Invest in Bournemouth, Christchurch and Poole

Engineering & Manufacturing Sector





bcpcouncil.gov.uk



Why the UK?



- Globally Competitive Tax Offer
- Business Friendly Environment
- Investment Finance
- Global Trade

- Open to Global Markets
- Talent
- Science, Technology & Innovation
- Clean Growth

UK Manufacturing

UK manufacturing remains in rude health being the 9th largest industrial nation worth some £206bn Gross Value Added in 2022, which is 20% more than the sector produced a decade ago.

It employs around 2.5 million highly skilled people and is a major contributor to regional economies right across the UK. Whilst the traditional industries such as aerospace and automotive tend to dominate the headlines because of the marques and profile of the companies involved in those sectors the biggest sector is food and drink which accounts for around 15% of total manufacturing output.

The Facts 2022



£183bn of output from the UK manufacturing sector



12% higher wages than the whole economy



Sources: Make UK

64% of all UK Business research & development

Source: Department of International Trade; Why UK? Global Britain's new story - issue 2, September 2021



Furthermore, there are other sectors such as medical equipment which are seeing fast rates of growth in response to the increased needs for healthcare and the demands of an ageing population. As rapidly emerging new technologies such as augmented reality and artificial intelligence are emerging, we are set to see the fourth industrial revolution come to the fore through digitalisation. This is leading to seismic changes in the way that manufacturers operate and, most importantly, the skills and qualities that they will need from the workforce of the future. The ability to attract and retain talent is the biggest challenge that the sector is facing and it's essential that industry works with Government and the education sector to ensure that we have a pipeline of talent to secure the future of the sector at the heart of the economy overall.



Bournemouth, **Christchurch and Poole**

The towns of Bournemouth, Christchurch and Poole (BCP) within Dorset make up one of the leading growth areas on the South Coast.

It is a place where culture and heritage meet innovation and modernity, village meets town, country meets coast, creativity meets digital, businesses flourish and people thrive.

BCP Council is the tenth largest urban local authority in England and our communities are vibrant and diverse, with an outstanding quality of life, where everyone plays an active role - a globally-recognised coastline of opportunity, where people love to live, learn, work, explore, invest, relax and play.

There is a highly skilled talent pool: a unique blend of experienced professionals and exceptional new talent. In addition, a robust and efficient high-speed infrastructure and an exceptional location which combines outstanding natural beauty with cosmopolitan, cultured lifestyle, make Bournemouth, Christchurch and Poole a great place to do digital business.

The ecosystem within Bournemouth, Christchurch and Poole offers an open interactive business environment with vibrant networking opportunities, including an extensive festival season. The proximity to leading organisations from other sectors, such as finance, advanced engineering and manufacturing, marine, sustainable technologies and healthcare, provide extensive cross-sector collaboration opportunities.



Bournemouth beach and promenade 18 - Credit BCP Tourism







Why Bournemouth, Christchurch and Poole?

Bournemouth, Christchurch and Poole are home to a thriving and varied manufacturing and engineering sector with specialisms in aerospace, defence and marine.

It is here that the bath bomb was created in a garden shed in 1989 and continues to be manufactured by LUSH, creators of pioneering beauty products who now operate in over 52 countries with 928 global shops and where the Astro Lamp later known as the Lava lamp was designed in 1963 and continues to be manufactured by Mathmos. It is also where in the 1970's the founder of the internet Sir Tim Berners-Lee started his career as an engineer for Plessey Telecom in Poole (which later amalgamated into Siemens Communications).

The area was home to pioneering aviator Sir Alan Cobham who designed and manufactured aerial refuelling equipment which broke new ground, enabling the first round-the-world flight by specially equipped Boeing B-50 Superfortresses. Cobham Limited still has its HQ in Bournemouth having been originally founded by Sir Alan Cobham as Flight Refuelling Limited. In 2020 Draken International acquired Cobham Aviation Services and now HQ Draken Europe from Bournemouth Airport, Christchurch.



