

# Accounting & Financial Management

The need for Engineers to converse  
with finance professionals & use  
financial information

# Accounting for resource accumulation & allocation

Allows public,  
professional &  
ethical accountabilities

# Professional roles

- Engineers - create & utilise resources
- Accountants - measure the use of resources
  - historical - statement of accounts
  - future - budgets & financial planning

Engineers will account for  
resources -  
\$, time,  
g's & s's

Relationship between resource use  
& work outcomes

# Types of Accounting

- Financial Accounting - information for external parties ( ASIC, taxation, shareholders)
- Management Accounting - information for internal decision makers

# Information for internal decision making

- Resource costs
  - Inventory levels
  - Labour costs
  - Budget figures
  - Tax position
  - Time specific
- Figures for:
    - units, programs, projects
    - products, services
    - entire organisation
    - levels of management

# Accounting entities

Accounting reports reflect events for  
an entity - persons, firms,  
partnerships, sole traders

# Entities distinguished by:

- ownership / control - individual, group, public, private, limited liability firm
- reason for existence - profit, not for profit
- type of activity - industry sector - primary, secondary, tertiary industry

# Types of reporting

- Balance Sheet - financial position
- Profit & Loss (Income) statement - operational performance
- Funds statement - changes in financial position

# Financial Position - Balance Sheet

- Static, point-in-time ‘snapshot’
- Records assets/resources, funding asset acquisition, solvency (meeting due payments)
- Impacted by levels of debt, inventory, credit, assets
- Displays relationship between assets, liabilities & equity  $E = A - L$

# Assets

- Items of value owned or controlled by entity
- Arranged on convertibility basis - degree of 'liquidity'

# Liabilities

- Amounts owed to 3rd parties for -
  - goods & services (accounts payable),
  - unremitted taxation (PAYG, GST)
  - monies borrowed (debt)

# Equity

- Claim of owner or controller of an entity to the resources of the entity

# Operating Performance - Profit & Loss

- Survival - meeting commitments as they fall due (balance sheet) thus satisfying the purpose of the entity
- Profit - excess funds after expenses (gross profit),  
$$\text{gross profit} - \text{income tax} = \text{net profit}$$
- Retained earnings -  
$$\text{RE} = \text{net profit} - \text{dividend}$$

# Funds statement

- Sources of revenue & expenses over time
- Historical trends of income & expenses

# Management Accounting

- Organisation / unit levels
- Product cost / profit
- Current position
- Future estimates - budgets, costings
- Frequency of reporting - monthly, quarterly, yearly
- Cost accounting - costs, profits, inventory, WiP, finished goods

# Types of costs

- Historicals - actuals over time
- Standard - pre-estimated for each product - quantity, price, time, overheads, \$ rate, materials, labour, product
- Variable
- Fixed
- Opportunity
- Sunk

# Capital Investment decisions

- Payback period - time to recoup investment or make profit
- Time value of \$ -
  - Net Present Value (NPV) - discounted value of cash (inflation)
  - Internal Rate of Return (IRR) - interest rate where present cash inflow = present value of cash outflows

# Overhead Costs

- Cost centres
  - within units of activity
  - defined activity
  - productive (\$ generating)
  - service (\$ spending)