

## **TJC Alternatives**

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**Global Marketing Team (500)**

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## **Marketing Plan**

### **Part I – Synopsis**

TJC Alternatives (TJC) has shown interest in expanding their operations to a location outside of North America. The state of São Paulo, Brazil is the ideal site for TJC to meet their needs and aspirations. São Paulo is in one of the densest regions of sugarcane production in Brazil. With sugarcane being the main source used in ethanol production in Brazil, it will be key to have accessible resources. Ethanol production will be efficient and cost-friendly to the business, as is discussed in Description of Pricing Strategy. TJC's goals in marketing will be executed to positively benefit TJC and ethanol consumption worldwide. Using geographical segmentation, psychographics, and demographics, TJC Alternatives will establish a target market, as TJC will be selling to wholesalers in Brazil and worldwide. Local, national, and international sales will boost financial stability and company popularity in Brazil. TJC Alternatives will identify different fixed and variable expenses to earn maximum profit.

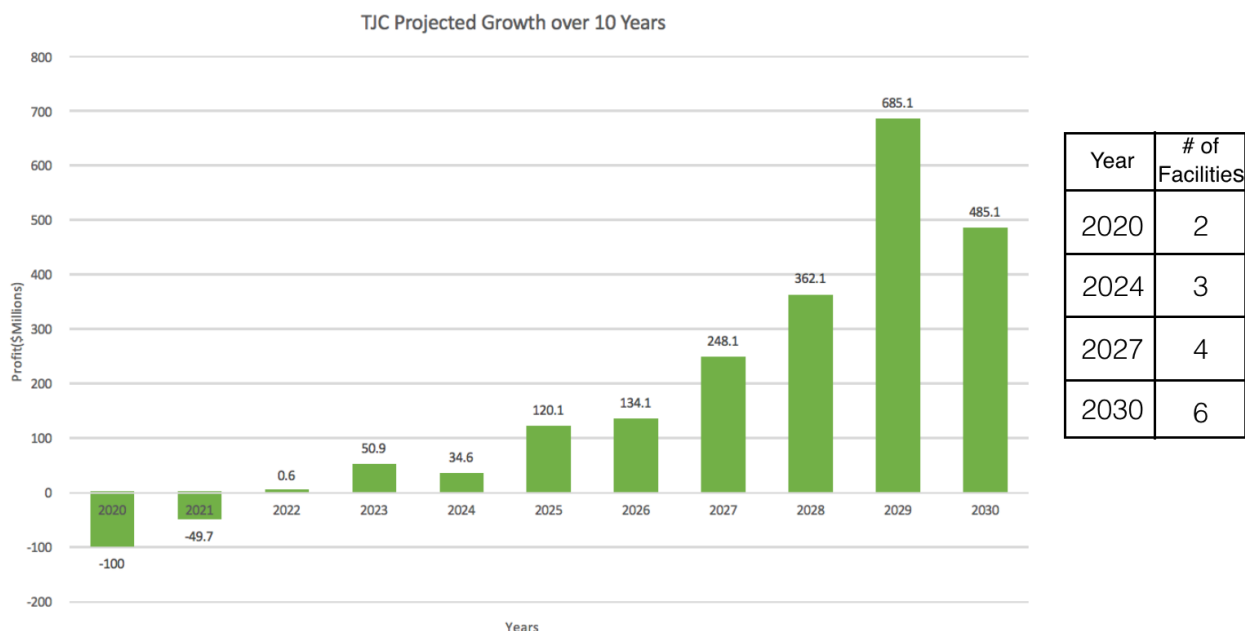
The direct and indirect competition, as well as strengths, weaknesses, opportunities, and threats (SWOT) will be identified to market TJC's facility in Brazil. Price, product, placement, and promotion will be analyzed to ensure business growth. With the ethanol sector expanding, TJC will identify economic, social, legal, and technological trends to increase recognition on ethanol production and consumption tendencies. The leadership team of the facility will have the necessary knowledge and experience in ethanol production to sustain and keep the production of ethanol efficient. The organization will hire the ideal employees and designate specific roles in management. To achieve our marketing goals, TJC Alternatives will follow a specific timeline. The new TJC Alternatives facility will promote improvements in the environment, as well as the important energy efficient ideologies of the organization while excelling in the ethanol industry.

