



acoustics.ac.uk
THE UK ACOUSTICS NETWORK

UK ACOUSTICS: SOUND ECONOMICS

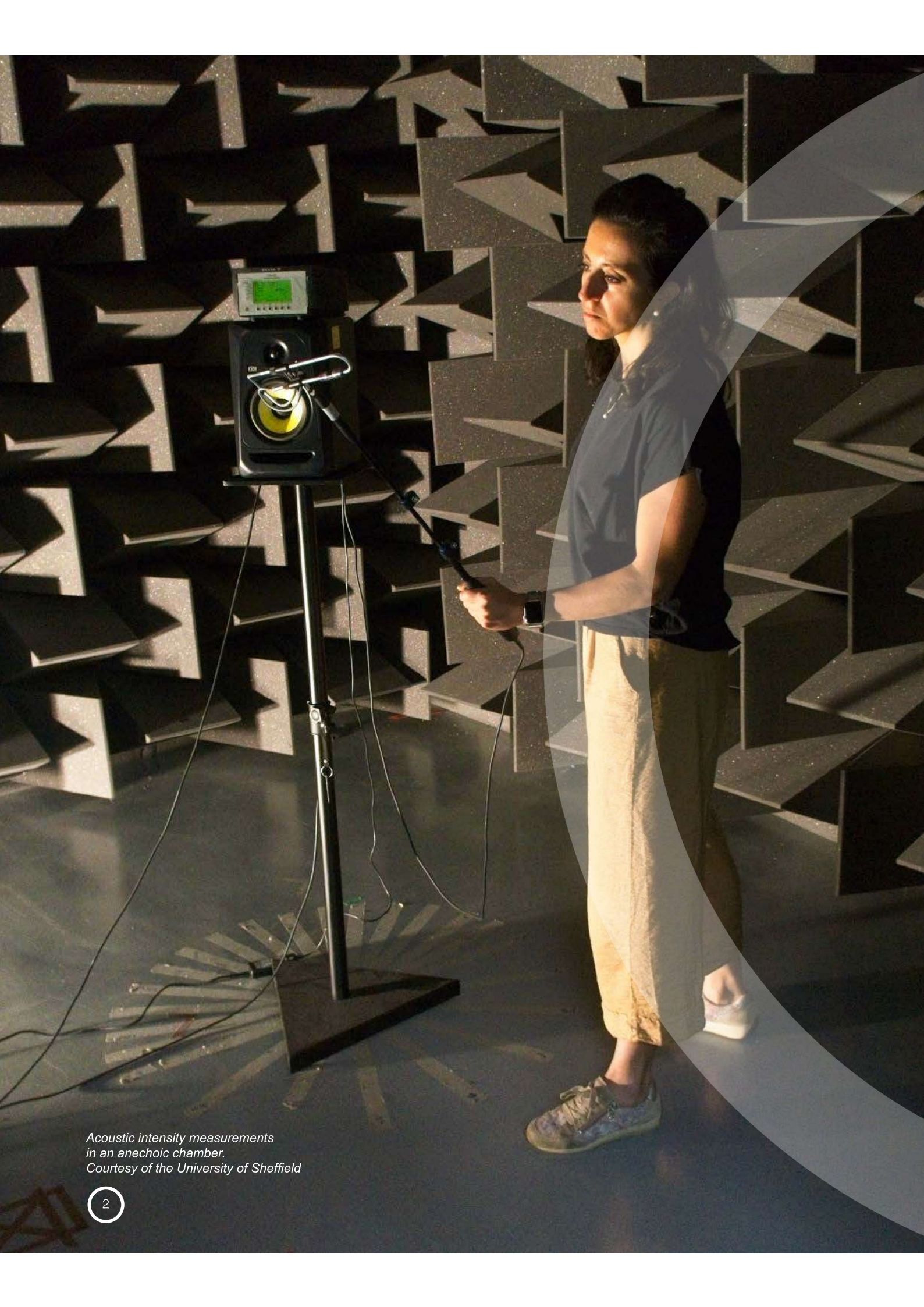
Published: September 2025



 Institute of
Acoustics

 **Noise
Network+**
Engineering a Quieter Future

ANC ACOUSTICS &
NOISE
CONSULTANTS



*Acoustic intensity measurements
in an anechoic chamber.
Courtesy of the University of Sheffield*



“The government has made economic growth their main mission, along with key commitments to delivering 1.5 million new homes and major infrastructure projects. The UK acoustics community is integral to providing solutions to support this growth in a sustainable way that also safeguards against the adverse effects of noise. Exposure to noise pollution is increasingly linked to adverse human health effects – it is second only to air pollution as an environmental cause of ill health. Many studies have also demonstrated the negative impacts of noise pollution on biodiversity. In an industry valued at some £5.2 billion, the UK is a leader in this field and can contribute to delivering the growth, health, and nature agendas using the creative, innovative thinking and expertise it is known for.”

Professor Anjali Goswami

Chief Scientific Adviser, Department for Environment,
Food & Rural Affairs (DEFRA)

“Acoustics plays a critical role in our daily lives from experiencing the negative effects of unwanted noise or vibration, or the positive effects of music or medical imaging. Acoustics industry is global and the UK is a significant contributor to it. This industry raises important research questions and challenges which the UK acoustics research community is targeting through the UK Acoustics and Noise Networks to harness new tools and techniques to provide the country with a global competitive edge.”

Dr Andrew Lawrence

Head of Engineering,
Engineering and Physical Sciences Research Council (EPSRC)



EXECUTIVE SUMMARY

Employing 20,000 people, the acoustics industry contributes £5.2 billion to the UK's economy annually.

Applying and leveraging sound and vibration is essential to modern society. From healthcare, construction, and defence, to AI-driven speech recognition; acoustics underpins critical sectors — but as an industry, it often goes unnoticed. Yet acoustics is a significant UK industry employing 20,000 people in over 780 firms, generating annual revenues of over £5.2 billion.

Acoustics defined

Acoustics is the generation, manipulation, control, transmission and detection of sound and vibration. Acoustics encompasses diverse and far-ranging applications, such as suppressing unwanted noise and vibration in the built environment and on transport, reproducing music and positive soundscapes, using audible soundwaves and ultrasonics in non-destructive testing and imaging in fluids, gases and elastic solids, medical ultrasonics and emerging applications such as speech and voice recognition and ultrahaptics technology, to name but a few.

The industry contains many small and medium-sized enterprises (SMEs), accounting for over 98% of businesses distributed across the UK from Cornwall to the Highlands. The importance of acoustics is indicated by the sector's productivity, which exceeds £95,000 gross value added to the economy per acoustics employee, a full one third higher than the UK manufacturing average.

UK revenues from acoustics have grown by 13% over the last six years. Productivity growth has been especially strong expanding by an average 8.6% per annum over the same period. Strong demand for acoustics skills is reflected by an average increase of 7% in salary and benefits paid to acoustics personnel since 2018.

The acoustics industry is underpinned by a vibrant knowledge base with over 250 active research grants, totalling in excess of £230 million and involving over 70 separate UK universities. This research is supported by eight different research councils under UK Research and Innovation (UKRI) and Horizon Europe, reflecting the multi-disciplinary environment in which acoustics operates, from social and health to engineering sciences.

Society and the wider manufacturing industry are increasingly recognising the importance of acoustics and investing in new capabilities. For example, the UK water industry are installing over 100,000 acoustic leak detectors to deliver a 50% reduction in leakage by 2050. In 2019 Thames Water alone signed contracts worth a total of £200 million over eight years to cover leak detection and repairs. Meta have recently announced a new £12 million audio research lab in Cambridge, located within the UK government's Ox-Cam corridor. This state-of-the-art facility is dedicated to advancing audio technologies for Meta's future AR and AI glasses. These investments are mirrored by companies within the automotive and construction sectors, e.g. Mahle Powertrain and Arup SoundLab.

