



E3DESIGN

Portfolio 2023

www.e3design.co.uk

**PRACTICAL *SOLUTIONS*
TO SEEMINGLY
IMPOSSIBLE PROBLEMS**



E3Design has a wealth of experience in Consumer Product, Structural Packaging, Medical, Lighting, Industrial, DFM and even Fashion. This variety of experience allows us to better inform all of our work while still maintaining fresh and creative ideas.

We have an innovative and creative design team with a proven record of delivering products. Our designers have specialist skills in product, industrial design and development, with particular skills in design for plastic injection moulding and high volume manufacture.

We design products like nobody else. You can trust that from concept generation through to DFM, our expert team are the best because design-to-manufacture is what we do.

Richard Parker
Managing Director

Peter Angus
Technical Director

Phillip Upton
Financial Director

Marc Holliday
Design Manager

ABOUT



Along with our many years of experience, comes a vast amount of technical knowledge.

At E3Design, we are not only equipped to offer creative design services we also boast abilities in Prototyping, Tooling and Support, FEA and Product Analysis as well as having the capabilities to offer CAD Engineering Support.

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E3Design would like to thank all of our clients for their business and for permission to use their images and brands in our portfolio.

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TOMMEE TIPPEE®

Design Development, DFM, Aesthetics, Intellectual Property

E3Design was selected by Tommee Tippee® to help design and develop a new range of children's drinking cups and a unique, patentable non-spill valve. The new non-spill valve had to be innovative and exclusive to Tommee Tippee®: non spill, easy drinking was a priority. The patented valve is used across a wide range of non-spill cups.

The aesthetic designs were created to evolve the already strong visual appeal found across the current range. The designs have a sense of personality and character, almost giving the cups life like qualities. The new range also visually grows up with the child, the sporty and insulated cups have similar styling cues to the weaning cups with an extra element of excitement for independent kids.





TALON

OJEE TALON

Design Development, DFM

Anyone who has played golf will know that it can be a frustrating game at times. One day you are finding it impossible to hit a bad shot and the next it's impossible to hit a good shot. What's changed? Ojee Golf approached E3D with a concept for a new training aid to help with this very problem. The Talon is a revolutionary device that gives you real-time visual feedback on your angles of address. This improves your chances of repeating that perfect shot.

Working to a short lead-time, E3D worked closely with Ojee Golf and their electronics supplier on the initial concept to ensure we had the right technical approach. The size of the device was critical and a lot of effort was made to ensure the device was as small as possible. Having agreed many details early on we were able to rapidly progress the design to a production ready level and meet the deadline for Ojee's important trade shows.





LIFESAVER: JERRYCAN

Design Development, DFM, Aesthetics, Prototyping, Testing

The Jerrycan is one in a range of products we have developed for Lifesaver Systems and has the ability to provide 40,000 litres of safe drinking water capacity while being robust enough to be drive a Land Rover over.

The final execution is an example of how a primarily functional design can create a strong structural brand image.

The cross marks allow strapping to standard military vehicle mountings for transportation, the additional diagonal marks allude to British design and manufacture, a key marketing target for our client and the bold round edges provide strength to the unit as well as creating a rugged appearance.





iEVO

Design Development, DFM, Aesthetics, Prototyping, Tooling



From a small Government seed funded project managed by the Design Network North initiative to assist start-ups and SMEs with design led projects iEvo has grown into a dynamic and successful business.

We have designed a whole range of biometric fingerprint readers that feature class leading fingerprint recognition technologies, software and hardware to integrate into all major security and access systems. E3D supported iEvo in the design, development, tooling and manufacture of their products.

On the strength of the first product's success iEvo's business has grown with more new products launched. iEvo's products are now available in the UK, Europe, US, South Africa, Mexico and Asia, with plans for further worldwide sales and new products in the future.





LIFESAVER: BOTTLE

Design Development, DFM, Aesthetics, Prototyping, Testing

The concept for the Lifesaver bottle was developed after seeing the tragic waste of life and serious problems caused by the lack of safe drinking water in the wake of the Tsunami in December 2004 and the following year with Hurricane Katrina.

