



Title:

Team 2 Marketing of DJI Drones Processing Report

Course Title: Technology Marketing

Course Number: ETM 555/655

Instructor: Dr. Sule Balkan

Term: Winter

Year: 2017

Author(s): The Fast Movers team (Team 2)

Tejas Deshpande

Donavon Nigg

Nicole Wehner

Rushikesh Jirage

John Bauer

Haitham Alkharboosh

File Name: 2017-W-555-Team-2-02

ETM OFFICE USE ONLY

Report No:

Type: Team 2 Processing Report.

Note:

1.0 Abstract	2
2.0 Phase I: Building a team & finding a product	2
2.1 First few weeks of class.	2
2.2 Choosing the Product	3
3.0 Phase II: Building Our Marketing Plan.	4
3.1 Tools Used:	6
3.2 Problems Encountered	8
4.0 Phase III: Midterm brief and Feedback.	8
4.1 Tools Used.	12
4.2 Problems Encountered	13
5.0 Phase IV: Dress Rehearsal & Final Presentation	13
5.1 Tools Used	14
5.2 Problems Encountered	15
6.0 Research Tools	15
7.0 Key Learning Points	15
8.0 Conclusion	16

1.0 Abstract

The document discusses the team process and progress of building “The Marketing Plan for DJI Phantom 4” over the period of 10 weeks. The document addresses some important phases our team went through while building the marketing plan. It covers all processes starting from forming a team to proposing the actual marketing plan. It addresses all the tools we used over the period to build a marketing plan, key learning points of our team. The document discusses how we apply classroom knowledge and lectures to build a marketing plan. To include some reflection on learning experience we, ‘as a team’ talk about problems we encountered, and how we overcame them by effective communications and time management skills. Finally, we conclude the viability of our plan and lessons learned through the process.

2.0 Phase I: Building a team & finding a product

2.1 First few weeks of class.

In the first day of class on January 10th Dr. Balkan gave a brief overview of the expectations for the course. It was snowing that evening and the class was cut short. However that evening we were able to build the team with the following members: Nicole Wehner, Haitham Alkharboosh, Tejas Deshpande, Rushikesh Jirage, John Bauer and Donavon Nigg. Once this was done we set up Google Drive document and WhatsApp group and started communicating and brainstorming a few product ideas. Due to the fact that class was released early we were assigned an additional homework assignment of reviewing the slides and writing a paper on what we learned. This writing assignment slowed down the team progress from actually spending much time on the marketing plan.

The second week’s class on January 17th was cancelled due to weather. However the team met over google hangout and created the outline for the processing report and continued to brainstorm ideas. The list of project/marketing plan ideas were: Solar roads, Solar paint, Solar roofs, Smart clothes, Wireless charging coming from roads for EV vehicles, Personal drone, (not yet on the market), Drive up shopping and how this process may change the future of shopping, We studied the suggested websites from professor: such as <http://gizmodo.com/> and <https://www.technologyreview.com/>. The feedback on each of these websites and YouTube videos seems to suggest to the all the students in the class to look for technology that is new, innovative and about to hit the market. The team also spent some time trying to come up with a team name. We decided on “Fast Movers” but soon realized we were just team # 2 as assigned by the TA, so this exercise in team building was a waste of time. The team set up a document on the shared drive and all collaborated our ideas on a single locations, which became very helpful in our team exercise to brainstorm ideas.

2.2 Choosing the Product

As a team we conducted several brainstorming sessions and discussions to come up with different ideas. We asked the question what type of High-Tech devices can we market and can we conduct a market analysis on our chosen product? We thought of personal drones, jet packs, weather control technologies, combatting climate change, technology generated rain clouds for water supply supplementation in developing or rural areas, or desert climates. We talked about the Rainmaker – fresh water rain cloud, push a button, create a very small localized and contained weather system, and collect a gallon of water. Make it Rain! Smart clothes, hovercraft motor bike, power from the air. Poof the pet monitor that shows the pet's health and safety as well as tells you how much your pet sleeps, how much they exercise and will help locate the pet if lost.

The night of January 22nd, we conducted a google hangout the goals from that meeting was to finalize our list of three short technologies to pitch to the class on Tuesday night.

