



E3DESIGN

Portfolio 2024

www.e3design.co.uk

WHO IS E3DESIGN?

Here at E3Design we have 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

Marc Holliday
Design Director

Phillip Upton
Financial Director



SERVICES

We have amassed a vast amount of technical knowledge over our many years of combined multidisciplinary experience

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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PORTFOLIO

TOMMEE TIPPEE®

OJEE TALON

LS: BOTTLE

LS: JERRYCAN

MUD DADDY

RICHWOOD 1881

DURHAM UNIVERSITY

CHRISTOPHER KANE

UNILEVER

TRIMAX TECHNOLOGIES

CENTURION

OGEL

GHANASAN

GEORDIE GIN

DESIGN
INNOVATION

DEVELOP
PROTOTYPE

DELIVER
MANUFACTURE

PRODUCT DESIGN

Concept Design, 3D CAD, Analysis & Testing

E3Design has a wealth of experience in Consumer Product Design, Structural Packaging, Medical, Lighting, Industrial, DFM and even Fashion.

The variety of established and proven skills and knowledge within our team means that we have an unsurpassed expertise in all of our long term and current work, while still having the capacity to create, develop, and maintain fresh and innovative ideas for the future.

Our creative design team has a proven record of delivering the product, with many companies returning time and time again to use our services.

Our designers have specialist skills in product, industrial design and development, with particular skills in design for plastic injection moulding and high volume manufacture.

Aesthetics

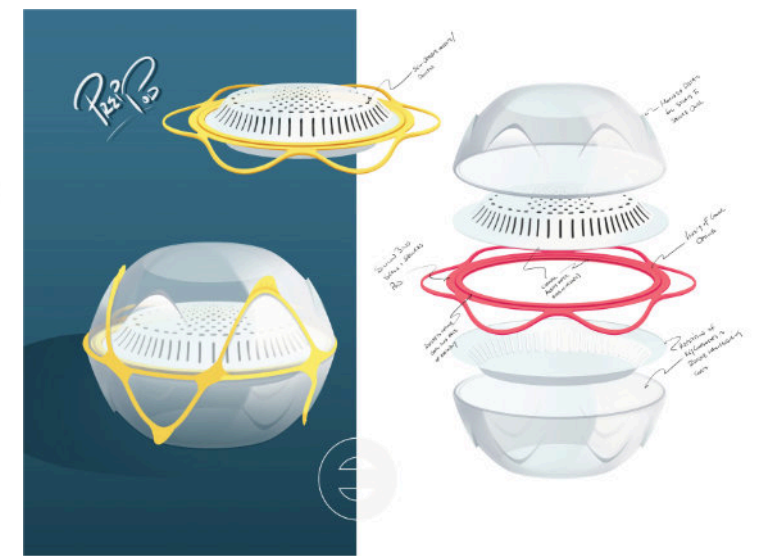
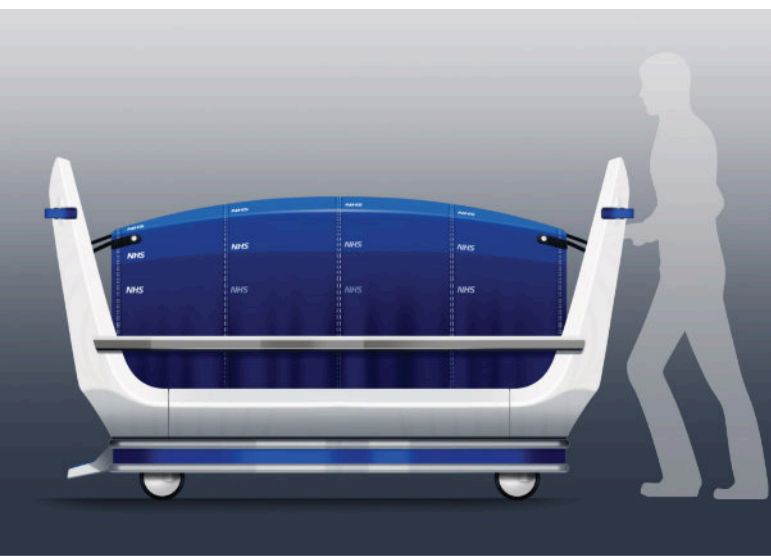
Assembly

Mechanics

Packaging

D.F.M.