### **Part II – Company Goals**

TJC Alternatives' primary goals are to establish an international base of operations, have a sugarcane farm, become profitable in the ethanol economy, and boost energy efficiency efforts. The management has developed a plan for building a state-of-the-art facility located in the state of São Paulo. The facilities will be operational 18 months from the execution of the plan. The main objectives of the facility will be to produce and manage sugarcane ethanol production, exports, and sales. TJC plans to have two fully operating facilities in São Paulo, which will have a combined annual production capacity of 95M gallons of cellulosic ethanol. The combined cost of these facilities will be USD 400M. TJC will implement second-generation ethanol production technology to lower costs. This can reduce capital costs per gallon, which allows for the construction of smaller cellulosic ethanol or bio sugar plants. Second-generation ethanol maximizes the production of ethanol by more than 50%.

The two facilities will cost USD 400M to build and TJC's goal is to raise USD 300M in subsidies from the Brazilian government. The Brazilian government subsidizes ethanol companies for at least 60% of their cost of infrastructure and large scale of buildings, so a USD 300M subsidy is anticipated. Also, they will subsidize TJC because of the local economic impact, such as new jobs in TJC's facilities and for those who supply goods to TJC.

According to the CIA World Factbook, Brazil has 32.9% agricultural land and 8.6% arable land. Arable land is land that is capable of producing crops, suitable for farming, suited to the plow, and tillage. Of the arable land, 24.3% is used, resulting in 75.7% available for development. After the short-term goals are met, the principal goals consist of transitioning available arable land into a TJC sugarcane production site, while also expanding operations by creating more facilities. An organizational goal is to be profitable by the third year of the business. With TJC investing from its profit in the United States and having to pay for operating, production, and distribution costs, a three year timeline is appropriate to attain profitability. TJC will be successful in Brazil due to the large demand for ethanol and the marketing strategies implemented to build a reputable international business. TJC wants to have continuous growth in ethanol sales for the first three years, being an indicator of growing profit or decrease in loss. In the long term, TJC envisions a growth in the percent of the ethanol market that TJC has. In five years, TJC's goal is to have four major facilities and be able to generate USD 440M in the fifth year in sales from Brazil. In 10 years, TJC would like eight total facilities in Brazil with the newest technology and exceed USD 1B in the tenth year in sales, as technology will have improved and more ethanol will be produced. Brazil consumes 7.93B gallons of ethanol per year, and TJC wants to account for approximately 6% of that market by selling 500M gallons annually in 10 years. This would result in USD 1B revenue. These goals will be important to keep track of as TJC attempts to control a significant amount of the Brazilian ethanol market.



TJC will campaign for the use of green energy within their company as TJC strives to become the face of green energy internationally. TJC will ensure operations run efficiently by using correct chemical processes that minimize harm to the environment, as said in Technological Trends. TJC's goal is to become a revolutionary business while becoming advocates of service and environmental prosperity. This will help TJC's marketing strategy because clients will be attracted by the appeal of helping the environment. Next, their customers will want to buy the product as well to help the environment and satisfy their need. The ultimate goal is to benefit TJC

Alternatives by maximizing profit by adjusting to the company and industry's weaknesses, and work with strengths.

### **Part III – Description of Customers and Their Needs**

According to the Biofuel Association, in the major markets of Brazil where ethanol is an important part of the fuel mix, consumption is growing by approximately 10% per year. According to The Biofuel Association, the world consumed 27B gallons of ethanol in 2014. Therefore, ethanol is approximately a USD 75B industry worldwide. Brazil is the second largest consumer, consuming 7.93B gallons of ethanol and therefore directly relates to TJC's local revenue. TJC will fulfill a large demand as a manufacturer in the distribution channel.