The objectives was to divide up the work, build slides, who will brief which topic and who will assist with research and field questions. The outcome from that meeting was, for Haitham to start creating the briefing slide outline so we each could start to build the briefing slide deck. Haitham would brief the smart clothing with research assistance from John. Nichole would brief the follow me drone cameras with research assistance from Rushikesh. And Donavon would brief the personal home assistants with research assistance from Tejas.

We met back up on Sunday January 29 on a Google Hangout to finalize our briefing for Tuesday's class. The goal was to finalize the slides, the objectives were to collaborate as a team and go through the slides all together and check for consistency and messaging, and the outcome was a finalized slide deck. On January 31st we briefed our top three topics and decided on the "follow-me" drone camera system as our marking project for this class. Original company we chose was the Lilly but we had just found out on Monday morning that they shut down due to funding. Now we needed to do more research and find a competitor to choose.

During this phase the team used the following tools:

- Team building
- Project management
- Brainstorming
- Google Hangout
- WhatsApp

What is marketing and how it differs from sales?

Team 2 started to read and search about the differences between marketing and sales. The team follows this important slides which leads the team to start building their marketing plan outline depending on answering the three main questions in order to go from point A to B to fulfill the situation analysis, market strategy, and performance plan. Also, some of team 2 members picked up the briefing reading assignment which represents the war between

marketing and sales, thus, it illustrates the idea about how sales and marketing activities are correlated.

- What are high tech markets?
- Seeing our first product the Lily drop out of the market was a good example of why high tech products fail. In this case they seem to be late at arriving to the market.
- The evolution of new technologies, Moore's Law
- Understanding the different types of innovations
 - Incremental versus breakthrough
 - Product vs process vs organizational
 - Architectural vs modular
 - Sustaining vs disruptive.

Most of the team members tried to complete the first individual assignment from Dr. Balkan. This was a good assignment and if the individual started this early enough it was not an issue. However some team members were still working on this assignment or the second assignment and not able to dive deep into the marketing plan. The other challenge was most team members having a full time job and assignments due at 5:00pm, For an individual that is working from 8:00 to 5:00 Monday through Friday this really isn't an adult learning master's degree evening program. For Donavon this was a big issue and the only way to get through it was to use vacation days from his employer.

During this phase we encountered the following problems and this is how we moved through them. There was confusion between our team about selection of the product and its availability in the market. We spent a lot of time looking at some of these types of high tech products but once we learned this was not our assignment we started looking at products that have been on the market for the past two years. Also the links to high tech products that Dr. Balkan gave us on the first day of class were also directed towards products that were not yet on the market. We did work through this, we asked for clarification and received the proper guidance from the professor. We learned of this change soon enough in order to make changes to our research.

Teams outcomes during this phase.

- Built our team
- Set up a communication and meeting schedule
- Briefed our top 3 and choose one final product to start our marketing plan.
- Understanding how to outline a marketing plan depending on answering the three main question to move from point A to B.

3.0 Phase II: Building Our Marketing Plan.

We finalized our product selection on week 5 as the DJI Phantom 4 Drone autonomous "Follow-Me" drone camera system. During this time we were all struggling with reading the marketing plan for the Da Vinci medical equipment. This assignment forced us to review what we had learned to date, an understanding the table in appendix 1.B of "Marketing of High-Technology Products and Innovations" as well as understanding the components of the rubric provided by Dr.

Balkan. This was a great learning exercise as each of us gained a different perspective of what a marketing plan should look like, the amount of detail that goes into it, and the amount of market analysis that must be conducted.

