



## **BUS 225 Milestone One Template**

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### **Executive Summary**

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#### **Description of Problem**

The automotive manufacturing industry faces challenges from the global shift to zero-emission vehicles. President Joe Biden produced an executive order for "zero-emissions vehicles to make up half of new cars and trucks sold by 2030", along with other nations like the UK issuing bans on new gas and diesel-powered cars by the same year.(nbcnews.com,2021;weforum.org,2021). To survive in this changing market, the company must diversify its products and leverage its engine expertise in other fields. Within the company's existing and new industry, two types of data will be researched and gathered to determine the optimal choice for entering another field: quantitative and qualitative. Quantitative data will include each industry's profitability, growth, market share, costs, and revenues. Qualitative data will include customer feedback, community attitudes, ethical issues, stakeholder satisfaction, and shareholder opinions of each industry.

#### **Description of the Current U.S. Automotive Industry**

The U.S. automotive engine and parts manufacturing industry had a negative annual growth of 3.5% from 2018 to 2023, but is expected to grow by 2% from 2023 to 2028.(ibisworld.com,2023) It also had a spike of 10.5% growth in 2022, reaching \$327.3 billion in value.(advantage-marketline-com,2023). After investigating sales by region of the United States, no apparent patterns exist which could determine a strategy for the company. California, Texas, and Florida were the top three states for new vehicle sales, with no regional patterns evident.(factorywarrantylist.com,2023) Gasoline engines dominated the U.S. light vehicle sales with 84.19%, followed by alternative fuels with 15.22% and diesel with 0.59%.(statista.com,2023) The most popular body style was utility vehicles (SUVs and others) with 55.99%, then cars (sedans and others) with 20.77%, pickups with 19.21%, and vans/minivans with 4.04%.(autosinnovate.org,2023) The national average age of vehicles was 12.2 years, indicating that most Americans own older vehicles and may not be willing to buy new ones.(autosinnovate.org,2023) The used car market, however, grew faster than the retail trade sector, at 6.2% per year from 2017 to 2022.(ibisworld.com)

#### **Current Automotive Market Trends**

The global shift to zero-emission vehicles is driving the trend of electric motors in the automotive market. Many governments offer tax credits and incentives to encourage consumers and manufacturers to adopt this technology. This is evidenced by the PwC's report of "EV penetration in the US is expected to increase to 30% by 2030".(pwc.com,2023). Americans also prefer larger vehicles, such as truck SUVs, pickups, and car SUVs, compared to other countries. In the United States, the trend for new body types for vehicles continues to be circulated around "truck SUV's, pickups, and car SUVs"(epa.gov,2022). The dealership experience is the most important factor for customers when buying a car, as 70% of customers state "the dealership a major touch point for physically experiencing the car".(surveysensum.com,2023) Quality is the second most important factor, followed by vehicle features. Brand affiliation is the least important factor for American customers. (deloitte.com,2023)

### **Description of the New Industry**

The landscaping and gardening equipment manufacturing industry is a growing and attractive industry in North America. It was valued at \$88.1 billion in 2022 and is expected to grow by 6.0% annually from 2023 to 2030.(grandviewresearch.com,2023) Within a report by the national association of landscaping professionals, California, New York, and Florida were the "states with the most number of landscaping businesses in the U.S"(2023). The average landscaping company has 305 customers and generates \$12,798 per customer.(landscapeprofessionals.org,2023) Lawnmowers are the most popular product, with a market size of \$7.1 billion in 2021 and a projected size of \$9.7 billion by 2027.(arizton.com,2022)Gas-powered equipment is the dominant segment, with a value of \$25.5 billion by 2032.(gminsights.com,2022) The main factor affecting the industry growth is the preference of 80% of landscapers for gas-powered equipment over electric ones, due to performance, run-time, and cost. (timesofsandiego.com,2021) This creates an opportunity for new engine manufacturers to enter the industry and leverage their expertise. However, they will face competition from established brands, such as Husqvarna, Deere, Toro, and Honda, which have a strong international distribution network.(industryselect.com,2022)

### **Current Market Trends in the New Industry**

The current market trends for the landscaping and gardening equipment industry are gas-powered equipment for professional landscapers and electric and smart technologies for personal users. The residential sector, which includes services like maintenance and overhauls of land and backyards, is the largest and fastest-growing segment of the industry "set to observe 5.5% growth between 2023 and 2032".(gminsights.com,2022). Customers demand more affordable, powerful, and durable equipment that can handle various terrain and weather conditions. They also look for more versatility and productivity from their machines, as they face worker shortages and tight schedules. According to Senior product manager at Doosan Bobcat North America, Ron Scheffler, "We're seeing landscapers look for more power and versatility from their machines" due to reduced crew sizes because of worker shortages.(landscape-business.com,2021) Brant Kukuk, product marketing manager at Ditch Witch, states a growing trend for "highly reliable productivity given some strain filling workforce needs".(landscape-business.com,2021) Another trend is product electrification, as customers are becoming more aware of the environmental impact of carbon dioxide emissions. The industry has also evolved to offer simpler, easy-to-use machinery that reduces the human labor involved in landscaping, such as ride-on mowers and lighter, more powerful weed whackers.

### **Appendix A**

#### **Explanation from Porter's Five Forces Analysis of the New Industry**

The industry has many competitors, with a few which dominate the market. The top four companies, Husqvarna, Deere, Honda, and Toro, possess about 50% of the market share, while the rest is divided among smaller firms.(IBISWorld,2023) The competitors differ in their product strategies such as investing in robotic or battery-powered machinery, or adding touchscreen and satellite features to their ride-on equipment. The competition is moderate and based on product quality and price, rather than marketing or innovation. This can be demonstrated through the low marketing implementation "expected to represent 0.4% of revenue in 2023", and the largest aspects of competition existing on "product quality and price".(IBISWorld,2023) The barriers to entry are medium, but the start-up costs are high for new entrants, especially within the manufacturing sector. Thankfully, the company can negate this as it already operates in this field.

