The carbon footprint refers to the amount of carbon produced and entering the environment from operations processes.

Corporate Social Responsibility:

- Corporate social responsibility (CSR) refers to open and accountable business actions based on respect for people, community/society and the broader environment. It involves business doing more than just complying with laws and regulations.
- CSR places value on financial returns as well as social responsibility and environmental sustainability.
- Legal compliance refers to businesses abiding by the law, whereas ethical responsibility encompasses a broader integration of social, community and environmental concerns.
- Sometimes a business seeks to avoid compliance by using outsourcing as a business strategy.
- Ethical businesses recognise that variation in laws can undermine social and ethical responsibility.
- Environmental sustainability and social responsibility are features of an ethical approach to operations management.
- Environment sustainability refers to economic, social and environmental performance of a business.
- Social responsibility refers to a business’s management of the social, environmental, political and human consequences of its actions.
• The critical path analysis (CPA) is a scheduling method or technique that shows what tasks need to be done, how long they take and what order is necessary to complete the tasks in.
• The critical path is the shortest length of time it takes to complete all tasks necessary to complete the process or project.

![Diagram of critical path analysis]

• Business technology involves the use of machinery and systems that enable the business to undertake the transformation process more efficiently and effectively.
• Office technology includes computers, productivity software, storage devices and mobile technology.
• Manufacturing technology includes robotic automation, computer aided design and computer aided manufacturing and 3D printing.

**Task Design**

• Task design includes classifying job activities in ways that make it easy for an employee to successfully complete and perform the task.
• It overlaps with the human resource function of job analysis and job description.
• The steps involved in the task design process -
  - Define what needs to be done
    - A skilled, competent electrician
  - Analyse the general job into specific duties
    - Understand electrical circuits
    - Ability to work independently and carefully to prescribed electrical standards
    - Follows directions
  - Allocate a degree of difficulty and time management
    - Supervision, difficulty: 8/10; 10 minutes supervision an hour
  - Match tasks to existing state/federal base/awards
    - $26/hour, first year licenced electrician
  - Articulate the task via job descriptions and a pay scale to allow a range of experiences in a range of work settings
    - Licenced electrician $65,000 p.a.
    - Duties to plan and install a range of electrical items
• Skills audit is a formal process used to determine the present level of skill of staff and any skill shortfalls that need to be made up through training or recruitment.

**Process Layout**

• Plant (office/factory) layout involves planning the arrangement of workspace to streamline the transformation process.
• There are three different forms of layout for manufacturing plants:
• Dependability as a performance objective refers to how consistent and reliable a business’s products are.
• Dependability refers to how long products are useful for before they fail.
  ➔ A highly durable product is a dependable product.
• A measure for service dependability is the number of complaints received- the fewer, the better.

**Flexibility**

• Flexibility refers to how quickly operations processes can adjust to changes in the market.
• Flexibility can be best achieved by increasing the capacity of production. A business can also buy new technologies, which increase flexibility and capacity.
• With services, flexibility can be achieved through increasing the number of service providers, increasing the skill level and through improving the level of technology used when providing the service.

**Customisation**

• Most products are standardised, however overtime customer’s preferences are creating a custom option for goods.
• Customisation refers to the creation of individual products to meet the specific needs of customers.
• Services are usually customised, although some aspects are standardised. Variation in product features such as colour, size and functionality.
• Mass customisation is a process that allows a standard, mass-produced item to be personally modified to specific customer requirements.
• Full customisation is rare and can only be offered when products are created after an order specific with the requirements is received.
• The cost of customisation is higher than the cost of mass-producing standardising products.

**Cost**

• Cost as a performance objective refers to the minimisation of expenses so that operations processes are conducted as cheaply as possible.
• The acquisition of new technologies helps businesses to reduce costs- less wastage. New technology means that there is a better use of inputs, minimising the waste created.

**Product Design and Development**

• A business needs to design and develop new products and services.
• There two main factors in product design and development, including-
  - Quality
  - Supply chain management
  - Capacity management
  - Cost
• There are two main drivers of new product or service design-
  - Changes in consumer preferences
  - Changes in underlying technology

**Service Design and Development**