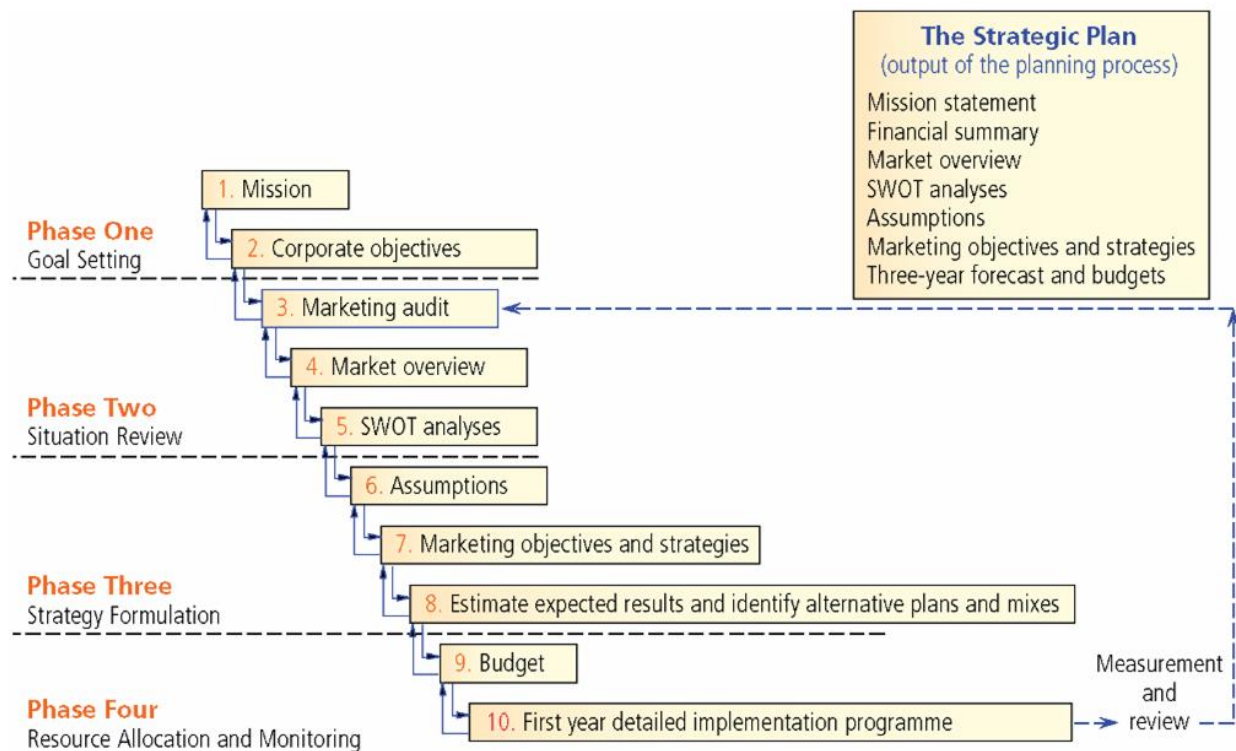


Figure 2.11: The 10 steps of the strategic marketing planning process.

We now had to build a marketing plan, we thought of using the rubric handed out by Dr. Balkan or the format shown above from one of her PowerPoint slides, but as a team figured the Appendix 1.B from “Marketing of High-Technology Products and Innovations” So using this framework we divided up the section and researched the following categories based on our product. The company analysis, product analysis, current market analysis, the competitors within our market, the customer analysis, the 4 P’s and SWOT analysis. The work produced by the team at this point in time was approximately 20 pages of the processing report. We created a research spreadsheet log as a tool to share with teammates where our area of research was taken us. We shared this document in order to save time, so that multiple people are not reading the same articles and journals or wasting time running down dead ends of information. Our team research was focused on addressing the following questions:

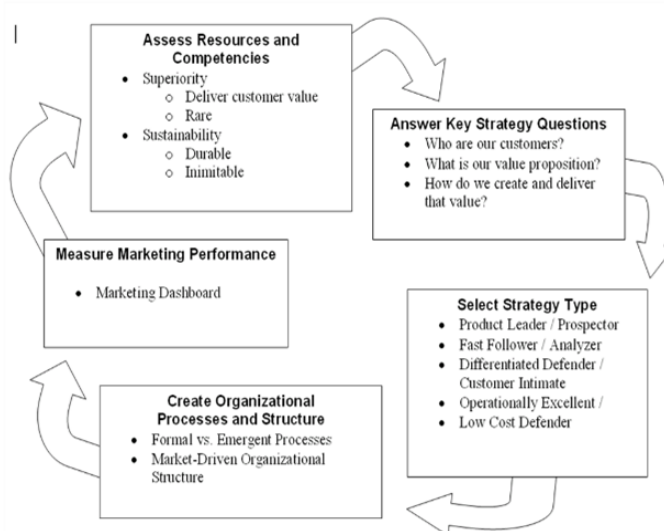
- Who and what is DJI
- Where do they stand in the market
- Who are their competitors?
- What do you know about each segment?
- Is the target customer well-funded?
- Could you reach the customer with your sales force?

