Together for tomorrow

UK-India academic collaborations: a force for global good

UK INDIA
BUSINESS COUNCIL

Contents

Universities as a force for good

As hubs of learning and discovery, universities play a pivotal and multifaceted role in society which extends far beyond the classroom. Universities are the risk takers, the pioneers of ground-breaking research, the critical builders of knowledge as capital. They help transform societies and lives through economic, social and cultural development.

However, this ambitious mission cannot be achieved by operating independently. To be relevant and successful, universities collaborate with other higher education (HE) institutions, with think tanks, with industry and with governments. These intersectoral partnerships lay the foundations for knowledge exchange, tech transfer, R&D and people-to-people links, all of which enable universities (and nations) to achieve their objectives and amplify their impact.

UK universities are already actively engaged in India — doing joint R&D and co-creating new technology with a range of Indian institutions and organisations that are aligned to the SDGs. This is having a huge positive impact.

While the Oxford University-AstraZeneca-Serum Institute of India partnership on a COVID-19 vaccine is the most well-known example, other collaborations between UK and Indian researchers include clean and renewable energy generation, food security, increased access to healthcare, education, water preservation, and job creation, to name a few.

Despite the importance of these joint research initiatives, they have not yet been fully documented. Records bringing these examples together are yet to be created to collectively showcase the critical work being done by UK universities in India. This evidence is crucial to track game-changing discoveries, their impact and outcomes. This highlights the commitment and positive contribution that UK universities are making in India in partnership with Indian counterparts.

Addressing this information gap will have the added benefit of elevating the profile and relevance of UK HE in an increasingly competitive market. It will change the narrative and foster greater goodwill amongst Indian stakeholders -- including government bodies, educational institutions and students.

More importantly, it will spark a self-fulfilling virtuous cycle – the more examples of UK and Indian R&D collaborations that surface, the greater the awareness, interest and support leading to enhanced opportunities and economic prosperity in both countries. In addition, the benefits will not just be limited to the UK-India sphere but will have the potential to deliver positive outcomes globally.

With this in mind, we have compiled this first-ever directory of UK India R&D collaborations which includes 20 such projects currently in place. This is not a comprehensive document, as there are many more such examples of partnership excellence. But it is a beginning – and one which we will continue to build upon in successive years.

More importantly, it will spark a self-fulfilling virtuous cycle – the more examples of UK and Indian R&D collaborations that surface, the greater the awareness, interest and support leading to enhanced opportunities and economic prosperity in both countries.

Big ideas. Bigger impact.

The collaboration between UK universities and Indian organisations in research and development (R&D) is crucial for driving innovation, economic growth, and addressing global challenges. This partnership leverages the strengths of both nations, fostering advancements in science, technology, and industry.

As both governments deepen diplomatic and economic ties and boost trade and investment, the importance of the UK-India R&D partnership is very clear.

This report explores the UK-India academic collaborations that are aligned with India's economic priorities and the UN's Sustainable Development Goals (SDGs) such as climate change (including energy transition), healthcare, food security and emerging technologies. The report highlights how these innovative collaborations not only enhance academic excellence but also contribute significantly to societal and environmental welfare. The report also examines a range of academia-to-industry linkages, illustrating how academic research is translated into practical, scalable solutions that benefit both nations and address global challenges.

By illuminating the positive impact of UK-India R&D collaborations, this report makes clear the role of universities as powerful agents of change. It showcases how academic institutions, through collaboration, can drive progress towards a more sustainable and equitable future.

As part of the methodology, we interviewed 20 leading UK universities to understand the nature of their engagements in India.

Agents of change

Increasing access to world class cancer care

Improving air quality

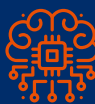Decarbonisation of foundation industries and steel production

Sustainable agriculture to address food security concerns, initiatives in low-cost solar

Technology and renewable energy solutions

Advances in regenerative medicine, mental health and neuroscience

Pioneering efforts around waste reduction using AI and machine learning

Partnerships to empower local communities through enhanced educational resources, local governance, teaching skills

Supporting female entrepreneurship

In addition to highlighting successful projects, the report discusses the challenges encountered in these collaborative efforts, such as funding limitations and regulatory barriers. The report also identifies opportunities for strengthening and expanding these partnerships, providing actionable recommendations.

