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Centaur

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## Abstract

In a rapidly evolving automotive landscape, This report presents an in-depth analysis of Centaur, a company operating in the European automotive market, within the framework of a business simulation. As the Sales and Dealer Network Executive for Centaur, the role involved developing and executing sales strategies, pricing policies, and dealer network expansion initiatives to achieve the company's financial and strategic objectives. The simulation spanned 10 weeks, representing 10 fiscal years, with key decisions focused on aligning product pricing, promotions, and dealer network development to meet evolving market dynamics.

The report commences by providing a background of the strategic direction taken by Centaur towards focusing on technological innovation, sustainability, and market expansion. The well-rounded literature review examines pricing strategies, optimization of the dealer network, and formulation of the sales strategy in the process, benchmarking the approach against industry leaders such as Tesla, BMW, and Hyundai.

Methodologically, a mixed approach was followed by collecting quantitative data from financial statements and market research, with qualitative insights into customer perceptions and competitor analysis. These sources were used to drive key decisions on product price, promotional campaigns, and dealer incentives.

The findings of the simulation emphasize the role of dynamic pricing, inventory management, and targeted marketing in a very competitive automotive market. Small and medium cars were areas for impressive growth due to effective strategies in pricing and promotions by Centaur, but not without challenges in inventories and underperforming models, which called for constant adjustments. Long-term R&D investments in focus on eco-friendly technologies positioned Centaur for future market leadership.

It concludes with further recommendations about the implementation of advanced analytics, refining incentives for a dealer network, and focusing more on sustainable innovations in the business strategy of Centaur. More key takeaways from this simulation include reflections on how strategic thinking, financial management, and competitor adaptability drive sustainable long-term business success.

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# 1. Introduction

## 1.1 Company's Strategic Direction

Centaur, a growing leader in the automotive industry, is in a great position to combine advanced technology with eco-friendly practices. The brand stands for strength, speed, and sustainability. Inspired by the mythical Centaur, known for its power and precision, the company aims to become a major player in the European automotive market. Centaur's strategy is focused on innovation, sustainability, and putting customers first, with the goal of transforming the automotive industry

The European car market remains one of the most dynamic and influential automotive markets across the world, making huge contributions to global automotive industrial trends and innovations. This is a large market that is characterized by size, a lot of regulations, and changing consumer preferences as driven by many things that include EV technology, stringent emissions standards, and evolving consumer demands. In 2023, the European car market accounted for approximately 20-25% of worldwide car sales and, in fact, is one of the foremost automotive markets across the globe. Its main individual markets include Germany, the United Kingdom, France, Italy, and Spain with Germany accounting for about 25% of the total sales. Its large size of market and its twin features as a significant centre for both production and consumption have rendered it critical for automotive makers and suppliers worldwide.

Centaur envisions itself in a leadership position within the automotive industry, driven by innovative AI-based safety systems and customizable eco-friendly powertrains satisfying an increasing demand for sustainable smart vehicles. It aims to capture significant market shares: one in every five vehicles on European roads driven by a Centaur vehicle by 2030. A tremendous ambition accompanies strong commitments in the fields of sustainability, satisfaction of customers, and technological leadership.

Centaur's target market includes environmental consumers and technology enthusiasts who want vehicles that bring out performance together with top safety, customization, and sustainability. The company aims its cars at the small, medium, large, and luxury car sectors, with models that may suit the various needs of different demographic groups, from young professionals to families and luxury car buyers.

## 1.2 Role of the Sales and Dealer Network Executive

At Centaur, the Sales and Dealer Network Executive plays a crucial role in operationalizing the company's vision and achieving its strategic plan objectives. This position's key goal will be to drive sales performance, increase market presence, and ensure Centaur vehicles are accessible to a broad customer base. The major roles, which the position entails, include setting and achieving the annual sales budget, devising a comprehensive sales plan, competitive pricing strategies, and expansion of dealer networking. Part of these roles includes working with the Manufacturing Manager to monitor the finished stock policy and implementing policies for sales promotions and marketing initiatives to improve brand visibility and better the relationship with customers.

The primary goal of this job will be to support Centaur to achieve its financial goals by ensuring that the company's products are placed effectively in the market. This will directly relate to the broader corporate strategy of Centaur, increasing market share and promoting customer satisfaction through innovative, high-quality vehicles by working with the development of sales strategies and dealer networks.

## 1.3 Specific Aims and Objectives of the Role

These agreed-to targets and key results for the position all aim to align Centaur's broader corporate strategy something that should see the company continue to succeed in the highly competitive automotive market.

- A yearly product sales plan aimed at accomplishing the Centaur target of sales through market trends, consumer preferences, and competitor strategies identification in the context of all vehicle sectors.
- Competitive Pricing Strategy: Develop a pricing strategy balancing profitability against market trends to get the firm's vehicles priced competitively in the marketplace, yet achieve maximum revenues and margins
- Dealer Network Expansion: Enhance market penetration by expanding the network of dealers for Centaur in critical regions, so as to effectively reach and access markets.
- Inventory Management: Work closely with Manufacturing period production adjusted based on demand helps reduce costs and ensures the availability of vehicles.
- Sales Promotion and Campaigns: Increase the visibility of the brand and interaction with customers through focused marketing which showcases Centaur's technology features and environmentally friendly features.

### 1.3.1 Alignment with Corporate Strategy

The proposed objectives, such as the maximization of sales volume, increase in profitability, and enlargement of market coverage, for the position of Sales and Dealer Network Executive resonate with the corporate strategy of Centaur. The position supports the accomplishment of strategic goals set by Centaur, namely market growth and leadership in technology, since it directly corresponds to the increase in sales volume, profitability increase, and market expansion. Moreover, the stress on the pricing strategy will ensure that Centaur makes its products affordable at competitive prices to a wide customer base while maintaining strong profit margins.

It will further contribute to Centaur's sustainable growth by enlarging the dealer network and making the company's vehicles closer to the customer in every part of Europe. All these efforts support the vision of Centaur as a leading actor on the European automotive market, known for innovation, sustainability, and customer orientation.

### 1.3.2 Expected Outcomes and Contributions

The expected outcomes from this role include:

- Increased Sales Volume: A solid sales plan will boost sales and revenue, strengthening Centaur's market position.
- Expanded Dealer Network: Growing the dealer network will make Centaur’s vehicles more accessible, driving sales and improving customer satisfaction.
- Improved Profit Margins: A smart pricing strategy will maximize profit margins while keeping prices appealing, supporting long-term growth.
- Enhanced Brand Awareness: Targeted promotions will raise brand visibility, emphasizing Centaur’s innovation and sustainability, helping the brand stand out.
- Operational Efficiency: Managing stock effectively will reduce costs, prevent overproduction, and ensure timely delivery, improving overall efficiency.

The role of Sales and Dealer Network Executive is pivotal to Centaur’s success in reaching its strategic goals. By focusing on optimizing sales performance, expanding the dealer network, and executing effective pricing strategies, this role ensures that Centaur not only meets its financial objectives but also positions itself as a leader in innovation, customer satisfaction, and sustainability. The influence of this position is expected to be substantial and long-lasting, driving Centaur’s growth and securing its long-term success in the highly competitive automotive market.

# 2. Literature Review

## 2.1 Sales Pricing Strategies

### 2.1.1 Approaches to developing Effective Sales and Pricing Products

Pricing is a key strategic lever in the automotive industry, shaping a company's brand image, market share, and profitability. Centaur has implemented a combination of value-based pricing, cost-plus pricing, and competition-based pricing, with each approach tailored to its specific products and market conditions. This pricing strategy allows Centaur to remain competitive while maximizing profitability across its vehicle lineup.

#### 2.1.1.1 Value Based Pricing for Premium Products

Centaur implemented value-based pricing for its premium products, such as long-range electric vehicles and smart driving control systems. This approach capitalized on the perceived value of these products, particularly appealing to environmentally conscious consumers who are willing to pay more for innovation and sustainability. Tesla, a leader in electric vehicle production, has successfully used value-based pricing for its Model S and Model X vehicles, highlighting their advanced technology, luxury features, and environmental benefits (Teece, 2018). As Monroe (2012) explains, value-based pricing aligns product prices with the perceived benefits to customers, making it a perfect fit for high-innovation sectors like electric vehicles. Centaur adopted this strategy, enabling its premium electric vehicles to command higher price points by showcasing their advanced features and eco-friendly focus.

#### 2.1.1.2 Cost-Plus Pricing for Mass Market Models

For its mid-range fuel-efficient vehicles, Centaur applied cost-plus pricing, ensuring that all production costs were covered with a consistent markup. Toyota has successfully used a similar strategy for its popular, fuel-efficient Corolla and Camry models, maintaining profitability in a highly competitive segment (Nagle, Hogan, & Zale, 2016). This approach works particularly well in stable production environments where controlling costs is key, enabling Centaur to achieve predictable profit margins for its mid-range vehicles. However, as Porter (2008) highlights, cost-plus pricing can limit a company's flexibility to adapt to dynamic market conditions or aggressive competitor pricing, especially when brands like Hyundai offer more affordable alternatives in the mass market.

#### 2.1.1.3 Competition Based Pricing for Price Sensitive Markets

In highly competitive regions, Centaur adopted competition-based pricing, especially for its standard models that directly competed with brands like Hyundai and Kia. As Porter (2008) explains, competition-based pricing allows companies to remain competitive by setting prices in line with market leaders, ensuring they are neither too high nor too low compared to rivals. Centaur closely tracked competitor prices to keep its standard models competitive without triggering destructive price wars. This strategy allowed Centaur to maintain its position in price-sensitive markets, balancing the need to preserve market share with the goal of sustaining profitability.

### 2.1.2 Impact of Pricing Policies on Sales Volume and Profit Margin

Centaur's pricing policies had a significant impact on its sales volume and profit margins across its product range. The company had to carefully strike a balance between maximizing profitability in its premium segments, where higher price points were justified, and maintaining market share in more competitive, price-sensitive markets. This delicate balancing act was essential to ensuring Centaur's overall financial health while catering to diverse customer needs.

#### 2.1.2.1 Value Based Pricing and profit Margins for Premium Products

Centaur’s value-based pricing strategy for its premium electric vehicles and advanced systems enabled the company to command higher prices, leading to strong profit margins. As Anderson and Narus (2004) explain, value-based pricing works well for products that offer clear technological or performance advantages, as customers are willing to pay more for perceived quality and innovation. BMW has successfully employed this approach with its i-Series electric cars, where the focus on luxury and sustainability justifies higher prices (Teece, 2010). Similarly, Centaur’s pricing for its premium models followed this path, allowing the company to secure strong profit margins by aligning pricing with innovation and eco-conscious branding.

#### 2.1.2.2 Cost Plus Pricing and Sales Volume for Mass Market Models

Centaur's cost-plus pricing strategy for its mass-market models aimed to drive sales volume in regions where affordability was a critical factor. While this approach helped Centaur maintain steady sales in these price-sensitive areas, it resulted in slimmer profit margins compared to its premium products. Similar to Ford's strategy with its fuel-efficient Focus model, cost-plus pricing can ensure consistent sales in competitive markets but may restrict a company's ability to respond to more aggressive pricing from competitors like Honda (Porter, 2008).

#### 2.1.2.3 Dynamic Pricing for Electric Vehicles

Centaur’s dynamic pricing strategy for its electric vehicle lineup enabled the company to stay competitive in markets impacted by changing government subsidies and raw material costs. Tesla, for instance, often adjusts its pricing based on the availability of government incentives for electric vehicles, which helps the company optimize both sales volume and profit margins (Chen et al., 2020).

Similarly, Centaur adopted this approach by lowering prices in regions with strong government incentives to boost demand, while raising prices in other regions to account for production cost fluctuations.

### 2.1.3 Benchmarking Centaur's Pricing Against Competitors

Benchmarking against key competitors like Tesla, BMW, and Hyundai was a crucial part of Centaur's pricing strategy. By consistently monitoring competitor pricing, Centaur was able to adjust its own strategies, ensuring it stayed competitive in the market while safeguarding its profit margins. This proactive approach allowed the company to respond to market shifts effectively and maintain a strong market presence.

#### 2.1.3.1 Tesla and Value based Pricing

Tesla's use of value-based pricing for its premium electric vehicles opened the door for Centaur to differentiate itself by adopting a similar strategy for its advanced electric models. Centaur's ability to charge higher prices for its premium electric vehicles, even in markets where Tesla had a strong presence, aligns with Monroe's (2012) view that value-based pricing is most effective when the product's unique benefits are clear to the customer. By focusing on sustainability and cutting-edge technology, Centaur was able to compete with Tesla while maintaining strong profit margins.

#### 2.1.3.2 Hyundai and Cost Plus Pricing

Hyundai's use of cost-plus pricing for its budget-friendly models, like the Elantra, served as a useful comparison for Centaur's mid-range fuel-efficient vehicles. While Hyundai focused on keeping prices low to attract a broader audience, Centaur applied cost-plus pricing to ensure steady profitability in this segment. However, as Porter (2008) highlights, this strategy can be limiting in competitive markets where brands like Hyundai employ aggressive pricing tactics, potentially challenging Centaur's ability to maintain market share.

### 2.1.4 Conclusion

Centaur's pricing strategies played a crucial role in striking the right balance between profitability and market competitiveness. By utilizing a mix of value-based pricing for its premium products, cost-plus pricing for its mass-market vehicles, and dynamic pricing for its electric models, the company was able to optimize both sales volume and profit margins. Benchmarking against competitors like Tesla, BMW, and Hyundai allowed Centaur to continuously adjust and improve its pricing strategies, ensuring long-term success. By leveraging real-time data and responding swiftly to external market conditions, Centaur upheld its reputation as a leader in both innovation and customer-centered pricing strategies.

## 2.2 Dealer Network Development

### 2.2.1 Overview of Dealer Network Development

Developing a comprehensive dealer network is crucial for automotive companies to expand their customer base, increase market penetration, and improve after-sales services (Aaker, 2012; Narus & Anderson, 2020). Centaur's strategy for building an effective dealer network centered on geographic expansion into high-demand markets while nurturing strong relationships with dealers. This approach ensured greater product visibility and contributed to the company's growth in market share.

### 2.2.2 Key Strategies for Building and Expanding a Dealer Network

#### 2.2.2.1 Geographic Expansion and High-Growth Market Entry

Expanding into high-growth markets is a key element of Centaur's dealer network strategy. By identifying markets with rising demand for electric vehicles (EVs) and fuel-efficient cars, Centaur effectively positioned its products to meet consumer needs. This approach aligns with BMW's strategy for expanding the market for its electric and hybrid vehicles (Schreuder, 2019). Centaur strategically placed dealerships in high-demand regions, mirroring BMW's geographic expansion model, particularly in urban areas where sustainable transportation is increasingly popular (Niemeyer et al., 2020).

