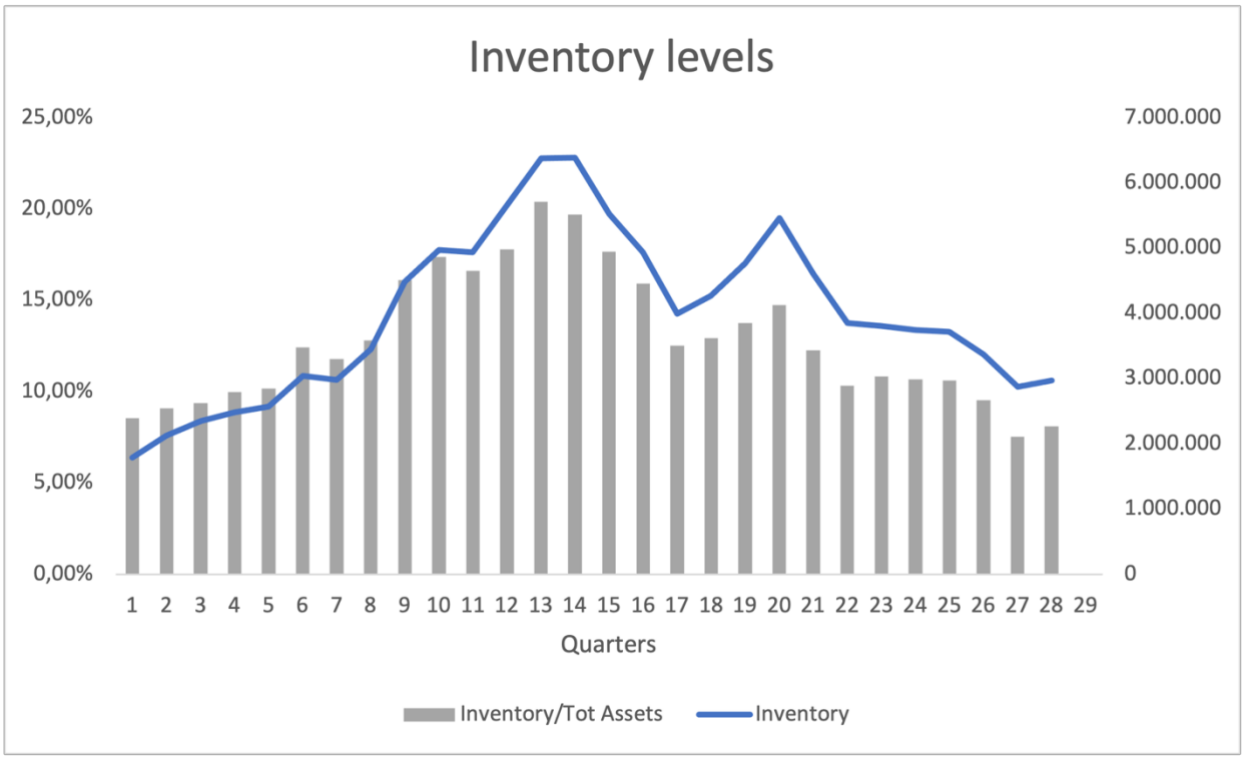



**Figure 14:** ***inventory level***

**Figure *14***

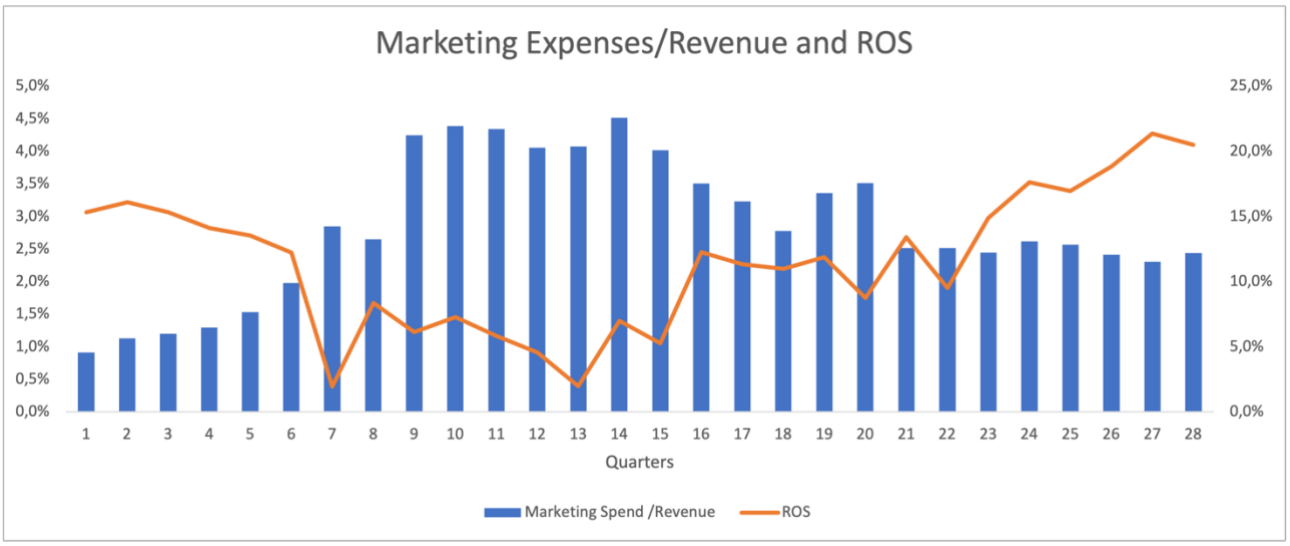



**Figure 15:** ***Return on Sales & marketing expense***

**Figure *15***

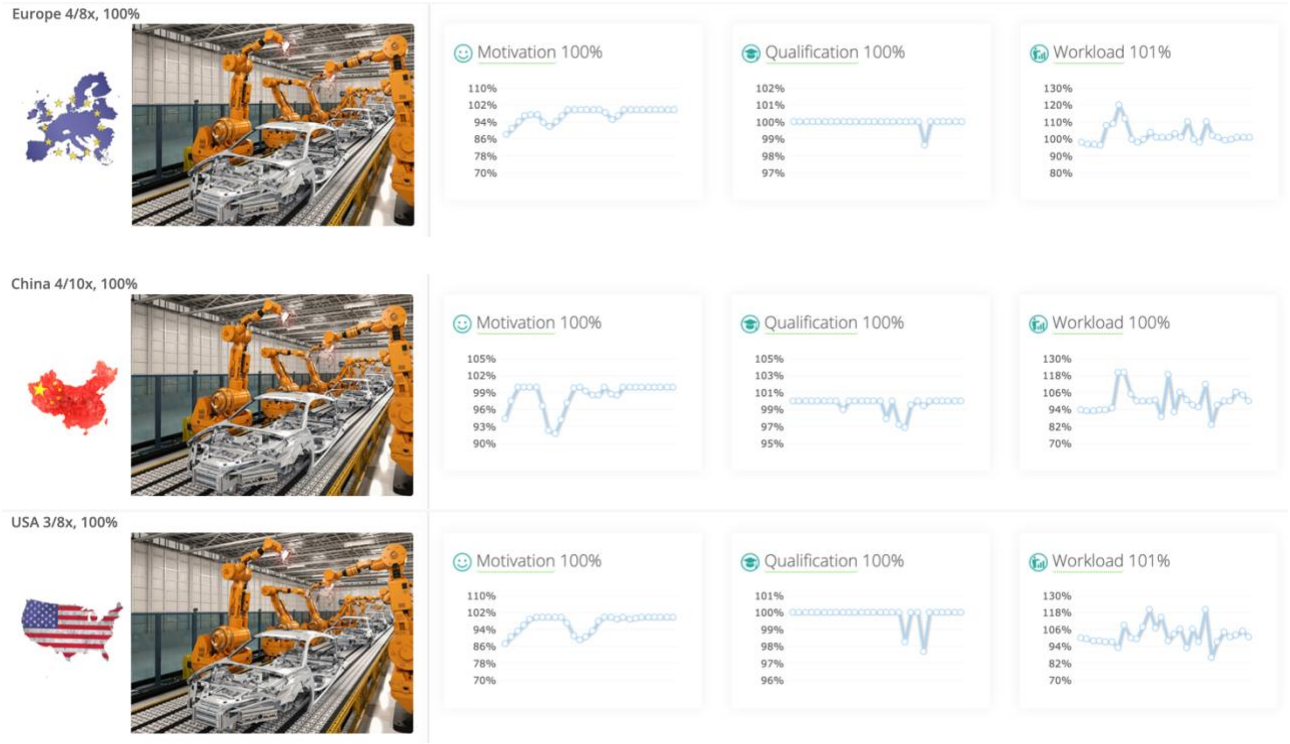



