

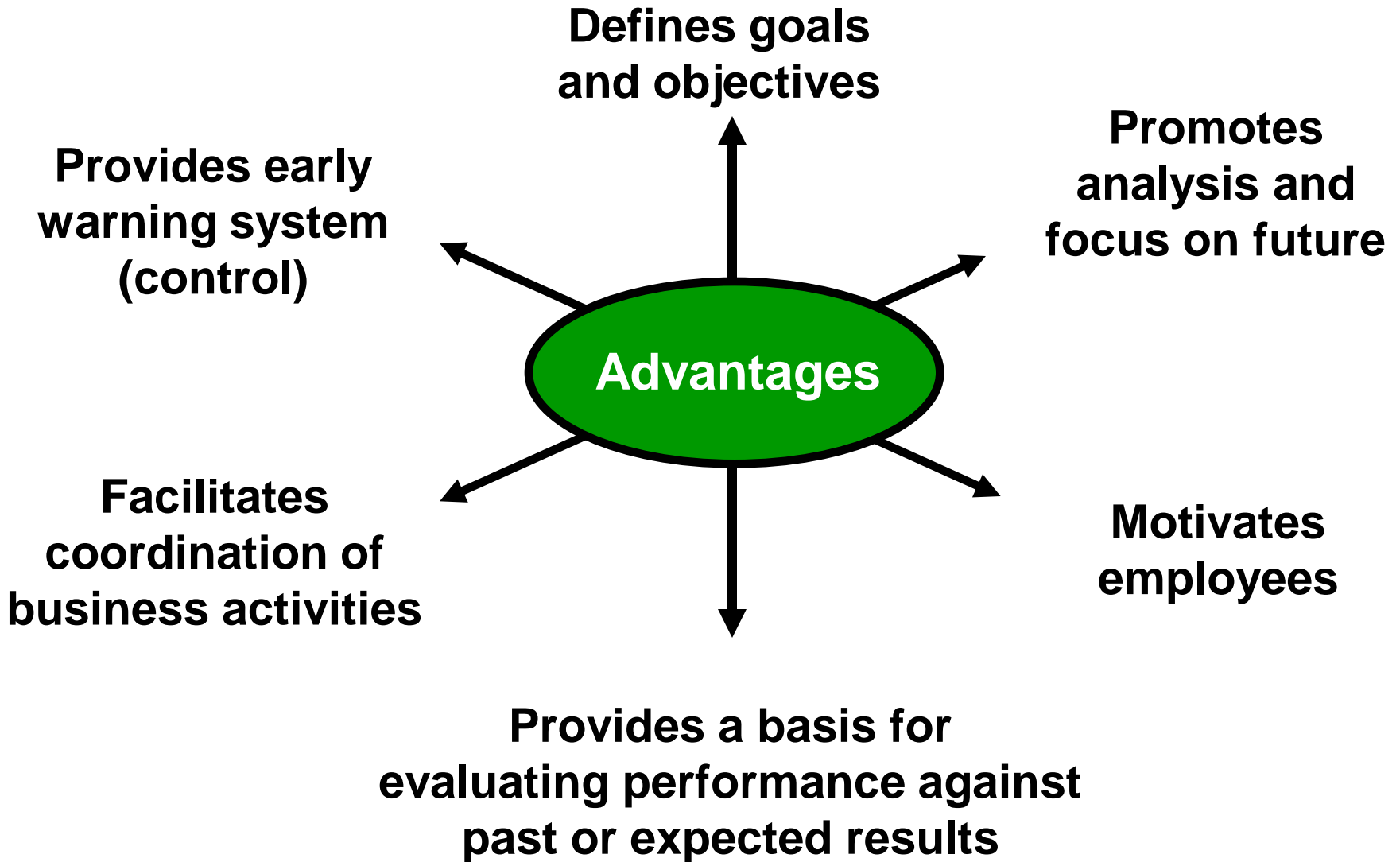
Chapter 7

Master Budgets and Performance Planning

Budget

- Management's *plan* expressed in financial terms for specific period (Planning).
- Primary way to communicate agreed-upon objectives to all parts of the company (Directing)
- May inspire higher levels of performance or discourage additional effort (Motivating)
- Evaluate success of plan and make adjustments where necessary (Control)

Budget Process



Budget Committee

- Responsible for preparing budget.
 - Includes managers from each major area of the company.
- Serves as review board where managers can defend their budget goals and request.

