

## 403 (Advanced Cost Accounting) Case for ACCTLG#2

Fall 2016 ACCT 403 Group Case

(No more than 3 people in a group)

### BACKGROUND:

Blue Ridge Manufacturing is one of a dozen companies that produces and sells towels for the U.S. "sports towel" market. A "sports towel" is a towel that has the promotion of an event or a logo printed on it. They're called sports towels because their most popular use is for distribution in connection with major sporting events such as the Super Bowl, NCAA Final Four, Augusta National Golf Tournament and the U.S. Open Tennis Tournament. Towels with college, NBA and NFL team logos, and promotions for commercial products such as soft drinks, beer, fast food chains, etc., are also big sellers. The firm designs, knits, prints and embroiders towels. The firm knits all the towels it sells and tracks costs for towel production separately from the cost to customize the towels. Seventy-five percent of its orders include logo design, while the balance are print only and require the payment of a license fee for the logo used. However, about 15% of its orders include embroidery. Towels are made in three sizes: regular (18" x 30"), hand (12" x 20") and mid-range (15" x 24"). The normal production cycle for an order of white towels is three days. If a customer wants a colored towel, the basic white towel made by Blue Ridge is sent to a dyeing firm, which extends the production cycle of an order by three days. Also, occasionally, customers order towels in sizes other than the three standard sizes. These towels are called "special".

The firm now produces a "medium" quality towel. They have had some difficulty with the "staying power" of the material printed on these towels, which is attributed to the towel quality, the ink and the printing process. Customers have complained that the ink "lays on the surface" and it cracks and peels off.

Blue Ridge recently made a break-through in developing an ink that soaks into the towel, won't wash out and is non-toxic. A big advantage of this ink is that it avoids EPA disposal requirements because it can be "washed down the drain". Due to these characteristics of its new ink, Blue Ridge is considering upgrading the quality of the basic towel it produces because it will "take" the ink better, both the towel and the ink will last longer and the product will sell at a higher price. If it takes this step, the company will evaluate expanding its marketing and sales area with the objective of "going national".

### CUSTOMERS:

Except for a few non-regional chains, Blue Ridge's sales are predominantly in the southeastern states. The company sells its products to 986 different customers. These customers differ primarily in the volume of their purchases, so management classifies each customer in one of three groups: large (8 customers), medium (154 customers) and small (824 customers). Large customers are primarily national chains, small customers are single store operations (including pro shops at golf courses) and medium-sized customers are small chains, large single stores or licensing agents for professional sports teams and manufacturers of consumer products. Table 1 gives the product and customer size statistics for 2001.

Blue Ridge has a different approach to customers in each of its three categories. A small group of in-house sales people sell directly to buyers in the large customer category. Independent manufacturer representatives, on commission, call on the license holder or the manager of a store in the medium

customer category. Ads placed in regional and national magazines and newspapers target customers primarily in the small-customer segment, who call or mail in their orders.

Blue Ridge does not give discounts and it ships all order free on board (FOB) point of origin, i.e., customers pay their freight costs.

### **MANUFACTURING:**

Blue Ridge has a modern knitting and printing plant in the foothills of North Carolina's Blue Ridge Mountains. Upgrading the facilities over recent years was accompanied by the introduction of an activity-based costing (ABC) system to determine product costs. The cost accounting system is fairly sophisticated and management has confidence in the accuracy of the manufacturing cost figures for each product line. Table 2 shows the firm's unit costs for various items.

Company management is committed to adopting advanced manufacturing techniques such as benchmarking and just-in-time (JIT). The corporate culture necessary for the success of such techniques is evolving and worker empowerment is already a major program. In addition, workers are allowed several hours away from regular work assignments each week for training programs conferring on budgets and work improvements and applying the ABC system.

### **PERFORMANCE:**

The company is profitable. However, management has become concerned about the profitability of the customers in its three customer-size categories—large, medium and small. Different customers demand different levels of support. Management has no basis for identifying customers that generate high profits or to drop those that do not generate enough revenues to cover the expenses to support them. Under the previous accounting system, it wasn't possible to determine the costs of supporting individual customers.

With the introduction of ABC, it now may be possible to determine customer profitability. Table 3 shows how the administrative and selling costs are assigned and re-assigned between various functions within the selling and marketing areas and to sub-activities in the selling and marketing areas. Table 4 provides a list of selling and marketing activities and the activity base to use in assigning costs to each.

### **REQUIRED:**

The managers of Blue Ridge Manufacturing have hired your consulting firm to advise them on the potential of using strategic cost analysis in assessing the profitability of their customer accounts.

Your analysis should include:

1. What is Blue Ridge's competitive strategy? Discuss the following strategic issues:
  - a) Is the new ink patented? How soon are competitors expected to meet this new innovation?
  - b) Are Blue Ridge's licenses with the sports teams of unique value, or do competitors have the same access as Blue Ridge?
  - c) How strong are Blue Ridge's ties to its customers, especially the large customers? Are these ties sufficiently strong to protect against competition for the next few years?

d) Has Blue Ridge integrated the marketing and manufacturing strategies, so that they are consistent? Given the changes in both manufacturing (new ink) and marketing (going national, seeking more profitable customers), the integration of these functions is important.

2. What type of cost system does Blue Ridge use, and is it consistent with their strategy?
3. Develop an analysis which can be used to assess the profitability of the three customer groups of Blue Ridge—large, medium and small customer account sizes. Use the information in Tables 1-4 to trace and allocate the costs necessary for the analysis.
  - a) Allocate SG & A Costs to SG & A Activities.
  - b) Allocate activity costs to Customer Type (Large, Medium, Small).
  - c) Calculate revenues for each customer group; calculate manufacturing cost (Regular, Midsize, Hand, Special), customizing cost (Inking, Embroidery, Dyeing), SG & A cost and total costs for each customer group; calculate profits for each customer type; calculate profit per customer for each customer type.
4. Discuss the benefits of activity based costing system. For example, how your analysis will help Blue Ridge to implement its strategy, offer discounts to customers, or reduce costs?

