Activity-Based Management
Learning Objective 1
Activity-Based Management (ABM)

Evaluates the costs and values of process activities . . .

. . . To identify opportunities to improve efficiency.

Activity-Based Costing + Value-Added Analysis =

- Process improvements
- Improve customer value
- Reduce costs
ABC vs. ABM

**ABC**

1. An improved understanding of the way resources are used in the current processes.
2. Measures product costs more accurately by analyzing costs associated with identified activities in the processes.

**ABM adds:**

1. Identifies value-added and non-value-added activities.
2. Identifies the customer-perceived value of each activity.
3. Identifies opportunities to enhance value-added activities and reduce or eliminate non-value-added activities.
Learning Objective 2
Combination of ABC And Target Costing

1. Determine target selling price per unit
2. Determine target cost, per unit and in total.
   - Determine target profit
   - Deduct target return on sales
   - Result is target cost
3. Compare target cost to currently feasible total cost.
   - The difference is the cost reduction target
4. Redesign products and processes to achieve the cost reduction target.

- Contract sales price
- Estimate based on market analysis
- Competitors’ pricing
### Megaburger Promotional Toys

#### Target Cost Calculation

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected contract price per unit</td>
<td>$17.00</td>
</tr>
<tr>
<td>Less required return on sales</td>
<td>20%</td>
</tr>
<tr>
<td>Required return on sales</td>
<td>3.40</td>
</tr>
<tr>
<td>Target cost per unit</td>
<td>$13.60</td>
</tr>
<tr>
<td>Multiplied by monthly sales of 20,000 units</td>
<td>20,000</td>
</tr>
<tr>
<td>Target cost for one month</td>
<td>$272,000</td>
</tr>
</tbody>
</table>
Combination of ABC and Target Costing

**Megaburger Promotional Toys**

<table>
<thead>
<tr>
<th></th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unit-level costs</td>
<td>$ 240,000</td>
</tr>
<tr>
<td>2. Batch-level costs</td>
<td>6,000</td>
</tr>
<tr>
<td>3. Product-level costs</td>
<td>44,000</td>
</tr>
<tr>
<td>4. Customer-level costs</td>
<td>11,000</td>
</tr>
<tr>
<td>5. Faculty-level costs</td>
<td>20,400</td>
</tr>
<tr>
<td>Monthly currently feasible costs</td>
<td>$ 321,400</td>
</tr>
<tr>
<td>Monthly target cost</td>
<td>272,000</td>
</tr>
<tr>
<td>Monthly cost reduction target</td>
<td>$ 49,400</td>
</tr>
<tr>
<td>Cost reduction target (in %)</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

By comparing the target cost to the currently feasible costs, we can determine the amount that costs need to be reduced.
Learning Objective 3
The Importance Of Customer-Perceived Value

Activities

Create outcomes and consume resources

VALUE-ADDED ACTIVITIES enhance the value of products and services in the eyes of the customer while meeting the goals of the organization.

NON-VALUE-ADDED ACTIVITIES do not contribute to customer perceived value.
Eliminating Non-Value-Added Activities

Why do organizations have incentives to eliminate non-value added activities?

- Competitors are constantly striving to create more value for customers at lower cost.
- Competition can appear quickly.
- The organization can apply the freed-up resources to value-added activities or distribute them to the owners and employees of the organization.
Likely Sources of Non-Value-Added Activities

- Producing defective products
- Producing to build up inventory
- Time and effort to move products from place to place
- Waiting time for processing
- Transporting workers to work sites
Identifying Value-Added Activities

The test for value-added activities

Would an external customer encourage the organization to do more of the activity?

Would the organization be more likely to reach its goal by performing that activity?

If the answer is “yes” to both it is value-added.
Identifying Value-Added Activities

The test for value added activities:

1. Would an external customer encourage the organization to do more of the activity?
2. Would the organization be more likely to reach its goal by performing that activity?

If the answer is "no" to both, it is **non-value-added**.
How Should An Organization Measure Value-Added?

Rate on a scale of 1 to 5

1. NON-VALUE-ADDED
2. Necessary Activities
3. Neither value-added nor non-value-added
4. Policy Requirements
5. Regulatory Requirements
6. VALUE-ADDED
Everyone's knowledge is limited.

Everyone is potentially biased in his or her response.

