

IDC  
forty years in the making



By Mike Woodhall, Chairman, and Stephen Knowles, Managing Director, at IDC

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**Industrial Design Consultancy (IDC) has just celebrated its 40th year of business. IDC's founder and chairman, Mike Woodhall, speaks about the fascinating history behind the company and design trends as it has moved from age to age. Looking to the future, IDC's MD, Stephen Knowles, discusses where the industry is heading and what he believes are the key opportunities and challenges for the future.**

1972. Three years after the BBC begins broadcasting in colour, big boxy colour televisions are starting to appear across the country. The Volkswagen Beetle is the most popular car ever sold and Atari launches the first video game to achieve commercial success. Digital watches are introduced this year and the first scientific hand-held calculator is available at an astronomical price. This is the year that it all started for IDC.

In 1972, working as Head of Audio Design for GEC, Mike Woodhall was busy supporting the expansion of the brown goods market to meet the demand for colour televisions and audio equipment. This role meant that he was constantly making new contacts and he was soon approached by an American company, Datacard, which asked if he would consider working for them as an industrial designer for two days a week. Accepting this role, he was offered a perfect opportunity to set up a company; freeing up another three days a week for other projects. These projects soon turned full-time and Industrial Design Consultancy was born.

Initially, IDC operated out of Mike Woodhall's home in Maidenhead, where he had set up a studio. As the contracts continued to roll in, more staff were required and space became an issue.

Mike explains, “These were the times when designs were drawn by hand. Concepts were created by pen and pencil on paper using A0 drawing boards, and plan chests of a similar size were used for storage. The design cycle was much slower and space was at a premium. The model making process also had similar constraints; what can be made in a matter of hours now by rapid prototyping and the use of CNC could take weeks to handcraft, and this process also demanded considerably more space than today.”

The need for space brought about IDC’s move to Datchet. The company initially worked from two houses with a commercial entrance on Datchet High Street. One building was converted into a design studio and the other, located over the street, was used as a workshop for model making. During this time, IDC was operating as three separate businesses, with specialisms in product design, graphic design for signage, and electronics for the reading of bar codes for companies such as Woolworths, BHS, Top Shop and BT. In these early years, the team took on many different projects and soon each business area was building its own reputation following the successful outcome of each project. Clients were repeatedly coming back with new work, but Mike Woodhall was conscious that each business was growing independently and he wanted to maintain focus. A decision was made to concentrate on the product design business and the graphic design and electronics businesses were closed. At this point IDC took on a similar structure to the company of today, with IDC for industrial design and engineering and its separate model making division, IDC Models.

At first, IDC’s core business was a mix of domestic appliances such as irons, kettles and cookers, but the technology soon shifted to computer control equipment. IDC’s landmark project came a few years into the company in 1975, when it produced the industrial design concept for a Crosfield 550 Scanner. This was a high value scanner that was almost revolutionary in the print industry, long before the time when Apple Macs and PCs were able to handle imaging. It was the world’s first computer controlled digital scanner with the colour separation and correction process both performed by the computer. The success of this project earned IDC its first award

and the company went on to handle other high profile projects with a technological bias, such as money dispensing and sorting machines for De la Rue and credit card machines for Rapid Data, as well as an international project to develop a lottery ticket machine to be used by the French lottery. IDC then went on to earn a second design award (from the American Electronic Association) for designing a PCB printer for DEK.



Typical 1970s project

Mike Woodhall believes his team had the ideal skills for the design industry at that time; “Technology was taking off and we had a great team of designers, engineers and electronics specialists. Together we were able to simplify complex problems and use our experience to engineer unique solutions. We were also very adept at designing around patents and coming up with new concepts of our own or for clients. This is still a key part of IDC’s success today.”

At the end of the 70s and early 80s IDC was developing as an international design consultancy. It established clients in India, which had international trade barriers at the time. Here, IDC acted as product designers to plastics manufacturers, Shaily Plastics and Indian domestic appliance

giant, Godrej. Godrej had lost its competitive edge and IDC stepped in to help transform the company's refrigeration business. In fact IDC helped them develop the most successful fridge they had ever had - by reducing components and cost, and tailoring the design to the specific needs of the market, as well as raising overall quality. Godrej also contracted IDC to act as trainers to their in-house designers, which meant long sessions working alongside Godrej's team in India to introduce them to IDC's design methods. Business spread by word of mouth and soon IDC was handling similar projects to develop air conditioning units in Saudi Arabia and plastic designs for the kitchen, including a unique design for an in-sink dishwasher.



IDC helped Godrej transform its refrigeration business

IDC also established strong links with suppliers abroad. The team had particularly strong contacts with toolmakers in Portugal, which at the time had the best facilities in Europe. Good relationships with toolmakers and moulding contractors also brought new business through recommendation and soon IDC's business grew to a 60-strong team. In 1985, to accommodate



IDC's growing business, the company moved to its current site in Datchet, with studio, offices and modelling workshop all under one roof.

