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Marketing Plan for the DJI Phantom 4 Follow-Me Drone Camera System

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1.0 Executive Summary

Dajiang Innovation Technology Co. (DJI) was founded in 2006 as a hobbyist venture, but soon transformed into the world's largest drone manufacturer. The company's main aim is to develop a flying - camera stabilization system - to capture amazing photos and video. DJI technology does more than simply enable creators. They push visionaries to go beyond the limits of what is thought possible, motivating them to inspire the world, a culture of constant innovation and curiosity, and a focus on transforming complex technology into easy-to-use devices. Building on the ethos of "form follows function," DJI's products combine advanced technology with dynamic designs.

Company Vision:

"Creativity is at the heart of every dream. Every idea, every groundbreaking leap that changes our world starts with the vision of talented creators. At DJI, we give these creators the tools they need to bring their ideas to life."

Headquartered in Shenzhen, widely considered China's Silicon Valley, DJI benefits from direct access to the suppliers, raw materials, and young, creative talent pool necessary for sustained success. Drawing on these resources, the company grew from a single small office in 2006 to a global workforce of over 6,000. DJI's offices can now be found in the United States, Germany, the Netherlands, Japan, Beijing and Hong Kong.

This paper is a marketing plan for the new DJI Phantom 4 series autonomous flying drone camera system, to promote this product to succeed among its current and future competitors. This marketing plan will focus on the commercial U.S. market, based on the analysis of product positioning within three target markets, agricultural, industrial inspections and real estate. We have created a marketing plan according to four fundamental questions. Where are we now? Where do we want to go? How will we get there? And what is supposed to happen when we get there?

Where are we now? In 2012, DJI, founded by Frank Wang Tao in China, launched the Phantom 1 Ready-to-Fly Quadcopter with GPS, larger payload (GoPro holder) and long horizon with advanced features and reliability. It is the first Chinese company that is leading drone camera revolution with revenue more than $1billion in 2015 [1]. The Phantom 4 Quadcopter, launched in 2015 and the Phantom 4 Pro launched in 2016, as a flying tripod and camera. Both of them have great features which meet the customer's needs including the aircraft, gimbal (to stabilize the camera), vision system, infrared sensing system, camera, remote controller, intelligent flight battery, anti-collision software and applications [2]. DJI is now the number one leading company based on sales, assets, profits and market value. Around 70% of the drone market share belongs to DJI, who sits ready to capture even more of this remarkable industry which is expected to grow by 800% to $27 billion by 2021.

Where do we want to go? Currently DJI has competition with many drone manufacturer like

3DR, Yuneec, Parrot, AirDog, Ehang, some of them are really established leaders in the drone market, where some are new entrants with innovative technology and product. Providers such as Parrot, Hubsan, Ehang, possess competition in the drone market with comparative lower prices of their product, but when it comes to technology and added value of the product for a little more money, DJI proves to be the best in class and is the market leader with advanced technology at relatively lower prices than competitors. Developing our strategy in these three top market segments will help us cross the adopter chasm and grow to be the main street product for these segments.

How do we get there? This document will outline the strategy for the DJI Phantom series to go after the marketing sweet spot of thee top commercial segments and will dominate these markets. Our marketing strategy further strengthens existing customer relationships, while developing an aggressive campaign to capture new customers who value our brand, buy our products regularly regardless of promotions, and maintains loyalty. We will do this through a focused promotional and distribution strategy, competitive pricing strategy, continual development of new services and features of the Phantom 4 and Pro.

What will it look like when they get there? DJI will obtain 75% market share by 2018 and grow to 80% in 2020 within each of the three target industries. The competition will struggle and many will fail in the wake of DJI's market dominance.

2.0 Introduction

In general, since 2012, the electronic market has grown tremendously among several high-tech products [3]. Most of the electronic components have been driven by low prices with high capabilities such as GPS and accelerometers. One of theses amazing technology is our products called Phantom 4 and Phantom 4 Pro from Dajiang Innovation Technology Co. (DJI). It is a “follow-me drone camera system.” This product will change professional photographics, industrial inspections, commercial real estate and people's lives globally with convenient price and reliability.

Our company vision is as DJI says, “Creativity is at the heart of every dream. Every idea, every groundbreaking leap that changes our world starts with the vision of talented creators. At DJI, we give these creators the tools they need to bring their ideas to life” [2].

In this paper, we will build a marketing plan for the DJI Phantom 4 and Phantom 4 Pro in order to promote our products to succeed among its current and future competitors. We will create a marketing plan according to four fundamental questions. Where are they now? Where do they want to go? How do they want to get there? And what is supposed to happen when they get there?

The AR Drone Parrot, first appeared by hobbyists in approximately 2009 - 2010. In 2012, DJI, founded by Frank Wang Tao in China, launched the Phantom 1 Ready-to-Fly Quadcopter with GPS, larger payload (GoPro holder) and long horizon with more ability and reliability. Extreme efforts were made with regards to DJI’s engineers and designers to solve the drone camera issues in order to meet the customer's needs. Our new products attract the customers globally by defining the aerial photography and video. It is the first Chinese companies that is leading drone camera revolution with revenue more than $1billion in 2015 [1]. In contrast, between 2013 and 2015 many other companies declared more features than Phantom, but most of their models launched a year later from their original announcement were unreliable. These companies misjudged a number of engineering advancements and their design required time to be optimized for the customers [3].

Phantom 4 Quadcopter, launched in 2015 with a price of $1,199.99, and Phantom 4 Pro launched in 2016 with price of $1,499.99, as a flying tripod and camera. Both of them have great features which meet the customer's needs including the aircraft, gimbal (to stabilize the camera), vision system, infrared sensing system, camera, remote controller, charger, intelligent flight battery, and applications [2].

3.0 Company Analysis

In this section we provide an overview of the business and the nature of the business for DJI Co. We include a general description of the history, the patented technology, complete products and services. Also included are details on patents and strategic partnerships that have helped to

position the phantom at the very top of the worldwide market in the drone industry.

3.1 Business Overview

DJI-Dajiang Innovation Technology Co. was founded in 2006 as a hobbyist venture, but soon transformed into the world's largest drone manufacturer. The company's main aim is to develop a flying - camera stabilization system - to capture amazing photos and video. DJI technology does more than simply enable creators. They push visionaries to go beyond the limits of what is thought possible, motivating them to inspire the world, with the help of an unparalleled commitment to research and development (R&D); a culture of constant innovation and curiosity, and a focus on transforming complex technology into easy-to-use devices. Building on the ethos of "form follows function," DJI's products combine advanced technology with dynamic designs [2].

Headquartered in Shenzhen, widely considered China's Silicon Valley, DJI benefits from direct access to the suppliers, raw materials, and young, creative talent pool necessary for sustained success. Drawing on these resources, the company grew from a single small office in 2006 to a global workforce of over 6,000. DJI's offices can now be found in the United States, Germany, the Netherlands, Japan, Beijing and Hong Kong. As a privately owned and operated company, DJI focuses on their own vision, supporting creative, commercial, and nonprofit applications of our technology [2].

3.2 Current Situations

Out of all the company's worldwide, DJI is the 1st leading company based on sales, assets, profits and market value (forbs 2016). Around 70% of the drone market share is DJI. According to Forbes, DJI's market dominance has garnered a $10 billion valuation, as private equity firms like Kleiner Perkins and Accel Partners have poured hundreds of millions of dollars in capital to gain a slice of an industry expected to grow 800% to $27 billion by 2021 [4].

3.3 Product and Services

Today, DJI products are redefining industries. Professionals in filmmaking, agriculture, conservation, search and rescue, energy infrastructure, just to name few. More trust DJI to bring new perspectives to their work and help them accomplish feats safer, faster, and with greater efficiency than ever before. According to IDC [3] it is estimated that DJI will capture around 30% of China's commercial market by 2019. The company, estimated to generate $1 billion in total revenues from last year by introducing a $15,000 agricultural drone last November that helps farmers spray pesticides over crops [4].

The Phantom series are DJI's consumer flagship quadcopters. They are currently the most popular product, and since launched, have evolved to integrated flight programming with a camera, Wi-Fi or Lightbridge connectivity, with the pilot's mobile device. Phantoms are made for aerial cinematography and photography applications, but are also used in recreational use. The Phantom 2 Vision+ features a camera and gimbal system manufactured by DJI, capable of

taking 14MP stills and recording 1080p. In comparison, the Phantom 3 Advanced, Professional, and 4K, can record 4K video and take 12MP stills. In March 2016, DJI released the next generation quadcopter called the Phantom 4 [2].

The Phantom 4 quadcopter offers more power, speed and features than the Phantom 3. Phantom 4 Quadcopter, launched in 2015 with a price of $1,199.99, and Phantom 4 Pro launched in 2016 with price of $1499.99, as a flying tripod and camera. Both of them have great features which meet the customer's needs including the aircraft, gimbal (to stabilize the camera), vision system, infrared sensing system, camera, remote controller, charger, intelligent flight battery, and applications. In terms of Phantom 4 applications, DJI launches an application, called GO, with updating every period of time such as GO 4. It has various features that can enhance the product usage and its enjoyment. The applications can be downloaded via Google Play for Android users and App Store for iOS users. The user can see through his device, such as iPad, what the camera sees by using a real-time HD downlink. With his hands, he can take pictures as using a regular camera. Simply, the app is completely controlling every part in Phantom 4 from picture, movement, speed, tracking, map, music and video template for sharing, and so forth [2].

At DJI, customer satisfaction is the priority. For that reason, DJI has an extensive team working on after sales. The company offers different types of product care plan to protect the product from damage. The online and offline service is offered by the company to claim the warranty or repairing services of the any product and part. In addition “rent gear” is a new service started by DJI where customers can rent their products on hour or day basis. With this service people can try out the product without having to purchase one, while capturing their special day with still photos and videos.

3.4 Intellectual Capital

DJI has invested a substantial amount of resources over the course of nearly a decade into the research and development of Unmanned Aerial Vehicles (UAVs). This investment has generated technology that is fundamental to the future of the UAV and related industrial applications.

DJI holds hundreds of patents worldwide, including at least 30 issued in the U.S. and has at least 50 applications pending there. DJI offers state-of-the-art products and solutions for aerial photography and cinematography. These solutions include remote tracking, monitoring, geological surveying, with many types of commercial, personal, and industrial applications for both professionals and hobbyists in the fields of journalism, filmmaking, emergency services, industrial equipment, road monitoring, and many others.

DJI welcomes competition, but is committed to protecting its intellectual property. They always safeguard that investment, to protect customers and partners and to promote genuine innovation in this promising area.

3.5 Strategic partnerships and alliances

The drone market today can be described as a melting pot of different technologies, where combinations of hardware and software components and service features are provided to the end user. In order to create sustainable success in this extremely fast moving market it is essential to maintain strategic partnerships or invest in a solid UAV portfolio.

In 2014 DJI first partnered with you ku.com service company and after that a series of hardware, software and service companies were also partnered with DJI. Hardware Company includes FLIR, Ford, FLYABILITY, uAvioni, Leica geosystems. Some software company includes AIRMAP, SKYCATCH, DroneDeploy, propeller, Datumate. To improve the services, companies like Lufthansa, and PILATUS are also partnered with DJI. DJI has formed partnerships with companies like PRECISIONHAWK and MEASURES that specifically demonstrate their industry specific involvement. It speaks to the work DJI is doing to develop, improve and expand their line of industrial offerings with airframes, payloads and software that can be utilized across various industries. However, there are and always will be narrow use cases which require a custom solution, but DJI has already engaged with their customers to create solutions that fill very specific needs. To date, these collaborations have taken several forms, including cooperation in the areas of product, training, and procedure development, and marketing activities [5].

4.0 Market Analysis

This section of the market analysis covers the increase in drone purchase, use, and manufacturing since 2013. The increase in hobby drone flying devices helped justify moving

towards the aerial photography drones, available now to the general population just within the past two years. We are using this data to support how to predict the use of autonomous “follow-me” aerial photography drones being flown without remote handheld controllers that are gaining traction in the market and will innovate DJI to remain on top of the market.

4.1 Market Demographics

The drone industry has grown very quickly since 2013. Aerial photography (AP) drones, by far, grabs the largest part of the market and has seen up to 3 Billion dollars’ worth (at retail) in 2016. This past year saw a large increase in the utility in law enforcement and agricultural applications and will continue to play a pivotal role in market growth over the five year forecasted period. Rotary blade drones accounted for over 75% of the market share in 2014. Its popularity can be attributed to the fact that it is capable of flying in every direction as well as hovering in a fixed position, which the fixed wing counterparts cannot achieve [6].

North America contributed to over 55% of the global revenues in 2014, which can be attributed to high production and increased use in law enforcement, agricultural activities and hobbyists. The regulatory scenario in Europe is more conducive to market growth as opposed to the U.S., which is expected to play a pivotal role in high penetration of commercial drones in Europe. Asia Pacific stands to witness high proliferation of commercial Unmanned Aerial Vehicles (UAVs) over the forecast period. Countries such as Japan and Australia have emphasized on the use of UAVs in agriculture [6].

4.2 Market trends

4.2.1 Regulations

June 2016 the United States Federal Aviation Administration (FAA) announced Par 107 regulations that the rules regarding flying drones in the country are to be greatly relaxed. This created an opportunity and a framework upon which to grow this product. Commercial operators no longer need a license to fly drones weighing less than 25kg/55lbs, nor do they require a Section 333 exemption, which had previously been required on a case-by-case basis and could take six to nine months to secure. In fact, the new regulations state that commercial drones can be flown as long as the pilot is over the age of 16 and has passed an aeronautics safety test; has the drone in their line of sight; and does not elevate over 122m/400 feet above ground level [7]. In addition, the FAA granted regulatory exemptions to six television and film production companies to operate drones on sets: Astraeus Aerial, Aerial MOB, HeliVideo Productions, Pictorvision, RC Pro Productions Consulting, and Snaproll Media [8].

