East Coast Distributors

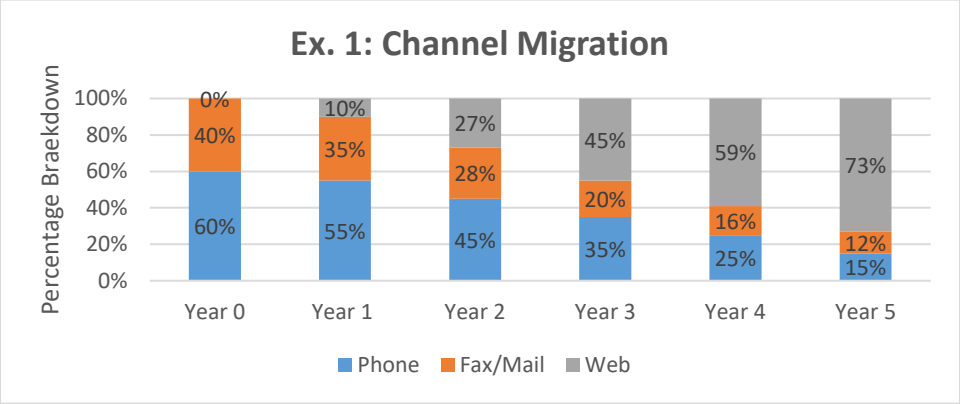
The arrival of a new CEO at East Coast Distributors (ECD) of Boston, MA last December has created a new momentum at the company. Carol Whitman is known in the industry for her strong leadership qualities. She has often taken bold steps in her long career to launch new IT initiatives. Her charismatic approach to problem solving has already inspired a number of executives at ECD.

Brad Coleman, head of Marketing at ECD, is one of the executives who has been moved by the new optimism in the company. He has decided to put forward a proposal to make a major push for online marketing and order processing. He has put together a project proposal to promote this idea. He wants you to develop a business case for the project. ECD.xlsx workbook contains much of the data required for this case.

The Idea. At present, ECD is behind its competition in its online sales capability. For example, it does not accept online orders from its customers. Brad not only wants to improve ECD website to enable online customer orders, he also wants to launch and sustain a strategic marketing campaign. Brad has already received proposals from a reputed IT vendor specializing in web hosting and marketing for the project. The vendor will use the waterfall model to execute the project over a period of three months. The annual support costs for both direct marketing and web hosting will increase by 4% each year. See the Project worksheet for more details.

Benefits. Brad expects four direct benefits from this project.

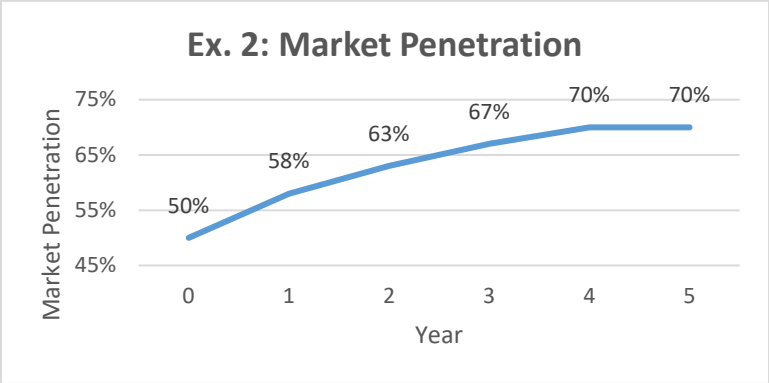
1. **Order Processing Costs.** Currently, the company receives 60% of orders by phone and 40% by Fax/Mail. While phone orders cost $32.50 per order, the cost of each Fax/Mail order is $25.00. Brad expects the unit costs of Web order to be only $3. But he is more excited about the lower inflation rate for online orders. He estimates only 1% increase per year for online order costs in comparison to a 4% increase for Phone orders and 3% for Fax/mail orders. Exhibit 1 gives the breakdown of the expected channel usage by customers over time. Assume channel usage does not change without Web ordering. See Orders worksheet for details.
2. **Average Order Size.** Brad expects the average order size ($250 at present) to increase by 5% each year if the project is implemented as opposed to a 3% current growth rate.

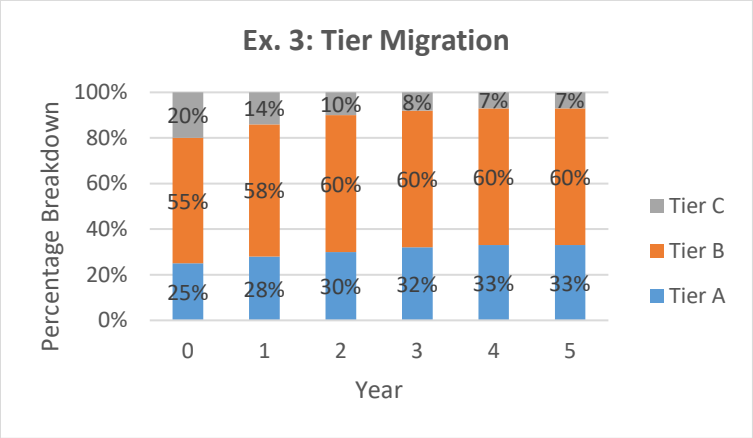


3. **Market Penetration.** At present, the company serves 50% of the market. It is expected ECD will have a 0.5% year-to-year increase in its market share. However, the gain will be much higher if the project is executed as per Brad's projections. Exhibit 2 shows the new market penetration rate over time.
4. **Tier Migration.** ECD classifies customers into three categories. Tier A customers provide 12 orders per year, followed by Tier B with 8 orders and Tier C ordering 3 times per year. Exhibit 3 shows the tier migration over time. Without the strategic marketing project, this migration will not take place.