Use a team approach
Tasks Required by Activity-Based Management

- Twin objectives of ABM
  - Identify non-value-added activities to be eliminated or reduced.
  - Identify value-added activities to be enhanced.
  - Redesign processes to eliminate wasteful spending on non-value-added activities.
### Sorting Activities By Cost And Value

**Megaburger Promotional Toys**

Sorting activities by value and costs, we can identify oversupplied non-value-added activities and undersupplied value-added activities. By focusing on non-value-added activities (low-value activities) with high costs, we can improve efficiency.

<table>
<thead>
<tr>
<th>Customer Value</th>
<th>Activity Cost</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (highest value added)</td>
<td>$100</td>
<td>3.3%</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>3</td>
<td>1,200</td>
<td>40.0%</td>
</tr>
<tr>
<td>2</td>
<td>700</td>
<td>23.3%</td>
</tr>
<tr>
<td>1 (lowest value added)</td>
<td>1,000</td>
<td>33.3%</td>
</tr>
<tr>
<td>Total (rounded)</td>
<td>$3,000</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Most costs are for non-value-added activities.
Learning Objective 4
## Identifying Opportunities for Improvement

### Megaburger Promotional Toys

#### Ask “Why?” for each step in the process.

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<thead>
<tr>
<th>Sub-Activity</th>
<th>Before Process Improvements Elapsed Time</th>
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<td>Trim excess plastic</td>
<td>83 min.</td>
</tr>
<tr>
<td>Recycle trimmings</td>
<td>60 min.</td>
</tr>
<tr>
<td>Put piece in box</td>
<td>25 min.</td>
</tr>
<tr>
<td>Log out completed order</td>
<td>30 min.</td>
</tr>
<tr>
<td>Move order to warehouse</td>
<td>60 min.</td>
</tr>
<tr>
<td>Register order in inventory</td>
<td>28 min.</td>
</tr>
<tr>
<td>Total elapsed time</td>
<td>286 min.</td>
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</table>

### Why do employees need to trim excess plastic from molded products?

- **Why#1**: Appearance and product function requires removal of the excess.
- **Why#2**: Under high-injection pressure, plastic leaks from the edges of the mold.
- **Why#3**: High pressure is required to mold the products properly.
- **Why#4**: The design of the molds permits leakage.
- **Why#5**: The molds are based on old designs.

### SOLUTION

Rework or replace old molds with improved molds to eliminate the need for trimming and recycling.
## Identifying Opportunities for Improvement

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**Megaburger Promotional Toys**

Ask “Why?” for each step in the process.

**Why are we spending so much time on non-value-added record keeping and the correction of recording errors?**

**SOLUTION:** Install a bar-coding system to mark and track all orders electronically.

A bar-coding system creates a unique bar code for each order and allows the company to mark and track all orders electronically.
## Identifying Opportunities for Improvement

### Megaburger Promotional Toys

After process improvements, total elapsed time has been reduced to 82.2 minutes.

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<tr>
<td>Log out completed order</td>
<td>30 min.</td>
<td>15.1 min.</td>
</tr>
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<td>Move order to warehouse</td>
<td>60 min.</td>
<td>30 min.</td>
</tr>
<tr>
<td>Register order in inventory</td>
<td>28 min.</td>
<td>12.1 min.</td>
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<td><strong>Total elapsed time</strong></td>
<td><strong>286 min.</strong></td>
<td><strong>82.2 min.</strong></td>
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If we assume a cost of $10 per hour, what is the cost savings?
## Identifying Opportunities for Improvement

### Megaburger Promotional Toys

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**Time Saved:**
- 286 min.
  - 82.2 min.
  - 203.8 min.
  - \( \frac{203.8 \text{ min.}}{60 \text{ min/hr}} \)
  - 3.397 hrs.

**Cost Savings:**
- 3.397 hrs.
  - \( \times 10 \text{ hr/} \) 
  - $33.97
Learning Objective 5
Costs of Resources Used versus Resources Supplied

The cost of supplying a resource is often greater than the cost of using a resource. The difference is an unused capacity cost.

Example: A pizza cook is paid $7.00 per hour and can make 10 pizzas per hour. If 10 pizzas are ordered in an hour, then the labor cost is actually $.70 per pizza. However, if only 5 pizzas are ordered in an hour, what is the cost per pizza?