4.2.2 Price

Dramatic decrease in the price of the hardware and technology is bringing a lot more hobbyist as well as new commercial customers into the market. Drones with high definition cameras range from $400.00 USD to $1500.00 USD for the local consumer interested in small aerial photography. A high-tech drone used in commercial industrial inspections that might have cost $140,00 three years ago is now available with more options for as little as $11,000 [16]. Small companies can purchase these aerial photograph devices at a very reasonable price and quickly get to work surveying their land, equipment or job site. Also real estate agents can now do a 360 panoramic view of a home listing with just a small investment. Other small businesses such as wedding photography can offer their customers a better service and action sport enthusiasts can also start low and advance their photography skills with very little investment, about the same as they would pay for a new cell phone.

4.2.3 Technology

New drone technology is opening up a whole raft of new applications due to multiple improvements, an example is in emergency response, security, and inspection fields just to name a few. In July 2016, a startup took first prize at the National Aeronautics and Space Administration (NASA) Unmanned Traffic Management (UTM) Drone Sense and avoid technology competition [10]. Aerotenna has incredible new technology–microwave sensors, basically miniature radar that are coupled with active sensing autopilot capability that scans the surroundings during flight and avoids potential collisions autonomously. So by combining microwave-based sensing with aerospace and control engineering, they are solving many challenges of being able to fly autonomously beyond visual line-of-sight. This will uncover new applications for UAV platforms.

4.2.4 Advancement in Aerial Photography

Drones have already created new sources of demand for aerial photography, and this will continue in earnest. As with land-based photography, the financial and technical barriers to entry are low, making it easy for businesses to begin offering drone based film and photography services [11]. Now that the regulatory hurdle is low, it is expected aircraft vendors and specialty retailers will flourish as well [12]. Compared to the historical aerial photography of having to rent a helicopter, this is completely new, industry changing, and innovative way to filming.

4.2.5 Competition

There is healthy competition, which delivers customer benefits, because everyone is working harder to produce a better product. However DJI is holding 70% of the market share and is diverse in their product line to support agriculture, industrial inspections, and real estate markets, as well as the hobbyist photographer. Some competition is entering the market with lower pricing with sometimes better product, and therefore each competitor will be addressed later in this paper. DJI needs to be aware of their competition, and needs to become the brand leader in aerial drone technology as more products in more hands, will increase awareness, increase curiosity, and increase customer knowledge.

4.2.6 Improved dependability

The desire for better dependability and reliability in the product is causing vendors to make better products. Users are beginning to believe it's not just a throw away toy anymore. They last longer and have excellent image and video resolution, which is a major driver in the commercial drone industry. This is not just true for professional drones but also consumer drones. Last year the major brands continued to offer integrated 4K video recording cameras on drones, but they did so at lower prices than in 2015 [12]. Additionally, this past year, DJI upped the fidelity bar with its Phantom 4 Pro and Inspire 2.The Phantom 4 offers more powerful video processing for 4K videos at 60 frames per second (fps) at a 100 Mbps bitrate. They also offer a mechanical shutter, eliminating the rolling shutter distortion that can occur when taking images of fast-moving subjects or when flying at high speeds. In effect, they are as powerful as many traditional ground cameras.

4.2.7 Sensors

The trend for better and smaller, more lightweight sensors for drones—such as stereoscopic, ultrasonic, LiDAR, infrared, and spectral sensors, all of which will help drones perform tasks like collision avoidance, 3D imaging, infrared thermography, or improved crop vigor analysis [12]. This technology is also improving the autonomous flights of the drones and is a major technology advancement for the Follow-Me drone system. While conducting aerial photography in the business of agriculture, insursturture inspections or just mountain biking with a drone following you, the user wants the reassurance of knowing that the drone is not going to crash.

4.2.8 Mobility

A major driver this past year for drone technology was mobility. In the consumer world, the scales have tipped from programming for personal computers and televisions to mobile devices [12]. What this means for drone manufacturers and service providers is that application development has shifted from desktop to mobile applications. In 2016, DroneDeploy introduced an App Market, a store for drone applications from a range of companies, including Autodesk, Box, John Deere, and 13 others, as well as a variety of industry verticals. The App Market includes mobile device applications from Airmap, Drone logbook, Flyte, Kitty hawk, NV Drone, Skyward, and Verify that help pilots and businesses manage drone operations and compliance. In a nutshell, these apps enable enterprises and drone-based business service providers to automate their workflow and data integration with specialized tools built within the DroneDeploy user interface. While watching the news the other night a story came on showing the local police flying a drone that required a laptop in order to view the video and control the device, now all of this can be done on your smartphone.

4.2.9 China production

Throughout 2016, Chinese companies both large and small entered the world market with consumer drones to establish market share or increase it. Tractica, unconfirmed commercial drone forecast, says consumer dorne sales will continue to surge over the next several years, with global annual unit shipments increasing more than tenfold from 6.4 million in 2015 to 67.7

million by 2021 [9]. While average selling prices for drones will continue to decline sharply during that period. They anticipate that total revenue will increase from $1.9 billion in 2015 to $5.0 billion in 2021 and the unit shipments to increase from 6.4 million in 2015 to 67.9 million by 2021 [13].

4.2.10 International Use and Regulations

In the UK, where the Civil Aviation Authority (CAA) has just granted Amazon permission to carry out extensive drone trials in Cambridge without the requirement to adhere to its strict flying restrictions. The CAA is allowing Amazon's employees to operate its drones without a direct line of sight to the device, trailing “sense and avoid” anti-collision technology that lets drones automatically avoid obstacles while in the air. In addition, one person will be allowed to control multiple drones [7].

The UK's emergency services are also actively engaging with the technology, and it was recently reported by Sky News that two thirds of UK fire services and half of police forces are planning to use drones or are already doing so. Last year, Greater Manchester Fire and Rescue Service became the first to enjoy 24/7 access to drone support from a number of trained operators. Another pioneer is Mid and West Wales FRS, which bought a number of drones in 2015 after securing a US$30,000 grant from the Welsh Government [7]. In February 2017 at the National Football League (NFL) super-bowl, over 1,000 drowns flew in formation during the halftime show creating a light show in the sky behind the performers.

On the other hand, other countries place bans for camera drones. Saudi Arabia prohibits flying or entering any remote-controlled flying devices into the country [14]. Also, United Arab Emirates requires drones users to register their devices with the General Civil Aviation Authority, and Sweden bans flying camera drones without surveillance permits [15], [16]. Therefore, it seems that some countries are working in updating their policies for camera drones because of their security and privacy fears. In these cases, DJI will need to develop a strategy to work within the government restrictions, and in some cases the governments themselves of other countries, in order to advance usage in many commercial areas, such as infrastructure assessment, and agriculture.

4.3 Market Needs

Technology trends through 2016 have focused on consumer drone use, but with the new demands and emerging technologies, many manufacturers are now transitioning into the commercial market [6]. The new technology trends are opening up many different uses for drones that were not present in the market before. Drones are also taking over as the preferred method for tasks that used to require an airplane or helicopter for aerial photos, or time intensive walk downs by someone doing an inspection.

Law enforcement, search and rescue, agricultural, and many more commercial sectors are all using this technology in their respected workforce [6]. Some current applications of aerial

photography drones include aerial inspections of pipelines with thermal cameras to detect where the thermal insulation is breaking down. This is being done on a project in the West Nile Desert of Egypt, where a drone flies autonomously along an 80 km pipeline. Drones can be used to aerial map forest fires detecting the hottest spots through the smoke, and then directing water carrying helicopters to that specific locations. Industrial inspections on bridges or large buildings can utilize a drone and remove the need to hire aerial support or scaffolding. The market needs are endless and ever evolving: soon a drone will be able to fly into a hazmat area with chemical identification sensors and radiation analysis equipment, pick up a particulate matter on a sticky cloth and test it on the spot, giving drones the potential to save lives [6].

4.4 Market Growth

4.4.1 World Market

Goldman Sachs predicts the total drone market to grow to $100 billion by 2020. This is grouped into two major segments: consumer and commercial. They predict the consumer market demand for drones will increase, and revenues in 2020 are expected around $3.3 Billion shown in Figure 1 below [17].

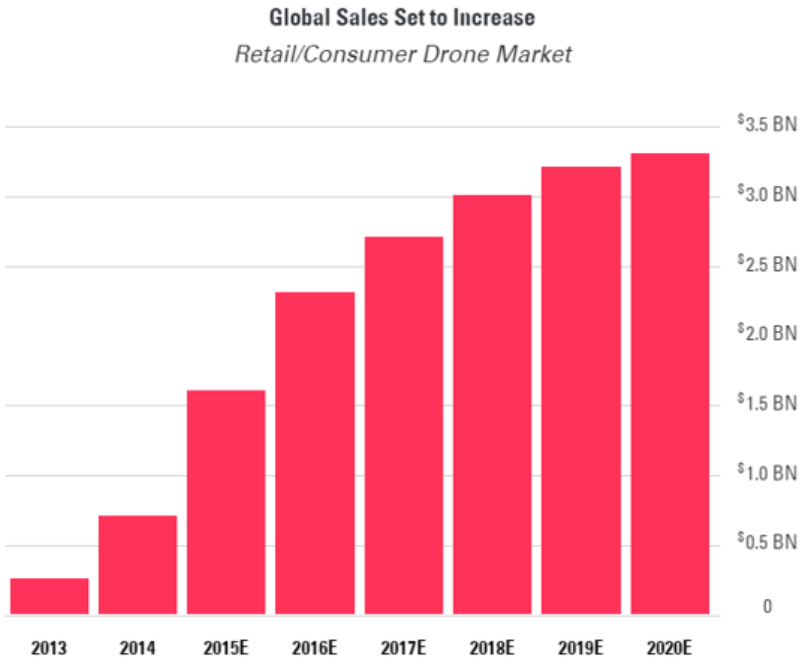


Figure 1. Goldman Sachs Drone Sales predictions

The global commercial drone market size was estimated to be USD 552 million in 2014 and is expected to have a compound annual growth rate of 16.9% by 2022 by Grand View Research. Administrative support through permitting drone flying for noncommercial and commercial purposes in select geographies is stimulating the growth of global drone market. Several companies have already gained prominence owing to their ability of high-resolution image and video capturing, dynamic novel design concept, as well as adequate operational intervals.

Upcoming favorable initiatives by regulatory bodies, such as Federal Aviation Authority (FAA) and European Aviation Safety Agency (EASA), and increasing governmental spending on such advanced UAVs are providing market opportunities to new entrants as well [3].

Goldman Sachs predicts much more growth than Grand View, at $13 billion between 2016 and 2020 for commercial and civil. They do not include military in this forecast, but separate that as a different, $70 billion industry [17].

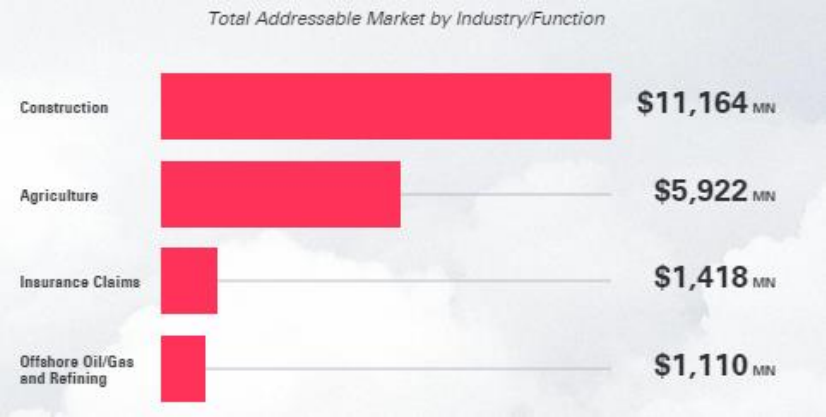


Figure 2. Goldman Sach's prediction of commercial drone market between 2016 and 2020.

4.4.2 US Market

Each year, the FAA publishes predictions on unmanned aerial system (UAS). Based on the new rule, they separate drones under the small UAS (sUAS) rule, which is under 55 lbs. They also separate the consumer and commercial markets, and go further to separate commercial units based on price. The higher end units are expected to be around $40,000 and the lower end around $2,500. Almost the entirety of the commercial market needs are expected to be fulfilled by these small, lower end units [12].

For these small, low cost units, in 2016, they forecast 0.6 million potential commercial annual sales, but the sales each year is expected to grow over 400% from last year, and increase to 2.7 million units sold annually by 2020 [12].

Table 1. FAA sUAS sales forecast summary

Sales Forcast Summary (US)					
Year	2016	2017	2018	2019	2020
Commercial drone Units sale(in Million)	0.6	2.5	2.6	2.6	2.7

Within the commercial segment, there are various sub segments for different industries.

