



> Assessment 2 Instructions: Demand Management Plan

Prepare a 7-page demand management plan, including a forecasting, inventory management, and scheduling analysis, as well as recommendations, for a provided scenario or business of your choice.

Introduction

This portfolio work project, a demand management plan, will help you demonstrate competency in forecasting, inventory management, and scheduling.

Scenario

For this assessment, choose either Option 1 or Option 2. You do not need to do both. You will apply one of these scenarios in the Requirements below. Both options will be graded using the same scoring guide.

Option 1

Wild Dog Coffee Company, a locally owned company with a single coffee shop location, serves a wide selection of espresso beverages, small breakfast and lunch menu items, and a limited evening menu. The company is planning to expand the business by adding an additional location. While different menu items may be tested at the new location, their core processes will remain the same. You have been working on a process improvement in preparation for the expansion and are now turning your attention to demand management.

Option 2

If you chose Option 2 for Assessment 1, use the same business for this assessment, or select a different business. Note that it is recommended that you use the same business for each assessment in this course, using the following criteria for your selection:

- The company fits the assessment requirements and you have access to the information needed to complete the assessment.
- The business information is disclosed in the assessment for faculty's reference.
- You can distribute the business data without disclosing confidential information.

Contact faculty with questions.

Your Role

Option 1

As an owner of Wild Dog Coffee Company, you and your business partners are planning the opening of a second location. You need to prepare an analysis and recommendations for demand management, including forecasting,

inventory, and scheduling, for your current location, so you can refine the model before opening the second location.

Option 2

Your boss, a director, has tasked you with a demand management project. She is relying on you to prepare an analysis and recommendations for demand management that can be presented to the executive team of the company. You completed a special project for her a few months ago that went very well, and you are pleased to have received this new assignment.

Requirements

Include the following in your demand management plan:

- Assess the impact of advertising on product demand.
 - If using Wild Dog Coffee Company, the following basic assumptions will help you prepare a demand forecast:

The other owners of Wild Dog Coffee Company handle the business' marketing and sales functions, and they believe that advertising expenditures impact the sale of coffee beverages. They want you to confirm whether or not their advertising dollars are driving sales. Here is what was agreed upon by all the owners:

Wild Dog Coffee Business Information

Questions	Responses
How many espresso beverages are made each hour?	30, on average
How many ounces of espresso beans are used for each beverage?	1.5 ounces
How many hours per day is the coffee shop open?	6:00 a.m.–8:00 p.m., Sunday–Saturday
How many days each month is the business open?	364 days per year. The coffee shop is closed on Christmas day.

You have the following six months of data to work with for pounds of espresso beans (y) used each month and monthly advertising expenditures (x):

Espresso Bean Use and Advertising

Month	Lbs/Beans (y)	Advertising Dollars (x)
1	987	\$1,050
2	1,412	\$1,500
3	1,020	\$1,000

Month	Lbs/Beans (y)	Advertising Dollars (x)
4	1,140	\$1,250
5	1,322	\$1,500
6	1,399	\$1,500

- Interpret the forecasting model for the selected product.
 - Use a simple linear regression model to show your forecast.
 - If using Wild Dog Coffee Company, forecast the pounds of espresso beans needed for month 7 if the advertising budget for month 7 is \$1,350. Interpret the model and respond to the following questions for Wild Dog Coffee Company:
 - How many espresso beverages will the company need to prepare, on average, each day?
 - How many pounds of espresso beans will the company need, on average, each day?
 - To what extent do advertising dollars predict the need for espresso beans?
- Prepare an inventory management analysis for the selected product.
 - In your analysis, include two different approaches to inventory management. What are the pros and cons of each system you analyzed?
 - If using Wild Dog Coffee Company, the following provides additional information you have gathered from the inventory management analysis:
 - Since Wild Dog Coffee Company is small, the company must manage inventory very carefully. While larger companies can have lots of inventory on the shelf, Wild Dog simply does not have the cash to do that. As such, you have a number of pressures for small inventories. Wild Dog does not have the ability to store a lot of beans, to cover the cost of capital, or to withstand unnecessary expenditures for taxes, insurance, and shrinkage. Shrinkage is important because roasted espresso beans only maintain their optimal freshness for two weeks.
 - Demand is approaching 1,400 pounds of espresso beans per month.
 - Only one type of espresso bean is stocked.
 - Demand is not constant on a daily or weekly basis.
 - If you run out of espresso beans at any point, you will have to close the business until the next shipment of beans arrives.
 - Espresso beans are shipped in 25-pound packages. (This is your base inventory unit.)
 - The cost per pound of beans averages \$9.00.
 - Espresso beans are delivered seven (7) days after placing the order and on any day of the week.
 - Shipping is free on orders over \$250. Otherwise, shipping is \$19.95 per order, regardless of weight. (This is the only ordering cost you incur.)
 - Holding costs are 10 percent/year/unit.
 - Standard deviation for *daily* demand is 1.84 pounds.
- Analyze the business' scheduling management.
 - In your analysis, detail two different staffing scenarios for Wild Dog Coffee Company or your selected business. What are the pros and cons of each staffing scenario?
 - Use a Word table or Excel spreadsheet to show both staffing scenarios for each day of the week. Include the daily and weekly total staffing costs and number of hours worked for each employee.
 - If using Wild Dog Coffee Company, the following provides additional information you have gathered from the staffing analysis:
 - Shifts have been scheduled according to who wants to work which shift. This has generally worked out well, but you realize you need to tighten up the scheduling process in order to optimize a staffing model. Two employees are required to make a coffee