**Demographics:** Consumer wants and needs will drive marketing decisions, and strategies will only be pursued once they satisfy consumer research. Consumer research will be conducted through surveys and data will be retrieved to see what methods of marketing entice customers the most. Demographics consist of fuel production companies that need ethanol for their fuel mixes. In Brazil, TJC Alternatives will primarily target E10 and E85(flex fuel) producing companies and sell them anhydrous ethanol. Flex fuel has a high concentration of ethanol, ranging from 51%-85%. TJC will sell its ethanol internationally as well. The product will be available to all types of companies, from startup to well-established. Most companies will come from a range of those that are involved in the use of ethanol in their fuel production.

**Geographic Segmentation:** The geographic target are the companies around the world, especially those in North America, Europe, and Brazil because there are high ethanol sales in these regions. With a vast range, geographically, the target market is very demanding and rising in most parts of the world. The extensive use of flex fuel cars in Brazil will make flex fuel producing companies great targets to sell TJC's anhydrous ethanol. Internationally, companies who produce gasoline-ethanol mixes will also be targeted with anhydrous ethanol.

**Psychographics:** The gas production companies' goals, interests, and environmental values play a critical role in data collection and improvements in the marketing strategy. The marketing department will generate and conduct surveys to obtain statistics with predictive modeling to build a successful company and support the customer base. Predictive modeling is a process where models are created to best predict the probability of an outcome. TJC Alternatives needs clients who are committed for the long term and will boost the organization's business. Many of TJC's consumers will value the efficiency, safety, and the price of the product. TJC will appeal to them on this aspect by marketing the product as high quality.

**Customer Needs:** TJC Alternatives believes that customers need a product that is priced fairly, easily accessible, and sold by a company which offers guarantees of quality. The customers will be businesses which produce fuels that require ethanol. They will be informed about the product in an appealing manner, as detailed in the Marketing Mix. If the product is marketed successfully, consumers will generate revenue which could lead to profit for TJC and will also increase customer satisfaction. Marketing the product is essential for the customers to gain the right knowledge about TJC's product. Certain guarantees for the customers, detailed in the Marketing Mix, will allow for the expansion of TJC's international business. Initially, TJC will

invest any profit back into the company and prices will become cheaper than TJC's competition and margins will be higher. Through valuing the customers and their needs, TJC Alternatives will be a stable option by the target market.

#### Part IV – Description of Pricing Strategy

TJC Alternatives' rationale for pricing is based on comparable businesses. Pricing will be fair for the businesses that TJC is selling to, but will generate enough revenue to meet the company's goals. Reference pricing, a strategy where a company sells its product around the main price of its main competitors, will be implemented.

The production process for ethanol will primarily be done through sugarcane due to the abundance of sugarcane in São Paulo, Brazil, as well as the rest of the country. According to the Sugarcane Organization, sugarcane ethanol production uses a very small amount of land when compared to other agricultural activities. Ethanol production currently occupies 4.6M hectares of farmland, which is only 1.4% of Brazil's 330M hectares of agricultural land. From this small portion of land, Brazil has replaced almost 42% of its gasoline needs with sugarcane ethanol while also exporting ethanol to the United States, Europe, and other markets. TJC will initially buy sugarcane from plantations in Brazil. The fixed costs to produce anhydrous ethanol will be the costs of ingredients (sugarcane, yeast, water, enzymes), labor, energy, maintenance, and distribution. TJC will receive a second-generation biofuel producer credit which will lower cost. Using reference pricing, the ethanol will be sold at prices that are comparable than our competitors. The ethanol will be sold at USD 2.30 per gallon and it will cost USD 1.77(refer to chart below) per gallon to produce, therefore creating a profit margin of USD 0.53 per gallon of ethanol sold. If TJC Brazil produces 95M gallons, the break-even point will be at a revenue of USD 168.15M and when 73M gallons are produced. TJC will make a gross profit of USD 50.35M yearly and will be used to finance the cost of the facility. After two years, TJC will be net profitable. There is a high demand and we expect TJC to lower cost and increase margins yearly by investing back into the business and getting funding from private investors or through subsidies.