- Does the customer have a compelling reason to buy?
- Could you deliver the whole product?
- Does competition block you?
- If you win this segment, can you leverage it to enter additional segments?



3.1 Tools Used:

STRATEGY FORMULATION PROCES



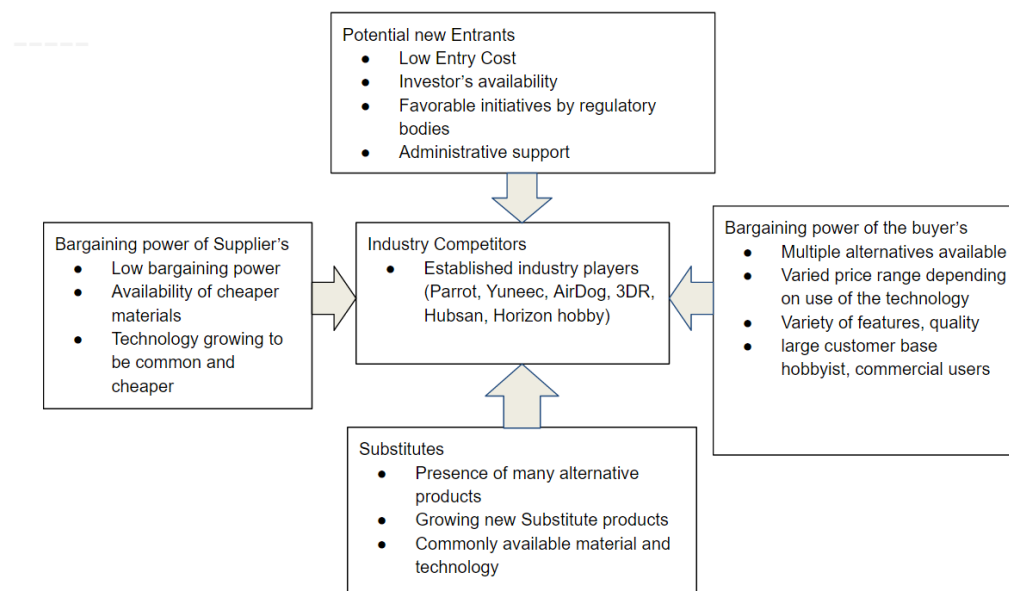
The team used the strategy formulation process to understand how to build the needed section of the marketing plan. For example this model helped us answer:

- Who are our customers
- What is the value proposition?

The model also helped with a lot more of the creation of our document and guiding our strategy.

Porter's Five Forces

Porter's Five Forces, as an effective framework with 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.



SWOT Analysis

The team used SWOT analysis to develop a marketing strategy based on the strengths of the Phantom 4 Series. Understanding, mitigating and reducing the effects of its weaknesses, in order for the Phantom 4 series to maintain its



- Brand recognition
- Existing relationships
- Superior Technology



- Limited FAA restrictions in US
- Broad market segment



- Costs
- International restrictions



- New entrants to market
- Current competitors
- Misuse of drone/ bad reputation

competitive advantage and market strength.

3.2 Problems Encountered

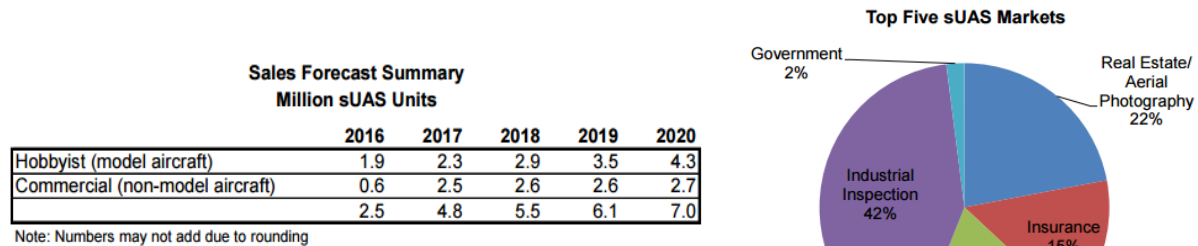
A few of our biggest struggles and issues during this period was the overlapping research for overall drone market research vs customer (DJI) research or company analysis vs product analysis. Also all the data we were pulling in was hard to understand if it was global figures or US Figures, if it was consumer or commercial used drones. Was the data referring to product delivery over the next few year or product manufacturing? Bottom line for the team was separating all the data into the proper category, understanding what all the different graphs were trying to explain, as it became very confusing when multiple people are all conducting research and bringing in great information. In order to work through this we had to have a lot more communications so on Monday February 13th, throughout the day, a lot of communications, via shared PowerPoint collaboration and discussion within the PowerPoint took place as we finalized the briefing slides. This continued collaboration within our documents continued through Tuesday February 14th as we completed our presentation slides and briefed our tentative marketing plan that night in class.

