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Driving customers' peace of mind: ZenMotors' radical journey to a sustainable, safe and high-end electric car portfolio

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Abstract

This thesis examines the transformative shift in the automotive sector towards electric vehicles (EVs) using a business simulation of a fictional car manufacturer, ZenMotors. By employing Rumelt's strategic kernel (2012), the study dissects ZenMotors' strategies, highlighting key lessons in technology incorporation, inventory management, and shareholder value optimization. Additionally, the research reflects on group dynamics in modern collaborative settings. Through personal experiences, the emphasis is laid on the democratization of leadership and the challenges posed by biases in diverse teams, advocating for psychological safety and bias awareness as essential tools in harnessing collective intelligence.

Keywords

Electric Vehicle Market; Transformation; Sustainability; Strategy; Marketing; Innovation; Inventory Management; Technology Readiness; Operational Efficiency; ESG; Team Dynamics; Cross-Functional Collaboration

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1. Analysis of business performance

1.1 Introduction to an evolving industry: Thesis purpose, content, and structure

According to the Intergovernmental Panel on Climate Change, the transportation sector accounted for approximately 15% of global greenhouse gas emissions in 2019 ("AR6 Synthesis Report: Climate Change 2023 — IPCC" n.d., 10). With the growing urgency to reduce greenhouse gas emissions, changing consumer demand, and regulatory pressure, BCG predicts the market for EVs to increase by six from 2021 to 2030 (Niese et al. 2022, 3). This surge in demand catalyzed a significant transformation of the mobility industry, drawing comparisons to the transformative impact of the Model T Ford's introduction.

This master thesis explores the effects of industry transformation and strategic decisions across various business functions on companies. A seven-year business simulation in the automotive sector was conducted to achieve this, focusing on ZenMotors (ZM), a fictional car manufacturer. The company underwent a radical sustainability transformation, transitioning from conventional combustion engine vehicles to a fully electrified car fleet within four years (Quarter 16), bypassing the interim step of producing hybrid vehicles.

Drawing from Rumelt's strategic kernel (2012) - which entails a diagnosis, a guiding policy definition, and the planning and execution of coherent actions - this thesis delves deep into ZMs' strategy formulation and execution. Beginning with a thorough analysis of ZMs' strategic diagnosis and guiding policy formation, the research then provides a detailed account of the coherent actions implemented in two critical departments: Innovation and marketing. Within the marketing chapter, the thesis offers profound insights into the department's interconnectedness with operations. The emphasis on these departments stems from the deep transformation tied to transitioning to electric vehicles (EVs), demanding a solid and well-thought-out strategy. Further, innovation and marketing emerge as key touchpoints when a

company undergoes a significant shift in its product essence, such as production and sales methodologies.

Through an evaluation of simulation data paired with academic frameworks, this thesis highlights each department's triumphs, setbacks, and invaluable lessons. An overarching perspective of ZMs, emphasizing the interplay between departments, is then provided. Comparisons with real-world companies punctuate the discussions, underscoring the practical relevance of the findings.

1.2 Strategy development

In the context of an automotive manufacturer, strategy holds paramount importance as it serves as the guiding blueprint for the company's success and sustainable growth. From 1896 to 1930, the U.S. saw over 1,800 car startups, but only 44 survived by 1930. Today, even fewer dominate, underscoring the industry's challenging success barriers (Brock 1983). While traditionally, the primary goal has been maximizing profits and capturing shareholder value, the modern business landscape demands a triple-bottom-line approach, emphasizing people, planet, and profit (K. Miller 2020). Despite these changing goals, methods to effectively navigate market complexities have remained consistent: Adopting a systematic approach, which includes iterative diagnosis, guiding policy creation, and coherent action execution (Rumelt 2012).

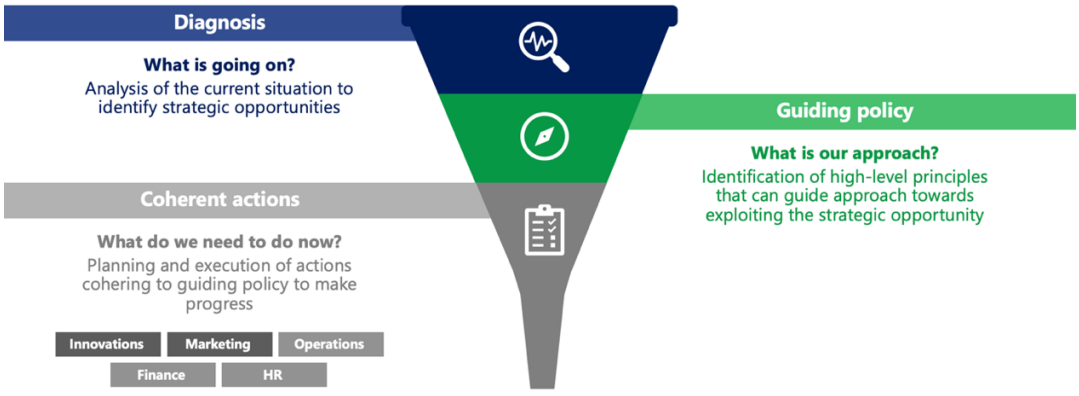

Figure 1: Systemic strategy approach, own design in accordance with Rumelt (2012)

1.2.1 Diagnosis: Pressure for fleet electrification with promising horizons

To analyze both the internal and external situation, an adapted 3C analysis, based on Ohmae, was conducted (1982, 38–48). To complement the internal & external picture, the regular 3Cs, Customers, Company, and Competitors, have been extended by the dimensions used by practitioners, Context, and Collaborators.

Context: Due to stringent regulations, including progressively higher maximum CO2 allowances per car sold (95g/mile) and $60 fines per gram for exceeding emission limits, Zen Motors was required to reduce CO2 emissions. Rather than opting for a gradual transition through hybrid cars, these findings led to the decision to directly phase out combustion engines, prioritizing the rapid adoption of an extensive electric vehicle line-up.

Competition: An analysis of the competitive landscape revealed only one competitor in the e-vehicle segment, emphasizing the choice of a pioneer strategy. In today's car industry, players are classified into two categories: incumbents and disruptors (McKinsey 2023). Incumbents are established original equipment manufacturers (OEMs) with existing infrastructures but often lack innovation. Disruptors, conversely, are new entrants focused on producing electric vehicles with, therefore, considerable tech expertise, often from Asia (McKinsey 2022). However, due to their relatively short history, they lack a comprehensive infrastructure (Roland Berger 2018). As the identified competitor fell into the disruptor category, it became clear that ZMs had to emphasize technological innovation.

Collaborators: Additionally, when evaluating ZMs' collaborators, the company discovered that it could leverage its well-established existing supplier, production, and car dealer infrastructure to retain a competitive edge.

Company: Internally, ZMs boasted robust manufacturing capabilities and brand recognition, enabling a successful and rapid foray into the EV segment.

Customers: Customers still preferred EVs less than combustion engines across all markets, likely stemming from concerns like range anxiety and inadequate charging infrastructure (Krishna 2021; Egbue and Long 2012). However, the anticipated advancements in battery technology and the expansion of charging infrastructure would effectively mitigate the concerns above (Krishna 2021; Egbue and Long 2012). Despite the overall market not being fully prepared for electric cars, a deeper examination revealed that specific segments were more receptive, particularly to e-compact cars, e-convertibles, and e-executive vehicles.

1.2.2 Guiding policy: Radical first-mover strategy toward a sustainable and high-tech electric fleet

Building upon these insights, the decision was made to rapidly transform to electric vehicles. ZMs planned not only to be the first to go electric amongst the incumbent OEMs but also to launch e-car-types that did not exist yet but had relatively high consumer receptiveness. This strategy, known as the First Mover Strategy, where an entity captures significant early market share and advantages by being the initial entrant into a particular segment, was central to their plans (Lieberman and Montgomery 1988, 43). However, as pointed out by Michael Porter, "A company can outperform rivals only if it can establish a difference that it can preserve" (Porter 1996). Thus, ZMs recognized that being the first to market alone would not suffice. They were looking to differentiate further and given consumers' inherent scepticism towards new technologies, ZMs targeted early adopters with a high technological affinity. Hence, the company decided to invest in advanced technologies from the outset heavily. The goal was to offer an experience that was both safe and ground-breaking for their customers.