#### 2.2.2.2 Dealer Support and Incentives

Providing support and incentives for dealers is crucial for boosting sales and building loyalty. Centaur's approach included offering extensive training programs and marketing support to help dealers effectively promote premium models like the Komet and Sentinel. This strategy mirrors Ford's approach, where dealers are incentivized to focus on eco-friendly models through structured sales initiatives and direct marketing assistance (Kotler & Keller, 2016; Wallström & Segerstedt, 2019). Centaur's emphasis on dealer incentives ensures that its network stays competitive while driving growth in key markets.

### 2.2.3 Importance of Dealer Relationships for Sales Performance

#### 2.2.3.1 Collaborative Dealer Partnerships

Strong relationships with dealers are vital for ensuring product availability and boosting sales. Centaur prioritized building collaborative relationships through its dealer support programs, offering comprehensive technical training and resources. Toyota has successfully expanded its dealer network by focusing on strong partnerships, providing extensive training on new hybrid and electric technologies (Anderson & Narus, 2016; Kühl, 2018). Similarly, Centaur's commitment to supporting its dealers has played a key role in promoting and selling its premium models (Smith et al., 2020; Product Life Cycle).

#### 2.2.3.2 Dealer Loyalty and Retention

Maintaining dealer loyalty is crucial for long-term success. Centaur adopted a retention strategy similar to Volkswagen’s, which focuses on dealer profitability and offers flexible terms to minimize churn rates (Grant, 2016; Martin, 2020). By providing ongoing support and competitive incentives, Centaur ensured its dealers were less likely to switch to competitors, fostering high levels of loyalty within its network (Baker & Hart, 2018).

### 2.2.4 Challenges in Dealer Network Expansion

#### 2.2.4.1 Logistical and Operational Constraints

Expanding a dealer network brings logistical challenges, especially in markets with limited electric vehicle (EV) infrastructure. Centaur faced obstacles similar to those experienced by Nissan, which struggled with EV infrastructure in emerging markets. To overcome these issues, Centaur prioritized high-demand regions with more developed EV infrastructure, ensuring its premium models could be properly supported (Schreuder, 2019; Silva & Laczniak, 2021).

#### 2.2.4.2 Market Saturation and Dealer Profitability

Rapid expansion can lead to market saturation and reduced dealer profitability. Anderson and Narus (2016) suggest that careful market selection and gradual expansion are crucial to avoiding oversaturation. Centaur adopted a selective approach to its dealer network expansion, focusing on strategic partners in high-growth regions. This method mirrors Hyundai’s strategy, which emphasizes maintaining dealer profitability by targeting regions with strong market potential before expanding further (Kaplan et al., 2020; Product Life Cycle).

### 2.2.5 Benchmarking Dealer Network Strategies with Competitors

#### 2.2.5.1 BMW's Focus on Urban Expansion

By benchmarking against BMW’s dealer network expansion, Centaur refined its strategy to prioritize urban areas where demand for electric vehicles is highest. BMW's success in expanding its i-Series electric vehicle dealerships in major European cities served as a model for Centaur’s targeted approach to urban markets, ensuring that its premium models were available in high-traffic, high-demand areas (Schreuder, 2019; Niemeyer et al., 2020). This allowed Centaur to optimize dealer locations based on market potential rather than simply focusing on geographic coverage.

#### 2.2.5.2 Hyundai's Dealer Retention Strategy

Centaur also took valuable insights from Hyundai's dealer retention strategies. Hyundai emphasizes strong dealer support, ensuring its partners have the necessary resources to promote both premium and affordable models. By adopting similar practices, Centaur provided its dealers with ongoing training and support, helping them effectively market and sell its premium electric and fuel-efficient vehicles (Kaplan et al., 2020; Wallström & Segerstedt, 2019).

### 2.2.6 Comparative Analysis of Dealer Network Strategies in the Automotive Industry

#### 2.2.6.1 Ford's Expansive Global Dealer Network

Centaur's approach to dealer network development shares similarities with Ford's global strategy. Ford focuses on balancing urban and rural expansion to ensure broad availability of its vehicles, especially in emerging markets (Kotler & Keller, 2016; Silva & Laczniak, 2021). Centaur's selective geographic expansion strategy mirrors Ford's by targeting key markets while avoiding the risks of overexpansion that can burden dealers (Baker & Hart, 2018).

#### 2.2.6.2 Tesla's Direct Sales Model

In contrast, Tesla operates with a direct-to-consumer model that eliminates the traditional dealership format, relying on company-owned stores. While Centaur did not fully adopt Tesla's direct sales model, it incorporated elements of centralized dealer control, such as providing direct marketing support and standardized training for all dealers. This approach ensured a consistent customer experience across its network, aligning with Tesla's focus on maintaining tight brand control (Schreuder, 2019; Kühl, 2018).

### 2.2.7 Conclusion

Centaur's dealer network strategy reflects a balanced approach, combining geographic expansion, strong dealer support, and competitive benchmarking to drive optimal performance. By learning from industry leaders like BMW, Hyundai, and Ford, Centaur built a network designed to maximize sales potential while maintaining dealer profitability. The focus on targeted market entry, along with comprehensive dealer support programs, has enabled Centaur to remain competitive in the fast-evolving automotive industry.

## 2.3 Sales Strategy and Optimization

### 2.3.1 Aligning Sales Strategy with Market Dynamics

Centaur's sales strategy was dynamic, continuously adapting to real-time data and changing market conditions. This multifaceted approach involved regularly reviewing market perception, consumer preferences, and competitor insights to refine sales tactics. By aligning its strategy with these external factors, Centaur ensured that its market approach remained both responsive and sustainable, leading to increased profitability and market share growth.

### 2.3.2 Data-Driven Sales Strategies

#### 2.3.2.1 Insights from Market Research Reports

Centaur's reliance on simulation data played a crucial role in optimizing its sales performance. Reports on Market Perception and Popularity Factors identified high-demand models like Komet and Sentinel, allowing the company to concentrate its promotional and sales efforts on products with the greatest potential (Perceptual Map; R and D). By leveraging these insights, Centaur ensured its sales teams prioritized models that closely aligned with consumer expectations, maximizing sales effectiveness and market success.

#### 2.3.2.2 Dynamic Pricing Adjustments

By leveraging insights from Profit and Loss reports, Centaur implemented dynamic pricing strategies that helped the company stay competitive in high-demand markets while optimizing profit margins. For example, models popular with environmentally conscious consumers saw strategic price increases, allowing Centaur to capitalize on the growing demand for eco-friendly vehicles. This approach ensured that pricing adjustments were aligned with market demand and profitability goals.

#### 2.3.2.3 Predicting Consumer Behaviour Through Data

Centaur leveraged consumer behaviour data from Market Research reports to forecast demand and predict shifts in consumer preferences. This enabled the company to anticipate trends, such as the increasing demand for electric vehicles (EVs) in urban areas, and adjust its sales strategy accordingly. This predictive approach helped Centaur stay ahead of market changes, similar to BMW's use of market data to adapt its product offerings (Smith et al., 2020). By staying proactive, Centaur was able to maintain a competitive edge in a rapidly evolving market.

### 2.3.3 Regional Customization in Sales Strategy

#### 2.3.3.1 Regional Variability in Consumer Preferences

One of the most effective elements of Centaur's strategy was the regional customization of its sales approach. Analysis from the Perceptual Map highlighted distinct regional preferences. For instance, urban areas with stricter government regulations on sustainability demonstrated a stronger preference for electric models like the Komet. Centaur tailored its promotional campaigns in these regions to emphasize the benefits of eco-friendly models, boosting the appeal of its electric. This targeted approach helped Centaur align its offerings with regional consumer demands, enhancing overall sales effectiveness.

#### 2.3.3.2 Targeting High-Income Regions

In regions with higher average incomes, Centaur concentrated its marketing efforts on premium models like the Sentinel. These models featured luxury elements that appealed to the affluent target demographic, enabling Centaur to maximize revenue in wealthier areas. This strategy mirrors that of automakers like Mercedes-Benz, which focuses on luxury segments in high-income regions (Schreuder, 2019). By aligning product offerings with the purchasing power of specific markets, Centaur effectively increased its profitability in these regions.

### 2.3.4 Dealer Network Optimization for Sales Growth

#### 2.3.4.1 Dealer Incentive Programs

To enhance the performance of its dealer network, Centaur introduced targeted incentive programs that encouraged dealers to focus on high-margin models like Veloz and Arion. These programs ensured that sales teams prioritized profitability, aligning dealer efforts with Centaur’s corporate goals. This strategic alignment improved overall dealer performance, following a model similar to Ford’s successful dealer incentive programs (Grant, 2016). By incentivizing dealers to promote the most profitable models, Centaur strengthened its sales outcomes.

#### 2.3.4.2 Strategic Dealer Placement

Centaur optimized its dealer network placement by strategically selecting regions with high sales potential, as highlighted by Market Research reports. By concentrating dealership expansion in areas with strong consumer demand, Centaur ensured its products were accessible to the right audience, enhancing market penetration. This approach mirrors Hyundai’s strategy of targeting dealer expansion in growing urban markets (Kaplan et al., 2020), allowing Centaur to effectively reach key consumer bases and maximize sales opportunities.

### 2.3.5 Competitive Benchmarking for Strategy Refinement

#### 2.3.5.1 Internal Sales Performance Benchmarking

Centaur regularly benchmarked its internal performance metrics, such as data from the Profit and Loss and Balance Sheet reports, to evaluate the effectiveness of its sales strategy. These internal reviews enabled the company to fine-tune its pricing, promotional efforts, and product focus based on real-time performance insights. This continuous assessment ensured that Centaur remained agile and responsive to market demands, optimizing its overall business strategy for success.

#### 2.3.5.2 External Competitive Benchmarking

In addition to internal benchmarking, Centaur compared its sales strategy with competitors using insights from the Data on Competition reports. This external benchmarking allowed Centaur to identify opportunities to refine its pricing and product positioning to remain competitive. For example, pricing adjustments for electric models like the Komet were influenced by competitor performance. This approach helped Centaur stay agile in a dynamic market, ensuring its strategies aligned with industry trends and competitor actions.

### 2.3.6 Technology-Enhanced Sales Optimization

#### 2.3.6.1 E-Commerce and Digital Sales Channels

As part of Centaur's strategy to expand its sales reach, the company integrated digital sales platforms, enabling customers to browse and purchase vehicles online. This approach not only extended Centaur's geographic reach but also responded to the growing consumer demand for digital purchasing options. This strategy is increasingly popular in the automotive industry, with companies like Ford and BMW adopting similar digital tools to enhance their sales channels (Silva & Laczniak, 2021). By embracing digital platforms, Centaur positioned itself to meet modern consumer expectations and broaden its market access.

#### 2.3.6.2 AI for Sales Forecasting

Centaur leveraged AI-driven analytics to forecast future sales trends and optimize inventory management. By utilizing predictive algorithms, the company anticipated demand spikes and adjusted inventory levels accordingly, ensuring that stock was readily available in regions where sales were expected to grow. This AI-driven approach aligns with the practices of automotive leaders like Toyota, which also uses AI to improve forecasting accuracy (Kühl, 2018). This allowed Centaur to efficiently manage inventory and meet customer demand more effectively.

### 2.3.7 Conclusion

Centaur's Sales Strategy and Optimization demonstrated a data-driven and regionally customized approach, integrating insights from simulation reports and real-time performance metrics. By tailoring strategies to fit local markets, aligning dealer incentives with corporate objectives, and utilizing modern technologies like AI and digital sales platforms, Centaur successfully optimized its sales operations. Continuous internal and external benchmarking allowed the company to stay agile and responsive to shifting market dynamics, ensuring ongoing competitiveness and growth.

# 3. Methodology

## 3.1 Research Design

The research design for this project employed a mixed-methods approach, combining both quantitative and qualitative data to inform decision-making and strategic planning. This approach was chosen to provide a more comprehensive understanding of the business environment by integrating numerical data with contextual, subjective insights (Creswell & Creswell, 2018). The combination of these methods allowed for a more nuanced interpretation of Centaur's performance and market dynamics, leading to more informed and effective decision-making.

The quantitative data offered objective measures of financial performance, production efficiency, and sales targets (Saunders, Lewis, & Thornhill, 2019). These metrics were critical for tracking the success of operational decisions and ensuring financial goals were met. In contrast, qualitative data provided deeper insights into consumer preferences, market perceptions, and competitor positioning, which were essential for customizing marketing strategies and refining product offerings (Bryman, 2016). This balance of data types allowed Centaur to make well-rounded, data-informed decisions.

By integrating both methods, it was possible to:

- Use quantitative data to track financial and operational performance, such as sales figures, profitability, and production efficiency (Saunders et al., 2019).
- Use qualitative data to understand customer needs and perceptions, which informed decisions about marketing, product design, and dealer network expansion (Silverman, 2014).

## 3.3 Data Collection Methods

Data was collected from two primary sources: quantitative reports generated from the simulation and qualitative insights obtained from market research, customer feedback, and perception reports (Robson & McCartan, 2016). Each type of data served a unique purpose, with quantitative data guiding financial and operational decisions, while qualitative insights shaped marketing strategies and product development based on customer preferences and market trends.

### 3.3.1 Quantitative Data

Quantitative data was primarily derived from the following reports:

- Profit and Loss Statements: These reports gave detailed insights into Centaur's financial health, including revenue, expenses, and profitability (Bryman, 2016). They were essential for assessing pricing strategies and sales campaigns. By analysing profit margins for each car model, Centaur could adjust pricing and promotions to boost profitability while staying competitive.

- Cash Flow Statements: Used to track Centaur's liquidity, these reports showed how well the company managed its working capital (Saunders et al., 2019). This data informed decisions on where to allocate funds, such as marketing, dealer network expansion, or R&D. Monitoring liquidity ensured resources were effectively distributed for growth and efficiency.
- Production and Sales Reports: These reports detailed production capacity, sales volumes, and stock levels, critical for meeting production goals and keeping the dealer network well-supplied (Robson & McCartan, 2016). If sales spiked unexpectedly in a region, production was adjusted to prevent stock shortages, ensuring smooth operations.
- Market Share and Benchmarking Data: Quantitative benchmarking compared Centaur's market share and sales performance with industry averages and competitors (Porter, 2008). This allowed Centaur to make periodic adjustments, staying competitive in key segments and regions where competitors were gaining traction.

