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Tesla Solar Roof Marketing Plan

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Tesla Solar Roof Marketing Plan



ETM 555/566 - Technology Marketing

Term: Winter 2018

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1.0 Executive Summary

This marketing plan for Tesla roof has been written to find the best marketing strategies for this new product. Tesla roof was launched in 2017 as part of Tesla's mission to accelerate the transition of the world into sustainable energy. The objective is to position Tesla roof tile as the first choice for homeowners seeking aesthetics and green energy, gaining market share within three years. The research shows that positioning Tesla roof in the solar market would be the most suitable approach for Tesla. Research and customer interviews analysis implies that the value proposition for this solar roof would be its ability to produce green energy and its aesthetic look. This makes the innovators the first target of Tesla roof. The innovators are defined as the green energy adopters and technology enthusiasts. Based on the market analysis, there is a market of \$1.8 Billion for this first target. However, this is only the 30% of the potential solar market, which has a total market of \$3.92 Billion with a 16% annual growth. This total market could be reached after crossing the Chasm period with applying the Bowling alley strategy. This strategy should focus on reducing the cost to reach the early majority of this market who are defined as the economic green energy adopters.

2.0 Introduction

The objective of this marketing plan is to create and implement marketing strategies for finding new markets and developing the existing markets for Tesla's solar roof tile. This goal has been pursued by analyzing market landscape and competition in solar energy products such as solar panels, traditional roof tiles, and also solar roof tile. All aspects of constituting sections of a standard marketing practice and planning has been considered to provide a useful grasp of existing potentials for Tesla's solar roof tile product. To successfully plan marketing activities it was required to collect relevant information regarding this product and similar products to figure out what is the most beneficial way for marketing of this novel product. This plan starts by explaining the company and its product, and then subsequent chapters such as market analysis, segmentation, targeting, positioning, strategies, and financials and controls will be following on. We, as a designing team of this marketing plan, have attempted to depict a crystal clear picture of market for this product and recommend some strategies for successful

marketing. This marketing plan establishes a consistent approach and proposes different methods for implementing a successful marketing plan according to milestones.

3.0 Situational Analysis

3.1 Company Profile

3.1.1 Tesla Background

Tesla was founded in 2003 by a group of engineers who wanted to prove that people didn't need to compromise to drive electric – that electric vehicles can be better, quicker and more fun to drive than gasoline cars. Today, Tesla builds not only all-electric vehicles but also infinitely scalable clean energy generation and storage products. Tesla believes the faster the world stops relying on fossil fuels and moves towards a zero-emission future, the better.

To create an entire sustainable energy ecosystem, Tesla also manufactures a unique set of energy solutions in addition to the different car models, powerwall, powerpack and solar roof, enabling homeowners, businesses, and utilities to manage renewable energy generation, storage, and consumption. Supporting Tesla's automotive and energy products is Gigafactory 1 – a facility designed to significantly reduce battery cell costs and, by 2018, produce more lithium-ion batteries annually than were produced worldwide in 2013. By bringing cell production in-house, Tesla manufactures batteries at the volumes required to meet production goals, while creating thousands of jobs [1].

3.1.2 Mission & Purpose

“To accelerate the world's transition to sustainable energy”

The main focus of the company is to help the world reduce its dependence on carbon fuels and transition towards a cleaner world with the help of sustainable energy. Tesla makes EVs and energy storage systems and also installs and maintains solar and energy storage products. The world is already moving towards electric friendly vehicles and environmental solutions and Tesla is on a mission to accelerate the process. This mission statement appears

like a socially responsible mission statement because its focus is on using innovation for the betterment of the world [1].

3.1.3 Vision

Tesla's vision is *"To create the most compelling car company of the 21st century by driving the world's transition to electric vehicles."* [1].

3.2 Product Profile

The solar tiles were first introduced in 2017 by the Tesla Company, and are designed to look essentially indistinguishable from traditional roofing materials such as ceramic or stone tiles. In addition, solar tiles gather the light energy and produce electricity so they present an aesthetically attractive option to consumers who like green energy but might shy away from traditional solar panel designs. "I think there's quite a radical difference between having solar panels on your roof that actually make your house look better versus ones that do not, I think it's going to be a night-and-day difference," said Musk in a statement before the product's official launch (Figure 1).



Figure 1: Elon Musk Introduces Tesla's Solar Tiles

After a year, Musk demonstrated the strength of his new roofing product by testing heavy weights on three common roof shingles as well as his own. Sure enough, the Tesla roof was the only one that could withstand the weight and pressure. "It's made of quartz," explained Musk. "It has a quasi-infinite lifetime." Tesla is now stating on its website that the

roof tiles used in its solar roof installations have an “infinite warranty” because of the strength of the roof glass. Tesla solar tiles are certified for wind resistance Class F ASTM D3161 (best wind rating), hail resistance Class 4 ANSI FM 4473 (best hail rating) and fire resistance Class A UL 790 (best fire rating) and they are compatible with freezing or cold winter [1].

The new roof will be offered in four designs: Tuscan glass tile, slate glass tile, textured glass tile and smooth glass tile (Figure 2).



Figure 2: Tesla's Four Tile Designs

With these four different designs, Tesla can make inroads into both the solar industry and roofing industry and offer competitive advantages in both. Solar panel warranties are often a huge selling point for homeowners who are concerned about the longtime production value and durability of their solar panel systems. Musk seems on a mission to put those concerns to bed and reach a broader audience than solar power ever could before. Roof Solar tiles would be customized to produce an amount of electricity which customers need. This feature is made possible by using two types of glass tile, solar tile and non-solar tile. Both appear the same from street level. Solar Roof integrates with the Powerwall home battery, allowing customer to use solar energy whenever is desired and providing uninterrupted electricity during grid outages.

SolarCity is a famous company in solar system and have a lot of source of information and skill in this industry. Tesla purchased most of SolarCity stock share to have a powerful installation partner and customer service in solar system. Solar Roof complements customer

home’s architecture while turning sunlight into electricity. Energy collected during the day is stored with an integrated Powerwall battery and made available any time, effectively turning home into a personal utility. Glass solar tiles are so durable, warranted for the lifetime of customer house, or infinity, whichever comes first.

3.3 Market Summary

“Tesla Roof” is a product with two purpose : roof and solar panel. Thus both markets are considered as a potential market. Roof market with total of \$18.76 bn(23.3% residential + 16.9% nonresidential) is one potential market for “Tesla Roof” [2]. Roof industry revenue depends on residential spending more than nonresidential (Figure 3). In the last five years, the demand for residential constructions returned back to the normal pace (Figure 4). On the other hand low-interest rate and increasing per capita disposable income add up to demand residential construction. The potential market value of residential construction shows the increase from 2017 through 2022. As it’s mentioned above, strong economy boosts home improvements as well. As the market for housing is growing, homeowners will take advantage of home equity loans for major home improvements like roofing.

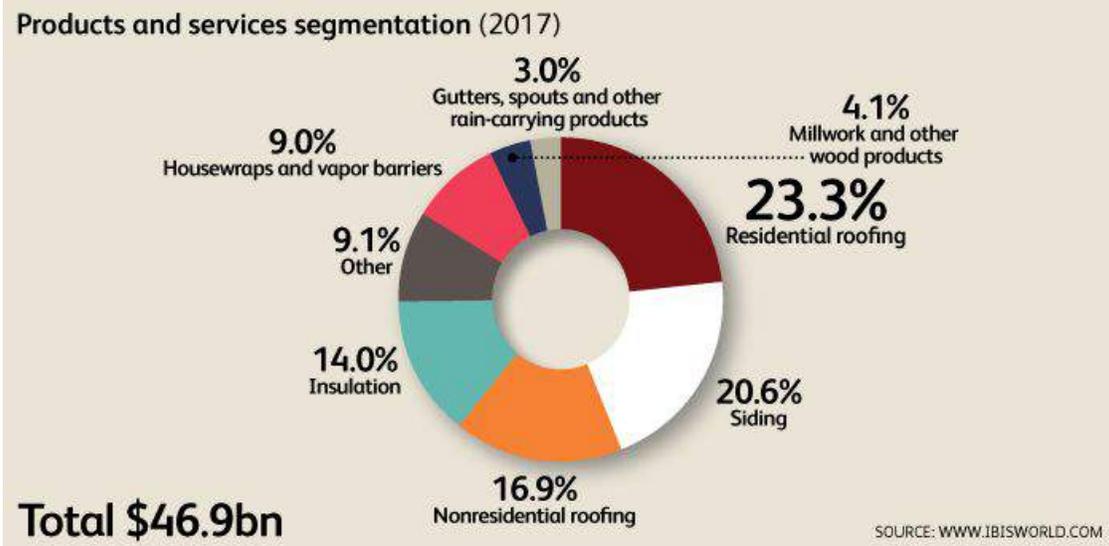


Figure 3: Products and Services Segmentation

Another movement in the last five years is “Green” movement. The roofing industry is introducing the green-roofing system to the customers. Green-roofing system provides “energy-efficient roofing solution”. There are several ways which could be justified in that category from reflecting the sunray rather than absorbing it to saving sun rays to make electricity. Solar power is one of the most attractive energies especially with falling the price of solar panels 1.1% every year from 2012 which encourage demand for “energy-efficient roofing solution”.