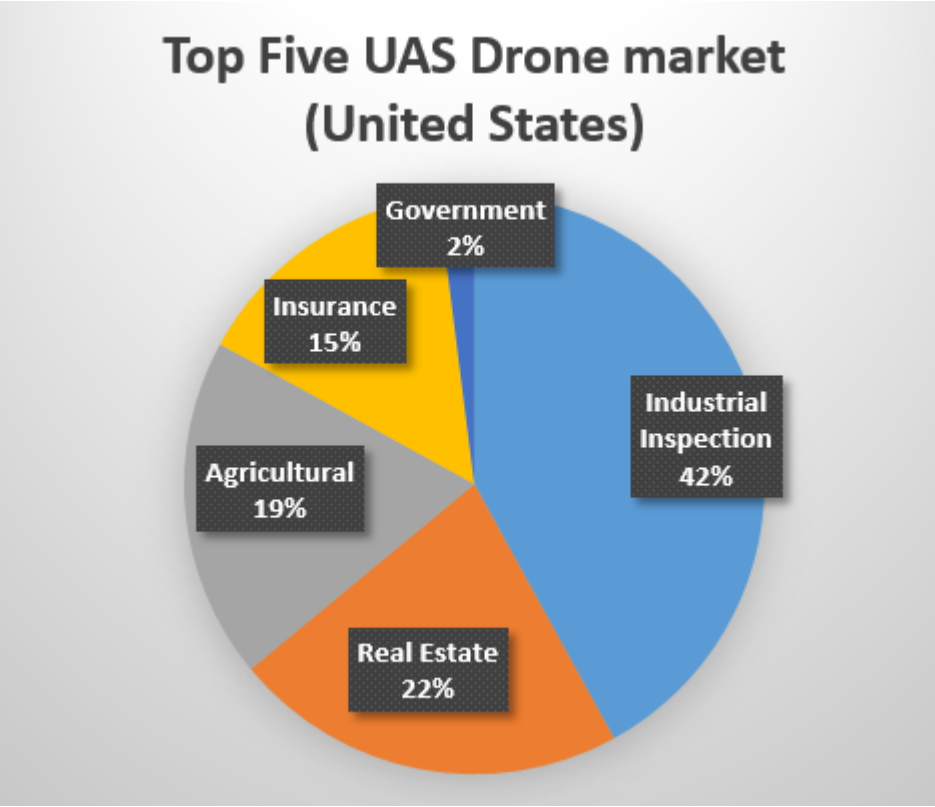


Figure 3. Top Five commercial drone markets, predicted by the FAA [12]

4.5 Potential Market Segments

Based on the emerging needs of the commercial market outlined above, and Goldman Sach's prediction of the global commercial market being four times the size of the consumer market, our marketing team needs to create a plan to move DJI more heavily into this sector.

To obtain our target market, we move focus to just the US market for the scope of this marketing plan. To predict our market size and potential sales, the FAA predictions are the most useful. They separate the market into small drones, and those at an average price of $2,500, which is exactly where the Phantom 4 fits in. The Phantom 4 can satisfy these market needs.

The FAA predicts the sales per Figure 3. Based on these percentages, and with the forecasted total sales numbers, each segment has a potential unit sales of Table 1.

Table 2. Predictive Sales by Market

Market	Predicted percentage of Total Units	Predicted Unit sale in 2017
Industrial Inspection	42%	1,050,000
Real Estate	22%	550,000
Agriculture	19%	475,000
Insurance	15%	375,000
Government	2%	50,000
Total		**2,500,000**

These calculations were done by multiplying each segment's percentage by the total unit sales, for example:

Industrial Inspection Segment: Market size = 42%

In 2017, 2.5 million commercial units estimated to be sold:
Total unit sales = 2,500,000
Segment unit sales = 0.42 * 2,500,000 = 1,050,000 units

To focus the Phantom 4 marketing plan and make the most of the resources, we will focus on the top three commercial sectors. These areas will provide the maximum profit because of the largest potential, at a total of 2.075 million units.

4.6 Customer Analysis

The FAA's new regulations for drone registration have opened the door for many uses of drones. Based on their predictions, there are three new areas of customers that we would like to tap into for a high number of drone sales. They are industrial inspection, real estate/aerial photography, and agriculture which we will go into over the next two pages.

4.6.1 Industrial Inspection

The category of industrial inspection includes many different customers in many different commercial industries. One use outlined above is using an aerial photography drone for inspecting a pipeline for damage. This is one of the many uses for drones in aerial surveying. Often times on a job site or completed project, there are obstacles preventing surveyors from getting to all locations. The needs in this industry are for more than just pictures however, after the points are taken with a drone, they would need a way to be converted into a GIS program or drafting program. This would be applicable for land surveying prior to start of a construction project, but also for inspecting job sites as they are being built, or inspecting projects down the line for damage. A fast way to inspect a site without having to get around all the obstacles will

help track progress with minimal cost, as well as help insure the job site is complying with environmental and other regulations [18].

One of the needs for the industry that will come along with this new use for drones is training [n4]. Companies can either hire a professional drone pilot, or start a program to train some of their internal employees. At only $1499, purchasing a Phantom 4 Pro can soon pay for itself, when professional drone fliers may charge up to $400 an hour. In the case of using in house personnel, ease of use is very important. The obstacle avoidance and stabilization features of the Phantom 4 are also very useful.

One of DJI's competitors, 3DR has a partnership with Autodesk, that can complete the process of converting the aerial surveys to map data in a computer aided drafting program in just 20 minutes and the data is stored on the cloud [18].

The customers in this market segment vary widely in background and company use. The decision makers could range from project managers all the way up to a business owner or an operations manager of a larger company. The primary motivation for utilizing a drone for inspections would be cost savings. Purchasing a drone can save hours of professional surveyors time and rental equipment. The product needs of this group of commercial sectors revolve primarily around the photography aspect. A high quality camera is necessary, along with easy flyability and usability, and available integration with existing software packages. Flyability can be improved by features such as the follow-me function, the obstacle avoidance, and a balance of weight and flight time.

4.6.2 Real Estate/Aerial Photography

Perhaps the most recognizable and most popular current use for drones is aerial photography. They are used for movies, wedding photography, commercials, tourist videos, and more [n5]. There are already movies released that use drone footage, such as *Captain America*, *Star Wars*, *James Bond's Spectre*, and the *Wolf of Wall Street*. News stations can use them for traffic reports and imaging, and coverage of natural disasters, such as CNN's use of drones to cover the earthquakes in Italy and Ecuador in 2016 [19].

Drones like the Phantom 4 that can lock onto a target are useful in adrenaline sports videos, such as surfing, snowboarding, biking, or skateboarding. This can be used in many different commercial applications. A surfing school or a guided rafting trip can employ a drone to follow their customers and produce pictures and videos of a memorable experience.

Those that make the decision to purchase a DJI Phantom 4 drone in this industry include small business owners, marketing directors, visual directors for movies and television, real estate agents, and commercial developer project managers. Although many decisions are about balancing cost versus function, rather than a replacement for labor or helicopters, a drone in this industry adds features and services to a company. Again, the primary focus for this purchase would be the camera, including the stabilization of it.

4.6.3 Agriculture

Farmers can use aerial photography drones to survey crops and crop land. Some farmers pay hundreds of dollars for an hour of an airplane or a helicopter to get aerial images of their crops, but a drone like the Phantom 4 can replace that. By getting good pictures of crop land early in the season, a farmer can utilize software to analyze and predict a harvest, rather than wait until the crop is actually picked months later. He can also see where plants are overtaken by weeds or not growing well, and help to correct the issue before it is too late. It would also allow analysis into where pesticides are actually needed, and rather than spraying an entire field, only selected areas would be treated [19]. Even beyond regular photography, drones can be equipped with thermal or infrared sensors to determine where land has become dry [20].

The survey of the crop land can currently be completed for small areas by standing in a single location and directing the drone, or setting a path it should follow in advance. It can also be done by directing the drone out of a slow moving car. This is allowed by the FAA in very sparsely populated areas already, but the drone cannot be out of the sight line. These regulations are still being developed, and it is possible for some users to get waivers, but the Phantom 4 will be a good choice for this purpose when it becomes more widely accepted because it has obstacle avoidance.

The decision makers in this area are likely the farmers who own the land and do the work. They can benefit from a high quality camera, as well as software to analyze the pictures and the various flying features such as autonomous flight, follow-me function, and obstacle avoidance. More than just the drone and the pictures, software is needed to help analyze the photos taken of the land however.

4.6.4 Other Customers

There are many commercial users for a drone like the Phantom 4 that will not be pursued by this marketing plan, but that are expected to also bring in revenue and are areas that can be expanded to at a later time. These users include:

- Scientists - environmentalists, wildlife conservation, geologists, studying animal numbers and migration without impacting the animals getting too close.
- Insurance agencies, to inspect damage on commercial and residential buildings after a catastrophe.
- Delivery services, such as Amazon or UPS
- Emergency services such as delivery of medical supplies, or aiding in disaster rescue [21]
- Police and security [22]

4.6.5 Phantom 4 Benefits to Users

Between the three major target areas, there are areas of overlapping features. The primary features utilized in target areas are below:

1. Camera
2. Good flyability and ease of use
3. Partnerships or connections to third party software to analyze images

Each of these areas was analyzed in satisfying the needs of these customer groups in Table 3 below.

Table 3 : Phantom 4 Features and Benefits

Features	Benefits	Customer Group/Need
Feature Group: Flyability and Ease of Use		
Obstacle sensing and avoidance	Security in flying anywhere	Agriculture, Industrial Inspection
Magnesium skeleton	reduces weight while keeping stiffness at a maximum to minimize vibration improves balance more agile and impressively precise	Agriculture, industrial inspection, real estate and aerial photography
Improved flight time to 28 minutes	Achieves 3.1mi (5km) of range	Agriculture, industrial inspection, real estate and aerial photography
Multiple flight modes	Speedy/smooth cinematic movement possible	Real estate and aerial photography
Altitude improvement up to 10 meters and positioning capabilities	Greater security while flying, greater stability while holding position	Agriculture, industrial inspection, real estate and aerial photography
Active track software with Tap Fly	No GPS tracker required Just tap and fly ability with smartphone	Agriculture, Industrial Inspection
Feature Group: Camera		
High resolution camera	video in up to 4K at 30fps and Full HD 1080p at 120fps for slow motion Useful in professional photography, inspection etc.	Agriculture, industrial inspection, real estate and aerial photography
Integrated Gimbal	takes out unwanted vibration and movement in-flight	Agriculture, industrial inspection, real estate and

	capture smooth and fluid footage even during complex maneuvers	aerial photography
Feature Group: Image and Analysis Software		
DJI Go and SDK supported	All series compatibility Open to software and hardware development	Industrial inspection, agriculture

4.7 Competitor Analysis

4.7.1 Industry dynamics with Porter's Five Forces

DJI's Phantom 4 drone is a part of a larger and growing industry, producing and commercializing personal drones. The group of firms in this industry form an oligarchy and produce similar and substitute products, all targeting the same market. Porter's Five Forces model shown below, is a common and effective framework that uses inputs from market research and competitive analysis to determine and graphically show industry competitiveness. Based on the competitor analysis, this framework considers the oligarchy of competitors and examines the competitive threats of: bargaining power of suppliers, threat of new industry entrants, threat of substitutes, firm rivalry, and the bargaining power of customers.

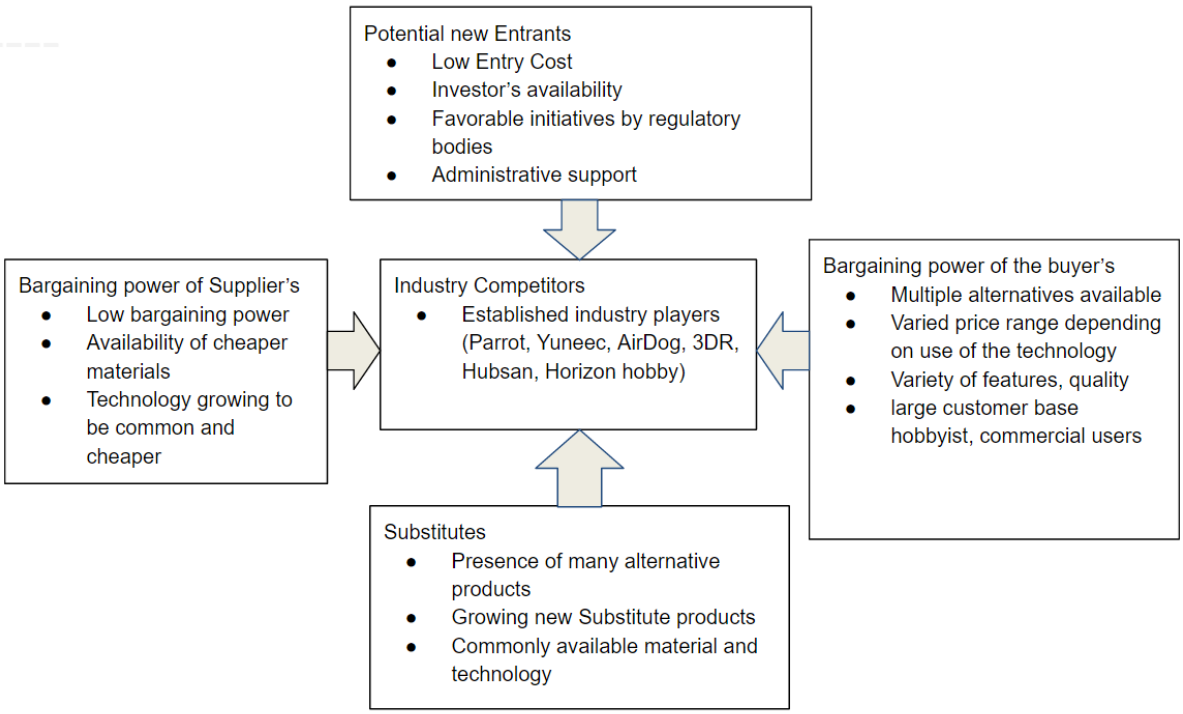


Figure 4: Porter's Five Forces Model

Bargaining Power of Suppliers

As drone technology continues to grow extensively, it has become smaller and cheaper over time. With the growing applicability of the technology to different industries, suppliers show little bargaining power as they frequently supply materials at a relatively low price. With rapid growth of the technology, materials and supplies also have become cheaper over the period. Hence, readily available materials at low prices has proven to be the advantage for DJI in case of supplier's bargaining power. There is no possible risk of suppliers going out of the business unexpectedly or suppliers demanding higher prices in near future.

Bargaining Power of Customers

As a result of technological advancement, the vast majority of products provided by the drone industry are reasonably priced. There are variety of products available from different manufacturers with quite a large range of prices, quality and features. The ability to bargain is for the most part strong among consumers in case of drone technology, however, it is heavily dependent on their different interests, budgets, and intentions. As technology continues to grow smaller and cheaper while becoming more applicable to a multitude of distinct industries, bargaining power of the consumer is increasing, giving possible threat of losing potential customers for DJI. Increasing availability of substitute products depending on customer's interest, intended use of products, creates the risk of customers switching to competitors.