Delivering timely growth from the 2025 UK Industrial Strategy will depend on integrating acoustics into the resulting activities. Not only is acoustics a high growth sector in its own right, all of the highest potential sectors identified in the strategy, and many key areas in the strategic defence review, have either a direct dependence on acoustics, e.g. submarine defence or feed into acoustics.

The global market for acoustics is both vast and diverse. It is estimated to grow to over £44 billion by 2030 in key applications areas, including: multi-billion markets for acoustics insulation, sonar for maritime security, ultrasound for medical imaging, advanced materials for vibration and sound control, and non-destructive testing and voice recognition/activation microphones - with the total market for acoustics being even higher.



The analysis reported here will ensure that acoustics is heard above the noise to inform policy, support agencies, researchers, career decisions and wider industry about the scale of acoustics capability and the future opportunities available in the UK. The direct economic value of acoustics, the global markets and the potential for growth are all significant. The contribution from products and services that harness and leverage sound and vibration is even greater still.

To capture the maximum value of these opportunities in the UK, action is needed on the five key report recommendations listed. Collaboration and coordination with the Department of Science, Innovation and Technology, the Ministry of Defence, and Department for Business and Trade is essential to maximise UK resilience and international trade based on extensive UK acoustics capability. The diverse nature of acoustics requires greater coordination between departments, professional bodies and industry, to maximise efficiencies and opportunities. Skills development is essential, both within the field and more broadly in engineering and beyond, to ensure early integration of acoustics,

sound and vibration into design from the built environment to transport. As leveraging value from acoustics becomes ever more dependent on AI, a review of UK infrastructure to enhance the combined value of both fields is to the benefit of the whole economy.

Recommendations:

1. Support a leadership body to convene industry, government and academia to spread awareness of industrial demand and advances in acoustics.
2. Work with the Department for Business and Trade to increase international awareness of UK acoustics capability as a national asset.
3. Conduct a review of UK acoustics capital infrastructure and access to key resources vital for expansion, e.g. in AI and machine learning.
4. Develop stronger collaboration between the professional bodies to which acoustics professionals affiliate, e.g. Institute of Acoustics, Institute of Physics, IMechE, IET, ICE and Audio Engineering Society, to ensure that acoustics is entrenched in design.
5. Provide broader opportunities for upskilling of the acoustics workforce across all career stages and education levels.



Image above: The Slaty-capped Shrike-vireo Vireolanius leucotis leads mixed-species flocks through the canopy of the Amazon rainforest, and is target species for passive acoustic monitoring. Photo: Oliver Metcalf, courtesy of the University of Lancaster.

Image left: Deploying recording equipment for a pilot study to listen to Amazonian forest soils. The UK Acoustics Network plus (UKAN+) funded workshops to develop hardware and methodology for passive acoustic monitoring of soil. Photo: Oliver Metcalf, courtesy of the University of Lancaster.



INTRODUCTION

Every product and every location in the world has sound or vibration characteristics, from people and machines, to the largest buildings, landscapes and oceans.

Acoustic science interprets the level and source of sound, noise and vibration, and seeks to understand and control their generation, detection, modification and usage. The field of acoustics covers a wide spectrum. From ultrasound to opera, random sub-audible vibrations to voice recognition, from sound insulation, to understanding the impact of noise and vibration on people and machines.

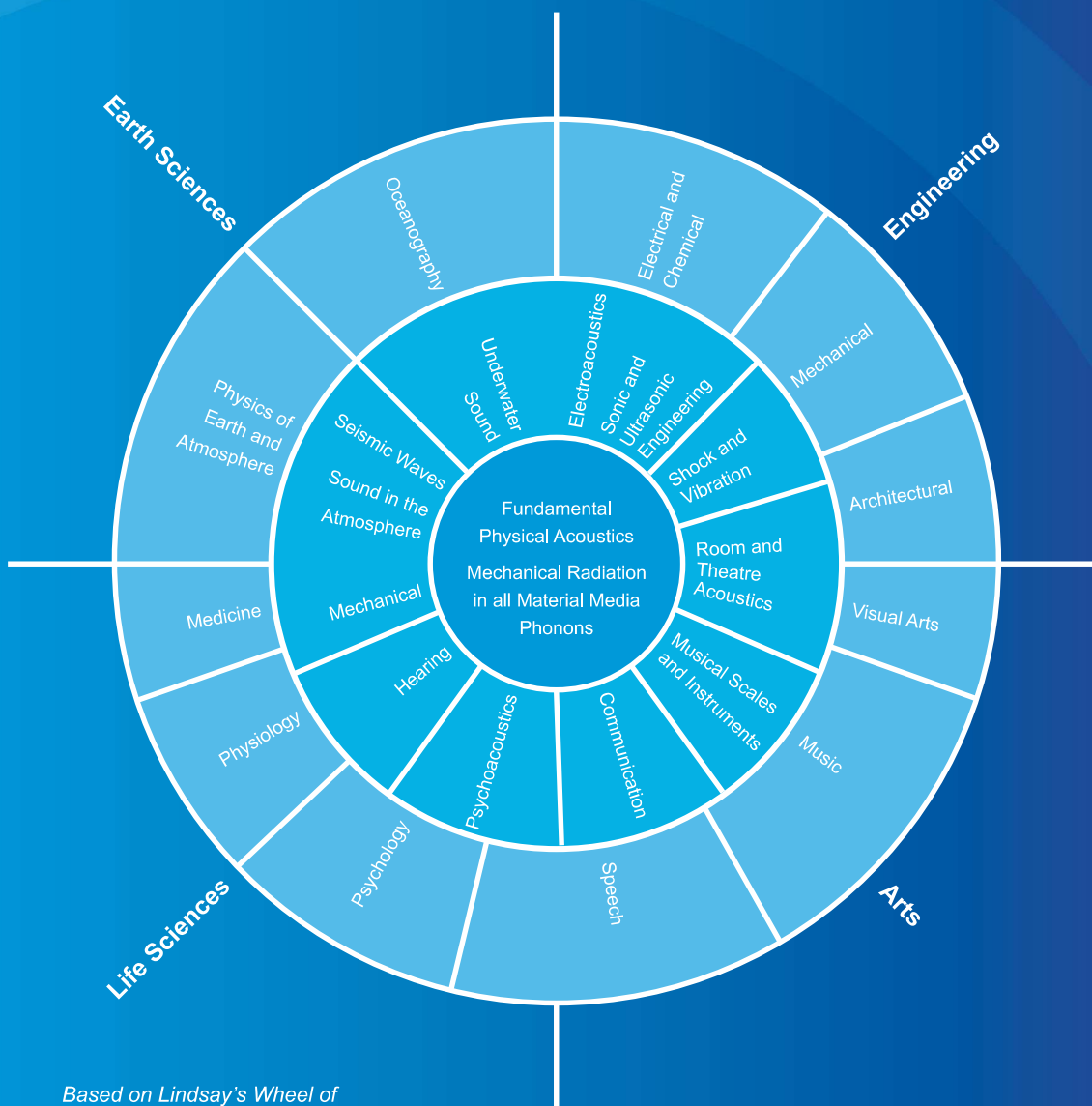
Acoustics is ubiquitous. Built-environment acoustics are evolving from passive noise suppression to the active design of positive sound environments, which enhance public well-being and mental health. In cars and transport sound has long been managed to improve the passenger experience and reduce environmental impact, with voice control now routinely integrated to improve safety. Sound has a unique ability to travel through fluids and elastic solids which means that it can be harnessed for non-destructive testing, sonar imaging and medical diagnostics. Barely a baby is born, an aerospace part manufactured, or oil well drilled without the help of an ultrasound, sonar or seismic scan. Everything that exists outside of a vacuum has a sound signature and so acoustics forms a critical part of our defence and security, enabling key capabilities in areas as diverse as submarines to perimeter monitoring. Acoustics shapes and supports every aspect of our lives.