Engineering and manufacturing businesses choose Bournemouth, Christchurch and Poole for many reasons:

- A vibrant and dynamic supply chain supported by key national trade associations and sector organisations.
- A Port and two harbours providing strong links to mainland Europe, Channel Islands and Santander.
- The Port of Southampton Container Terminal within 1 hour.
- Co-locating with global leaders in engineering and manufacturing including: Trident Marine Systems, AVIC Cabin Systems, BAE Systems, Siemens, Honeywell, AEC Walker, LUSH and Curtiss-Wright.
- It is home to Bournemouth International Airport offering direct links to 36 European destinations, as well as the fastest growing cargo-hub.
 Southampton Airport is accessible in under an hour, Bristol, London Heathrow and London Gatwick are within 2 hours.
- Excellent universities (Bournemouth University and Arts University Bournemouth) and colleges with specialisms in aerospace and marine related research and education. Plus close links to 11 neighbouring universities and the National Composite Centre, the South West's "Catapult Centre" located at Bristol & Bath Science Park and Satellite Applications Catapult, the Defence BattleLab at Dorset Innovation Park and iAero in Yeovil.
- A superb quality of life acting as a magnet for skilled people.



BCP Engineering & Manufacturing





Networks



Britain is one of the world's biggest manufacturing nations. Almost 3 million people work in our sector and deliver almost half of all UK exports. Our companies drive over 60 percent of all UK research and development. As a result of that investment, manufacturing as we know it is changing, adapting, and transforming each and every day.

We're at the cutting edge of innovation; leading the way in developing skills and driving competitive advantage for the UK.

makeuk.org



Dorset Engineering and Manufacturing Cluster (DEMC) was created to support engineering and manufacturing in Dorset to create opportunities to collaborate, create and innovate with each other, industry partners, schools, colleges, and universities.

dorsetemc.com

SWMAS (South West Manufacturing Advisory Service) are a team of manufacturing and business development experts. Their connections, knowledge, and expertise are used in partnership with ambitious manufacturers to help them improve their productivity, develop their capabilities, enter new markets, and become leaders in their fields.

swmas.co.uk



The West of England Aerospace Forum (WEAF) is a membership trade organisation that is passionate about all aspects of aerospace and defence. Their member and partner base represent a very wide spectrum – from SMEs to global corporations. They are one of the largest aerospace and defence associations in Europe, so can provide a strong voice for its members, as well as representation and access to prominent regional, national and international decision makers in industry and government.

weaf.co.uk



Maritime UK South West is a public, business, research partnership which brings together the breadth of ocean economy to create a world leading ocean technology cluster. We enable innovation and collaboration, finding the right business support and skills and driving strategic development and investment.

Dorset and the South West of England presents a key opportunity to benefit from the unique capabilities of the UK's largest maritime cluster and provide solutions across growing industries. The award of a High Potential Opportunity in Marine Autonomy by DIT busines autonoi meeting

Case Study

Active Research Ltd was founded by Phil Whitehurst in 1997 to solve key connectivity challenges in the marine electronics sector. The launch of their award-winning Actisense® brand in 2001 brought international trade success for the business and their products can now be found in over 50 countries globally, where they work with some of the marine industry's most prominent names. The company's specialism is in NMEA (National Marine Electronics Association) technology, where they help boaters and technical installers connect newer electronics to older legacy systems, as well as manage their vessel data through the production of intelligent sensors, gateways and connecting infrastructure products.

The company has been identified as a fast-growth candidate, and their team has now grown to 35 people, based at their headquarters in Poole, Dorset. The full





by DIT highlights the emerging opportunity for Dorset based businesses to design, test, validate and manufacture marine autonomous systems in the UK's largest maritime cluster; meeting growing demand across unique early adopter.

maritimeuksw.org



business operation is based in Dorset, including engineering, manufacturing, support, sales and marketing functions. Actisense has a passion for growing its people and has promoted internally and provided extensive training and development plans to their team. Being based in Dorset has helped the company, both in being close to the water and many of their customers, and also by providing a close network of key specialist suppliers and advisors.

actisense.com

Parvalux Electric Motors Ltd, is the UK's leading manufacturer of fractional horsepower AC & DC geared motors and drive solutions.

Now celebrating over 75 years in business Parvalux first moved to the Bournemouth & Poole area in 1961, expanding to three production sites locally. A Swiss motor manufacture, maxon, acquired Parvalux in 2018, and has invested heavily in the business. 2023 sees the opening of a 14,000m2 state of the art factory

and offices which will facilitate decades of future expansion, showing commitment to the local area.