Lifesaver Systems commissioned E3Design to develop the product from a bench rig into a consumer ready production solution.

The unit had to be simple, portable, robust, pressure tight and serviceable. Lifesaver bottle is the world's first all-in-one ultra filtration water bottle to remove all water-borne pathogens. E3D designed all of the plastic parts in the Lifesaver bottle, working closely with a local Injection moulding company to provide a complete manufacturing solution.





CHRISTOPHER KANE

Design Development, DFM, Fashion Design, Prototyping

'Can you make rubber lace?' This is the question we were asked by fashion designer, Christopher Kane.

From this conversation we worked with his fashion concepts to create individual accent pieces and accessories for several collections. Each design is individual and amazing. Our challenge was to take Christopher's vision and convert it into a manufacturing solution while retaining the beauty and originality of the initial concept.

We pushed our suppliers to the limit and worked with them to adapt processes to manufacture and finish batches of catwalk quality parts. With garments at this level there can be no room for any quality issues, each part is a work of art in its own right.





GEORDIE GIN

Graphic Design, Design for Print, Technical Support

Geordie Gin Co. approached E3Design to aid them in producing their bottle design for their original gin. This unique gin was formulated and produced on Tyneside. Taking as its theme the traditional colours of the area - black and white, this is a gin that is high-quality with the heart of the north east!

E3D were supplied with an illustration and graphics which we then re-worked accurately to fit the bottle dimensions for production. With the gin market currently booming, we wanted to create a high quality finish that would help Geordie Gin stand out amongst the crowd.





OGEL

Design Development, DFM, Prototyping



OGEL is a brand new building system. Simple, fast, light, reusable and made from recycled materials.

Co founder of OGEL, Gary Giles, came to E3Design with an idea and a question, how do you build a life-size, watertight wall without using something to glue or hold parts together?

Not ones to turn down a challenge, E3Design took on the task and the end result was a successful design of a product that could build walls with no connectors or joining agents.

The product can make corners, fit windows and doors, is able to be filled with everything from concrete blocks to batteries and also has the ability to run cables and pipes unobstructed through the walls, all of which can be finished off with attachable roofing and flooring.





GHANASAN

Design Development, DFM, Tooling, Production

The Ghanasan project is a collaboration between Unilever, Water and Sanitation for the Urban Poor (WSUP), and IDEO to develop new products and services for in-home sanitation in Kumasi, Ghana.

The project aims to address the barriers that prevent 1 billion people in urban areas from accessing adequate sanitary facilities. These include insecure or non-existent land tenure, cramped living conditions and poor access to finance.

Taking the initial proposed design concept we developed the toilet product into a low cost manufacturing solution. Using our supply chain in the Far East we supplied injection and blowmold tooling and production batches of parts that were shipped from the Far East direct to Ghana for the WSUP team to start to build the business and franchise network helping improve sanitation for many people.





UNILEVER: PERSIL

Design Development, DFM, Aesthetics, Prototyping



This product is just one of many we have worked on with Unilever. The design was selected from a broad range of marketing concepts and features a new slant on capping and closure in this marketplace.

One of the market research targets was to incorporate the liquid containing shuttle in an easy to store and access solution.

E3Design were instrumental in the introduction of the use of a TPU material for this part, challenging the conventional use of PP with its tactile and visual qualities. This has become a key visual feature of this pack fulfilling not only the storage challenge but also providing a strong on shelf image.





CENTURION

Design Development, DFM, Aesthetics, Prototyping, FEA

E3design were commissioned to create a stylish new 'working at height' helmet.

We worked alongside Centurion's in-house team to distil all their many years of product knowledge into a new vision and direction.

Our designers generated over 30 new concepts while working alongside the clients marketing team to produce an aesthetically pleasing and functional piece of work-wear.

The helmet is ergonomically designed and streamlined to be as effective in the work place as it is on a mountaineers head when tackling a cliff face. We carried out FEA to ensure the helmet met all the distortion and impact loads and ticked all the health and safety requirements prior to tooling the product.





MUD DADDY

Design Development, DFM, Aesthetics



Mud Daddy is an award winning, portable and compact washing brush. Initially intended specifically for muddy dogs, its simplicity also makes it perfect for bikes, boots, cars or anything that needs to be cleaned on the go.