**Figure 16:** ***motivation, qualification & workload, all the countries***

**Figure *16***

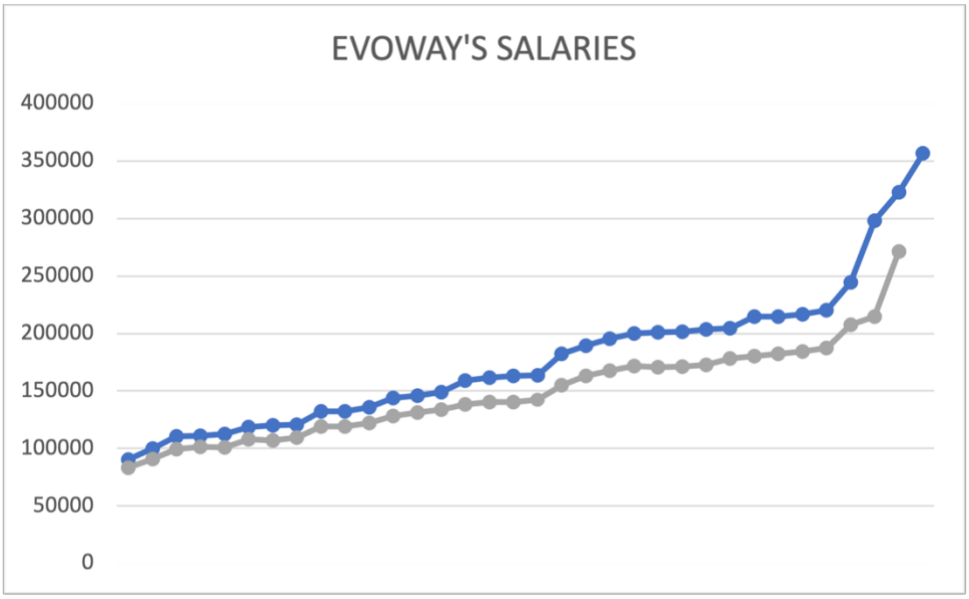



**Figure 17:** ***EVOWAY's salaries (blue) against industry average (grey)***

**Figure *17***

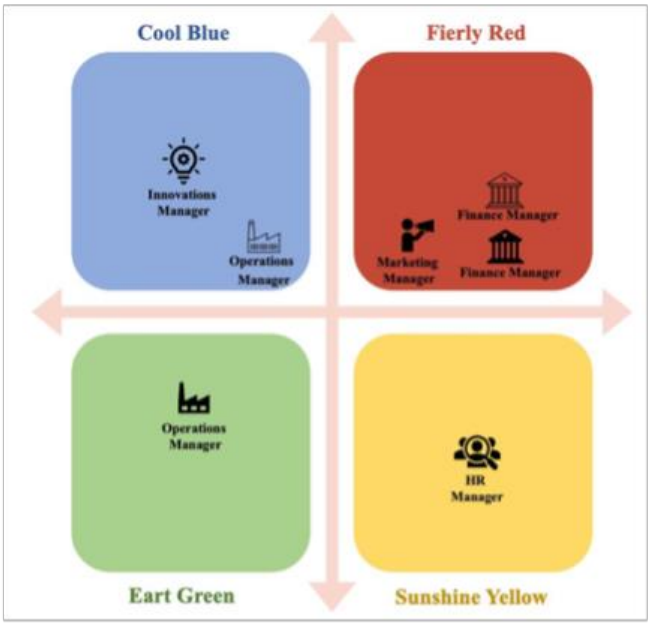