Further, in recognition of the triple bottom line, ZM is committed to sustainability by fleet electrification and encompassing efforts to mitigate greenhouse gas (GHG) emissions across scopes 1, 2, and 3, enhancing employee satisfaction and fostering social responsibility across diverse departments. As a result, the guiding policy crystallized into developing premium,

high-tech, and genuinely sustainable e-cars, positioning ZMs as pioneers or early entrants in the market (Appendix 1). The strategic focus naturally gravitated towards the American market, where the company believed these pioneering offerings would be optimally received.

1.3 Coherent actions

In the pursuit of organizational success, the formulation of a well-crafted guiding policy serves as the foundational step. However, its ultimate test lies in the proficient execution thereof across all facets of an organization (Appendix 2). This chapter delves into the importance of aligning resources, capabilities, and efforts, specifically emphasizing two closely interconnected business functions - Innovation and Marketing.

1.3.1 Coherent innovation actions: Accelerated investments into electrification and technology

Across the business spectrum, innovation manifests in areas like technology, product design, business models, and more. Frequently, it's technological advancements that serve as catalysts, driving transformation in other areas. (Boer and During 2001, 39). ZMs, operating within the constraints of its simulations, experienced this dynamic, as the emphasis lay on technological advancements that directly catalyzed product innovation. While innovation is frequently driven by consumer demand, there are instances when companies proactively introduce innovations to consumers, even in the face of uncertain demand or a market not fully prepared to embrace them (Appendix 3). This scenario is particularly relevant in the electric vehicle (EV) sector, where environmental policies require companies to explore new and innovative technologies and resulting products.

However, there exist diverse strategies and approaches through which innovation can be pursued (Appendix 4). Historically, automotive companies have achieved success through incremental innovations over extended periods. Nevertheless, realizing ZM's strategy demands heavy investments in innovation, embracing the disruptive innovation strategy (Christensen,

Raynor, and Mcdonald, n.d., 4). In pursuing this strategy, a critical challenge arises – allocating financial resources, as not every innovation opportunity can be pursued simultaneously. As ZMs not only planned to have a completely new fleet with advanced technology but also to be entirely sustainable, financial means were needed in innovation, HR, and the operations department. ZMs faced what can be termed the Innovators Dilemma (Christensen 1997, 172) (Appendix 5 and 6). On the one hand, risks are associated with undertaking specific innovations, like the uncertainty of consumer demand, potential technical challenges, or the possibility of unforeseen market dynamics. On the other hand, not pursuing certain investments may mean ZMs falling behind its competitors and losing market share and relevance (Christensen 1997, 182).

This necessitates the prioritization of research and development (R&D) initiatives. In a real business context, this would typically be based on a calculated assessment of innovation opportunities value by conducting market research (Terwiesch and Ulrich 2009, 14). These factors may include the number of target customers, the frequency at which the solution would be used, the customers' willingness to pay for the proposed solution, and the level of satisfaction with the existing solutions in the market. However, generating these insights is not always possible for unproven and disruptive technologies, especially for smaller firms with less financial means. (Christensen 1997, 173).

So did ZMs, so the company based its choices on perceived strategy-coherent actions fit and a belief that every innovation would be well-received in the market, assuming an uncalculated and general demand for all offerings (Rumelt 2012). This was deemed successful for fleet electrification and zero CO2 fleet emission, achieved in Quarter 12 (Appendix 7). However, it also resulted in ZMs investing in all technology opportunities in a concise and early timeframe. Nonetheless, ZMs' aggressive tech investments led to the launching of overly advanced cars,

which the market wasn't prepared for. ZMs overlooked that investing heavily in technology doesn't always necessitate its immediate incorporation into products.

The core goal of R&D often lies in strategic future preparedness, such as e-mobility readiness. This metric evaluates an automaker's capability to transition to and thrive within the electric vehicle (EV) domain. It integrates technological infrastructure, skills cultivation, supply chain adaptations, and insights into evolving EV demands, including sustainable production. Its metric indicates market adaptability and signals prospects to potential investors. However, not all advancements resonate with customers, mainly when they translate to higher costs. ZMs encountered this problem when their innovative approaches unintentionally drove up vehicle prices, making them unaffordable for many potential buyers. A deeper exploration of these pricing and marketing challenges can be found in the following chapter.

To resolve this issue, an alternative approach that could have been adopted by ZMs is a scoring model, as these are considered best to evaluate innovation investments (Cooper, Edgett, and Kleinschmidt 2001). Each innovation opportunity could be assessed and assigned a score from 1 to 10 for each of the following criteria clustered along the innovation process (Tzokas, Hultink, and Hart 2004):

1. **Idea Screening:** Assesses the market potential, technical feasibility, and product uniqueness.
2. **Concept testing:** Gauges the level of confidence the customer has in the success of the innovation as well as their acceptance rate.
3. **Business Analysis:** Quantify potential margins and profits on which initial sales objectives are to be determined.

Using the proposed scoring model, ZMs could have efficiently assessed each innovation opportunity, gaining data-driven insights into their potential success or need for refinement.

This model would have streamlined decision-making, ensuring better financial resource allocation and strategic alignment with promising innovations.

1.3.2 Coherent marketing actions: Lagging due to inventory management issues

As the essential link between customers and companies, marketing is the information source for customer needs, market trends, and the competitive landscape, ultimately shaping various aspects of a business, including product development and operational strategies (Lukas and Ferrell 2000). Furthermore, marketing is intimately linked to innovation. When launching a new car type, it must effectively set price points, marketing budgets, and communication channels to balance consumer demand with car profitability (Lerch and Spieth 2012). There are three dominant pricing strategies marketers can choose from:

- **Cost+ Strategy:** This method prices products by adding a predetermined margin to production costs, ensuring coverage of costs and a set profit margin.
- **Competition-based Strategy:** Prices are set about competitors' charges for similar products, aiming for competitive positioning, whether matching, undercutting, or premium pricing.
- **Value-based Strategy:** Pricing is determined by the product's perceived value to the customer, reflecting factors like brand reputation, features, and the customer's willingness to pay (Simon and Fassnacht 2018, 86–92).

While the cost+ strategy is commonly used for its simplicity, it does provide suboptimal results, as it inherently fails to consider differences in customers' willingness to pay (Simon and Fassnacht 2018, 176). Contrary to that, value-based pricing is superior as it enables businesses to optimize profits and enhance brand positioning effectively (Simon and Fassnacht 2018, 89). On the marketing budget front, allocating specific funds for individual products ensures they receive the required attention. These needs often vary based on the product's life cycle stage:

Newly launched products often require a larger marketing budget than mature ones that have been in the market for a while and are well known (Tellis 2003, 28).

Further, marketing budgets and initiatives must also be taken on an overall brand level. To allocate resources efficiently, the correct marketing channels must be chosen based on the product portfolio and the target group (Neslin and Shankar 2009).

Further, in industries as capital-intensive and volume-driven as the automotive sector, it's imperative to align marketing initiatives with operational parameters, notably inventory management, to optimize customer satisfaction and the company's financial health. If production surpasses demand due to too rapid expansion of production facilities or setting price points too high, excessive inventory will build up, causing three kinds of financial issues:

- **Depreciation Costs:** The longer cars stay in inventory, the more value decreases. This is especially true for models that undergo frequent updates or face intense competition.
- **Storage Costs:** Unsold vehicles imply storage, insurance, and maintenance costs.
- **Capital Lock-up:** Funds allocated to unsold inventory represent opportunity costs, as they would yield high returns when spent on growth initiatives or R&D (Lind et al. 2012).

Conversely, demand can also exceed production capacity due to smaller facilities or inefficient employee operations, leading to stockouts, causing customer dissatisfaction and the potential for lost sales. Research has demonstrated that these risks can be effectively managed by closely monitoring key performance indicators (KPIs) such as Days of Inventory (DOI) and by accurately forecasting consumer demand through comprehensive market research (Copeland, Dunn, and Hall 2005).