The cost of labor supplied is $7.00 per hour. The cost of labor used is only $3.50 when 5 pizzas are ordered, still $.70 per pizza. The remaining $3.50 is the cost of unused capacity.
Capacity Utilization

Unused Capacity = Resources Supplied - Resources Used

Cost of all resources provided, whether used or not.
Cost of all resources actually used by the productive process.

An indication of potential cost savings or possible expansion without additional costs.
Learning Objective 6
Implementation Of Activity-Based Costing & Management

The Focus of ABC

Developing improved product or service costs given current processes

The Focus of ABM

Identifying opportunities for improving processes

Consider the benefits and the costs
What Organizations Adopt ABC and ABM?

Companies facing price competition.

Companies producing many different, complex products from common facilities.
Can You Be Sure That ABC And ABM Will Be Successful?

What is the scope of the ABC or ABM project?

Pilot Project

Organization-wide System

What is a “pilot project”?

A project of limited scope that is intended to be a small-scale model of an organizational system.

Why use a “pilot project”?

Anticipate the linkages across departments, groups and processes. Anticipate the data gathering and reporting requirements.
What resources are necessary?

Management Commitment

Educate top management as to cost/benefits

Personnel and Time

Significant projects will require a three-to four-person, cross-functional team at least four to six months of full-time effort

Technology

Begin with existing commercial software

Can You Be Sure That ABC And ABM Will Be Successful?
Can You Be Sure That ABC And ABM Will Be Successful?

How can you anticipate and overcome resistance to change?

Prevent or Minimize Resistance by:

- Education and Training
- Incentives that Encourage and Reward Change
- Widespread Sponsorship and Participation
- Be Sensitive to Differences in National Cultures

Effects of culture
Can You Be Sure That ABC And ABM Will Be Successful?

ABC and ABM require information that is not normally available from an organization’s information systems.

How do you gather information?

- Observation
- Interview
- Survey
- This information can be generated by:
Can You Be Sure That ABC And ABM Will Be Successful?

How Should you Perform the Analysis and Make Recommendations?

Though top managers ultimately have the responsibility for authorizing and effecting major changes, the analysis team is best prepared to analyze the data and make recommendations.

The team is ultimately familiar with the data, its strengths and weaknesses.

Empowering and requiring the team to make recommendations gives the control and accountability for the entire project.
Some Notes on Resource Consumption Accounting (RCA)
Managers Comment about Cost Reports

How do I get my schedule in sync with these budget estimates?

Some staff have just been hired, but there is no allowance for the learning they have to do.

Why did they call our idle time estimates lost time?
Shortcomings of Activity-Based Management

- It pays primary attention to the cost (in dollar values) of an organization’s personal and physical resources.
- Activity analyses often assume that those costs can be treated as if they were all variable.
- It assumes uniformity among the human and physical resources involved in performing activities.
- It is still primarily concerned not with operational effectiveness, but with measuring the cost of products (as is financial accounting).
A Suggestion for Improvement

- Account for personal and physical resources at the beginning of the budgeting process.
- Measure them first in terms of their contributions to work output (productive hours, capacity, technology).
- Chart the cause and effect relationships among them.
- Then, after we know the demand for these resources, we may assign costs (fixed and proportional) to the units of output of our goods and services.
-- Not Spoken Here!

- Those anonymous, “uncontrollable” costs are no longer added together and allocated at the end of a budgeting process, but identified at the beginning.
- That is because the primary goal is not cost accumulation but resource planning and management.
- This integrating technique is called Resource Consumption Accounting.
- It is also known as Activity-based Resource Planning, because it enhances Activity-based Budgeting.
Advantages of This Approach

- It simulates more closely the way operations managers plan their activities in response to future needs.
- Traditional cost accounting becomes smoothly integrated into their resource planning and scheduling activities.
- Reports and analyses focus on cause-and-effect relationships and levels of controllability rather than formula-based cost assignments.
Resource Consumption Accounting

- Pilot RCA programs are in progress throughout the U. S.
- An organization must have installed an Enterprise Resource Planning (ERP) system in order to implement RCA.
- Research results are available from CAM-I at a dedicated website: www.rcainform.org.
- IMA has published numerous articles about RCA, which are available at www.imanet.org/
End of Chapter 5