

UNIT 6: Designing Principles

INVESTIGATION PRIMARY AND SECONDARY

Primary Research

Primary data is new data, gathered by the researcher
Sources include: interviews, focus groups, questionnaires and case studies

Secondary Research

Secondary data is gathered as part of research or reporting on primary data
Sources include articles, books and magazines

Market Research

Research helps designers analyse and identify the market need for a product, the competition and the customer base

Product Analysis

As part of your research, it's essential to know what else is on the market and how it's made, its Functionality, Aesthetics, Finish, materials

Ergonomics

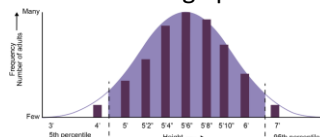
The Relationship between a user and product. The science of how humans interact with objects. Design for efficiency and comfort

Anthropometrics

The study of human measurements. Measurement of the physical properties of the human body.

Percentiles

5th, 95th Often excluded
50th Average person



THE WORK OF OTHERS DESIGNERS

Harry Beck 1902-1974

Map of the London underground

Coco Chanel 1883-1971

Iconic: Little Black Dress
Fonder of Chanel Brand

Alexander McQueen 1969-2010

Pushed the boundaries of fashion

William Morris 1834-1893

Nature patterns
Arts and Crafts Movement

Mary Quant 1934 -

Fashion Designer
Famed for the Min Skirt

Vivienne Westwood 1941-

Provocative punk style
Challenger and innovative

Marcel Breuer 1902-1981

Cesca chair famous design
Student of Bauhaus

Norman Foster

British Architect creator of iconic buildings e.g. Gherkin

Charles Rennie Mackintosh

Glasgow School of art,
Geometric lines, Art Deco

Aldo Rossi 1931-1997

Italian Architect Geometric forms, Post Modernism

Gerrit Rietveld 1888-1964

Dutch architect and furniture designer, De Stijl

Ettore Sottsass

Revolutionised typewriter design, Memphis

Raymond Templier

Art Deco jewellery, geometric style

Louis Comfort Tiffany

Stained glass echoing natural forms, Art Nouveau

Sir Alec Issigonis

Designer of Morris Minor and Mini

THE WORK OF OTHERS COMPANIES

Alessi

Producing traditional items for the home. Their attention grabbing style has made Alessi one of the most recognised brands in the world

Apple

In 1976 Steve Jobs founded Apple. Their aim was to help make computing simpler and enjoyable with pleasing aesthetics and elegant product design.

Braun

Braun's philosophy was for their products to be simple, functional, innovative and long lasting. **Dieter Rams** became Head of Design at Braun and defined their elegant style

Under Armour

Founded in the USA, in 1996 by Kevin Plank. Under Armour's now famous fabric is UA TECH™ They have gone on to develop more engineered textiles to keep athletes comfortable

Dyson

Sir James Dyson is a British inventor and founder of the Dyson company. Dyson engineer their products to solve problems, with productivity and wellbeing in mind

Primark

Produce high street clothing and accessories at low prices. Fast fashion is fuelled by Primark's ability to interpret the latest trends and produce high volumes of low cost items

Zara

Zara aims to produce quality fashion that remains affordable
Zara is famed for swiftly interpreting catwalk styles and getting the look into their stores within weeks

DESIGN STRATEGIES

Collaboration

Working with others can greatly increase creativity. It also promotes: Motivation, Problem solving, Communication and Support

User Centred Design

The focus of user-centred design is the client or user group. Their requirements and limitations guide the design process.

Systems approach

The systems approach represents a sequence of actions, often based on an **input-process-output** model



Iterative Design

The iterative cycle enables the designer to refine their work in progress. With every iteration, the design results improve.

Design Fixation

Design fixation can negatively impact design. It can limit creativity and result in similar or 'safe' design ideas



Modelling

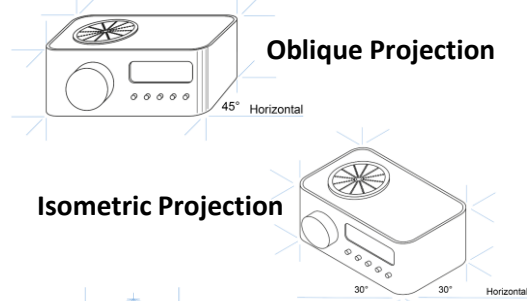
Making a model can be the next step in the process. However simple, it enables a designer to translate their idea into reality

Testing

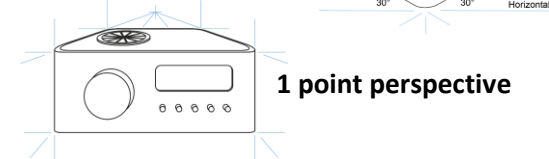
Testing could be as straightforward as checking measurements or gathering opinions. Types: Destructive, Non Destructive and Market testing.

COMMUNICATION OF DESIGN IDEAS

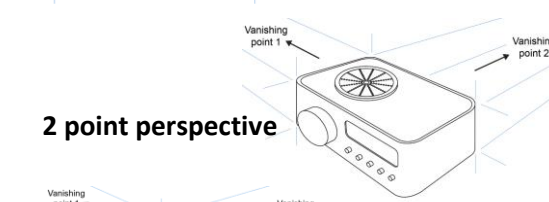
Oblique Projection



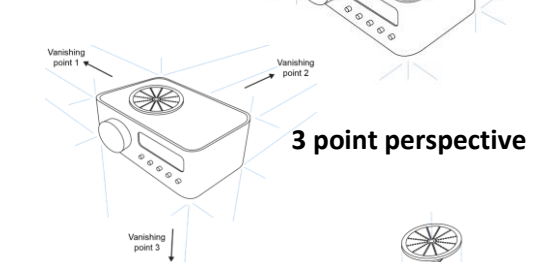
Isometric Projection



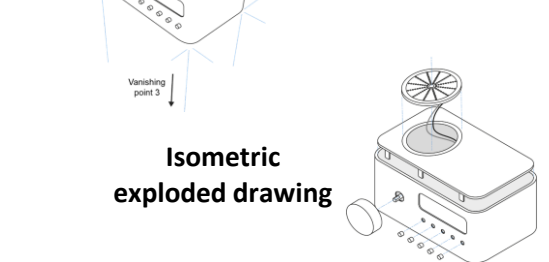
1 point perspective



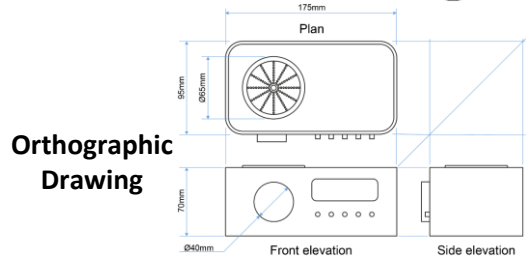
2 point perspective



3 point perspective



Isometric exploded drawing



Orthographic Drawing

Systems Diagrams

This is a graphical representation of a process. input, output process etc

Working Drawings

Working drawings give technical details to enable a product to be manufactured

Mathematical Modelling

The process of design often entails using some maths eg. Amount, weight of material

Prototypes

A prototype is a preliminary version of a product