Participative Budgeting

- Each level of management participates in budget process.

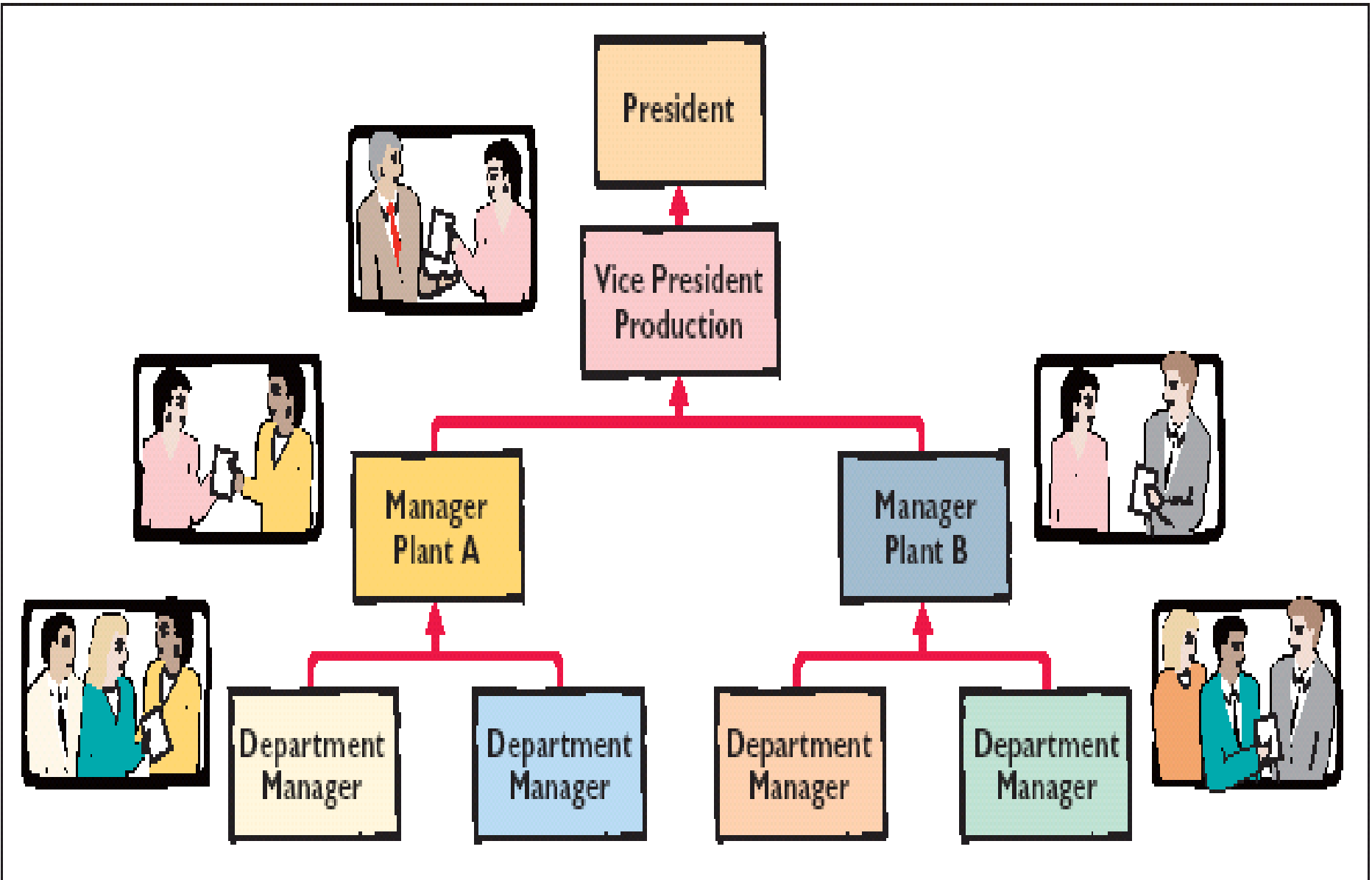
Advantages:

- ① *More accurate budget estimates* since low level managers have more detailed knowledge of their area
- ② *Perceived as fair* due to involvement of lower level management

Disadvantages:

- ① *Time consuming and costly*
- ② May foster budgetary "gaming" through *budgetary slack*

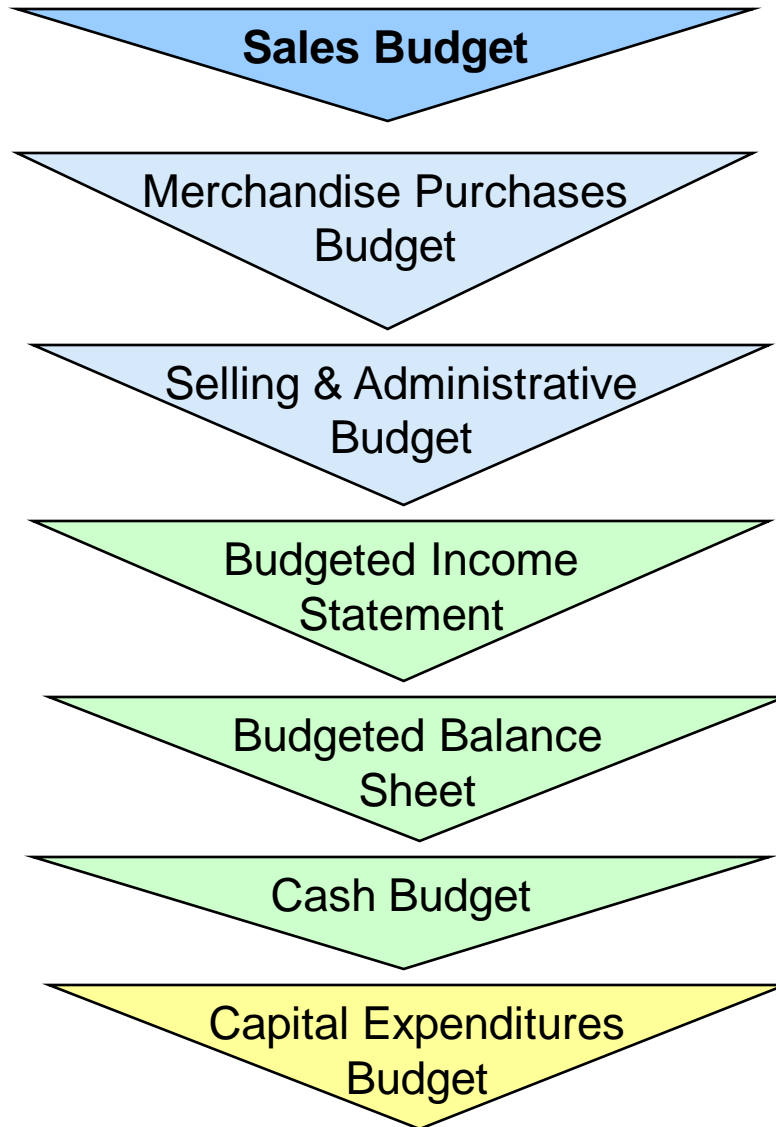
Participative Budgeting – Flows Up



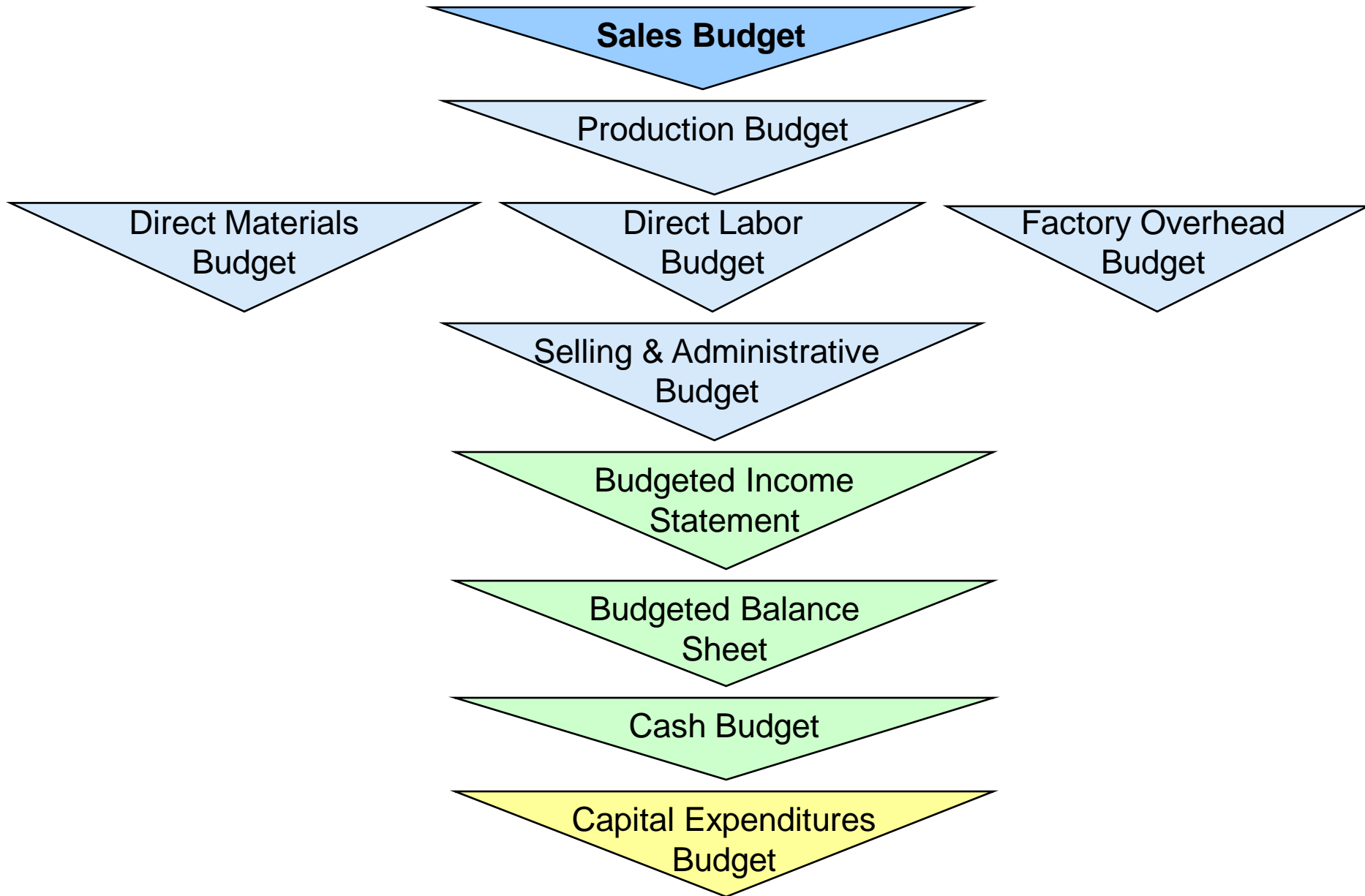
Master Budget

- A set of *interrelated budgets* that constitutes a plan of action for a specific time period.
 - **Operating budgets**
 - Sales budget
 - Production budget
 - Direct materials budget
 - Direct labor budget
 - Factory overhead budget
 - **Financial budgets**
 - cash budget,
 - budgeted income statement,
 - budgeted balance sheet
 - **Capital expenditures budget** –purchase of long-lived assets