Ultimately, this report underscores the transformative potential of UK-India research partnerships in addressing India's economic priorities, advancing global sustainable development and promoting community wellbeing.

Climate change

India's bold climate targets gain momentum through partnerships with UK universities. The collaboration is driving advancements in energy efficiency, green infrastructure, and community development across smart cities and rural areas.

India, one of the world's most climate-sensitive nations, has recognised that addressing climate change is both an environmental necessity and a critical economic priority. The government has set ambitious targets, including reducing carbon intensity by 45% by 2030, and achieving net-zero emissions by 2070. Central to this strategy is the National Action Plan on Climate Change (NAPCC), which includes missions focused on energy efficiency, sustainable agriculture, and preserving the Himalayan ecosystems.

India is also investing heavily in green infrastructure to reach 500 GW of renewable energy capacity by 2030[1], and promoting electric mobility through initiatives like the FAME scheme (Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India). Balancing economic growth with sustainability, India is integrating climate resilience into its development agenda, with a focus on smart cities, sustainable transport, and rural development.

International collaborations, particularly with UK universities, play a vital role in supporting these efforts by contributing to research, climate modelling, and policy development. India is not only addressing climate risks but also creating new opportunities for economic growth, positioning itself as a leader in sustainable development. UK universities are engaged as partners with these Indian initiatives, across all areas of climate change.

1.1 Net-zero and clean and renewable energy

India's drive towards a clean energy future is at the heart of its strategy to sustain economic growth, while mitigating environmental impact. As one of the largest energy consumers globally, India is actively working to diversify its energy portfolio, aiming to achieve 50% of its installed energy capacity from non-fossil fuel sources by 2030[2].

The government's initiatives, such as the National Solar Mission, have set ambitious targets for expanding solar energy capacity, while policies incentivising wind and hydropower projects are also gaining momentum.

In this transition, strategic partnerships with UK universities, such as the SUNRISE project, are bringing advanced research and innovation to India's clean energy landscape. They include the development of smart grids, energy storage technologies, and renewable energy integration. Moreover, these initiatives are fostering the growth of green industries, creating jobs, and attracting investment in sustainable infrastructure. By accelerating the shift to clean energy, India is not only addressing its climate goals, but also ensuring long-term economic resilience and competitiveness on the global stage.

Multi-national collaboration on solar and renewable energy

The SUNRISE project, led by Swansea University, is a ground-breaking collaboration initiative involving 18 academic partners across five countries. Key UK institutions include Imperial College London, Oxford, and Cambridge, while in India the partners include IISER Pune, IISc Bangalore, and several IITs. The project also collaborates with partners in Mexico, South Africa, Kazakhstan, and numerous industrial partners such as Tata companies.

The SUNRISE project has built a global and equitable collaboration in sustainable energy research, focusing on low-cost solar technology and renewable energy solutions. The project developed and evaluated flexible, thin-film photovoltaics, along with other technologies such as electrical storage devices, energy-efficient lighting, and biomass energy.

Fuelling homes and hopes

The construction of a full energy-positive building in Khuded, Maharashtra, provided reliable and clean energy to a community of approximately 500 people. It also enhanced agricultural practices and facilitated local craftsmanship, such as the production of Diwali lamps that are sold globally.

Despite challenges such as the COVID-19 pandemic and resultant funding cuts, SUNRISE managed to construct the Khuded building, produce 203 academic publications and win awards, including Times Higher Education's Best International Collaboration in 2020. The project became an OECD case study on 'Addressing societal challenges using transdisciplinary research' in the same year.

The team at IISc Bangalore utilised the SUNRISE resource to produce a microgrid demonstrator that provided clean energy access to a medical centre and school in Bangalore, impacting 25,000 people annually.

Offshore wind energy

A crucial part of the country's energy transition will be achieved through harnessing offshore wind energy. India is making significant strides in developing offshore wind energy and has a target of installing 30 gigawatts (GW) of offshore wind capacity by 2030. [3]Research published in the Ocean Energy Journal has already highlighted the immense potential of offshore wind energy along India's 7,500 km coastline.