The new Parvalux house will achieve a net zero carbon rating, with over 1500 solar panels providing 100% of the power required to operate the building and its offices.

Russell Tanner, Parvalux's Head of New Factory Development, said: "Sustainability is key to what we do as an electric motor manufacturer and our new headquarters has been designed to be carbon neutral with one of the largest photovoltaic (PV) arrays fitted



parvalux by maxon



to a single building in the local area and potentially the South of England.

This new facility will bring our team of over 200 people together into a single location and facilitate decades of future expansion whilst enabling us to remain at net zero emissions."

Parvalux works in partnership with its supply chain to be able to deliver on its customer promises, and in supporting the development of the new factory, and recognises the value of local procurement.

Russell said "we work on a local first approach, seeking suppliers from the local area, as building relationships and supporting the local and British economy is important to us."

As a manufacturer Parvalux champions STEM careers in the local area, engaging with schools through our Parvalux Sparks initiatives, with colleges and universities, and we recognise the importance of the local skill base.

Russell continued "We are proud to be an active member of the community, inspiring careers as a local employer in the BCP area for decades to come."

parvalux.com

10

Case Study

Yunex Traffic is a global leader in intelligent traffic systems, offering a comprehensive suite of solutions for adaptive traffic control and management, highway and tunnel automation, and intelligent solutions for connected vehicles and tolling systems. Founded and matured under the competent umbrella of Siemens, we have extensive, market-leading knowledge and many years of experience in infrastructure projects. Today, as an independent and agile mobility innovator, we continue to offer unparalleled expertise and advanced solutions to customers worldwide.

We are a global leader in the design, manufacture and operation of intelligent transport equipment, with a long and distinguished history of manufacturing here in the UK. Our manufacturing facility in Poole, Dorset, is responsible for producing assets globally and we are





YUNEX Traffic

widely recognised as a factory of distinction setting the standard for manufacturing quality and innovation in the industry.

In addition to manufacturing traffic products, Yunex Traffic provides businesses throughout the UK unparalleled production engineering expertise and a comprehensive range of manufacturing capabilities and services. This includes designing, building and repairing complex PCBs as well as providing box build assembly services. With a dedicated R&D and engineering department, we are committed to providing support to businesses with complex and customised manufacturing requirements. We strive to consistently and efficiently deliver excellence in manufacturing.

yunextraffic.com

Ishida Co Ltd was established in Kyoto, Japan in 1893. From its roots in weighing equipment, Ishida went on to build the world's first automatic weighing machine in 1959. Thirteen years later, the revolutionary multihead weigher was launched.

Since 1972, Ishida has grown steadily, expanding the product range vastly to offer not only weighing systems, but also packing machines, quality control systems and complete solutions for fresh, frozen and dry foods.

Ishida Europe was established in 1985 in Woodgate Birmingham with a total of 450 employees on site and Ishida Poole was purchased in 2002. Ishida Poole have been instrumental in Developing products for group utilising a highly skilled group of Engineers that are able to Design, manufacture, prototype and develop concepts.

The Poole Team have designed X-ray systems for Europe, Grading equipment for poultry worldwide, CO2 leak detection equipment, Rotary filling systems for USA and a range of Traysealing machines for global projects.

After pre-production machines are proven production is transferred to our Birmingham manufacturing facility.

By utilising a standalone highly skilled and innovative team to develop products, Ishida Europe have changed the business model from a Sales outlet for Japanese systems to expanding the group product portfolio and now exporting globally and back to our Japanese colleagues.

ishidaeurope.com/en

★ISHIDA



Case Study

Beagle Aircraft is one of the UK's longest established aerospace manufacturers, offering a diverse range of capabilities and genuine one stop shop solutions. Delivering niche and highly complex product to an impressive range of customers for well over half a century. Products range from simple aluminium details to larger structural assembles.

We are recognised leaders in the field of metal to metal and honeycomb bonding. This activity is supported via full clean room facilities and two autoclaves. Pre-pregs and non-metallics also catered for via wet lay-up.

Extensive stretch forming capabilities can be carried on our Erco and Hufford machines, stretching a variety of product from stringer and frame sections to tail skins, door skin and leading edges. Titanium, Steel and Aluminium can all be stretched at our facility.







Machining capabilities from 3 through to 5 axis prismatic machining up to 4m in length and 7 axis CNC Brake Press.

