

# CHAPTER 02

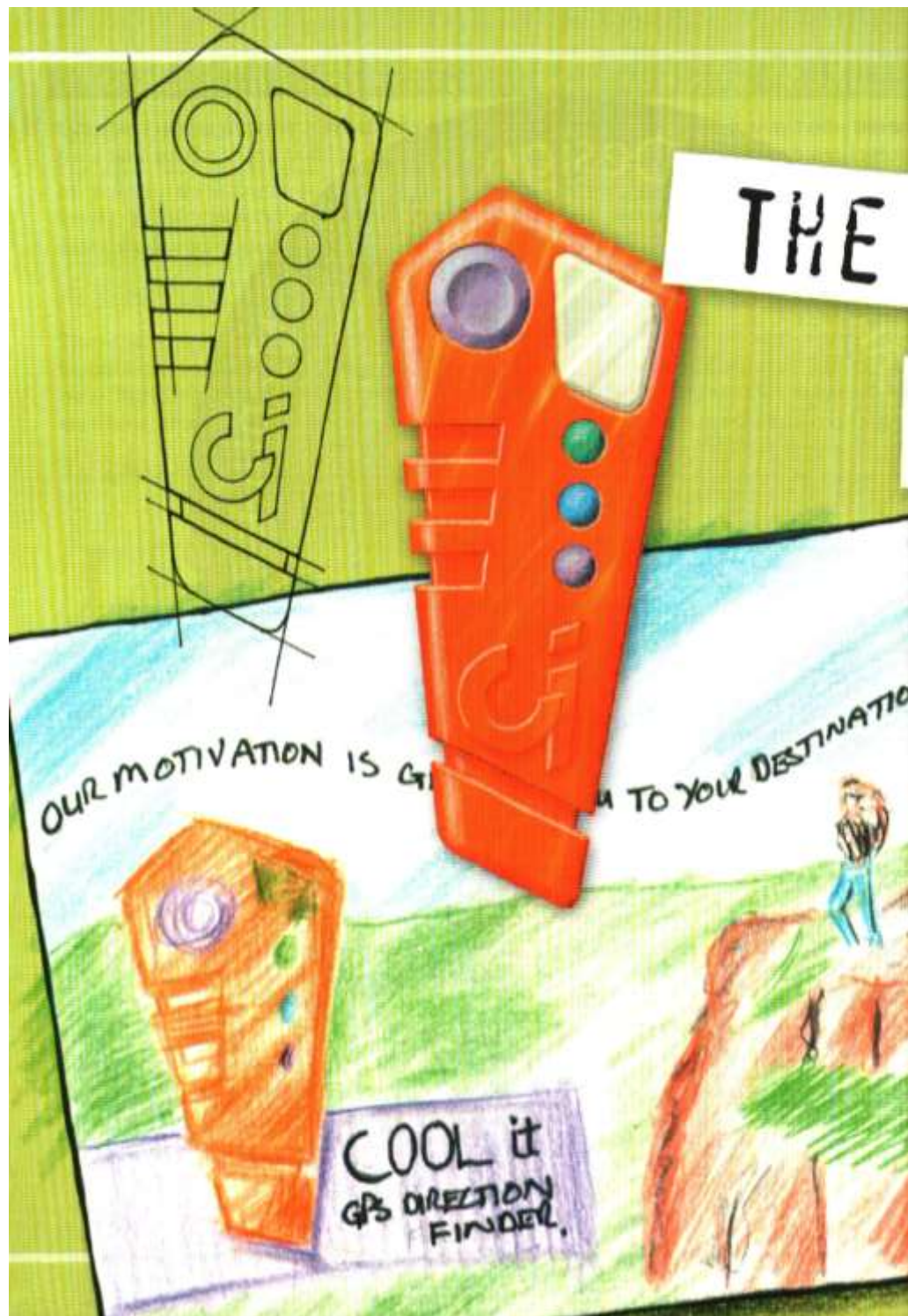
## THE 3PS | PRELIMINARY

## PRODUCTION AND

## PROMOTION

### WHAT YOU WILL LEARN

- **The importance of graphics**  
graphics worldwide • in industry and construction
- **The 3Ps**  
preliminary • production • promotion
- **Selecting the right type of graphic**  
manual • CAD • what to use and when



## THE IMPORTANCE OF GRAPHICS IN SOCIETY

Graphics have many purposes and functions. They can be used for entertainment – in video games for example – or they can be decorative, such as in posters and pictures.

Perhaps the most important use of graphics is in industry and construction. The success of these graphics helps determine the success of products we use, the buildings we live and work in, the comfort and entertainment we enjoy and our safety when we are doing these things.