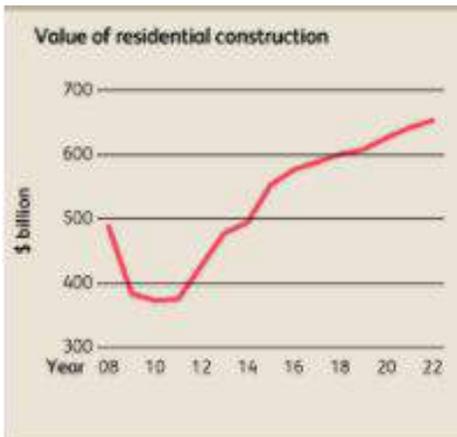


Figure 4: Value of Residential Construction

Solar panel market with \$3.92 bn(35% roof mounted panel) is another potential market for “Tesla Roof”[3]. The solar market is growing very fast and has had 500% increase from 2000 to 2014. The roof-mounted panel in residential with 35% has the majority of the share market. (Figure 5)

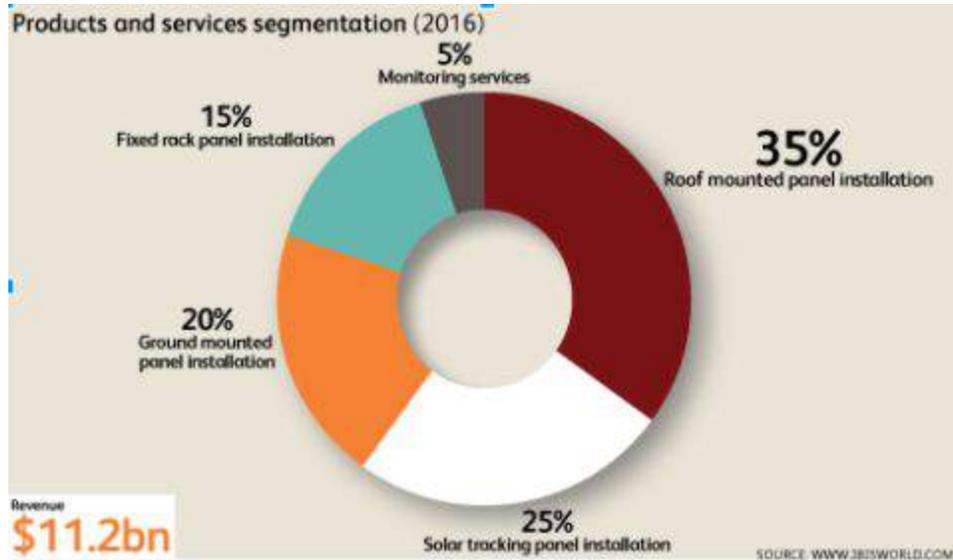


Figure 5: Products and Services Segmentation

Ambiguity in tax breaks for solar projects is inevitable with Trump administration, but the industry is growing and the forecast growth is 16.1% each year till 2021 to reach \$23.7 bn.

3.4 - SWOT

SWOT analysis (Table 1) covers both internal and external factors that may impact how the Tesla roof will be deployed in the marketplace. This analysis guides us to identify the positives and negatives inside the technology (S-W) and outside of it, in the external environment (O-T).

Developing a full awareness of the technology can help with both strategic planning and decision-making.

Table 1: SWOT Analysis

<p>Strengths</p> <ul style="list-style-type: none"> ❖ Brand recognition ❖ Base of loyal customers ❖ Sustainable innovation ❖ Ecosystem of compatible products ❖ Efficient customer service ❖ Effective strategic management 	<p>Weaknesses</p> <ul style="list-style-type: none"> ❖ Limited Sales ❖ Supply chain not fully established ❖ Limited Capacity of Production
<p>Opportunities</p> <ul style="list-style-type: none"> ❖ Significant economies of scale from the mass production ❖ Growing demand of renewable energy sources ❖ Targeting the middle class segment ❖ Growing into international markets ❖ Government green energy tax breaks 	<p>Threats</p> <ul style="list-style-type: none"> ❖ Solar Panel Companies ❖ End of tax breaks ❖ New competing energy sources

3.5 Competition

As a tile which can produce electricity, there are no competitors currently in the market. In fact, homeowners who are interested to green and renewable energy, use solar panels on top of their home roof to produce electricity. Their roof could be asphalt shingle , ceramic or stone tiles, and metal roofing. Therefore, adding cost of roof coverage and solar panel system are total cost. Solar panel cost estimation is hard and depends on sunshine grade of home, amount of desired electricity, and size of roof surface. So, it is very difficult to compare solar panels cost versus tesla tile cost. In most of research, \$25,000 is estimated to install 8.5 kW solar panel system for home between 1600 and 3000 sq.ft. which needs to add to cost of roofing. As a result, if customers consider asphalt shingle with solar panel system, Tesla roof is 1.5 times more expensive and produce 23% les electricity [4], On the other hand, if aesthetic parameter is customer priority, ceramic and stone tile with solar system costs a lot more than Tesla tiles because just stone and ceramic tile price, itself is same or more than Tesla tiles.

In most research, 8.5 kw package is considered for solar panel comparison which refers to producing 8.5 kw per hour, cost around \$25,000 and cover around 600 square feet of roof. In reality, total produced electricity by solar panel system is lower than 8.5 kw per hour because of sunshine rate and solar panel angle. a 8.5kW solar power system produce between 23.2 and 36.8 kWh per day on average over the year. Tesla offers 6.5 kW per hour and it cost \$50,000. Tesla roof could not generate their maximum of electricity production rate same as solar panel system. Thus, solar panel system has more efficiency than tesla tile roof.

For adding solar system on top of roof, there are different type of roof coverage like ceramic tile, stone tile, stone coated metal tile, asphalt shingle, and metal roofing are available. They have different specifications, applications, and weakness and strength points. Generally ceramic tile (Figure 6), stone tile and stone coated metal tile are used for neighborhood with above middle- class and high income because of high cost and aesthetic; on the other hand, asphalt shingle and metal roofing are applied for middle class and low income neighborhood which are price sensitive.



Figure 6: Ceramic Tiles with Solar Panel System

Metal roof sheet costs double than asphalt shingle and most homeowners prefer metal sheet than asphalt shingle because of more durability but peeling paint, not good looking, dent, noisy sound in rain, and hard to maintenance forced metal sheet producer to develop their product. New engineered metal roof tiles is introduced to market which is a coated layer of stone powder on metal sheet. Stone coated metal tiles are too new and some customer reviews complain about installation and low wind resistance, because Stone coated metal tile locks are not matched correctly or not designed properly; moreover, same is metal

roofing, still it is hard to maintenance and easy dent if somebody walks on top of them. They protect home from outside fire hazard but if fire happens inside, it is hard to open the roof to fight fire or rescue households.

There are some standards to test roof tile resistance against hail, fire, wind which are established by ASTM “American Society for Testing and Materials”. Warranty and price are 2 important parameters to consider and generally asphalt shingle (figure 7) has lower cost and warranty verses roof tiles; cost of asphalt shingle is around \$5 per square feet (although different state and cities have different installation cost) and warranty is lower than 25 years. If aesthetic, longevity(warranty) and high standards with optimum price are more important parameters than price for customers, roof tiles are best choices. Tiles cost 20- 35 dollars per sq.ft and last long more than 50 years.



Figure 7: Asphalt Shingle with Solar Panel System

An important consideration to think about is climate. If home is in an easier climate, weather-wise, it may not be a bad idea to go with shingles.. However, for some aera like southeast of the United States, as well as other windy and snow-ridden areas, it may be a wise choice to go with tiles when possible. Stone tiles do perform well in cold climates. They are not just for warm, sunny regions. Snow easily slides from their surface and they are good conductors. In cold and freezing weather stone tiles and tesla tiles are better choices than ceramic tiles because ceramic tiles crack and break. Both ceramic and stone tiles are Fragile if somebody walk on top of them for maintenance or cleaning; but tesla roof is hardened by heat treatment process to be tough enough.