A manual pump pressurises a bottle, spraying water through a brush which can be used to scrub your dog (or bike) nice and clean before they get back in your car. Requiring no external power means it can be used anywhere.

With extensive experience in bottles, valves and pumps, this was an ideal project for E3Design. From the initial concept design, to developing working prototypes and right through to manufacturing specification, our designers excelled and worked to a very tight time-scale and got the job done.





PROTOTYPING

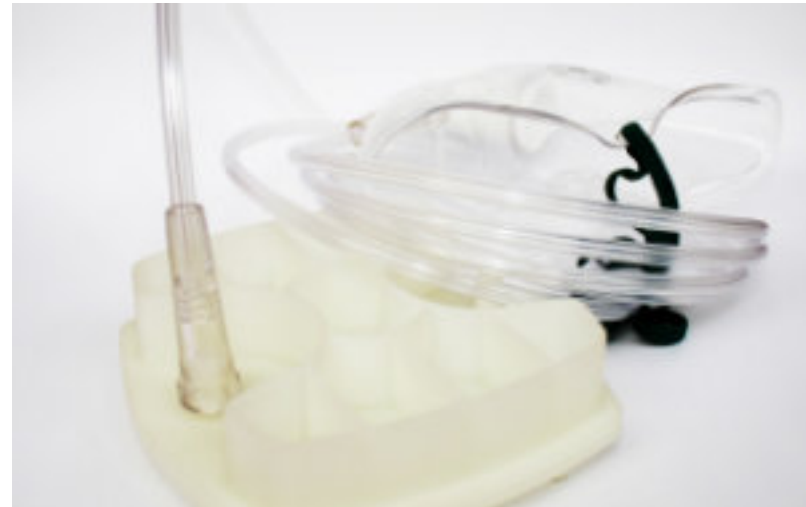
We always encourage our clients to manufacture a prototype of their product. The level and detail required in prototyping can vary greatly, but we believe it is essential to have a physical artefact for evaluation and approval at the critical stages of a project.

We utilise our in-house 3D printing capability and outsource SLA(stereo-lithography) SLS (selective laser sintering) VAC casting and 3D machining in both plastics and metals.

We use our supply chain of companies in the UK, Europe and the Far East to supply all levels of prototyping from a simple machined part to a full-scale appearance model.

Working with our suppliers we aim to give our clients the best value prototype that is suitable for that stage of development.

This can range from a test rig made of wood and off the shelf parts to a fully functional prototype complete with prototype PCB's and off tool parts as required. You honestly won't believe some of the things we have prototyped!





**TOOLING &
SUPPORT**

E3Design has a long experience of designing products that are to be produced in high volume. Efficient material usage is critical for a cost effective manufacturing solution and our experience allows us to design products to optimise strength with minimum wall section. Consideration of cavitation in tooling, and how the product will be moulded and ejected are critical in the production process.

We have significant in-house tool making experience with our Technical Director having started his career by completing a toolmaking apprenticeship and going on to become the Technical Director of a well-known Rapid Tooling and Manufacturing company.

We often provide tooling consultancy and advice to our clients outside the actual design projects we are working on. Our approach to product aesthetics and economic material usage, combined with hands-on manufacturing experience and ergonomic design, has led to us working with some of the biggest companies in the world. Around 95% of everything E3D designs actually ends up in manufacture.