$$C_A = \frac{C_B}{120} + C_K + C_L + C_E + C_M + C_O + C_D - P_P$$

Feedstock in terms of \$ dry ton	$(C_B)$ = \$7 per ton of sugar cane
Capital Investment	$(C_K)$ = \$2.10 per gallon of annual capacity
Cost of labor	$(C_L)$ = \$0.0553 per gallon
Cost of energy to power the plant	$(C_E)$ = \$0.0581 per gallon
Cost of raw materials	$(C_M)$ = \$0.493 per gallon
Cost of operations and maintenance	$(C_O)$ = \$0.0125 per gallon
Second Generation Biofuel Producer Credit Received	$(P_P)$ = \$1.01 per gallon
Cost of distribution	$(C_D)$ = \$0.02 per gallon
Total cost per gallon of ethanol produced from biomass	$(C_A)$ = \$1.774 per gallon of cellulosic ethanol

\*The value of 120 in the denominator is based on an assumption of 120 gallons per dry ton conversion factor.

The cost to produce ethanol will decrease if goals are met and the operations in Brazil expands as TJC becomes a larger business. Other costs for the business will be the cost of the facilities and operating costs. Variable costs will be marketing costs, such as advertising through trade shows, magazines, and online ads. TJC will invest its profit in at least the first four years back into its business for production, to lower the cost, increase capacity, and allow for more marketing. TJC will have a high gross profit margin if all ethanol is sold and will enable TJC to attain international success. We project that by the third year there will be significant net profit. These key figures are in place to show TJC Alternatives' specific goals on how much ethanol to sell and to ensure the prices keep the company competitive in the ethanol market.

## Part V – Competition

TJC will consistently reference their competition to improve their company by evaluating the direct and indirect competition. The direct competition for TJC Alternatives are the ethanol production plants in Brazil since they sell the same product as TJC. There are hundreds of ethanol production plants in São Paulo, most of which are owned by the following five major companies: Raizen, Petrobras, Solazyme-Bunge, São Martinho, and Odebrecht Agroindustrial. TJC will be competing with these ethanol producing companies for customers and market shares. TJC's product will be marketed in the most effective way to stand out from the competition, as stated in the Marketing Mix. TJC will export ethanol to countries where there is demand for ethanol, resulting in a large customer base and an established international reputation. The company plans on using a SWOT analysis to evaluate direct and indirect competition and daily operations.



The company plans to compromise these weaknesses and threats by acting efficiently as the plan is approved. Consistently evaluating the SWOT will ensure trust within the company.

TJC's major indirect competition are the gasoline producing companies in Brazil. Although they sell a different product from ethanol, they satisfy the same customer needs through pure gasoline. The marketing team will promote TJC against the indirect competition based on the environmental benefits of using an ethanol and gasoline mix, rather than just pure gasoline. As stated in the SWOT matrix, an opportunity TJC will take advantage of is the change in government policy. According to Gain Reports, the Brazilian government raised federal taxes on gasoline to R\$ 0.22/liter and several states raised taxes for circulation of goods and services on gasoline while reducing the tax for ethanol. Using marketing techniques, TJC will attract customers to buy pure ethanol due to the cost benefits. TJC will market based on their product's strengths to entice customers amongst competition and gain the best possible customer base.