Graphics are a central part of developing new products. Everything, from mobile phones to cars and aeroplanes, requires a range of graphics before it can be designed and built. Construction depends on graphics to ensure buildings are functional, attractive and safe.

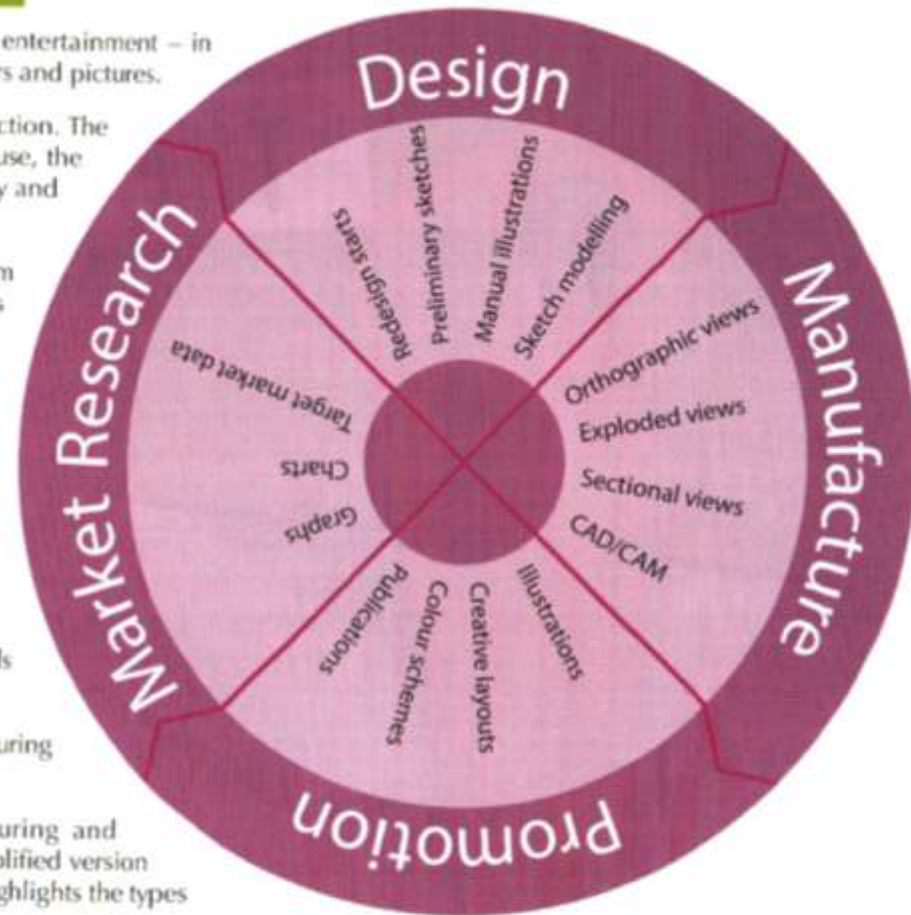
The Graphic Communication course looks at the importance of graphics in design, manufacture and construction. It covers the full range of graphic styles, from preliminary design sketches to dimensioned production drawings and the illustrations and publications that we use to promote new products.

Graphic communication has become even more important with increased trade, construction and manufacturing around the world. Graphics help break down language barriers, and international standards have been devised to ensure a common understanding worldwide.

Computer graphics are now central to any modern design and manufacturing process and this topic will be explored fully in this book.

In manufacturing industries, the design, development, manufacturing and marketing of a product follows a cyclic path. The diagram shows a simplified version of the four main stages in the design and manufacture of a product. It highlights the types of graphic that are important at each stage.

We are surrounded by promotional graphics in our daily lives, yet there are sketches, drawings, charts, graphs and computer-generated models that go largely unseen. All of them are vital to industry and construction and an important part of our lives.



"IN ORDER TO CARRY A **POSITIVE ACTION**

WE MUST

DEVELOP HERE A **POSITIVE VISION.**"

Dalai Lama

# THE 3PS | PRELIMINARY, PRODUCTION AND PROMOTION

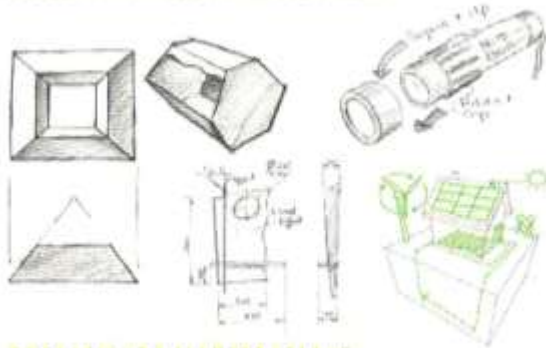
Graphic communication is all about communicating information. This may be in the form of a design idea for a new product, or a building plan for a new house, or a poster for use in a marketing campaign.