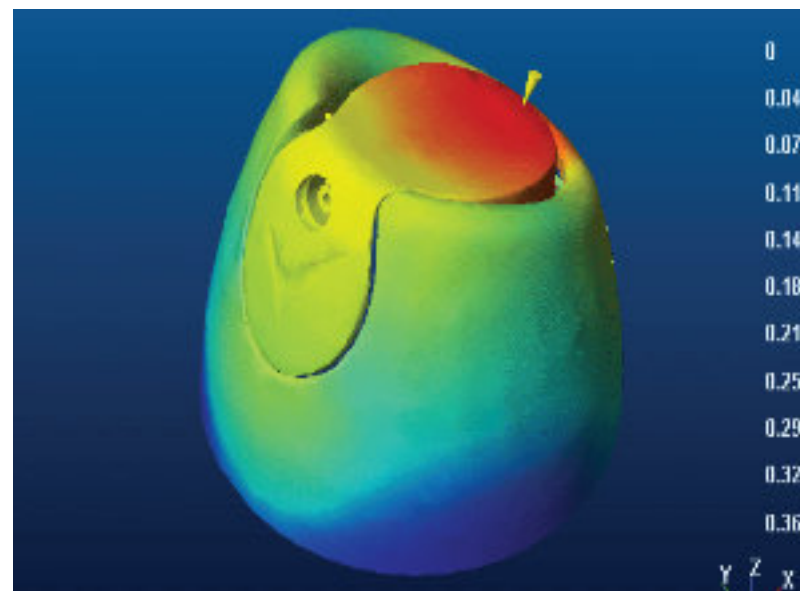
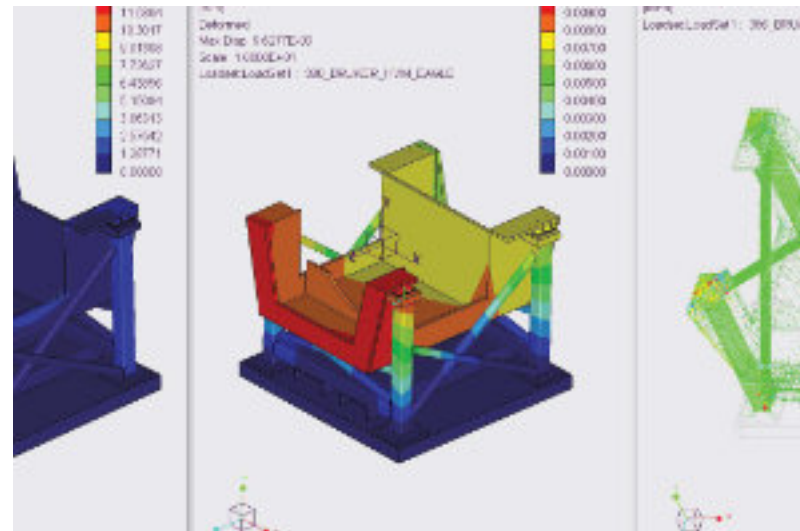
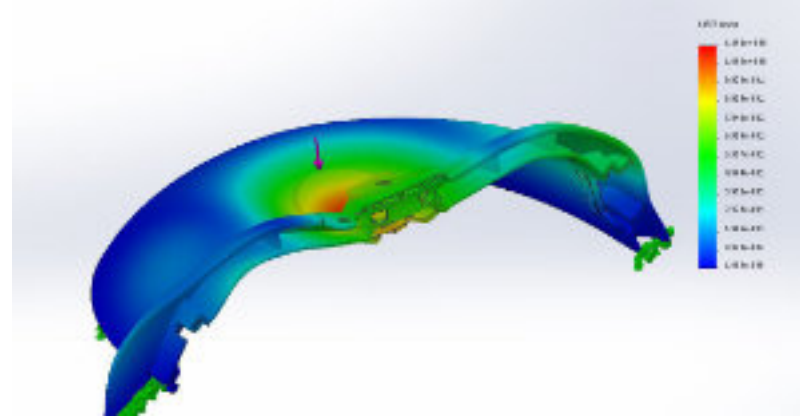
**ANALYSIS &
FEA**

Once the concepts are lifted from paper and transformed into the 3D environment adding both shape and form to technical details we create assemblies of the product in 3D. We check fits and functionality with the parts developed with the final manufacturing process firmly in mind we approach this process with Design for Manufacture (DFM) as one of our key requirements.

We also analyse our designs with Finite Element Analysis (FEA) and Thermal Analysis as needed. With the variety of clients we work with the analysis requirements can vary greatly.

We look into our designs at all levels from an in-house 'look-see' to a full outsourced mechanical, structural or electrical analysis. With the design of plastic parts we work with our suppliers and our clients suppliers using mold-flow analysis where needed to de-risk the part design or demonstrate how a part can best be made.

