

To help determine the activity rates, employees were interviewed and asked how they divided their time among the four major activities. The results of employee interviews at CDG are displayed below:

Distribution of Resource Consumption Across Activities at the CDG Operation

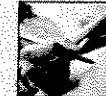
	Meal Preparation	Flight Related	Customer Service	Other	Total
Cooks and delivery personnel wages . . .	75%	20%	0%	5%	100%
Kitchen supplies	100%	0%	0%	0%	100%
Chef salaries	30%	20%	40%	10%	100%
Equipment depreciation	60%	0%	0%	40%	100%
Administrative wages and salaries	0%	20%	60%	20%	100%
Building costs	0%	0%	0%	100%	100%

Required:

1. Perform the first-stage allocation of costs to the activity cost pools. (Use Exhibit 8A-1 as a guide.)
2. Compute the activity rates for the activity cost pools. (Use Exhibit 8A-2 as a guide.) Do not round off.
3. The Orly operation has already concluded its activity-based costing study and has reported the following activity rates: €1.98 per meal for meal preparation; €115.60 per flight for flight-related activities; and €9,600 for customer service. Comparing the activity rates for the CDG operation you computed in part (2) above to the activity rates for Orly, do you have any suggestions for the top management of Aerotraiteur SA?

PROBLEM 8-24 Evaluating the Profitability of Services [LO2, LO3, LO4, LO5]

Gaffan Carpet Cleaning is a small, family-owned business operating out of Bozeman, Montana. For its services, the company has always charged a flat fee per hundred square feet of carpet cleaned. The current fee is \$28 per hundred square feet. However, there is some question about whether the company is actually making any money on jobs for some customers—particularly those located on remote ranches that require considerable travel time. The owner's daughter, home for the summer from college, has suggested investigating this question using activity-based costing. After some discussion, a simple system consisting of four activity cost pools seemed to be adequate. The activity cost pools and their activity measures appear below:



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Activity Cost Pool	Activity Measure	Activity for the Year
Cleaning carpets	Square feet cleaned (00s)	20,000 hundred square feet
Travel to jobs	Miles driven	60,000 miles
Job support	Number of jobs	2,000 jobs
Other (costs of idle capacity and organization-sustaining costs)	None	Not applicable

The total cost of operating the company for the year is \$430,000, which includes the following costs:

Wages	\$150,000
Cleaning supplies	40,000
Cleaning equipment depreciation	20,000
Vehicle expenses	80,000
Office expenses	60,000
President's compensation	80,000
Total cost	<u>\$430,000</u>

Resource consumption is distributed across the activities as follows:

Distribution of Resource Consumption Across Activities

	Cleaning Carpets	Travel to Jobs	Job Support	Other	Total
Wages	70%	20%	0%	10%	100%
Cleaning supplies	100%	0%	0%	0%	100%
Cleaning equipment depreciation ...	80%	0%	0%	20%	100%
Vehicle expenses	0%	60%	0%	40%	100%
Office expenses	0%	0%	45%	55%	100%
President's compensation	0%	0%	40%	60%	100%

Job support consists of receiving calls from potential customers at the home office, scheduling jobs, billing, resolving issues, and so on.

Required:

1. Prepare the first-stage allocation of costs to the activity cost pools. (Use Exhibit 8-4 as a guide.)
2. Compute the activity rates for the activity cost pools. (Use Exhibit 8-5 as a guide.)
3. The company recently completed a 5 hundred square foot carpet-cleaning job at the Flying N ranch—a 75-mile round-trip journey from the company's offices in Bozeman. Compute the cost of this job using the activity-based costing system. (Use Exhibit 8-8 as a guide.)
4. The revenue from the Flying N ranch was \$140 (5 hundred square feet @ \$28 per hundred square feet). Prepare a report showing the margin from this job. (Use Exhibit 8-9 as a guide. Think of the job as a product.)
5. What do you conclude concerning the profitability of the Flying N ranch job? Explain.
6. What advice would you give the president concerning pricing jobs in the future?



PROBLEM 8-25 (Appendix 8A) Evaluating the Profitability of Services Using an Action Analysis

[LO2, LO3, LO4, LO7]

Refer to the data for Gallatin Carpet Cleaning in Problem 8-24.

Required:

1. Using Exhibit 8A-1 as a guide, prepare the first-stage allocation of costs to the activity cost pools.
2. Using Exhibit 8A-2 as a guide, compute the activity rates for the activity cost pools.
3. The company recently completed a 5 hundred square foot carpet-cleaning job at the Flying N Ranch—a 75-mile round-trip journey from the company's offices in Bozeman. Using Exhibit 8A-3 as a guide, compute the cost of this job using the activity-based costing system.
4. The revenue from the Flying N Ranch was \$140 (5 hundred square feet @ \$28 per hundred square feet). Using Exhibit 8A-5 as a guide, prepare an action analysis report of the Flying N Ranch job. The president of Gallatin Carpet Cleaning considers all of the company's costs to be Green costs except for office expenses, which are coded Yellow, and his own compensation, which is coded Red. The people who do the actual carpet cleaning are all trained part-time workers who are paid only for work actually done.
5. What do you conclude concerning the profitability of the Flying N Ranch job? Explain.
6. What advice would you give the president concerning pricing jobs in the future?



PROBLEM 8-26 Activity-Based Costing as an Alternative to Traditional Product Costing

[LO3, LO4, LO6]

This chapter emphasizes the use of activity-based costing in internal decisions. However, a modified form of activity-based costing can also be used to develop product costs for external financial reports. For this purpose, product costs include all manufacturing overhead costs and exclude all nonmanufacturing costs. This problem illustrates such a costing system.

Ellix Company manufactures two models of ultra-high fidelity speakers, the X200 model and the X99 model. Data regarding the two products follow:

Product	Direct Labor-Hours	Annual Production	Total Direct Labor-Hours
X200	1.8 DLHs per unit	5,000 units	9,000 DLHs
X99	0.9 DLHs per unit	30,000 units	27,000 DLHs
			<u>36,000 DLHs</u>