Threat of new entrants

When there is already a strong competition for DJI in the drone industry by companies like Parrot, Yuneec, etc., the threat of new entrants is also real. The ease of access to the technology and low entry cost have allowed developers and startup companies to enter with negligible restrictions. Even though there is increasing competition within the industry, new entrants are taking full advantage of innovation in drone Technology. Many innovation and advancements such as video displaying are often licensed or sold out to competitors, giving competitive advantage to other companies.

Threat of Substitute Products

As demand for drones is rapidly increasing over the period, companies are investing more and more on R&D to provide wide range of products according to customer's interests and intended uses. Companies like 3DR, Yuneec, and Hubsan already have wide range of products which are giving strong competition to DJI Phantom 4 with low price. Technological advancements and innovation in current product line are rapidly growing, resulting in multiple substitute products in drone market at lower prices. Commonly available materials and supplies, availability of investors, growing number of customer base and rapidly increasing use of drone technology in different industries are driving companies to innovate and develop new products with variety of features, as a result of which market has multiple alternatives for DJI Phantom 4.

Rivalry among Existing firms

There are multiple established players in the drone industry such as Parrot, Yuneec, 3DR etc.,

which have strong brand recognition and technical superiority as well along with DJI. Many companies like 3DR, Yuneec have recently announced that they received another influx of funding. Companies like Parrot, being the beginner in drone market, has strong brand reputation and technical advancement as competitive advantage over others. Other companies like AirDog, Ehang, and Hubsan also possess equal competition to DJI as their products are provided for relatively lower price than DJI Phantom 4. Because of strong rivalry in drone market, all players are investing more and more on R&D to innovate new technological advancements and gain competitive advantage. Though the last few years, DJI has proven to be the best in class, gaining customer's trust, however, strong competition among existing players will definitely possess risk in terms of price, and innovation in current products to DJI.

4.7.2 Competitive products and Factors Analysis

According to Technavio's analysts, competition between vendors is incredibly high, and with a number of risks and challenges to deal with, vendors are continuously focusing on innovation and adding the value of their products to differentiate themselves and stay relevant in such a rapidly-expanding market [22]. Below is the brief list of potential competitive products and factors analysis for all potential competitors in the commercial drone market [23].

Table 5: Competitive Products and Factors analysis

Company	Product	Price	Relative market Ranking Q3 2016	Revenue (current)	Customer satisfaction (on the scale of 1 to 5)	Unique Features & services	R&D Spending of the company	Funding Received
DJI	DJI Phantom 4 DJI Phantom 4 PRO	1199 & 1499	1st	1.5B $	4.8	Obstacle avoidance Active Track software High resolution Camera, 'Rent Gear' Training services	Huge, 1,500 out of DJI's 4,000 staff work in R&D, 100s of patents	$75M
Parrot	BeBop 2.0	427.00	2nd	217M $	4	Rear flash LED for better visibility	huge spending on R&D personnel	-
Yuneec	Typhoon H	1000.00	8th	$30.5M	4.6	Autonomous flight modes Live FPV streaming No Fly Zone feature to stay FAA compliant	Huge, over 50 Patents, separate facilities for R&D	$60M
	Q500 4K Typhoon	700			4.3			

3DR	3DR solo	319.00	6th	$32.3M	3.6	Pushbutton flight, safety features like pause and “safety net”	developme nt of open source model and vision of innovative flying	$124.9M
AirDog	AirDog Sports Camera	1574	NA	1 M $	3.4	Altitude & position hold Return to home	-	$3.9M
Walkera	GPS QR X 800	1688.00	NA	$23.4M	4.8	Great for carrying action cams, Compatible with Mission Planner	-	$23.4M
Ehang	Ghost drone 2.0	400	9th	$3M	3.3	Automated Flight features: Return-to-home, Orbit, Follow	Large spending on R&D in all brands	$52M
Hubsan	H501S	223	NA	-	4.9	GPS Position Hold & Barometer Altitude Hold, 1-key return	-	undisclose d
Horizon Hobby	Blade Chroma	700	NA	$4.3M	4.5	Smart mode for newer pilots. AP mode for advanced	-	Undisclose d

There are currently a number of drones on the market that are comparable to the DJI Phantom 4 drone. The one thing however that they all lack is an obstacle detect and avoid. Also, it is true that competition is getting increased day by day in the drone market due to Administrative support and flexible regulations by FAA, DJI still maintains the position of Market leader with almost 70% of the share.

Specifications of the Product

“In terms of a fact-based answer, as of mid-2016, there are no consumer camera drones comparable to the Phantom 4, Someday DJI will have competitors - but they currently do not…at least in the sense of a true competitor who can deliver the technology at a similar value.”- Craig S. Issod, www.droneflyers.com Author and Reviewer.

When we compared DJI Phantom 4 with other competitive products, we came to know that DJI is far ahead in the competition in case of features, innovative technology, hardware and software updates for relative price range. Currently DJI has competition with many drone manufacturer like 3DR, Yuneec, Parrot, AirDog, Ehang, some of them are really established leaders in the drone market, where some are new entrants with innovative technology and product. Providers such as Parrot, Hubsan, Ehang, possess competition in the drone market with comparative lower prices of their product, but when it comes to technology and added value of the product for a little more money, DJI proves to be the best in class. As DJI, unlike other manufacturers hasn't gone into down market with low price drones, But, compared to other products like Yuneec, AirDog having higher price, DJI has been the market leader with advanced technology at relatively lower price than competitors in High-end market.

China's Yuneec is one of the last competitors standing. It's being assisted by Intel, which has given Yuneec both investment and technology. Yuneec's Typhoon H drone has the same price point of $1,499. While it does have Intel RealSense Technology that can detect and navigate around obstacles, it only has one sensor on the front of the drone. But, DJI's 'Active track' software, anti-collision sensing and high-resolution camera are some distinctive features at lower price than Yuneec make it more desirable.

To analyze the competition in depth, we compared few major elements of competition like Sales and revenue and overall nature of competition, customer satisfaction and economic value of the product, and distinctive features of all alternative products, R&D spending of all relevant providers like DJI, Yuneec, Parrot, Ehang and others.

4.7.3 Nature of competition

It can be analyzed from the table that DJI is far ahead in terms of revenue, market position and innovation and technological superiority in its products. There is a large gap between DJI and 2nd ranked Parrot of almost $800M in revenues. Some companies like Walkera, Horizon Hobby, Ehang, AirDog, and Hubsan possess competition to DJI products as they have similar products with relatively similar technology and features but they are not seen as strong competition in near future, in terms of popularity of their product, brand value and revenue as well.

While, all other companies are dealing with low end market, Yuneec possess strong competition to DJI in terms of products, innovation and R&D potential. Though, DJI has a market share of about 70% in drones, but Yuneec is the drone industry's dark horse, quickly rising up the ranks in popularity while raising funding from Intel Corp.

Another competitor, which stood 2nd in 2016 Q3 ranking is Parrot SA. But, DJI left Parrot behind this year in terms innovations and product manufacturing at a lower cost. One reason DJI can manufacture its drones cheaper is because, unlike Parrot and 3DR, it owns the factories where it makes the drones, at its headquarters in Shenzhen, China.

While Yuneec and Parrot grew their drone business through acquisitions and investments from

major investors, DJI uses partners to expand their business portfolio (e.g. the infrared camera maker FLIR, surveying expert Leica Geosystems and micro ADS-B transponder manufacturer uAviniox).

Meanwhile the competition is actually shrinking. 3D Robotics, a promising Silicon Valley startup, got out of the consumer drone business after the disastrous launch of the Solo. And GoPro, which seemed poised to shake up the market, was forced to recall its new Karma drone after they started falling out of the sky. The much hyped Lily drone still hasn't shipped [24], [23].

Distinctive features and services

After analyzing product and service quality for all products at relative price range, we came to know that Yuneec and Parrot possess strong competition to DJI. Both of these companies are heavily spending on Research, development and customer service. But, DJI still stands outstanding in case of product quality, innovation and customer service. DJI offer 'rent gear' service for customers where a customer can rent the product and experience flying, instead of spending the whole amount on buying the product. In case of after sales service, online and offline services are available for customers. Warranty and damage repair services are also offered by the company. DJI's SkyFund put money into a startup called drone Base, which is like a drone version of Uber. Drone Base allows anyone who wants to take photos from a drone to link up with a drone pilot in their area. Typical requests involve real estate promotion, construction, mapping, and terrain modelling. 'Customer satisfaction' is the end goal of DJI and company is intensively working towards it.

Customer Satisfaction and Economic value of the product

As per the analysis, DJI deals with competition in all markets in terms of price range, that is High-End Market where it deals with Yuneec, AirDog, Walkera while in Low-End market it deals with 3DR, Ehang, Hubsan, Parrot, Horizon Hobby etc.. But, according to customer reviews and revenue numbers, it can be analyzed that DJI has proven to be the best in class. Phantom 4 has been the favorite model of consumer for the last year. By adding computer vision and fully autonomous capabilities, the Phantom 4 has dramatically raised the bar on what is possible with a consumer caliber camera drone, both for complete amateurs who want to start flying and for professionals who are crafting complex and dangerous shots.

Compared to Yuneec, AirDog and Walkera in high end market, DJI comes with more advanced and innovative features in product which makes it popular and successful in the market. If we compare the flight time, speed, software updates, application compatibility and other specifications of the product, DJI is far ahead of other providers increasing economic value of the product and improving buyer's experience.

Research and Development Spending

In case of intensive R&D and innovation, DJI, Yuneec and Parrot possess strong competition to each other. Yuneec, being the strong player in the drone market for so many years spends a lot on R&D and innovation. Out of $60M from Intel Funding, Yuneec spent a large fraction on a

new facility working only for R&D. It already has over 50 patents in the drone and related technologies. Parrot also spends large amounts on R&D personnel to innovate something new all the time. In case of DJI, the company also invests a lot in R&D and continuous improvement through innovation.

1500 of DJI's employees out of total 4000, work for research and development of the product and service. This shows the company's commitment towards innovation and customer satisfaction. Compared to established leaders like Yuneec and Parrot, DJI has come from practically nowhere, revenues of just $4.2 million in 2011, to become a billion-dollar business last year. Continuous focus on R&D and innovation has made this possible for DJI. Instead of working for development of low price product, DJI focused on technical superiority and improvement in product feature. DJI holds 100s of patents worldwide, including 30 in USA.

4.7.4 Extended profiles of Major Competitors

Yuneec
Founded in Hong Kong, Yuneec International Co. Ltd. has proven to be the best in electric aviation. With hundreds of patents filed, Yuneec's core technologies power its manned aircraft as well as its drones and its market leading line of radio controlled aircraft for the hobby market. The company's achievements include the introduction of the hobby industry's first "Ready to Fly" radio control electric powered airplane and the design and manufacture of the market leading radio controlled helicopters and micro-copters. Yuneec's E430 was also recognized by the prestigious UK Design Awards for excellence in design.
Founded: 1999
Headquarters: Ontario, CA
Sales : over 1 million units per year
Description: Yuneec International develops technologies that power electric aircraft as well as aerial photography and video systems.
Categories: Drones, Electronics, Manufacturing
Brands: Blade, Parkzone, E-Flite, Firebird, Firebird XL and Q500
Most Recent Funding - $60M Venture on August 26, 2015 by Intel
Website: http://yuneec.com/
Employees: 1k - 5k worldwide

Parrot
Parrot creates, develops and markets high tech wireless products for the retail and professional markets. The company operates in 3 main sectors: Civil Drones (UAVs) through retail leisure quadcopters and cutting hedge professional solutions, automotive, with the widest range of hands-free communication systems and infotainment solutions for the car, and connected objects, in the area of sound as well as gardening.
Headquarters: Paris, Ile-de-France
Founded: 1994

Total Equity Funding: $35.21M
Acquisitions - DiBcom
Description: develops wireless devices for mobile phones.
Founders: Henri Seydoux
Categories: Consumer Electronics, Wireless, Product Design, Automotive, Manufacturing, Mobile
Website: http://www.parrot.com/usa
Employees: over 1k

Shenzhen Hubsan Technology
Shenzhen Hubsan Technology Co., Ltd. is an enterprise that integrated the research and development, production and sale and sales services for hobbies and toys. Its drone product portfolio includes helicopters, planes, FPVs, and quadcopters.
Founded: 2010
Description: Shenzhen Hubsan Technology company.
Website: http://hubsan.com

Airdog
Airdog is one of the innovators which came up with auto-follow drones. Airdog launched their first auto follow drone for Go-Pro, designed for sports enthusiasts, outdoor activities, and filmmaking. The drone comes equipped with 5 different sport mode applications, including MTB, Wakeboard, Surf, Backcountry, and Windsurf. In 2014, Airdog's Kickstarter campaign was successfully funded, and it was awarded "best drone or robot" at CES 2015.
Total Equity Funding: $5.21M in 3 Rounds from 15 Investors
Description: Auto-Follow Drone for Action Sports.
Founders: Ilja Nevdahs, Agris Kipurs, Edgars Rozentals
Categories: Drones, Sports
Website: https://www.airdog.com/
Founded: 2014
Funding: Most Recent Funding Venture on August 26, 2016 / Undisclosed Amount
Headquarters: Palo Alto, California

3D Robotics
3D Robotics is an American company that designs and manufactures commercial and recreational unmanned aerial vehicles. Specifically, it has produced consumer drones, ready-to-fly quadcopters for aerial photography and mapping, and fixed wing UAVs based on the Ardupilot platform.
Founders: Jordi Munoz, Chris Anderson
Categories: Drones, SaaS
Headquarters: Berkeley, California
Description: Advanced drone technology easily accessible to the construction, mining and surveying industries for use in data analysis.