### 3.3.2 Qualitative Data

Qualitative data played a crucial role in understanding market dynamics, consumer preferences, and the competitive landscape (Silverman, 2014). The main sources of qualitative data were:

- Market Research Reports: These reports gave detailed insights into consumer preferences, emerging trends, and regional demands (Kotler & Keller, 2016). They helped guide product customization and marketing decisions. For example, the growing demand for eco-friendly cars led Centaur to focus more on promoting electric and hybrid vehicles in specific areas, aligning its offerings with market needs.
- Customer Perception Reports and Perceptual Maps: These reports provided insights into how consumers viewed Centaur's products compared to competitors (Aaker, 2012). Perceptual maps highlighted attributes like safety, comfort, and innovation. This data helped refine Centaur's marketing message, improving product positioning and differentiation in the market.
- Competitor Analysis: Competitor analysis was key to Centaur's strategy. Insights from competitor reports gave a clear view of their marketing, product positioning, and features (Porter, 2008). When competitors targeted low-cost models, Centaur emphasized high-end features like AI-driven safety systems, helping the brand stand out in a competitive market by focusing on innovation and quality.

## 3.4 Application of Quantitative and Qualitative Data in Decision-Making

Centaur utilized both quantitative and qualitative data for decision-making across pricing strategies, dealer expansion, and marketing campaigns.

- Pricing Strategies Using Quantitative Data: Pricing decisions were based on analyzing Profit and Loss Statements, sales trends, and gross profit margins (Saunders et al., 2019). If a model showed strong sales but declining margins, pricing or promotions were adjusted. Break-even analysis helped ensure pricing aligned with costs, maintaining profitability while staying competitive.
- Dealer Network Expansion Using Qualitative Data: Dealer network growth was driven by market research and customer perception data (Kotler & Keller, 2016). Centaur expanded its network in high-demand regions, balancing supply with demand. This strategic approach improved dealer performance and market coverage.
- Marketing Campaigns Using Qualitative Data: Customer perception reports shaped Centaur's marketing strategies, targeting consumers interested in technological innovation and eco-friendly features (Aaker, 2012). Regular assessment of marketing ROI ensured campaigns were cost-effective and aligned with customer preferences.
- Using Competitor Data for Strategic Adjustments: Competitor data and Porter's Five Forces Model helped Centaur refine its strategies (Porter, 2008). By analysing competitor strengths, Centaur adjusted pricing and expanded its dealer network to target high-demand regions, positioning itself effectively in the market.

## 3.5 Data Analysis Tools and Methods

A variety of tools and methods were used to analyse the collected data and support decision-making:

- Trend Analysis: This method used to identify patterns in financial performance, such as sales fluctuations or production cost changes (Saunders et al., 2019). This helped Centaur forecast future trends and adjust pricing, marketing, and production strategies to stay ahead of market shifts and ensure operational efficiency.

- SWOT Analysis: Recurring SWOT analyses evaluated Centaur's strengths, weaknesses, opportunities, and threats (Grant, 2016). This ensured that strategic decisions aligned with core strengths, like innovation, while addressing market risks, helping Centaur adapt to changing conditions and maintain a competitive edge.

- Perceptual Mapping: This tool compared Centaur’s product attributes to competitors (Aaker, 2012). Visualizing customer perceptions helped refine marketing messages and product features to better align with consumer expectations, ensuring effective market positioning.

- Comparative Benchmarking: Centaur consistently compared its performance against industry benchmarks (Porter, 2008). This offered insights into financial performance, market share, and customer satisfaction, allowing Centaur to make adjustments and improve its competitive positioning.

## 3.6 Evaluation and Continuous Improvement

The data-driven decision-making process was consistently evaluated using a combination of quantitative and qualitative feedback. Financial reports enabled immediate assessment of the impact of pricing and production decisions, while qualitative insights from customer perception reports provided ongoing understanding of consumer satisfaction and market positioning (Bryman, 2016).

This iterative approach, where decisions were continuously refined based on data, ensured that Centaur’s strategies stayed aligned with both short-term financial objectives and long-term strategic goals (Creswell & Creswell, 2018). By integrating competitor data with internal performance metrics, Centaur could swiftly adapt its strategies to the ever-changing automotive market, maintaining a competitive edge.

# 4. Business Game Discussion

As part of the team at Centaur, the Sales and Dealer Network Executive was responsible for managing the sales and dealers network strategy throughout the 10-week simulation, with each week representing one business year. Centaur operated in four key car segments small, medium, large, and luxury each tailored to the needs of specific age demographics. Small cars were targeted at individuals aged 55 and older, medium cars were designed for the 25-40 age group, large cars catered to the 40-55 age range, and luxury cars were aimed at affluent customers aged 40 to 55. This segmentation strategy allowed Centaur to offer a diverse range of vehicles that appealed to various customer groups, ensuring broad market coverage and enhancing sales opportunities across multiple segments.

In the role of Sales and Dealer Network Executive, the primary focus was on setting ambitious sales targets, preparing comprehensive sales plans, and developing a pricing strategy that kept Centaur competitive. I managed dealer relationships and launched sales campaigns aimed at boosting demand for our vehicles. Key decisions included adjusting prices, aligning production levels with market demand, and evaluating the effectiveness of sales initiatives. These decisions were regularly benchmarked against competitors to ensure Centaur remained profitable and competitive. Every action required balancing the goal of increasing short-term sales with maintaining long-term success, while also being responsive to changing market conditions and competitive pressures.

## 4.1 Week 1, 2 and 3

### 4.1.1 Key Decisions and Impact on Company's Performance

As the Sales and Dealer Network Executive, the primary responsibility was to set and achieve annual sales budgets, both in terms of volume and value. I was also tasked with developing a strong dealer network and implementing pricing strategies aimed at increasing profitability while maintaining competitiveness. Throughout the business simulation, several key decisions were made regarding product pricing, sales promotions, and dealer network expansion. These decisions played a pivotal role in shaping Centaur's overall strategy and had a significant impact on the company's financial performance. By aligning these initiatives with market demands and competitive dynamics, I contributed to Centaur's growth and long-term success.

#### 4.1.2 Product Sales Plan

At the start of the simulation, we develop an ambitious sales plan focused on maximizing volumes for our key models: ARION and VELOZ. Using market research data, I identified strong demand in the small and medium car segments and adjusted production targets accordingly. For ARION, we set a goal of reaching 90,000 units, while VELOZ's target was set at 60,000 units. Both models were designed to align with customer preferences, offering competitive pricing and added features such as heads-up displays and wireless charging. This alignment between production and market demand enabled us to successfully meet our sales targets in these segments, driving growth and solidifying our market position

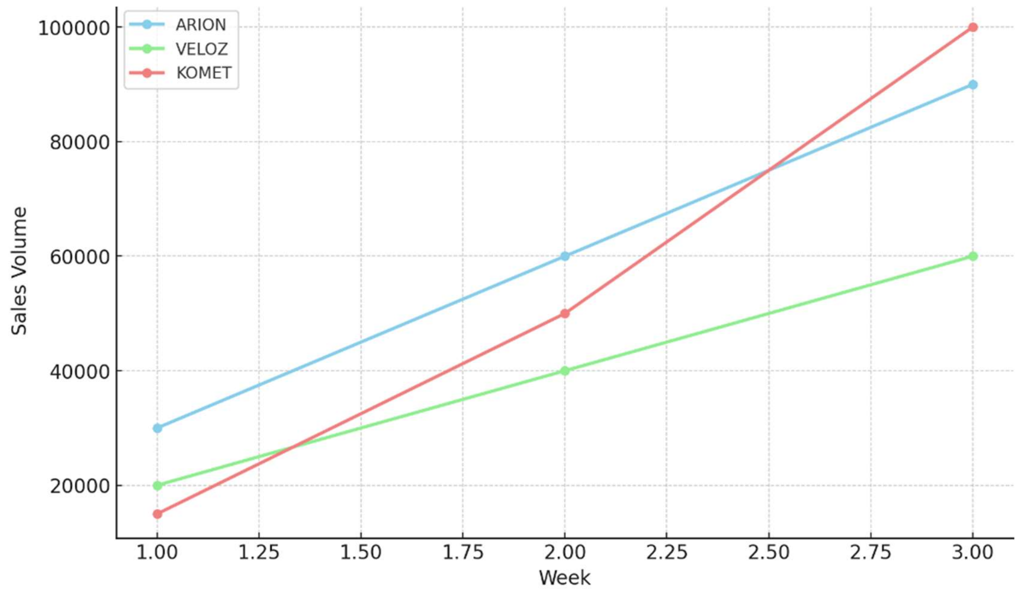


*Figure 1 Sales Volume of Arion, Veloz and Komet over time*

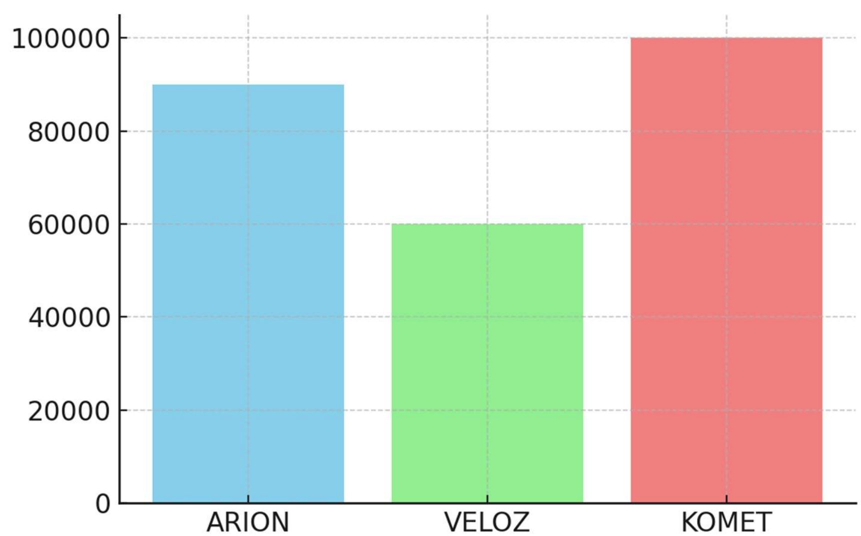


*Figure 2 Production Volume by model*

### 4.1.3 Pricing Strategy

To achieve the desired sales volume and profitability, I adopted a pricing strategy that balanced market competitiveness with the need to maintain healthy margins. For ARION, I implemented a 2% price increase, and for VELOZ, a 3% increase, both designed to adjust for inflation while keeping the products attractive to customers. This decision was crucial, as inflationary pressures were forecasted to rise by 7.70%. The modest price increases allowed Centaur to preserve profitability without alienating price-sensitive buyers. This approach effectively positioned Centaur in the market, enabling the company to sustain profitability while competing with aggressive pricing strategies from rivals like Aizen and STELLAR.

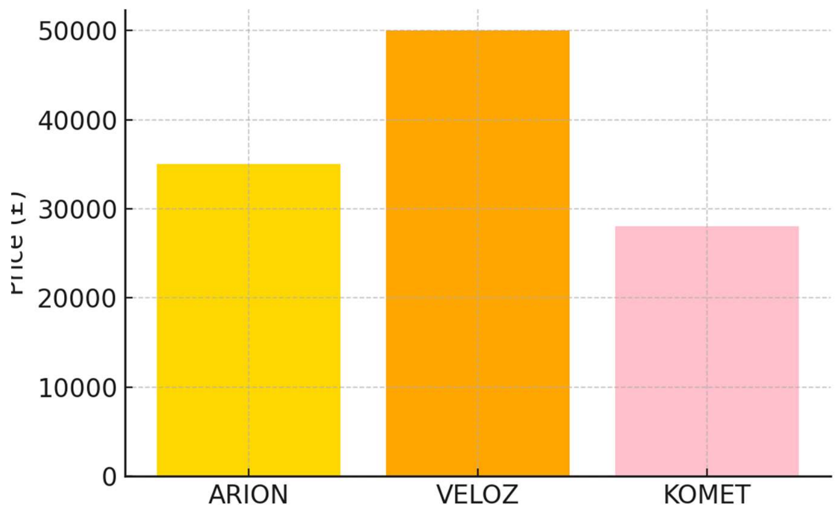


*Figure 3 Price by Model*

### 4.1.4 Sales Promotions and Campaigns

Recognizing the importance of brand awareness, I increased the promotional budget by 20% in Week 2, focusing on targeted television and radio campaigns to drive sales in the small and medium car segments. This investment delivered positive results, with VELOZ's market share rising to 2.47% by Week 3. While our promotions were effective, competitor benchmarking revealed that Aizen had increased their promotion budget by a significant 142%, highlighting the potential for even greater returns with additional promotional efforts. Moving forward, I recommended reallocating more resources towards digital and television advertising to further boost brand visibility and enhance market penetration.

## 4.1.5 Overview of Role's Performance

### 4.1.5.1 Sales Target Achievement

By the end of Week 3, Centaur successfully met its sales targets for ARION and VELOZ, achieving 90,000 and 60,000 units sold, respectively. This success was attributed to a combination of targeted promotions, strategic pricing, and a well-developed dealer network. However, the KOMET model, priced at £28,000, fell short with a market share of only 1.76%, highlighting the need for adjustments in pricing and promotion strategies to better capture the large car market. Moving forward, I recommended a review of the KOMET's pricing and promotional efforts to boost its competitiveness and increase its appeal in this segment.

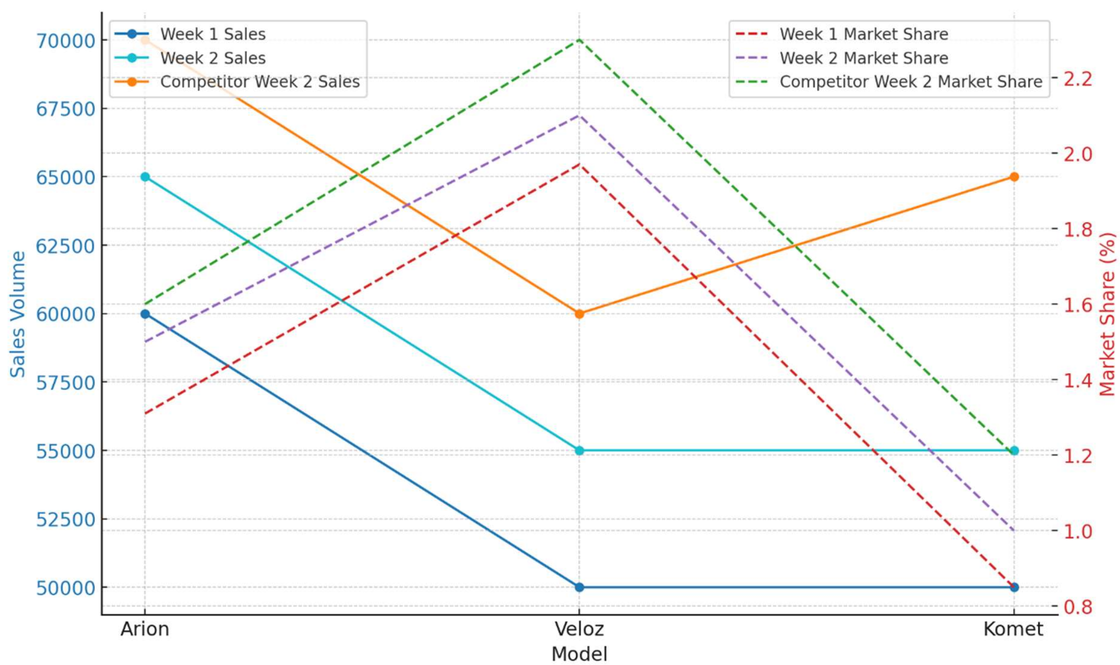


Figure 4 Sales Volume and Market Shares Comparison

### 4.1.5.2 Profit Margins

A key focus of the role was maintaining profit margins while scaling up sales. We successfully achieved a gross profit margin of 36.03% and a sales margin of 17.87%, outperforming many competitors. Striking this balance between sales volumes and profitability was crucial for ensuring Centaur's financial stability and delivering value to shareholders. The careful pricing strategy, combined with efficient cost management, enabled Centaur to remain competitive while sustaining a healthy bottom line. This approach not only supported immediate financial goals but also positioned the company for long-term success.