However, when too high or low DOI is already in place, marketing departments play a pivotal role in influencing demand dynamics. When confronted with high DOI, marketers often need to implement measures to accelerate sales through promotions, and discounts. In some scenarios, selling cars at lower margins or even breakeven is more financially viable than

maintaining high inventory levels. On the other hand, in scenarios of low DOI, marketing might prioritize increasing price points to maximize profitability and artificially lower demand (Cachon and Olivares 2010).

ZMs encountered challenges at this intersection of innovation, marketing, and operations. To establish a lead with fully electric, high-tech vehicles, cars were introduced that exceeded customer budget allowances due to their sophisticated technology. Additionally, the defined guiding policy for growth resulted in an early expansion of production facilities without a precise assessment of demand. This led to a significant rise in DOI, necessitating increased marketing expenditures and low-margin pricing, both compromising on ZM's profits and value-added to shareholders.

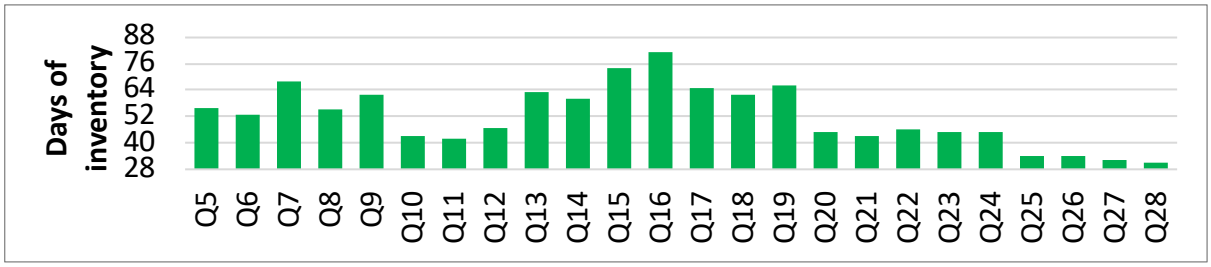

Figure 2: ZenMotors Days of inventory

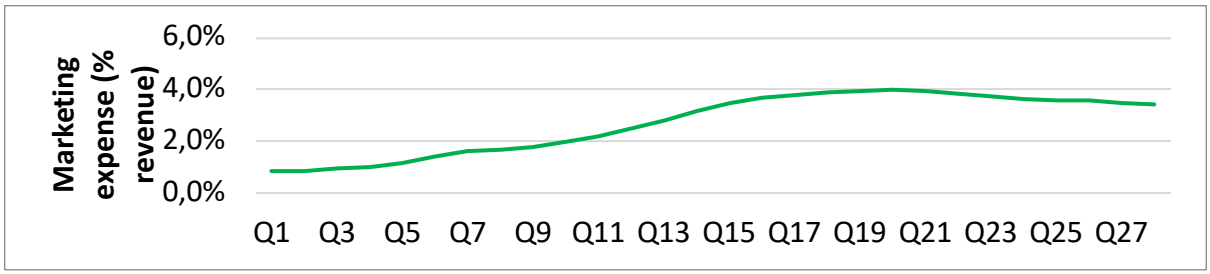

Figure 3: ZenMotors marketing expenses (as % of revenue)

However, it took ZM until Q21 to realize that the issues did not result from wrong price points or marketing but rather from a misalignment between the product portfolio and customer preferences, coupled with not adjusting production capacities to match demand. Upon this realization, the strategy was adjusted by conducting market sizing for different car types, introducing low-priced cars, such as micro mobility and compact cars, to the market. These cars were produced on a large scale due to their expansive target markets. Simultaneously, the

production of premium vehicles was scaled down, and versions with less technological intensity were launched to better align with customer preferences regarding pricing and features. This shift enabled Zen Motors to transition from a cost+ strategy to a value-based pricing approach tailored to the product's life cycle and regional customer preferences.

1.4 Integrated view across all functions

Overall, ZMs tried addressing the operational issues primarily through marketing, neglecting collaboration with other vital departments. Beyond the evident need for alignment with operations and innovations, the finance department could have introduced unique financing offers to stimulate sales. In an ironic twist, even as high DOI loomed, the HR department kept investing in employee training and satisfaction, leading to even swifter production rates of cars that unfortunately remained unsold. Gillian Tett's "The Silo Effect" vividly illuminates the hazards of such insular departmental thinking and the inherent risks to decision-making and innovation (Simon and Schuster 2015). This situation is a stark reminder of the pitfalls of isolated departmental strategies. As Ken Blanchard insightfully noted, "None of us is as smart as all of us" (Blanchard and Conley 2022). Only once ZMs steered to an approach that harnessed input from all departments the company could navigate and triumph over its challenges. This underlines those integrative strategies, ensures alignment, and fosters innovation, as departments bring diverse insights to the table, creating comprehensive and enduring solutions.

1.5 Comparison with actual car manufacturers' challenges

In a real-world scenario, the challenges ZMs face can be paralleled by the experiences of established and emerging automobile manufacturers. For instance, while appearing as a potential competitor to Tesla, NIO grappled with the consequences of aggressive expansion. With the launch of the ES8 in 2018, they experienced robust initial interest. Yet, as production scaled up, their focus on vast scales of sales and deliveries, combined with high overheads from

establishing luxurious clubhouses for NIO owners and investments in battery swapping technology, led to low margins. Significant losses were reported by mid-2019, which resonates with ZM's mistake of aiming too much at growth rather than profitability. Another challenge faced by ZMs was the introduction of over-advanced technological features in vehicles when market demand for such features was limited. BMW's i8 is a prime illustration of this. As a plug-in hybrid sports car boasting cutting-edge technology, its sales volumes remained subdued owing to its high cost and the market's restrained demand for such niche offerings. Furthermore, the unique appeal of specific vehicle types and their unsuitability for mass production can be observed in the luxury car segment. Aston Martin's Rapide E serves as a testament. It was designed as a limited-production electric vehicle to cater to an exclusive clientele. It underscores the realization that certain cars, especially from iconic brands, aren't meant for large-scale production.

Beyond product design and market alignment, organizational coherence has proven critical for ZMs and Ford's real-world example. As the company embarked on its electric journey, it suffered as departments worked in isolation on various aspects like battery technology, design, and drivetrain, often leading to gaps in communication and vision. The outcome was a slower-to-market approach; at times, products were misaligned with rapidly changing consumer expectations or industry advancements.

Recognizing this impediment, CEO Jim Hackett shifted the historically hierarchical model to one emphasizing "enterprise fitness." In this new paradigm, teams were restructured to foster cross-functional collaboration, ensuring a more integrated approach to vehicle development. By prioritizing enhanced collaboration and breaking down silos, Ford positioned itself more agilely in the ever-evolving electric mobility landscape, drawing lessons that many in the industry could learn from.

1.6 Key learnings from performance evaluation: Strong on the planet, weaker on people and profits due to low operational efficiency

ZMs' journey in the simulated automotive realm provides insights into various dimensions of business strategy. Reflecting on the company's performance, the firm's overarching objectives encompassed planet, people, and profit.

Planet: The company achieved notable milestones in environmental areas, with rapid and complete electrification by Q14 and reaching a fleet of zero CO2 emissions by Q19. Achieving zero emissions in Scope 3 by Q21 further emphasizes the company's holistic commitment to environmental responsibility (Appendix 7 & 8).

People: However, on the people front, ZMs faltered with a 62% CSR score by Q28 (Appendix 9 & 10). This shortfall was influenced by the lack of employee-centric HR policies and a low diversity rate of 40% in the same quarter and influenced by financial ineaffecteds, ZMs prioritized profit margins and working hours over CSR, underscoring the importance of a balanced approach towards profit, people, and the planet.

Profit: From analysing ZM's financial data, it can be said that high revenues do not necessarily equate to value added for shareholders. In the same periods the company showed significant sales of up to $7bn in Q19, it also had challenges optimizing operational costs, leading to lower EBITDA margins.