Branding



PROTOTYPING

Component Testing, Function, User Testing

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 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!

F.D.M.

S.L.A.

S.L.S.

M.J.F.

Machining

Vacuum Casting

Fabrication



MANUFACTURING

Supply Chain, Metrology, Standards, Regulation

E3Design has extensive experience in designing products for high-volume production. Efficient material usage is crucial for cost-effective manufacturing and our expertise allows us to optimise the design. Considering cavitation in tooling, as well as how the product will be moulded and ejected, are critical aspects of the production process.

We possess significant in-house toolmaking experience, with our Technical Director having started his career by completing a toolmaking apprenticeship and subsequently becoming the Technical Director of a well-known Rapid Tooling and Manufacturing company. We often provide tooling consultancy and advice to our clients beyond the scope of the actual design projects we are working on.

Our approach to product aesthetics, economic material usage, combined with hands-on manufacturing experience and ergonomic design, has led us to collaborate with some of the largest companies in the world. Approximately 95% of everything we design ultimately ends up in manufacture.

Tooling

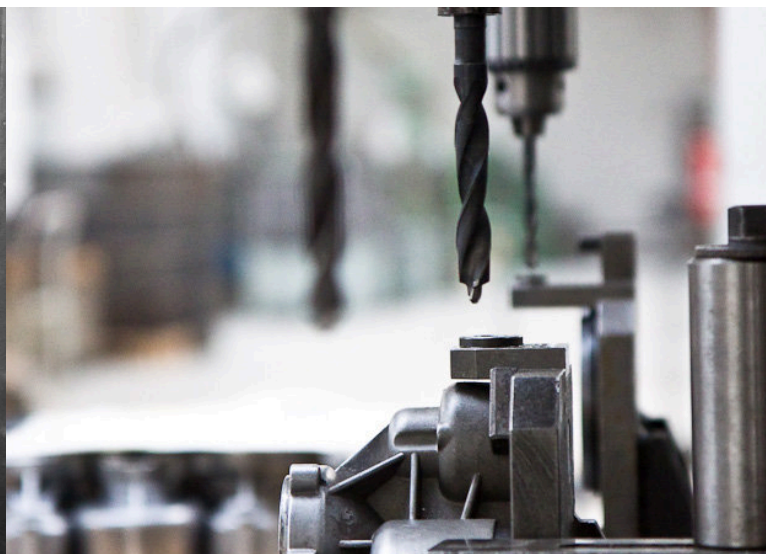
Assembly

Distribution

Metrology

Moulding

Fabrication



ANALYSIS

Testing, Validation

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

We also analyse our designs with Finite Element Analysis (FEA), Thermal Analysis and Mould Flow as needed. Due to the variety of clients we work with the analysis requirements can vary greatly. Our design can be explored 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 using mold-flow analysis where needed to de-risk the part design and 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 complete a specific analysis in house we can contact a number of contacts in are network who do and we can arrange for that test to be completed.

F.E.A.

