

# teaching note

## *Get the Door. It's Drone: The future of flying food deliveries*

The case study deals with a current topic, which provides excellent opportunities to discuss different opinions. As with any case study, there is a dilemma, which can be argued from both positive and negative points of view. Since the topic is of interest to students this case study can be used for both graduate and undergraduate students, selecting relevant study area and adjusting requirements. Actually, it can be utilized to supplement several different topics and discussions as listed in the following learning objectives, considering food delivery using drones.

### 1. Strategic Management

- a. Developing decision-making skills while selecting technological developments.
- b. Understanding the need for organization's direction in response to a changing environment.
- c. Learning the importance of weighing the pros and cons before making strategic decisions.
- d. Modifying strategic plans based on the market response.
- e. Gaining competitive advantage by adopting latest technology.

### 2. Food Service Management

- a. Learning how to improve foodservice efficiency by adapting new technology.
- b. Understanding the customer needs in a fast-paced technological environment.
- c. Utilizing modern methods for delivering foods considering the convenience of customers.
- d. Realizing the importance of food safety for foods delivered to consumers.
- e. Using methods to preserve the food quality for an extended period.

### 3. Marketing Strategy

- a. Utilizing seven P's when marketing new products and services.
- b. Use SWOT analyses in marketing plans.
- c. Learning the need for approaching untapped markets.
- d. Developing sales and promotion mechanism for new products and services.
- e. Building consumer confidence in using new technologies.
- f. Brand equity management, customer loyalty, and brand management.

### 4. Legal Aspects in Hospitality

- a. Knowledge of influencing factors in developing rules and regulations for new products and services.
- b. Becoming aware of privacy issues and related laws and

regulations.

- c. Realizing the interstate commerce regulations when drones cross State borders.
- d. Understanding legal aspects related to branding and franchising.
- e. Learning to consider decisions from the legal points of view in adapting new technologies.

## Teaching Aids and Resources

1. **Power Point Slides:** Latest PowerPoint slides of drones can be used to demonstrate how drones work, specifically in the delivery of foods.
2. **Videos:** Select videos from the list or from other sources. It is highly recommended that videos be used in conjunction with this case study since participants may not know have seen drones and how they are being used:
  - 1- Flying fish: Sushi delivered by drone: <https://www.youtube.com/watch?v=WV0yQYXLU34>
  - 2- Domino's First Company To Deliver Pizza By Drone | CNBC: <https://www.youtube.com/watch?v=JoP1IvgGLys>
  - 3- Domino's Flying Drone Delivers Pizza: [https://www.youtube.com/watch?v=-CYT4PFV\\_Hs](https://www.youtube.com/watch?v=-CYT4PFV_Hs)
  - 4- Chipotle will deliver burritos via drones in Virginia Tech: <https://www.youtube.com/watch?v=zTHY6nD6AHc>
  - 5- Qumins Indian Restaurant delivering curry by drone: <https://www.youtube.com/watch?v=DLpkvQjcPYA>
  - 6- Pizza delivery drones: <https://www.youtube.com/watch?v=HZF4xvpREuo>
  - 7- Amazon Prime Air: [https://www.youtube.com/watch?v=MXo\\_d6tNWuY](https://www.youtube.com/watch?v=MXo_d6tNWuY)
  - 8- Brazilian Restaurant uses Drone to Deliver Pizza: <https://www.youtube.com/watch?v=ExHgYQP0bZg>
  - 9- Google tests burrito drone delivery at Virginia Tech : <https://www.youtube.com/watch?v=0OkmruOVr08>
  - 10- Burrito Bomber : <https://www.youtube.com/watch?v=3lqMRHwGsRA>
3. **Drone (Model):** Whenever possible and allowed, it will be interesting to bring a model, even if it is a toy drone, to show how it works and flies. They can be used in classroom or in an open environment. Of particular interest is how drones detects and avoid hurdles. We have found this to be an interesting and learning component of the program.