To advance offshore wind energy research in India, the University of Surrey launched a new course on offshore wind energy, in collaboration with IIT Bhubaneswar and IIT (ISM) Dhanbad, under the Ministry of Education's Global Initiative for Academic Network (GIAN) scheme.

Although it concluded some years ago, it continues to deliver results. The initiative has established strong ties with Indian institutions, leading to co-supervised PhD projects and the inception of the Indian Symposium on Offshore Geotechnics (ISOG), first held at IIT Bhubaneswar in 2019, with subsequent events at IIT Madras in 2022, and another planned for Surathkal in 2024.

Expanding the role of wind energy to fuel the growth of today's industrial economies is not the only issue. There is also the matter of decarbonisation which is becoming increasingly important.
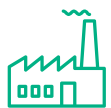
1.2 Decarbonisation of industry

Energy efficiency and decarbonisation have been central to Durham University's collaboration with Amrita Vishwa Vidyapeetham in India. Launched in November 2021, the UK-India Foundation Industries Sustainable Thermal Energy Management Collaboration (UK-India FI-SusTEM Collaboration) aims to revolutionise energy-intensive

foundation industries such as metals, cement, paper, glass, ceramics, and bulk chemicals, by capturing and reusing low-grade waste heat, an underutilised energy source. The project focuses on advanced technologies, including new heat exchangers, thermal energy storage materials, and innovative thermochemical cycles, to reduce emissions and energy costs, helping both the UK and India achieve net-zero targets.

Led by Professor Tony Roskilly and a team of experts from Durham and Amrita, the collaboration connects researchers, industry, and stakeholders in a unique cross-border network. It also seeks to identify gaps in thermal energy management, develop business cases for waste heat recovery, and maximise the impact on research, industry, and the environment. Funded by Innovate UK, the project builds on Durham and Amrita's strong research foundations, driving forward innovation in sustainable energy use for foundation industries.

"Our collaboration with Amrita Vishwa Vidyapeetham marks a significant step towards not only harnessing under-utilised waste heat available in energy-intensive industries, but also long-term research and innovation ties between both institutions. We look forward to cutting-edge research and innovation in this area."

- Professor Roskilly, Durham University

Decarbonising steel production

The Centre for Innovation in Sustainable Design and Manufacturing, a new collaboration between Imperial College London and Tata Steel, is set to transform steel production. This £10 million Centre will leverage the expertise of both institutions' to develop advanced and environmentally friendly manufacturing processes and materials to reduce the carbon footprint of steel production. The focus is on creating stronger and lighter steels, integrating them with new materials for enhanced energy efficiency in automotive and clean energy sectors.

The Centre will also feature an accelerator programme to rapidly develop and commercialise new technologies, and is also working on net-zero construction technologies, which are essential for building a sustainable future. This includes developing smart manufacturing and sustainable multi-material joining technologies.

By addressing sustainability challenges, the Centre aligns with Imperial's broader 'Transition to Zero Pollution' initiative, and plays a pivotal role in transforming the global steel industry towards a more environmentally-friendly future.

1.3 Air pollution

India faces challenges with air pollution, which has severe health and economic impact. The country struggles with high levels of particulate matter (PM2.5), which is linked to various health issues, including lung cancer, stroke, and heart disease. In 2019, air pollution was responsible for 1.67 million deaths in India, accounting for 17.8% of the total deaths in the country. Efforts to combat air pollution in India include the National Clean Air Programme (NCAP), an initiative which aims to reduce PM2.5 and PM10 levels by 20-30% by 2024, compared to 2017 levels[4].

UK universities are supporting India's efforts to combat air pollution. For instance, Surrey University's projects ASAP Delhi, CaRe Cities and Care Homes (primarily located in Delhi and Chennai) have provided an authoritative assessment of particulate matter sources, devised effective strategies to reduce exposure to emissions, and created a framework for managing indoor air pollution in low-income environments.

In 2019, air pollution was responsible for 1.67 million deaths in India, accounting for 17.8% of the total deaths in the country.

1.4 Flood risk mitigation

Climate change, along with hazard mitigation and flood risk mapping, is a major theme for Bristol University's Cabot Institute for Environment, as part of its collaborations with IIT Kharagpur, IIT Madras, and IISc Bangalore. At IIT Kharagpur, the collaboration focuses on improving climate projection models and understanding the impact of climate change on river ecosystems, coastal processes, and extreme water levels. At IIT Madras, the partnership addresses critical issues such as ocean acidification, food security, and sustainability.