4.0 Phase III: Midterm brief and Feedback.

Sunday February 19th, our team met in person in downtown Portland to review the feedback from our Tuesday night briefing of the marketing plan. The question from Dr. Balkan on Tuesday night was why we were not focusing the marketing plan on the commercial market. The feeling to this from most of the team members was we had just picked our product two weeks ago and a lot of time and research was spend on just trying to understand the company, its products, the competitions and the Market. The Market turned out to be very complex when we start to look at global vs US. production vs sales, commercial vs consumer, and government vs private. Also we really weren't sure how you go about building a marketing plan before you fully understand all the items just listed above. Our team looked at all the requirements to building a marketing plan as outlined in Appendix 1B and decided to only focus on the first four chapters of the marking plan up to the Midterm of the semester. Even though Dr. Balkan may have expected more from us at our Midterm this was a great idea, since we needed to re-direct our focus from consumer to commercial markets.

We agreed to focus on and use the FAA numbers for the 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.



These two graphs represent the FAA growth numbers and the percentage of market where drones are being used. We also used these FAA numbers for SAM to focus on the US market and SOM to focus on the US Market commercial market.

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)

The team agreed to focus the commercial usage on agriculture, industrial inspections and real estate. There are a lot of subcategories within these three that continue to confuse our team, but we continued to communicate and re-emphasize our top three market areas to focus this marketing plan toward.

We discussed how our marketing strategy must get us over the chasm along the technology adoption curve. Items we discussed as additional research and sections that need to be added to our marketing plan are:

1. Determine customer segmentation
 - a. Commercial vs Consumer
 - b. Commercial - Evaluation
 - i. Agriculture
 - ii. Consulting/construction/ industrial inspection
 - iii. Real Estate/Photography/video
 1. Outdoor building and housing.
 2. Wedding events
 3. Movies
 4. Sports
 - iv. Government: surveying

- v. Emergency service: search and rescue/medical supplies, police and fire fighting
2. Determine largest potential
3. Determine who makes decision to purchase, who makes the purchase, and who actually uses the products
4. Rank importance of roles/individuals
5. Determine what benefits of product turns each individual on to purchase
6. How well are these benefits delivered? Vs the competition?

We continued to focus our marketing plan structure based on Appendix 1.B. in textbook. The team also referenced the rubric for the class midterm assignment to assure that each part fit within the marketing plan and the course requirements.

Goal from the meeting was for each member to revise their section from last week based on our commercial focus and direction, and finish this by Friday. Also everyone must read the whole document and consider section 6 by next Saturday.

The team once again met in downtown Portland on Sunday Feb 26th to continue working on the marketing plan and the briefing slides that are due on March 7th. The meeting walked through the marketing plan on the large screen section by section, where we refined the outline and addressed each section that needed additional work.

1. Executive Summary - do at end
2. Introduction
 - a. Purpose needs a bit more work
3. Company Analysis
 - a. Product Analysis needs more work
4. Marketing Analysis
 - a. Trends, growth, behavior explain crossing the chasm
 - i. Add Goldman Sachs numbers
 - b. Customer segmentation
 - c. Competitors -
 - i. Take a look at DaVinci plan and see if what we have is enough.
5. Objectives - missing
6. Segmentation, Targeting, and Positioning/Value Proposition (still needs to be started)
 - a. Reference customer segments
7. Marketing Strategy
 - a. Positioning: competitive, graph (been started but just rough numbers right now)
 - b. Product/service attributes: analyze features or advancement, services (including training services) - need to be added
 - i. How to strengthen weaknesses in features
 - ii. Growth Strategy
 - c. Distribution: where to sell and allow trials - (been initiated but need more work)
 - d. Promotion: Needs to be written
 - i. Advertising
 - ii. Sales promotion

- iii. Public relations
 - iv. selling/trade shows
- 8. Budgeting and Control, needs to be written
 - a. Implementation
 - b. Financial information
- 9. Conclusion - done at end

For the presentation we wanted to condense our first slide presentation into 5-6 slides, and focus on the strategy and implementation parts. We then looked at how much time we have (only 20 minutes) and six team members. Which is only 4 minutes per person. Our agenda for the dress rehearsal side presentation needed to be much shorter and very focused.