Website: http://3drobotics.com
Total Equity Funding: $126.08M in 5 Rounds from 14 Investors
Founded: 2009
Employees: 51 - 100

Ehang
Ehang is founded by makers from China, America, and Singapore who are enthusiastic about drone flying. Its product, Ghost, is accepted as the first truly smartphone application operated intelligent robot, which is widely used in geographical information surveying, professional television aerial filming, roadshow displaying, disaster rescuing and delivery, surveillance and monitoring, and even expected to play important role in the future logistics areas.
Founders: Derrick Xiong
Founded: 2014
Categories: Consumer Electronics, Aerospace, Transportation
Most Recent Funding: $42M Series B on August 24, 2015
Headquarters: Guangzhou, Guangdong
Description: Focused on R&D and production in airplane and aircraft field.
Employees: 101-250
Website: http://www.ehang.com/
Founded: 2009
Employees: 51 - 100

4.8 SWOT Analysis

Using SWOT analysis, we can develop a marketing strategy based on the strengths of the Phantom 4 Series. By mitigating and reducing the effects of its weaknesses, the Phantom 4 series will maintain competitive advantage and market strength [25].

Figure 5: SWOT Analysis

4.8.1 Strengths

The Phantom 4 series is positioned for significant competitive advantage by leveraging its superior product characteristics. Offering more powerful video processing capability, a mechanical shutter that improves quality, and increased durability through the use of high quality materials, the Phantom 4 series is differentiated from its competitors. Furthermore, DJI's brand equity in the mind of the consumers, is a strength of the product. DJI leads the market, illustrating the high brand awareness and equity behind DJI's name adding value to the Phantom 4 series.

4.8.2 Weaknesses

Our market research identifies cost and international restrictions, of the Phantom 4 series, as product weaknesses compared to competitors. The Phantom 4 is one of the more expensive drone options, which presents a weakness when being considered at price-point by some customers. Additionally, flight-time and range are general technological limitations of all drone products on the market, and an area where technological advancement will create an avenue for differentiation and competitive advantage. Currently, the Phantom 4 has one of the longest flight-times and range in its class.

4.8.3 Opportunities

Recent regulatory changes from the FAA are poised to significantly grow the Phantom 4 series product market, by eliminating commercial licenses for drones in its weight class. These changes grow our customer base by removing the barrier to ownership. Though the Phantom 4 series has one of the longest flight-times, technological advancement leading to improved flight

times, will create an avenue for differentiation and competitive advantage.

4.8.4 Threats

New market entrants are a threat to DJI's current position as market leaders. The same regulatory changes that create market opportunity for the Phantom 4 series, also increase the threat of new entrants by reducing the barriers to market entry. As shown in the Porter's Five Forces analysis, firm rivalry is high and constant competition can threaten profit margins and market share. Additionally, past drone failures either in product performance or user error and poor judgment, have had a negative impact on public perception, which could stunt market growth. Strategic customer outreach and customer demonstrations will help mitigate this threat. Strategic alliances and partnerships that strengthen and leverage positive network effects, will improve competitiveness and will also help mitigate the threats of new entry and firm rivalry.

5.0 Marketing Objectives & Goals

5.1 Overall

Develop a strategy for the Phantom 4 and Phantom 4 Pro to go after the marketing sweet spot of commercial customers of aerial photography in agricultural, real estate, and industrial inspection, to dominate these markets. Our marketing strategy further strengthens existing customer relationships, while developing an aggressive campaign to capture new customers who value our brand, buy our products regularly regardless of promotions, and maintains loyalty.

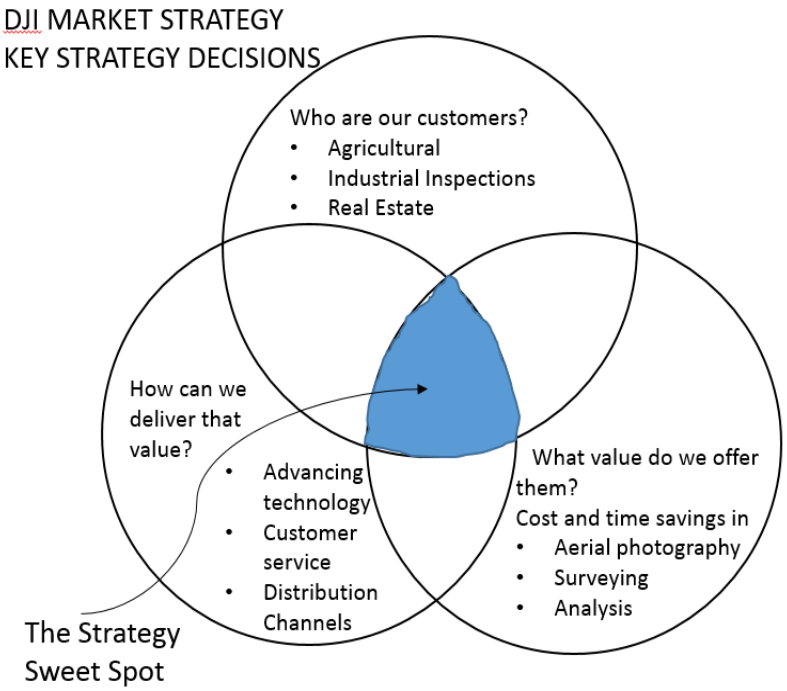


Figure 6. Marketing Strategy

This marketing plan will focus on the commercial U.S. market, based on the analysis in previous sections, and will contain the product positioning within these target markets, and the optimal marketing mix for competitive advantage and greatest market share.

5.2 Financial

Our goal is to obtain 75% market share in year 1 and growing to 80% in 2020 in each of the three target industries. We will do this through a focused promotional and distribution strategy, competitive pricing strategy, continual development of new services and features of the Phantom 4 and Pro. Developing our strategy in these market segments will help us cross the adopter chasm and grow to be the main street product for these segments. For simplicity, we assume a price of $1,349 per drone, which is the average of the two products in the Phantom 4 series.

Our strategy outlines how these financial goals will be achieved and justifies them. Since DJI already has 70% of the general market, these goals outline growth in these industries. The overall strategy is to maximize revenue, increase our global market share to 85% by 2020 and see competition fall out of the market.

Table 6. DJI Financial Goals

Market Share and Revenue Goals				
	Year 1 (2017)	Year 2 (2018)	Year 3 (2019)	Year 4 (2020)
Total Market Size of Target Segments (million units)	2.075	2.158	2.158	2.241
Market Share	75%	78%	79%	80%
Unit Sold (million units)	1.556	1.683	1.705	1.793
Drone Price (USD)	$1,349	$1,349	$1,349	$1,349
Revenue (USD, millions)	$2,099	$2,271	$2,300	$2,418

6.0 Segmentation, Targeting, Value Proposition, and Positioning

6.1 Market Segmentation and Targeting

The total available market (TAM) for drones can be considered the total global drone market potential. This was forecast at $100 billion by Goldman Sachs. Within that forecast, $13 billion was predicted for the commercial market, which is serviceable available market (SAM) [17].

From all available commercial markets, DJI chose the top three segments, which are industrial inspection; real estate and aerial photography; The DJI plan is to capture 75% of US market share this year. To obtain market sales in US Dollars, the total unit sales in each sector were multiplied by the drone price. For example, in the industrial inspection area:

Unit drone Price: $1349
Total market sales: 1,050,000 * $1349 = $1,416,650,000

Similarly, other segments unit sales are calculated, and then used to calculate the serviceable obtainable market (SOM) in each segment.

1) **Industrial Inspection**: The 42% of the market is captured by this segment. This segment is the primary segment where the company is planning to focus on. From the forecasted data of 1,050,000 units we'll sell in 2017 will generate approximately $1.4 billion in sales. So total serviceable obtainable market (SOM);

=market share * sale
=0.75 * $1.4 = $1.06 billion.

2) **Real Estate and Aerial Photography:** The 22% of the market is captured by this segment. Estimated unit sale is 550,000 and it will generate $0.8 billion. So total serviceable obtainable market in the United States is;

=0.75 * 0.7= 0.55 billion

3) **Agricultural:** Around 19% of the market is of this segment. The agricultural segment is rising up slowly. From the predicted data 475,000 units we'll sale worldwide in 2017 which will gather around 0.7 billion sales. So total serviceable obtainable market in the United States can be calculated as:

=0.75 * 0.6= 0.40 billion

So from three segment total serviceable obtainable market (SOM) = 1.06+0.55+0.40 = 2.09 billion. The following table shows the unit sold prediction and also the total sale in the United States in US dollars in 2017.

Table 7: Predicted US Sales

Market	Predicted percentage of total units	Predicted unit sales in 2017	Predicted unit sale based on market share	At $1349 per drone, total sale based on market share
Industrial Inspection	42%	1,050,000	787,500	$1,062,337,500
Real Estate	22%	550,000	412,500	$556,462,500
Agriculture	19%	475,000	356,250	$480,581,250
Total		2,075,000	1,556,250	$2,099,381,250

6.2 Value Proposition

The Phantom 4 series focuses on commercial customers and applications, and utilizes high technology for high performance, at a fair price, that is easy to purchase, service, and fun to use. We create value by providing specific features and support to our customers:

- High quality, high resolution camera for use in surveying, aerial photography, and image analysis
- Intelligent flying features to make it easy to fly in all situations, which saves the customer time and money
- The Phantom 4's reduced weight and core design, improves balance for greater agility and precision, meeting the demanding and unique requirements of commercial customers.
- Training and customer support so users can get the most out of their drone's capabilities. DJI has 20 years' experience in the industry to support and provide valuable

experience to customers.

6.3 Product Positioning

The positioning map identifies the distinctive position of the Phantom 4 series drone among competitors, from the target customer's perspective. The product research we completed by surveying online performance reviews of product users is summarized in Figures 8 and 9 below. Additionally, the figure also shows product ranking by cost. Customer perception of performance and cost are the quantitative and qualitative inputs used to create the positioning map. DJI's positioning statement for the Phantom 4 series positions the company and our products to leverage our capabilities and best defend against competitive forces. Using the results of our market research to define competitive forces, and identify customer targets and their requirements, we clearly defined our positioning statement:

- For commercial customers who want a dependable high performance drone, the Phantom 4 series is a solution that delivers exceptional performance, at a reasonable price.

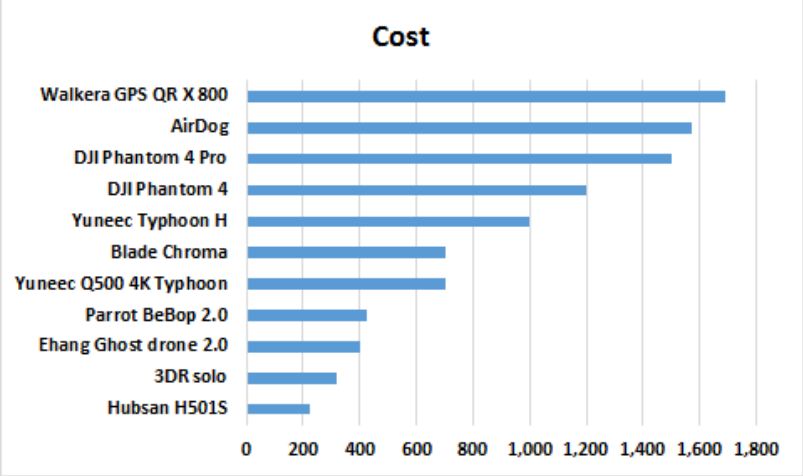


Figure 7. Product Ranking by Cost

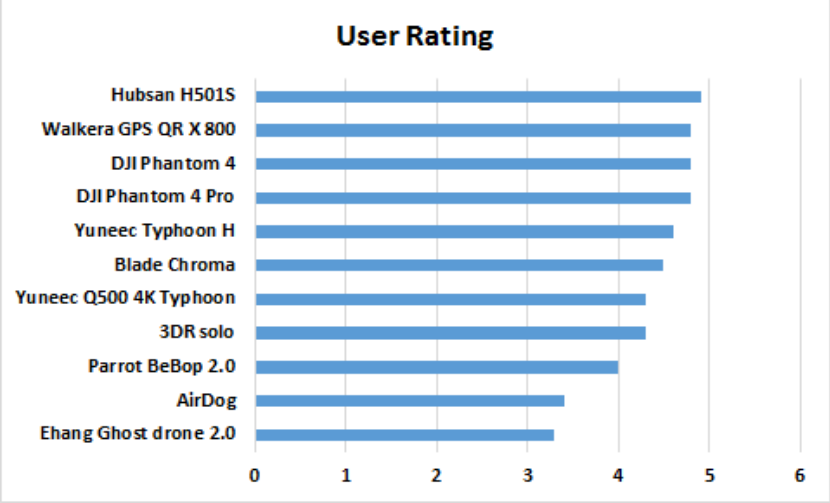


Figure 8. Product Ranking by User Ratings

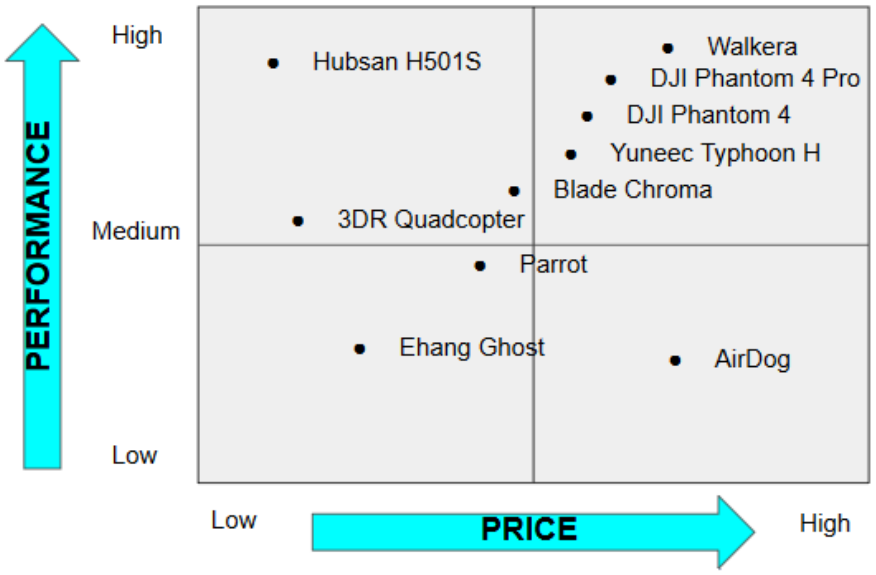


Figure 9. Positioning Map

6.4 Differentiation Statement

Unlike Parrot BeBop 2.0, Walkera GS QR X800, and Yuneec Typhoon Series, our product has the longest range without diminishing flight time, and superior camera and video technology. The phantom 4 series' superior technology is backed by 20 years of experience in the industry to train, support, and provide added value to commercial customers.