1.5 Oceans and the Blue Economy

India's blue economy refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs, while preserving the health of ocean ecosystems. It encompasses a wide range of sectors, including shipping, tourism, fisheries, and offshore oil and gas exploration.

St Andrews has also been leading the way with coastal research on India's Blue Carbon Ecosystem, which involves partnerships with the Gujarat Institute of Desert Research, Ahmedabad University, and the National Centre for Coastal Research. The project is funded through the United Nations Ocean Decade Programme, and focuses on creating a national road map for Blue Carbon in India's climate policy. The initiative has faced administrative and logistical challenges, particularly in remote coastal areas, but has benefitted from local partnerships and UK Government support via the Foreign, Commonwealth and Development Office.

1.6 Green energy and the rural economy

In large parts of rural India, the availability of low-cost energy for basic needs such as electricity and water pumping is a critical issue. Enter University of Strathclyde and University College London (UCL), who launched a project titled 'Low-Cost Li-Free Battery-Supercapacitor Hybrid Technologies for Energising Rural Communities'. This project started in November 2023 and is due to end in January 2025. This was a collaborative effort involving Indian partners, such as the Tata Institute of Fundamental Research (TIFR) Hyderabad (lead), IIT Bhubaneswar, and KARMA Tech Ltd.

The project focuses on developing and implementing low-cost electrochemical energy storage systems for rural lighting and water pumping in villages near IIT Bhubaneswar. Additionally, the project will train students and early career researchers in industrial settings and sustainable energy awareness programmes.

Initial results have shown the development of high-power density supercapacitors from upcycled biomass and plastic waste-derived activated carbon composites. TIFR Hyderabad, in collaboration with IIT Bhubaneswar, has developed high energy density Zn-air batteries, and UCL has developed Zn-ion batteries.

Battery boost

The next steps in the 'Low-Cost Li-Free Battery-Supercapacitor Hybrid Technologies for Energising Rural Communities project' involve creating protocols for integrating Zn-ion/Zn-air batteries with carbon composite-based supercapacitors. The project is funded by the Royal Academy of Engineering. However, due to limited funding, the implementation in rural settings will only be possible on a small scale. Future ambitions include applying for further funding to support larger-scale development and implementation. Additionally, the project has secured a Commonwealth Split Site PhD studentship for a student from IIT Bhubaneswar, highlighting its educational impact and potential for ongoing research and development.

"We are excited to be part of this time of evolution in higher education in India, engaging with the brightest minds in the country and contributing to building the future today. As the University of Bristol furthers its partnerships globally, we see our Indian partners as among our most valuable – partners we are able to learn from, and share with, in equal measure."

- Professor Faul, University of Bristol

Sustainable agriculture and food security

India faces food security challenges from population growth and climate change. Government policies, alongside collaborations with the UK, are promoting sustainable agriculture and boosting productivity and rural livelihoods.

With a rapidly growing population, urbanisation, and the increasing threat of climate change, ensuring food security in India is a complex and pressing challenge. Placing agriculture at the centre of its economic priorities, the government has enacted policies such as the National Food Security Act, which guarantees subsidised food grains to hundreds of millions of people, and has emphasised the need for sustainable agricultural practices to safeguard future food supplies. Climate-resilient agriculture was emphasised in the Union Budget 2024-25, with initiatives promoting the adoption of drought-resistant crops, efficient water usage, and organic farming methods[5].

Collaborative efforts with UK universities are important in advancing these goals, bringing in expertise in agricultural technology, climate adaptation, and rural development. Research partnerships are yielding innovations in precision farming, soil health management, and agri-tech solutions, which are being implemented to enhance productivity, while reducing environmental impact. These collaborations strengthen food security and contribute to rural livelihoods and economic growth, making agriculture more sustainable and resilient.

Collaborative efforts with UK universities are important in advancing these goals, bringing in expertise in agricultural technology, climate adaptation, and rural development.

2.1 The TIGR²ESS project

One of the most notable projects in this sector is the TIGR²ESS project, which transformed agricultural practices in India through collaborative research, community engagement, and innovative solutions that addressed food security challenges and promoted sustainable crop production.

