Wilmont's Pharmacy Drone Case

Problem Case Summary

Wilmont's is a top-ranked US retail pharmacy with more than 8,000 stores nationwide. The company is secretly considering delivering prescriptions by flying drone. DroneTech, a small firm in San Francisco, CA announced the approach in March, and Wilmont's has made an agreement with DroneTech to prototype this project in the San Francisco area. DroneTech will provide the drone technology as well as the drone piloting and delivery systems, but will customize its systems and business process to conform to Wilmont's requirements.

You are the project manager assigned to lead this project. (Depending upon the course domain, the case positions the student as the project manager in either Wilmont's IT, Wilmont's Pharmacy Operations, or DroneTech Engineering.)

- Wilmont's has limited the project expenditures to a maximum of US$1,750,000 for this prototype project and will implement it first in only four stores.
- The project begins next January 5 and the first customer delivery flight should take place no later than November 30 to avoid harsh weather in the San Francisco area.
- You will need to plan tasks and assign team members to them from a list of people involved in the project. Regular meetings need to be held with the team and stakeholders as well as other forms of communication.
- Approval points are needed through the project sequence.
- Risks, testing, quality control and provision issues may develop.
- Issues in security, reliability, integrity, interfaces between the systems of the two organizations and customer interaction are all considerations that must be made as you plan the project.
- User training and other preparations will be required for system implementation. The Wilmont's Change Management Team will assist you in this effort.

Final schedules need to show a certain level of completion based upon a given date.

Source: Task Force on PM Curricula (2015). PM Curriculum and Resources. Newtown Square, Pa: Project Management Institute.

5.12.1 Problem Case: Engineering Student Information Part 1

CASE PROBLEM – Part 1:

Wilmont's is a top-ranked U.S. retail pharmacy company based in St. Louis, MO with more than 8,000 stores nationwide and in all 50 states, and employing more than 244,000 people overall. The company has engaged in a number of innovative business practices, and now they are once again secretly considering breaking ground with an even newer concept – delivering prescriptions and drugstore items by flying drone.

The concept isn't new – your company is a small firm named DroneTech in San Francisco, CA and your firm announced the approach in March, and is looking to develop a relationship with drugstores nationwide to launch the concept for real. Wilmont's may be the big break your firm is looking for!

The Operations Vice President (George Cranston) of Wilmont's wants to develop a pilot project to get something moving and see how this works. He will provide the funds and will oversee all aspects of this initiative. Mr. Cranston has made an agreement with DroneTech CEO and founder Jordan Kempler to prototype this project in the San Francisco area, which is the home location of the DroneTech organization where it developed the system. DroneTech will customize its systems, interfaces, and business process to conform to project requirements from Wilmont's. You are the Project Manager for DroneTech who will manage the DroneTech customization project generally and serve as DroneTech' point of contact for Wilmont's. You report directly to Jordan Kempler, as this is a visible project that could mean the future for DroneTech. While your company's drones will fly with Wilmont's markings, a successful long-term relationship with a large-scale company like Wilmont's will make DroneTech a stable company in any measure.

As far as DroneTech's interface to Wilmont's is concerned, the project will likely need to accomplish the following in order to appear seamless to Wilmont's pharmacy customers:

- DroneTech will handle piloting the drones and delivery of the products. You already have processes that handle order entry, delivery confirmation, and a mobile app on the DroneTech side, but these need to be customized for Wilmont's so that customers don't see these as two separate companies. Eileen Seymour is your firm's IT point of contact on the DroneTech information systems side and will be overseeing the data interface team with her counterparts at Wilmont's. Mary Pearson is the Project Manager for Wilmont's internal IT department, and she has been assigned by CIO James Connor, to lead the information systems development for Wilmont's that will be needed to support the initiative. Phillip Greenberg is the project manager on Wilmont's business operations side who will work with you to organize the Wilmont's resources in order to interface with DroneTech's flight operations and other management systems that control and manage the drone delivery system.
- Interface to Wilmont's enhanced online order entry process that will allow customers in the San Francisco area to register their willingness to have a drone deliver their orders by means of online entry or smartphone entry. There will be significant restrictions on the approval of customers for this service, so there will need to be a segment of the process to allow Wilmont's management to approve the customer, send a confirmation to the customer, etc.. While DroneTech systems already do this, you need to interface your systems to Wilmont's so that customers are not going directly to DroneTech's normal customer websites or mobile applications.
- Interface communications about deliveries for Wilmont's customers electronically through email, online, and through mobile alerts as the customer requests.
    - Your firm has not yet established a signed contract with Wilmont's, and there is not yet an agreement on all aspects of either the services to be provided, or the cost of those services. DroneTech needs to modify several systems and interfaces for the drone flight operations in order to customize things for Wilmont's but the nature of this is not yet determined. The development of this proposed contract and payment plan will be a part of your project plan. You will need to build in a period of time for contract negotiations between Wilmont's and DroneTech as you develop the project plan as well. Members of the

legal teams of both organizations will assist you with the negotiations, so your role in this will be to ensure that the right people from DroneTech Engineering and Flight Operations are involved in the development of the legal requirements for the relationship.

- Ensure that the relationship between DroneTech and Wilmont's does not compromise the security of Wilmont's business information, the customer's privacy and the proprietary information about how Wilmont's will use the drones for delivery. You will work with Wilmont's Information Security Management Team to accomplish this, and William Scott is the project lead on that team for this project.
- You will need to identify what modifications to the drone flight operations will be necessary and then determine your team members from the list of people given in this document as you move toward final project planning.
  - Your Flight Operations Manager, Gerald Hasper, has let you know that Wilmont's already wants one such modification: They want to adapt a temperature-controlled product bagging system along with a bubble-type cushioning system for the customer delivery packaging in order to ensure that certain temperature-sensitive or breakable items are not affected by the delivery process. While you've got that ability to adapt the drone package clamps to this sort of packaging, this will require a measure of testing to make sure that issues are resolved and that the new package release systems will work reliably. You'll need to be sure that your project plan has this engineering sub-project defined.
- It has been determined that only four (4) of Wilmont's pharmacies will participate in the prototype delivery system. These are in a close geographic area to one another, and they are in a non-city environment consisting mainly of suburban homes and small businesses. Customers in apartment buildings will not be permitted in the prototype due to delivery issues. You will need to provide the four participating pharmacies with all the information needed on the drone delivery technology, making sure they are fully comfortable to load products into the drone package carrier and engage in this prototype by the time for first flight. As mentioned earlier, the drone deliveries need to be seamless enhancements to Wilmont's already top-quality delivery processes for customers, and Jordan Kempler has promised Mr. Cranston that this will be the case.
  - DroneTech will need to allocate a total of 4 new drones for this prototype project, and these will need to be painted in the Wilmont's corporate colors and logo.

- Wilmont's can accommodate operating this prototype system within their existing infrastructure that handles customer orders, but those processes need to be enhanced by Wilmont's project teams in order to provide this delivery option and all the management processes that must accompany them. The customized special technology needed for delivery and drone control is on your side, and you will be including it in your proposal and budget. A project plan with detailed costs will be given to Wilmont's as a part of your final contract.
- Jordan Kempler is unsure of the cost of the customized enhancements of the flight operations systems for this prototype project because the project is just being defined right now. However, based on some customized work that was done before with another customer for small package delivery, Kempler determined that the project should likely come well under a total of $750,000, so he gave that initial figure to Wilmont's last week. That puts you in the position of needing to treat this figure as the maximum that the project could cost. This is only an ultimate constraint – you will eventually need to tell Mr. Kempler what your project estimate will be, but you don't have enough information about the project design yet to be able to give such an accurate budget estimate. You have been asked by Mr. Kempler to ensure that your project not only does not go higher than this, but that it should be less than that total, if possible.
- The two companies agreed that they would like to begin the project on next January 5, and that their first customer delivery flight should take place no later than November 30 to avoid harsh weather in the San Francisco area.