Master Budget-Merchandiser



Master Budget-Manufacturer



Sales Budget

Estimated Unit Price

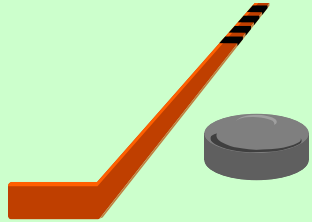
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Estimated Unit Sales

- Economic and market conditions
- Marketing department's forecast of customer needs
- Estimated advertising & promotion

Last Year's Sales

Sales Budget – Merchandiser



HOCKEY DEN Monthly Sales Budget October 2008 – January 2009

	Budgeted Unit Sales	Budgeted Unit Price	Budgeted Total Sales
September 2008 (actual)	700	\$ 100	\$ 70,000
October 2008	1,000	\$ 100	\$ 100,000
November 2008	800	100	80,000
December 2008	1,400	100	140,000
Total	3,200	\$ 100	\$ 320,000
January 2009	900	\$ 100	\$ 90,000

Merchandise Purchases Budget

Estimated cost of goods to be purchased by a merchandiser to meet expected sales.

Hockey Den Merchandise Purchases Budget Q4 200X

Expected sales (units)	3,200
+ Desired ending inventory (units)	200
- Beginning inventory (units)	<u>(100)</u>
= Purchases required (units)	3,300
x Merchandise price per unit	<u>\$ 40.00</u>
= Cost of merchandise purchases	\$ 132,000

Sales Budget - Manufacturer

Every other budget depends on the sales budget!!



**Glass Company
Sales Budget
Year Ending December 31, 200X**



	<u>Quarter</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>Year</u>
Expected unit sales	3,000	3,500	4,000	4,500	15,000
Unit selling price	x \$60	x \$60	x \$60	x \$60	x \$60
Total sales	<u>\$180,000</u>	<u>\$210,000</u>	<u>\$240,000</u>	<u>\$270,000</u>	<u>\$900,000</u>

Production Budget

- Number of units that must be produced to meet estimated sales and maintain desired inventory.

**Glass Company
Production Budget
For the Year Ending December 31, 200X**

	<u>Quarter</u>				<u>Year</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
Expected unit sales	3,000	3,500	4,000	4,500	
+ Desired ending inventory ^a	<u>700</u>	<u>800</u>	<u>900</u>	<u>1,000^b</u>	
Total required units	3,700	4,300	4,900	5,500	
- Beginning inventory	<u>600^c</u>	<u>700</u>	<u>800</u>	<u>900</u>	
Required production (units)	<u>3,100</u>	<u>3,600</u>	<u>4,100</u>	<u>4,600</u>	<u>15,400</u>

^a 20% of next quarter's sales

^b Expected 200Y first-quarter sales, 5000 units x 20%

^c 20% of estimated first-quarter 2002 sales units

Direct Materials Budget

- Estimated quantity and cost of direct materials to be purchased to meet production needs.

Glass Company
Direct Materials Budget
For the Year Ending December 31, 200X

	<u>Quarter</u>				
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>Year</u>
Units to be produced	3,100	3,600	4,100	4,600	
Direct materials per unit (lbs)	x 2	x 2	x 2	x 2	
Materials needed for production	<u>6,200</u>	<u>7,200</u>	<u>8,200</u>	<u>9,200</u>	
Add: desired end. inventory (DM)	<u>720</u>	<u>820</u>	<u>920</u>	<u>1,020</u>	
Total materials required (lbs)	6,920	8,020	9,120	10,220	
Less: beginning inventory (DM)	<u>620</u>	<u>720</u>	<u>820</u>	<u>920</u>	
Direct materials purchases (lbs)	6,300	7,300	8,300	9,300	
Material price per unit (lb)	<u>x \$4</u>	<u>x \$4</u>	<u>x \$4</u>	<u>x \$4</u>	
Total cost of DM purchases	\$25,200	\$29,200	\$33,200	\$37,200	\$124,800

Direct Labor Budget

- Estimated quantity and cost of direct labor to be incurred to meet production requirements.