Launched in February 2017, and funded by the UK's Global Challenges Research Fund (GCRF) programme, the TIGR²ESS project involved the University of Cambridge, the John Innes Centre, University of East Anglia, Rothamsted Research, the National Institute of Agricultural Botany, University of Essex, and the University of Hull from the UK. The Indian partners were ICRISAT, IIT Mumbai, IIT Ropar, Punjab Agricultural University, Punjab University, National Institute for Plant Genome Research, M.S Swaminathan Research Foundation, Kalinga Institute of Social Sciences, and PRADAN. Working in six states across India - Punjab, Maharashtra, Telangana, Tamil Nadu, Odisha, and Jharkhand - these partners strengthened alliances across crop science, hydrology, social science, and policy to promote a two-way knowledge exchange.

Despite challenges such as funding complexities and the COVID-19 pandemic, TIGR²ESS introduced innovative agricultural technologies, supported female entrepreneurship, and developed educational resources. A specific UEA contribution was the development of a 4-credit MOOC on sustainable food systems, in partnership with the Indira Gandhi National Open University (IGNOU), the largest open university in the world, which can be accessed free of cost on the Government of India's Swayam platform. The MOOC is available in both English and Hindi.

Other collaborative contributions covered the nutritional efficacy of indigenous food systems in Eastern India, the integration of archaeological and historical water management strategies with modern targeted irrigation techniques, as well as promoting Farmer Producer Organisations and crop improvement and diversification within specific regions.

Having ended in June 2022, the project's impact continues through continuing research partnerships and policy implementation, showing the power of international collaboration in addressing global food security challenges.

2.2 Natural farming

Another project worth mentioning is the UK Research and Innovation-funded BLOOM project, led by the University of Edinburgh and Ashoka University's Centre for Health Analytics Research and Trends (CHART), in partnership with a government-owned company called Rythu Sadhikara Samstha (RySS) that implements natural farming programmes across 26 districts of Andhra Pradesh. This study investigated the benefits of replacing toxic chemical pesticides with natural farming methods in Andhra Pradesh.

BLOOM focused on the Kurnool and Visakhapatnam districts of Andhra Pradesh, and examined the co-benefits of large-scale organic farming on human health and the environment. The primary outcomes measured are pesticide exposure, dietary diversity, household income, and crop yield. Secondary outcomes include adult glycemia, kidney function, self-reported symptoms (musculoskeletal pain, headache, respiratory symptoms, dermatological symptoms, and depression). The project also studied growth and cognitive development of children in the districts.

The goal of the project, which is ongoing, is to support the transition of all farmers and farmworkers in Andhra Pradesh to climate-resilient natural farming by 2030, ensuring long-term sustainability and welfare for the farming community.

Adding to these efforts, the University of Reading is also playing a vital role in addressing sustainable agriculture challenges in India through research collaborations focusing on natural farming, pollination benefits, malnutrition, and snakebite impact reduction. The University of Reading India Office, established in Bengaluru in early 2024, supports these initiatives by fostering research with Indian institutions, enhancing educational pathways for Indian students, and contributing to the global conversation on sustainable farming practices.

One of the University's projects focusses on Zero Budget Natural Farming (ZBNF) in Andhra Pradesh, India, aimed at addressing critical issues such as farmer debt, soil degradation, and poor rural well-being. ZBNF focuses on low-cost and chemical-free farming methods to improve the resilience of smallholder farmers. The interdisciplinary research, led by University of Reading soil scientist Dr. Sarah Duddigan and social scientist Dr. Grady Walker, has built a strong evidence base to support the expansion of ZBNF across the region.

The research combined soil science and social science to evaluate ZBNF's effectiveness. Soil science investigations showed that ZBNF enhances soil moisture retention, improves crop yield, and reduces costs. At the same time, social science research, through participatory photography and engagement with over 150 farmers and local stakeholders, revealed that farmers value ZBNF not only for higher yields, but also for its role in preserving cultural legacy, promoting agricultural independence, and resisting industrialised farming.

