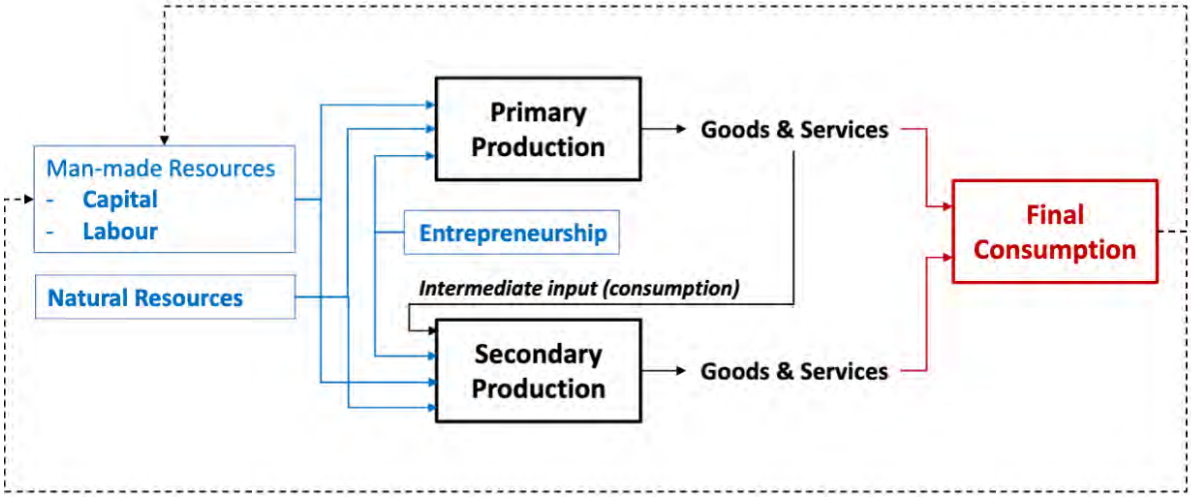
Logical decision-making for different social organisations

STEPS	HOUSEHOLD	BUSINESS	GOVERNMENT
Recognize a decision problem	Need a car	Design new production process	Meet energy demand
Define the goals and objectives	Safe and affordable	Meet design specification within budget	Clean, reliable and affordable energy
Decide whose impacts count (standing)	Householder	Owner, shareholder	Society, community, citizen
Collect all the relevant information	Gather technical and financial data	Gather technical and financial data	Gather technical, financial and *economic* data
Identify a set of feasible decision alternatives	Choice between different brands	Choice of materials use in the new process	Choice between fossil fuel and renewable energy
Select the decision criterion to use	Minimise life-cycle-cost	Maximise profit	Maximise welfare
Select the best alternative	Preferred/Optimised choice		

THE ECONOMY



Primary Factors of Production **Final Goods and Services**

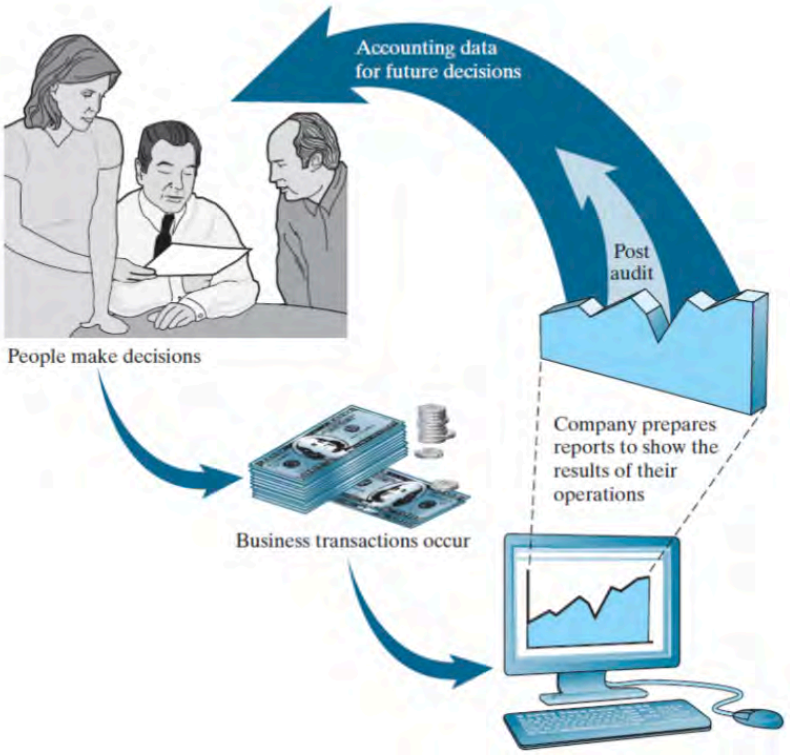
15) Which of the following statements is incorrect?