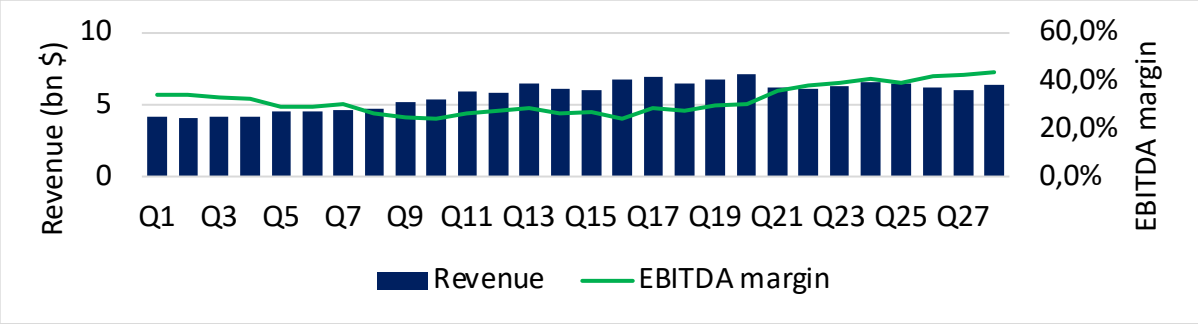

Figure 4: ZenMotors revenue vs. EBITDA margin

Concurrently, an increase in net assets, attributed to operational inventory challenges, impacted the company's asset utilization to generate value added (Appendix 11 & 12). Further analysis

of the company's financial structure revealed a high debt-to-equity ratio, 47,3%, debt indicating a heavy reliance on external capital (Appendix 13). While the firm showed resilience and adaptability, its strategy could benefit from greater emphasis on operational efficiency, reasonable allocation of assets, and a balanced capital structure.

ZMs' journey underscores the need for accurate industry diagnosis, a clear guiding policy, and coherently planned actions. This strategic direction ensures the alignment of internal business functions and congruence with market demands and broader industry shifts. For ZenMoros, the issue was twofold: a misinterpreted diagnosis of customer preferences, assuming a need for high technology levels, and a subsequent guiding policy that focused too much on growth and too little on profits. While growth is a coveted objective for many organizations, it should not come at the expense of profitability. Further, ZMs needed to have defined coherent actions in enough detail, leading to misalignment among innovations, marketing, and operations. This resulted in high sales but low operational efficiency with resulting low profits over an extended period, which underlines the importance of carefully planning and measuring every strategic action against its potential impact on the bottom line. Key insights from the Innovation department highlighted a pivotal realization: Technology, for technology's sake, can be counterproductive. Instead of inundating products with features, it's crucial to discern which innovations add value and serve to future-proof the organization. This balance is critical to ensure consumer-centric products that do not inflate costs needlessly. Meanwhile, the Marketing department's experiences provided a nuanced understanding of the ripple effects of internal processes on external outcomes—notably, the repercussions of inadequate inventory management illuminate how operational setbacks can severely impede marketing initiatives. The solution, as inferred, lies in fostering a collaborative and integrated approach among departments. Operating in isolation, or 'silos,' exacerbates challenges rather than alleviates them.

In conclusion, as the world stands at the cusp of an automotive revolution, businesses must be agile, consumer-centric, and collaborative in their approach. The lessons from ZMs, albeit in a simulated environment, hold potent real-world implications. For industry players, these insights can serve as a blueprint; for academics and researchers, they open avenues for further exploration; and for consumers and shareholders, they offer a peek into the intricate mechanics of an industry in flux.

2. Personal reflection

2.1 Introduction and overview of two incidents

Working collaboratively within a group has become increasingly essential in today's multifaceted, interconnected world. However, behind the evident benefits of group work lies the intricate web of team dynamics. If not understood or managed effectively, these can undermine the advantages that collaboration aims to achieve. By combining two primary personal experiences and complementing them with secondary academic literature, this chapter aims to bridge the gap between theoretical understandings of team dynamics and lived realities. The democratization of leadership is more than just a contemporary buzzword—it symbolizes an essential shift in the broader understanding of authority and influence. For an environmentally and socially sustainable world, there is a call for individuals from all sectors to take the initiative and lead. Therefore, firstly, a critical incident regarding leadership empowerment is explored, and observations underscore the importance of psychologically safe environments where individuals are empowered to learn, grow, and collaboratively contribute to leadership. Achieving this type of environment requires a deep-rooted empathy and emotional intelligence that seeks to comprehend the underlying struggles of individuals rather than imposing specific behaviors.

Secondly, a reflection on an incident related to biases is undertaken. Given today's globalized context, teams encounter diverse backgrounds, experiences, and thought processes. Although

this diversity stands as a potential strength, it risks being diminished by underlying implicit biases. The act of identifying, confronting, and maneuvering biases, therefore, is not just driven by fairness but also as a tactic to fully leverage the richness of collective intelligence to achieve sustainable advancements in society.

2.2 The burden of responsibility: Enabling others to lead

2.2.1 Situation: Assumed team members' accountability gap in brainstorming

During the brainstorming session for our sales call, a crucial early stage in our teamwork process, I single-handedly led the conversation, being the only one to take the initiative to have a laptop out and create some structure. I had wished for collaborative team dynamics, or, in the words of Daniel Goleman, a situation where "There are many leaders, not just one." (Goleman 2001). Yet, instead of this envisioned distributed leadership, I sensed an overwhelming responsibility due to my teammates' limited participation and initiative. Feeling disheartened, I distanced myself from the conversation, hoping my absence would encourage other team members to step up. However, the discussion continued for an extended period, lacking structure and yielding minimal results. After observing for approximately ninety minutes, my decision to re-engage was driven by mounting frustration. In a firm tone, I inquired, "What is the plan now?" Regrettably, this only intensified tensions rather than fostering dialogue, culminating in a heated exchange with some team members. The discussion peaked when a team member confronted me, questioning my withdrawal from the process. Faced with my explanation of having strategically withdrawn, as I had hoped others would step up, one team member spoke up with a remarkable display of vulnerability and self-awareness. He expressed his desire to lead but confessed to feeling ill-equipped due to his limited professional experience.

2.2.2 Root causes: Unpacking social loafing and inexperience in team dynamics

This marked a turning point, prompting me to reassess the degree to which I dominated the group's activities. Before this, I had implemented numerous strategies to foster a collaborative atmosphere. These included virtual introduction meetings, organizing team dinners to build rapport, and establishing communication channels via WhatsApp and Teams. I also crafted tools like PowerPoint presentations and Excel sheets. Although these initiatives were intended to promote teamwork and shared responsibility, they inadvertently cast me as a dominant figure in logistical coordination and group discussions.

One crucial concept that emerged from this situation is social loafing. This phenomenon describes instances where individuals in a group invest less effort working collectively than they would individually (Karau and Williams 1993). In our brainstorming session, some team members displayed limited engagement and initiative, possibly believing that others would bear most of the responsibility, resulting in reduced participation. Several factors from the literature can help explain this behavior:

- **Ringelmann Effect:** This effect, first observed by Max Ringelmann, demonstrates that as group size increases, individual effort tends to decrease (Ingham et al. 1974). Team members may have perceived the presence of many members as an opportunity to contribute less individually, contributing to the lack of engagement.
- **Social Identity Theory:** This theory posits that individuals derive their self-esteem and identity from their group memberships. In a diverse team, some members might not feel a strong sense of identification or belonging, which could contribute to social loafing, as they may not fully identify with the team's goals (Tajfel and Turner 2004; Hogg 2021).
- **Tuckman's Stages of Group Development:** Tuckman's stages of group development, with a specific focus on the "forming" and "storming" stages, represent critical phases during which teams are in the process of establishing their identity while grappling with

uncertainties and potential conflicts (Tuckman and Jensen 1977). While usually in these stages, a fight for roles of power evolves (D. L. Miller 2003, 122), in this case, a lack of such was the driver of struggle.

The second root cause of the situation lies in the inexperience of some team members in effectively navigating team dynamics and leadership. The team member who eventually desired to lead but confessed to feeling ill-equipped highlighted the fear of inadequacy that inexperienced individuals often face in team settings. This fear aligns with the concept of psychological safety, a crucial factor in team effectiveness (Carmeli, Tishler, and Edmondson 2012; Collins and Smith 2006; Schaubroeck, Lam, and Peng 2011; Edmondson 1999). A lack of psychological safety can deter individuals from taking risks, sharing their ideas, or stepping into leadership roles (Edmondson 1999, 24; Collins and Smith 2006; Baer and Frese 2003).