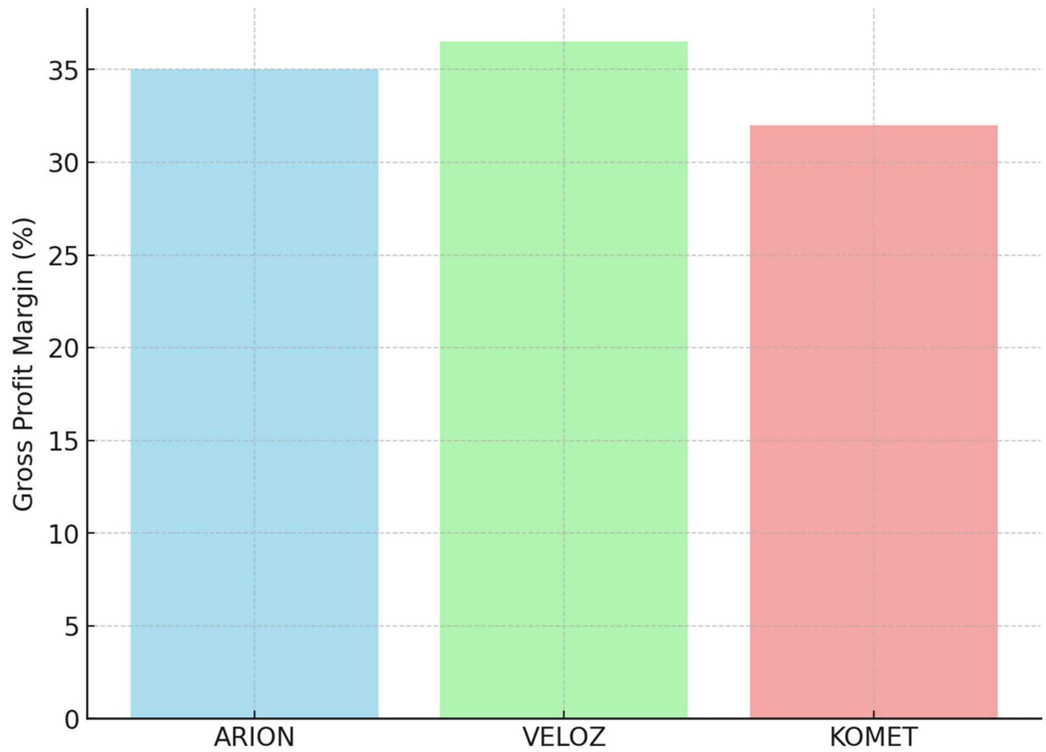


*Figure 5 Gross Profit Margin Comparison Across Models*

#### 4.1.5.3 Dealer Network Development

One of the most significant aspects of the role was expanding the dealer network to reach a wider market. By focusing on regions with high demand for small and medium cars, I was able to enhance market penetration and improve dealer performance. This expanded network increased the overall visibility of Centaur's product lines, contributing to the success of our sales strategy, especially in regions with intense competition from established players like Carrus Motivus and STELLAR.

### 4.1.6 Benchmarking Analysis

To evaluate our performance, I employed competitor benchmarking to compare Centaur's sales, market share, and promotional efforts with key rivals. Teams like Carrus Motivus (Team 1) and Aizen (Team 5) posed significant challenges, particularly in the large and luxury segments. By analyzing their strategies, I was able to adjust Centaur's approach to maintain competitiveness.

#### 4.1.6.1 Market Share Comparison

By Week 3, Centaur captured 2.03% of the small car market, 2.47% of the medium segment, and 1.76% of the large car segment, showing solid progress from our initial position. However, further improvements were needed to compete with rivals like Aizen, which held a 4.25% share in the luxury market due to aggressive promotions and competitive pricing. Benchmarking against competitors helped pinpoint areas for improvement, particularly in refining our pricing strategy and increasing promotional spending to sustain competitiveness in critical segments.

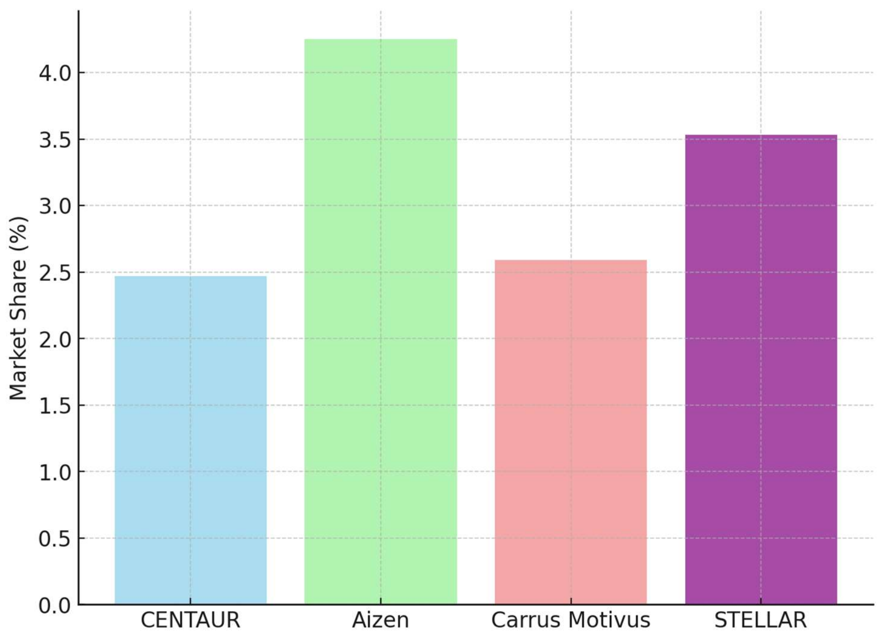


*Figure 6 Market Shares Comparison with Competitors*


Figure 7 Market Shares by Model

### 4.1.6.2 Promotion and Brand Awareness

While our promotions were effective, they were not as aggressive as those of competitors like Aizen. Benchmarking revealed that Aizen's significant increase in promotional spending resulted in higher brand visibility and stronger market share growth. To remain competitive, I recommended increasing our promotional budget, with a particular focus on TV advertising and dealer incentives. This strategy would enhance Centaur's brand recognition and help secure a larger market share in key segments, positioning us more effectively against aggressive competitors like Aizen.

#### 4.1.6.3 Major Challenges Encountered

One of the primary challenges was maintaining profit margins in a highly competitive and inflationary environment. Rising material costs, exacerbated by the EU7 regulations, further squeezed profitability. Competitors like Carrus Motivus implemented significant price cuts and invested heavily in automation, creating an even more challenging landscape. To maintain competitiveness, we had to carefully manage costs without compromising product quality or dealer relationships. Dynamic adjustments to pricing strategies and promotions in response to market fluctuations became crucial for sustaining growth. This approach allowed us to remain agile and competitive despite the external pressures, ensuring that Centaur stayed on track with its financial and market objectives.

### 4.1.7 Financial Outcomes and Adjustments

#### 4.1.7.1 Net Profit and Gross Margins

By the end of Week 3, Centaur posted a net profit of £1,315.15 million, demonstrating the effectiveness of our balanced approach to sales volume, cost management, and pricing strategies. The gross margin of 36.03% highlighted the company's ability to control production costs while maximizing revenue through strategic pricing and marketing efforts. Despite inflationary pressures and rising material costs, Centaur maintained profitability by leveraging automation and operational efficiency. This focus on streamlining operations while remaining competitive in the market allowed us to sustain strong financial performance.

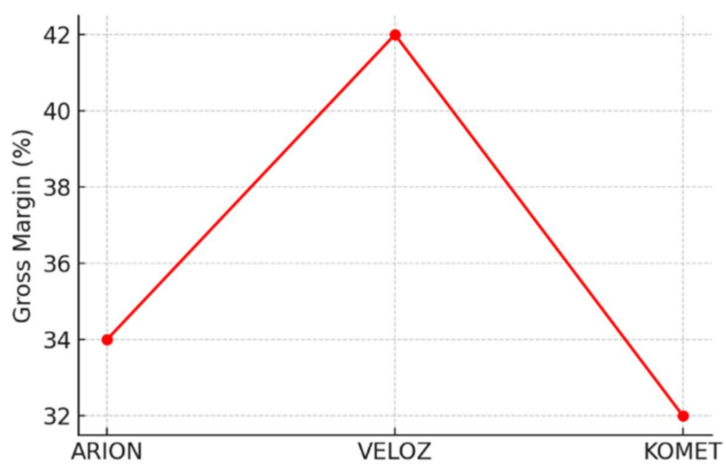


*Figure 8 Gross Margin by Model*

#### 4.1.7.2 Price Adjustments and Stock Management

One of the key adjustments made during the simulation was the decision to maintain the price of the KOMET at £28,000, despite its underperformance in sales. However, after recognizing the high price sensitivity in the large car segment, I proposed a price reduction in the next cycle to stimulate demand. This adjustment, combined with leaner stock management, was expected to improve the market share for large cars. Implementing a more flexible pricing strategy moving forward would enable us to respond quickly to market trends and competitor actions, ensuring that Centaur remained competitive while better aligning our offerings with consumer expectations.

#### 4.1.7.3 Profitability of Sales Promotions

The sales promotions launched in Week 2, particularly in digital and radio advertising, successfully boosted brand awareness and sales, with VELOZ achieving a 2.47% market share increase by Week 3. However, competitor analysis indicated that Aizen's significantly higher promotional budget led to greater market penetration. To remain competitive, I recommended increasing the promotional budget, particularly for television advertising and dealer incentives. This move would likely enhance Centaur's brand visibility and help capture a larger market share, positioning the company to compete more effectively in key segments.

### 4.1.8 Strategic Implementation and Recommendations

#### 4.1.8.1 Dynamic Pricing Strategy

Moving forward, I recommend adopting a more flexible pricing model, particularly for the small and medium car segments, to better respond to market fluctuations and competitor actions. A dynamic pricing approach would enable us to increase prices when inflationary pressures rise, while allowing for price reductions when necessary to maintain competitiveness. This strategy would provide Centaur with the agility needed to adjust quickly to market conditions and sustain both profitability and market share.

#### 4.1.8.2 Dealer Network Expansion and Incentive

To further grow our market share, particularly in underperforming regions, I recommend expanding our dealer network. Offering dealer incentives could boost sales volumes in areas where Centaur has lower visibility compared to competitors like Carrus Motivus and Aizen. This expansion would also enhance the reach of our product lines, especially for underperforming models like KOMET. By strengthening our presence in these regions, we can increase brand visibility, drive sales growth, and improve overall market penetration.

#### 4.1.8.3 Enhanced Promotions and Product Differentiation

More targeted promotions are necessary to better differentiate the KOMET model, which underperformed compared to ARION and VELOZ. By emphasizing its advanced technological features and offering more personalized promotions, we can better appeal to potential customers and increase market share. Additionally, shifting a larger portion of the promotional budget to TV and digital platforms would boost brand awareness, helping to strengthen Centaur's competitive position and enhance the overall visibility of the KOMET model in key segments.

#### 4.1.8.4 Cost Management and R&D

Lastly, careful management of labor and material costs is essential. By leveraging automation, streamlining production processes, and investing in research and development (R&D), Centaur can maintain its competitive edge despite rising costs. Prioritizing R&D for fuel-efficient and low-emission vehicles will also position the company to meet future regulatory requirements and evolving consumer demands. This approach not only ensures cost-efficiency but also aligns Centaur with industry trends, preparing the company for long-term growth and sustainability in a competitive market.

## 4.2 Week 4, 5 and 6

During Weeks 4 to 6, the role as Sales and Dealer Network Executive at Centaur involved managing key areas such as pricing strategies, inventory, promotions, and long-term R&D investments. Each decision had a direct impact on our financial performance and competitive position in the market. We faced challenges with Veloz (large car) and Komet (small car), while Arion (medium car) continued to perform steadily. These weeks were pivotal in balancing short-term profitability with the execution of our long-term strategy, ensuring Centaur remained agile and competitive in a rapidly shifting market environment.

### 4.2.1 Pricing Strategy and Adjustments

We initially set competitive pricing for our models: Arion at £53,000, Veloz at £28,000, and Komet at £37,000. This pricing strategy proved successful for Arion, which sold 110,000 units and captured 2.66% of the market by Week 4. However, Veloz and Komet struggled to gain traction. By the end of Week 4, we had 35,201 unsold units of Komet and 17,001 unsold units of Veloz, indicating a misalignment between pricing and market demand. This suggested the need for immediate adjustments to the pricing strategy, promotions, and inventory management to better align with consumer preferences and drive sales for these underperforming models.

To stimulate demand, we reduced Veloz's price to £27,500 in Week 5. However, despite this adjustment, sales remained sluggish, and inventory issues continued. By Week 6, we further lowered Veloz's price to £26,500, successfully clearing all 99,000 units in stock. While this approach resolved the immediate inventory challenge, it was clear that relying on price cuts alone was unsustainable for long-term profitability. The struggles with Veloz and Komet underscored the need for more dynamic, market-driven pricing strategies that would better respond to consumer demand without depending heavily on aggressive discounts.