Glass Company
Direct Labor Budget
For the Year Ending December 31, 200X

	<u>Quarter</u>				<u>Year</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
Units to be produced (from production budget)	3,100	3,600	4,100	4,600	
Direct labor time (hours) per unit	x 2	x 2	x 2	x 2	
Total required direct labor hours	6,200	7,200	8,200	9,200	
Direct labor cost per hour	x \$10	x \$10	x \$10	x \$10	
Total direct labor cost	\$62,000	\$72,000	\$82,000	\$92,000	\$308,000

Manufacturing Overhead Budget

- Shows the expected manufacturing overhead costs for the budget period.
- Distinguishes between **fixed** and **variable** overhead costs.
- The fixed cost amounts are given or assumed.
- Variable costs for Glass Co. per direct labor hour:
 - indirect materials: \$1.00
 - indirect labor: \$1.40
 - utilities: \$0.40
 - maintenance: \$0.20

Manufacturing Overhead Budget

Glass Company Manufacturing Budget For the Year Ending December 31, 200X

	Quarter				Year
	1	2	3	4	
Variable Costs					
Indirect materials (\$1.00 per DLH)	\$ 6,200	\$ 7,200	\$ 8,200	\$ 9,200	\$ 30,800
Indirect labor (\$1.40 per DLH)	8,680	10,080	11,480	12,880	43,120
Utilities (\$.40 per DLH)	2,480	2,880	3,280	3,680	12,320
Maintenance (\$.20 per DLH)	1,240	1,440	1,640	1,840	6,160
Total variable	18,600	21,600	24,600	27,600	92,400
Fixed costs					
Supervisory salaries	20,000	20,000	20,000	20,000	80,000
Depreciation	3,800	3,800	3,800	3,800	15,200
Property tax and insurance	9,000	9,000	9,000	9,000	36,000
Maintenance	5,700	5,700	5,700	5,700	22,800
Total fixed	38,500	38,500	38,500	38,500	154,000
Total manufacturing overhead	\$57,100	\$60,100	\$63,100	\$66,100	\$246,400
Direct Labor hours	6,200	7,200	8,200	9,200	30,800
Manufacturing overhead rate per direct labor hour (\$246,400 ÷ 30,800)					\$ 8.00

Selling and Administrative Expense Budget

- Is a projection of anticipated operating expenses.
- Distinguishes between **fixed** and **variable** costs.
- Fixed cost amounts are assumed, and Glass Company expects the following variable costs per unit sold (from sales budget):
 - **sales commissions: \$3.00**
 - **freight-out: \$1.00**

Selling and Administrative Expense Budget

Glass Company
Selling & Administrative Budget
For the Year Ending December 31, 200X

	<u>Quarter</u>				<u>Year</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
Variable Costs					
Sales commissions (\$3 per unit)	<u>\$ 9,000</u>	<u>\$ 10,500</u>	<u>\$ 12,000</u>	<u>\$ 13,500</u>	<u>\$ 45,000</u>
Freight-out (\$1 per unit)	<u>3,000</u>	<u>3,500</u>	<u>4,000</u>	<u>4,500</u>	<u>15,000</u>
Total variable	<u>12,000</u>	<u>14,000</u>	<u>16,000</u>	<u>18,000</u>	<u>60,000</u>
Fixed costs					
Advertising	5,000	5,000	5,000	5,000	20,000
Sales salaries	15,000	15,000	15,000	15,000	60,000
Office Salaries	7,500	7,500	7,500	7,500	30,000
Depreciation	1,000	1,000	1,000	1,000	4,000
Property taxes and insurance	<u>1,500</u>	<u>1,500</u>	<u>1,500</u>	<u>1,500</u>	<u>6,000</u>
Total Fixed	<u>30,000</u>	<u>30,000</u>	<u>30,000</u>	<u>30,000</u>	<u>120,000</u>
Total selling and administrative	<u><u>\$42,000</u></u>	<u><u>\$44,000</u></u>	<u><u>\$46,000</u></u>	<u><u>\$48,000</u></u>	<u><u>\$180,000</u></u>

Budgeted Income Statement

Expected profitability for the budget period.