## Discussion Questions

- Drones have proven to be indispensable for scanning environments and use in military, agriculture, and relief operations, however, do you think they will be as useful in the delivery of commercial foods?
- Defend your discussion points selecting either the pros or cons for using drones for commercial food deliveries.
- Is drone-related technology anywhere close to ready for mass deployment? Are drone deliveries has a realistic prospect in the hospitality industry?
- Do you believe that using drones for food deliveries will be cost effective or cost prohibitive compared to traditional methods of food delivery? Discuss reasons for your answer.
- Will it be exciting to see drones all over the sky bringing different packages? What traffic problems, if any, do you foresee?
- As a consumer, are you in favor of replacing traditional deliveries for drone deliveries?
- From legal standpoint, do you think it will be easier to get clearance or certification for using drones for commercial food deliveries? If not, what hurdles do you foresee?
- Who would benefit the most by using drones for food deliveries: drone manufacturers, food service providers, or consumers?
- Will there be a need to change marketing or branding strategies if food deliveries by drones are used?
- Considering food safety and hazards, do you consider using drones for food deliveries is a good idea?
- Do you think the quality of the foods delivered by the drones will be at risk?
- Personally, will you be interested in getting food delivered by drones? Support your answer?
- Will hacking and privacy be of concern to you if food delivery by drones is used?
- From human resources point of view, is it economically feasible to deliver foods by drones rather than by delivery personnel?
- Using drones will reduce the personal touch, which is so important in hospitality. Argue for or against this statement.

## Teaching Approach

**For Undergraduate Courses:** Use the following steps if convenient. Feel free to change as needed.

- Distribute the case for study well ahead of the discussion. It is better to use this study in conjunction with a discussion of disruptive distribution, giving examples such as the delivery by Amazon & Dell computers.
- Divide the class into two groups, one in favor and other opposed.
- Show video or drone demonstration and discuss the topic in gen-

eral without going into the details, particularly pros and cons.

- Open the class for discussion. Give about an hour for discussion. Use discussion questions.
- Ask students to submit a written report based on the discussion. Evaluate as necessary.

**For graduate Courses:** Give the topic ahead of time and ask students to prepare a report based on current research publications. This can also be done in teams. While discussing the case study, use the steps listed for undergraduate courses. Encourage students to support their arguments based on the updated research findings.

## Teaching Strategy

Since this case study includes several issues, it provides excellent opportunities for fruitful discussions. It is recommended that instructors explore related topics to provide an in-depth understanding of the complexities involved in drone food deliveries. The case study can be used for both undergraduate and graduate business classes by adding additional readings and presentations. The following areas are mentioned as recommended topics in which this case study can be used. However, since the topic can be interdisciplinary several other courses can also benefit from this case study.

### 1. Strategic Management:

This case study provides an excellent example of how important business executives should modify the strategic plan based on the market shift. Students need to understand the process of adjusting organization direction and strategic plan from the perspective of the decision makers.

### 2. Food Service Management:

This case study can address a significant change for the food service industry. Companies that hope to invest in drones should fully research and understand the efficiency and effectiveness of food delivery using drones as well as figure out the preferences or feedback from their target customers. Students who are interested in food service industry should pay a close attention to this trend and come up with innovative ideas to help the industry transform.

### 3. Marketing Strategy:

This case study can help students understand the concepts of branding and rebranding in the food service industry. When the market is about to shift, businesses should immediately respond to it and make efforts to attract new customers by addressing significant marketing strategies. Students should learn to develop original strategies that may help businesses gain more market shares during the competitions.

### 4. Supply Chain Management:

This case study also address a significant change of the supply chain model of the food service industry. Students should be able to design or upgrade the traditional model to better responsive to the market shift.

### 5. Information Technology:

This case study presents numerous opportunities for information-

al technology companies who have ambitions to product and develop drones for product or food delivery. Students should understand the opportunities and threats for the current and future drone makers as well as the impact of increased drones demand to the drone industry.

#### **6. Legal Aspects:**

This case study illustrates several key legal issues which can significantly influence the implementation of drone deliveries of food in the United States. While the business sector has greatly requested for more beneficial policies to be introduced, the government still does not come out better legislative regulations that businesses hope to see. Students should understand the importance of the role of the government in the drone deliveries.

### **Additional Readings**

- Bloomberg. (2016). Pizza delivery drones: Turns out, pigs are flying (sort of). *Industry Week*. Retrieved from <http://login.ezproxy.lib.vt.edu/login?url=http://search.proquest.com.ezproxy.lib.vt.edu/docview/1814094030?>
- Glaser, A. (2017). Trump's freeze on new regulation means that we won't get drone delivery anytime soon. (February 9). Retrieved on February 15, 2017 from <http://www.recode.net/2017/2/9/14462390/trump-freeze-regulation-faa-drone-delivery>.
- Lee, Nicole (2016). 7 Eleven has already made 77 deliveries by drone Engadget, New York: AOL Inc. Dec 20, 2016.
- Nicas, Jack. *Wall Street Journal* (Online); New York, N.Y. [New York, N.Y.] 08 Sep 2016.
- Weise, E., & Jansen, B. (2017, January 31). Drone industry concerned about trump regulation reduction. Retrieved on February 14, 2017 from <http://www.usatoday.com/story/tech/2017/01/31/drone-regulation-reduction-trump/97291728/>.