## Part VI – Marketing Mix

**Product:** The vision behind TJC Alternatives' product is high quality second-generation sugarcane ethanol while benefiting the new São Paulo facility and community. TJC Alternatives will produce anhydrous ethanol in Brazil. Anhydrous ethanol will be used to mix with gasoline to produce fuel with more gasoline than ethanol. The anhydrous ethanol will be sold primarily internationally.

**Price:** Variable costs will be marketing costs, such as advertising through trade shows, magazines, and online ads. TJC will invest 100% of its profit in at least the first four years of business back into its business for production to lower the cost and increase capacity and marketing. The cost to produce ethanol per gallon, price per gallon, break-even point, revenue, and profit are listed in the table below.

<b>Cost Per Gallon of Ethanol Produced</b>	USD 1.77
<b>Price Per Gallon of Ethanol</b>	USD 2.30
<b>Projected Ethanol Produced</b>	95M Gallons
<b>Break-Even Point</b>	USD 168.15 M
<b>Revenue</b>	USD 218.5M
<b>Annual Total Gross Profit</b>	USD 50.35M

**Placement:** TJC Alternatives will produce ethanol and sell it to gas production companies directly or will sell to wholesalers who will then sell it to gas productions companies. TJC will use salespeople to market the product at TJC's facilities and through distributors. Buyers will look for the product online and order directly with the TJC Brazil facility through calling, email, and other forms of communication. Buyers will order the product from the facility and it will be shipped to the buyer. The methods used to deliver the ethanol are train, truck, and barge boat. One railcar can carry 30,000 gallons, one truck can carry 8,000-10,000 gallons, and one barge boat can carry 500,000 gallons. The product will be bought in relatively large orders, as TJC's target market does not include individuals. TJC will send brochures to previous and potential customers, while advertising online. TJC is willing to send samples to potential buyers to test the ethanol's quality.



Another way to access the distribution channels will be attending trade fairs around the world for the industry to showcase the ethanol.

**Promotion:** TJC Alternatives needs to reach many consumers with their product. TJC Alternatives intends on connecting with consumers all over the world to compete for market shares in the ethanol industry by increasing its brand awareness. TJC's salespeople will market the product in Brazil primarily through traditional sales by approaching clients and securing deals that benefit TJC. The secondary marketing strategy for TJC Alternatives will be an interactive website which will promote the company through viral marketing. The leadership team will promote the company through participation in trade shows, internet ads, conventions, and ethanol magazines. The product will appeal to consumers in other countries through the low pricing, high compatibility, and marketing offers. TJC will be a pioneer in the ethanol industry by including the following marketing offers: 7% off when the purchaser refers three or more clients to TJC, a 100% guarantee in ethanol quality, and 3% off when a purchaser buys 50% or more than their original order. Finally, TJC will offer a buy-back guarantee if a client buys an extra 50% in their order. If a purchaser does not sell that extra ethanol by the end of the year, it can be sold back to TJC at the same price at which it was bought. TJC will auction it to customers at a lower, yet profitable price. Due to the high demand for ethanol, reselling it will benefit TJC and customers. However, TJC anticipates this auction would rarely occur due to the high quality and large demand of ethanol. The offer provides an opportunity to increase sales as it is the first within the industry. TJC looks to differentiate from competition and encourage large orders through these promotions which will assist TJC Alternatives reach its full potential.

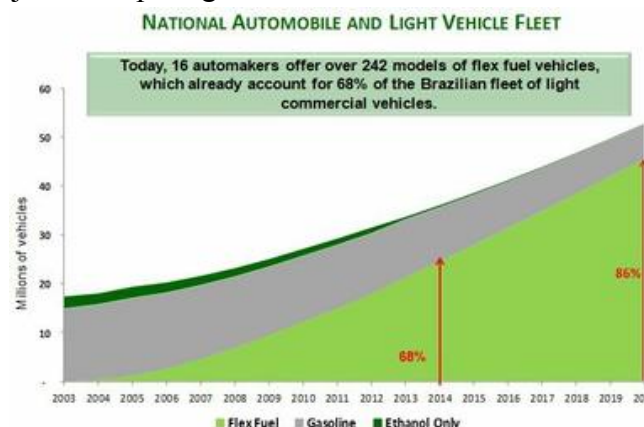
Website: [www.tjcalternatives.weebly.com](http://www.tjcalternatives.weebly.com)