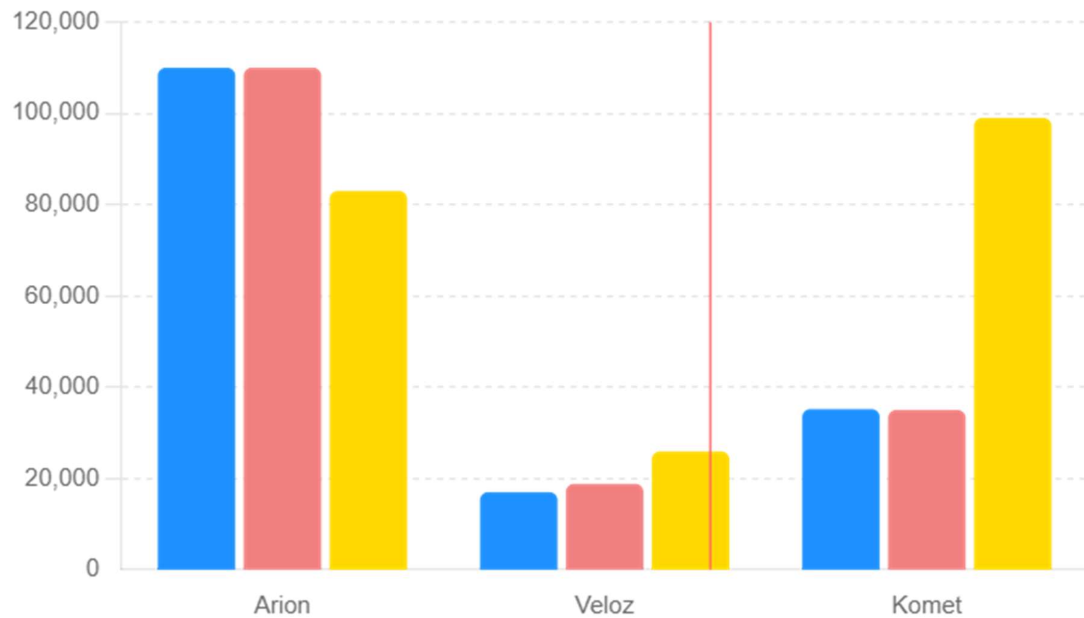


*Figure 9 Sales Performance by model Across Week*

Arion's success at a higher price point emphasized that pricing should reflect product differentiation rather than simply competing on cost. The challenges with Veloz and Komet made it clear that reducing prices alone wasn't enough to boost sales, highlighting the need for a more strategic approach.

### 4.2.2 Inventory Management and Financial Impact

Managing inventory was a significant challenge, especially for Veloz and Komet. By the end of Week 4, Komet had 35,201 unsold units, and Veloz had 17,001, resulting in surplus inventory that tied up capital and added £224.85 million in storage and maintenance costs. Despite adjusting production and ramping up promotions in Week 5, the issue persisted. Komet still had 18,811 unsold units by the end of Week 5, and Veloz continued to struggle, even after the price reduction, highlighting the complexity of resolving inventory challenges.

By Week 6, aggressive pricing helped clear Veloz's remaining inventory, but Komet still had 25,000 unsold units. This underscored the financial strain caused by overproduction and misaligned demand forecasting. Our reliance on price cuts and promotions wasn't a sustainable long-term strategy, as it didn't tackle the root issues of production planning and demand alignment. Moving forward, we need to better align production with market demand, supported by stronger forecasting and clearer product differentiation to ensure long-term stability and profitability.

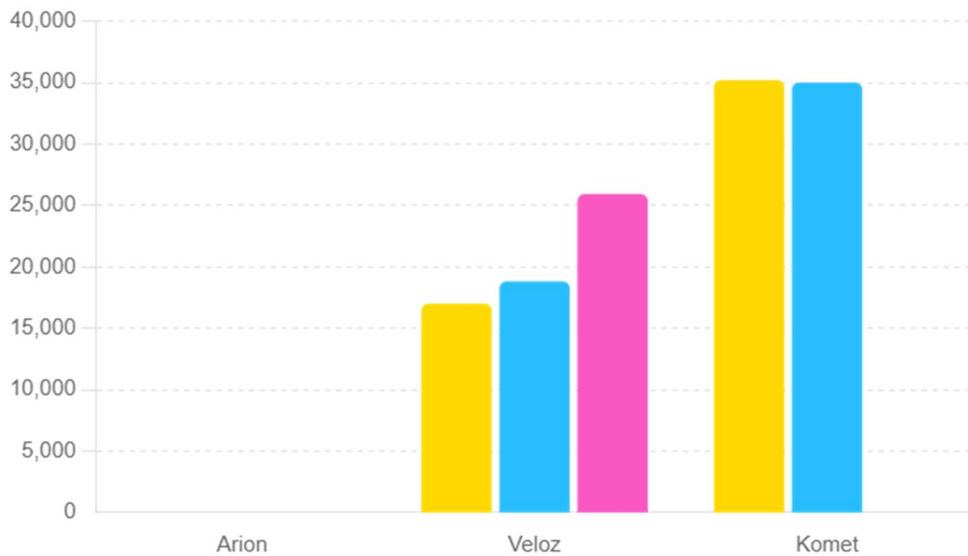


*Figure 10 Inventory Level By Model Across Weeks*

### 4.2.3 Promotions and Advertising Strategy

Given the inventory challenges, we invested heavily in promotions and advertising. In Week 4, we allocated £60 million to promote Arion, £25 million for Veloz, and £30 million for Komet. While these efforts helped Arion maintain its visibility and steady performance, they had limited impact on Veloz and Komet, both of which continued to struggle with slow sales despite the increased promotional efforts. This highlighted the need for a more targeted approach beyond just advertising spend.

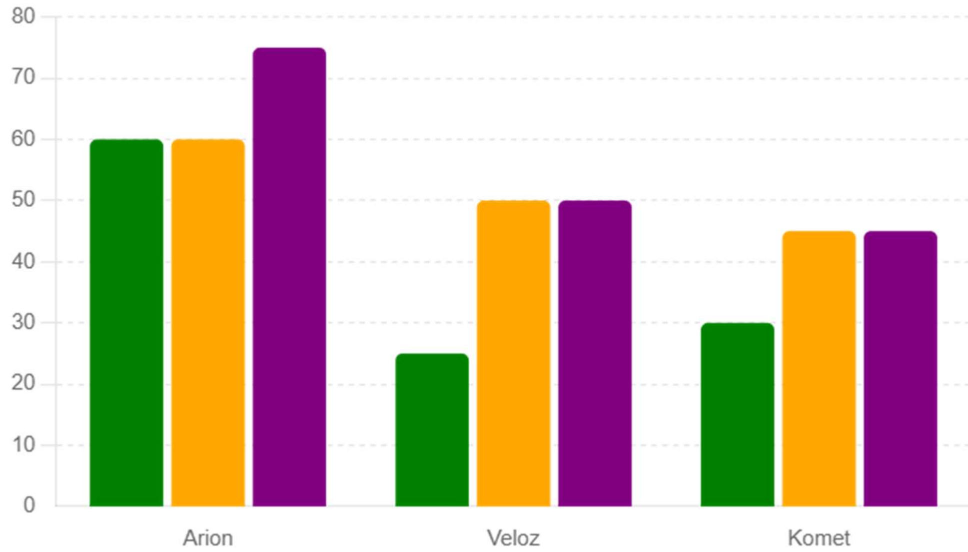


*Figure 11 Advertising Spend by Model Across Weeks (£ Million)*

To address this, we increased the promotional budgets in Week 5, allocating £50 million to Veloz and £45 million to Komet. Despite these efforts, sales growth remained slow, with both models ending Week 5 with considerable unsold inventory. By Week 6, we further boosted Arion's advertising budget to £75 million to maintain its strong performance, while keeping Veloz's budget steady at £50 million. Despite the increased spending, the impact on Veloz and Komet's sales was still limited.

While advertising helped stabilize Arion's sales, it wasn't sufficient to address the deeper issues with Veloz and Komet. This highlighted the limitations of relying solely on advertising to drive demand in a competitive market. Effective promotional strategies must be coupled with strong product differentiation and competitive pricing to ensure long-term success. The ongoing challenges with Veloz and Komet indicated that visibility alone wasn't enough, and more comprehensive marketing strategies were needed to achieve meaningful sales growth.

### 4.2.4 R&D Investments for Long-Term Growth

Amid these short-term challenges, we stayed focused on long-term growth by making significant investments in R&D. In Week 4, we allocated £164 million to automation, aimed at reducing labor costs and enhancing production efficiency. Additionally, we invested £42 million in developing hybrid and fuel cell engines, aligning with the increasing demand for environmentally friendly vehicles. These investments were crucial for positioning Centaur competitively in the evolving automotive market while addressing future consumer preferences and regulatory requirements.

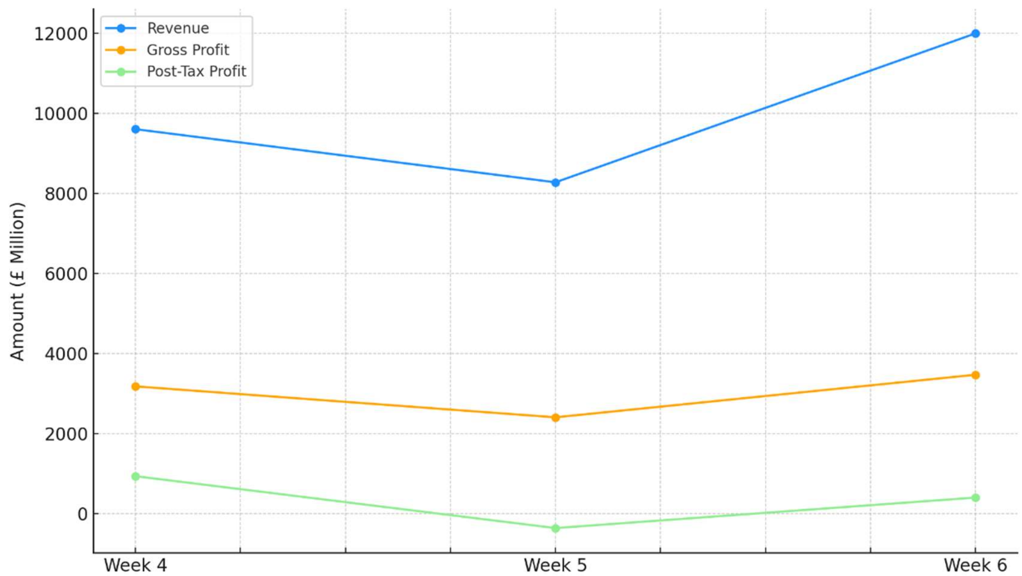


*Figure 12 Financial Performance Across Weeks (£ Million)*

By Week 5, we completed a Product Relaunch and Facelift for all models, enhancing their appeal with updated safety features and styling. These improvements positively impacted customer perception, especially in the medium and large car segments. In Week 6, we continued investing in future technologies, such as the Zero Emissions Engine and Smart Driving Controls, positioning Centaur to lead as the automotive industry shifts toward sustainability.

Although these investments put short-term pressure on our finances, they strategically positioned Centaur for long-term success. Competitors like Carrus Motivus and STELLAR were slower to adopt eco-friendly technology, giving us a significant opportunity to lead in this area. However, balancing these forward-thinking investments with ongoing challenges in inventory management and promotions required careful financial management to sustain momentum.

### 4.2.5 Benchmarking Against Competitors

A comparison with competitors highlighted areas where Centaur was falling behind, particularly in the large and small car segments. Carrus Motivus and STELLAR had stronger market positions, with Carrus Motivus capturing 3.02% of the medium car market, while Arion held only 1.98%. Similarly, STELLAR outperformed us in the large car segment, where Veloz continued to struggle. These gaps in performance indicated a need for strategic adjustments to better compete in these critical segments.

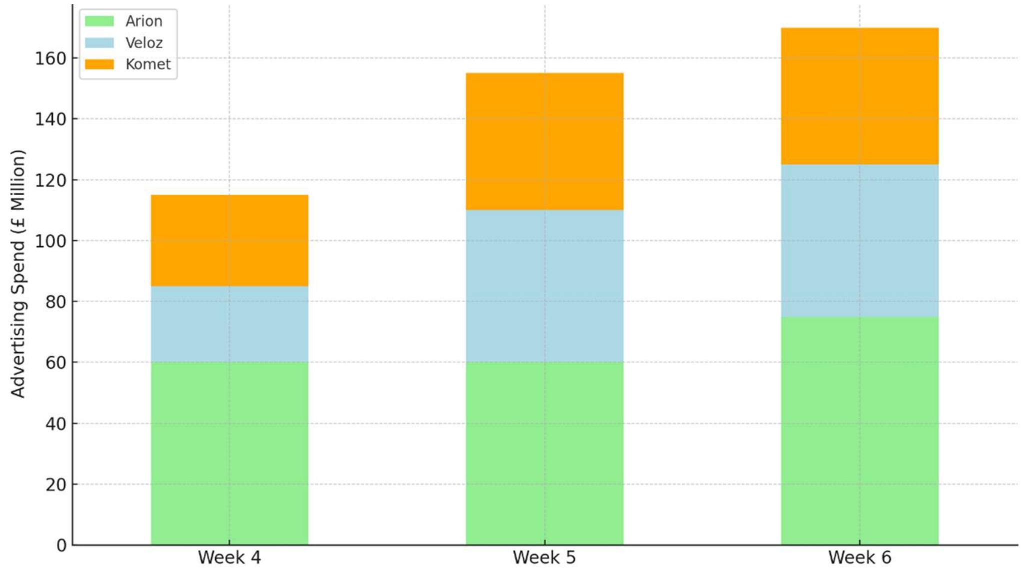


*Figure 13 Advertising Spend Across Models (By Week)*

Competitors achieved success through stronger brand positioning and effective customer loyalty programs, enabling them to maintain market share without resorting to significant price cuts. In contrast, Centaur relied heavily on aggressive promotions and price reductions, which proved less effective for building long-term market strength.

Benchmarking emphasized the need to move away from short-term promotional tactics and focus on more sustainable strategies, such as product innovation and customer engagement. If Centaur aims to compete effectively, especially in the eco-friendly vehicle market, prioritizing technological advancements and fostering deeper customer relationships will be crucial for long-term success.

### 4.2.6 Strategic Shifts and Implementation for Sustained Growth

Over Weeks 4 to 6, we implemented several key strategies to address immediate challenges, including inventory management and pricing. While aggressive price cuts for Veloz helped clear unsold stock, this approach proved unsustainable for long-term profitability. Moving forward, Centaur must shift away from short-term, reactive tactics and focus on proactive strategies that foster customer loyalty and emphasize product differentiation. This shift will ensure the company's growth and competitiveness in the long run, particularly in a market where customer engagement and innovation are key.