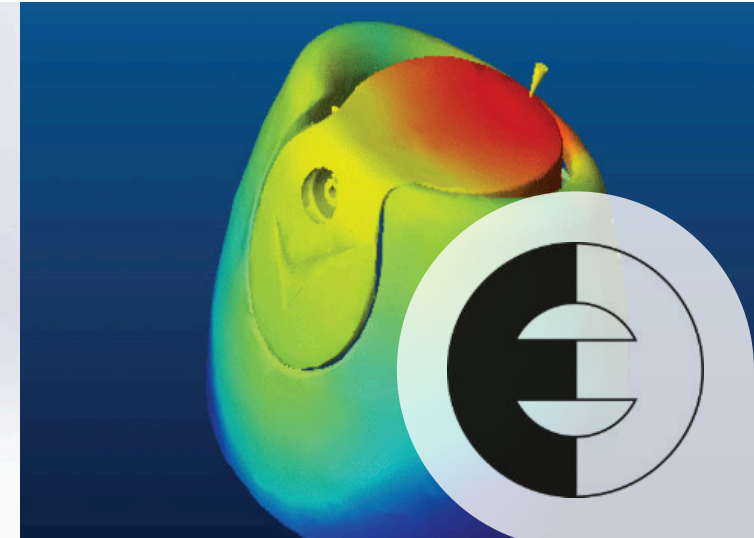
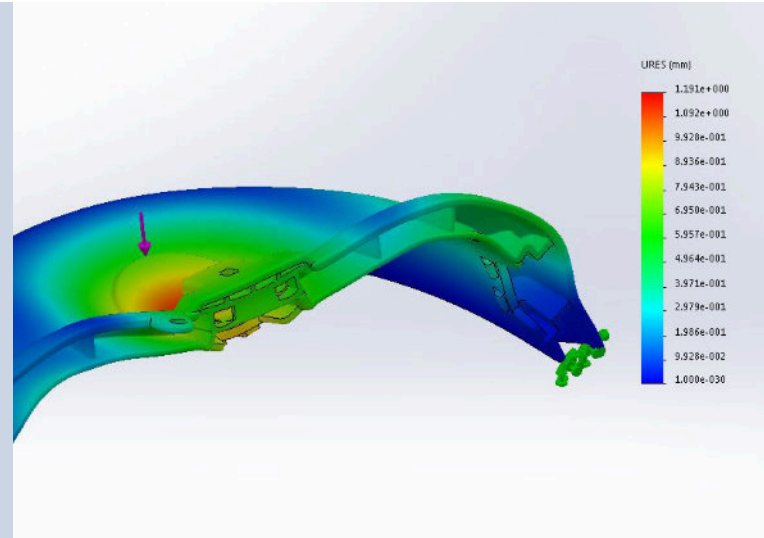
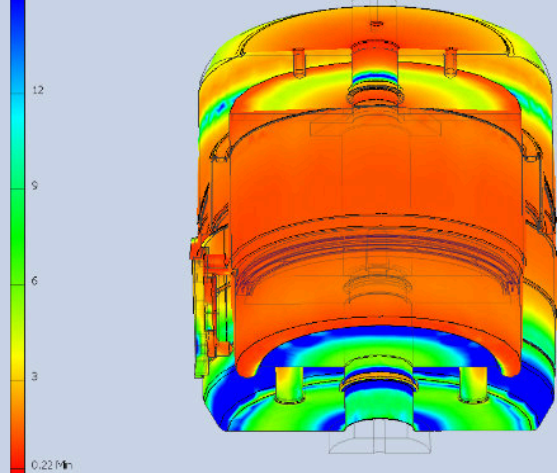
C.F.D.

D.F.M.

Metrology

Mould Flow

Type: Safety Factor
Unit: u
21/06/2022, 10:16:45
15 Max



ENGINEERING SUPPORT

Design, Testing, Validation

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 the definition of manufacturing methods of components.