## Part VII – Economic, Social, Legal, and Technological Trends

**Economic Trends:** The most noticeable economic trend shows a drastic increase in demand for ethanol. Per the Economic Research Service, there is a necessity for more ethanol production in Brazil. 90% of new cars sold in Brazil are flex fuel compatible, showing the opportunity to sell ethanol in Brazil. Adding TJC's business to Brazil will provide significant income for both the country and the company and the demand for ethanol will be met.

TJC believes that governments will be inclined to give subsidies to TJC because of the tremendous environmental and economic benefits of the product and there has been a trend of subsidies in this industry. TJC would like annual subsidies in the future for the operating costs. In the Brazilian economy, jobs will be created and will help TJC's partners to do well. The United States will continue to support the renewable energy sector through the Renewable Fuel Standard program.

The figure below projects that pure gasoline cars will be obsolete soon, especially in Brazil.



**Social Trends:** There has been a strong push regarding reduction of greenhouse gases and pollution. Sugarcane-based ethanol reduced greenhouse gas (GHG) emissions by over 90% on average compared to gasoline according to Sugarcane.org. Greenhouse gas emissions, which are produced by gasoline, are plaguing the world. Through the use of flex fuel (E85) and other combinations of ethanol with pure gasoline, TJC will stand out amongst these gasoline producing companies for the superior product. Using sugarcane for production affects food security while promoting socioeconomic levels in Brazil, compounded with the energy efficient uses of ethanol. An MIT study shows that ethanol can reduce annual gasoline consumption by 3-5%, which helps the environment. Also, ethanol use will provide additional carbon dioxide emission reductions of 19-35 metric tons per year, which will have a positive social impact.

**Legal Trends:** According to Reuters, Brazil mandates that ethanol makes up a maximum of 27% of the fuel and the rest be gasoline, unless the engines for cars are compatible with flex fuel(E85). TJC will sell the ethanol to gas production companies which will mix the gasoline with the ethanol, resulting in different fuels that can be used by consumers. Ethanol provides an environmental benefit by reducing greenhouse gas emissions and being a renewable resource. TJC will not be prone to lawsuits regarding negative environmental concerns due to ethanol reducing greenhouse gas emissions.