Areas of expertise: Stretch Forming, Chemical Etching, Metal to Metal and Wet Lay Up Bonding, Precision Machining, Welding, Sheetmetal fabrication and assembly.

Certifications include: AS9100 ISO9001 ISO14001, ISO45001, ADS SC21. 5 x NADCAP Approvals, Heat Treatment, Chemical Processes, Welding, NDT, Composites.

Numerous OEM Approvals include BAE Systems, Boeing, Airbus, Leonardo, Spirit Aerosystems, Bombardier, Rolls Royce, GKN.

beagletechnologygroup.com



John Reid & Sons (Strucsteel) Ltd's steel structures can be found on every continent on earth – all designed, engineered and manufactured from Christchurch, Dorset.

The 130-strong company – known as REIDsteel – has exported to 140 countries in 104 years of trading to date. Its name is also on countless structures in the UK, including a twin-cantilever hangar at Biggin Hill Airport, which recently won a prestigious Structural Steel Design Award.

As well as hangars, its expertise extends to every kind of steel structure – including bridges, stadia, airport and cruise terminals, civic centres, factories, commercial units and car parks.

REIDsteel's specialisms includes disaster resistant structures designed to withstand the worst the elements can throw at them. All of its buildings survived the devastating hurricanes of 2017 in the British Virgin Islands.



The company works on in-house designed schemes – from conception to construction – or value-engineered projects, whether it is steel only that is required or the whole building envelope – including glazing, cladding and doors.

REIDsteel – a four times winner of the Queen's Award for Enterprise – remains family owned with a diverse and progressive management team. Its 'one team' ethos means every employee is valued. Safety and wellbeing are priorities.

The company was the first steel contractor to sign the UK Steel Charter and has strong links with the community, including Dorset Chamber, AFC Bournemouth and Bournemouth University.

REIDsteel has exciting plan for the future to ensure that its 'engineered in Dorset' hallmark is stamped on structures worldwide for many more years yet.

reidsteel.com

Case Study

KDC Projects, an engineering services consultancy with over 20 years of expertise in delivering highvalue projects and aircraft certification solutions to established aerospace and defence manufacturers and suppliers.

Working closely with household names in the Aerospace industry, such as Airbus, BAE Systems, QinetiQ, Eaton Mission Systems, Chelton, DE&S, GKN Aerospace, and more, delivering high-value design, systems, and stress projects. We collaborate closely with these clients, as well as the extended supply chain, to foster strong partnerships and provide innovative solutions across the Dorset and the broader Southwest engineering cluster.

The company is significantly investing in emerging aerospace technologies, such as Hydrogen fuel applications, which require the best engineering talent in the business.





KDC Projects is supported by its sister company, KDC Resource, to provide engineering recruitment services both internally, and externally to leading aerospace and defence engineering organisations.

Peter Burden CEO and Founder believes our core objectives is to create job opportunities and provide training for the next generation of engineers in our region. By investing in education and skill development, we aim to cultivate a skilled workforce that will contribute to the growth and prosperity of the engineering sector in the Southwest.

Our commitment to the local community goes beyond our professional endeavours; we proudly support local community projects, sports teams, and valuable emergency services.

kdc-group.co.uk



Sunseeker is the world's leading brand for luxury performance motor yachts. It's been headquartered in Poole since its creation in 1969 and has grown to be one of the largest employers in Dorset.

From its manufacturing base, Sunseeker produces around 150 boats every year ranging from 38-161 feet which are sold across the globe. Poole is also the home to Sunseeker's Design & Technology Centre, where its world-renowned luxury yachts are designed, from initial concepts to finishing details. Many components – including furnishings, complex electrical systems, and helm consoles – are produced in a dedicated in-house facility, offering exceptional quality control, craftsmanship, and attention to detail.

The Sunseeker range of yachts constantly sets new standards and benchmarks. From the majestic Superyacht range to the iconic Predator models, each Sunseeker is the result of innovative design and engineering excellence. Never settling for second best, it is this spirit that has driven Sunseeker to its preeminent position in the global leisure marine industry.