Glass Company Budgeted Income Statement For the Year Ending December 31, 200X
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Sales	\$900,000
Cost of goods sold (15,000 x \$44)	<u>660,000</u>
Gross profit	240,000
Selling & administrative expenses	<u>180,000</u>
Income from operations	60,000
Interest expense	<u>100</u>
Income before income taxes	59,900
Income tax expense	<u>12,000</u>
Net income	<u><u>\$ 47,900</u></u>

Financial Budgets Consist of:

- Capital Expenditure Budget
- Cash Budget
- Budget Balance Sheet

Cash Budget

Projection of anticipated cash flows.

Yo Company Cash Budget Year Ending 200X

Beginning cash balance	\$ 60,000
+ Cash receipts (itemized)	\$ 325,000
- Cash disbursements (itemized)	<u>\$ (350,000)</u>
= Preliminary balance	\$ 35,000
+ Borrowing	\$ 25,000
- Repayment of loan	<u>\$ -</u>
= Ending cash balance	\$ 60,000

Budgeted Balance Sheet

A projection of financial position
at the end of the budget
period.

Glass Company

Budgeted Balance Sheet

December 31, 200X

ASSETS

Cash		\$ 37,900
Accounts receivable		108,000
Finished goods inventory		44,000
Raw materials inventory		4,080
Buildings & Equipment	\$ 192,000	
Less: Accumulated Depreciation	<u>48,000</u>	<u>144,000</u>
Total assets		<u>\$337,980</u>

LIABILITIES AND STOCKHOLDERS' EQUITY

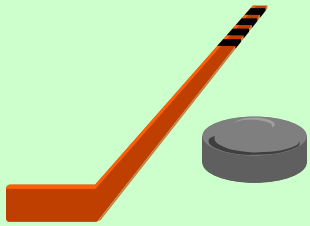
Accounts payable	\$ 18,600
Common stock	225,000
Retained earnings	<u>94,380</u>
Total liabilities and stockholders' equity	<u>\$337,980</u>

Nonmanufacturing
Companies such as
service enterprises and
not-for-profit
organizations also need
budgeting!

Not-for-profit entities budget on the basis of cash flows rather than on a revenue and expense basis.

Textbook's Format

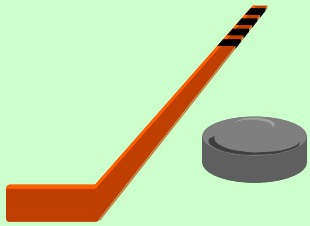
Merchandise Purchases Budget



HOCKEY DEN Merchandise Purchases Budget October 2008 – December 2008

	October	November	December
Next month's unit sales	800	1,400	900
Ending inventory percentage	× 90%	× 90%	× 90%
Budgeted ending inventory units	720	1,260	810
Add current month's unit sales			
Total units needed			
Deduct beginning inventory units			
Number of units to be purchased			
Budgeted cost per unit			
Budgeted cost of purchases			

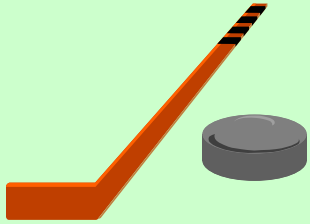
Merchandise Purchases Budget



HOCKEY DEN Merchandise Purchases Budget October 2008 – December 2008

	October	November	December
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Ending inventory percentage	× 90%	× 90%	× 90%
Budgeted ending inventory units	720	1,260	810
Add current month's unit sales	1,000	800	1,400
Total units needed	1,720	2,060	2,210
Deduct beginning inventory units			
Number of units to be purchased			
Budgeted cost per unit			
Budgeted cost of purchases			