The ubiquitous nature of acoustics means that 'sound management' is frequently taken for granted in the development of new products and services, and is often considered only in the latter stages of the design process. This can lead to increased engineering costs, delays in taking products to market and missed opportunities for integrating advanced acoustic technology into new products. This oversight has also contributed to the acoustics industry remaining relatively unheard of outside of the sector. An irony made even greater by the significant and ubiquitous impact of acoustics on day-to-day life.

As a result of being a 'hidden' industry, analysis of the direct economic contribution of acoustics to the UK economy was not undertaken until 2019. The 2025 update presented here, quantifies the direct economic impact from the manufacturing of acoustics products and services in the UK, irrespective of their ultimate end application. Key metrics are reported for acoustics revenue, the size of the workforce employed in the sector and the gross value added (GVA) to the UK economy. Comparison to the 2019 analysis allows reporting of long-term growth rates over all of these key metrics for the first time.

This analysis is based on a robust, proven methodology that has been developed and applied to quantify the economic value of other enabling industries including photonics, or 'light technologies', and fluids dynamics/mechanics in the UK and internationally. The methodology takes into account the highly-distributed industry landscape, comprised of many specialised small and medium-sized enterprises (SMEs) operating alongside fewer large companies engaged in significant activities within the sector, as part of a far wider and highly diversified portfolio of products and technologies.





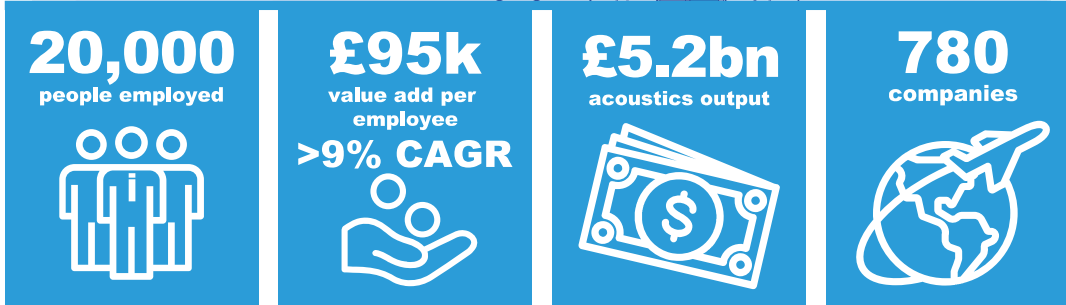
Based on Lindsay's Wheel of Acoustics, Bruce Lindsay, 1964

The outcome of applying this approach is an accurate, reliable and valid estimate of the size and distribution of industrial acoustics in the UK. The strength of the UK acoustics knowledge base is separately captured by £230+ million of active, acoustics-related research. Advanced acoustic technologies are vital to keeping products competitive, safe and compliant with environmental regulations. It is beyond the scope of this report to quantify the

significant leverage of acoustics into all the many individual markets on which these technologies impact. However, it is evident that a strong, dynamic and growing UK acoustics industry needs to be in place to support use of sound and vibration as a key differentiator of products, support defence and security as a maritime nation, and enhance the health and productivity of society through optimising our built environment.

THE UK ACOUSTICS INDUSTRY IN 2025

The UK Acoustics industry produced goods and services worth £5.2 billion and employed 20,000 people.



Delivering this impressive output is an acoustics industry comprising of over 780 companies, employing a total of 20,000 people in manufacturing, design and engineering jobs.

In just one year, the UK acoustics workforce contributes £95,000 in gross-value-added (GVA) to the economy per full-time employee, an increase of 64% in productivity since 2018. Acoustics now contributes £1.9 billion in total GVA to the UK economy every year from revenues of £5.2 billion.

The evaluation of industry size includes commercial industrial organisations only, with all publicly-funded research institutes and universities excluded from the data set. For highly diversified companies, the analysis includes only the proportion of their output directly attributable to acoustics (see methodology).

Top 20 contributors to UK acoustics output

- | | |
|---|---|
| <ul style="list-style-type: none"> • BAE systems • Cirrus Logic • Cochlear • Ford UK • GKN aerospace • JCB • Jaguar Land Rover • Kellogg Brown & Root • Kingspan • Lear Corporation | <ul style="list-style-type: none"> • Martin Audio • Nissan UK • QinetiQ • Ricardo • Rockwool • Rolls Royce • Saint Gobain • SEA • Sonardyne • Thales UK |
|---|---|

Companies within the top 20 largest contributors to the UK acoustics industry operate in seven of the ten identified key end-user markets. This emphasises both the diverse nature of businesses involved within the sector and the wide-ranging impact of acoustics technologies.



Total acoustics revenues have grown by 13% over the last 6 years, more than double the rate of UK GDP growth over the same period. Employment in the sector has grown even faster, by over 23% over the same period, with a compound annual growth rate (CAGR) of over 3.5%.

Productivity growth has been even more impressive. The GVA per acoustics employee added to the UK economy has risen by 64% (8.6% CAGR) based on

a like-for-like comparison of only the companies in both the 2019 and this 2025 analysis. This has been driven by strong 7% compound annual growth in employee benefits paid in the sector. This confirms acoustics as an important high growth sector, with substantial potential to underpin UK economic expansion.

IMPACT

Growing a vibrant resilient UK economy depends on acoustics

Addressing the challenges of today and tomorrow

The ubiquitous nature of acoustics means it is critical to the future of the UK's growth. Everything has an acoustic signature and is impacted at some level by sound. Acoustics is essential for our national defence, healthy living, built environment and advanced manufacturing.

Early consideration of acoustics is critical to maximising the benefits of innovation in all fields. Ignoring acoustics inevitably reduces impact, lengthens time to market and increases waste, which compromises productivity and the benefits that can be delivered to society. In fact, modern acoustics will increasingly be the focus of innovative solutions to society challenges, not just an auxiliary aspect in their development.

Advanced Manufacturing

Ultrasound is one of the critical non-destructive test mechanisms used in advanced manufacturing. Able to 'see' inside complex materials and structures, ultrasound supports quality assurance both at the point of manufacture and for fatigue analysis in the field.

As composite materials and 3D printing become standard manufacturing processes, delivering stronger and lighter structures in everything from planes and cars to prosthetic hips and knees, ultrasonic testing becomes vital to ensure their quality. Accelerating the adoption of advanced manufacturing techniques is vital to maximising UK competitiveness and growth, especially in high value sectors such as aerospace, energy and defence where the UK excels. To do so safely requires assurance of structural integrity and durability driving demand for through-life non-destructive acoustic testing as the gold standard.

Clean Energy Industries

The UK is a leading force in wind power generation. Meeting targets for extending deployment, especially of on-shore wind, necessitate reducing its impact, where the generated noise is a top priority. Understanding acoustics is vital to minimise the impact and thus maximise the societal buy-in, that

is essential to delivering the wind power deployment required to meet the UK's net zero targets.

Additionally air source heat pumps create a new noise close to people's homes and neighbours.

Insulation is equally a high priority to reduce energy consumption. However, thermal and acoustic properties of insulation are not always coupled to each other. In the built environment especially, good design and innovative new advanced materials, such as acoustic metamaterials, can optimise both the thermal and sound environment simultaneously. Poor design and/or material choice can lead to inefficient doubling-up in the use of materials, and in the worst case the negation of benefits. We have all experienced the issues of external noise impacting an environment when windows are opened on a hot day which is becoming increasingly common with climate change. There is an increased demand for air conditioning and heat pump units that present another noise source to control.