Throughout this week the marketing plan becomes clearer to the team especially after concentrating in the commercial sectors. Also, because the marketing strategy section in Appendix 1.B is the meat for the product plan, we starts to feel that they are on the right road for the project. There was still a lot of work that needed to be done as we referenced appendix 1.B and the rubric.

1. Decide structure
 - a. Fix headings
 - b. Consolidate sections
 - c. Can fix grammar along the way
2. Consolidate market numbers
 - a. In market demographics section
 - b. Predictions in market growth section
3. Decide where to put product features
 - a. Introduction
4. TAM and SAM - total available market and serviceable available market
 - a. TAM - max available sales in US
 - b. SAM - segment available sales
 - i. Industrial, Agriculture, aerial photography
5. Next sections
 - a. Assigned above
 - b. Meet Saturday 9 am
 - c. Next week: put together slides for presentation

Meeting Saturday Morning March 5th was a bad weekend for Donavon who is not only has a full time job, is full time student but is also a US Army Reservist and this was his reserve weekend. However he was able to take half a day off on Saturday to meet with the team where we outlined the Tuesday night presentation and build our briefing slides to about the 80% solution.

After Saturday's meeting we continued to work on our parts of the marketing plan as well as our parts of the presentation. On Tuesday night March 7th our dress rehearsal was scheduled for 7:30 p.m. so we meet at 5:00 p.m. in the computer lab around the corner from our classroom. We presenting the briefing slides on the big screen and walked through the slides one by one.

There was still a lot of discussion and lack of understanding on our TAM, SAM and SOM numbers but as a group we worked through all misunderstandings and finalized our briefing slides. In addition, we discussed about our advertising and promotion strategy and which of the Advertising and Promotion pyramid that we should eliminate. Therefore, we eliminate the Catalog, Literature, and Manuals layer, however, we was not sure that our decision is right or no. Also, we were struggling how to set a maximum budget for our advertising and promotion strategy and we assume that 15% from our product budget will be enough according to the other high-tech companies.

4.1 Tools Used.

Some of the tools used during this part of building our marketing strategy were a lot more depth analysis of the marketing mix which is composed of four elements, sometimes referred to as the Four-P's: product, price, promotion, and place. These four elements combine to create Deja's strategy for product differentiation and competitive advantage.

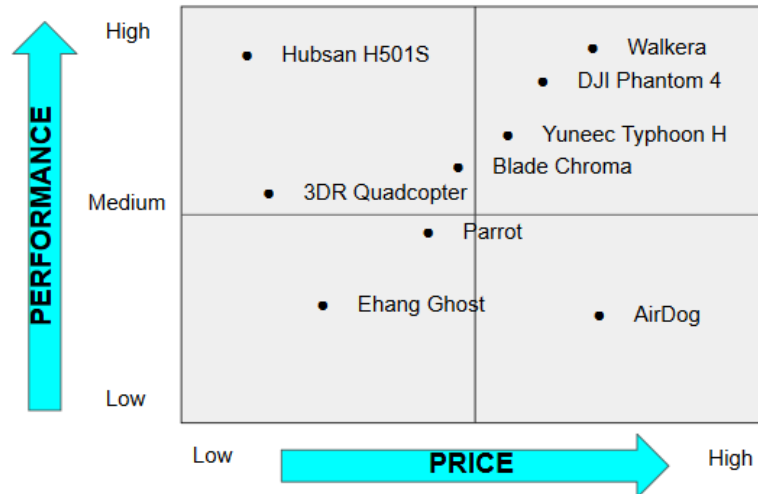
4 P's of Marketing

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



The Positioning Map

The positioning map was also used to understand where DJI Phantom 4 sits in comparison to its competitors. We had to 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. To use the pricing strategy correctly one will analyze the market competition and position. Additionally, a pricing strategy will align with our product attributes and high performance. We determined by using this tool that our product is the third highest in cost -- \$125.00 more than the fourth place product and \$563.00 less than the highest priced product.