When you are comparing different alternatives, you must look at these alternatives independently.

16) What is the single most important economic decision from an engineer's point of view?

Evaluation of costs and benefits associated with making a capital investment

Week 2 content: basics of accounting and finance



THE BALANCE SHEET:
A balance sheet, sometimes called a statement of financial position , reports three main categories of items: assets, liabilities, and stockholders' equity.

What are assets?

Assets are anything valuable that your company owns, whether it's equipment, land, buildings, or intellectual property. We list the asset items in the order of their "liquidity," or the length of time it takes to convert them to cash, according to the following three categories:

When you look at your assets, you're trying to answer a simple question:

"How much do I have?"

If it has value, and you own it, it's an asset.

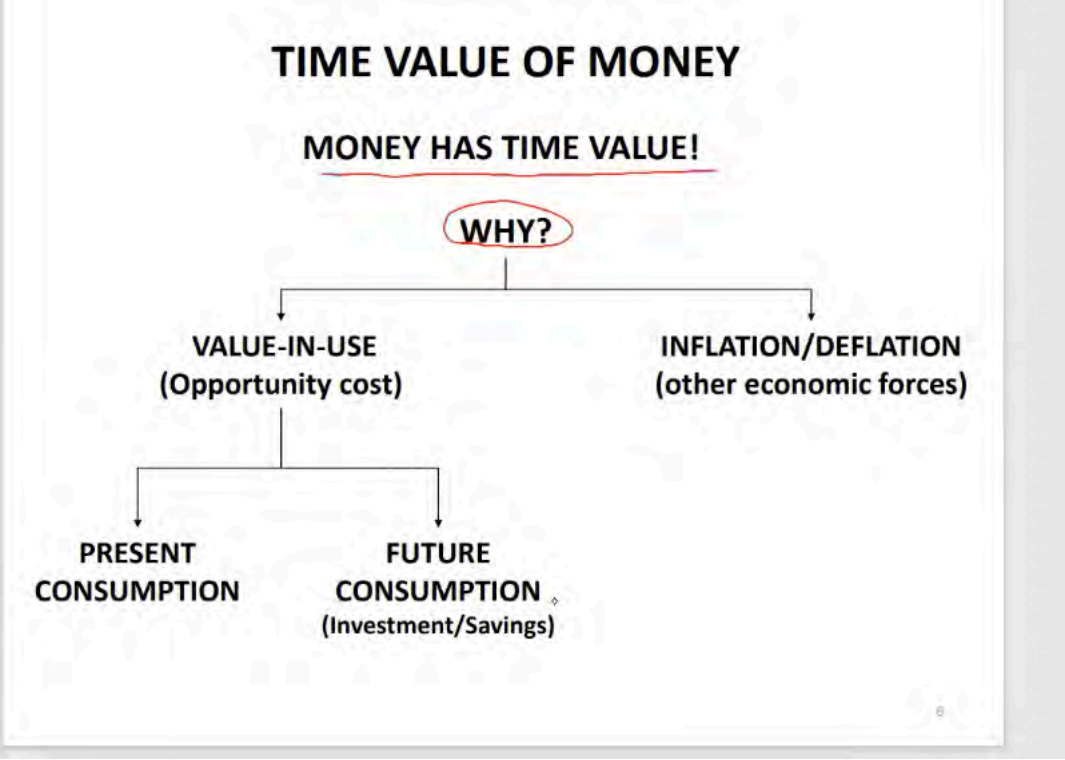
Some common current asset types include:

- **Accounts receivable**: any payments that your clients and customers owe you.
- **Cash**: the money you have in your business bank account.
- **Inventory**: any goods you have in stock that you intend to sell.
- **Property and equipment:** any buildings or tools that you need to operate your business.

Assets are generally divided into two categories:

- Current assets: cash and anything that can be converted into cash within a year (like inventory, for example).
- Fixed assets: Things like land, trademarks, and the value of your "brand.". Physical investment in the business such as land, buildings, factory machinery, office equipment and so on. Each year, a portion of the usefulness of these assets expires, and a portion of their total cost should thus be recognized as a depreciation expense. As stated previously in this book, the term depreciation refers to the accounting process for this gradual conversion of fixed assets into expenses.

Managing money:
the time value of money ; the earlier a sum of money is received, the more it is worth because over time money can earn more money via interest.



Clearly, the rate at which you earn interest should be higher than the inflation rate in order to make any economic sense of the delayed purchase.

Purchasing power is the amount of goods and services that can be purchased with a unit of currency

Scarcity leads to inflation.

inflation decreases purchasing power of people

Interest = cost of money