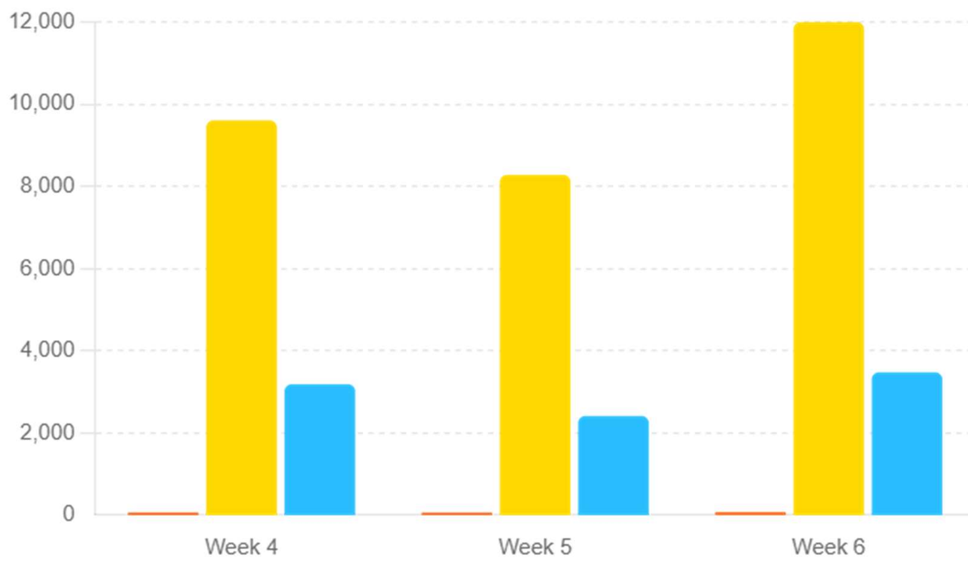


*Figure 14 Advertising Spend (Arion) vs Financial Performance*

Our promotional strategies helped maintain Arion's strong position in the medium car segment, but the struggles with Veloz and Komet highlighted the need for more targeted marketing efforts. Looking ahead, R&D investments will be critical in driving product innovation, particularly as we aim to lead in hybrid and electric vehicle technologies.

Our future strategy must focus on better aligning production with demand, refining pricing to reflect product value instead of relying on discounts, and building stronger brand loyalty through continuous product innovation. By leveraging our R&D investments and insights from benchmarking, Centaur can turn current challenges into long-term growth opportunities, particularly in the eco-friendly vehicle market. Success will depend on balancing short-term adjustments with long-term strategic initiatives, positioning Centaur as a market leader in the rapidly evolving automotive industry.

## 4.3 Week 7, 8, 9 and 10

### 4.3.1 Sales Strategy and Product Mix

Across Weeks 7 to 10, Centaur's strategic focus was on maintaining a balanced product mix and achieving optimal price positioning for each model. Arion, targeting the small car segment, was priced at £49,999 and captured a 2.67% market share, while Veloz, priced at £65,999, held a 2.76% market share by Week 8. These models' success underscored the effectiveness of our pricing strategy. However, luxury models like Sentinel faced limited sales despite a high price of £159,999. Nonetheless, Sentinel had the highest gross margin at 35.55%, helping offset the lower sales volume and contributing to profitability.

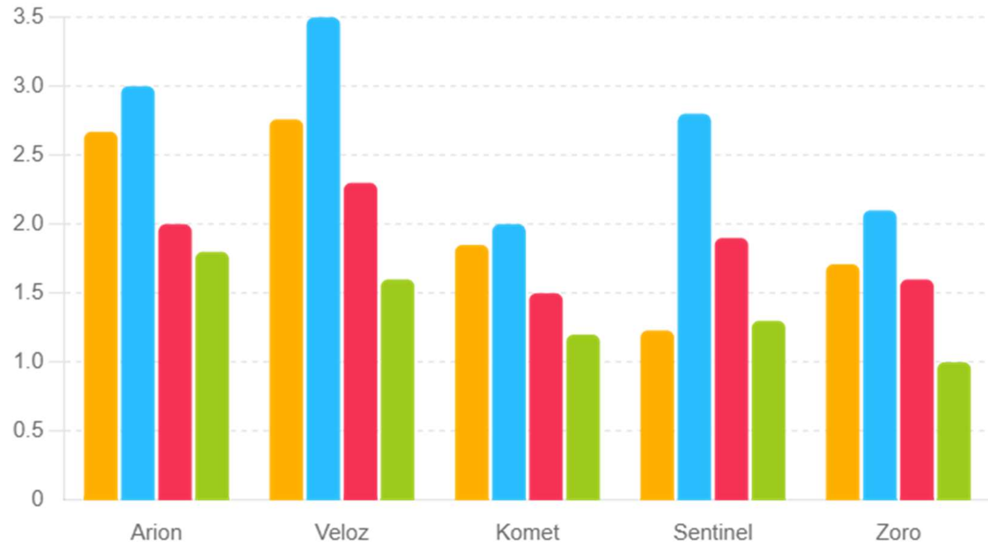


*Figure 15 Market Share Across Product Segments*

### 4.3.2 Inventory management

Inventory management was a key focus, with zero unsold stock across all models in Weeks 7 to 9. This success was attributed to accurate sales forecasting and efficient production planning, ensuring that capital wasn't tied up in excess inventory. Compared to competitors, Centaur's product range held a strong position in the medium car segment, with models like Komet and Veloz performing well in a highly competitive market. This efficiency in inventory management contributed to overall financial stability and market competitiveness.

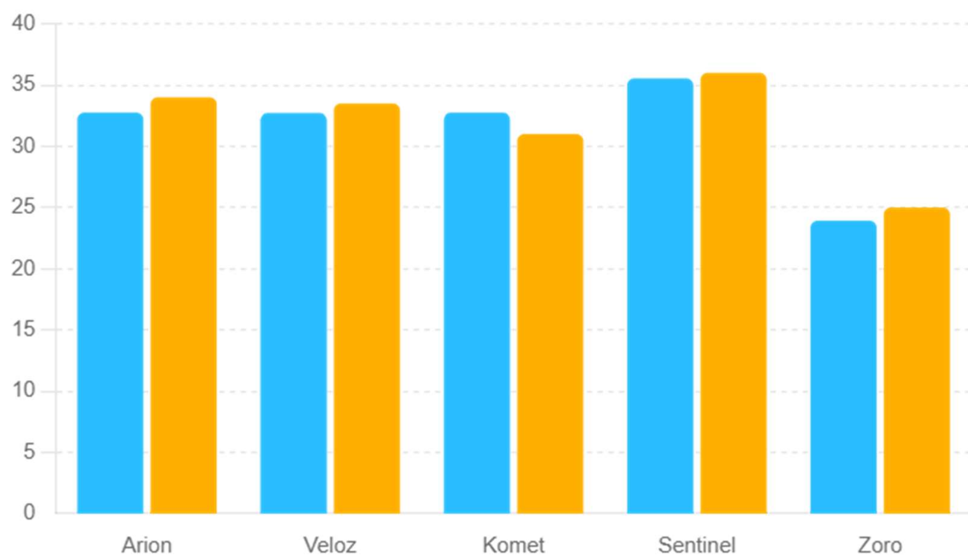


*Figure 16 Gross Margins Across Models*

### 4.3.3 Pricing Strategy and Profit Margins

The pricing strategy across models was generally successful, but some models, such as Zoro, exhibited lower gross margins at 23.92%, indicating the need for future price adjustments or cost control. Zoro's lower profitability pointed to the importance of refining cost structures for this model.

In contrast, Sentinel's profitability, with a gross margin of 35.55%, highlighted the potential of luxury models to drive higher profit margins despite lower sales volumes. Pricing decisions for models like Komet and Veloz resulted in margins exceeding 32%, aligning with competitors while maintaining a solid market share.

In the coming weeks, price adjustments will likely focus on optimizing profitability for underperforming models like Zoro. Sentinel's high gross margin suggests there is room for further exploration in the luxury segment, where prices could be increased slightly without significantly impacting demand. This strategic focus on balancing profitability and market share will be key to Centaur's ongoing success.

### 4.3.4 Dealer Network and Sales Channels

Developing an effective dealer network remained a crucial aspect of Centaur's overall strategy. During Weeks 7 to 9, the focus was on strengthening dealer relationships and offering incentives to boost sales. However, the results indicated only average market awareness generated from dealer promotions, highlighting underperformance in this area. To improve outcomes, further investment in dealer support and training will be necessary, ensuring dealers are better equipped to promote Centaur's products and maximize sales effectiveness.

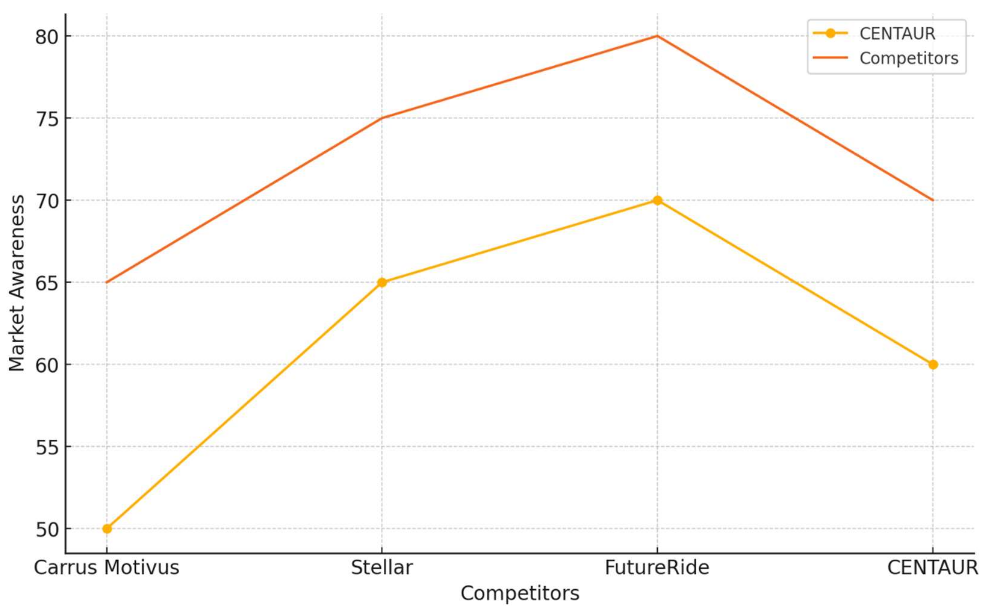


*Figure 17 Market Awareness Comparison: Centaur vs Competitors*

During Weeks 8 and 9, I implemented regional expansion strategies by focusing on weaker markets where Centaur's presence was limited. While this helped broaden the brand's reach, the immediate impact on sales performance was minimal. To improve results in future rounds, enhancing dealer incentives with a performance-based reward system will likely be more effective, motivating dealers to increase sales and strengthen Centaur's market presence in these regions.

### 4.3.5 Promotions and Market Awareness

Promotional campaigns played a pivotal role, with Centaur's efforts spanning radio, television, digital media, and dealer incentives. Radio and magazine promotions generated strong market awareness, while digital media and dealer incentives underperformed, resulting in only average overall results. This discrepancy underscored the need to reallocate funds to digital media, where awareness is growing rapidly, especially among younger demographics. Focusing more on digital platforms will allow Centaur to better engage with evolving consumer preferences and improve campaign effectiveness moving forward.

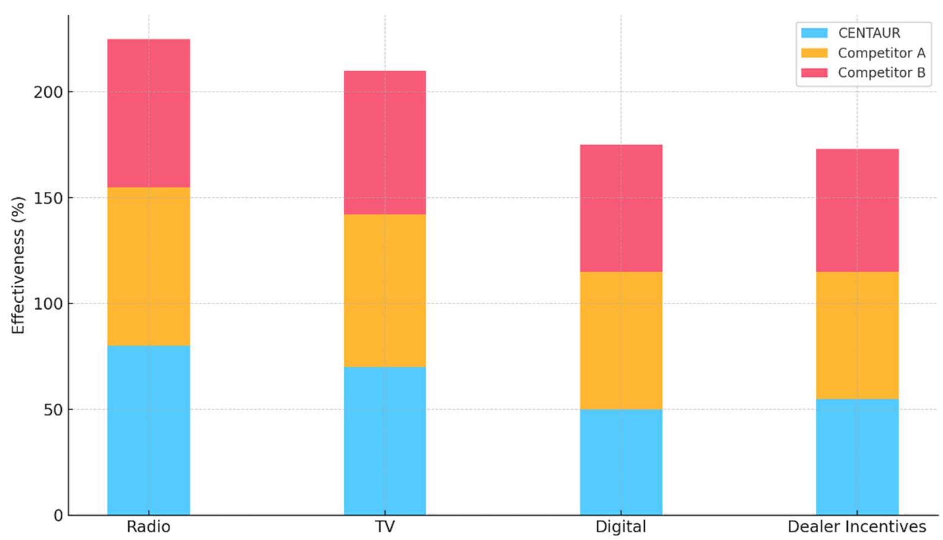


*Figure 18 Promotional Channel Effectiveness*

In weeks 9 and 10, I shifted promotional spending toward digital channels, anticipating better long-term results. Future campaigns will aim for a more focused digital approach to tap into tech-savvy consumers, especially for models like Komet, which have high-tech features appealing to younger audiences.

### 4.3.6 Competitive Benchmarking and Performance

Benchmarking Centaur's performance against competitors like Carrus Motivus and Stellar highlighted areas for improvement. Carrus Motivus held stronger positions in both the small and luxury segments, achieving higher market shares of up to 2.49% . While Centaur performed well in the medium and large car segments, it lagged behind in luxury sales.

In terms of productivity, Centaur's rate of 94.02 cars per worker per year was respectable but fell short compared to top performers like FutureRide, which produced 144.44 cars per worker. Graph illustrates this productivity gap, comparing Centaur to key competitors and the industry average. Addressing these gaps will be essential for Centaur's continued growth and competitive edge.

### 4.3.7 Investment for Business

This underscores the need for increased investment in automation and workforce efficiency to close the productivity gap. Automation investments initiated in Week 10 are expected to enhance productivity, particularly in the production of high-volume models like Arion.

Financial benchmarking revealed that Centaur's Return on Capital Employed (ROCE) was 27.40%, indicating efficient capital utilization. However, profit per employee (£501,443.78) lagged behind competitors like Stellar, suggesting a need for further improvements in cost management. Enhancing operational efficiency and reducing costs will be critical in improving profitability and overall competitiveness in future rounds.