Soil meets strategy

The participatory approach in the 'BLOOM' project also led to capacity building. More than 100 Indian farmers and researchers were trained, gaining new insights into sustainable agriculture. This interdisciplinary effort provided a comprehensive understanding of ZBNF's socio-economic and environmental benefits, influencing policymakers who plan to scale the method to 6 million farmers in Andhra Pradesh.

The BLOOM project, supported by RySS and funded by KfW Development Bank, demonstrates the potential of combining soil and social sciences to foster sustainable agriculture and rural development in India.

Healthcare

Indian and UK academic partnerships are addressing critical health issues, from cancer care and antimicrobial resistance to neuroscience and snakebite envenomation. Together, they are enhancing the quality of life across the nation.

India's healthcare sector is undergoing transformative changes, driven by initiatives such as the Ayushman Bharat scheme, which aims to provide universal health coverage and improve infrastructure, while promoting preventive care. The National Health Policy further highlights the integration of digital health, telemedicine, and a blend of traditional and modern systems. These efforts are essential for improving public health, reducing the economic burden of disease, and enhancing economic resilience, particularly in rural and underserved areas[6]. Key to these objectives is the collaboration between Indian and UK institutions, with healthcare partnerships playing a pivotal role in addressing pressing challenges such as cancer care, antimicrobial resistance, and respiratory support during crises like the COVID-19 pandemic.

3.1 Cancer care

One such critical partnership is the collaboration between King's College London (KCL) and Tata Memorial Centre (TMC), established in 2009. This partnership has significantly contributed to India's cancer care landscape, most notably through the development of the National Cancer Grid (NCG).

The NCG, with support from KCL and King's Health Partners (KHP), now connects over 250 cancer centres across India, treating 60% of the country's cancer patients.

King's and KHP have played a crucial advisory and capacity-building role in standardising cancer care across the nation. This initiative sets a global benchmark for healthcare systems, offering equitable cancer treatment and fostering collaboration on a scale never seen before in India.

The partnership's impact extends beyond cancer care to education and research. Through joint projects, such as the Wellcome Trust-funded study on oncology and cancer care transformation, King's and TMC have led pivotal research efforts in grid oncology. Additionally, their educational programmes, including the Foundations in Oncology course and bioinformatics workshops, have trained hundreds of clinicians and students, improving cancer care practices and advancing bioinformatics in India.These efforts were recognised when King's academics won the Student Nursing Times Award for Teaching Innovation, underscoring the effectiveness of cross-cultural healthcare education.

In India, the sparse distribution of cancer hospitals creates barriers to treatment for patients. Reducing this health inequality is essential for improving cancer survivorship globally. Manchester University is involved in expanding and levelling access to cancer services in India. Researchers at The University of Manchester have partnered with local institutions to establish a dedicated cancer hospital and research centre in India, and standardising services to deliver more effective treatments for patients.

Manchester's cancer researchers, in collaboration with The Christie, Europe's largest cancer hospital, and Tata Medical Centre (TMC) in Kolkata, have pioneered advancements in cancer care, particularly for children with Acute Lymphoblastic Leukaemia (ALL).

This collaboration led to the creation of a dedicated paediatric cancer unit and the Tata Translational Cancer Research Centre (TTCRC) in 2018. Led by Professor Saha, the TTCRC includes a cancer biorepository, clinical trials unit, and advanced laboratories. It connects with other Indian centres to exchange knowledge and standardise protocols for cancer prevention, detection, and treatment.

Lifesaving partnerships

The collaboration between KCL and TMC is inspired by Manchester's integrated approach. It has facilitated the treatment of over 5,000 children with Acute Lymphoblastic Leukaemia (ALL) across India.

Services at TMC now include modern care and financial assistance for families, supported by various agencies and private donors. Early data indicates a decrease in treatment-related deaths, improved survivorship, and reduced therapy costs for childhood ALL. The skills and technology are now being applied to tackle gallbladder cancer, a rare and under-researched cancer with a high incidence in India.

"The principles we follow in Manchester, such as collaboration and information sharing, have made a positive difference in India."
- Professor Saha, University of Manchester

3.2 Antimicrobial resistance

Antimicrobial resistance (AMR) continues to pose a significant challenge to global health, and India has been at the forefront of tackling this issue.