In industry, there are three main types of graphic that are used to present this information and these are known as the 'three Ps': preliminary, production and promotion. They each have a specific purpose. You will learn about each type below and you will also produce graphics of each type during your course.

## PRELIMINARY GRAPHICS

These are sketches, illustrations and thumbnail layouts used at the design stages of new products, new buildings and new publications. Skills in sketching, drawing and rendering are important.

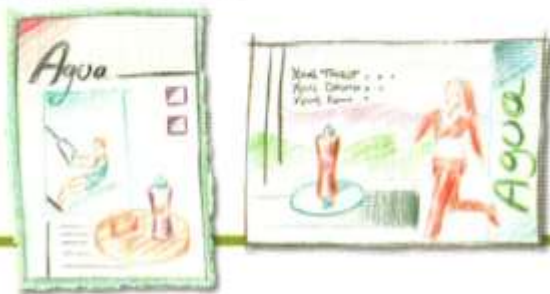
### PRELIMINARY DESIGN SKETCHES



### PRELIMINARY ILLUSTRATIONS



### PRELIMINARY LAYOUTS



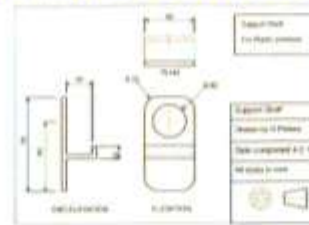
## PRODUCTION DRAWINGS

These are drawings that include dimensions and technical detail so that products can be made and buildings constructed. Types of production drawings include: dimensioned orthographic views, exploded drawings, sectional views and surface developments. They are normally drawn to scale and always conform to drawing standards.

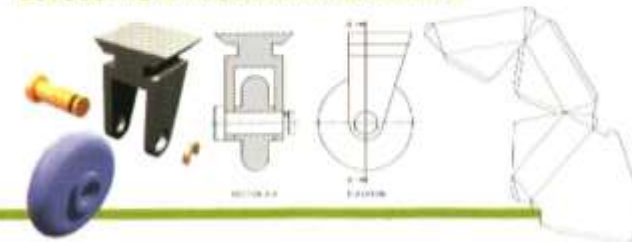
### PRODUCTION DRAWINGS FOR CONSTRUCTION



### PRODUCTION DRAWINGS FOR MANUFACTURE



### EXPLODED VIEW, SECTIONAL VIEW AND SURFACE DEVELOPMENT PRODUCTION DRAWINGS



## PROMOTIONAL GRAPHICS

These are graphics and documents that are used in advertising to promote a product. Promotional documents often include an illustration with text and a background. The layout is carefully planned to create visual impact and is designed to appeal to a specific target market. Examples of promotional graphics include: illustrations, posters, brochures, booklets, banners, billboards, graphs and charts, and web pages.

### PROMOTIONAL ILLUSTRATIONS



### PROMOTIONAL PUBLICATIONS: BROCHURE, POSTER AND GRAPHICS



## WHICH TYPE OF GRAPHIC TO USE AND WHEN

## PRELIMINARY GRAPHICS

	Sketches, illustrations and thumbnail layouts
<b>Benefits</b>	<p>They are: quick to produce.</p> <p>They are a good way of recording ideas or designs.</p> <p>They are a good way of developing design ideas.</p> <p>They can be produced using cheap equipment: pencil and paper.</p> <p>They can be quickly annotated to add information.</p> <p>They are useful when communicating ideas to a client or colleague.</p> <p>They can be easily produced 'on site'.</p> <p>They form the basis for production drawings or DTP work.</p> <p>The quality of the graphic is not as important as the clarity of the graphic and the information it conveys.</p>
<b>Disadvantages</b>	<p>They are not normally drawn to scale.</p> <p>They are not normally dimensionally accurate.</p>

## PRODUCTION DRAWINGS

	Dimensioned orthographic views, exploded drawings, sectional views and surface developments
<b>Benefits</b>	<p>They are important when component parts are to be manufactured.</p> <p>They can show how components are assembled.</p> <p>Technical details can be shown using a number of drawing types.</p> <p>They can be easily dimensioned.</p> <p>The drawing standards used are now worldwide standards.</p> <p>They can be understood by all users, regardless of nationality or language.</p> <p>They are accurate.</p> <p>They are drawn to scale.</p> <p>A library of reuseable parts can be built up.</p> <p>Electronic production drawings can be used to control manufacturing machinery – computer-aided manufacture (CAM).</p> <p>They are useful when surface developments are required to make packaging or panels for car bodies, for example.</p> <p>They can be used in promotional documents and animations to show customers how parts assemble or the floor plan of a new building.</p>
<b>Disadvantages</b>	<p>Training or knowledge is required to produce them: drawing standards have to be learned.</p> <p>They can be time-consuming to produce.</p> <p>Costly specialist equipment is required: drawing boards and tools, or computers and appropriate software.</p>