The company also needs to consider the legal and environmental regulations that vary by state, such as bans on non-functional grass or gas-powered equipment. For example, in Nevada by 2027, the state aims to "ban non-functional grass in the Las Vegas metro area" to conserve water, which other states such as Colorado aim to replicate.(purchasegreen.com) In California, all "sale[s] of new gas-powered equipment using small off-road engines [including] all lawn and landscape equipment" will be prohibited.(purchasegreen.com) These are areas of consideration for the company as they aim to enter this market, to identify which states may not be the best strategy for entry. These may limit the market potential for some products or regions. The biggest threat for new entrants is reputation, as customers tend to choose brands that they trust and offer good customer service. IBISWorld states that "companies compete heavily on brand recognition and customer service".(IBISWorld,2023) In this industry, as products can get expensive, customers will eventually pick the cheaper selection when everything else remains very similar. The company may need to spend more on advertising and marketing to establish its image and convince customers that it can deliver high-quality products in this industry.

The bargaining power of suppliers is similar to the automobile industry, as both require electronic components, metals, rubber, and other materials. The company can source these materials from domestic or international suppliers, such as ArcelorMittal, Bridgestone, or Dow Chemical Company. The supplier power is medium for some materials, such as steel, due to the high number of competitors yet high demand. This can be seen through each nation's production of the material, with China being the leading nation in the world by crude steel production at 77.9 million metric tons in 2022 alone, 700% larger than the second leading nation of India.(statista.com,2023) Due to this virtual monopoly of some countries and the risk of supply disruptions like COVID-19, the company may face higher costs and volatility in obtaining some materials for this market. The threat of substitutes is moderate, as electric equipment is gaining popularity and attention in the market, especially among personal users who care about their environmental impact. However, electric equipment is still more expensive and less powerful than gas-powered equipment, which makes it less attractive for professional landscapers who value performance and run time.

Additionally, "projected prices for battery-electric construction equipment, by some accounts, could be triple that of their diesel counterparts."(equipmentworld.com,2023) While the company may need to consider investing in electric technology to compete with brands like Ryobi and EGO, research demonstrates most customers in this market are not demanding or purchasing these products in the volumes as gas alternatives. Landscaping companies and private individuals are the main consumer groups for this industry. The bargaining power of buyers is medium. As new landscaping equipment brands arise, causing price competition, most customers already understand which products they will and will not use. With rising selections of equipment brands, this can offer many choices and allow them to switch to other brands easily. With this rise, they may demand more quality, features, and service from the company's equipment. They may also influence market trends and regulations by preferring greener products or advocating for lower emissions. While consumers and government entities continue to push for electrification and lower emissions, this trend does not appear to have much impact or focus on landscaping equipment. This explains the growth in engine manufacturing within this industry in the upcoming years. However, if this trend did penetrate this market, customers could choose to buy greener products and petition and campaign for more regulations for gas alternatives for this equipment. However, there are no instances of this occurring even now, as most of this emphasis is on cars.

## **Appendix B**

### **Summary of Findings from Porter's Five Forces Analysis Comparing Both Industries**

These two industries demonstrate their shared similarities and differences within numerous criteria. For instance, the bargaining power of suppliers is medium as they each distribute the same materials among both industries, such as aluminum, computer chips, and rubber. This makes the authority of suppliers within both industries comparable, as there exists so many domestically and internationally one's prices can be compared and compete with another's. Every other aspect of Porter's Five Forces witnessed either medium or low power from a party or level of threat in a category, while in the automotive industry, there were instances of either high threats or power from buyers. The only category which demonstrated a low threat level was for new entrants into the market. This was due to the staggeringly high costs of entering this specific field of manufacturing, which is why new companies in this market aren't consistently being introduced. For the new industry, however, there exists a higher threat of entry as landscaping machinery is smaller and requires fewer supplies for parts than an engine for a car, such as wiring or safety equipment. However, reputation plays a larger role in this market which was not the case for the existing industry as most individuals seek out the cheaper options and report less value on the brand identity of their car. The threat of substitution is also low compared to the existing industry due to a lower rise in electrification, which is a growing threat for the company. This allows for gas engines to endure for longer in the market of landscaping equipment as it is less interested in electrifying this sector.

After much consideration of the research conducted on the landscaping equipment industry, this market demonstrates strong returns and steady growth. The automotive engine market is projected to grow by a mere 2% until 2028, 66% lower than the increase in landscaping equipment manufacturing until 2030 at 6% growth. A real threat of extinction exists for gas-powered engine manufacturers by both legal and consumer demands in the automotive industry. This is not the case for the new industry, with 8 out of 10 individuals having no desire for the transition into electrification. This trend offers a strong strategy for diversification for the company, as it has experience in engine manufacturing and can implement its facilities to produce smaller engines for this gardening equipment that is less resource intensive and less powerful. This factor can demonstrate savings for the company, in addition to longevity in its engine manufacturing, which is unclear for the automotive industry. This is also determinant of whether the company desires to enter the electric car industry, which currently costs "automakers worldwide...more than \$515 billion through 2030".(eletrek.co,2022) In summation, diversification into the landscaping and garden manufacturing industry not only allows the company to return a profit through strong growth but also provides the company with security and longevity in its operations by not being diminished by current car trends and having to spend exorbitant amounts to renovate its facilities and practices to exist in the future.

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