4.2 Problems Encountered

A challenge during these last two weeks of February was the individual homework assignments most but not all team members had turned both writing assignments, there was discussion about how to improve second assignment if we receive feedback for first one. What if my score was really low on the second assignment and I needed to do a third. This unknown fear created additional stress to those who were juggling 12 credit hours and a full time job. The consensus at this time was to face the fact that no matter what your second score was there is no time to work on a third homework assignment, prepare for the dress rehearsal, with the marketing plan and the processing report. As a team we supported and encouraged each other which showed strong teamwork and care for each other.

5.0 Phase IV: Dress Rehearsal & Final Presentation

Tuesday night March 7th, meeting in the computer room prior to the meeting with Dr. Balkan. A lot of time was spent on TAM, SAM and SOM. As well as trying to standardize our message on Agriculture, Industrial Inspections and Real Estate. We continued working on the slideshow up to the time we were called into the room. We presented our material and was the only team that finished in under the time limit.

Feedback from dress rehearsal

We were the first and only team to present within our time limit. But we should have taken more time to explain some important points.

1. Donavon: More information up front, more about the product, explain the move from consumer to commercial, hit the Porter's Five Forces
2. Tajas: Talk Slower

3. Haitham: Hit only the big payoff advertisement and address expected returns on investment. Also, not eliminating some of the Advertising and Promotion pyramid will benefit our advertising strategy and lower marketing plan budget.
4. John: Label your price sensitivity and the 10% and 15%.
5. Nicole: Purchase list and cost per list and ROI
6. Rushikesh: Explain how you got your numbers for TAM, SAM, SOM.

Wednesday March 8th Email received back from Dr. Balkan with feedback on our draft marketing plan.

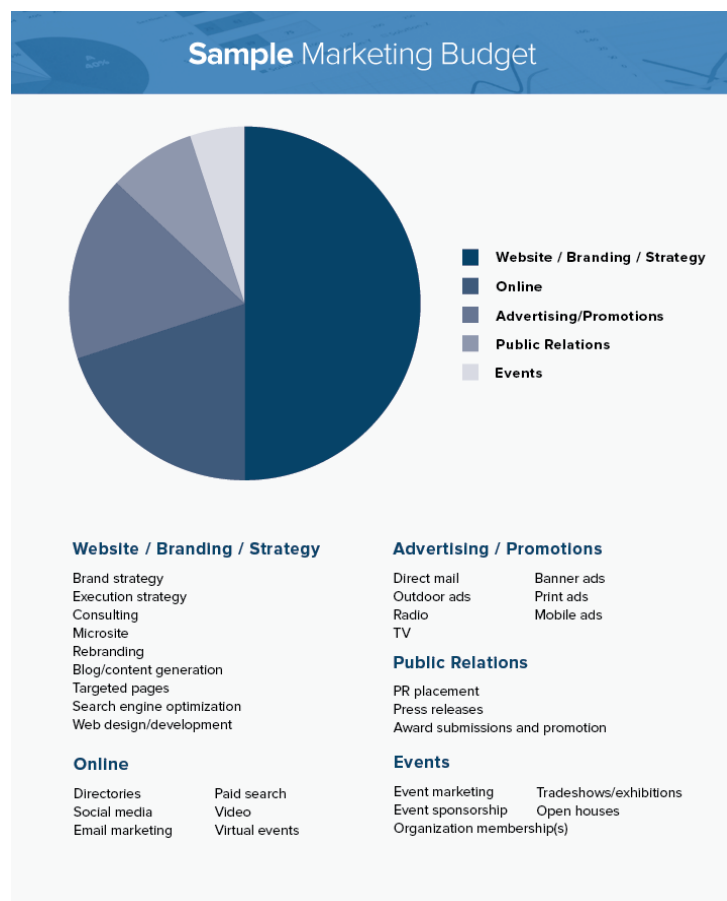
1. The document is too high level lots of information up front
2. No explanation of transferring from consumer to commercial
3. Missing the biggest part of the document which is section 6 segmentation, targeting, positioning and value.

5.1 Tools Used

During the final phase, though everybody was 90% finished with their own parts, working on the flow of the document was also important. While writing own parts, we also started to connect individual parts to the whole document to make them aligned with our marketing plan objectives and strategies.