Defence and Security

The 2025 strategic defence review committed to a significant expansion of the UK's submarine fleet. Sound travels much further in water than air, and acoustic sonar is long established in maritime defence as the prime sensor modality. Whether a large nuclear submarine or submersible drone, if it makes noise, it can be detected. Stealth underwater is acoustics.

As a naval nation the UK has a unique interest in acoustics for security and defence. Without acoustics, the UK's maritime power is vastly compromised. We must stay ahead of the world in both reducing acoustic signatures and in advancing sonar for early detection and classification.

Digital Technologies and AI

Sound is complex. With multiple frequencies and amplitudes, sound contains a wealth of information hidden in what can appear as noise. Extracting the maximum information from acoustics is vastly enhanced by the use of AI. With rich data and complex interactions with the environment, sound waves are suited to the application of AI to inform decision making.

From the interpretation of seismic signatures of volcanic activity, to interpretation of speech, leak noise in buried pipes, or the optimisation of sound insulation quality; AI will vastly extend the value of acoustics. Application of AI will put new demands on acoustics equipment and stretch scientific understanding, opening up new applications and extending the value acoustics adds to society. Given that sound of some form is almost always present in the environment, adding AI enables society to extract high value from its acoustics assets.

Life Sciences and Healthy Living

Ultrasound is the backbone of soft tissue imaging used in every hospital across the country. As ubiquitous as X-rays, it has a key advantage in allowing real time video imaging. Whether it is measuring foetal heartbeats in the womb, or blood flow to suspected tumours, the dynamic aspect to ultrasound adds huge value to medical diagnostics.

It is increasingly understood that our long-term mental health is impacted by the soundscapes around us. The acoustic environment can be incredibly therapeutic or a major cause of stress. Managing soundscapes is therefore critical to healthy living. This ranges from understanding the impact of the built environment and transport, to understanding how we interact with our audio environment including how that changes as society ages.

The impact of the UK's 2025 Industrial Strategy will only be maximised by ensuring that acoustics is built into emerging programmes and initiatives at the earliest possible opportunity. As a sector with huge potential, impacting all other high potential sectors, acoustics needs to be integrated within the focal areas of UKRI to ensure that UK expertise is leveraged to its full potential and extended for the future.



INDUSTRY PROFILE

UK Acoustics is dominated by small and medium sized companies

Small and medium size companies with less than 250 employees make up 98% of the UK acoustics industry. Whilst these smaller enterprises are the heart of acoustics innovation and service delivery, it is the larger companies who in combination generate the majority of acoustics revenues and employment. 64% of acoustics revenues and 54% of acoustics employment comes from just 2% of companies, who are assessed to have over 250 acoustics employees. This dominance of larger enterprises on economic impact replicates other enabling technologies, e.g. photonics and fluid dynamics in the UK and internationally, and indeed wider manufacturing.

With approximately 20,000 employees in the UK, acoustics employees are double the number of people involved in refining petroleum, and one third of the number employed in the whole of the test and measurement sector. Notably for such a hidden, unrecognised sector, acoustics employees are more than a quarter of the number of people employed in either motor or aerospace manufacturing in the UK when compared to data for these industries based on SIC codes from the Office of National Statistics (ONS).

Acoustics jobs are notably high value, paying an average employee benefit of £68,500. This has risen by an average CAGR of 7% over the last 6 years, reflecting high demand for acoustic skills across a wide range of vertical markets.

Acoustics is one of the most productive manufacturing sectors in the UK. Generating GVA to the economy of £95,000 per employee, acoustics is one third more productive than the UK manufacturing average when compared to ONS 2022 labour productivity statistics. Acoustics also exceeds by 8.5% the more recent UK manufacturing productivity estimate of £87,300 per employee from Four Jaws Manufacturing Analytics (Feb 2025) based on world bank and OECD data, and exceeds manufacturing productivity estimates from both Germany and Japan.

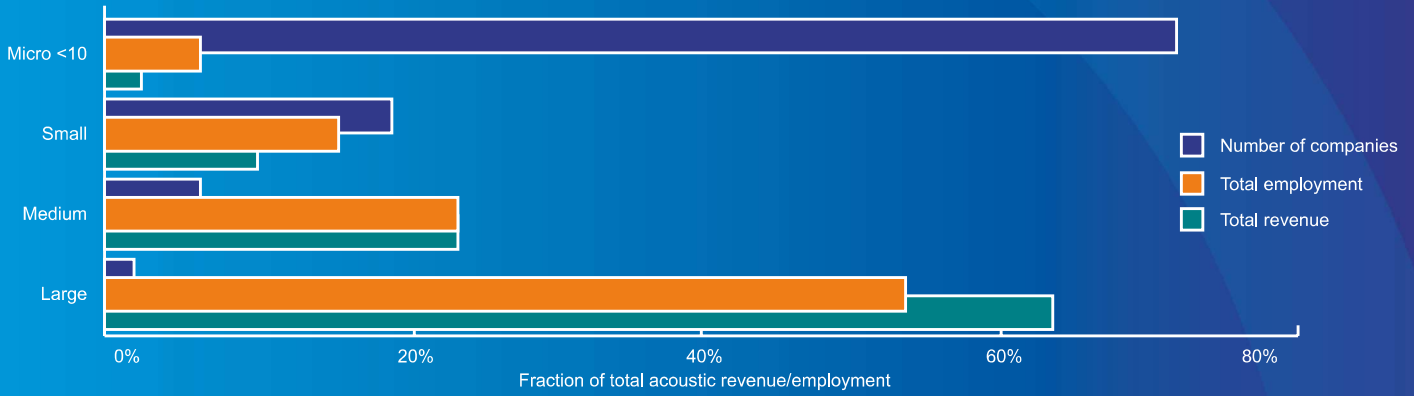
Acoustics productivity has grown by 64% over the last 6 years (CAGR 8.6%) exceeding productivity growth in almost all UK manufacturing sectors. With strong revenue growth and even faster productivity growth, acoustics fits perfectly the growth focus of the UK's 2025 Industry Strategy. UK acoustics is expanding precisely because of its broad enabling impact, providing not only direct growth within the sector, but also underpinning growth in the vast range of vertical markets acoustics enables, from the built environment to defence.



“Acoustics profoundly shapes our daily lives, health, and economy in ways often unseen yet deeply felt. The UK’s leadership in acoustics science, engineering, and manufacturing drives significant socio-economic benefits—from advancing cutting-edge communication, entertainment, healthcare, and defence technologies to innovating noise control solutions that enhance urban living and public health. As noise increasingly emerges as a critical health concern, the integration of sustainable acoustic materials and quieter technologies presents vast opportunities for improving quality of life while supporting economic growth. Continued collaboration between researchers, industry, and policymakers is essential to harness the full potential of acoustics, creating quieter environments and healthier soundscapes that benefit both society and the planet”