The collaboration between Imperial College London and the Amrita Institute of Medical Sciences targets both the environmental and medical aspects of AMR. The UK-India AMRWATCH project, led by Professor Nick Voulvoulis, investigates antibiotic contamination in water, sediments, animals, and humans around antibiotic manufacturing sites in Chennai and Puducherry.

Concurrently, Imperial's ASPIRES programme is optimising the use of antibiotics in surgery, reducing misuse, and improving infection management, in collaboration with the Amrita Institute and the University of Cape Town. Together, these projects contribute to global health efforts in addressing AMR, making a tangible difference in clinical practices and environmental health.

Expanding on these efforts, the University of Bristol has established a broad AMR research network with Indian institutions - such as the Postgraduate Institute of Medical Education and Research (PGIMER) in Chandigarh, Banaras Hindu University (BHU)IIT-Delhi, and the National Environmental Engineering Research Institute (NEERI) in Nagpur. Their collaborative projects, funded by UK's Natural Environment Research Council (NERC) and Department for Business and Trade (DBT), examine the environmental and health impact of AMR, adding a crucial layer to India's battle against antibiotic resistance.

3.3 Mental health and neuroscience

In the realm of mental health and neuroscience, the University of Liverpool has worked with the National Institute of Mental Health and Neuroscience (NIMHANS) in Bengaluru since 2010. Initially focusing on brain infections such as Japanese Encephalitis, their partnership has expanded into mental health and neuroscience, including children's mental health and advancing neuro-imaging techniques to better comprehend epilepsy.

The partnership has overcome the challenge of securing sustained funding for research programmes and PhDs, achieving significant milestones. Collaborative efforts have overcome roadblocks of poor surveillance, complicated diagnostics and insufficient disease outcomes, and led to the uptake of a major vaccination programme for Japanese Encephalitis, saving an estimated 200,000 lives through effecting WHO surveillance standards and clinical care guidelines.

The partnership (which remains active and is growing), manages a major longitudinal birth cohort study on children's mental health in Bengaluru, which was started in 2015 and is funded by the UK Medical Research Council (MRC) and the Indian Council of Medical Research (ICMR). The cohort studies have the potential to develop more culturally nuanced approaches to WHO public health policy to improve mental health outcomes for children, not just in India, but globally. New studies are also underway in neuroimaging for epilepsy. Philanthropic support (over the next five years from the Pratiksha Trust) will enable PhD students to continue research in brain infections, epilepsy, and child mental health, ensuring this collaboration continues to expand and address global health challenges.

3.4 Blind and partially sighted people

Where disabilities are concerned, University College London (UCL) has been doing remarkable work to help blind and partially sighted (BPS) people.

The "Powered by Tacilia" project, which is a collaboration between UCL Global Disability Innovation Hub, IIT Delhi, and the National Association for the Blind in Delhi, will enhance access to information for BPS people. Initiated in November 2019, this project has created affordable and refreshable tactile interfaces, addressing the limitations of existing tactile display technologies, which are currently prohibitively expensive.

Tacilia's cutting-edge technology managed to dramatically reduce the complexity of tactile displays from 3,000 components to just one monolithic sheet of Nitinol, and went on to win the Engineering Talent Awards Innovation of the Year 2023.

In addition to developing these new cost-effective tactile displays, the technology also helps BPS individuals access tactile graphics, supporting learning in subjects such as math, science, and art, and is also working on integrating AI-driven conversational interfaces to allow BPS users to create tactile graphics by voice commands via smartphones. Future evaluations will involve teachers and students, expanding the usability of Tacilia in educational settings.

3.5 Life sciences research

Although India's life sciences sector is expanding rapidly on the back of government initiatives, a strong pharmaceutical industry and increasing investments in R&D, it still faces significant challenges, including the need for more R&D funding and specialised infrastructure such as advanced research labs and manufacturing facilities.

Responding to this need, the University of Glasgow officially opened the £118 million Mazumdar-Shaw Advanced Research Centre (ARC) in June 2022, in partnership with the Indian life sciences company Biocon, and inaugurated by Nobel Laureate Professor Sir David MacMillan. The ARC serves as a hub for cross-disciplinary research, housing over 500 researchers from various fields, and is focused on driving world-changing innovations to enhance the quality of life and benefit human society. The Centre supports the University's Research Strategy 2020-2025, particularly its priorities of collaboration and creativity, and brings together researchers from diverse sectors to tackle transformational programmes with global impact. The partnership with Biocon also helped establish the Mazumdar-Shaw Chair of Molecular Pathology, advancing research excellence. Through its initiatives, the ARC fosters an inclusive, ambitious research environment, promotes public and community engagement, and encourages interdisciplinary collaboration to deliver impactful, societal benefits.