2.2.3 Responses: From assertion to empowerment

Initial response: In hindsight, my abrupt withdrawal likely left my team members feeling bewildered and frustrated. They may have experienced a sense of abandonment, creating a leadership void within the team. This situation represents a leadership vacuum, where the absence of a leader leads to uncertainty and disarray within a group. Furthermore, my angry response likely harmed the team, making them feel defensive and criticized. This eroded trust and hindered open communication and collaboration among team members. Moreover, it shifted the team's focus away from the task at hand and onto the emotional dynamics within the group, diverting valuable time from our primary objective.

Improved response: A more constructive and efficient response would have entailed cultivating empathy better to understand my team members' struggles and aspirations. Dr. Travis Bradberry highlights in "Emotional Intelligence 2.0" that emotional intelligence determines one's ability to recognize and understand emotions in oneself and others and the skill to employ this awareness in managing behavior and relationships (Dr. Bradberry and

Greaves 2009, 17). Upon recognizing these underlying factors, my approach should have emphasized creating a psychologically safe environment within the team. This involves establishing a space where team members feel secure expressing themselves, taking risks, and sharing their ideas without fear of criticism or retribution. In alignment with Bill George's perspective on authentic leadership, which underscores the importance of leading with compassion and building trusting relationships, connectedness is crucial (George, McLeann□, and Craig, 2011).

Furthermore, I should have exercised better emotional regulation, considering Daniel Goleman's insight that emotional intelligence is an executive function that aids in managing emotions and paying attention to others (Goleman□n 2001, 14). Effective communication, conducted with clarity and composure, would have been more productive. Lastly, I could have adopted a facilitative leadership style, encouraging team members to assume leading roles.

The ADKAR model, an acronym for Awareness, Desire, Knowledge, Ability, and Reinforcement, provides a framework for understanding and guiding change at an individual level. Developed by Jeff Hiatt, the model offers insights tailored to the challenge of fostering distributed leadership and collaborative dynamics within a team (Hiatt 2006).

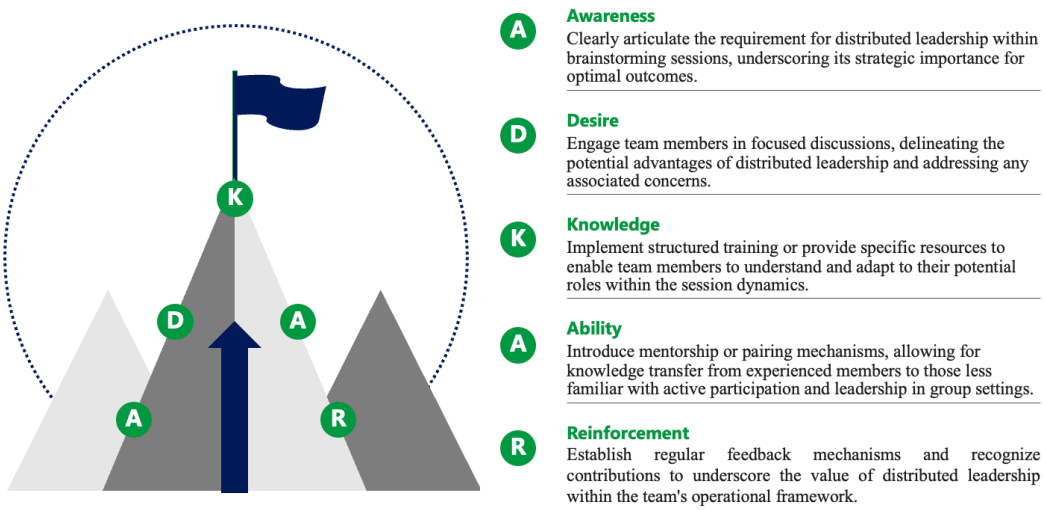

Figure 5: ADKAR Framwork, own design in accordance with Hiatt (2006)

By adhering to the ADKAR model, organizations can create a structured framework that paves the way for a more efficient and collaborative leadership environment, ensuring that every team member possesses the requisite tools and motivation to lead.

Conclusion and future steps: One of the most striking realizations is the double-edged sword that leadership can sometimes become; while it is essential to guide, it is equally crucial to step back and allow others to emerge and shine. Balancing assertiveness with empathy and understanding is a delicate art, one that I learned the hard way. In a diverse and multifaceted team, there exists a multiplicity of experiences, fears, and ambitions. This incident helped me fathom that the role of a leader isn't just to provide solutions, but also to create an environment where everyone feels encouraged to share, to contribute, and to lead.

I am eager to enhance my leadership abilities through training, workshops, and soliciting input from colleagues. My aim is to become an encouraging and inspiring leader who can effectively mentor and empower individuals. I am fully committed to my personal and professional advancement in order to attain this objective.

2.3 Overcoming biases and fostering inclusivity: A reflection on perceived competence

2.3.1 Situation: Underestimated team members' decision-making contributions

Our Business in Practice team came from various nationalities, such as China, France, India, Belgium, Portugal, and Germany, and had diverse academic backgrounds in finance, management, and entrepreneurship. This diversity initially caused mixed feelings within me, as I was motivated to excel in the simulation but concerned about the other team members' goals and ambitions. I also assumed differences in educational levels, industries, and thinking styles among my peers. Some team members had limited or no prior professional experience, unlike me, who had accumulated four years of experience, making me question their business skills. Furthermore, I had hoped to be placed in the same team as my three close friends, who shared my ambitions and competencies. However, my skepticism towards my team members

changed when we faced a significant challenge in the business simulation: selecting a new car battery type to introduce to the market. This decision required not only the competence of the innovation department but also meticulous planning by the finance department, both of which had members whose competencies I had previously doubted the most. Despite my initial doubts, my team members exceeded my expectations. To my surprise, the innovation department member displayed a deep knowledge of battery technology types and their pros and cons.

In contrast, the two financial department members thoroughly analyzed the financial implications of our decisions. It became evident that I couldn't have gained such insights, fresh perspectives, and critical analysis alone. Our diverse team allowed us to fully understand the situation and arrive at a profound decision together.

2.3.2 Root causes: Cultural bias and ageism

My initial prejudices were influenced by a complex web of psychological, sociological, and cultural factors, all of which are studied in the academic literature under the term "bias" (Tversky and Kahneman 1974). Biases exist in various domains, such as psychology, sociology, and decision-making. Social biases, the root of my prejudices, are cognitive shortcuts that the human brain uses to simplify processing information about others (Devine 1989). They manifest in various forms, including cultural, age, gender, religious, and sexual orientation (Hofstede 1984; Palmore 1999; Staw and Cummings 1983; Perry, Murphy, and Dovidio 2015). In the first two, I was the victim of unconsciousness.

- **Cultural Bias:** The biases I held towards my teammates from various nationalities underscore the intricacies of cultural bias. Cultural bias is the tendency to judge, hold stereotypes, or exhibit prejudice based on an individual's or group's cultural background, ethnicity, nationality, or cultural practices (“Cultural Bias” n.d.). Stereotypes about the supposed work ethics, communication styles, or problem-solving approaches of individuals

from different cultures can lead to misunderstandings and undermine the potential for synergy in teamwork (Jehn, Northcraft, and Neale, 1999).

- **Ageism:** Age-related bias, often called ageism, is the tendency to hold stereotypes, make judgments, or discriminate against individuals or groups based on their age, typically regarding older or younger people (Butler 1969, 243). My hesitation to trust younger, inexperienced team members stemmed from a predisposition to consider my experience as the primary driver of sound decision-making. Society frequently associates youth with innovation, energy, and adaptability, ascribing expertise and wisdom to older individuals (Jones 2005; Ardelt 2000). These stereotypes can lead to the erroneous belief that older individuals possess more valuable insights or are better equipped to handle complex tasks. Conversely, younger team members may be unfairly underestimated or overlooked despite their potential to bring fresh ideas and approaches (Posthuma and Campion 2009).