7.0 Marketing Strategy

7.1 Marketing Mix

The marketing mix is composed of four elements, sometimes referred to as the Four-P's: product, price, promotion, and place. These four elements combine to create DJI's strategy for product differentiation and competitive advantage.

- Pricing strategy
- Promotion strategy
- Product performance, features, and life-cycle
- Channel, distribution and inventory strategy

Figure 10. Marketing Mix [26]

7.2 Pricing Strategy

DJI will develop the following pricing policies to distinguish the Phantom 4 series from its competitors, and place our product competitively with high performance and fair price, as shown on the positioning map. The pricing strategy is based on our analysis of market competition and position. Additionally, our pricing strategy aligns with the Phantom 4 series' product attributes and high performance. Currently the Phantom 4 series is the third and fourth highest in cost -- $125.00 more than the fourth place Yuneec Typhoon H, and $563.00 less than the highest priced Walkera GPS QRX 800.

Our market research has identified that the market for drones is competitive and price-sensitive, therefore pricing simply based on total market demand may negatively affect the Phantom 4 series' competitiveness. DJI is already a market leader, pricing low for market penetration is not critical. However, competitive pricing relative to its nearest competitor in terms of performance, is an important strategy for increasing revenues and market share [27]. Furthermore, a primary goal and pricing objective is to increase DJI's U.S. market share among the three primary segments, industrial inspection, real estate, and agriculture -- shown in Table 7. Therefore, the pricing strategy will focus on per-unit revenue maximization, with the primary goal of increasing market share.

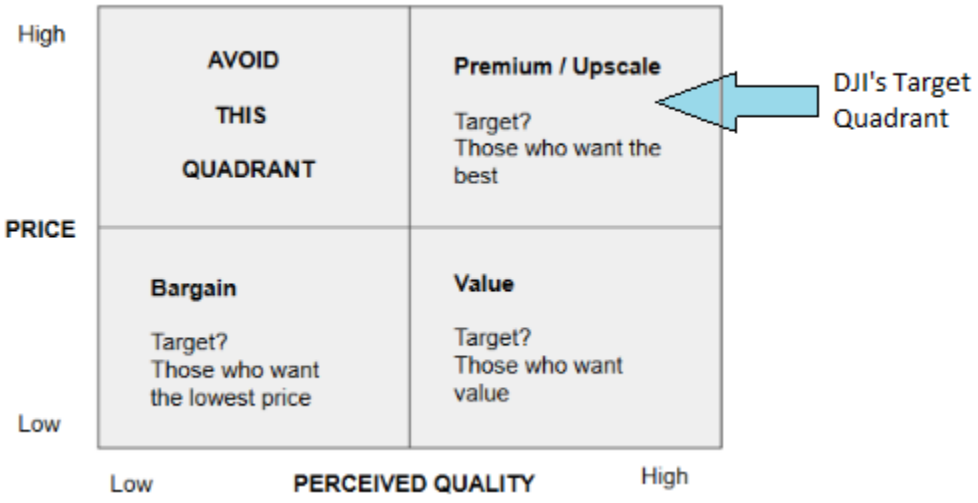


Figure 11 Price vs. Perceived Quality [26]

DJI's Phantom 4 series is positioned in the premium quadrant shown in Figure 11 above. The best pricing strategy for meeting the objective of revenue maximization is "*good, better, best pricing*" [JB8]. With this strategy, the Phantom 4 series would be offered in three different prices depending on the purchasing format and channel options. Furthermore, this pricing strategy will maximize the quantity of units sold. The Phantom 4 series' sales forecast is based on the FAA's predicted drone sales shown in Table 1. Interpolating out to 2022, sales in our target US markets are forecasted to grow by 20% over a six year period from 2017 to 2022. Table 8 below shows DJI's projected commercial sales revenues from 2017 through 2022.

Table 8: Projected Commercial Sales Revenues

Year	US Market Share	Total Industry Revenue Projections in US	DJI Revenue Projections in US
2017	75%	$ 2,799,175,000	$ 2,099,381,250
2018	78%	$ 3,359,010,000	$ 2,620,027,800
2019	79%	$ 4,030,812,000	$ 3,184,341,480
2020	80%	$ 4,836,974,400	$ 3,869,579,520
2021	81%	$ 5,804,369,280	$ 4,701,539,117
2022	82%	$ 6,965,243,136	$ 5,711,499,372

We have distributed the projected annual sales of both the Phantom 4 and the Phantom 4 Pro against projected revenues from 2017 to 2022. Our pricing objective is to increase market share among our SOM segmentation, shown in Table 9, as well as each years' respective revenues. We assume that our revenues are evenly split by product -- Phantom 4 and Phantom 4 Pro. Table 9 below, shows revenues by year for each product, as well as units sold respectively.

Table 9: Projected Commercial Sales Revenues by Product

Series Product	Year	# Units Sold	MSRP	Revenue (USD)
Phantom 4 ($1,200)	2017	874,742	$ 1,200	$ 1,049,690,625
	2018	1,091,678	$ 1,200	$ 1,310,013,900
	2019	1,326,809	$ 1,200	$ 1,592,170,740
	2020	1,612,325	$ 1,200	$ 1,934,789,760
	2021	1,958,975	$ 1,200	$ 2,350,769,558
	2022	2,379,791	$ 1,200	$ 2,855,749,686
Phantom 4 Pro ($1,500)	2017	699,794	$ 1,500	$ 1,049,690,625
	2018	873,343	$ 1,500	$ 1,310,013,900
	2019	1,061,447	$ 1,500	$ 1,592,170,740
	2020	1,289,860	$ 1,500	$ 1,934,789,760
	2021	1,567,180	$ 1,500	$ 2,350,769,558
	2022	1,903,833	$ 1,500	$ 2,855,749,686

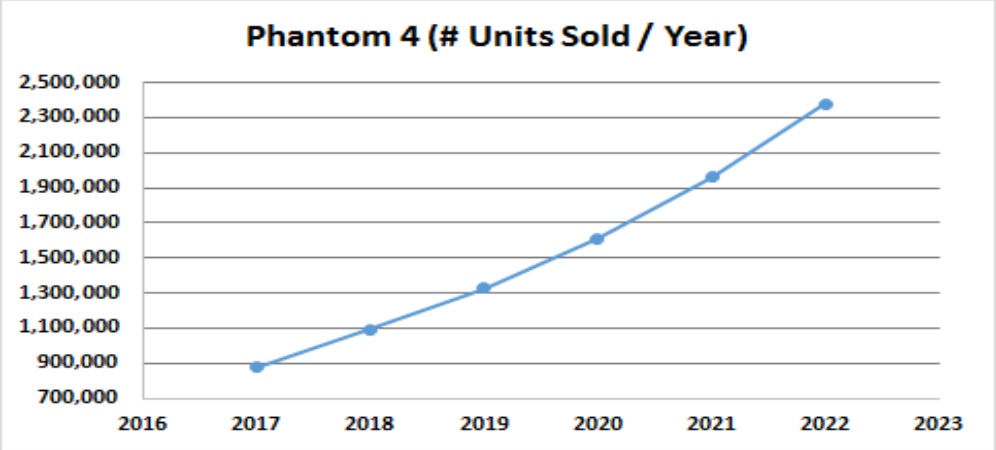


Figure 12: Project Phantom 4 Unit Sales

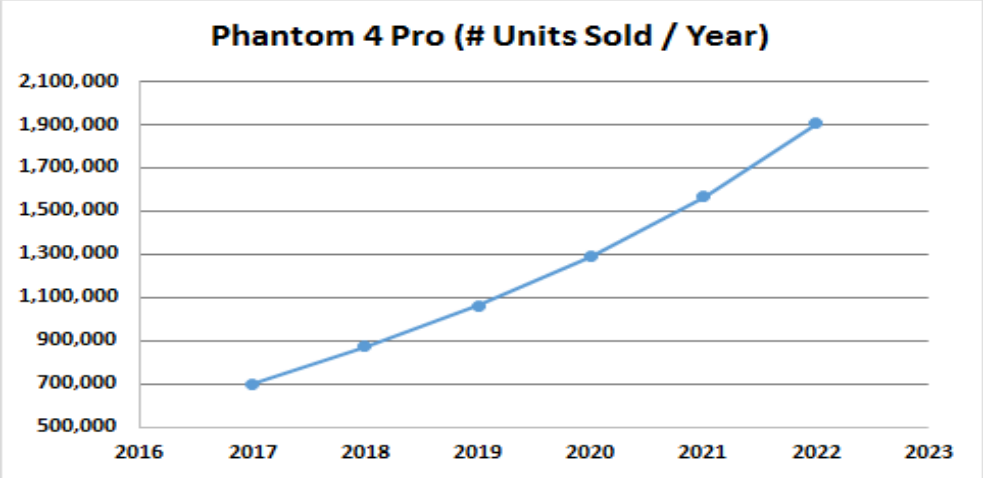


Figure 13: Project Phantom 4 Pro Unit Sales

The following Table 10 shows our three pricing options for the *"good, better, best"* pricing strategy. This strategy is used to meet our established objectives of revenue maximization and market share increases. Our three prices for each product are shown below, and increase from the "best" price by 10% for each price increase. Additionally, we estimated price sensitivity and the effect pricing has on demand. For each product we assumed both an increase in demand by a low (5%) and high (15%), and a decrease in demand by the same high and low percentages. Table 10 shows the revenues of our pricing strategy and the different (assumed) demand sensitivities, for each Phantom 4 and Phantom 4 Pro.

Table 10: Pricing Strategy and Revenue Maximization

2018 Demand P4 = 1,091,678

Phantom 4	Price (10% Change)		
	$1,080	$1,200	$1,320
Price Sensitivity	$1,237,963,136	$1,310,013,900	$1,368,964,526
	$1,355,864,387	$1,310,013,900	$1,224,862,997

2018 Demand P4 Pro = 873,343

Phantom 4 Pro	Price (10% Change)		
	$1,350	$1,500	$1,650
Price Sensitivity	$1,237,963,136	$1,310,013,900	$1,368,964,526
	$1,355,864,387	$1,310,013,900	$1,224,862,997

7.3 Promotion Strategy

In advertising, we will implement some of the advertising and promotion pyramid layers in order to promote Phantom 4 series and spread it among our targeted commercial sectors, which are agricultural, real estate and aerial photography, and industrial inspection. Our advertising strategy will concentrate on media advertising, public relations/publicity, trade shows, seminars, training, and selected personal sales. Other areas, such as direct mail, telemarketing, and catalogs, are not practical for our application because of the low return on investment in these areas and for a high tech product like the Phantom 4 series. We believe that we have to exploit our advertisement sources by concentrating on quality instead of quantity in order to target our revenue goal which is $2,099,381,250 in 2017 with 20% increase per year until 2022. However, our marketing budget starts with 15% in 2017, then, it will increase 19.87% in 2018, 17.72% in 2019, 17.71% in 2020, 17.70% in 2021, and 17.68% in 2022. It will be divided into our three targeted segments: Industrial inspection 50%, real estate/aerial photograph 27%, and agriculture 23%.

7.3.1 Media Advertising

Advertising the Phantom 4 series among several channels in new media instead of traditional ways will have a significant impact on acquiring more customers and getting their attention. This will be done with mostly low cost methods rather than some older methods such as TV and radio. However, because this marketing plan targets specific commercial customers instead of

consumers, it is strongly recommended for us to select some of the non-traditional media resources that are lower in cost to distribute its product and get the public attention. Therefore, our product advertising should eliminate two of these traditional sources, which are radio and television for two primary reasons: It will consume the product budget, which reduces other resource budgets that should be used and exploited, and the percentage of attracting the commercial market attention with these two sources will be low, as it is more effective if the product is targeted straight to the customers. We will strongly concentrate and exploit three sources which are (1) social media, (2) experts and social celebrity, and (3) targeted ad space on industry specific websites and journals.

In social media, Phantom 4 series should have its own accounts on Twitter, Facebook, Snapchat, Instagram, YouTube, Google and any new emerging social media programs. These accounts, which are free to create, will have a huge impact to our commercial targets in several ways. We will launch many videos about the advantages of using our products in agricultural, real estate, and Industrial Inspection. These videos can attract the employees, top managers, and professionals in commercial sectors by representing many aspect depending on our targeted needs such as how it will solve their issues, how it will reduce their budget, and overall how it will accelerate and promote their tasks. Furthermore, our products accounts will answer questions, feedback, and react with our clients in a fast way, giving the sense that the company is customer service driven, and that our clients are important to us, which will create loyalty and long-term engagement. Also, it will spread our product which will enhance our brand recognition. Because the products can be spread widely among social media, it will attract the individuals who are non-targeted clients in this marketing plan, but they will be our future clients after they become an employee in one of our commercial targets. Therefore, using social media will benefit our products advertisement with low cost and more effective than the traditional ads.

