GRAPHIC TYPES & TECHNIQUES

Use of 3D CAD, Animation, 3D Printing, CNC applications

3D CAD

Audiences: Designers (product, interior, landscape etc), Architects, Engineers (mechanical, civil, naval etc), Bio-medical industry (prosthetics, dentistry etc), Games Industry. Clients.

Purpose: Engineers and designers can create a digital prototype to experience their 3D CAD designs virtually, before they're built. It gives them an integrated way to explore a project's key physical and functional characteristic's digitally. FEA and CFD testing. Virtual walk-through. Creation of production drawings and files for CNC manufacture.

Benefits: Digital Protoyping solutions let teams test and optimise 3D CAD designs, helping to drive innovation, achieve higher quality and speed time to market.

3D PRINTING

Audiences: Product Designer, Architects, Engineers (mechanical, automotive, aerospace etc). Bio-medical industry (prosthetics, dentistry etc). Fashion designers.

Purpose: Allows designers and engineers to quickly create physical prototypes to test a project's key physical and functional characteristics or component assembly. Used to manufacture bespoke (one off) products, eg medical/dental prosthetics. Used to mass produce components which are lighter and stronger than other methods, eg aerospace components.

Benefits: Ability to personalise products / levels of complexity that simply could not be produced physically in any other way / design faster and be more innovative / product development time reduced (no expensive tooling or moulds required) 3D scanning can replicate complex objects.

CNC APPLICATIONS (SIMULATION)

Audiences: Designers and manufacturers who use subtractive (cutting) methods to manufacture components. (Eg. Laser or Vinyl Cutters, Routers).

Purpose: To simulate/test in a digital environment the set-up and cutting of a component before production commences.

Benefits: Allows you to see the toolpaths. Visualise the resulting component. Collision detection prevents catastrophes. Speeds up product development time.

ANIMATION

Audiences: Medical professionals or their patients. Forensic scientists. Architecture clients. Teachers and learners. Product designers and engineers.

Purpose: Medical animation as an instructional tool. Forensics in which animation recreation of incidents are created to aid investigators & help solve cases. Used to explain theory and concepts to students in a more convincing manner.

Benefits: Cutting down on development costs. Working in a virtual world can let developers eliminate problems that would normally require extensive physical test models & experimentation. Training packages can eliminate language barriers.