# The sales, production and materials budgets

MODULE 3 | PART B.1 | STUDENT COMPANION

A **master budget** is a set of linked budgets for the coming period, drawing on the operational plan, past results and predictions. Financial planning models, enterprise system data and what-if (sensitivity) analysis help prepare it.

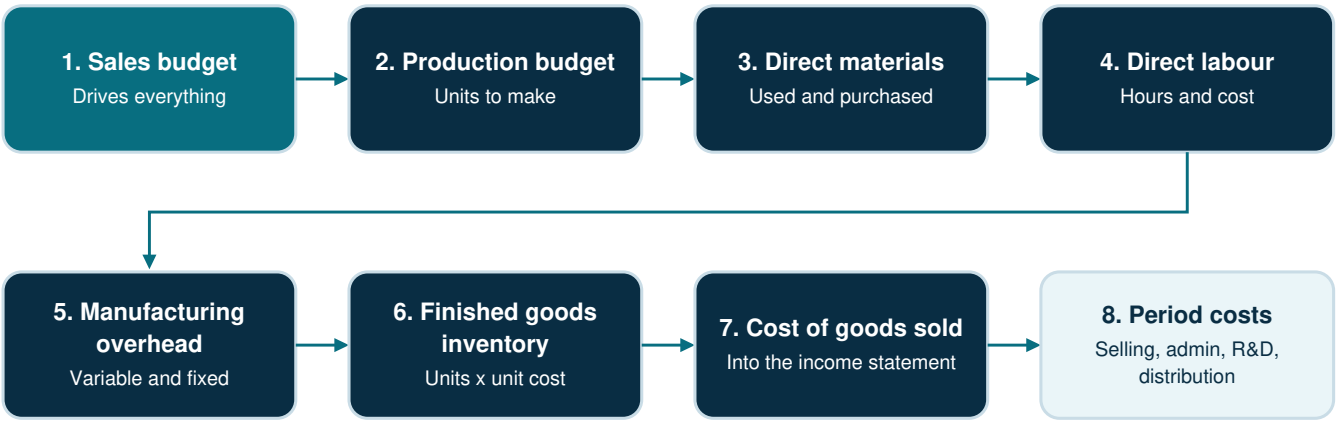
## Factors that shape the budget

International organisations add cultural and legal differences, economies that move differently, currency translation and different inflation rates.

| External | Internal |
|---|---|
| Demand and market research; suppliers and input prices | Capacity and supply constraints |
| Economy at home and worldwide; industry trends | Planned advertising and promotions; pricing and inventory policies |
| Competitors, new entrants, substitutes; changing tastes and fads | New products from research and development; product improvements |
| New laws and taxes; political change; technology | Changes in operations, management, and sales or product mix |
| Natural events: floods, bushfires, droughts | Budget politics: game playing and empire building |

**Why accuracy matters:** an over-optimistic sales budget builds excess stock that may be discounted or sold at a loss; an over-pessimistic one causes shortages, lost sales and lost customers. Too little raw material can stop production; too much adds storage, insurance, handling and obsolescence costs.

## The operating budget for a manufacturer




**Steps 2 to 7 budget production; step 8 budgets the rest of the value chain**

## Step 1: the sales budget

Led by sales staff, using customer system data, statistical methods (trend analysis, regression, probability) and sometimes market research; production managers check it can be supplied. **Blue Wren Drinkware (imagined):** 9,600 bottles in July at $30 = **$288,000**.

## Step 2: the production budget

| Blue Wren Drinkware: production budget for July | Bottles |
|---|---|
| Budgeted sales | 9,600 |
| Add: desired closing finished goods (25% of August sales of 9,600) | 2,400 |
| Total needed | 12,000 |
| Less: opening finished goods | (2,000) |
| Bottles to produce | 10,000 |

**Production = sales + desired closing stock - opening stock**

## Step 3: the direct materials budget

| Blue Wren: direct materials budget for July | Kilograms | Cost at $6/kg |
|---|---|---|
| Steel needed for production (10,000 x 0.5 kg) | 5,000 | $30,000 (used) |
| Add: desired closing steel | 1,000 | |
| Total needed | 6,000 | |
| Less: opening steel | (800) | |
| Steel to purchase | 5,200 | $31,200 (purchased) |

**Purchases = material for production + desired closing stock - opening stock**

The purchasing manager answers for the **price** of materials; the production manager answers for **usage**. If cheaper steel dents more easily and scrap rises, production explains the usage, but the cause sits in purchasing: coordination matters.

# Practice questions

MODULE 3 | PART B.1 | TRY THESE BEFORE THE WORKED ANSWERS

**Ridgeway Boards (imagined)** makes skateboards. Budgeted sales: July 4,000; August 5,000; September 4,500; October 4,000 boards. Desired closing finished goods = 20% of next month's sales. Opening finished goods for July: 800 boards. Each board uses 2 kg of timber at $5 per kg. Desired closing timber = 10% of next month's production needs. Opening timber for July: 900 kg.

## Question 1 - Production budget

| Boards | July | August |
|---|---|---|
| Budgeted sales | | |
| Add: desired closing finished goods | | |
| Total needed | | |
| Less: opening finished goods | | |
| Boards to produce | | |

Hint: you will also need September's production to set August's closing timber.

## Question 2 - Direct materials budget

| Timber | July | August |
|---|---|---|
| Timber needed for production (kg) | | |
| Add: desired closing timber (kg) | | |
| Total needed (kg) | | |
| Less: opening timber (kg) | | |
| Timber to purchase (kg) | | |
| Cost of timber purchased | | |
| Cost of timber used | | |

## Question 3 - Factors for Ridgeway's sales budget

Name four external and four internal factors that should shape Ridgeway's sales budget.

# Worked answers

MODULE 3 | PART B.1 | WORKED ANSWERS - ATTEMPT THE QUESTIONS FIRST

## Question 1 - Production budget

| Boards | July | August |
|---|---|---|
| Budgeted sales | 4,000 | 5,000 |
| Add: desired closing finished goods (20% of next month) | 1,000 | 900 |
| Total needed | 5,000 | 5,900 |
| Less: opening finished goods | (800) | (1,000) |
| Boards to produce | 4,200 | 4,900 |

September production (for August's closing timber): 4,500 + 800 (20% of October) - 900 = **4,400 boards**.

## Question 2 - Direct materials budget

| Timber | July | August |
|---|---|---|
| Needed for production (x 2 kg) | 8,400 | 9,800 |
| Add: desired closing timber (10% of next month's needs) | 980 | 880 |
| Total needed | 9,380 | 10,680 |
| Less: opening timber | (900) | (980) |
| Timber to purchase (kg) | 8,480 | 9,700 |
| Cost of timber purchased ($5/kg) | $42,400 | $48,500 |
| Cost of timber used ($5/kg) | $42,000 | $49,000 |

## Question 3 - Factors for Ridgeway's sales budget

**External:** demand trends in skateboarding; competitors' prices and new entrants; economic conditions affecting household spending; timber supply and prices; import tariffs or product safety rules; fads. **Internal:** factory capacity; planned promotions; pricing and inventory policies; new board designs; changes in product mix; budget gaming by sales staff.