Further, research in social psychology extensively examines two levels of bias consciousness.

- **Explicit:** Firstly, clear bias entails conscious and overt beliefs, attitudes, and prejudices openly held towards various groups or individuals. This bias is easily identifiable through verbal statements, actions, or behaviors. Conversely, implicit bias is subtler, residing in subconscious associations and attitudes toward different groups, often operating beyond conscious awareness (Greenwald and Krieger 2006, 948).
- **Implicit:** Implicit bias may influence one's thoughts, emotions, or automatic responses, impacting perceptions and interactions with others, even when these biases are not consciously acknowledged or wanted (Greenwald and Krieger 2006, 948).

Cultural norms, media portrayals, and personal experiences can shape both levels. These biases can lead to suboptimal decision-making, especially if a lack of awareness exists (Tversky and Kahneman 1974, 1131). Biases as mental shortcuts are deeply ingrained in our evolutionary psychology, as they have historically been necessary for survival (Cosmides and Tooby 1994,

330–34). However, diverse teams can lead to premature assessment of competence based on superficial criteria.

2.3.3 Responses: From bias to seeing value in diversity

Initial response: In my initial reaction, I made quick judgments about my team members without giving them a fair chance to showcase their competence. My approach was driven by a desire to compensate for my team's potential shortcomings. I lacked trust in their abilities, hesitated to embrace their decisions, and took on tasks I deemed critical. Unfortunately, these actions may have communicated to my team members that their contributions were not valued or respected. This may have led to the so-called "Stereotype threat," which occurs when individuals from diverse backgrounds are aware of negative stereotypes associated with their group, making them anxious and underperform (Steele, Spencer, and Aronson 2002).

This hindered the utilization of cognitive diversity within my team. Cognitive diversity refers to differences in problem-solving approaches, critical thinking, and information processing. Research by van Knippenberg and Schippers (2007) suggests that groups that do not harness the potential of cognitive diversity may miss out on innovative solutions and comprehensive problem-solving approaches. Embracing cognitive diversity has enhanced problem-solving and decision-making within teams (Hong and Page, 2004). Hong and Page's research suggests that diverse perspectives can improve outcomes by challenging conventional thinking and introducing novel solutions. Moreover, a study by Milliken and Martins (1996) emphasizes that when effectively managed, cognitive diversity contributes to increased creativity and adaptability.

Improved response: Reflecting on the situation, a more effective approach would have involved keeping an open mind and actively seeking to explore the diverse perspectives of my team members. Research in the field of bias mitigation and inclusive leadership underscores the importance of self-awareness and active listening. According to Perry, Murphy, and

Dovidio (2015), self-awareness is critical to reducing implicit biases. Individuals who engage in self-reflection and self-monitoring are more likely to identify and challenge their preconceptions. By acknowledging the presence of implicit bias, we can appreciate the subtlety of its influence on our perceptions and work towards mitigating its impact. Additionally, active listening, which involves giving full attention to others' perspectives, has been shown to enhance collaboration and reduce bias (Wiese, 2015).

Conclusion and future steps: While this critical incident within BIP was a first step in recognizing my biases, I am dedicated to further reducing them. Cultural competence is essential for addressing biases and immersing oneself in diverse cultures and viewpoints. Consequently, I am committed to seeking international experiences and fostering genuine interactions with locals. While ageism is crucial, experience is not the sole determinant of attributes such as innovation, adaptability, energy, or wisdom. I will engage in cross-generational dialogues and mentorships to tackle age-related biases, facilitating knowledge exchange and bridging the gap between age groups. As I embark on my professional journey at an international strategy consulting firm, I anticipate working with more diverse teams. Therefore, I will diligently monitor my biases by reflecting on my first thoughts when interacting with new colleagues.

2.4 Integrated view of peer feedback and conclusion

Concluding the reflection on the critical incidents encountered in the BIP seminar, the feedback from my peers stands out as a crucial touchstone for self-awareness. It revealed a slight overestimation of my competencies in interacting with teammates, keeping the team on track, and expecting high quality. The significance of external feedback and maintaining a balance between confidence and humility is crucial. Overestimating one's abilities can lead to unintentionally overshadowing team members, resulting in an uneven distribution of

participation and hindering the team's effectiveness. This is in line with my two primary takeaways:

The Power of Empowerment: I realized that my team needed self-trust and leadership skills. Being a mentor helped bridge gaps in confidence and skills, which could only be achieve by creating a sense of psychological safety and empowerment were important.

The Mirage of Bias: I learned not to underestimate diversity after initially doubting my teammates' abilities due to cultural and age biases. Their unique insights and contributions proved invaluable, emphasizing the benefits of diverse teams.

I will prioritize inclusivity, trust, empowerment, and seeking feedback in my professional interactions. I'll re-evaluate my assumptions and biases, creating an environment where everyone feels valued and inspired to contribute their best. The Business in Practice project taught me about real-world challenges in diverse teams and the importance of empathy, self-awareness, and personal growth.

Table of contents

List of abbreviations

- EV = Electric Vehicle
- ICE = Internal Combustion Engine
- OEM = Original Equipment Manufacturer
- DOI = Day of Inventoty
- KPI = Key Performance Indicator
- ZM = ZMs

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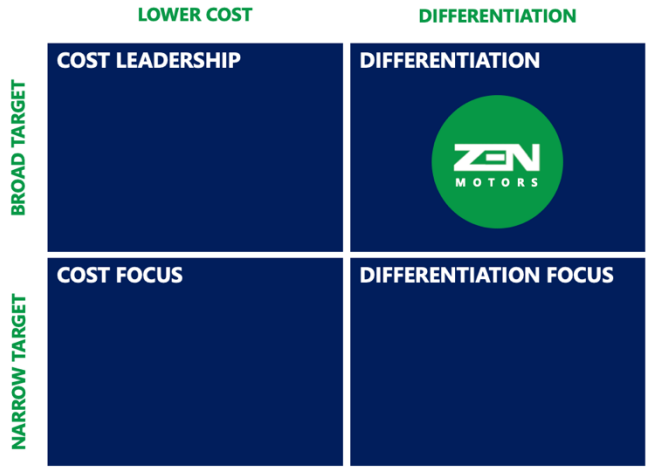
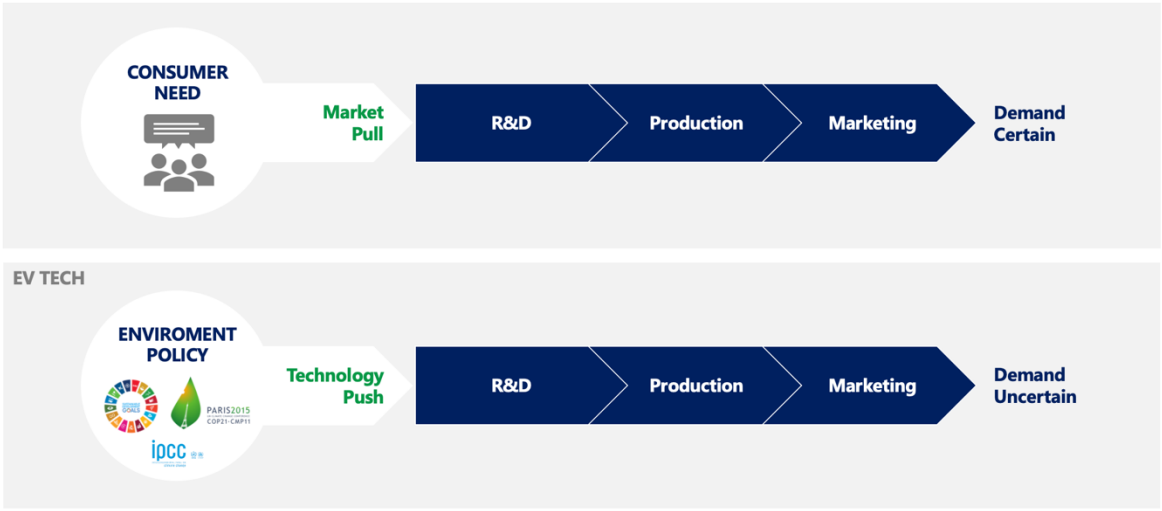
Appendix