The report will be completed on a word process, double spaced. Please include computation working steps in your report. I only accept hard copies. However, you may email me your spreadsheet so that I can check the formulas you used in the spreadsheet.

<b>TABLE 1 BLUE RIDGE MANUFACTURING Sales Information</b>				
<b>Product and Customer Size Statistics</b>	<b>Sales in Units by Customer Account Size</b>			
	<b>Large</b>	<b>Medium</b>	<b>Small</b>	<b>Total</b>
Towel: Regular	27,250	16,600	10,550	54,400
Mid-Size	36,640	18,552	10,308	65,500
Hand	35,880	19,966	95,954	151,800
Special	480	3,426	594	4,500
Number of Units Sold	100,250	58,544	117,406	276,200
Number of Units Embroidered	5,959	6,490	29,394	41,842
Number of Units Dyed	20,536	9,935	12,328	42,798
Sales Volume Revenue	\$308,762	\$183,744	\$318,024	\$810,530
Number of Orders Received	133	845	5,130	6,108
Number of Shipments Made	147	923	5,431	6,501
Number of Invoices Sent	112	754	4,737	5,603
Accounts with Balance >60 Days	1	11	122	134

**TABLE 2**  
**BLUE RIDGE MANUFACTURING**  
**Unit Cost Information**

**Line 1 Direct Manufacturing Costs Per Unit**

Cost		Sales	Unit	Quantity	Price	<u>Material</u>	Labor	Overhead
Towels:	54,400	\$3.60	\$0.60	\$0.37	\$0.22	\$1.19		
Regular								
Mid-Size	65,500	3.20	0.50	0.33	0.20	1.03		
Hand	151,800	2.55	0.39	0.31	0.19	0.89		
Special	4,500	4.00	0.67	0.48	0.29	1.44		

**Line 2 Direct Costs of Customizing Per Unit**

	Quantity	Cost	<u>Material</u>	Labor	Overhead	Total
Inking (based on passes)	552,400	—	\$0.0030	\$0.0045	\$0.0742	\$0.0817
Dyeing	42,798	\$0.11	—	—	0.0000	0.1100
Embroidery	41,842	—	0.0026	0.1750	1.0994	1.2770

Direct Labor Wage Rate: \$9.00 (Including Fringes)

Inking requires one pass for each color used; average two colors per towel (i.e., 2 per unit), and is used on all towels.

**TABLE 3  
BLUE RIDGE MANUFACTURING**

**Selling and Administrative Costs and Activities**

**Costs Incurred in Each Function (Shipping, Sales, Marketing)**

**Directly Assigned To:**

	<b>Total</b>	<b>Shipping</b>	<b>Sales</b>	<b>Marketing</b>	<b>Other</b>	<b>Assigned</b>	<b>Unassigned</b>	<b>Total</b>
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Administration \$170,000	\$ 17,000	\$ 37,400		\$20,400	\$56,100	\$130,900	\$39,100*	
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Selling	<u>155,000</u>	<u>15,500</u>	<u>117,800</u>	<u>9,300</u>	<u>12,400</u>	155,000		
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	<u>\$325,000</u>	<u>\$ 32,500</u>	<u>\$155,200</u>	<u>\$29,700</u>	<u>\$68,500</u>	<u>\$285,900</u>	<u>\$39,100</u>	
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**Each function is used for the Following Activities Percentage of:**

<u>Selling and Administrative Activities:</u>	<b>Shipping</b>	<b>Sales</b>	<b>Marketin</b>	<b>Other</b>
	<b>g</b>			

Entering Purchase Orders				55		10	
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Commissions				10			
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Shipping Activities			65			15	
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Invoicing						20	
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Cost to Make Sales Calls				30		10	
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Checking Credit						10	
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Samples, Catalog Info.			5		10		
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Special Handling Charges			5			5	
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Distribution Management			10		10		
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Marketing, by Customer Type				5			
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Advertising/Promotion					30		
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Marketing			15		50	5	
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Administrative Office Support						20	
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Licenses, Fees						5	
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	<u>100</u>		<u>100</u>		<u>100</u>		<u>100</u>
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\* Note that \$39,100 of the SG&A cost was not directly assigned. This amount represents the facility-sustaining activity cost.

**TABLE 4  
BLUE RIDGE MANUFACTURING  
Activities and Cost drivers**

Cost Drivers for Allocating Costs of Activities to Customer Groups (Large, Medium, Small)

<b>Activity</b>	<b>Cost Driver</b>
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Entering Purchase Orders	Number of Orders
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Commissions	Sales Dollars with Medium Customers
Shipping Activities	Number of Shipments
Invoicing	Number of Invoices
Cost to Make Sales Calls	Sales Dollars with Large Customers
Checking Credit	Percent Accounts >60 Days
Samples, Catalog Info.	Sales Dollars
Special Handling Charges	Management Estimate <sup>1</sup>
Distribution Management	Sales Dollars
Marketing, by Customer Type	Sales Dollars
Advertising/Promotion	Management Estimate <sup>2</sup>
Marketing	Number of Units Sold <sup>3</sup>
Administrative Office Support	Number of Units Sold <sup>4</sup>
Licenses, Fees	Sales Dollars with Medium Customers

<sup>1</sup>20% to medium-sized customers; 80% to small-sized customers.

<sup>2</sup>25% to medium-sized customers; 75% to small-sized customers.

<sup>3</sup>Excluding Specials

<sup>4</sup>Excluding Specials