Sunseeker's £40m commitment to a renewed product development plan for 2022 – 2025 is evident in its application of world-class innovation, the design and construction of its boats, and its development of their skilled team.

sunseeker.com







Case Study

The RNLI (Royal National Lifeboat Institution) are a charity which has been saving lives at sea since 1824. They rely entirely on public donations to be able to provide an on call 24-hour lifeboat search and rescue service and a seasonal lifeguard service. They aim to educate, influence, supervise and rescue those in and around the water.

As technology advances, it is important for the RNLI to keep up to date with the latest innovations and incorporate the latest science and engineering for their lifeboats. This is what will ensure a sustainable future and allow them to continue saving lives for another 200 years. The RNLI have a number of different lifeboats in their fleet which accommodate different conditions, ranging from inshore lifeboats, including the D-class and Atlantic 85, to the All-Weather Lifeboats, including their latest Shannon Lifeboat. Designed and built entirely in house by the RNLI, the Shannon lifeboat is propelled by water jets allowing it to operate in shallow waters and making it the most agile in the fleet.

The RNLI has two manufacturing centres, one in Poole and one on the Isle of Wight. The Poole site builds,







repairs and maintains the charity's All-weather lifeboat fleet and the centre on the Isle of Wight looks afters it inshore lifeboats. By bringing every stage of the building process in house and having skilled teams of engineers it means the RNLI has greater control over quality and costs.

The Poole site also hosts a training college for the charity's lifesavers who attend courses to learn and hone their skills in preparation for facing all manner of conditions when savings lives at sea.

rnli.org





Engineering (Mechanical and Electrical)

Study Engineering with us from Level 1 right through to Level 6.

Engineering is a diverse and vibrant industry, and there are plenty of opportunities for talented and enthusiastic graduates, fitters and operatives. Expert tutors teach the skills and techniques that local businesses require. We work closely with local businesses like Eaton PLC, REID Steel, Superior Seals and Aish Technologies.

We cover a wide range of subjects from mechanical engineering, electrical and electronic Engineering, welding and fabrication to CNC and CAD. Our wellequipped workshops reflect an industrial environment, so students get hands-on training in real conditions. Students do work experience as part of the course and learn from specialist guest speakers. Many of our qualifications include an external assessment.





At level 1 and 2 we offer a rounded introduction to Engineering with some mechanical, fabrication and electrical engineering to allow students to decide how they wish to specialise as they progress. Level 3 students can specialise in either mechanical or electrical pathways, or choose an apprenticeship.

There is a thriving engineering industry locally. Our students have gone on to work in mechanical engineering, welding, maintenance engineering, CNC manufacturing and CAD drafting.

In higher education our FdEng/HNC course in Mechanical Design will give you a superb grounding in the essential principles and techniques needed to meet the increasingly challenging and exciting nature of the Engineering industry. It has been designed to be relevant to the needs of employment in the fields of Design and within Mechanical Engineering.

Students have the benefits of using the College's excellent facilities including 3D printing, an industrial robot, CAD/CAM suites and material testing laboratory. Current students are registered as student members of the Institute of Engineering Designers (IED). Completion of the course enables partial Incorporated Engineer registration.

Our FdEng/HNC Engineering - Electronic Design course will give you a superb grounding in the essential principles and techniques needed to meet



the increasingly challenging and exciting nature of the Engineering industry. It has been designed to be relevant to the needs of employment in the fields of Electronic and Electrical Engineering.

On this course students have the benefits of using the College's excellent facilities including a full equipped electronics laboratory, electronics systems design suites and a new PCB design and prototyping system. Current students are registered as student members of the Institute of Engineering Designers (IED). Completion of the course enables partial Incorporated Engineer registration.

We also offer Degree Apprenticeships in Manufacturing Management and Electronic Design. Apprentices work as part of manufacturing teams and gain in-depth knowledge and skills in production and manufacturing engineering. Apprentices are critical thinkers and independent learners, able to solve complex design and engineering-related problems individually and in teams. Validated by Bournemouth University, accredited by the Institution of Engineering Designers (IED) and delivered





by Bournemouth & Poole College, the Apprenticeship has high industrial relevance and close ties with the requirements of local industry. Apprentices will work on 'live' projects and assignments related to and based on real experiences within their organisation.