Appendix 1: Porters generic strategies

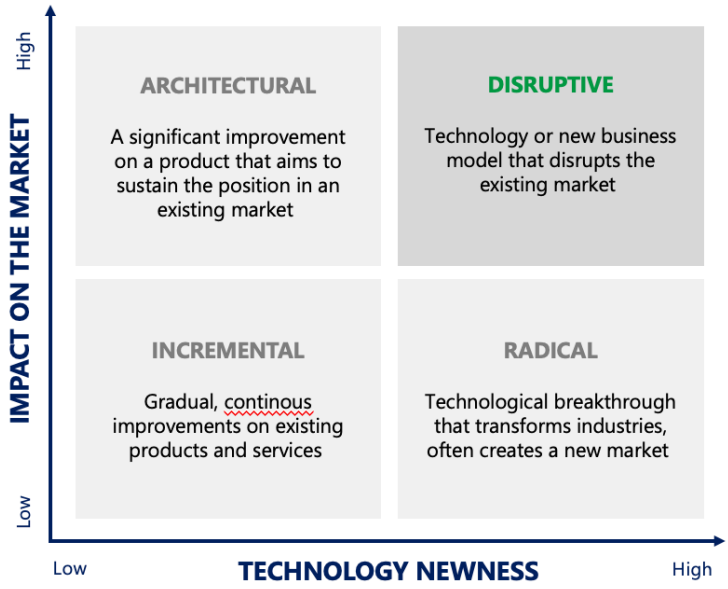


Appendix 2: Coherent actions planned for all departments of ZenMotors

Appendix 3: Innovation Push vs. Pull



Appendix 4: Types of Innovation



Appendix 5: ZenMotors Car Launches

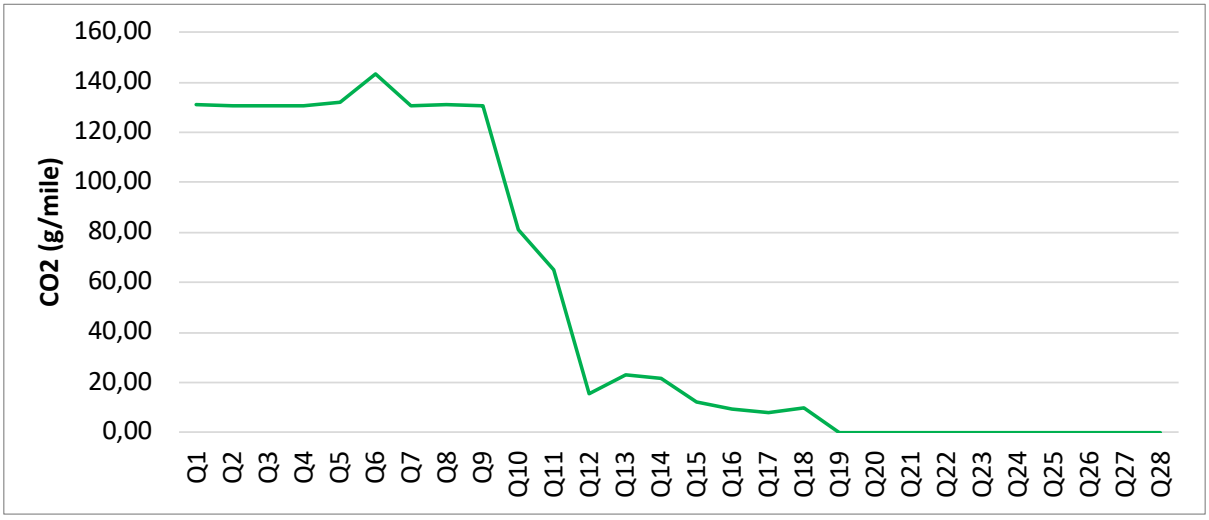
	E-CONVERTIBLE	E-BUSINESS	E-COMPACT	E-LUXURY	E-SUV	E-MICRO
ZEN MOTORS	Q10 (F)	Q10 (F)	Q12	Q12	Q15	Q16
COMPETITOR A	Q13	Q13	Q7	Q13	Q13	Q18
COMPETITOR B	Q11	Q11	Q4	Q13	Q13	Q15 (F)
COMPETITOR C	n/a	n/a	Q3 (F)	Q3 (F)	Q7 (F)	Q16

(F) First to enter the market with EV car type

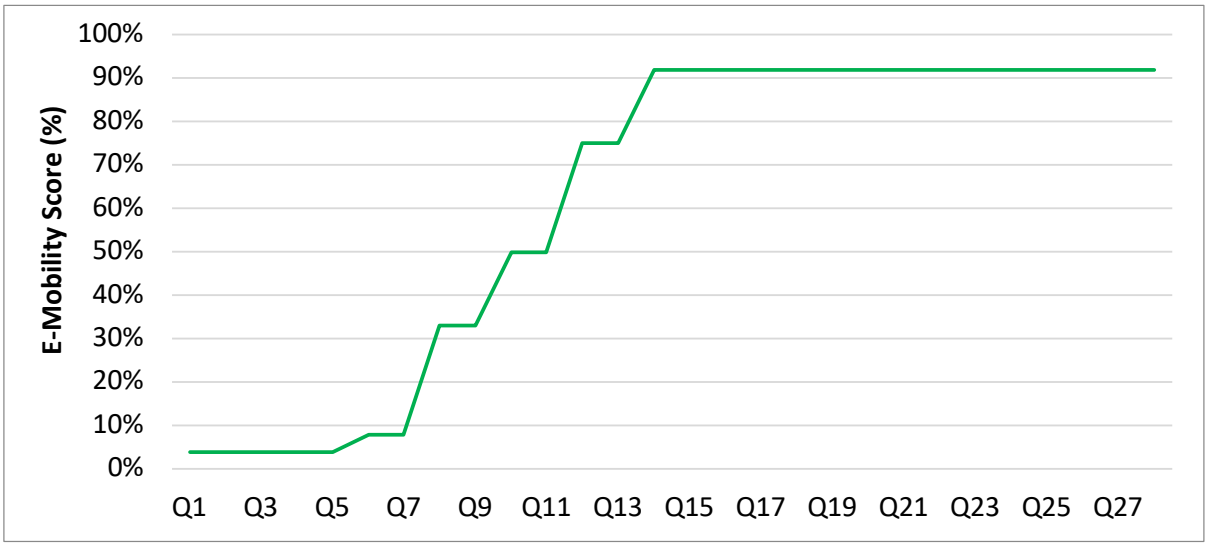
Appendix 6: ZenMotors Investment Schedule

	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				YEAR 6			
Investments	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27
INNOVATION																								
Electrification																								
Home Charging Stations				300M																				
High Power Charging (HPC)						200M																		
Connectivity																								
Connectivity Technology	250M																							
Infotainment Services		160M																						
Big Data						150M																		
Cross-Platform Technology								200M																
Autonomous Driving																								
Automated Parking		500M																						
Driver Assistance				250M																				
Cloud Connection						300M																		
Secure Infrastructure								400M																
Cars																								
City-E						510M	DEVELOPMENT						Product Life Cycle											
Biz-E				550M	DEVELOPMENT								Product Life Cycle											
4x4-E								665M	DEVELOPMENT						Product Life Cycle									
Air-E				650M	DEVELOPMENT								Product Life Cycle											
Lux-E						710M	DEVELOPMENT						Product Life Cycle											
Micro-E										560	DEVELOPMENT						Product Life Cycle							
HR																								
Create Sustainability Policy		10.00M																						
Sustainability Policy Training				15.00M																				
Sustainability Awareness Training						15.00M																		
OPERATIONS																								
Factory																								
USA																								
China																								
Europe																								
Production Investments (Scope 1)																								
Water Consumption Reduction		200M																						
Waste Reduction					400M																			
ISO14001 / EMAS certificates								500M																
Energy Investments (Scope 2)																								
Energy Efficiency Investment		150M																						
Install Solar Panels				250M																				
Energy Management System										10M														
Supply Chain Investments (Scope 3)																								
Offset Suppliers CO2			13.70M																					
Choose Sustainable Supplier		10.00M																						
Co-Invest with Supplier				50.00M																				