Table 2: Competitors Comparison

	Tesla Roof Tile	Ceramic Roof Tile + Solar System	Stone Roof Tile + Solar System	Metal Sheet (stone coated) + Solar System	Asphalt shingle + Solar System
Cost (2000 sq.ft)	50k	65k-75k	65k-80k	55k-65	35k
Hail Rate	Best	Average	Average	Best	Average
Fire Rat	Best	best	Best	Best	Low
Wind Rate	Best	average	Best	Best	Low
Freezing/cold Weather	Good	Low	Best	Good	Low
Warranty/ Year	Lifetime	100	100	50/ lifetime	25
Aesthetic	Best	Medium	Medium	Medium	Low

As can be seen in table 2, customers who are looking for green energy can add solar system on top of their roof which could be asphalt shingles or tiles. If price is most important considered parameter, asphalt shingle and solar system is a better option than solar tiles but asphalt shingle roof has just 25 years warranty, medium standard grades, and no good looking. Aesthetic and high standards are parameters which force customers to select roof tiles versus asphalt shingle and metal roof. In this case, solar system and roof tiles together cost same or more than Tesla tiles. In addition, tesla tile system covers all standards with best grade.

3.6 Customer Interviews

Customer interview is the best way to gather voice of customers. The first step for customer interview is to find the customer need and then how to solve the customer need. There are several techniques for customer interview which should be followed to have a better

understanding of customer needs. Customer interviews should be performed in a standard sample size to have the best result. Due to the limited time, the team performed 12 customer interviews and identified the customer needs to be based on interviews and team expertise.

Customers interview questions are:

- Which kind of roof are you considering to use on your property?
- Would you adopt green energy technology for your home?
- Would you consider Tesla Roof as the aesthetic roof?
- Would you install it in your home?
- Why?
- Indicate your priorities for your roof(from the most important to the least important)
 - Price
 - Aesthetic
 - Longevity (warranty)
 - Making Electricity
 - Protection (Hail, fire resistance)
 - Home association regulation
 - Customers service

Customer's interviews clarified the direction of our marketing strategy(even though as it's mentioned earlier due to limited time we couldn't perform enough interviews) and fortunately the interviews were in line with the team ideas. Some customer's quote are shown as following:

- "Each state has different taste(California is interested in high-tech and breakthrough technology vs "RED" states that are interested in made in USA products."
- "Tesla is a great company. Their customer service is great. Even Elon Musk would react if a customer send a complaint through his twitter account. There's a customer forum in their website which customers can write their experience and issues with the product and the company is really responsive to any valid complaints."

- “If the price is not too much high he would go with Tesla because of company’s good reputation.”
- “I am very excited for this new technology. We have to do our part of saving the environment. Nothing is better than doing that for the benefits of your home (Nice looking + Energy).”
- “I want to be one of those people who care about the environment and take action by adopting green energy solution and support technologies that help us to go with clean energy. “

Data were processed After gathering all information in Figure 8.

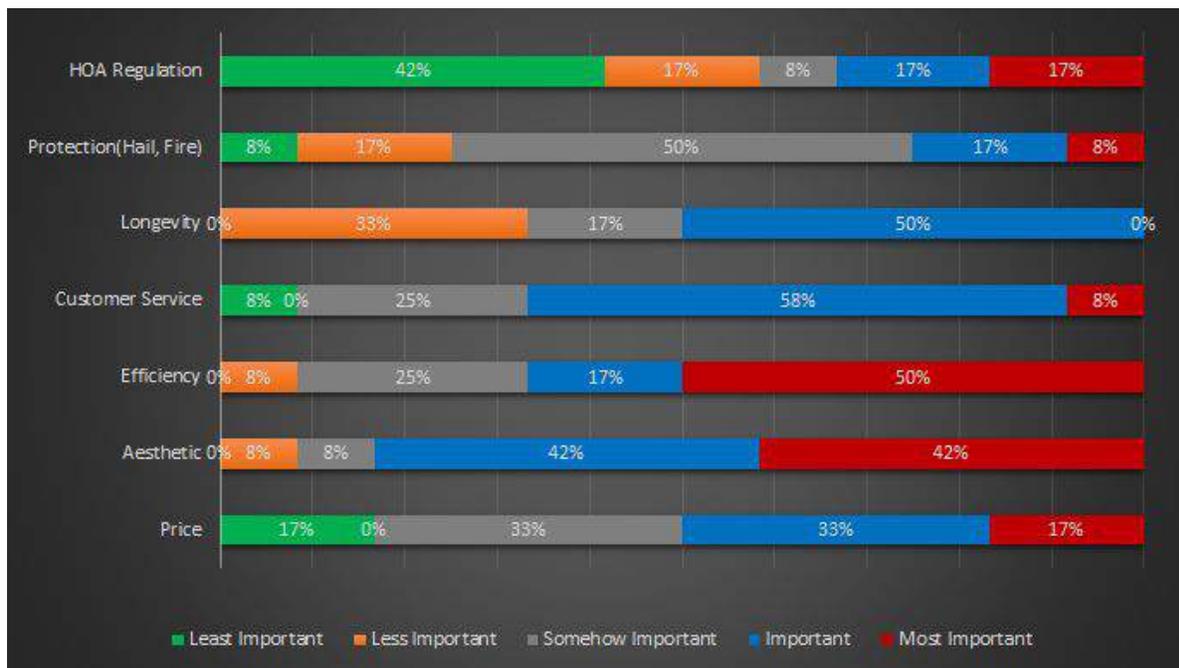


Figure 8: Interview Results

4.0 Marketing Strategy

4.1 Segmentation

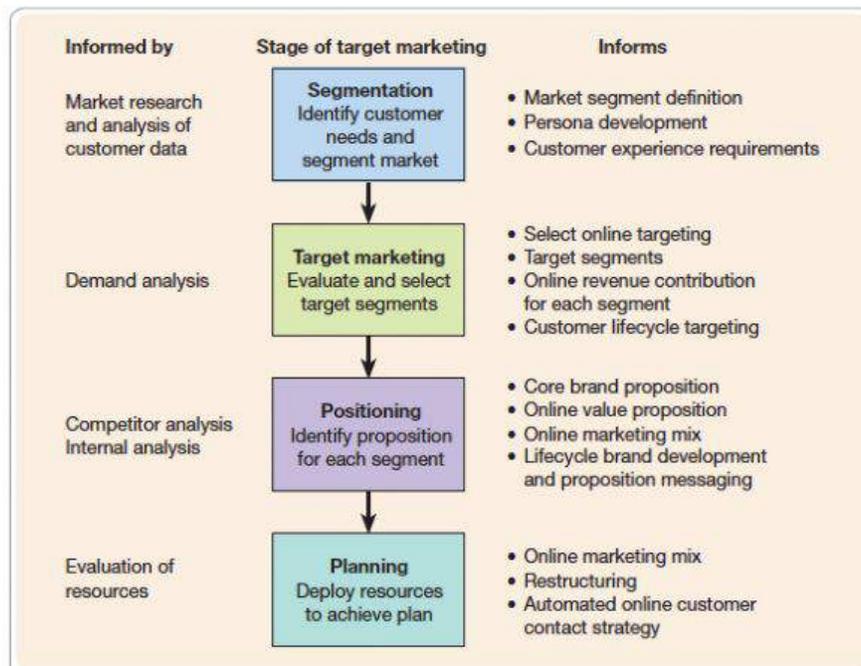


Figure 9: Stages of marketing strategy development [11]

The marketing strategy includes four different steps as shown in figure 9. The first step is segmentation followed by targeting, positioning, and finally planning. Segmentation is a process that identify the customers need and the different segments of the market. This process provide the possible options for the targeting steps when only one segment will be selected. The segments of this marketing plan were derived by market research, analysis of customer data, and our expertise.

Possible main segmentations that were considered for Tesla roof were the “Green Energy Adopters” and the “Roof customers”. Each one of these two main segmentations included two different segments as shown in figure 10:



Figure 10: Diagram of the four possible segments of Tesla roof

4.1.1 The segments of “Green Energy Adopters”

1- Economic Green Energy Adopters

The first possible segment of Tesla roof is the segment of the customers who basically have an asphalt shingle roof and they are green energy adopters. Those customers are willing to install solar panels on their asphalt shingle roof. They are green energy adopters with price sensitivity behavior. The fact that they installed asphalt shingle roof implies that the cost could be a limitation to them.

2- Aesthetic Green Energy Adopters

This second segment is for the customers who have installed a high-end roof such as ceramic or stone tile roofs. At the same time, they are green energy adopters who are willing to utilize the new green energy technology like the solar panels. This group of consumers have a higher aesthetic style for their homes, which led them to install ceramic or stone roofs in the first place. This would make them hesitant to install a solar panel on the top of their nice looking tile roof. Tesla roof seems to provide a solution for this segment of customers.