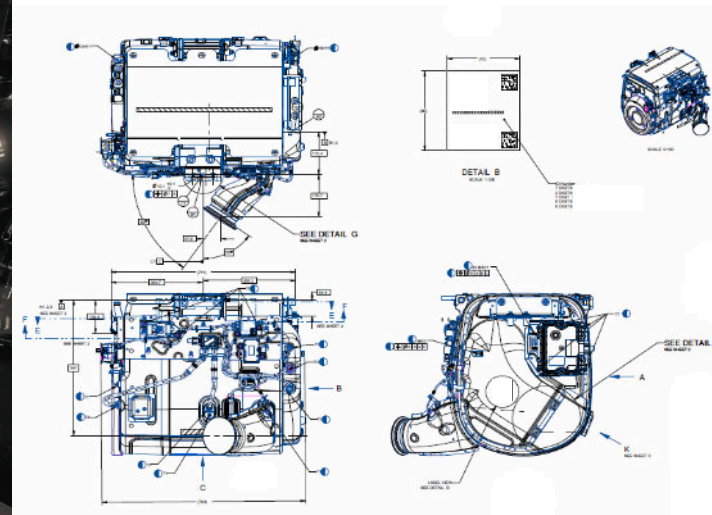
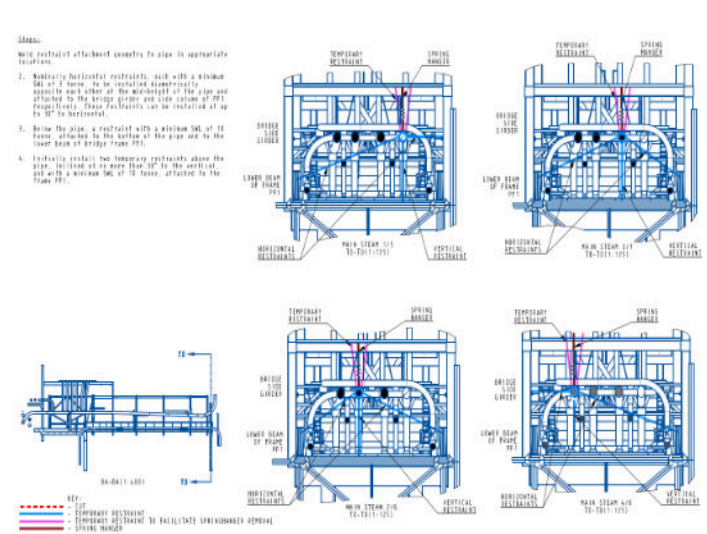
E3Design can offer competitive rates for CAD support to your business on a contract basis. A bolt-on service that you can switch off and on as demand requires.

2D CAD

3D CAD

D.F.M.

Analysis





SUSTAINABILITY

Repair, Recycle, Re-Use & Re-Think

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Repair, Recycle, Re-Use & Re-Think

Sustainability in Product Design

Injecting sustainability principles throughout our design process is something we have successfully done for years. We implore each and every customer to think about their product's life cycle in a way that would benefit them, their consumers and the environment.

How We Do It?

We guide you through sustainability best practises throughout the entire development process. Considering sustainability from the very start ensures we deliver a product that works well for the customer, the user and the planet.

L.C.A.

Materials

Regulation

Repair-ability

Strategy





DESIGN PORTFOLIO



TOMMEE TIPPEE ®

Design Development, DFM, Aesthetics, Intellectual Property

TOMMEE TIPPEE®

Design Development, DFM, Aesthetics, Intellectual Property

E3Design was selected by Tommee Tippee® to assist in designing and developing a new range of children's drinking cups and a unique, patentable non-spill valve. The new non-spill valve needed to be innovative and exclusive to Tommee Tippee®, with non-spill functionality and easy drinking being top priorities. This patented valve is utilised across a wide range of non-spill cups.

The aesthetic designs were crafted to enhance the already strong visual appeal present in the current range. The designs imbue a sense of personality and character, almost breathing life-like qualities into the cups. Additionally, the new range visually matures alongside the child; the sporty and insulated cups maintain similar styling cues to the weaning cups, with an added element of excitement tailored for independent kids.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





OJEE TALON

Design Development, DFM

OJEE TALON

Design Development, DFM

Anyone who has played golf knows that it can be a frustrating game at times. One day you're hitting every shot perfectly, and the next it feels impossible to make a good shot. What's changed? Ojee Golf approached E3D with a concept for a new training aid to address this very issue. The Talon is a revolutionary device that provides real-time visual feedback on your angles of address, thus enhancing your ability to replicate that perfect shot.