While searching for all market numbers, competitors, business value of each competitor in the market, we came across a lot of new information regarding marketing strategies of each company, how companies spend on marketing and related strategies etc.

Tem took help from several company's marketing plans and marketing budget and tried to analyze how companies manage their marketing strategies and allocate resources.



5.2 Problems Encountered

During this phase the team reflected on the following learning experiences

That exploiting all of the Advertising and Promotion pyramid is not an efficient method for our advertising strategy, thus, selecting the some of the effective layers that fits with our targeted customers in the commercial sectors will benefit our product more.

The team has lived this market on drones for over the past nine weeks now, and condensing so much knowledge down to a 20 minute brief, hitting the “important” topics is very difficult. What parts of the marketing plan do you leave out and what parts do you keep in? How can we anticipate the questions from Dr. Balkan and did we effectively brief the major parts of the plan.

During this phase we encountered the following problems and this is how we moved through them.

In the briefing slides the advertising, promotion, and distribution channel strategy, did not represent the benefit, such as ROI, that results from implementing the strategy. Only presented was the methodology we will use since return on investment is very hard to calculate but is stated in the project report.

6.0 Research Tools

Our team relied heavily on online publications for our research. We found some articles through scholarly journals through periodical databases using the PSU library’s website, but found most of our information through forums on drones or business websites, such as *Fortune* and *Forbes*. We did not have access to many of the marketing data collections that a company like DJI would purchase to complete their marketing plan, but were able to find enough data in articles to create our plan.

7.0 Key Learning Points

1. In technology marketing, a happy medium is key. When going after new markets vs. established markets, different sales methods, or pursuing incremental innovation or breakthrough innovation, it is important to have a balance. It’s also a long, arduous process that takes a lot of analysis and is hard to do in the confines of a 10 week course.
2. Marketing is not only about Sales, it is way beyond just sales and distribution. When we talk about Marketing of product, it starts from making strategies for Product design to after sales service after releasing the actual product/service. It involves all processes in between and all this work in collaboration.
3. High-Tech Marketing today is difficult than traditional marketing. Today, when technology is growing so fast, life cycle of technology affects each strategy of the company. Growing emphasis on research & innovation are some major drivers of the competition in high-Tech Marketing.

4. Marketing strategy of the company is a reflection of extensive market analysis, huge spending on R&D and awareness about what customer needs. In case of segmentation, Literature research and statistical data prove to be a major source to select the target market segment.
5. It takes extensive research to identify profitable channel for promotion and advertisements. Not all possible Promotion and communication channels could be captured for any product.
6. As students in a marketing class we are trying to gain the knowledge and learn the process of building a strategic marketing plan, and we all agreed we successfully did just that. Marketing is not easy but it's even harder as a student without access to the company data. Additional research turned up so many dead ends when trying to understand the profit margins, investments and overhead. Our marketing plan needed to be sound and reasonable and based on company figures that were not attainable. A learning point on this would be to pick a company that is publically traded in order to understand the company's actual profits, losses and expenditures.

8.0 Conclusion

The process of writing marketing plan for DJI Phantom 4 helped us not only in gaining knowledge about marketing strategies but also in gaining insights about communication and team management. It was a great learning experience for all of us a team to work on something which none of us have done before. As it's a common misleading perception that marketing is only about Sales and Advertisement, but this class helped us to understand real marketing and what it takes for a company to build a marketing strategies as a whole. While building strategies for our product, we came to know that any marketing strategy is an output of extensive market research, industry analysis in terms of competition, past statistical data about technology, Customer needs and much more. We got a chance to learn these concepts thoroughly, and could apply them in our plan. This not only taught us about how to analyze market and how to build strategies, but also how to collaborate with your team members as well. We as a team were successful in managing each other's schedules, and learned to be liable for not only "My work" but also for "our performance".

As a result, we came up with a marketing plan for DJI Phantom 4 which is viable, profitable and meeting the objective of gaining 75% of the market share by 2018 and 80% by 2020. We invested 15% of our revenue in marketing budget after close inspection of the drone market and competition. But, as we are aware of the fact that Drone Technology is still in the initial phase, with this plan, we are aiming to cross the chasm and achieve at becoming the most desirable and profitable provider in the drone market. We analyze few required improvements in the product features and services offered and build strategies to achieve them.