4.1.2 The Segments of “Roof Customers”

1- Economic Customers

The roof market is another market that Tesla roof could be launched at. More than 50% of this market is “asphalt shingle” according to market roof share database [5]. Low price is why “asphalt shingle” is number one choice for homeowners and construction companies who are sensitive about price. First priority for this segment of customers is low price, and their need is just a regular roof.

2- Aesthetic Customers

Another segment within the roof market is the segment of high-end roof. As the price of roof goes up, the market share goes down. For ceramic, stone, and metal roof tile with price from \$17 to \$40 the market share is around 15% [5]. This Customer segments’ need is “elegance” of the roof not the price.

4.2 Targeting

Next step after identifying segmentation is targeting. In this process target customer(s) will be selected based on product core competence . As Elon Musk has stated in Tesla roof presentation the main goal for Tesla is to reduce carbon footprint and at the same time provide aesthetic roof.

The customer target for Tesla roof product would be **“Green Energy Adopters”** because these group of customers are concerned about carbon footprint. Tesla roof is located in before “Chasm” in the technology adoption life cycle (Figure 11). Innovators are the first target for Tesla roof which would be **“Technology Enthusiasts”**.

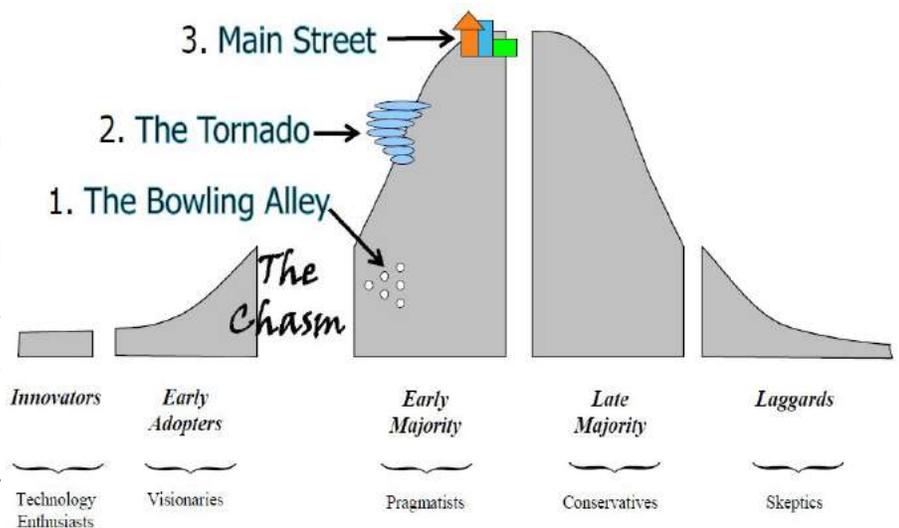
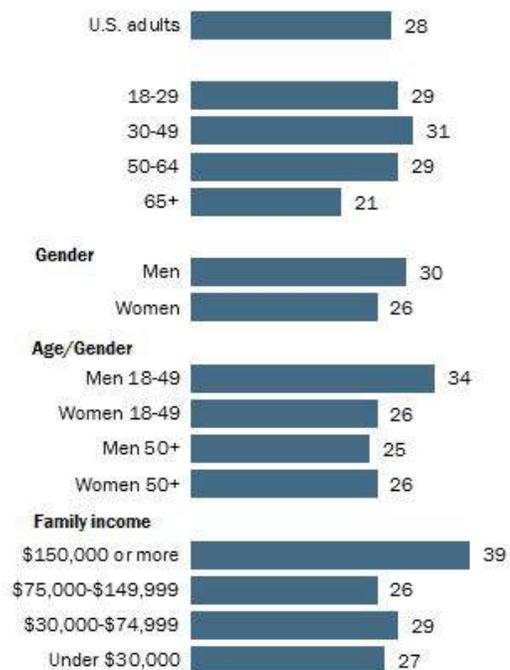


Figure 11: Technology Life Cycle

Younger men, higher-income adults prefer to be early technology adopters

% of U.S. adults with a strong preference for new technology products on a 6-item index



Surveys of U.S. adults conducted April 29-May 27, 2014, and May 30-June 30, 2014.

PEW RESEARCH CENTER

Figure 12: PEW Research Center Results

Based on “PEW Research Center” 28% of the US adults are willing to be early technology adopters (Figure 12) [6].

Total roof mounted solar panel market is \$3.92 bn which 28% of this market would be the target before the chasm. Customer profile for innovators would be:

- Green energy adopters
- Technology Enthusiasts
- People who care about carbon footprint
- Willing to be the first customer

4.3 Positioning

Customer reviews and our interviews showed that cost, longevity, aesthetic, and efficiency are more important attributes for customer to select solar roof. As a customer view, Tesla costs more than asphalt shingle with solar panel system but other competitors cost more than tesla. 30 years Warranty of electricity production on Tesla tiles versus maximum 25 years solar system produce electricity, canceling warranty of regular roof by installing solar panels, and middle grade of hail, fire and wind resistance are reasons which encourage customer to instal tesla tiles which has lifetime warranty and best grade in all standard tests. Position of Tesla and its competitors are shown on Figure 13.

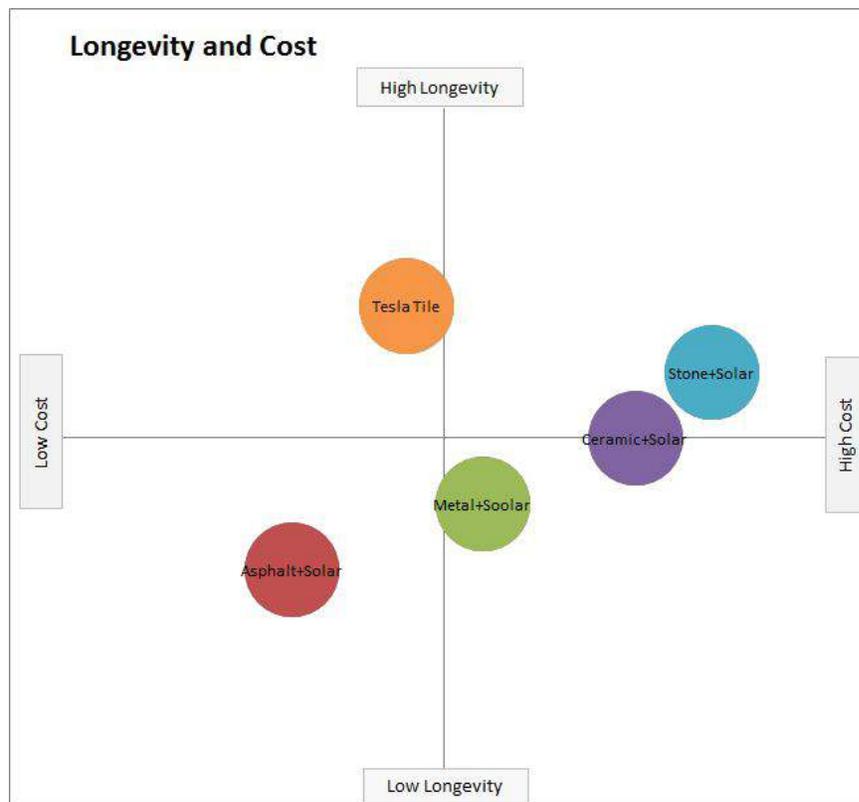


Figure 13: Longevity and Cost Positioning

Solar panels produce 15 Watts/sq.ft and Tesla tiles generate 5.5 Watts/sq.ft so solar panels are more efficient and Tesla tiles to reach 6.5 kW/hour needs to use more solar tesla

tiles and cover more area [7]. Totally, solar panel system produce more electricity by lower cost and roof coverage. On the other hand, customer complained about how solar panel looks like and make their roof ugly and some home associations don't let homeowner to use solar panel. Tesla tiles look like high end roof tiles such as stone or ceramic and present aesthetic. As can be seen in the figure 14, Tesla has lower efficiency but it is more aesthetic than other competitors.