Working within a tight time frame, E3D collaborated closely with Ojee Golf and their electronics supplier on the initial concept to ensure the correct technical approach. The size of the device was critical, and significant effort was dedicated to minimising its dimensions. By ironing out many details early in the process, we were able to swiftly advance the design to a production-ready stage, meeting the deadline for Ojee's crucial trade shows.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





 **LIFESAVER**

LIFESAVER: BOTTLE

Design Development, DFM, Aesthetics, Prototyping, Testing

LIFESAVER: BOTTLE

Design Development, DFM, Aesthetics, Prototyping, Testing

The concept for the Lifesaver bottle was born out of witnessing the tragic loss of life and the serious issues arising from the lack of safe drinking water following the Tsunami in December 2004 and the subsequent Hurricane Katrina the following year. Lifesaver Systems entrusted E3Design with the task of transforming the product from a bench rig into a consumer-ready production solution.

The requirements were clear: the unit had to be simple, portable, robust, pressure-tight, and serviceable. The Lifesaver bottle stands as the world's first all-in-one ultra filtration water bottle capable of removing all waterborne pathogens. E3Design took charge of designing all the plastic parts in the Lifesaver bottle, collaborating closely with a local injection moulding company to provide a comprehensive manufacturing solution.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





LIFESAVER: JERRYCAN

Design Development, DFM, Aesthetics, Prototyping, Testing

LIFESAVER: JERRYCAN

Design Development, DFM, Aesthetics, Prototyping, Testing

The Jerrycan is one of several products we've developed for Lifesaver Systems, boasting the capacity to provide 40,000 litres of safe drinking water while maintaining the robustness to withstand the weight of a Land Rover. Its final design exemplifies how a primarily functional approach can establish a powerful structural brand identity.

The inclusion of cross marks facilitates strapping to standard military vehicle mountings for transportation, while the additional diagonal marks subtly reference British design and manufacture, aligning with a key marketing target for our client. Furthermore, the bold, rounded edges not only enhance the unit's strength but also contribute to its rugged appearance.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





MUD DADDY

Design Development, DFM, Aesthetic

8L
**Mud
Daddy**
PORTABLE MUD WASHING BRUSH

MUD DADDY

Design Development, DFM, Aesthetic

Mud Daddy is an award-winning, portable, and compact washing brush. Initially designed for muddy dogs, its simplicity also makes it ideal for cleaning bikes, boots, cars, or anything that requires on-the-go cleaning.

Operating with a manual pump, it pressurises a bottle, spraying water through a brush that effectively cleans your dog (or bike) before they re-enter your car. Its independence from external power sources ensures it can be used anywhere.

Given our extensive expertise in bottles, valves, and pumps, this project was a perfect fit for E3Design. From the initial concept design to the development of working prototypes and all the way to manufacturing specifications, our designers excelled, working within a tight time frame to deliver exceptional results.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture



Mud
Daddy





RICHWOOD 1881

Design Development, DFM, Aesthetic

RICHWOOD 1881

Design Development, DFM, Aesthetic

Bod-i-Box is a product developed with local innovator, Daniel McFarlane. Daniel is an ex Olympic Boxing referee who has vast experience with the sport and his knowledge, paired with our Design to Manufacture process resulted in this fantastic training aid.

The world's first ever strike pad has been designed to attach quickly to the arm and can then be utilised to take strikes from various punching angles. The unique design provides the athlete with vital protection while enabling them to strike the body at the correct angle during workouts. It provides Boxers with a multi-dimensional training session and allows the athlete to achieve quicker response times. Representing an unprecedented technological feat, this robust, lightweight equipment asserts itself as the best body strike pad suited for professionals and amateurs alike, being ten times more suitable than traditional hook/jab pads.

E3Design is proud to support local innovation and Bod-i-Box truly encapsulates the spirit of innovation within it's field.

