



patent plan

prototype service

**Our Prototype and Engineering Design Centre
for inventors and small companies**

Guiding you through the complex process of innovation
with practical industrial design advice based on
experience to develop your idea from concept to
drawing, prototype or production

Our Prototype and Engineering Design Centre (PEDC)

Background

Taking a new product, such as a new invention or design, from conception to manufacture, and then to the market, is a complicated and vastly underestimated process. It requires a knowledge of a number of different disciplines. A key component is industrial design.

The product needs to be designed not only from an aesthetic point of view but also to make it manufacturable and at a favourable cost. Choosing the right materials, manufacturing process, making the product function properly, and look right, are all part of this exercise, and making an error in the early stages can prove a costly mistake.

PEDC have designed a tried and tested formula to take you down a logical Industrial Design path to help make your product a success.

The method

Before we commence work we usually require an in depth meeting with any potential client where we discuss not only the product but, just as importantly, the commercial objectives. For example at small start-up company might wish to choose a low cost manufacturing process albeit with a product cost penalty to test the market, whereas an existing company may wish to invest in expensive tooling at the outset to obtain an immediate benefit in cost. Another client may be looking to licence the product to an existing manufacturer. These factors would influence our work.

The first stage (CONCEPTS) is to examine a number of different design concepts (usually 2D sketches hand or computer generated) which might be acceptable, and come up with a number of outline drawings for discussion. From these one is then selected as a final concept design option to move forward with.

This process of examining the various design options at the outset is vital so that one can always be confident at a later date that there is not a better alternative design to the final design selected, and also to be confident of the reasons for selecting the final design.

The second stage (IDGA) is to take the final concept design and draw what is known as an Industrial Design General Arrangement drawing(s) (IDGA). This is an outline design of what the product would look like and include all its functions. This is usually a 2D drawing in CAD.

This drawing(s) can be used, initially, for market research purposes to ascertain views on the final design, and outline costings for the eventual manufacture of the product. The IDGA drawing may be modified based on any feedback obtained on the final design.

The third stage (BLOCK MODEL - optional). In some circumstances it can be desirable to produce a block model of the design. This can be used for example to undertake market research, to prove a principle without the expense of a full prototype, or finalise aesthetic shape.

The fourth stage (PROTOTYPE DRAWINGS) is to convert the IDGA into a detailed engineering prototype drawing or 3D CAD drawings suitable to make a prototype. Costings can then be obtained for the production of a prototype.

The fifth stage (PROTOTYPE MODEL) is to have a prototype made. This can be used for market research purposes, pre-selling the product, licensing the product and obtaining more accurate manufacturing quotes.

The sixth stage (MANUFACTURING DRAWINGS) is to create a final manufacturing drawing(s). This usually requires collaboration with a manufacturer and/or tool maker.

As the above method is divided into a series of distinct stages, our clients are always in control of the costs. Our client can also choose not to complete all the stages. For example one may follow the stages just through to an IDGA or perhaps a prototype, e.g. in order to raise funds to take the new product through to manufacture or licence the product.

Each stage is performed only after a meeting with our clients.

Clients are always provided with quotes before work is commenced. In some instances, our clients have raised finance to cover our costs through a DTI grant.

Note

When producing a prototype of a product, one is producing a product which has never been made before. This inevitably means that unforeseen issues can arise, which may result in re-scheduling. Also PEDC is responsible for designing a new product and project managing its development, but the actual fabrication of a prototype is usually sub-contracted in good faith to a manufacturer not part of PEDC and this can sometimes lead to issues beyond PEDC's control. All quotes and delivery schedules are made in good faith, but all work is subject to our published terms and conditions available for inspection on request. It is recommended that no contractual obligations are entered into before delivery of a prototype.

The Team



Kit Grundy managing director

Kit Grundy founded our sister company patent plan in 1993 and is also Managing Director. Kit spent seven years working for a leading London firm of Patent Agents and European Patent Attorneys. He then founded a unique service in 1982 to help inventors and small companies license their ideas to industry in the UK and overseas. He is a Director of several other companies. His interest in promoting UK innovation and understanding the problems of producing prototypes has led him to start this unique service.



Graham Thomson design director

Born in Scotland and after achieving a BSc in Industrial Design at Napier in Edinburgh in 1979 and becoming an MCSD, he has spent the last 25 years as a designer/design director in leading industrial design consultancies; Ogle Design, Loewy International and Michael Peters. In 1987 he co-founded his own consultancy, Product first Ltd. He has been responsible for award winning, ground breaking and commercially successful projects from concept to manufacture in International markets including mainland Europe, Scandanavia, America and the Asia Pacific Basin. These have ranged from transport, small and large consumer/capital goods, medical and structural packaging, for companies which include Shell International, Unilever, Kango, Racal, 3M, The inventor, Apple, Ross, and Jaguar. Has been involved in lecturing, research studies and sat on consultative panels for education, government bodies and businesses on all matters pertaining to new product development.

He takes an idea and injects analysis, functionality, aesthetics and ergonomics, integrated with engineering, production methods and materials to produce a truly creative sustainable marketable solution

Our Patent Service

patent plan also provides a minimal cost, personalised service offering patent assistance to inventors and small companies to protect inventions.

Contact us for a brochure on our patent service at the address below.



The Innovation Centre, The Willows, Main Road, Fishbourne, Chichester, West Sussex PO18 8AX

Tel/fax 01243 576075 E info@patentsandprototypes.co.uk

www.patentplan.co.uk

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