Barry Jobling
Director, Hoare Lea

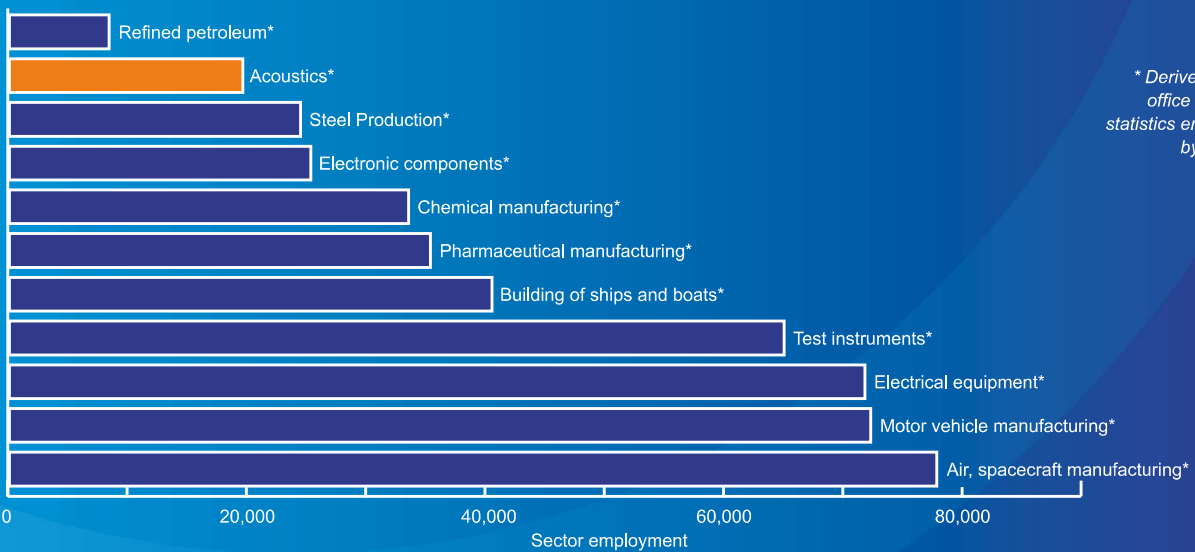
Total acoustics revenues by size of operation



Distribution of acoustics companies by employment



Employment in key UK manufacturing sectors



* Derived from the office of national statistics employment by SIC code

REGIONAL DISTRIBUTION

The acoustics industry is distributed throughout the UK

The UK acoustics industry is distributed throughout the country with significant industrial activity in all regions. Acoustics generates over £0.5 billion in revenue annually, in six of the twelve NUTS1 UK regions. Heat mapping of the industry also shows many acoustics companies are based outside the UK's main industrial areas, including Cornwall, North Wales and the North of Scotland. This reflects the diverse nature of the industry which covers both industrial, built environment and broader environmental and noise applications.

Acoustic industrial productivity, assessed as gross value added to the economy per employee, is fairly uniform across the country with the exception of Scotland where it is 45% higher than the national average. This is attributed to the high level of defence plus oil and gas industry activity in Scotland.

The distribution of the UK acoustics is based on a mix of operation and registered company addresses. Where a company is known to have two addresses, as a first approximation, revenues and employment are split evenly between locations. The actual split of acoustics activity between locations is likely to differ from this approximation and therefore the regional distribution should be taken as an approximate indication only.

Region	Output	Acoustic employees	GVA/employee
Scotland	£490m	1,130	£141,000
Northern Ireland	£10m	30	£86,000
North East	£170m	400	£76,000
North West	£860m	3,410	£89,000
Yorkshire and the Humber	£140m	750	£87,000
East Midlands	£520m	1,520	£110,000
West Midlands	£700m	1,430	£103,000
Wales	£180m	470	£96,000
East of England	£580m	2,180	£86,000
London	£110m	660	£91,000
South East	£1,110m	5,870	£92,000
South West	£340m	1,880	£85,000
Total	£5,207m	19,730	£95,000

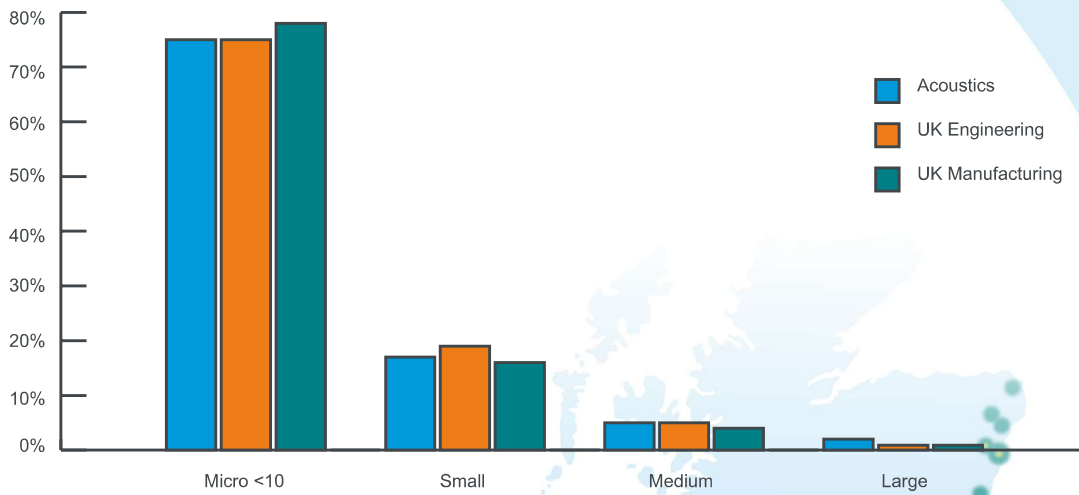


“Acoustics is a constant part of our everyday lives from architectural and environmental acoustics, to understanding platform radiated noise and utilising sound as a “vision” tool to detect intruders, protect critical structures such as bridges, undersea pipelines and sense our bodies and environments. The acoustics community includes some of the nation’s greatest talent in mathematics, physics, engineering and social sciences. It is the multi-disciplinary nature of acoustics that makes this an exciting, evolving and vibrant field of work. The UK Acoustics and Noise Networks have an essential role in bringing the disciplines together, creating the network of academics, governmental and industry stakeholders and ensuring that the UK remains at the leading edge of acoustics with the development of new technologies and new talent.”

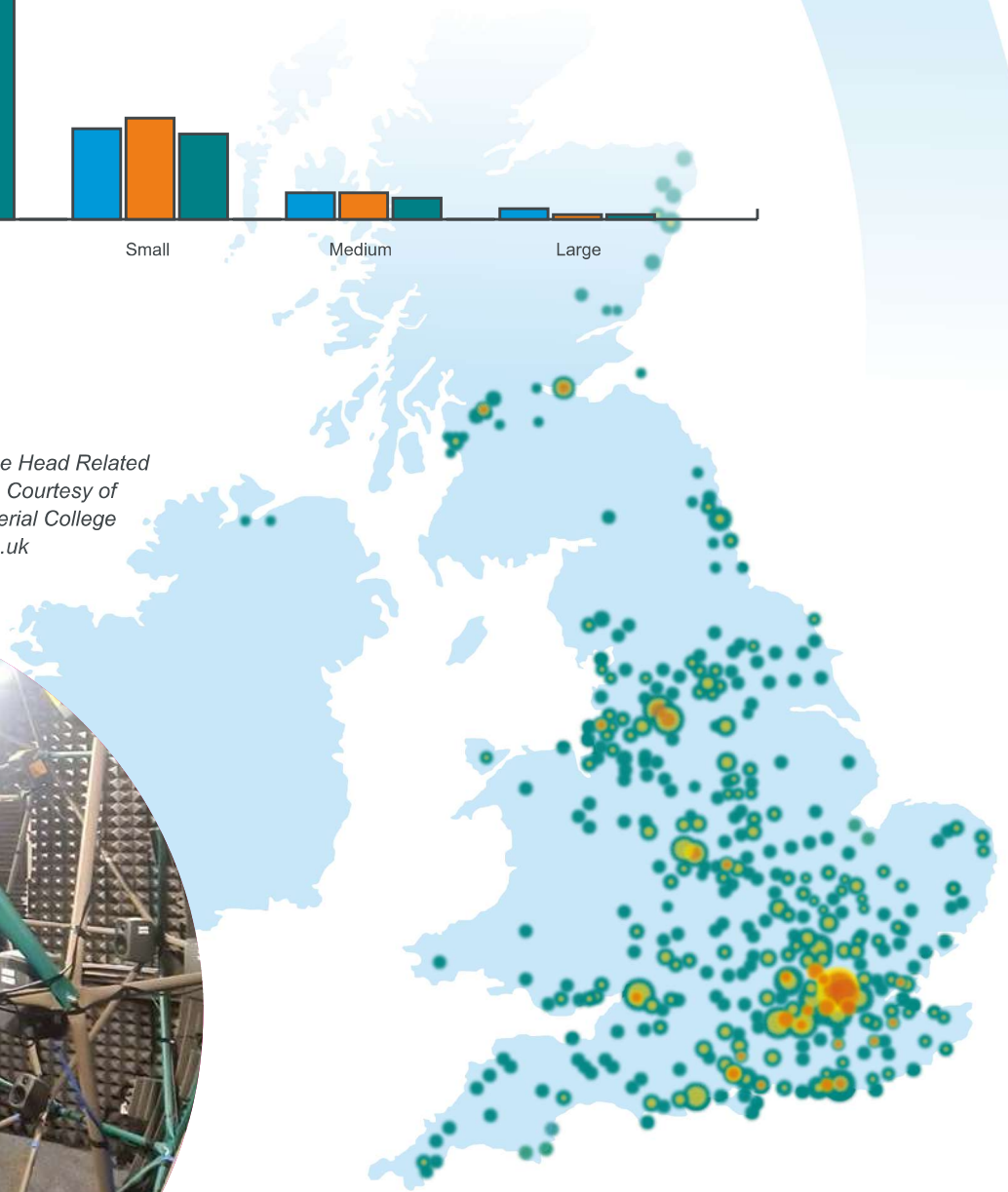
Dr Samantha Dugelay
Head of General Sonar Studies, Thales