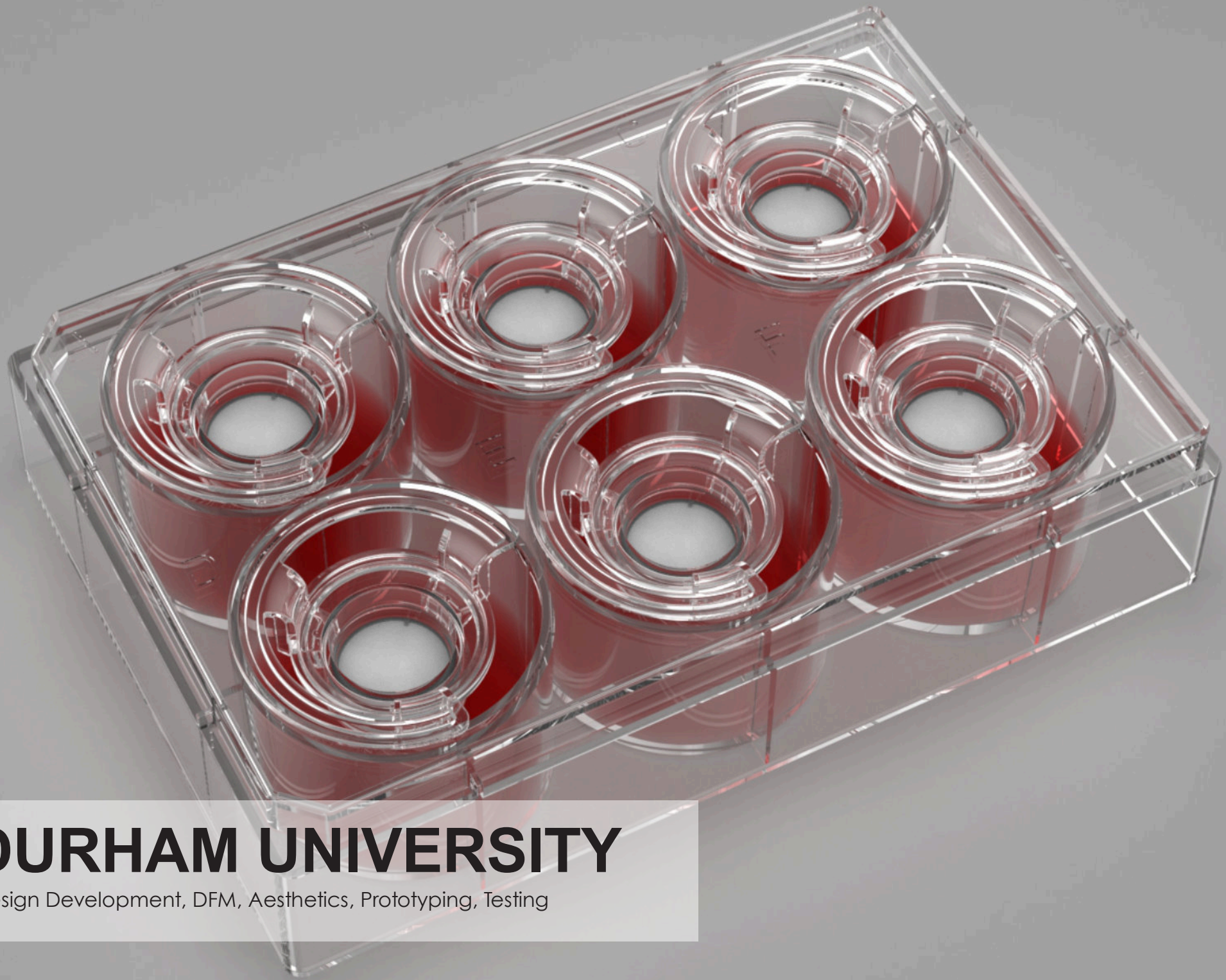
Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





DURHAM UNIVERSITY

Design Development, DFM, Aesthetics, Prototyping, Testing

DURHAM UNIVERSITY

Design Development, DFM, Aesthetics, Prototyping, Testing

Dr Stefan Przyborski has worked with E3Design for over ten years, developing prototypes of devices to support the growth and development of human tissue models in the laboratory.