Of course, you also need to include specific steps and processes for:

- Regular meetings with the Team, Stakeholders, and Cross-impacted areas of the company.
- Approval points as needed through the project sequence.
- Points at which you will refine cost and staffing requirements (you do not need to calculate costs or total staffing at this point)
- Points at which you will produce the various Project Plan documentation deliverables discussed in class.
- Testing, quality control and provision for issues that may develop.
- User training and other preparations for system implementation. The Wilmont's Change Management Team, headed by Shirley Johnson, will assist you in this effort.

Summary of Personnel Involved in the Project (name initials are in brackets):

DroneTech Corporation Staff:

Jordan Kempler (JXK), CEO and Founder
You as Project Manager overall for DroneTech (Add your own initials)
Stephanie Williams (SMW), Senior Business Analyst
Gerald Hasper (GPH), Flight Operations Manager
Eileen Seymour (ERS), Project Lead, IT Systems
Katie O'Ryan (KRO), Corporate Attorney for DroneTech
Rohan Shah (RXS), Programmer
Shravani Sinha (SXS), Senior Programmer
William Holt (WKH), Drone Systems Engineer ($45/hr)
Ashish Nehra (AXN), Drone Systems Technician ($35/hr)

Key members of Wilmont's Staff for this project:

George Cranston (GWC), Operations VP
James Connor (JFC), CIO
Mary Pearson (MJP), Project Lead, IT Systems Team
William Scott (WKS), Project Lead, Security Team
Julie Green (JRG), Pharmacy Manager Store #35864
Steve Haskell (SLH), Pharmacy Manager Store #32185
James O'Donnell (JLO), Pharmacy Manager Store #38734
Wilma Marcy (WPM), Pharmacy Manager Store #33001
Phillip Greenberg (PAG), Project Manager, Business Operations side
Jonathan Perry (JSP), Retail Operations Assistant
Linda Thornton (LET), Online Customer Process Analyst
Gerald Peritoni (GEP), Testing Specialist
Elizabeth Walton (EMW), Senior Testing Specialist
Shirley Johnson (SPJ), Change Management Coordinator
Alan Swanson (AES), Attorney – Legal Department

5.12.2 Problem Case: Engineering Student Information Part 2

CASE PROBLEM – Additional Information for Part 2:

Please review the Part 1 Case Problem information as it is the general background and requirements of the case. This information should be added to the following clarifications regarding the project schedule:

1. Total Project Cost must not exceed Project Constraints. Project schedule should begin January 5, and should meet the schedule constraints as per the

case for completion, etc. You may assume 100% (1.0FTE) allocation to this project for each resource in the list below. Load leveling is NOT required for this assignment, and over-allocation warnings on your WBS will not be counted as a problem as long as the resource effort allocation is reasonable.

2. It is critical that your assignment WBS is specific to this case problem in detail. You must ensure that all required deliverables appear in your WBS specifically, and that each includes design, development, testing and implementation as appropriate. Your WBS must include project management steps for the charter/scope, risk management plan, WBS, schedule and training and the required meetings to conduct and manage the project. Do not include things like procurement management plan or staffing plan or quality management plan as these are not a part of this case problem. A generic WBS is not acceptable for this assignment. This is practice for you to see how you might deliver such a detailed schedule for this case problem to your boss, and it will be evaluated that way.
3. It is up to you to add the project management, communication, testing and training tasks as needed to make the project successful. Use the information in the case and the other assignments, along with your own ideas about how much effort is involved to ensure a quality implementation overall throughout the project. Be sure that you do not exceed the project constraints.
4. Remember that this project will be tight in terms of time and cost, so do not include steps that are not really necessary for this particular project. You should schedule the project from the beginning, including charter/scope, planning meetings, risk management and communications management plan development, WBS and schedule development – these items need to appear in this schedule along with resource assignments and the appropriate costs that go along with them.
5. Finally, you are required to indicate an appropriate quantity of tasks that have likely been already in progress or completed. Assume that we are looking at your schedule on June 27. Show which work packages would probably be at what stage of completion by this specific time in the schedule. Use your own judgment based on the work package finish dates, but be reasonable!
6. The personnel involved in Wilmont's do not have billing rates per hour because their cost is being separately budgeted internally for Wilmont's. These people should be listed in your resource sheet, but with $0.00 standard rate, and they should be assigned to the appropriate tasks for the project.
    - George Cranston (GWC), Operations VP
    - James Connor (JFC), CIO