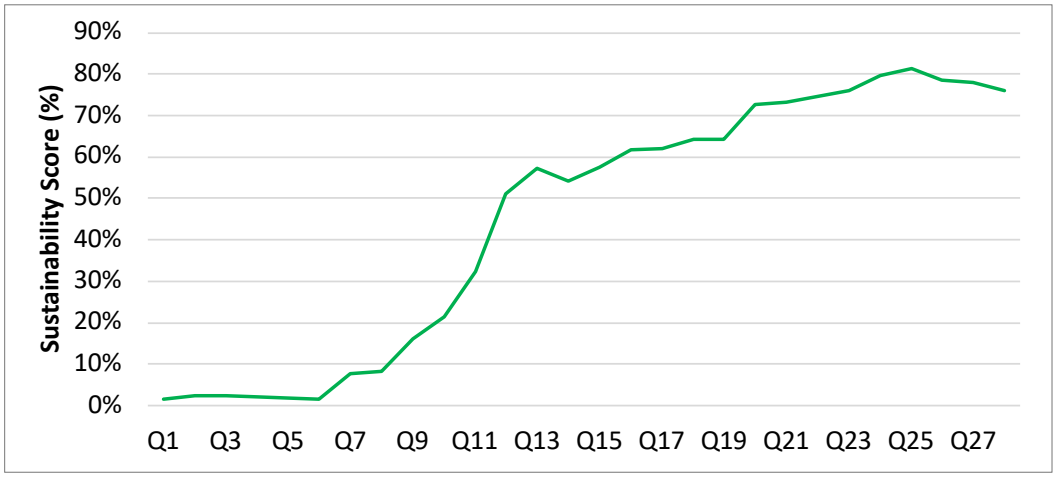
Appendix 7: ZenMotors CO2 fleet emissions



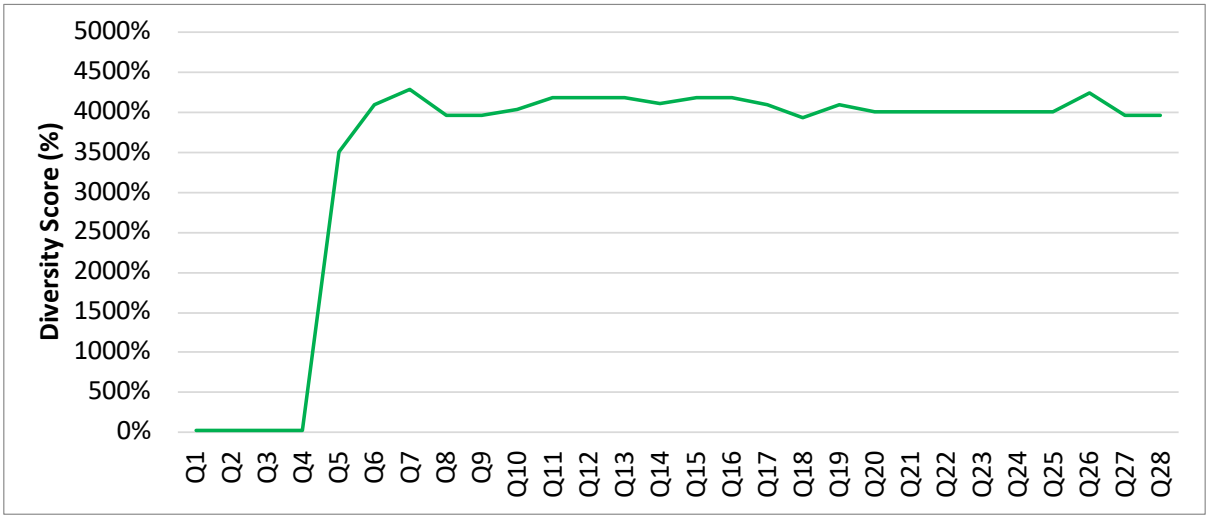
Appendix 8: ZenMotors E-mobility Scores



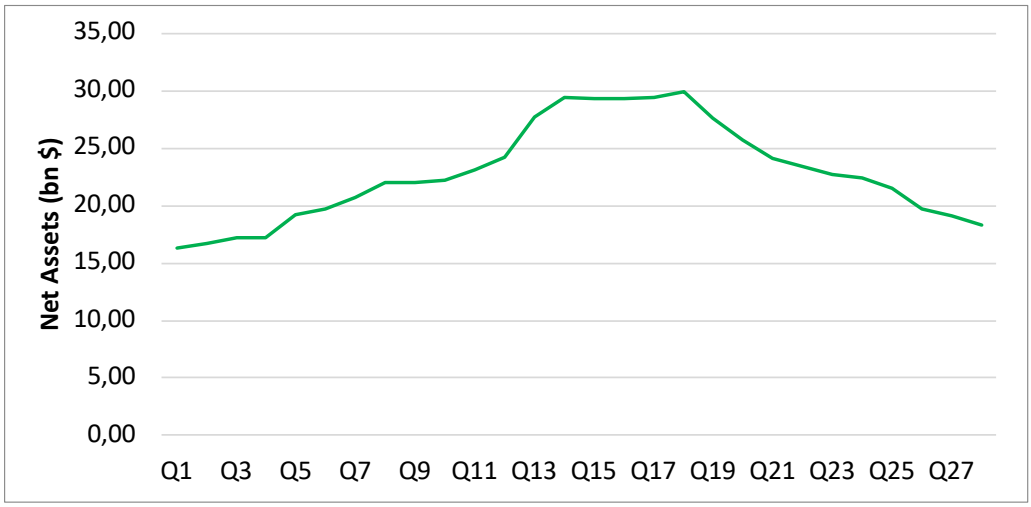
Appendix 9: ZenMotors Sustainbility Score



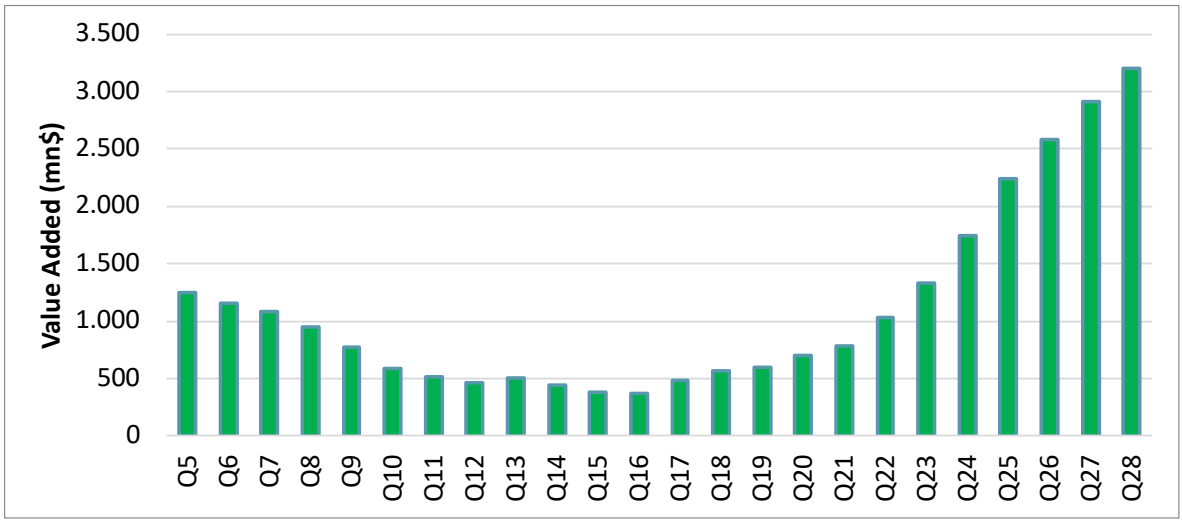
Appendix 10: ZenMotors Diversity Score



Appendix 11: ZenMotors Net Assets



Appendix 12: Value Added



Appendix 13: ZenMotors D/E Ratio