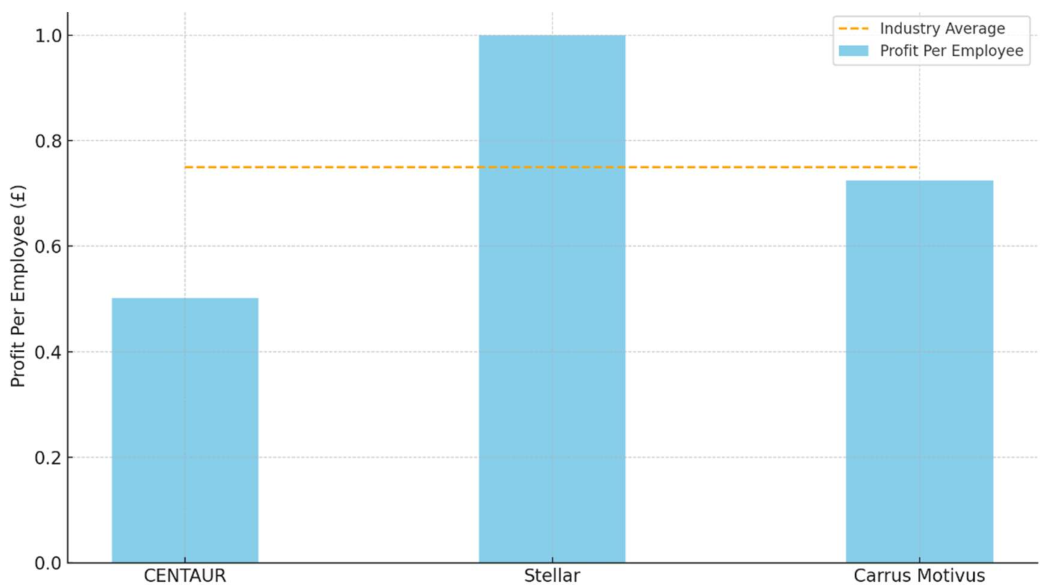


*Figure 19 : Profit Per Employee Comparison*

### 4.3.8 Financial Outcomes and Adjustments

The financial results from Weeks 7 to 10 demonstrated that Centaur maintained solid profitability, with a post-tax profit margin of 8.07%. However, competitors like Stellar achieved better returns through superior cost management. Moving forward, implementing a price increase for models like Zoro, alongside tighter cost controls, could help improve margins and overall profitability.

In Week 10, I prioritized automation investments to boost productivity, and this is expected to have a positive impact in future rounds. Additionally, adjustments in promotional strategies—particularly by increasing the digital budget—will help ensure greater market awareness and stronger engagement with key target audiences, positioning Centaur for future growth.

## 4.4 Conclusion

The Centaur business simulation underscored the vital importance of strategic decision-making in areas such as sales, pricing, and dealer network management to achieve both short-term success and long-term growth. As Sales and Dealer Network Executive, I concentrated on optimizing sales volumes, balancing competitive pricing, and crafting effective promotional campaigns, particularly for models like ARION and VELOZ. These strategies successfully boosted market share and profitability in key segments. However, challenges remained with underperforming models like KOMET, which required more dynamic pricing adjustments and better-targeted marketing efforts to enhance performance.

Benchmarking revealed that competitors like Aizen were more aggressive in their promotional spending, highlighting the need for Centaur to strengthen its marketing strategies and dealer incentives. Although Centaur achieved solid financial results, including healthy profit margins, the simulation emphasized the importance of cost control, inventory management, and product differentiation. Investments in automation and R&D prepared Centaur to remain competitive, especially as the automotive industry shifts toward eco-friendly vehicles.

Ultimately, Centaur's balanced approach of driving sales, controlling costs, and fostering innovation positioned the company for long-term success. The simulation underscored the importance of adaptability in a competitive, ever-changing market environment.

The accompanying graphs illustrate the company’s performance over the ten-week period, highlighting the growth and progress made in key areas such as sales, profitability, and market share.