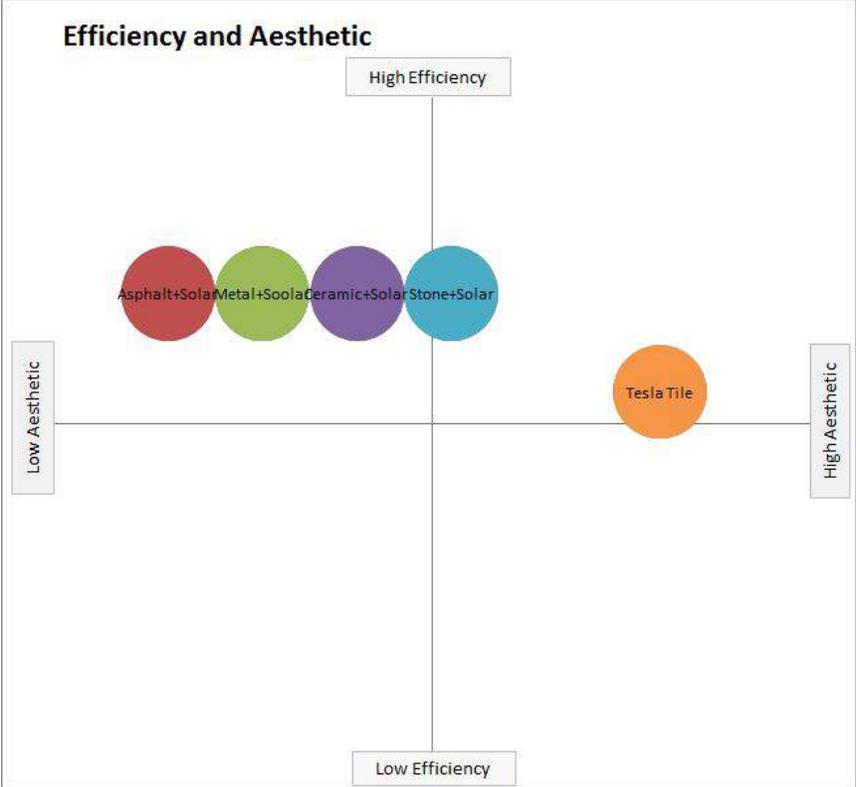


Figure 14: Efficiency and Aesthetic Positioning

4.4 Strategies

The objective is to position Tesla roof tile as the first choice for homeowners seeking aesthetics and green energy, gaining market share within three years. The marketing strategy will follow to create customer awareness regarding this product and its features, develop Tesla's customer base, establish interaction with target markets, and work toward customer word-of-mouth and referral by building a network of accredited roof installers and customer satisfaction.

Tesla's roof tile marketing strategies are:

- Increased awareness among green early adopters
- Leveraging Tesla's existing customer base
- Promoting Tesla's customer service and warranty
- Promoting among homebuilders
- Using "SolarCity" resources and building a network of accredited roof installers

Strategy 1: Increase awareness and image – informing those green energy early adopters not yet aware of features and price of Tesla's roof tile. This awareness will be pursued by application of social media tools such Facebook, Twitter, Instagram, and so on.

Strategy 2: one of the main potential sources of future sales and growth of Tesla's roof tile will be current customer base of Tesla and SolarCity companies. This customer based will be exploited by excellent customer service and relationships. Also, sales promotions will increase probability of customer base for purchasing solar roof tile. Additional interaction and experiences of customers with company and its products create some sort of satisfaction as well.

Strategy 3: As Tesla has been famous for its customer service, this capability of Tesla and SolarCity infrastructure too can be used in supporting customer service and bringing great warranty.

Strategy 4: In the channel of partners of Tesla and SolarCity, home-builders could be one critical source of promotion among end users of roof tile. Homebuilders will connect with people involved in the building process and customers as well.

Strategy 5: SolarCity has had a network and channel of accredited roof installers beforehand. This existing network of involving people in solar roof sector could be utilized to gain advantage and reduce redundancy among participants of value chain.

4.5 Marketing Mix

4.5.1 Product

Tesla's product significantly challenges traditional roofs, "I think this is really a fundamental part of achieving differentiated product strategy, where you have a beautiful roof," Musk said. "It's not a thing on the roof. It is the roof" [8]. The solar roof has the appearance of a traditional roof, with individual shingles that are embedded with solar cells. The visually impressive roof comes in four versions: smooth or textured glass, slate, and a Tuscan-style terra cotta. They are virtually indistinguishable from a normal roof. Tesla's logic is that by building solar generation units that resemble a traditional roof, Tesla could overcome one stubborn hurdle in solar adoption – one of perceived poor aesthetics.

The Tesla shingles are also much more durable than traditional shingles, made out of Quartz [8], an abundant ingredient in sand. Tesla is going as far as offering a lifetime warranty on the shingles, which is quite a change in tone to the average 25 year lifespan of a typical roof.

4.5.2 Cost

Currently the price point of the Tesla roof is set at a point for upper middle-class income residential customers - at about \$22/ft² [9]. In order to assess this price point, the three Cs of pricing strategy was utilized to help establish a lower and upper bound for what the ideal price of the Tesla solar roof should be.

Customers, according to the results to a limited survey, consider themselves as green adopters are willing to pay a price that is equal to or less than a high-end solar roof (such as

ceramic tiles) with solar panels installed on them. This perceived value placed on the Tesla roof is intuitively reasonable, since Tesla provides an added value of being aesthetically more pleasing, than it's high-end-plus-Solar panel roof counterparts.

As referenced previously in table 2, the price points of Tesla's competitors (whom were identified as ordinary roofs with the added solar panels) are mixed. The solar panel prices are unchanging across the board. The prices are only dependent on the roof types. Tesla's current price point is positioned above the lower cost asphalt shingles, and lower than the rest of the high-end shingles.

Unsurprisingly, the cost of manufacturing the solar roof is unknown, Tesla has not shared that information. But, having the price points of the competitors available, and insight to how much customers are willing to pay, we can elect that the Tesla's current price point for their solar roof is appropriate. Tesla's current price point provides them with a competitive advantage – one of high aesthetic appeal at cost lower than other high-end roofs.

4.5.3 Promotion

Elon Musk, Tesla's charismatic CEO, showed off the new solar roof in a live announcement in 2016. His announcement was marketing gold. SolarCity and Tesla, Musk explained, were going to introduce solar roofing shingles and an in-home battery. Musk claimed the new shingles looked better than a normal roof, generated electricity, lasted longer than current roofing materials and provided better installation [8]. Details were a little fuzzy, but the buzz was there. The media was impressed. Major press coverage followed. Tesla Roofs are now showcased in Tesla showrooms, next to all the cool Tesla EVs.

Musk's announcement was a success, but it only reached a limited demographic – techies. And the showrooms also attract a limited population segment.

First, to better reach the target market segment, social media will be utilized to generate awareness, catering to the high tech enthusiasts. This may come in a combination of press release. From there, demonstrations of the product's offerings will be executed through various field-marketing events such as conferences and tradeshow; e.g., International Builders' Show (IBS), and National Roofing Contractors Association (NRCA).

Second, securing partnerships with installation experts. Not only will they be the only group licensed and bonded to install, but they have their own network of clients. Tesla can leverage their pre-existing relationships to expand Tesla's market. Running in tandem with promotional activities one and two, is to officially form alliances with Public Utility Districts, such as PG&E, for it is they that will drive the incentive programs. This will be key and quite possibly necessary to cross the chasm to reach the Early Majority market segment.

4.5.4 Place

With the Tesla roof being in the early market phase, one conventional market channel strategy is already in place using a direct distribution approach, including online stores and brick and mortar shops - showrooms [10].

Direct sales via the Tesla website offers the users who visit the website the option to purchase the solar roof directly from Tesla. The website is user friendly, and easy to navigate. It provides relevant information pertaining to the buying options, warranty, financing, tax credits, and other information answering most anticipated inquires.

Since Tesla acquired SolarCity, they have shut down several of the solar installer's marketing efforts in order to focus on using its own car showroom to promote their solar and energy storage products [10].

One additional distribution channel to be targeting is the new home builder companies. The goal is to have home builders offer the Tesla Roof as an option in a new home construction.

Down the line, once the infrastructure is in place, that is once they have the necessary partnerships with electrical service providers and qualified installers, a mass retail approach may be explored. Tesla may partner with home improvement stores such as Home Depot and Lowes to sell directly to consumers.

5.0 Financials

This section will present a financial overview of Tesla's roof tile as it associated to our marketing activities. We will address customer revenue and percentage margin for the base year – 2018 - and 3 following years until 2021, marketing on sales, marketing return-on-investment (ROI), marketing budget, and finally how strategies are linked to marketing expenses.

5.1 Customer Revenue and Percent Margin

The table 3 below illustrates different sales and marketing measures. As it is crystal clear marketing ROI – 114% - seems appealing and also achievable. Furthermore, as it is depicted marketing expenses is just 14% of total sales/revenue. Additionally, sales revenue is estimated for 2018 and 2021 and rate of 16.10% growth rate is considered for this market. This growth rate is in line with what has been reported in several industry reports. This projection appears attainable and takes the increasing base into consideration. This revenue will be achieved by different category of customers including existing customer base, early adopters and after chasm mainstream.