Our team's technical experience covers many industries and environments and if we do not have the capability to a specific analysis in house we probably know someone who does and can arrange for that test to be completed.

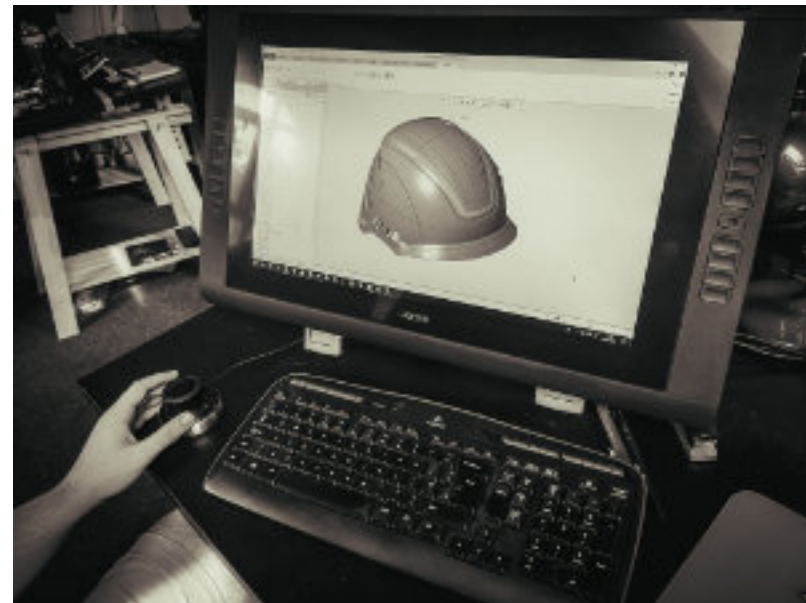
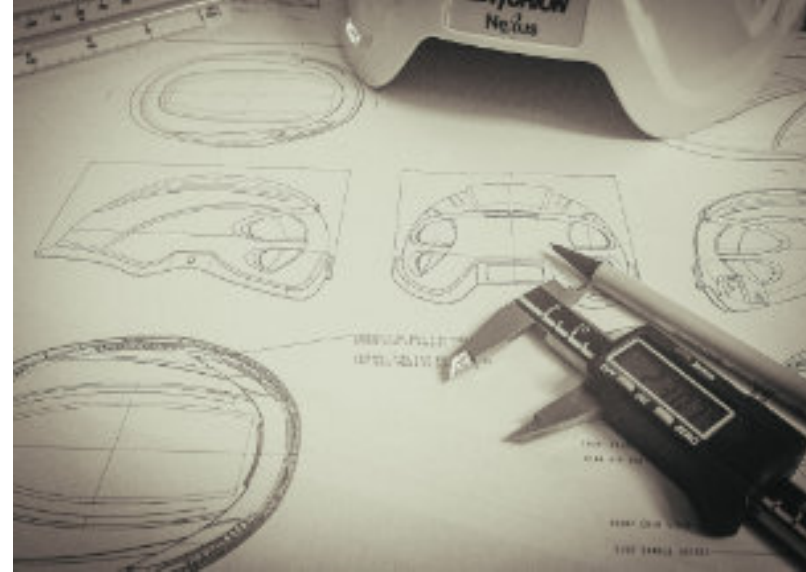




ENGINEERING CAD SUPPORT

CAD is mainly used for detailed engineering of 3D models or 2D drawings of physical components, but it is also used throughout the engineering process from conceptual design and layout of products, through strength and dynamic analysis of assemblies to definition of manufacturing methods of components.

E3Design can offer competitive rates for CAD support to your business on a contacts basis. A bolt on service that you can switch off and on as demand requires.





Suite 8 Walker Davison
House High Street
Newburn
Newcastle Upon Tyne
NE15 8LN



@e3designltd

www.e3design.co.uk

Whether you're a large corporate
or a lone ranger; we can help and
we want to hear from you.

0191 430 2603

hello@e3design.co.uk

Richard Parker
Managing Director

Peter Angus
Technical Director

Phillip Upton
Financial Director

Marc Holliday
Design Manager