By the early 90s computer technology was streamlining design processes. A combination of increased computer processing power and new 3D modelling and illustrator software meant that the design world was changing rapidly. This was a significant milestone for IDC; it had to adapt its whole business to take advantage of the CAD technologies that were available. The business changed significantly; going from low overheads to a high capital base as IDC purchased the latest computers and design software. Meticulous drawings and lengthy calculations by hand were suddenly a thing of the past as sophisticated software was able to make calculations such as volume and material density in an instant. IDC Models also changed dramatically as technology improved, bringing CNC machining and Stereolithography (SLA) rapid prototyping machines. The digital revolution brought new benefits to clients as it was possible to reduce the time to market for product development, and with this came cost benefits too, but high quality project management was more essential than ever.



Early design software at IDC

There were teething problems with this new technology though, as Mike Woodhall recalls, “At the time, the software developers were all fighting to dominate the market and product designers often ran into issues of software compatibility. Projects ran smoothly as long as everyone used the same software, but inevitably there were occasions when this wasn’t the case and then the technology was quite an obstacle. To overcome these problems IDC used three or four different software systems, to ensure we could always fit in with clients.”

Throughout the 90s IDC continued to pull in some major contracts. Working for Kelvin Hughes, IDC designed a high-tech control unit for the QE2 which won several design awards. This was followed by a digital cinema projector which was eventually purchased by a Japanese electronics company. One of the biggest projects to date came in the form of a sophisticated drinks vending machine for Mars KLIX, which required considerable resources from IDC and its modelling division, IDC Models.



Drinks vending machine that IDC developed for Mars KLIX

Since IDC's launch in 1972 Mike Woodhall believes there has been a distinct pattern to IDC's projects, "The company has seen waves of different design trends, influenced both by technology and the economy. The 70s brought many domestic projects, despite economic difficulties as new technologies were developing and products could be mass-marketed. IDC was fortunate to have a team with the right expertise throughout the 80s as computers were taking off and products were becoming influenced by electronics. This is when IDC really started to gain momentum and by the 90s we had an excellent reputation for combining design appeal with leading edge technology."

Stephen Knowles took over as Managing Director in 2006, when Mike Woodhall sold the business and remained in the supporting role of Chairman. At the same time IDC's business began to take off in the medical products sector, with medical clients returning repeatedly for new projects. IDC has developed numerous award-winning products for British manufacturers. It has also achieved success internationally working for companies such as medical giant FOOSIN and Shenzhen XFT in China, and Wockhardt in India. Products have ranged from insulin pens and inhalers through to surgical equipment including a ground-breaking laryngoscope, suture dispensing systems and complex medical systems such as heart monitors and a blood analysis system.

Over the same period, IDC has also kept up its reputation for industrial and consumer product design. The availability of exciting new composite materials meant that IDC was able to develop technologically challenging products with aesthetic appeal and with sustainability in mind. One product developed by IDC which represents the innovative, inventive nature of the team, is the Phillips Helmet. Stephen Knowles summarises, "This is a motorcycle helmet inspired by a doctor who came to us with specific ideas about a new helmet that could help prevent brain injuries. Head rotation is the greatest cause of head injury for motorcyclists in road accidents and IDC used this knowledge to design a helmet with a clever outer skin that was able to reduce head rotation in accidents by up to 50%. The helmet went on to win several awards."