Size of UK acoustics firms relative to UK engineering and manufacturing



Below: Measurement of the Head Related Transfer Function (HRTF). Courtesy of the Turret Laboratory, Imperial College London, www.axdesign.ac.uk



UK ACOUSTICS KNOWLEDGE BASE

The success of UK industry is built upon the strength and depth of acoustics research in the UK.

The breadth of subject areas reflects the pervasive and enabling nature of acoustics, and the many ways in which it impacts on our lives.

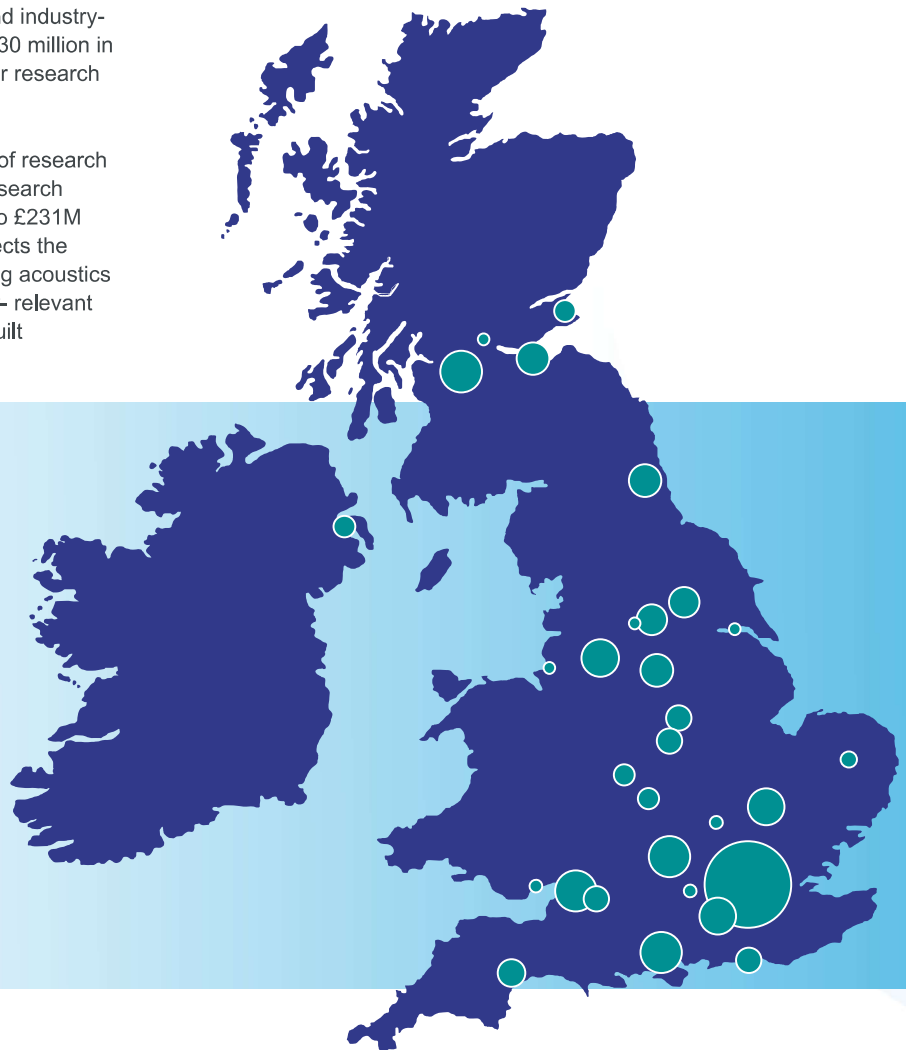
Within these disciplines, studies under the umbrella of ‘acoustics’ can be broadly grouped into five areas of investigative research:

- Audio, speech, sonic, sound and hearing
- Fundamental acoustics
- Ultrasound and ultrasonics
- Vibration
- Noise

The UK is a well-established international powerhouse of acoustics-related research. In 2025, there were over 250 active university and industry-led grants in the field, valued at over £230 million in total and dispersed across the five major research areas listed above.

During the last six years the total value of research funding awarded to acoustics related research has risen by 48% from £156M in 2018 to £231M in 2025. This enhanced investment reflects the renewed importance placed on furthering acoustics knowledge in complex, often industrially-relevant areas, from speech recognition to the built environment.

The acoustics knowledge base is distributed throughout the UK. Over 70 different institutions were responsible for heading up the 251 research grants in the field related to acoustics recorded as active in May 2025. These spanned the country from University of the Highlands and Islands in Scotland, to Plymouth in the South West region and included both historic Oxbridge and Russell Group universities (e.g. University of Sheffield, Imperial College and University College London) and many newer institutions (e.g. Leeds Beckett University and, Manchester Metropolitan University).



The most prolific grant holders (by value) were the University of Glasgow, Imperial College and University of Sheffield, with a total of 37 institutions in possession of more than one active grant in the field. In 2025, fundamental acoustics and ultrasonics remained the most active research areas, both in terms of the total value and number of grants awarded.

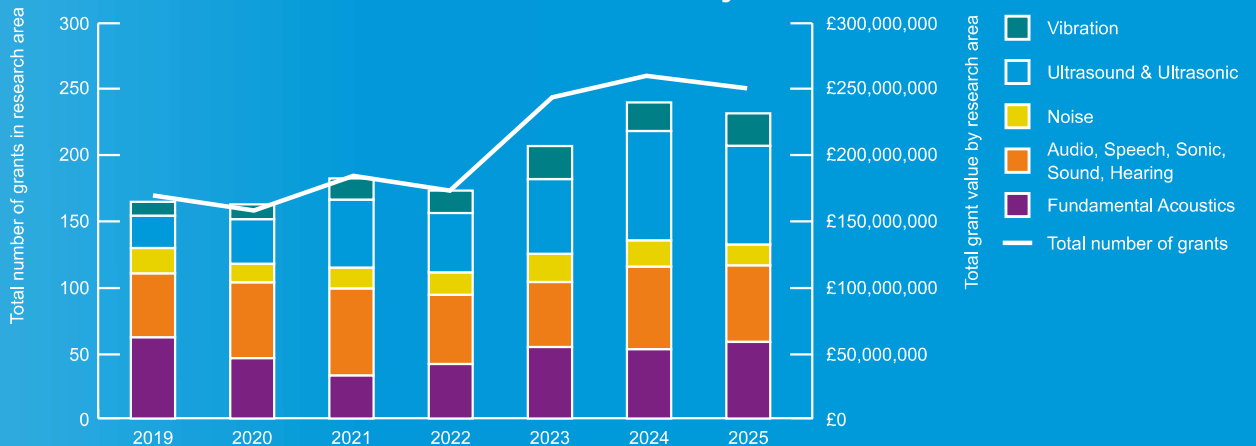
Industrial engagement is increasingly prevalent in the broad field of acoustics research. In 2025, there were 19 active industry-led Innovate UK grants related to acoustics, many of which involve UK university partners.