Merchandise Purchases Budget

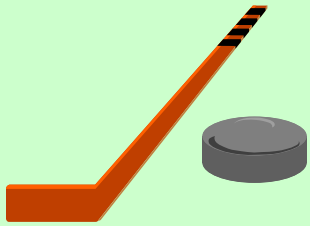


HOCKEY DEN Merchandise Purchases Budget October 2008 – December 2008

	October	November	December
Next month's unit sales	800	1,400	900
Ending inventory percentage	× 90%	× 90%	× 90%
Budgeted ending inventory units	720	1,260	810
Add current month's unit sales	1,000	800	1,400
Total units needed	1,720	2,060	2,210
Deduct beginning inventory units	900		
Number of units to be purchased	820		
Budgeted cost per unit	× \$ 60		
Budgeted cost of purchases	<u>\$ 49,200</u>		

Beginning inventory is last month's ending inventory.

Merchandise Purchases Budget

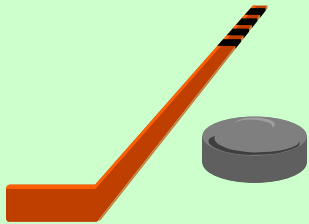


HOCKEY DEN Merchandise Purchases Budget October 2008 – December 2008

	October	November	December
Next month's unit sales	800	1,400	900
Ending inventory percentage	× 90%	× 90%	× 90%
Budgeted ending inventory units	720	1,260	810
Add current month's unit sales	1,000	800	1,400
Total units needed	1,720	2,060	2,210
Deduct beginning inventory units	900	720	1,260
Number of units to be purchased	820	1,340	950
Budgeted cost per unit	× \$ 60	× \$ 60	× \$ 60
Budgeted cost of purchases	\$ 49,200	\$ 80,400	\$ 57,000

Beginning inventory is last month's ending inventory.

Selling Expense Budget

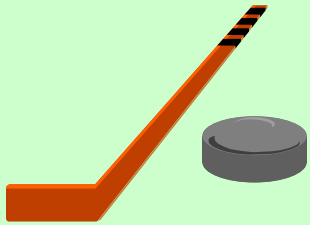


HOCKEY DEN Selling Expense Budget October 2008 – December 2008

	October	November	December	Total
Budgeted sales	\$ 100,000	\$ 80,000	\$ 140,000	\$ 320,000
Sales commission %	x 10%	x 10%	x 10%	x 10%
Sales commission	\$ 10,000	\$ 8,000	\$ 14,000	\$ 32,000
Sales manager salary	2,000	2,000	2,000	6,000
Total selling expenses	\$ 12,000	\$ 10,000	\$ 16,000	\$ 38,000

From Hockey Den's sales budget

Budgeted Cash Receipts



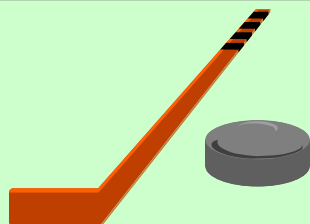
HOCKEY DEN Cash Receipts Budget October 2008 – December 2008

	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Budgeted sales	\$ 70,000	\$ 100,000	\$ 80,000	\$ 140,000
Accounts receivable	\$ 42,000	\$ 60,000	\$ 48,000	\$ 84,000
Cash receipts from:				
Cash sales		\$ 40,000	\$ 32,000	\$ 56,000
Collection of receivables				
Total cash receipts				

60% of sales

40% of sales

Budgeted Cash Receipts



HOCKEY DEN Cash Receipts Budget October 2008 – December 2008

	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
Budgeted sales	\$ 70,000	\$ 100,000	\$ 80,000	\$ 140,000
Accounts receivable	\$ 42,000	\$ 60,000	\$ 48,000	\$ 84,000
Cash receipts from:				
Cash sales		\$ 40,000	\$ 32,000	\$ 56,000
Collection of receivables		42,000	60,000	48,000
Total cash receipts		<u>\$ 82,000</u>	<u>\$ 92,000</u>	<u>\$ 104,000</u>