Table 3: Customer Revenue and Percent Margin

Customer Revenue and Percent Margin		
Scale = Millions	Current	3-Year Plan
Tesla Solar Roof Tile	2018	2021
Market Growth Rate		16.10%
Market Demand (\$)	\$3,920	\$6,135
Market Share (%)	31.00%	45.00%
Sales Revenue (\$)	\$1,215	\$2,761
Revenue Per Customer (**)	\$50,900	\$50,900
Customer Volume (*)	23874	54235
Percent Margin	30.00%	30.00%
Gross Profit	\$365	\$828
Marketing & Sales Expense (% sales)	14.00%	14.00%
Marketing & Sales Expense (\$)	\$170	\$386
Net Marketing Contribution	\$194	\$442
Marketing ROS	16.00%	16.00%
Marketing ROI	114.00%	114.00%
* Not Scaled		
** Average California House Revenue		

5.2 Marketing Budget

Marketing expense/budget is to be budgeted at approximately 14% of total sales/revenue. Expenses are tracked in the major marketing categories of network of accredited roof installers, local marketing, public relations, social media, online channels, market research, and eventually sales campaigns. Marketing budget based on all of these categories and dollar amounts are depicted in below table 4.

Table 4: Marketing Budget

CATEGORY	Current	
	TOTAL EXPENSES	% OF TOTAL
Social Media	\$ 51,000,000.00	30%
Twitter	\$ 6,375,000.00	13%
Facebook	\$ 12,750,000.00	25%
Pinterest	\$ 6,375,000.00	13%
Instagram	\$ 12,750,000.00	25%
Google+	\$ 6,375,000.00	13%
LinkedIn	\$ 6,375,000.00	13%
Online	\$ 17,000,000.00	10%
Blog	\$ 3,000,000.00	18%
Website	\$ 4,250,000.00	25%
Mobile App	\$ 4,250,000.00	25%
Mobile Alerts	\$ 3,000,000.00	18%
Email Newsletter	\$ 2,500,000.00	15%

CATEGORY	Current	
	TOTAL EXPENSES	% OF TOTAL
National Marketing	\$ 25,500,000.00	15%
Network of accredited roof installers	\$ 25,500,000.00	100%
		0%
		0%
Local Marketing	\$ 8,500,000.00	5%
Newspaper		0%
In-Store Marketing	\$ 4,250,000.00	50%
POP	\$ 4,250,000.00	50%
		0%
Public Relations	\$ 34,000,000.00	20%
Public Events		0%
Sponsorships		0%
Press Releases		0%
Webinars		0%
Conferences	\$ 17,000,000.00	50%
Client Events		0%
Trade Shows	\$ 17,000,000.00	50%

CATEGORY	Current	
	TOTAL EXPENSES	% OF TOTAL
Market Research	\$ 8,500,000.00	5%
Surveys	\$ 4,250,000.00	50%
Impact Studies	\$ 4,250,000.00	50%
		0%
Sales Campaigns	\$ 25,500,000.00	15%
Campaign A	\$ 8,500,000.00	33%
Campaign B	\$ 8,500,000.00	33%
Campaign C	\$ 8,500,000.00	33%
Campaign D		0%
Campaign E		0%
		0%
Other	\$ -	0%
Premiums		
Corporate Branding		
Business Cards		
Signage		
TOTALS	\$ 170,000,000.00	100%

5.3 Linking Expense to Strategies/Tactics

Marketing budget is allocated based on priorities which demonstrate the importance of social media and public relations by 30% and 20% respectively. (figure 15) Allocation of marketing expenses is allocated as below:

- Invest in early adopter who massively utilize social media - **30%**
- Invest in channel partners for in-store marketing and POP - **5%**
- Invest in prospective customers by showing up in conferences and trade shows - **20%**
- Invest in creating greater awareness in online communities - **10%**
- Invest in sale campaigns through network of roof installers and market research - **20%**
- Invest in promotion among the network of accredited roof installers - **15%**

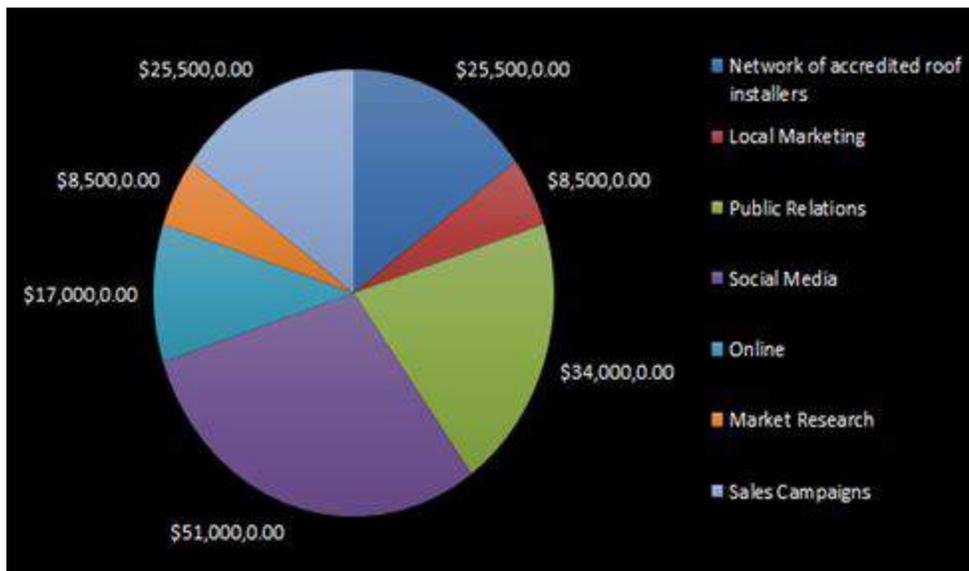


Figure 15: Marketing Budget Allocations (\$ amount)

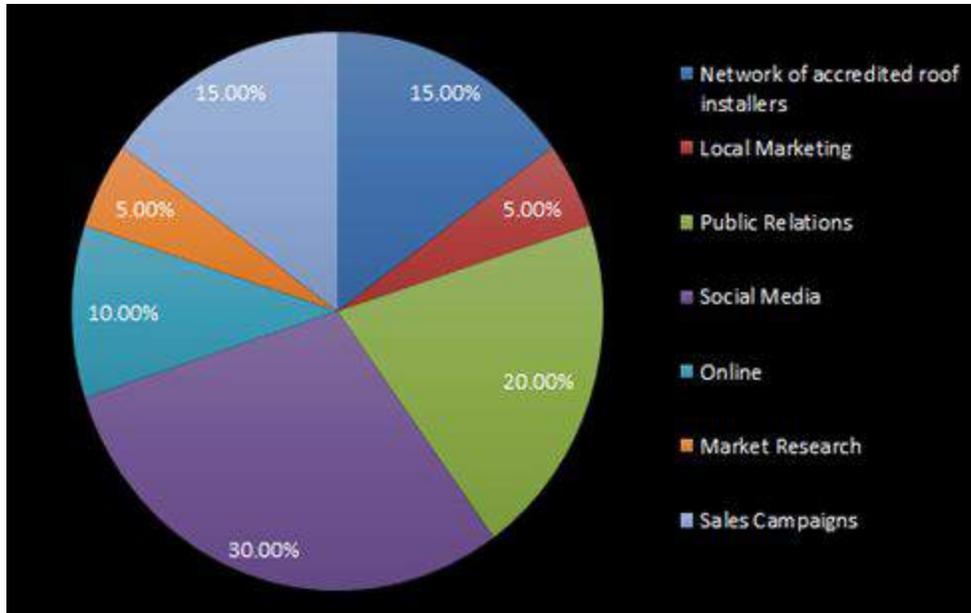


Figure 16: Marketing Budget Allocations (%)

6.0 Conclusion

Tesla roof is a product that complements customers homes' architecture while turning sunlight into electricity. It is a brilliant idea from Tesla that aligns with its mission of accelerating the world's transition to sustainable energy. The benefits of installing this roof might be noticeable only for those who are green energy and technology enthusiasts. This is why this marketing plan target a customer profile for this kind of people. The objective of this marketing plan is to position Tesla roof tile as the first choice for homeowners seeking aesthetics and green energy, gaining market share within three years. The marketing strategy will follow to create customer awareness regarding Tesla roof, develop Tesla's customer base, establish interaction with target markets, and work toward customer word-of-mouth and referral by building a network of accredited roof installers and customer satisfaction.

This plan found that there is a potential for Tesla roof in the solar market of \$3.92 Billion and its annual growth is 16%. However, 30% of this market represent the technology enthusiasts with \$1.18 Billion [3]. This %30 is the first target of Tesla roof. It is suggested that

Tesla targets the innovators and then the early adopters. The innovators are defined as the green energy adopter who care about footprint and they are also a technology enthusiasts. While the early adopters are the green energy adopters who care about prestige. To cross the Chasm, Bowling alley strategy should be applied to reduce the cost. This will allow Tesla to reach the early majority, which is defined as the economic green energy adopters who care more about cost and saving. A total budget of \$170 million has been allocated for a three years marketing plan that focuses mainly on social media and public relations to reach the targeted consumers.