Exploiting experts and social celebrity who are famous in reviewing high-tech products in advertising Phantom 4 series will induce the commercial sectors and others about trusting our products such as in quality, usage, and price. It is strongly recommended to invite at least the top experts and social celebrity in U.S to our company and show them how our engineering, designers, and so forth working hard to optimize this kind of amazing products. Also, leading those top experts and celebrity to use our products, then, launches their usage in their accounts with their recommendation will be so effective to attract new clients among our target segment. Therefore, even though this tactic requires spending sometimes money to high-tech reviewers, it will be far away from the high price in radio or television and it will not be a repeatable ad as the traditional way which requires repeating the ads after every program with high price and boring style. Also, inviting experts in commercial sectors to examine and use our products mostly will be free.

We will advertise in banners on commercial sectors' websites, such as the American Society of Civil Engineers or the American Farm Bureau, and will promote spreading our product on its features, price offers, and so forth. We will also advertise at the beginning of YouTube videos focused on our industries. For example, rent banners in agricultural or wedding web pages will give the trust to Phantom 4 among our targeted segment. Therefore, these kinds of ads is less

expensive and more cost efficiency (CPM) than other traditional ads according to the advertising and promotion pyramid, reinforce brand message, and reach more commercial sectors clients. The table below shows some of sample Potential websites that we would advertise on.

Table 11: Potential Websites

Potential websites	Website links
American Society of Civil Engineers	www.asce.org
School that teaches Hollywood costume and set design	www.stanwinstonschool.com
Associated General Contractors of America	www.acg.org
Commercial Real Estate Development Association	https://www.naiop.org/
American Farm Bureau and each bureau for each state	www.fb.org

Specific print media will be targeted as well. Many of the organizations listed above also send out quarterly or monthly journals that print ads can be placed in and will reach their network of members without purchasing an email or mailing list.

7.3.2 Public Relations/Publicity

There is a negative perspective to the drone industry. People believe it is an invasion of privacy when the next door neighbor flies their drone over your house or hovers outside your front door. There has been several reports where people have grabbed their shotgun and shot down the pesky drone. The FAA has put out regulations that make it illegal to shoot any registered aircraft out of the sky and this includes hobby drones, even if they are only $400.00, unmanned and weigh less than 55 lbs. However, this regulation is not going to stop people from taking action on what they believe is trespassing and invasion of privacy. Also, because we are targeting commercial sectors which will be more responsible in using our camera drone and they will use it in doing their work, it would not have a huge negative impact to our product. However, we must be aware of this public perception of drones and work towards better relationships with non-drone owners and commercial sector owners to avoid any issues with the public by explaining to them the side effect any invasion to the public privacy.

In addition, for public relations, developing goodwill with our products customers, communities, and stakeholders, such as holding charitable events and event sponsorship, represents our products company identity to its clients. For example, Phantom 4 series can be used to sponsor sport events, such as football, baseball, and soccer events, in order to attract our commercial clients in advertising their products or events through drones camera flying above the stadium because it already has the ability to do this kind of features. Therefore, it will not just attract the

commercial attention, it will be a revolution and entertainment in showing ads in several events instead of the small walls or screens that has ads which are tiny to be seen by the audience. Moreover, launching our products in charitable events will attract and change the way for the events owners in recording their events. It will show that our company is responsible, cares for the community and is engage. For publicity, because it is related to the news media, such as any press conferences and stage events, it is strongly recommended to show our products in these events to be seen by various commercial sectors, specially our target segment, and attract the news in TV's to talk about how Phantom 4 series is supporting and helpful for these or other events. It will attract news media to use our products to cover national disasters which are hard to reach such as earthquake or the recent event in Oroville California where drones assisted in assessing the damage of the dam. It is important for our executives to do speeches where coverage by TV's in U.S. and our new media accounts in order to gather the stakeholders such as experts, employees, and experts in our commercial sectors target. Also, it will represents how our leaders in the company are so intelligent, if they have a great and impactful speech. For example, when seeing how the CEOs in other companies, such as Apple, have a huge impact to their customers and how it increases their sells, we will see how it is important for our executives to do so.

7.3.3 Trade Shows, Seminars, and Training

For trade shows and seminars, since Phantom 4 series are still new products, it is significant to attend famous shows in U.S., such as Expo's in order to represent our products to various targeted clients who can test and compare it with other products. For example, by entering the Expo database, it can will show us many trade shows in agriculture, energy, animal, construction, and so forth. These kinds of events will advance our selling and spread our brand among various of commercial sectors attending these events. However, it can be more expensive than the previous methods in exhibitor fees, design and set up a booth, personnel to staff the show, and so forth. Our company should select the trade shows who are doing creative entertainment that includes all our target customers within the commercial sectors. Our company will benefit from the face to face interaction between the clients of Phantom 4 series and help to reduce the market, technology, and competitor's uncertainty. For training, we can employ professional drone pilots and start a training program for our current and future targeted clients by creating a drone certificate, called Phantom 4 certificate, in order to build a long-term brand loyalty with our products line, spread the brand, convince them about the product reliability, and so forth.

7.3.4 Personal Sales

Using direct sales (In person) will be very effective for to reach our commercial sectors. Our sales people will pick up from the lists providing from brokers and other sources, to call new clients and set appointments to advertise Phantom 4 in person with presenting live demonstrations instead of catalogues in order to convince them to use and benefit from our product. For example, our salespeople will sit an appointment with the large and small agricultural companies by presenting how our product it will be less expensive and faster than hiring a helicopter to survey crops and crop land. Also, since the most usage of drones is in

aerial photography, the mail can focus on movies, wedding, tourist companies, and so forth. As mentioned previously some famous movies already used drones such as the *Wolf of Wall Street and Captain America.* The client lists can be purchased from brokers to decided which company they have to set an appointment with. An example of a realtor and do a free video capture of the listed home and give that film to them to post with their home listing. Therefore, our salespeople will meet in person with the clients in our target commercial sectors and they will ensure that our company will not lose this important methods to advertise our product, but with more effective and new ways of controlling the overall marketing plan budget. It will lead our sales people to interact with our clients face to face which is the primary and effective way for our target commercial sectors. Lastly it will lead our company to create its own database about our client and build our lists.

7.4 Promotional Strategy

Since we are concentrating in the commercial sector and not the consumer sector, our promotions would revolve around discount, training, and warranty among all the previous advertising methods that we will use, specifically, ads in our website, website dealers, in person interaction, such as trade shows, distribution agreement, such as WYNIT, and so forth, instead of our average sales in stores. Thus, we will not focus on events such as Black Friday sales and Christmas sales. Also, our promotion plan should exploit what benefits that our product and company have been depending on throughout our marketing budget.

Creating attractive discounts during events depending on the number of drones that a company need will improve our sales numbers. For example, when an agricultural company needs 4 products from Phantom 4 to use it in cropland, we can offer selling 3 product and one free, extra time warranty, training or so forth. Also, doing the same tactic with the previous advertising plan will impact positively on our seals. Therefore, discounts should also be offered among media advertising, public relations/publicity, trade shows, seminars, training, and personal sales.

We used some of the Pyramid below in an orchestrated campaign to deliver a consistent message to the target audience.

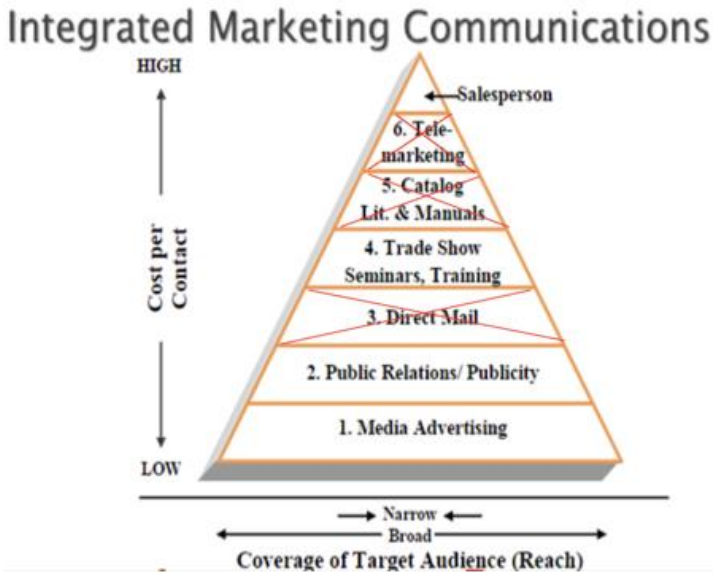


Figure 14: Marketing Pyramid

7.5 Product Strategy

The Product and service plan analyzes some major strengths and limitations of the product/ service and suggests strategy accordingly.

7.5.1 Product Family

Currently, DJI offers wide range of products and services including drones, imagery solutions and enterprise products. Our drones include Inspire series (3 products), Phantom series (11 products) and Mavic (1 product) having wide range of features and benefits. All our drone series are powerful, fast and intelligent, and majorly used for professional filmmaking, and aerial imaging. Our Phantom 4 and all products launched after it possess all important features and high service level which provide competitive advantage over others. It includes:

1. Obstacle sensing and avoidance
2. High resolution camera
3. Light weight product with magnesium skeleton
4. Multiple flight modes
5. Integrated Gimbal
6. Altitude improvement up to 10 meters and positioning capabilities
7. Active track software with Tap Fly ability
8. DJI Go and SDK supported upgrades
9. ‘Rent gear’ service
10. Online and offline customer service
11. Training services

Through extensive research and development practices, DJI managed to add relatively new and attractive features in the next product Phantom 4 Pro. Table 12 below describes new additions in the product technology.

Table 12: Technical Differences in Phantom 4 and Phantom 4 Pro

Elements	**Phantom 4**	**Phantom 4 Pro**
Flight time	27	30
Infrared sensors	No	Yes
Camera	12.4MP 1/2.3” CMOS camera with a FOV of 94°and a 20mm (35 mm format equivalent) lens.	20MP 1″ CMOS camera with a FOV 84° and a 24mm (35 mm format equivalent) lens
Dual camera obstacle avoidance	Front	Front & back
ISO	Video- 100-3200 Photo-100-12800	Video-100-6400 Photo-100-1600
Mechanical shutter	NO	Yes
Burst mode	7 images	14 images
Maximum speed	10m/s	14m/s
Built in display	No	Optional
Recording bitrate	60 Mbps	100 Mbps
Memory space	Limited to 64GB	Micro SD cards up to 128GB

7.5.2 Improvements in Product/ services

DJI, with continuous improvements and breakthrough innovations manages to grow in sales. Through immense spending on research and development, it has come up with several distinctive features in product and services offered which provide competitive advantage to the company over others, but, we analyzed that there are still some areas where DJI needs to focus. These include:

1. Waterproof design of the product
2. Product crashing and durability
3. Balance between product weight and improved flight time

Some service areas also needs focus and improvements such as:

1. Training and educational services to users
2. After sales services

DJI, with superior technology and effective service, has managed to be ahead in the drone market. But, considering growing competition and rapidly developing technology, the threat of substitute products and new entrants has increased. There are some areas this marketing plan analyzed where the company still needs to focus and work on improvements. After analyzing customer reviews for our products, we came to know that Phantom 4 still has problem of crashing even though it has effective obstacle sensing and avoidance feature. Customer are not 100% satisfied with the warranty and replacement service of the company in case of product crashing. This plan proposes 50 % of the budget to R&D so that such issues like crashing, durability of the product can be fixed with future improvements in product design and its strength. This is consistent with our competitor, Parrot, and the same as what they spend [38]. Also, plan analyzes and works on areas of customer service (online & offline customer services).

In case of incremental innovation in product feature, Waterproof design is suggested by the plan. Efficient allocation of budget to R&D can achieve this goal, for adding most desirable feature of Waterproof design in the product. Also, though among all competitive providers, DJI has achieved to provide the maximum flight time, but when it comes to weight of the product for improved flight time, DJI product gets heavier than the previous version with low flight time. Hence, such specifications provide major scope for improvements which will be addressed by this plan. As not all businessmen are photographers and hobbyists to handle this relatively new technology of drones. To help such customers, DJI provides educational and training services to them to make them aware of the technology and to try hand on it. But, such offered services are not well-known by many customers who might want to hire them. This marketing plan addresses the issue where our strategy would focus more on promotions and advertisement of not only products but also these “training services” being available for customers as well.

7.6 Growth Strategy

Though currently there are many competitors in the drone market worldwide, DJI constantly holds the position of Market leader with 70% of market share. As it can be analyzed from customer experiences and revenue numbers, DJI is already far ahead of its competitors in terms of innovation in products and continuous improvements in product and service as well. But, down market is the place where DJI hasn’t explored yet. Almost all DJI products cost more than $999 which limits its growth in low end markets where there is opportunity to gain large market share with low price products for large customer base, especially for smaller businesses preferring cheaper product.

New market development through cheaper products and services can provide maximum opportunity to DJI. As compared to competitors, DJI has superiority in terms of technology, service, product development, it can be used to attract new market segment (low end) with new products. The maximum opportunity for DJI is to become the most popular drone manufacturer

in all market segments with wide product line having different price ranges according to market segments. In some cases such as 3DR, the competition is actually shrinking in low end markets because 3DR is no more producing drones due to lack of funding. This provides an opportunity to DJI to develop products for such market segments and position it effectively.

Table 13: Growth Strategy Matrix

	Current Product/Service	New Product/Service
Current Market	70% of Market share Brand reputation Technical superiority	Improve Products/service Technical Improvements Develop new products Reduced Price
New Market	Expand Market segments Down Market Entry with lower prices	Develop new products/services for new market Focus on new opportunities Spend more on R&D & new market strategy

Though DJI holds 70% of the market share in the drone market, there is still opportunity to expand with the help of effective advertising and brand awareness strategies. As the commercial drone market is expected to grow rapidly in next few years, it is important for DJI to capitalize on customer satisfaction and improvement of brand value to be ahead in competition. Currently, all DJI products including Phantom 4 possess high technological superiority, great features and high customer demand. But, established competitors like Yuneec, Parrot are coming with similar products and gaining customer trust. Because of administrative support, new entrants are also coming with breakthrough innovation in the technology, developing advanced features. Hence, it is important to focus on continuous improvements in product features, customer satisfaction and new product development as well.