beverage. One employee takes the orders, and a barista makes the coffee drink and hands it to the customer.

- Baristas are paid \$14/hour, regardless of whether they are full-time or part-time.
 - Full-time employees (up to 40 hours/week), other than baristas, are paid \$12/hour.
 - Part-time employees (up to 20 hours/week), other than baristas, are paid \$9/hour.
 - All full-time employees receive company benefits that equate to 15 percent of their hourly rate. (This is known as a benefits load.)
 - All full-time employees are paid at 150 percent of their regular rate for all hours worked over 40 hours per week. Full-time employees can only work a maximum of 50 hours per week. The benefits load is not applied to overtime hours.
 - All part-time employees are paid at 150 percent of their regular rate for all hours worked over 20 hours per week. Part-time employees can only work a maximum of 26 hours per week.
 - It costs \$500 to hire each additional employee, and it costs \$250 to terminate an employee.
 - Full-time employees are likely to resign if moved to part-time status.
 - The coffee shop is open 84 hours per week. There are two additional hours allocated each day for one employee to perform opening and closing activities. (That is, one hour is allocated for opening duties and one hour is allocated for closing duties.)
 - Your current level of staffing for coffee beverages is as follows:
 - Baristas – 1 full-time; 3 part-time.
 - Non-barista – 1 full-time; 2 part-time.
- Recommend an inventory management system and staffing plan for a selected business and product.
 - Detail the results of your analysis for Wild Dog Coffee Company or your selected business' product to substantiate your recommendations.

Deliverable Format

Requirements:

- The demand management plan is to be a minimum of 7 pages, not including the title, reference, and appendix pages.
- Use a demand management plan template of your choice.

Related company standards:

- The demand management plan is a professional document and should therefore follow the corresponding MBA Academic and Professional Document Guidelines (available in the MBA Program Resources), including single-spaced paragraphs.
- In addition to the title and reference pages, include the following in the appendix:
 - Linear regression model for product forecasting.
 - Word table or Excel spreadsheet for staffing scenarios.
- Use 2–3 scholarly or academic sources, where applicable, one of which must come from the *Wall Street Journal*, *Forbes*, or *MIT Sloan Management Review*.
- Use APA formatting for citations and references.

Evaluation

By successfully completing this assessment, you will demonstrate your proficiency in the following course competencies through corresponding scoring guide criteria:

- Competency 1: Analyze how operations management theories and models effect the development and delivery of products or services to the marketplace.
 - Interpret the forecasting model for the selected product.
- Competency 2: Use logistics and supply chain management tools to manage the distribution of products and services.
 - Prepare an inventory management analysis for the selected product.
- Competency 3: Use data to evaluate the effect of operations management decisions on organizational goals.
 - Assess the impact of advertising on product demand.
 - Analyze the business' scheduling management.
- Competency 4: Evaluate the effectiveness of operations management strategies to achieve quality and customer service goals.
 - Recommend an inventory management system and staffing plan for a selected business and product.
- Competency 5: Communicate business needs, opportunities, and strategies with multiple stakeholders.
 - Write coherently to support a central idea with correct grammar, usage, and mechanics as expected of a business professional.

Faculty will provide feedback as if they were the recipient of your deliverable in the workplace, using the scoring guide. Refer to the scoring guide to ensure that you meet the grading criteria for this assessment before submission.

ePortfolio

This portfolio work project demonstrates your competency in applying knowledge and skills required of a MBA learner in the workplace. Save this activity to your ePortfolio for future reference in the workplace.



SCORING GUIDE

Use the scoring guide to understand how your assessment will be evaluated.

[VIEW SCORING GUIDE](#) 