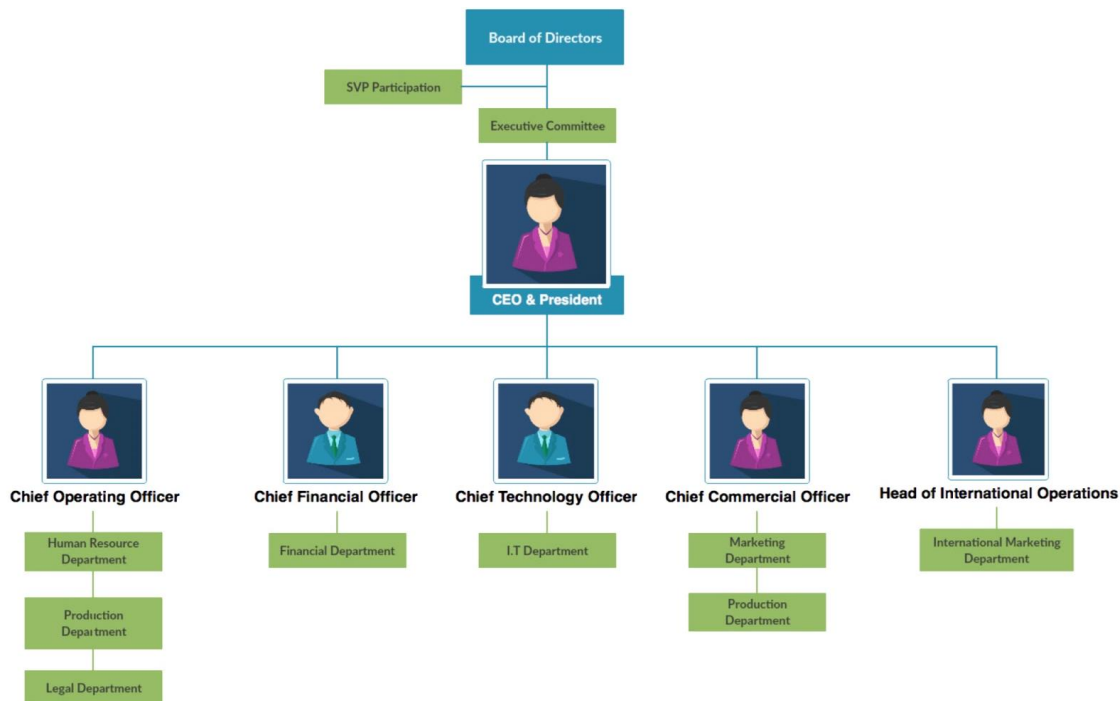
**Technological Trends:** In recent years, technological trends have transformed the ethanol industry. The major technological trend is the microorganism's ability to efficiently convert biomass sugars (arabinose or xylose) into ethanol. This helps ethanol production companies diversify their feedstock and help prevent shortage of agricultural goods. Additionally, scientists have been developing more digestible biomass to ease bioconversion of biomass into cellulosic ethanol. A more digestible biomass would create a cost-effective method. Some of the key characteristics that would be exhibited are: maximum fermentable carbohydrate recovery, low environmental impact, moderately low energy input, minimum wear, and chemical use. These technological trends will improve the process of converting sugarcane into cellulosic ethanol, which will supplement the growing energy needs of Brazil.

TJC will use second-generation technology, which uses the by-products of the conventional manufacture of ethanol and sugar. This process will yield raw material for this new generation of biofuel. In recent years, technological breakthroughs have been necessary due to the lack of alternative feedstock and considerable shortage of agricultural land. Advances in metabolic pathway engineering and genetic engineering have led to the development of microorganisms being capable of efficiently converting biomass sugars into ethanol. With these promising technologies, TJC will be able to run a state of the art ethanol business.

## **Part XII – Human Resource Requirements**

The human resource requirements will be based on experience, passion, leadership, communication, and specializations. People in our staff will be hired if certain education requirements are met and they meet the company's standards. Entry level positions will require a Bachelor's Degree, and higher level positions will require a Master's Degree as well. Preferably, employees should have a degree in the field or department they intend to work in. In Brazil, TJC will seek to promote from within, but also will be willing to hire new employees. The employees

will have knowledge on basic business operations and their performance shown by previous work done in their specific field. The staff and salespeople in Brazil should be fluent in Portuguese and familiar with the Brazilian culture to communicate with domestic companies and clients. Salespeople should have connections with companies that are potential clients and have great speaking skills to entice customers.



### Job Summaries:

**Board of Directors** - Group of elected individuals that act as a representative of stockholders. These individuals supervise decisions and performance of the company.

**CEO** - Highest authority in the company and responsible for making decisions.

**Chief Operating Officer** - In charge of the Human Resource Department and the Production Department which oversees ethanol production operations within the company.

**Chief Financial Officer** - In charge of the Financial Department which is responsible for managing the financial risks of TJC Alternatives' operations.