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8.0 Appendix

8.1 Appendix A

Customers Interviews

Customer 1

Bio

He's a homeowner in San Jose (55 years old, property estimate at \$800k, household income \$200k), California. He's interested in 'Green Energy'. He'd rather "Tesla Roof" in case of changing his property roof vs roof + solar panel. His priority :

- Having good looking roof
- Very important to have made in the USA product
- "Tesla" has a great customer service based some of his friends who bought "Tesla" cars
- He's heard solar roof on top of the existing roof have some leaking issues and endanger roof guarantee

Side note: Each state has different taste(California is interested in high-tech and breakthrough technology vs "RED" states that are interested in made in USA products.

Questions

Would you be a green energy adapter?

Yes

Would you consider Tesla Roof Astatic?

Yes

Would you get tesla roof for your home?

Yes

Why?

"Tesla" has a great customer service based some of his friends who bought "Tesla" cars, And it's very good looking

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone - Yes
- Ceramic - Yes
- Metal

Why? It's important to have a good looking roof, so add the house value.

2) Indicate your priorities (from the most important to the least important)

- Price 3
 - Aesthetic 1
 - Longevity (warranty) 2
 - Making Electricity 1
 - Protection (Hail, fire resistance) 2
 - Home association regulation 1
-

Customer 2

Bio

He's a homeowner in Lake Oswego (55 years old, property estimate at \$900k, household income \$250k), Oregon. He's interested in 'Green Energy'. He's a "Tesla" owner. His priority :

- Having good looking roof
- He'd like to buy a "Tesla" battery pack to integrate roof and battery, so saves energy for nights.
- He has a great experience with his car(he owns his car for two years) for "Tesla" customer service.

Side note:

- His friend wants to install "Tesla" roof, but his property wasn't qualified for that due to trees around the property.
- It's important to sell product integrated with the battery(Tesla)
- "Tesla" is great company. Their customer service is great. Even Elon Musk would react if a customer send a complaint through his twitter account. There's a customer forum in their website which customers can write their experience and issues with the product and the company is really responsive to any valid complaints. Their products ' design is so advanced, so they can take care of issues with updating the software
- "Tesla" car battery could be used for house use(if integrated with the Tesla battery, in case of blackout). Each battery pack has 25 KW energy which is good for a day of normal household use. Tesla car battery pack has 75 KW energy which could be used in case of blackout.

Questions

Would you be a green energy adapter?

Yes

Would you consider Tesla Roof Astatic?

Yes

Would you get tesla roof for your home?

Yes

Why

Why? Having good looking roof

- He'd like to buy a "Tesla" battery pack to integrate roof and battery, so saves energy for nights.
- He has a great experience with his car(he owns his car for two years) for "Tesla" customer service.

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone - Yes
- Ceramic - Yes
- Metal

Why? It's important to have a good looking roof.

Indicate your priorities (from the most important to the least important)

- Price 3
- Aesthetic 1
- Longevity (warranty) 2
- Making Electricity 1
- Protection (Hail, fire resistance) 2
- Home association regulation NA

Customer 3

Bio

He's a homeowner in Lake Oswego (50 years old, property estimate at \$950k, household income \$230k), Oregon. He's interested in 'Green Energy".. His priority :

- Having good maintenance and customer service
- Having better price
- Having good looking roof

Side note:

- He had another property and 3 years ago wanted to change the roof, but the homeowner association won't let them to install asphalt shingle
- If the price is not too much high he would go with Tesla because of company's good reputation
- If he knew someone who had good experience with Tesla, that would definitely affect on his decision

Customers Interview Questions Customer #03:

Would you be a green energy adapter?

Yes

Would you consider Tesla Roof Astatic?

Yes

Would you get tesla roof for your home?

Yes

Why?Having good looking roof

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone - Yes
- Ceramic - Yes
- Metal

Why? It's important to have a good looking roof.

Indicate your priorities (from the most important to the least important)

- Price 1
 - Aesthetic 2
 - Longevity (warranty) 2
 - Making Electricity 1
 - Protection (Hail, fire resistance) 2
 - Home association regulation 1
-

Customer 4

Bio

54 years old man

Retired from electrical engineering industry.

Own his own business

Own a home in beaverton, OR

Would you adapt green energy technology for your home?

Yes

Would you consider Tesla Roof as Astatic roof?

Yes

Would you install if for your home?

Yes

Why?

I would install it if I make sure it is not more expensive than the regular luxury roof

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone - Yes
- Ceramic - Yes
- Metal

Indicate your priorities (from the most important to the least important)

- Price - 3
 - Aesthetic - 5
 - Longevity (warranty) - 4
 - Making Electricity - 5
 - Protection (Hail, fire resistance) - 3
 - Home association regulation - 3
 - Customer Service 4
-

Customer 5

Bio

55 years old man

Retired from engineering company

Own a home in Lake Oswego

Would you adapt green energy technology for your home?

Yes

Would you consider Tesla Roof as Astatic roof?

Yes

Would you install if for your home?

Yes, i am very excited for this new technology. We have to do our part of saving the environment. Nothing is better than doing that for the benefits of your home (Nice looking + Energy)

Why?

I want to be one of those people who care about the environment and take action by adopting green energy solution and support technologies that help us to go with clean energy.

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone
- Ceramic
- Metal

Indicate your priorities (from the most important to the least important)

- Price - 3
 - Aesthetic - 4
 - Longevity (warranty) - 4
 - Making Electricity - 5
 - Protection (Hail, fire resistance) - 3
 - Home association regulation - 2
 - Customer Service 4
-

Customer 6

Bio

55 years old

Retired bank manager

Would you adapt green energy technology for your home?

Yes

Would you consider Tesla Roof as Astatic roof?

Yes

Would you install if for your home?

Yes

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone
- Ceramic
- Metal

Indicate your priorities (from the most important to the least important)

- Price - 4
- Aesthetic - 5
- Longevity (warranty) - 4
- Making Electricity - 5
- Protection (Hail, fire resistance) - 4
- Home association regulation - 4
- Customer Service - 4

Customer 7**Bio**

43 years old

Professional Investment Researcher

Technology oriented

Would you adapt green energy technology for your home?

Yes

Would you consider Tesla Roof as Astatic roof?

Yes

Would you install if for your home?

Yes

Why?

Because I personally think that green energy and newer technologies in this line is consistent with what I want to have in life.

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone - yes
- Ceramic - yes
- Metal

Indicate your priorities (from the most important to the least important)

- Price - 3
- Aesthetic - 5
- Longevity (warranty) - 2
- Making Electricity - 2
- Protection (Hail, fire resistance) - 2
- Home association regulation - 5
- Customer Service - 3

Customer 8**Bio**

35 years old

Civil engineer

Technology oriented but not sure about green energy options

Would you adapt green energy technology for your home?

probably

Would you consider Tesla Roof as Astatic roof?

Yes

Would you install if for your home?

Will be considered in the near future

Why?

Because I assume this technology is in its early stages and there is more room that this technology will be evaluated.

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone - yes
- Ceramic - yes
- Metal

Why?**Indicate your priorities (from the most important to the least important)**

- Price – 4
- Aesthetic - 4
- Longevity (warranty) - 2
- Making Electricity - 3
- Protection (Hail, fire resistance) - 2
- Home association regulation - 1
- Customer Service - 3

Customer 9

Bio

27 years old Female

Pharmacist

Owens a home

Would you adapt green energy technology for your home?

Yes

Would you consider Tesla Roof as Astatic roof?

Yes

Would you install if for your home?

No

Why?

Don't plan to stay in the house for over 20 years

1. Which kind of roof are you considering to use in your property?

- Asphalt Shingle - yes
- Stone
- Ceramic
- Metal

Why?

Don't plan to live in the house for a long time

2) Indicate your priorities (from the most important to the least important)

- Price - 4
 - Aesthetic - 2
 - Longevity (warranty) - 3
 - Making Electricity - 3
 - Protection (Hail, fire resistance) - 5
 - Home association regulation - 1
 - Customers service - 1
-

Customer 10

Bio

29 years old male

Engineer

Owens a home

Would you adapt green energy technology for your home?

Yes

Would you consider Tesla Roof as Astatic roof?

Maybe

Would you install if for your home?

No

Why?

I would prefer to add solar panels. I care about aesthetics, but not enough to pay the price difference.

1. Which kind of roof are you considering to use in your property?

- **Asphalt Shingle**
- Stone
- Ceramic
- Metal

Why?