A close working relationship has been established and E3Design continues to work with Stefan and support the design of the innovations being developed by him.

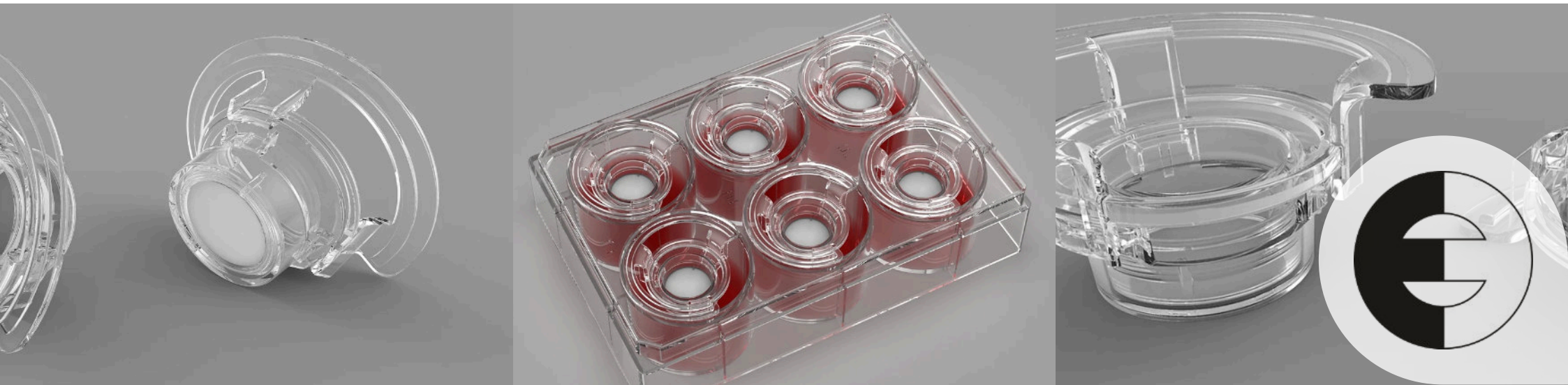
For example, the technology can be used to enable the formation of human skin in a robust and consistent manner, which in turn is used to support the development of drugs and new consumer products in partnership with industrial clients.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





CHRISTOPHER KANE

Design Development, DFM, Fashion Design, Prototyping

CHRISTOPHER KANE

Design Development, DFM, Aesthetic

"Can you create rubber lace?" That was the question posed to us by fashion designer Christopher Kane.

Following this conversation, we collaborated closely with Kane to translate his fashion concepts into unique accent pieces and accessories for several collections. Each design is distinct and remarkable. Our task was to realise Kane's vision by developing a manufacturing solution that preserves the beauty and originality of the initial concept.

We pushed the boundaries with our suppliers, working closely with them to adapt processes for manufacturing and finishing batches of catwalk-quality parts. Given the high standards demanded by garments at this level, there is no room for any quality issues; each part is a masterpiece in its own right.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





UNILEVER

Design Development, DFM, Aesthetics, Prototyping

UNILEVER

Design Development, DFM, Aesthetics, Prototyping

This product is just one among many that we've collaborated on with Unilever. The design was chosen from a wide array of marketing concepts and introduces a fresh perspective on capping and closure within this market segment.

One of the objectives identified through market research was to incorporate the liquid-containing shuttle into a solution that is easy to store and access. E3Design played a pivotal role in introducing the use of TPU material for this component, challenging the conventional use of PP due to its tactile and visual qualities. This decision has transformed into a key visual element of this packaging, addressing not only the storage challenge but also contributing to a compelling on-shelf presence.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





TRIMAX TECHNOLOGIES

Design Development, DFM, Aesthetics, Prototyping, Testing

TRIMAX TECHNOLOGIES

Design Development, DFM, Aesthetics, Prototyping, Testing

E3Design worked alongside Trimax Technologies to develop and design the Voltage and current probe(VIPA).