## PROMOTIONAL GRAPHICS

	Illustrations, posters, brochures, booklets, banners, billboards, graphs and charts, web pages and animations, etc.
<b>Benefits</b>	<p>They can appear 'less technical' than production drawings.</p> <p>They tend to be more easily understood than production drawings.</p> <p>They can be made to look more realistic than production drawings.</p> <p>They can be used in promotional documents or videos.</p> <p>They can show the customer what the product or building will look like.</p> <p>They may be placed in a virtual environment to enhance realism.</p> <p>They can have materials and lights applied to create visual impact.</p> <p>They can be animated to create visual appeal.</p> <p>They can be styled to appeal to a specific target market.</p> <p>They can be made to look attractive in order to help sell the product.</p>
<b>Disadvantages</b>	<p>They require skill and knowledge to produce.</p> <p>They can give a false impression of the product.</p> <p>You can't physically handle a rendered model.</p>

## MANUAL OR ELECTRONIC METHODS?

### METHODS OF PRODUCING GRAPHICS

The two main methods of producing graphics are:

- manual methods (creating graphics by hand)
- electronic or digital methods (creating graphics using a computer).

Each method has its advantages and disadvantages. You will be asked about these two methods in the course exam. The tables below highlight some of the important differences between the two production methods.

**"GOOD DESIGN IS OBVIOUS.  
GREAT DESIGN IS TRANSPARENT."**  
Joe Sparano

Manually produced graphics		Digitally produced graphics	
Advantages	Disadvantages	Advantages	Disadvantages
<p>They can be produced using <b>inexpensive equipment</b>: drawing board, pencil and paper.</p> <p>Manual drawings and designs are not prone to <b>'hacking' crimes</b>.</p> <p>Manually produced graphics that are produced 'freehand' are <b>quick</b> and <b>immediate</b> way of <b>recording ideas</b> or <b>designs</b>.</p> <p>They can be easily produced <b>'on site'</b>.</p> <p>They are useful when <b>communicating ideas</b> to a client or colleague.</p> <p>There is no risk of loss because of corrupted files or computer crashes.</p> <p>They form the basis for production drawings or DTP work.</p>	<p>Each graphic must to be <b>drawn separately</b>.</p> <p>Extensive <b>modification can be difficult</b>, resulting in a complete redraw.</p> <p>They can take up lots of <b>storage space</b> compared with electronic methods.</p> <p>They <b>cannot be sent electronically</b> without digitising them.</p> <p>It is generally <b>slower</b> to produce drawings manually.</p> <p>They <b>cannot be used to control</b> manufacturing machinery.</p> <p><b>Accuracy</b> depends on the skill of the drawer: there is no <b>zoom-in</b> command to aid accuracy.</p> <p>Manual graphics are normally <b>produced on paper</b> which makes demands on the environment.</p>	<p><b>Drawing Standards</b> can be set in advance to ensure that the correct standards are applied each time.</p> <p>CAD drawings are <b>easily modified</b>, saving both time and cost.</p> <p>High accuracy is achieved by using the <b>zoom-in</b> command.</p> <p>Enlarged views can be created without drawing them from scratch.</p> <p><b>The speed of drawing</b> is high because of the <b>grid</b> and <b>snap-to-grid</b> commands.</p> <p>A <b>CAD library</b> can be set up so that commonly used parts can be dropped into the drawing without having to be re-drawn each time.</p> <p>CAD drawings can be built up in <b>layers</b>, making the drawings easier to understand when they are viewed (see pages 74 and 115).</p> <p>Features such as <b>scales</b> and <b>orientation</b> can be set up and changed easily.</p> <p>Drawings stored digitally take up very <b>little physical storage space</b>.</p> <p>CAD drawings can be used to <b>control computer numerically controlled (CNC) machines</b>, making manufacturing quick and accurate.</p> <p>CAD files can be emailed to customers and colleagues around the world.</p> <p>CAD models can be <b>realistically rendered</b> for use in promotions layouts.</p> <p>CAD models can be <b>animated</b> and used in promotional videos.</p> <p>CAD models can be <b>tested</b> to ensure the designs work before the physical product is made: this saves time and money.</p> <p>Working digitally can help <b>reduce</b> the amount of paper used.</p>	<p>Initial <b>investment</b> in computers and software is required.</p> <p><b>Training</b> is required whenever new software is introduced.</p> <p>Computer systems can be a target for <b>industrial theft</b>.</p> <p>A <b>computer virus</b> can cause loss of data.</p> <p>Computer systems require electricity to work: a <b>power cut</b> will shut down the system.</p>