It costs less

2) Indicate your priorities (from the most important to the least important)

- Price - 5
 - Aesthetic - 4
 - Longevity (warranty) - 2
 - Making Electricity - 4
 - Protection (Hail, fire resistance) - 1
 - Home association regulation - 1
 - Customers service - 3
-

Customer 11

Bio

63 years old female

Interior architecture,

Owens 2 homes in Lake Oswego and live in tower in Portland downtown

Would you adapt green energy technology for your home?

Yes

Would you consider Tesla Roof as Astatic roof?

yes

Would you install if for your home?

yes

Why?

I care about carbon footprint and pollution, I have never used SUV cars and I prefer to use electric car (has 2015 Lexus CT 200h).

2. Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone Yes
- Ceramic Yes
- Metal

Why?

Good looking and neighborhood

2) Indicate your priorities (from the most important to the least important)

- Price - 3
 - Aesthetic - 4
 - Longevity (warranty) - 4
 - Making Electricity - 4
 - Protection (Hail, fire resistance) - 4
 - Home association regulation - 1
 - Customers service - 3
-

Customer 12

Bio

58 years old male

Engineer,

Owns 1 homes in Lake Oswego and owns 3 storage company in different cities in California

Would you adapt green energy technology for your home(your business properties)?

Yes

Would you consider Tesla Roof as Astatic roof?

yes

Would you install if for your home or your storage properties?

yes

Why?

I care about pollution, I own 3 big storage properties as a business, if I install Tesla roof , I can produce electricity more than i need and sell it (I can do business inside of my business by selling electricity. I can sell my business higher price in future because of the value of tesla roof and electricity production.

Which kind of roof are you considering to use in your property?

- Asphalt Shingle
- Stone
- Ceramic Yes
- Metal yes

Why?

Not so expensive and more they are durable

2) Indicate your priorities (from the most important to the least important)

- Price - 3
- Aesthetic - 3
- Longevity (warranty) - 4
- Making Electricity - 5
- Protection (Hail, fire resistance) - 5
- Home association regulation - 1
- Customers service - 4

8.2 Appendix B

Research Log

Overall research process

The team research process of this marketing plan included online search, interviews, brainstorming, and discussions with experts (our professor and TA). All the team members conducted online research starting from looking for a topic for our marketing plan until the end of this marketing plan. Online web research was a main source of data for this marketing plan. We started with looking for information related to Tesla roof itself as a product. Gathering information about the product was necessary to determine whether we want to proceed with it or not.

The price, efficiency, and regulations are things we searched for mainly online. The appearance of the roof was something we discussed in customers interviews. These interviews and the market research gave us a better idea of what segments should we consider for our product. Segmentation, targeting, and positioning were some of the challenges we found in this project. Especially that Tesla roof could be a solar energy product and a roof product. Moreover, it is a new technology that needed certain type of customers to adopt. Continuous brainstorming in our weekly meeting and having a discussion about these challenges allowed us to overcome it. The combination of the different research methods provided us with a brighter insight.

Tesla website was one of our sources but we also considered looking for personal reviews from customers about Tesla as a company and about this particular product. Looking for similar products and competitors was one of the things we did to determine what distinguish Tesla roof than other solar panels or tile roof. We had to ask ourselves questions such as: why would people install Tesla roof instead of regular tile roof? What would make the customers believe in this new technology? What kind of behaviour and lifestyle would those customers have? Thinking from the customers perceptions was very helpful method for us to find some answers and move on in this project.

Research about the product itself (Tesla Roof)

Research about Tesla roof started from Tesla website. The first thing that is obvious on the website is “aesthetic” look. The second was the durability of Tesla roof in comparison with the other traditional roof. And finally, tesla roof integrated with Tesla "Powerwall" can allow the customers to be off the grid. After surfing in google another piece of information about Tesla roof was Elon Musk’s presentation. He well defined all aspect of Tesla roof and the actual Tesla roof was installed in two houses close to the scene.

- **How much does it cost?**

The cost of Tesla roof is little high even though there is no clear answer for Tesla roof pricing in Tesla website. The main reason is that incentives vary from state to state which affects on Tesla roof cost. There’s some information in some websites which the team is considered as a base for our project(\$21 per sqft). The cost of Tesla roof is compared to the high-end roof(the look is like a high-end roof as well). The team is agreed that in order for Tesla roof to be a product with customers throughout the nation is to reduce the cost later.

- **The efficiency**

Tesla roof is pretty durable. As it’s mentioned earlier the standard of hail, wind, and fire rating is higher than any roof. The efficiency of Tesla roof as far as making electricity in comparison with the traditional solar panel is not very good. There’s no clear answer to this question: what is the exact efficiency of Tesla roof? The team found a website that had some information about Tesla roof and the efficiency of traditional solar panels were compared to Tesla roof. Based on this information Tesla roof is less efficient than the normal solar panel. The team wasn't worried about the efficiency of Tesla roof, at least for before the Chasm. The team believes that with the new technology and improving the PV cell efficiency Tesla roof could be more efficient than now.

- **Regulation**

According to Tesla website and as it's mentioned earlier Tesla roof has top of the line's standards. The team was agreed that Tesla is going to be one of the best options for the harsh environment (like below freezing in the winter time and hot in summer time). Fire standards might be one of the big strength of this product in high fire risk regions. The team thought the incentives could help Tesla roof to be one of the best options in some states like California. There's some concern about the new administration and cutting the federal incentives.

Competition

Our challenge in competitors analysis was selecting market because at first, we did not know what is our market, it was hard for us to distinguish our market between roof and green energy (roof which produce electricity). Tesla tiles could work as a roof and it makes it hard to make a decision. After we did some research and change our perspective from engineer side to customer side, we found that we need to identify Tesla tile job which has to be done from customer view. Our research and meeting discussion concluded that In fact, tesla tiles job is producing electricity as a roof tiles from customer approach. This conclusion has clarified our way to select the market and recognize our competitors in market which is solar panel system which has to be added on top of roof so our competitors are combination of roof tiles and solar system. Switching from producer or engineer side to customer view works as an indicator in each step and helped us to find our way and correct our-self.

Challenges

Identifying who we are (as a product) was a challenge throughout the the course. We struggled to define our market segment. We originally thought Tesla roof is both a roof in itself, and a solar energy device, so we determined that both these segments can be explored. During our midterm presentation we received feedback eluding to our miss calculations in choosing

both market segments. We then decided to proceed with the roof segment only. we knew there was something unsettling to that decision because we could not ignore or factor in the solar aspect of the roof. A couple of weeks after choosing the roofing market only, we had a conversation after class with our profesor and discussed our dilemma. Our professor explained that we are missing the most valuable value proposition - the solar aspect, and that we may explore both solar energy and roofing market, which we did.

As a team, we had a long brainstorming session, and were able to talk through and identify our segments and customer profiles by thinking about the motivations of the individuals who may consider the Tesla roof. The first profile was the simplest, since it was in our opinion the most common; a person who is interested in green energy, but price sensitive. We used that first profile as a starting point. We found it much easier after that to build on that profile, for instance, removing price sensitivity and adding esthetics, or removing green energy customer and adding new roof shopper.

Team Expectations

As a team we had some expectations before going forward through the process of designing marketing strategies and planning. At first, we had some schemas and mental models regarding this product and potential markets and customers, and we naturally gathered information to help us judge and respond to it. Along the way of designing marketing ideas and strategies we found some results for and against of our prior assumptions. For instance, one of our early premises was that markets of this product could be segmented by geographical variable and target market for this product should be necessarily in states with high level of sunshine. As we were stepping into next levels we comprehend that that assumption is not a useful indicator for representing the best target market. What we realized was that by categorizing markets based on such variable (geographic) we were narrowing down our target market which was part of market that could be exploited. But on the other hand, some of our ideas generated at the first stages of planning were totally consistent by what we got from information collection and analysis. For example, all of team members had consensus that both

roof tiles and solar panels should be considered as similar products in evaluation of Tesla's roof tile. After gathering relevant data for those two and comparing with our product it was evident that there was overlaps as if we did not take into account both markets and products we will be behind the competition and loss and attractive sections of the total market.

Additionally, once we compared results of similar substitute products according to their different features and price, results was somehow surprising and interesting. Although Tesla's solar roof tile was a mixture of their features in one product, its price was really competitive. That showed some room of value for exploiting that we paid attention to thereafter in our marketing plan.

Moreover., all of us had the same perspective about first target market for our product. That was early adopter of green energy. After analyzing different segments by doing some sort of product/market grid analysis we discerned that this target could be first point for the beginning of marketing strategy to enter into the market. All measures of target market supported this idea and it was exactly in the same direction of our expectations.

All in all, our main learning and expectation from doing such a great project was that group dynamics among team members and our discussions had an impacting effect in final results. What we learned was that a great team could result in successful achievements and our expectations could be modified during time by collecting more information and group discussions.