The UK acoustics knowledge base has strength and depth and is highly interdisciplinary in nature, as illustrated by the numerous different funding bodies supporting research in the field. These include the Arts and Humanities Research Council (AHRC), Biotechnology and Biological Sciences Research Council (BBSRC), Engineering and Physical Sciences Research Council (EPSRC), Innovate UK, Medical Research Council (MRC), Natural Environment Research Council (NERC) and Science and Technology Facilities Council (STFC), which now sit under the common umbrella of UK Research and Innovation (UKRI).

The industry-led Institute of Acoustics, EPSRC-funded UK Acoustics and Noise Networks support the development and integration of the UK acoustics knowledge base. These organisations bring together the various acoustics research fields with the highly diverse user base, to facilitate sharing of knowledge and best practice to maximise opportunities for commercially exploiting innovation.

The UK has well-established industry expertise in acoustics and an internationally leading academic knowledge base distributed throughout the country. Whilst it is little-known outside of the profession, there exists a strong, self-organised UK acoustics community, supported by organisations such as the Institute of Acoustics, which provides professional support to over 3000 members, and the UK Acoustics Network, which brings together 2000 individuals from academia and industry and enables the knowledge base to unite and thrive. In 2025 the EPSRC funded the Noise Network Plus which will reach beyond the acoustics community to ensure that sound and noise are considered at all stages of design and implementation resulting in an inclusive and sustainable environment.

Distribution of acoustics research in UK in May 2025



METHODOLOGY SUMMARY

An Internationally established process for quantifying acoustics and enabling technology industries.

Like many enabling and underpinning industries leveraged into multiple end markets, the acoustics industry does not have a dedicated Standard Industrial Classification (SIC) code. This is a challenge that has long hindered efforts to accurately quantify the size of enabling technology sectors around the globe. In addition, many companies working with acoustics are highly diversified, delivering products embedded with acoustics in combination with, and/or alongside, products based on other technologies.

The methodology for this report was developed to meet these challenges and provides a valid, representative estimate of the UK acoustics industry size, without the need to resort to confidential data. Consistent application over time enables accurate reporting of the underlying growth rate of the industry and comparison to other sectors.

Step 1: Compile a comprehensive list of companies engaged with acoustics. The starting point was the list used for the previous 2019 analysis, revised to remove companies no longer trading or those merged with others. Some 200 new companies were identified as actively adding value with acoustics in the UK and added to the list. The list was filtered to remove publicly funded research organisations (e.g., universities) and those that use acoustics products, but do not add-value with internal acoustics expertise. The result was a net total of 780 companies, adding direct economic value with acoustics in the UK.

Step 2: Source UK output (turnover), profit and employment figures from Dun and Bradstreet, based on matching the company name, number and postcode. Where global figures are returned for international business, a fraction of activity is attributed to the UK based on local employment, unless otherwise known.

Step 3: For larger, diversified companies producing both acoustics and other products: the proportion of total company output categorised as specifically acoustics was estimated by an expert panel. This apportionment fraction was applied to revenue, profit and employment.

Step 4: The average benefit paid per employee was estimated from the total reported benefits paid and employee numbers for a sample of companies reporting such figures and fully focused on acoustics. Gross value added (GVA) was calculated from total profit and total employee benefits paid using this average.

Step 5: Operational addresses for all companies are recorded and assigned to NUTS regions via postcode. Fiscal figures are distributed between sites based on industry input, or uniform distribution between sites where not otherwise known.

This methodology was designed to enable the inclusion of highly diversified companies, without over-attributing the value of their output to acoustics. The process is the gold standard for quantifying the size of enabling technology and has been applied to Acoustics and Fluid Mechanics in the UK, Fluid Mechanics in the Netherlands, Australia and New Zealand, and Photonics in Australia, New Zealand and globally by SPIE and Thematys. Fiscal data is based on that reported to Companies House by May 2025. It therefore features a range of year end dates within 2024. Previous analysis published in 2019 was based on 2018 financial data and therefore total growth rates cover a 6-year period.

Methodology for estimating UK acoustics industry size



GLOBAL ACOUSTIC MARKETS

Acoustics addresses multi-billion dollar global markets.

Acoustics is a major global industry supporting multiple significant yet diverse vertical markets. As such the acoustics market is rarely analysed in its entirety. Rather, analyst forecasts are available separately for only the most significant verticals underpinned by acoustics.

The global market for acoustics insulation, which includes glass wool and other materials and fabrics used in new-build construction and the transport industry, was estimated at \$15 billion in 2023 and is projected to grow at 4.3% CAGR to \$21 billion by 2030. UK manufacturers include manufacturers of traditional sound-absorbing insulation, e.g. Saint-Gobain, and those developing next-generation soundproofing meta-materials, e.g. Sonobex.

The global ultrasound equipment market includes both medical imaging and, as a small fraction, industrial non-destructive testing. The market was valued at \$9.6 billion in 2024 and is projected to grow by 7.3% CAGR reaching \$16.1 billion by 2032 driven by increased use in both healthcare and industry. UK manufacturers include EMS Physio, BK Ultrasound and Alba Ultrasound.

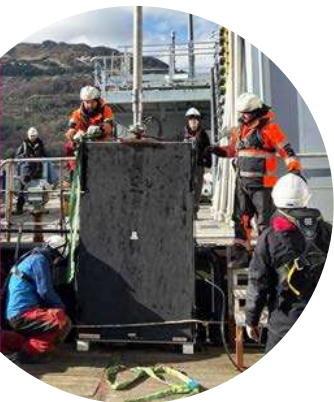
Speech and voice recognition that combines acoustics and AI has now become standard in consumer electronics and continues to expand with voice control in automotive, smart homes and industrial applications. Noise cancellation is now standard in the earbuds ubiquitously used by the digital native Generation Z. Both are built on advances in miniaturised semiconductor far-field microphones. The result is a global market for far-field speech and voice recognition that is forecast to explode by 18% CAGR from \$5.1 billion in 2024 to \$19.5 billion by 2032 and a market for microphones projected to reach \$10 billion by 2030.

The global underwater sonar system market is experiencing substantial growth, and likely to accelerate further with increased global defence spending and focus on maritime security including in the UK. Forecasts project a 7.8% CAGR to \$6.9 billion market by 2030.

Just combining these four applications indicates a global acoustics market in excess of \$60 billion (£44 billion) in 2030 spread across consumer, built environment, defence and healthcare. The total market will be significantly larger given the raft of additional markets driven by acoustics and the vibrant acoustics and noise service sector not included in above forecasts.

Demand for these key acoustics end-products is distributed throughout the world with growth driven by global mega trends in digitisation, demographics, security, urbanisation and mobility. Unlike other enabling technologies, e.g. semiconductor production, acoustics design and manufacturing are also globally distributed with notable strengths in the UK.