7.6.1 Growth by Acquisitions and Partnerships

As a part of growth strategy, DJI should focus more on partnerships and acquisitions to gain competitive advantage over others. Many competitors of DJI such as Yuneec, Parrot are also focusing on such strategies to gain more funding and dominance in the market. Currently, DJI uses partners to expand the business portfolio, e.g. the infrared camera maker FLIR, surveying expert Leica Geosystems and micro ADS-B transponder manufacturer uAviniox. But, considering growing interests of many companies such as Amazon, Intel, Apple in the drone market, it has become necessary to adapt partnership and acquisition strategies to gain operational expertise. Such strategies possess threat to company's intellectual property, but DJI works effectively to protect them through Patents, copyrights etc. Also, many competitors are trying hard to gain large amount of funding from major investors e.g. Yuneec received $60M

from Intel. Yuneec therefore, receives not only funding but Intel's excellence as well to succeed in the market. DJI is suggested to work on Software Partnerships to gain software superiority over others.

7.6.2 Growth by Innovation and Research & Development

DJI invests heavily in R&D and innovation strategies. 1400 out of 2500 staff of DJI worldwide, works for research & development. Also, it is important to protect your intellectual capital when it comes to technology and research. Strategies like partnerships, acquisitions can possess threats to the intellectual property rights of the company. But, DJI works intensively to protect intellectual rights through Patents, copyrights etc. Continuous focus on R&D has proven to be the competitive advantage for DJI in the drone market. DJI's own Active track software and anti-collision sensing feature are some distinctive features companies brought into Market through extensive research and development. Only few companies in the market possess those expertise. Hence, many investors, companies are interested to work with DJI or invest in DJI. Such brand image opens lot more opportunities for DJI in terms of new product development and can be attained through more and more R&D spending, positioning product in new market segments etc. DJI hasn't invested in developing product for low end customers yet. With the help more research, it can develop product for down market, as it possesses high opportunity in terms of not only revenue but brand reputation and large customer base. For current product, DJI can work on improving features such as waterproof ability, durability, stability, ease of use etc., through more investment on R&D.

7.6.3 Growth Through New Market Development

DJI never built the strategy for low-end market as such. Though Phantom 3 sells for $445 in the market, majority of DJI products are sold in high-end market. Though it is true that eventually after release of next series product, price of current product which is already popular in the market gets dropped. But bringing a new low price product for smaller businesses can prove to be a good strategy. Because, low price product can be viable option for small businesses and some commercial markets that do not want to buy expensive product. Our plan analyzes that the company needs to focus on developing products at lower cost for these low end markets. Also, with new strategies of advertising and promotions focusing on these markets, company can easily capture down market segments.

7.6.4 Growth Through Network Economies

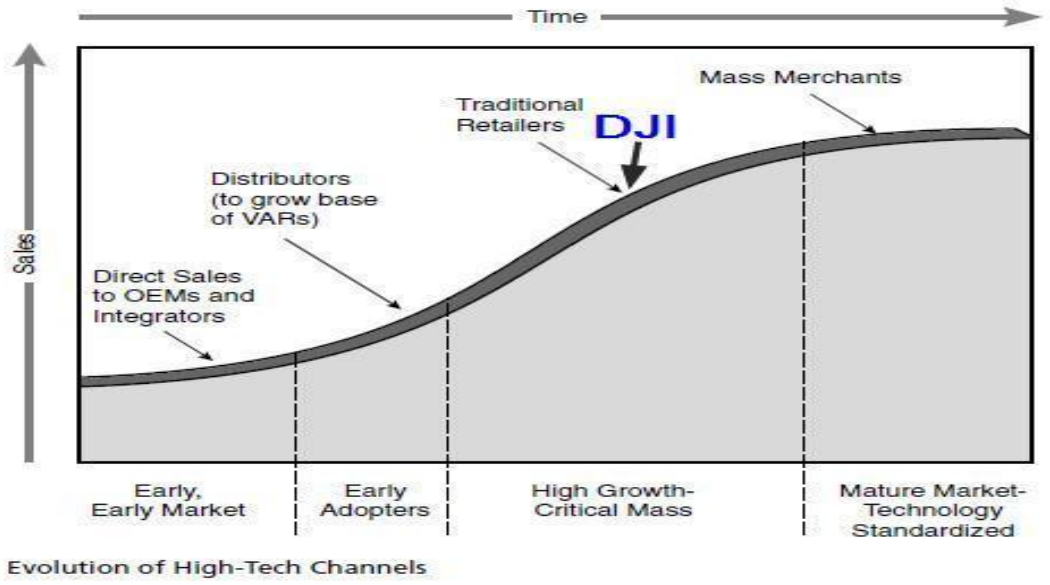
By partnering with companies developing complementary products, DJI can increase market demand and thus create market growth through network effects. In our target segments, agriculture, real estate, and industrial inspection, partnering with companies that are developing accessory products to service each application, will grow revenue and market share through network economies.

7.7 Place (Distribution) Strategy

DJI mainly focused on direct sale. DJI product is sold directly on DJI's website as well as through authorized DJI dealers around the world. DJI first launches their products in USA with the help of Texas based UAV entrepreneur Colin Guinn. Guinn led Texas-based team charge of marketing and distribution of DJI drones.

In 2013, DJI agreements with WYNIT Distribution, LLC. a leading national distributor of products from the top national brands in the consumer electronics, security and outdoor leisure and adventure industries. Also the company serves a wide range of customers ranging from large national retailers to independent resellers through dedicated business units.

After Phantom 3, DJI has built wide cooperation with US electronic product distributors, including BestBuy, Apple Flagship Stores as well as major airplane vendors, and has several thousand locations for sales in North America. Customer can buy the new, refurbished product on e-commerce site like Amazon, Dronenerds.com, etc. However, to maintain the high performance and service quality company insist to buy the product on their website or authorized retail store only. Along with this DJI is also using trade shows and various conferences to give live demo and direct sale of the products, as it will create the live interaction and purchase environment with the customers to get more product insights and then sale



related enquiry.

Figure 15: Evolution of High Tech Sales Channels

8.0 Budgeting and Control

8.1 Marketing Budget

The marketing budget for this strategy will be 15% of revenue. This is right around other high tech companies, such as Intel, Microsoft, and Google [28]. This is slightly higher than the average amount tech companies spend, at 9.1% [29]. The reason being, that this is a more emerging market and more should be spent up front to obtain the market majority early on.

The total budget then for marketing for 2017 is:

0.15 * $2.099 Billion = $314.8 Million

Table 14: Projected Capital Expenditure - Marketing

Year	Marketing Budget By Year (15% of Revenue)	% Increase From Previous Year
2017	$ 314,907,188	
2018	$ 393,004,170	19.87%
2019	$ 477,651,222	17.72%
2020	$ 580,436,928	17.71%
2021	$ 705,230,868	17.70%
2022	$ 856,724,906	17.68%

The marketing budget for each target market segment will be weighted according to the percentage of future market share. Based on our promotional strategy, and the importance and relative emphasis on each piece of it, as well as the market segmentation and potential profits in each sector, the promotional budget has been outlined as below.

Market Segment	% of Marketing Budget
Industrial Inspection	50%
Real Estate/Aerial Photography	27%
Agriculture	23%

Although there is a weight to each target, we recognize there are some activities that overlap with each other, and the costs would be distributed between all three segments.

DJI is a large company and has its own internal marketing team, so will not be hiring an outside company to market. The hourly wage for a marketing manager is assumed to be $45 based on

average data found in the U.S. [30]. For assumption purposes, this is also assumed to be the hourly wage for all positions within the marketing group, such as graphic designer, social media manager, and so forth. Based on our promotional strategy above, we will focus on the methods that have a low cost per thousand (CPM) for people reached, along with a few, more expensive, direct promotional tools.

In print media, the cost of a ¼ page ad in the Commercial Real Estate Development Association's quarterly magazine starts at $1,950 and reaches 20,000 people in the commercial real estate profession [31]. This was assumed to be typical for most industry journals and magazines. Based on this, and assuming a two weeks' worth of a graphic designer/marketing manager's time to put together the ad, the CPM for this type of advertising is:

CPM = ($45/hour * 80 hours + $1950)/20,000 *1000 = $277

Advertising on a website such as dronelife.com, that writes articles about utilizing drones for a specific use, and is the leading website for drone marketplace, starts at $500 a month [32].

A 10 x10 booth at the IDEAg Trade Show at the American Farm Bureau Annual Convention is $1,000. In addition to this, there are shipping costs to get the exhibit there, which are assumed to be around $100, and staffing costs, which would be the hourly rate of two people for a 4 day conference, plus a full day of travelling to the location and back. Travel costs are assume to be ($500 per flight, $150 per night in hotel, and $20 per meal). The conference advertises 6,000 attendees [33]. These costs are assumed to be typical for a conference and as the conference scales up in attendees, that the costs scale by the same size, as larger conferences have higher costs for booths and will require more attendees.

CPM = (1,000 + (3,500 cost per person*2) / 6,000 *1,000 = $1,333

Although this price is high, the conference is one of the major ways to reach farmers and those in the agriculture industry. There are similar conferences for all professions. As stated, there is no cost to have social media accounts, but there is a cost to pay someone to update them. This can be assumed to be one person's full time job, so per year, the cost is:

$45/hour * 40 hours/week * 52 weeks/year = $93,600

Based on the fact that DJI has the number of followers on each platform below:

Platform	Number of followers
Twitter	885,000 [35]
Facebook	3,402,227 (DJI America) [36]
Instagram	654,000 [37]

The CPM for social media is:

CPM = 93,600/ (885,000 + 3,402,227 + 654,000) *1,000 = $18.94 per year

8.2 Metrics

Each year, we will review our marketing budget against our market growth, and adjust accordingly to meet our goals. The metrics for success will be sales from specific channels. Whenever a drone purchase is made directly through DJI, there will be a question on the payment page online, or the sales representative will ask, where the customer heard of us, and how they decided to buy. Specific sales numbers will be tracked at each trade show, and timing of sales will be tracked to determine if there was a spike in sales after specific events.

In addition, soft numbers will be tracked, such as number of followers gained after specific ad campaigns and events, or customer service interactions.

User reviews on major tech websites will be tracked, such as droneflyers.com and dronelife.com, as well as major sales channels, such as amazon.com, Apple stores and website, and Google.

As the product will be new to this market, we will analyze the targeted segments and other customers' feedback on a monthly basis. Representatives from the various departments such as Marketing, Sales, and Engineering will analyze the current market situation, and based on this information improvisation in the current technology can be done. Our ROI goal is to achieve our financial goal with our budgeted marketing costs. This means an overall ROI of:

($2,099M - $314.8M) / $314.8M = 5.66 : 1

This puts us just above the average of many companies, 5:1 [34]. By analyzing the return on investment, (ROI) we will continuously monitor whether the money invested in market is resulted into profit. We will measure the amount spent on each campaign against the amount of sales each campaign brought in specifically. Through our sales analysis we would be able to compare actual sales and sales target and budgets. And analysis of any variance between the two would be examined carefully.

By doing market share analysis we would be able to keep track of the growth of our product. We will be relying on Market expense to sales ratio. By doing this we will be able to analyze whether we are spending too much or too little on marketing in order to achieve our desired sales goal. Through continuous and rigorous auditing we will be able to examine where exactly we are spending. By doing auditing we can cut down our unnecessary expenditures.

9.0 Conclusion

We built a strategic marketing plan for the Phantom 4 and Phantom 4 Pro to dominate the aerial

photography drone camera industry in the U.S among our present and future competitors. Our marketing plan focuses on the commercial sectors and targeted the agricultural, industrial inspection, and real estate/aerial photography industries. We created our plan based on essential questions: Where are we now? Where do we want to go? How will we get there? And what is supposed to happen when we get there? It will promote DJI Phantom 4 series to cross the chasm; strengthen and capture a strong relationship with our current and new clients; create a long-term engagement and loyalty with our clients; and; spread our brand. We do this by; setting discounts and distribution channels plan, and exploiting our advertising and promotion budget by focusing on quality instead of quantity.

Our products are high quality with new technology that is backed by our strong partnerships and history with hundreds of intellectual property globally. Our analysis showed that there is a large emerging market in the commercial sector with a need for products that Phantom 4 series can fulfill. It illustrated what features and services that can be delivered to our clients. We analyzed our market by demonstrating the market demographics globally and in U.S, trend, needs, growth, and SWOT to compete successfully in U.S market and achieve our objectives and goals.

We built our marketing strategy by building our positioning strategy, pricing strategy with respect for each of our target segments, promotion strategy including the 4 P's, product strategy, growth strategy including acquisitions, partnerships, innovations, and R&D, and distribution strategy with respect for our marketing budget 15% of our revenue. Our goal for this strategy is to achieve a total sales of $2,099,381,250 in 2017. Our promotional strategy includes media advertising, public relation and publicity, trade shows, seminars, and training, and direct sale to achieve an overall low CPM, while still targeting direct sales through certain channels. By using Porter's Five Forces model, we determined the industry competitiveness and examined the threats of new entrants, bargaining power of suppliers, bargaining power of customers, firm rivalry, and threat of substitutes. To improve our products we suggested features and services that we should focus on.

Our company's market share of 70% represents our high position in the drone market. DJI and the Phantom 4 series are uniquely focused on creating a revolution for camera usage by facilitating the tasks for our targeted segments clients, and we are committed to:

"Creativity is at the heart of every dream. Every idea, every groundbreaking leap that changes our world starts with the vision of talented creators. At DJI, we give these creators the tools they need to bring their ideas to life."

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