The VIPA has been designed from the ground up to give the operator total confidence when taking voltage and current readings. The absence of threaded connections means the VIPA is ready to go straight from the pouch, and connections will not come loose during operation. The linearly driven bed of nails creates a low-resistance electrical contact with wire cores through the wire insulation.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





CENTURION

Design Development, DFM, Aesthetics, Prototyping, FEA

CENTURION

Design Development, DFM, Aesthetics, Prototyping, FEA

E3Design was commissioned to create a stylish new 'working at height' helmet. We collaborated with 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 client's marketing team to produce aesthetically pleasing and functional work wear.

The helmet is ergonomically designed and streamlined to be as effective in the workplace as it is on a mountaineer's head when tackling a cliff face. We conducted Finite Element Analysis (FEA) to ensure the helmet met all distortion and impact loads and complied with all health and safety requirements prior to tooling the product.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





OGEL

Design Development, DFM, Prototyping

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.

Innovation

CAD & Engineering

Prototyping

Tooling & Manufacture





GHANASAN

Design Development, DFM, Tooling, Production

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 barriers include insecure or non-existent land tenure, cramped living conditions, and poor access to finance.

Starting with the initial proposed design concept, we developed the toilet product into a low-cost manufacturing solution. Utilising our supply chain in the Far East, we provided injection and blow mold tooling, as well as production batches of parts that were shipped directly from the Far East to Ghana for the WSUP team to begin building the business and franchise network, ultimately improving sanitation for many people.

Innovation

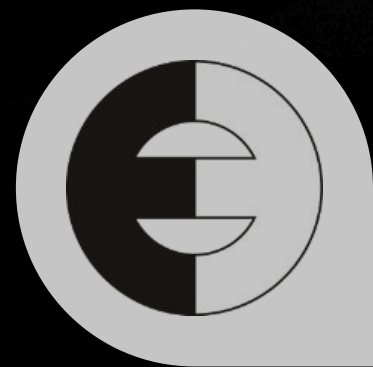
CAD & Engineering

Prototyping

Tooling & Manufacture



**E3DESIGN CAN ALSO SUPPORT
YOU FURTHER WITH GRAPHIC
DESIGN AND SOCIAL MEDIA,
ENSURING YOUR PRODUCT
GAINS THE ATTENTION IT
DESERVES IN TODAY'S DIGITAL
LANDSCAPE**





GEORDIE GIN

Graphic Design, Design for Print, Technical Support

GEORDIE GIN

Graphic Design, Design for Print, Technical Support

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

E3D was supplied with an illustration and graphics, which we then reworked 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 among the crowd.

Graphic Design

Prototyping





CREATIVE FOX

Graphic Design, Packaging Design, Social Media

NUTRITIONAL ANALYSIS		
	PER 30g (1 SCOOP)	PER 100g
Energy (kJ)	467	1557
Calories (kcal)	112	372
Fat (g)	2.0	6.8
of which saturates (g)	0.5	1.6
Carbohydrate (g)	0.5	1.6
of which sugars (g)		
Fibre (g)		
Protein (g)		
Salt (g)		

CREATIVE FOX

Graphic Design, Packaging Design, Social Media

Welcome to Creative Fox, your partner in graphic design and social media excellence. With years of industry experience and a diverse portfolio of clients across various sectors, we are dedicated to taking your product to new heights. Utilising our expertise in graphic design, we craft compelling branding, packaging designs, and strategic marketing solutions tailored to your unique needs.

While an outstanding product design by E3Design sets the foundation, we add the final flourish to ensure your idea reaches its full potential in the market. Let us collaborate to elevate your brand and connect with the right audience, making a lasting impact in the ever-evolving digital landscape

Graphic Design

Branding

Packaging Design

Social Media





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