Conclusion. As Brad began working on the business case for the new system, he came across some more data. For example, he found out that the current market size is limited to 3500 customers. However, this number is likely

to increase by 2% for the next several years. Similarly, he found out from the Cost Accounting Department that the Cost of Goods Sold (COGS) is 68.7% of the order value before subtracting the costs of order processing. The head of the Cost Accounting Department Jim King explained that COGS captures all costs associated with an order except order processing costs. King summarized the Profit calculation as follows:





Revenue = Total Number of Orders * Average Order Size

Cost of Goods Sold = COGS% * Revenue

Average Order Processing Cost (Current) = % Phone Order * $32.50 + % Fax/Mail * $25.00

Total Order Processing Cost = Total Number of Orders * Average Order Processing Cost

Profit = Revenue - Cost of Goods Sold - Total Order Processing Cost

Profit after Tax = (1- Tax Rate) * Profit, if Profit > 0

Jim asked Brad to use after-tax cost and benefit estimates for the business case. The Tax Rate is fixed at 35% of profits. Brad also found out from Jim that a 12% discount rate is used by ECD for any IT investment project. Brad is sure he has all the data required to the business case for the new system. He spent some time creating an Excel workbook to outline his model (ECD.xlsx)

East Coast Distributors Case Report

Use the ECD.xlsx workbook for this assignment. Type names of all Team members as Authors and Date in the Documentation worksheet. To assist you in your work, a question mark (?) is placed in every cell where you must fill in or calculate a value.

1. Calculate the net present value and internal rate of return of the proposed project.

a) Go to Project worksheet. Calculate Total costs for three months in E7:E13 for each row. Next calculate Total Personnel Costs in E14 as the sum of E7:E13 and Total Project Costs as the sum of E14:E15. Finally, determine the Annual Costs for Year 1 in B26. <5 points>

b) Go to Orders worksheet. Calculate Cost Per Order in C14:G16 for Year 1-5. Calculate Average Order Cost in B20:G20 for the current system and in B21:G21 for the new system. Next, determine Difference in Row 22 as the amount of cost savings. <5 points>

c) Go to Base Case worksheet. Calculate Market Size for Year 1-5 in D5:H5 taking market growth into account. Determine Number of Customers for ECD in Row 9. Determine Tier Structure in C12:H22. Use Average Order Size in Year 0 in C24 to calculate the same for subsequent years in Row 24. Next, determine Number of Orders and Revenue in Thousands. Calculate Total COGS, Order Costs and Profit. Finally, determine Tax and Profit after Tax in Rows 43-44. <15 points>

d) Go to New System worksheet, and follow a similar process as in Step (c) above. <15 points>

e) Go to ROI Model worksheet. Bring Profit after Tax figures from New System worksheet and Base case worksheet in Rows 6-7 to calculate Incremental benefit in Row 8. Enter Total Project Costs in C11 and Annual Costs in D12:H12. Next, determine Total Costs and Total (after tax) in Rows 13-14. Calculate Net Cash Flow (difference between Incremental benefit and Total Costs after tax) in Row 16. Use the Net Cash Flow numbers in Row 16 to calculate the IRR and NPV in C18 and C20. <15 points>

2. Assuming that the Web-Based Customer Portal project is implemented, how much cost savings are expected in each year (Year 1, Year 2, …, Year 5) due to the introduction of the Web channel? Show your calculation in the designated part (B3:F5) of the Further Analysis worksheet. <5 points>

3. Similar to Q2, find out how many more customer orders are expected in each year (Year 1, Year 2, …, Year 5) due to this project? Show your calculation in the designated part (B9:F11) of the Further Analysis worksheet. <5 points>

4. Create a one variable Data table in C47:H52 of the New System worksheet to calculate how the Annual Profit before Tax in each year (Year 1, Year 2, …, Year 5) changes as the Growth Rate of Average order size changes from 3% to 7% in equal increments of 1% in. Record your results in the designated part of the Further Analysis worksheet. <5 points>
5. After examining the results of the model, CEO Whitman has asked you to develop three scenarios by changing Order Size Growth rate and Enhanced Market Penetration. Create the following scenarios in the New System worksheet:
   a) Current scenario: Order Size Growth rate = 5%, Enhanced Market Penetration in Year 1 to Year 5 as 58%, 63%, 67%, 70% and 70%.
   b) Optimistic scenario: Order Size Growth rate = 6%, Enhanced Market Penetration in Year 1 to Year 5 as 65%, 70%, 75%, 78% and 80%.
   c) Pessimistic scenario: Order Size Growth rate = 4%, Enhanced Market Penetration in Year 1 to Year 5 as 55%, 60%, 63%, 65% and 65%.

   Find out how the NPV, IRR of the ROI Model worksheet and Annual Profit before Tax in each year (Year 1, Year 2, …, Year 5) of the New System worksheet change with each scenario. Record your results in the designated part (B21:H23) of the Further Analysis worksheet. <5 points>

Submission Procedure:

Save the workbook as ECD_Results.xlsx and submit at Canvas.