UK acoustics is particularly active in building design, architecture and marine surveying, yielding a vibrant acoustics service sector alongside hardware manufacturing. Many such services are delivered internationally, either by companies operating as independent acoustic consultancy firms or by units embedded within much larger buildings, construction and architecture practices. Acoustics is a multi-disciplinary and multi-billion pound global industry. It is a key element of vertical markets as diverse as aerospace, automotive, healthcare, construction, manufacturing and defence. The proportion of acoustics activity within each of these sectors is significant in itself, but when combined across all end markets opportunity is vast.



Images showing acoustics for underwater exploration.

Top image: Seiche deploying equipment to assess underwater sounds. Courtesy of Seiche.

Bottom image: Thales and QinetiQ teams support the Submarine Enterprise at Loch Goil, performing characterisation of both in-service and developmental acoustic sensors for DSTL, and the development of future submarine sonar capability. Jai Kaniewski (GSS Trials Engineer) April 2025. Courtesy of Thales

ACKNOWLEDGEMENTS

The contribution of the following experts to the apportionment processes used in sizing the industry is gratefully acknowledged:

Andrew Anderson, Ultra Maritime

Andrew Bullmore, Hoare Lea LLP

John Campbell, Campbell Associates Ltd

Nicholas Chotiros, University of Southampton/US ONR

Stephen Dance, London South Bank University

Carl Hunter, Centre for Underwater Acoustics Analysis (CUAA)

Ian Knowles, ARUP

Paul Shields, University of Derby

Keith Vickers, Hottinger Brüel & Kjaer UK Ltd

Acknowledgements

- The UK Acoustics Network
- Noise Network Plus
- Institute of Acoustics
- Engineering and Physical Sciences Research Council
- Association of Noise Consultants

Authors

- Professor Richard Craster, Imperial College London
- Professor Kirill Horoshenkov, University of Sheffield
- Professor Abigail Bristow, University of Surrey
- Ms Aisling Cooling, University of Sheffield
- Dr John Lincoln, Harlin Ltd

The input of many industry leaders and academics who, through the UK acoustics network, contributed their insights and knowledge into this report and the underpinning analysis of the UK acoustics industry is gratefully acknowledged.

DATA SOURCES

Lindsay's Wheel of Acoustics, R. Bruce Lindsay, J. Acoust. Soc. Am. V. 36, p. 2242 (1964).

UK manufacturing output by sector: Non-financial business economy, UK: Sections A to S, Office of National Statistics, Accessed May 2025, www.ons.gov.uk/businessindustryandtrade/business/businessservices/datasets/uknonfinancialbusinesseseconomyannualbusinesssurveysectionsas

UK employment by sector: Industry (two, three and five-digit Standard Industrial Classification) – Business Register and Employment Survey (BRES): Table 2, Office of National Statistics, www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/industry235digitsicbusinessregisterandemploymentsurveybrestable2

UK manufacturing workers lead the world in productivity gains over the last five years, MTA and FourJaw Manufacturing Analytics, www.mta.org.uk/uk-manufacturing-workers-lead-the-world-in-productivity-gains-over-the-last-five-years/

UK Photonics 2025: The Hidden Economic Engine, Photonics Leadership Group, https://photonicsuk.org/wp-content/uploads/2025/06/UK_Photonics_2025_The_Hidden_Economic_Engine_online.pdf

Firm-level labour productivity from the Annual Business Survey: summary statistics, 1997-2022, UK, Office of National Statistics, www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/datasets/firmlevellabourproductivityestimatesfromtheannualbusinesssurveyabsssummarystatistics

Acoustic Insulation Market Size 2024-2039, Grand View Research, www.grandviewresearch.com/industry-analysis/acoustic-insulation-market

Ultrasound Equipment Market Size, Fortuen Business insight, www.fortunebusinessinsights.com/industry-reports/ultrasound-equipment-market-100515

Global Far-Field Speech and Voice Recognition Market Overview, Market Research Future, www.marketresearchfuture.com/reports/far-field-speech-and-voice-recognition-market-7964

Microphone Market Size 2025-2030, Grand View Research, www.grandviewresearch.com/industry-analysis/microphone-market-report

Global Sonar System Market Research Report: Forecast (2025-2030), MarkNtel Advisors, www.marknteladvisors.com/research-library/global-sonar-system-market-analysis.html

SUMMARY

Acoustics: A Vital, High-Growth UK Industry essential to the economy

Recommendations:

1. Support a leadership body to convene industry, government and academia to spread awareness of industrial demand and advances in acoustics.
2. Work with the Department for Business and Trade to increase international awareness of UK acoustics capability as a national asset.
3. Conduct a review of UK acoustics capital infrastructure and access to key resources vital for expansion, e.g. in AI and machine learning.
4. Develop stronger collaboration between the professional bodies to which acoustics professionals affiliate, e.g. Institute of Acoustics, Institute of Physics, IMechE, ICE, IET and Audio Engineering Society, to ensure that acoustics is entrenched in design.
5. Provide broader opportunities for upskilling of the acoustics workforce across all career stages and education levels.

“The maritime environment is critical to the stability, security, and prosperity of the United Kingdom. 96% of all UK trade is carried on the oceans, but 99% of all UK financial transactions, and 99% of our entire internet are enabled under them, by the Critical Underwater Infrastructure of the Undersea Network of Cables, protected by the Royal Navy’s Submarine Service, Surface Fleet and Aviation assets using advanced acoustics. Underwater acoustics are a critical enabler to secure UK and allied strategic technological dominance by applying the physical sciences and mathematics at the leading edge of scientific and technological possibility in the most complex 3-dimensional underwater environment.”

Professor Carl Stephen Patrick Hunter, OBE
Director the Centre for Underwater Acoustic Analysis



Acoustics - harnessing and controlling sound and vibration - is fundamental to modern life, playing a critical role in sectors such as healthcare, defence, and construction. Despite its importance, the UK acoustics industry remains largely hidden from public view. Yet it is a significant contributor to the economy, employing 20,000 people across more than 780 businesses, over 98% of which are small and medium-sized enterprises (SMEs). These firms collectively generate over £5.2 billion in annual revenue, with each employee contributing over £95,000 to the economy every year, 30% higher than the UK manufacturing average.

Acoustics is one of the fundamental enabling technologies where the UK has significant strength and depth. It supports and enables a vast range of applications which impact on us everyday. Fully harnessing the UK's acoustics capability will therefore be key to growing a strong resilient economy, improving lives and national security and defence.

The industry is experiencing robust growth, with revenues increasing by over 13% in the past six years. Productivity has expanded even more rapidly, rising by an average of 8.6% annually. This demand is reflected in a 7% increase in pay and benefits for acoustics professionals since 2018.

Underpinning this growth is a thriving research base. Over 250 active research grants, worth in total in excess of £230 million and involving over 70 separate UK universities. This research is supported by eight different research councils under UK Research and Innovation (UKRI) and Horizon Europe Guarantee schemes, reflecting the multi-disciplinary environment in which acoustics operates, from social and health to engineering sciences.

To realise its full potential, acoustics must be integrated into the 2025 UK Industrial Strategy. Key growth sectors and defence priorities all rely on acoustics, such as submarine technology and smart infrastructure. Globally, the market for acoustics is projected to reach £44 billion by 2030, spanning applications in medical imaging, maritime security, voice recognition and more.

To seize this opportunity, action is needed in five areas: cross-departmental collaboration, strategic coordination, skills development, AI integration, and infrastructure investment. Strengthening these areas will unlock greater economic value, resilience, and international competitiveness - ensuring the UK remains a global leader in sound and vibration technologies.





acoustics.ac.uk
THE UK ACOUSTICS NETWORK

If you are interested in learning more about the UK acoustics industry, its impact and capabilities, please contact us:

info@acoustics.ac.uk
www.acoustics.ac.uk