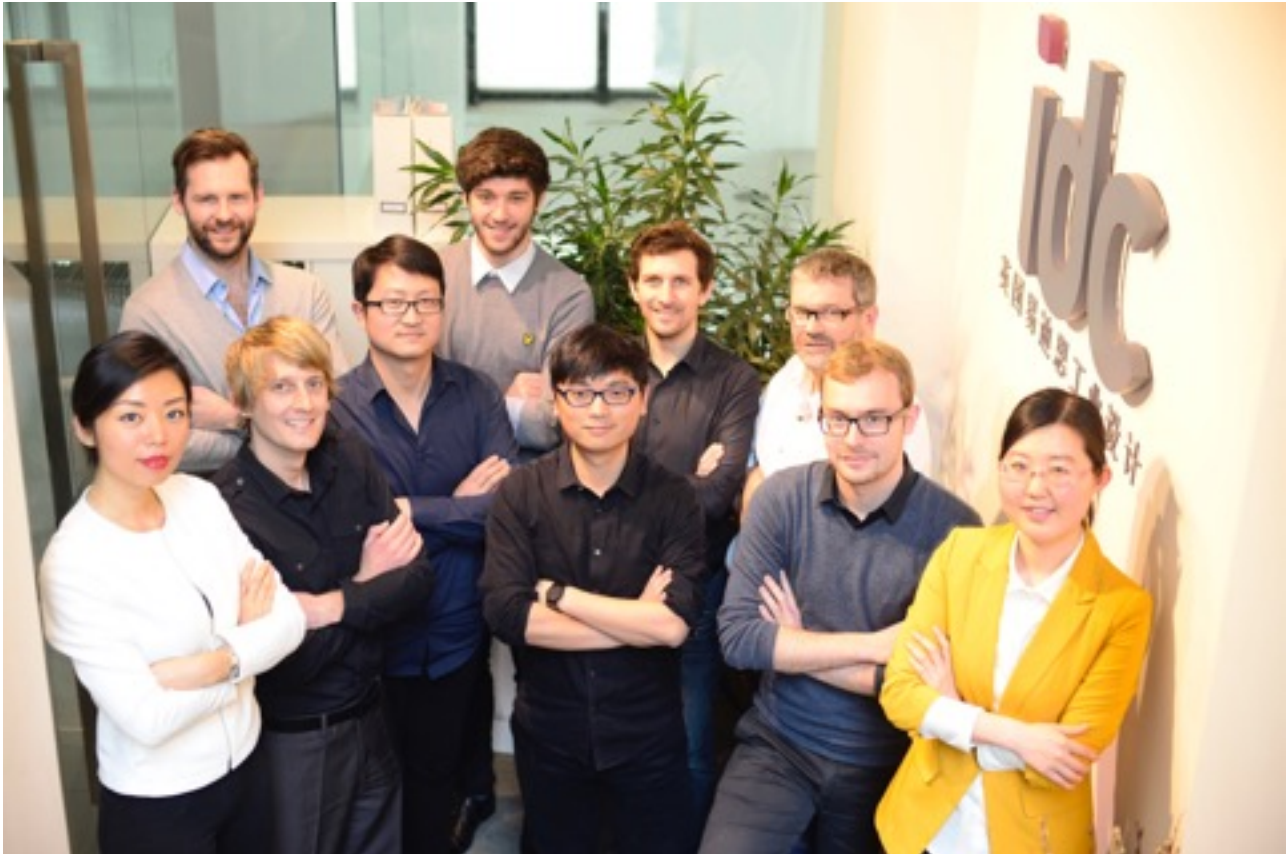




One of IDC's recent award winning medical products, a laryngoscope developed for Venner

Perhaps one of the strongest qualities of IDC today is its ability to design products for a sustainable future. In 2008, the company employed a dedicated sustainable design expert, who implemented a new system to build sustainability into the design process. This system was so successful that IDC used it as a basis to develop its own software product, the LCA (Lifecycle Assessment) Calculator, for analysing sustainability at all stages of design, which it now sells to customers. This software is being used by all types of organisations, from big automotive companies such as Jaguar Land Rover to small design consultancies and academic institutions.

As well as being one of the first design companies to introduce sustainable design, IDC has also been quick to recognise the opportunities for designers in China. Stephen Knowles explains, “As a country, China’s reputation has been as a manufacturer. But we recognised a growing opportunity for input from western product designers, like IDC, to create designs specifically for the Chinese market. China is keen to become an innovator in its own right.”



In 2010 IDC opened offices in Shanghai, bringing staff from the UK and employing locally. Although only two years in, the business has already doubled in size.

Identifying potential opportunities and threats has always been important to IDC and as part of IDC’s 40th anniversary celebrations it organised a special workshop for clients to come together and discuss what they believe to be the key opportunities and challenges for their products in the future. The outcome was fascinating, with issues of globalisation rating highly as both an opportunity and a concern; with higher customer demands and product expectations globally; issues of copycat technology (several clients having already experienced this); issues of product usage affecting reliability when used in countries without high training standards; regional supply and support; as well as other general issues such as meeting international legislation and

quality standards. Clients also felt that transfer to manufacturing was a significant challenge for them, with a wide variety of issues cropping up when production starts. This is an area that IDC had previously identified as being a concern and now offers a range of 'design to production' services to support clients.

Despite the recent economic downturn, IDC has had an impressive two years in the run up to its 40th anniversary. It has received no less than four design awards (BEEA, Green Award, Red Dot Award and China Red Star Design Award) and unlike many in the industry, IDC is still expanding with new senior members of the team, as well as the launch of a graduate training scheme to attract Britain's best design talent.

Stephen Knowles is delighted to have achieved so much, but is always keeping an eye to the future: "We've had such an outstanding few years counting down to our 40th anniversary, which proves the top quality of our team. But as we celebrate, we have have taken time to reflect on the needs and issues of clients, so that we can focus on the future with clear direction and ensure our progress is dynamic, leading-edge and tailored to the needs of business."

**This article was written shortly  
before the death of Mike Woodhall  
(on June 8th 2013), who was  
previously Chairman of IDC.**

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