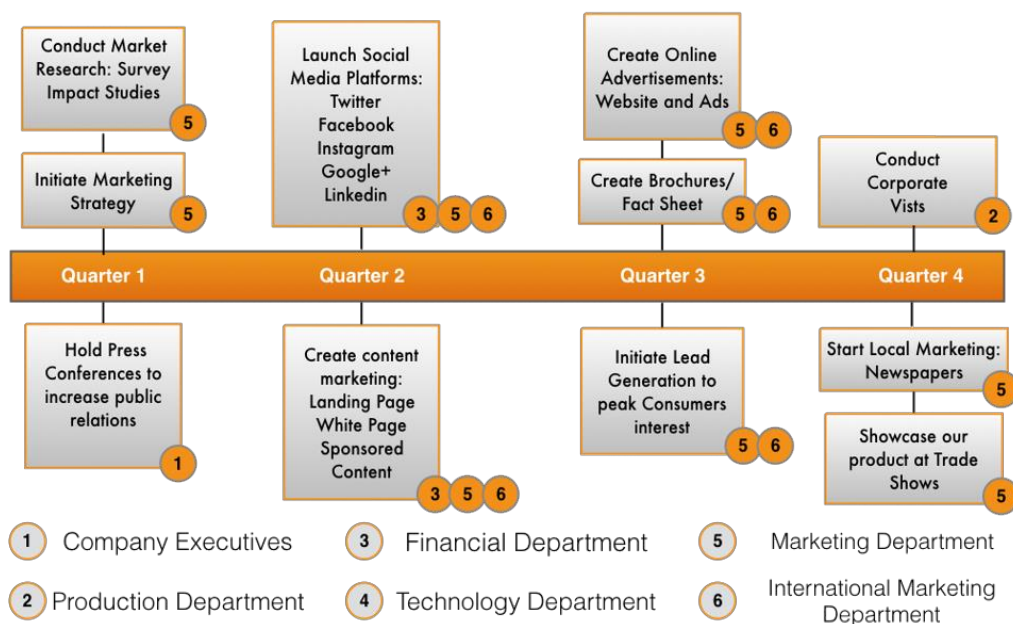
**Chief Technology Officer** - In charge of the I.T. Department which is responsible for fixing scientific and technological issues within TJC Alternatives.

**Chief Commercial Officer** - In charge of the marketing department which is responsible for the TJC Alternatives' commercial strategy and development as an organization.

**Head of International Operations** - In charge of the International Marketing Department. This department is responsible for international business operations who must understand cultural, political, economic, social, and operational challenges of foreign markets and available opportunities.

## Part XI – Marketing Timeline

### TJC ALTERNATIVES MARKETING TIMELINE



\*All marketing for Brazil will go through Head of International Operations, and will be done by International Marketing Department\*

## Part X – Methods of Measuring Success

TJC Alternatives will determine success by using the following key performance indicators (KPIs): revenue, marketing success, employee/customer satisfaction, and prosperity relative to the ethanol market. To be successful, TJC needs to meet the short and long term goals of the organization. TJC's Brazil operations will be deemed successful if the goals in profitability, revenue, and ethanol sold are met.

Management will evaluate demographics, psychographics, geographical segmentation, customer needs, economic trends, social trends, legal trends, and technological trends to determine if the marketing strategy is functioning at optimal level. Profitability will indicate that operations in Brazil can grow while losses can indicate that TJC must reevaluate its strategy. The company will have a foundation for future success and profitability even if there is minimum to no profit in the first three years. TJC's will expand its effective marketing strategies continuously. However, if the strategies are ineffective, new strategies will be implemented by the international marketing department to gather information by analyzing statistics and survey data. Also, TJC will reevaluate prices, economics, and technology based off market trends. TJC will use these trends to determine if more facilities should be created. Yearly, TJC will survey employees to inform the company with their feedback on the work environment and procedure. TJC's customer service will be active on media to evaluate customer satisfaction. If the data indicates disappointment in employees or customers, TJC will make changes to ensure success. TJC will also make changes within human resources and reevaluate its staff each year to eliminate inefficiency. TJC Alternatives wants to make a statement amongst all competitors in the ethanol and gasoline industry while positively impacting the world.

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