- Mary Pearson (MJP), Project Lead, IT Systems Team
- William Scott (WKS), Project Lead, Security Team
- Julie Green (JRG), Pharmacy Manager Store #35864
- Steve Haskell (SLH), Pharmacy Manager Store #32185
- James O'Donnell (JLO), Pharmacy Manager Store #38734
- Wilma Marcy (WPM), Pharmacy Manager Store #33001
- Phillip Greenberg (PAG), Project Manager on the Business Operations side
- Jonathan Perry (JSP), Retail Operations Assistant
- Linda Thornton (LET), Online Customer Process Analyst
- Gerald Peritoni (GEP), Testing Specialist
- Elizabeth Walton (EMW), Senior Testing Specialist
- Shirley Johnson (SPJ), Change Management Coordinator
- Alan Swanson (AES), Attorney – Legal Department

These people should be assigned to project tasks as appropriate using the information in the case and the other details below, but they will not affect the DroneTech portion of the project budget.

7. Special Equipment Needed:
   - DroneTech Corporation New Drone Procurement: Each new delivery drone will cost $18,034.00. DroneTech will supply four of these to Wilmont's for the purpose of the prototype project. The cost of the drones will be incorporated into the budget of your project.
   - Drone Maintenance/Repair Parts: You should allow $20,000 worth of spare drone parts and batteries to be on-hand for this project.
8. DroneTech's Staff, effective hourly rates and official abbreviated names (initials):
   - Jordan Kempler (JXK), CEO and Founder ($200/hr)
   - You as Project Manager overall for DroneTech (Add your own initials) ($55/hr)
   - Stephanie Williams (SMW), Senior Business Analyst ($50/hr)
   - Gerald Hasper (GPH), Flight Operations Manager ($65/hr)
   - Eileen Seymour (ERS), Project Lead, IT Systems ($60/hr)
   - Katie O'Ryan (KRO), Corporate Attorney – DroneTech ($65/hr)
   - Rohan Shah (RXS), Programmer ($45/hr)
   - Shravani Sinha (SXS), Senior Programmer ($50/hr)
   - William Holt (WKH), Drone Systems Engineer ($45/hr)
   - Ashish Nehra (AXN), Drone Systems Technician ($35/hr)

9. The following is the estimated total EFFORT HOURS for DroneTech engineering, flight operations enhancements, and customized interfaces to the pharmacy customer and Wilmont's management for the prototype project. (these do not include the time for procurement, process or engineering design requirements, project management activities, testing, training, or final implementation or meetings — you will need to add those additional steps and estimates for each):

    1. Wilmont's/DroneTech Legal Contract Negotiations (160 hours)
    2. Specialized Customer Order/Information Interface (150 hours)
    3. Custom Management Reporting Interface (135 hours)
    4. Customization of Flight/Delivery Processing (75 hours)
    5. Custom Drone Construction (40 hours each for 4 drones – 160 hours total)
    6. Custom Temperature/Shock Protection Product Carrier (160 hours)
    7. Flight path engineering (120 hours)
    8. Pharmacy Manager Drone Delivery Operations Procedures (80 hours)
    9. Drone Maintenance/Repair Procedures and Parts (80 hours)

You need to determine who on Wilmont's and DroneTech's staff should be involved in the various deliverables based upon your best judgment, and how their positions and skills relate to the tasks.

End of Case Problem