thecollege.co.uk

ARTS UNIVERSITY BOURNEMOUTH

Arts University Bournemouth brings together business, academic and research to enhance the innovation ecosystem of Dorset. We have a number of programmes that deliver activities for innovation, run through our Innovation Studio. AUB's Innovation Studio operates as a lab for creative technologies, a nucleus for start-ups and regional enterprises, and a hub for industry engagement, with a focus on collaboration, high skills development, entrepreneurship, research, and prototyping. The following are examples of projects we have been supporting in recent years

aub.ac.uk

Designed Healthcare

Designed Healthcare is a start-up business founded by AUB Architecture graduate, Ali Jafary (MA). As a practicing nurse at Royal Bournemouth Hospital, Ali is developing a new type of chair focused on alleviating physiological stresses from lifting in and out of a chair. As a resident business to the Innovation Studio, the company has received innovation funding and product development support to move from concept to prototype. In 2022, Ali was awarded a £50k grant from the Royal College of Art (RCA) Design Age Institute 'Pathfinder' initiative.

Latent Drive

Latent Drive is a start-up company developing the 'Catrode', a combined catalyst and electrode for making Green Hydrogen by electrolysis of water. Catrodes are simple to mass produce, durable, efficient and provide an alternative to rare platinum group metals. Latent have been working with our innovation team to access funding and resources for early-stage development. In 2022, the company was awarded a grant of £472k from the Energy Entrepreneurs Fund, a grant competition run by BEIS. This will form 90% of funding for a £525k project to pilot mass production of our Catrodes for Green Hydrogen production.

latentdrive.co.uk



cyclOpic

Cyclopic is a start-up engineering business from central Dorset specialising in transport solutions for greener growth in urban areas. AUB have been supporting Cyclopic on prototyping the bike using technical expertise and access to our digital fabrication equipment. We have also awarded the business an EU Regional Development Fund grant for the design and development of its mobility products.

cyclopic.co.uk

aub.ac.uk/innovation-studio/projects/cyclopic

AETHA

AUB has been working with Aetha Design, a product design studio in Poole, since its inception in 2018. As well as supporting the development of new to the market products, Aetha and AUB have created a valuable network of support for small businesses in Dorset, developing projects from concept through to minimum viable product. AUB was one of the early funders for Aetha's first IP development projects, the 'Totem' camera arm, which has since gone on to be awarded an Innovate UK grant.

aethadesign.com

LUSH

Lush is a global cosmetic brand famous for its colourful and cruelty-free handmade cosmetics. Since 2020, AUB have been working with the LUSH R&D team to explore concepts and processes that will enhance the innovation potential of sustainable packaging. As a company, LUSH employees are a member of AUB's Innovation Studio and get access to our creative technologies and research and technical expertise.

lush.com









Bournemouth University

Bournemouth University has a long-established relationship in engineering, linking with local businesses to turn education into practice.

The university offers engineering courses, as well as courses in product design, design engineering, mechanical engineering and elements of computing, informatics and robotics. These courses culminate in the Festival of Design and Engineering, which takes place each year to showcase the products and engineering solutions of students.

In research, the university is engaged in helping to preserve historic vehicles, create assistive technologies for a fairer society, and the creation of prosthetic limbs for high-level athletes. The university works on fatigue testing of materials using ultrasonic technology, to understand the life of materials and help to create



solutions for them to last longer, reducing the need for waste, while BU also offers medical engineering solutions, creating products that help people live better, for longer.

The university brings its creative and digital expertise alongside its engineering capability to help create solutions to modern engineering problems.

bournemouth.ac.uk



Local Support Packages

Whether you are thinking about starting a new business, expanding your UK operations, relocating, or seeking a UK base for your operations, the economic development team at BCP Council can help you explore what the region has to offer and ensure you get all the support you need to be successful here.

- · Location advice, property viewing and familiarisation visits
- Introductions to legal, financial, commercial property specialists and their services
- · Employment support including introductions to recruitment and training partners
- International trade advice
- Information regarding Trading Standards
- A tailored introduction service to Bournemouth, Christchurch and Poole is offered to help meet the requirements and relocation of staff and families
- Advice on funding and assistance available within Bournemouth, Christchurch and Poole including innovation, growth and exporting
- Business advice and networking

The team are dedicated to helping companies and will provide information tailored to your needs, make introductions, help find suitable premises and advise on financial assistance available.

Please contact economicdevelopment@bcpcouncil.gov.uk





00

bcpcouncil.gov.uk



May 2023