

CASE STUDY: Waiting Lines (Queuing)

For this assignment, you will analyze a case study and prepare a short executive report (plus appendices) that discusses the conditions of the case and your recommendations.

THE PALM OASIS SUITE HOTEL

Cody Michlon, manager of the Palm Oasis Suite Hotel in Miami Beach is requesting your help to improve the guest experience at the hotel. Cody Michlon plans to remodel the front desk to provide a more customer-centric experience and create an optimal level of staff efficiency and guest service. Historical data of arrivals during the peak check-in time of 5:00PM to 7:00PM showed that an average of **80** guests arrive each hour. It takes an average of **3** minutes for the front-desk clerk to register each guest.

Mr. Michlon wants to improve guest service by reducing the length of time that guests spend waiting in line.

CURRENT (PLAN 0): At present, the hotel has five clerks on duty, each with a separate waiting line.

PLAN I. The first proposal would designate one employee as a quick-service clerk for guests registering under corporate accounts, a market segment that fills about **30%** of all occupied rooms. Because corporate guests are preregistered, the registration takes an average of just **2** minutes. With these guests separated from the rest of the clientele, the average time for registering a typical guest would climb to **3.4** minutes. Under this plan non-corporate guests would choose any of the remaining four separate lines.

PLAN II. The second plan is to implement a single-line system. All guests could form a single waiting line to be served by whichever of five clerks became available. (The only difference between the current scenario and this proposed Plan II is the line formation – currently it is set up with five separate lines one in front of each of the clerks, this plan II proposes a single line that wraps around with a corral and the next guest will go to the next available clerk). This option would require sufficient lobby space for what could be a substantial queue.

PLAN III. The use of a self-service kiosk for check-ins is the basis for the third proposal. This kiosk would provide about the same service rate as would a clerk, however, since check-ins are automated the service time would be a constant 3 minutes. Because initial use of this technology is minimal, Cody estimates that **20%** of customers, primarily frequent guests, would be willing to use this machine – hopefully this percent will increase in the future. Cody would set-up a single queue for customers who prefer human check-in clerks (the remaining 80% of the customers). This line would be served by only four clerks, because of the space requirement for the self-serve kiosk and the extra expense of the technology.

PLAN IV. Please provide your suggestion for a “better” queuing system. Be sure to compare your performance measures to the other plans. Your idea?????

INSTRUCTIONS: Prepare a one to two page Executive Summary which should include the following sections:

- a. **(20 points) Case Synopsis** (include a brief summary of the case and the issue that Cody Michlon is facing – include a description for your Plan IV)
- b. **(20 points) Methodology** (include a discussion of what information was provided and how you used this information to analyze the problem - create a summary table containing the data for of each of the plans)
- c. **(40 points) Findings and Conclusions**

- i. Determine the average amount of time that a guest spends checking-in under each of the stated options and compare to existing set-up. *HINT: for Plans with multiple “systems” (eg. 30% corporate customers, 70% regular customers) calculate a weighted average for that plan so you can easily compare performance measures to the other plans.*
- ii. Compare the various plans using relevant performance measures (time spent waiting in line / in system, number of guests waiting in line / in system, probability that a customer will need to wait to be served, etc.). You should include a summary table of for the performance measures for each plan.

d. (20 points) Recommendation

- i. Based on your analysis, which option do you recommend? Why?
- ii. What other issues must Cody Michlon consider in making this decision (other factors)?