**Figure 18:** ***colors position EVOWAY's team***

**Figure *18*:**

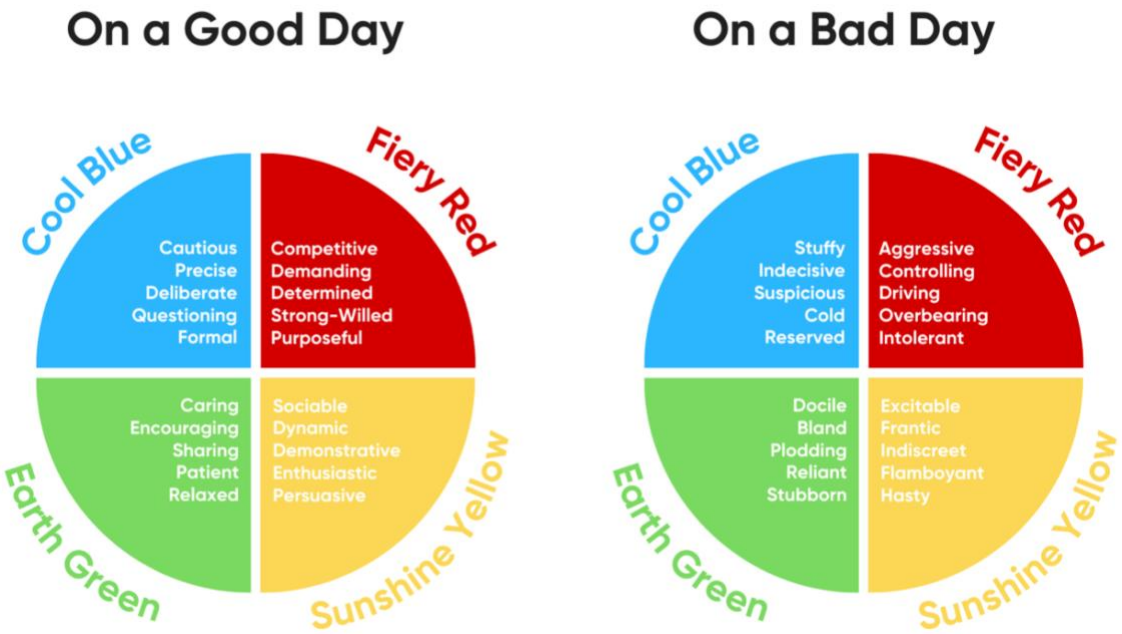



**Figure 19:** ***Insights Discovery® colors' characteristics***

**Figure *19***


**Figure 20:** ***EVOWAY overall winning prize***