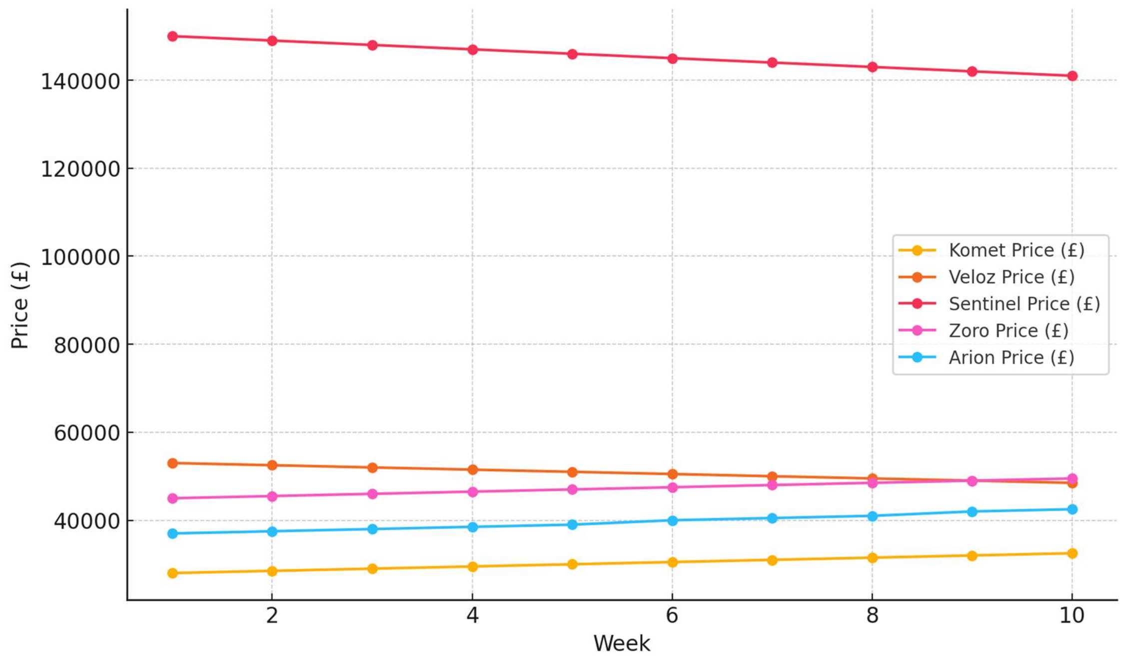


*Figure 20 Pricing Over all Models and Weeks*

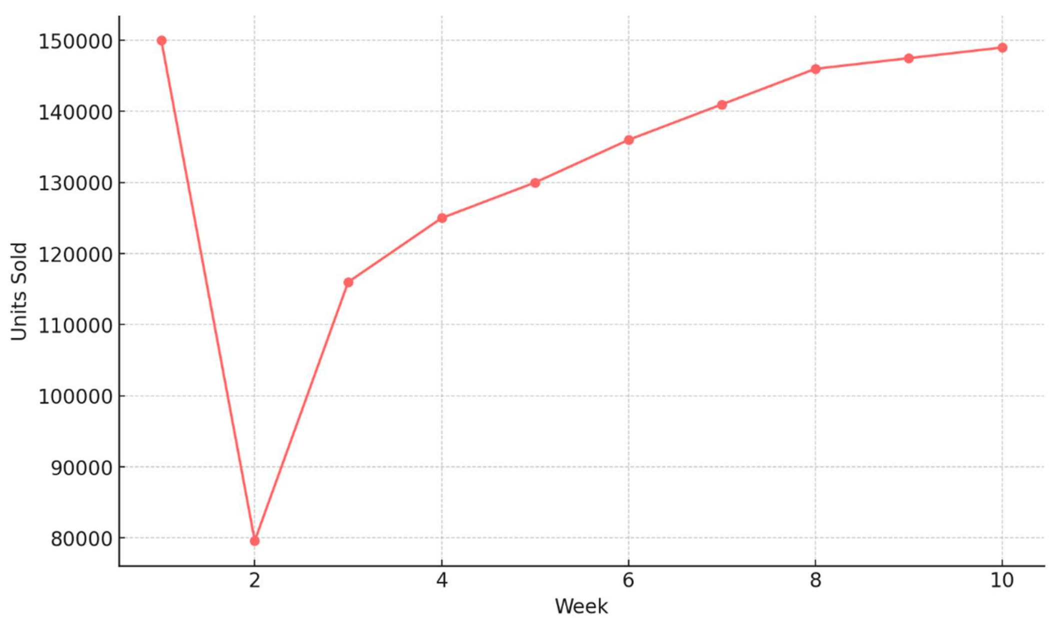


Figure 21 Total Inventory Sold for 5 Models Over All Weeks

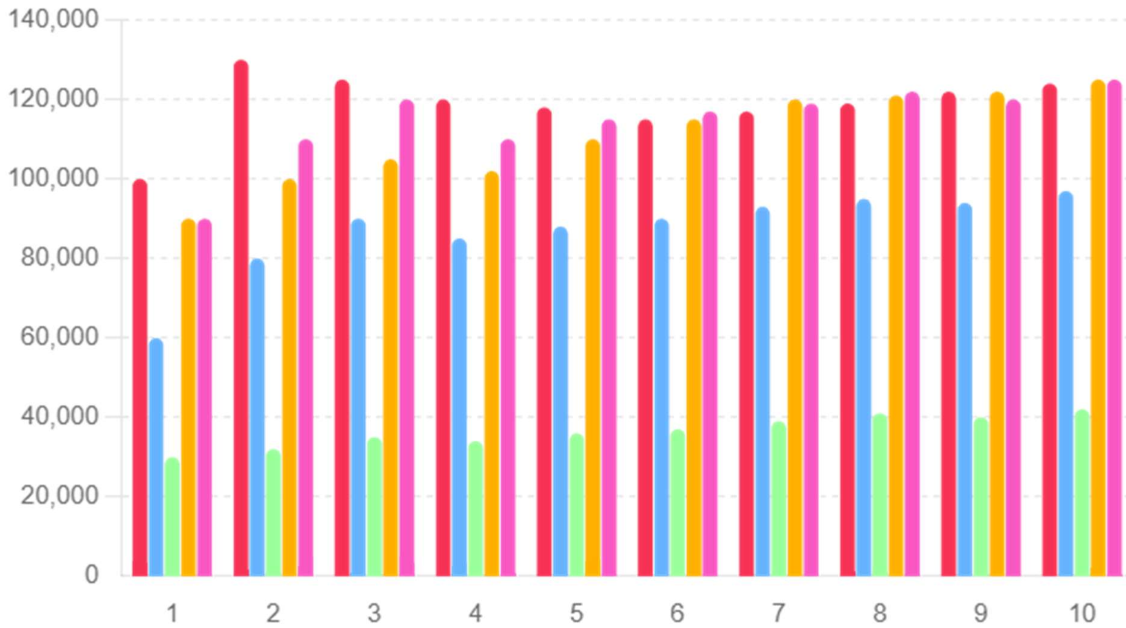

Figure 22 Total Sales Performance over all Weeks

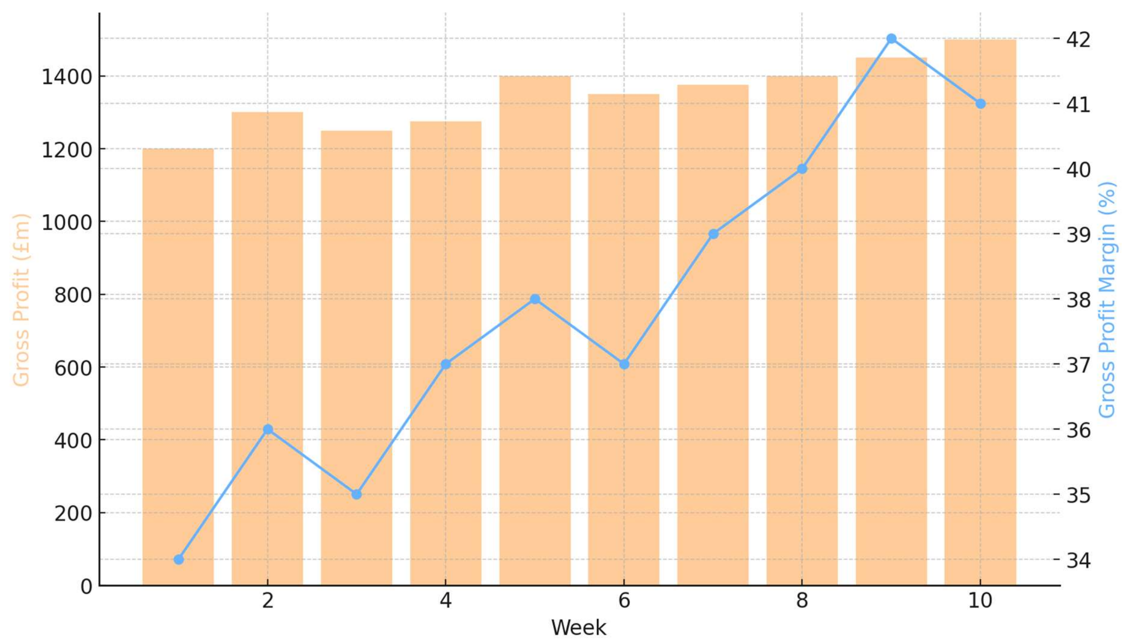

*Figure 23 Gross Profit and Margin (%) Over Weeks*

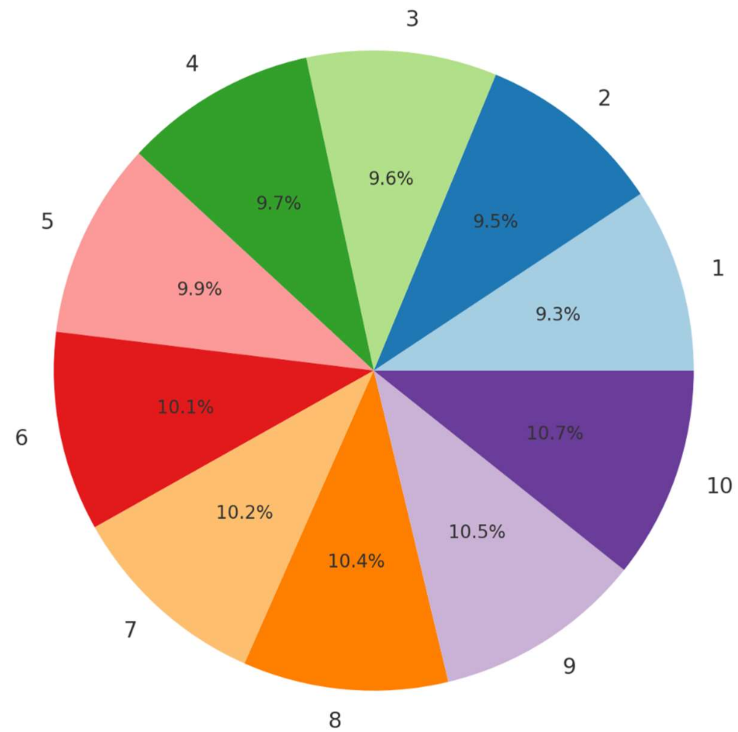


*Figure 24 Share Price Distribution Over all Weeks*

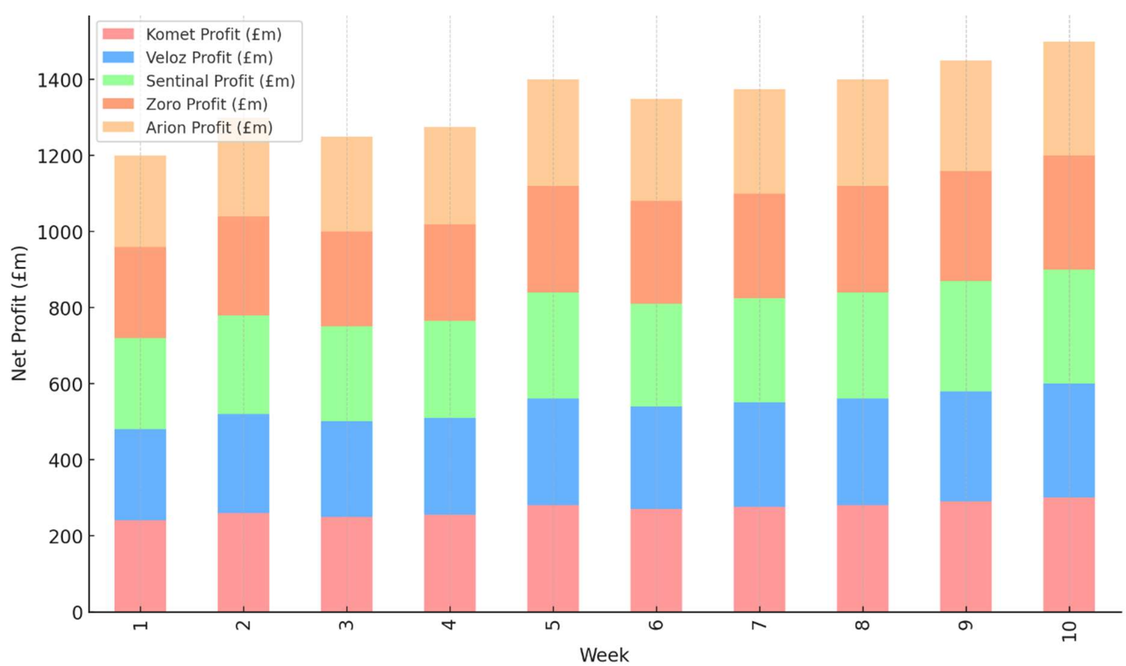


Figure 25 Net Profit Over Weeks by Model

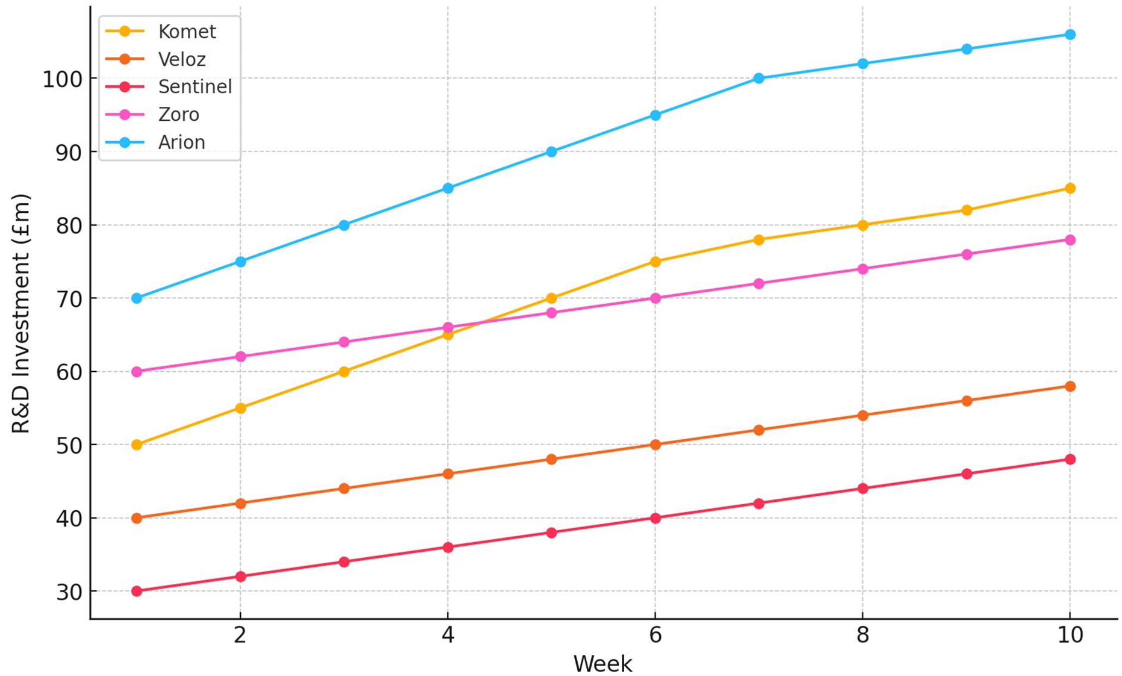


Figure 26 R&D Investment Over Weeks by Model

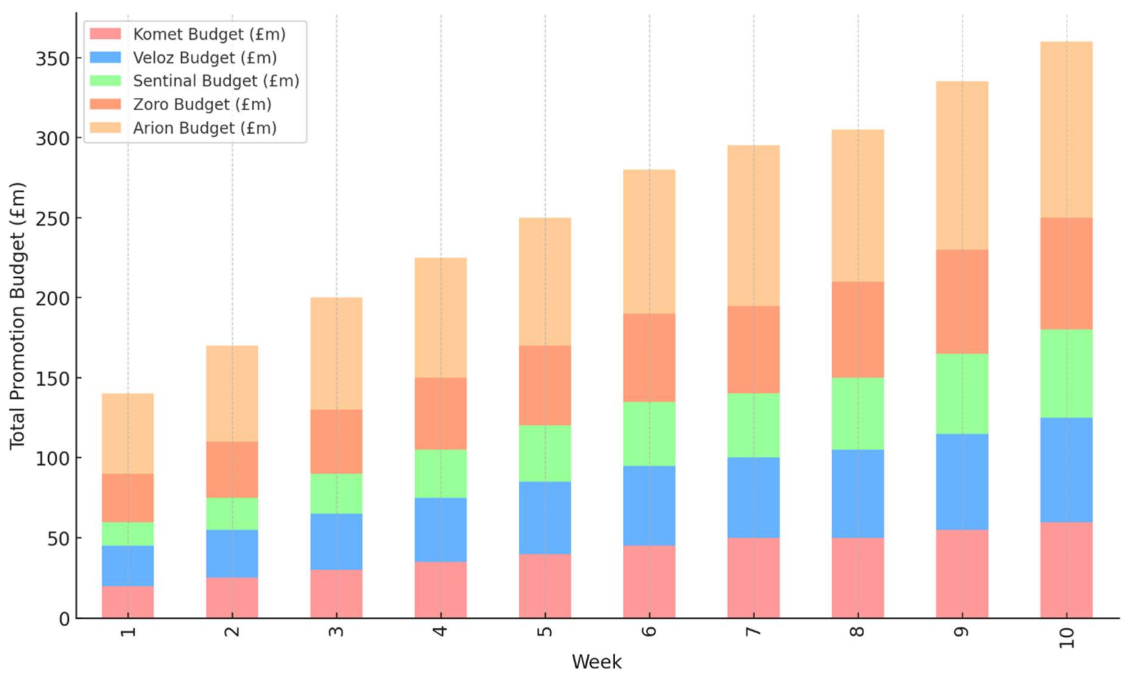


Figure 27 Promotion Budget Allocation Across Models over All Weeks

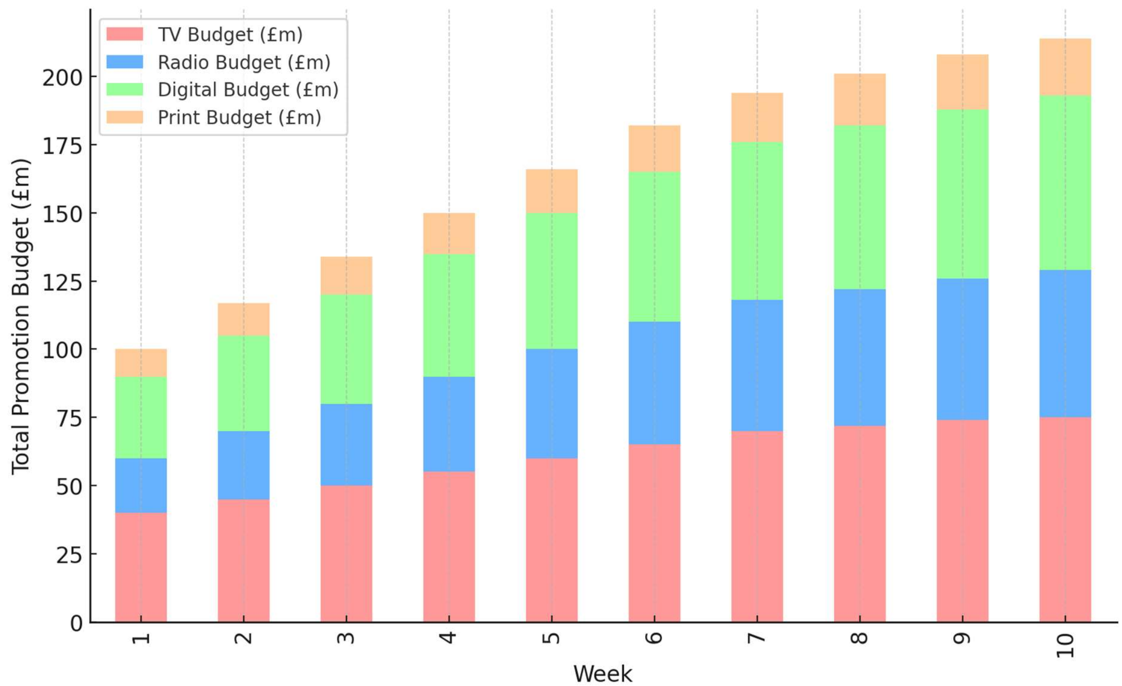


Figure 28 Promotion Budget Allocation by Channels Over All Weeks

# 5. Recommendations and Reflections

## 5.1 Recommendations for Improvement and Future Strategy

The Centaur business simulation offered a dynamic platform to test strategic decision-making, but several enhancements could further improve both the gameplay experience and the decision-making process.

### 5.1.1 Dynamic Pricing Strategy

A more sophisticated pricing model should be introduced. While price adjustments were possible, adding real-time market analytics tools would allow for dynamic pricing based on consumer demand, competitor pricing, and inflation rates. This would enable participants to react more effectively to market changes, optimizing profitability and market share (Kotler & Keller, 2016).

### 5.1.2 Advanced Analytics and Forecasting Tools

Incorporating advanced data analytics would greatly enhance decision-making. Predictive analytics could improve demand forecasting, aligning production with customer preferences. Real-time insights into sales trends, competitor moves, and customer sentiment would mirror the advanced analytics that companies like Amazon use to optimize operations (Davenport & Harris, 2017).

### 5.1.3 Refined Dealer Network Strategy

The dealer network strategy can be improved by adding metrics that assess dealer performance across multiple parameters, such as sales, customer satisfaction, and market penetration. Testing various incentive models, such as performance-based bonuses, could better motivate dealers and drive higher sales (Jobber & Lancaster, 2015).

### 5.1.4 Targeted Marketing and Promotional Strategies

The promotional strategies lacked sufficient customer targeting. Future simulations should include tools for audience segmentation, allowing for personalized marketing campaigns based on customer data like age, income, and preferences. This would reflect the real-world use of CRM systems to enhance marketing efficiency (Chaffey & Ellis-Chadwick, 2019).

### 5.1.5 Sustainability and Innovation

The automotive industry's focus on sustainability should be reflected by incorporating metrics like carbon emissions, fuel efficiency, and regulatory compliance. Investments in green technologies, like those seen at Tesla, offer competitive advantages (Porter & Kramer, 2019). Future simulations should allow for R&D investments in sustainable products, enabling participants to lead in eco-friendly innovation.

## 5.2 Reflection on Key Learnings from the Simulation

The Centaur simulation provided critical insights into several key areas, all of which have real-world applications in business management.

### 5.2.1 Strategic Thinking and Long-term Decision Making

One of the most valuable learnings was the importance of balancing short-term goals with long-term strategy. Every decision, from pricing adjustments to R&D investments, impacted future performance. This mirrors the need for businesses to plan for both immediate profits and sustainable growth (Johnson et al., 2017). Strategic, forward-thinking decisions are essential in today's volatile business environment.

### 5.2.2 Financial Management and Profitability

Maintaining financial health through cost control and profit margin management was critical. Setting prices that covered costs while staying competitive was essential, reflecting the real-world challenge of balancing pricing and profitability (Horngren et al., 2015). Regularly reviewing financial metrics and adjusting strategies to protect margins was a key takeaway.

### 5.2.3 Sales and Marketing Integration

The simulation showed the close relationship between sales and marketing. Targeted promotional efforts can significantly boost sales, but only if marketing spend aligns with consumer behaviour. Integrating sales and marketing is crucial for customer engagement and driving revenue (Kotler & Keller, 2016). This has direct relevance to real-world business where customer targeting and brand positioning are critical.

### 5.2.4 Demand Forecasting and Inventory Management

Managing inventory and aligning production with demand were among the biggest challenges. Overproduction caused financial strain, while underproduction risked losing market share. Effective demand forecasting and production planning are critical to optimize cash flow and avoid excess costs (Chopra & Meindl, 2016). The need for an agile supply chain that can quickly adjust to demand changes was a key learning.

### 5.2.5 Competitor Benchmarking and Adaptability

The simulation highlighted the critical importance of benchmarking performance against competitors and maintaining adaptability in strategy. Competitor analysis provided valuable insights that shaped strategic adjustments, from pricing shifts to changes in promotional efforts. This learning mirrors the real-world necessity for businesses to continuously monitor the competitive landscape and adapt their strategies to remain relevant (Porter, 1980).

The Centaur simulation was a rich learning experience that developed essential business skills, including strategic thinking, financial management, sales and marketing integration, demand forecasting, and competitor analysis. These insights are directly transferable to real-world business challenges and have strengthened the ability to make data-driven, strategic decisions.

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