3.6 Snakebite – envenomation

Snakebite envenomation (SBE) is a major public health issue in agricultural communities, particularly in developing countries like India. The World Health Organisation estimates that SBE causes 140,000 deaths and 500,000 permanent disabilities annually, with over 40% of these fatalities occurring in India, often referred to as the "snakebite capital of the world.[7]"

Dr. Sakthivel Vaiyapuri and his team at the University of Reading launched an extensive public health education programme in Tamil Nadu to address this crisis. The programme, based on research from a survey of 30,000 households, identified a lack of knowledge about snakes and SBE significantly contributes to increased fatalities and disabilities. To counter this, the team developed a targeted campaign to debunk myths, educate communities on proper first aid, and encourage prompt hospital treatment instead of traditional remedies.

Venom awareness

From 2019 to 2020, the campaign reached more than 7 million people, or 10% of Tamil Nadu's population. It engaged more than 50,000 schoolchildren, 200,000 villagers, and aired a 25-minute documentary, watched by 4 million people. The campaign also trained 250 healthcare professionals and involved local 'champions' to expand its reach. Evaluation showed a significant impact: 90% of attendees remembered key messages, and 60% of snakebite victims arrived at hospitals within four hours—up from 50% previously. Additionally, 95% sought medical treatment instead of traditional care, improving outcomes and reducing long-term treatment costs for more than 80% of patients.

Building on this success, Dr. Vaiyapuri is working with the Indian government to extend this education programme nationwide. With more than 5.8 billion people globally at risk, this approach offers a scalable framework to reduce SBE-related deaths, disabilities, and the economic burden on communities.

Emerging technologies

UK universities are playing a key role in positioning India as a global leader in the tech sector.

India is rapidly advancing in several emerging technologies such as Artificial Intelligence (AI) and Machine Learning (ML), 5G technology, Blockchain and Quantum Computing. These emerging technologies are driving India's transformation into a tech powerhouse, fostering innovation, and creating new opportunities across various industries.

4.1 Artificial intelligence

The Government of India has introduced the National Strategy for Artificial Intelligence, branded as #AIforAll, which aims to harness the transformative potential of AI across various sectors, including healthcare, agriculture, and education. This strategy supports AI research and development, capacity building, and the promotion of ethical AI practices, ensuring that AI contributes to inclusive growth. This is positioning India as a global leader in AI innovation, driving economic growth, creating new employment opportunities, and enhancing the international competitiveness of its industries[8].

The UK is a world leader in Artificial Intelligence and one of its most significant assets is the country's fastest, most powerful and most sustainable supercomputer, Isambard-AI, located at the University of Bristol, following a £300 million investment from the UK government. This cutting-edge machine is ranked as the world's second greenest and one of the most efficient supercomputers, featuring advanced technologies like HPE Slingshot 11 interconnect and NVIDIA's integrated CPU-GPU systems.

Isambard-AI supports a wide range of AI-driven research, including training large language models (LLMs), AI safety, healthcare, robotics, and climate research. It is rapidly becoming a key resource for organisations across the UK, pushing forward advancements in AI and supercomputing.

Isambard-AI is part of a larger collaboration between the University of Bristol and the Tata Institute of Fundamental Research (TIFR), which covers cutting-edge research areas related to AI, quantum, mathematics and energy.

The University of Bristol is also renowned for its Faculty of Science and Engineering and its Composites Institute. Bristol's Faculty of Science and Engineering is a hub for manufacturing innovation, with strong ties to major industry players such as Airbus, Rolls-Royce, and the National Composites Centre. The Bristol Composites Institute leads research in aerospace, defence, and other sectors, focusing on areas such as ultrasonics, non-destructive testing, and structural health monitoring.

The faculty also excels in quantum technologies, robotics, fluid dynamics, and electrical energy management, with wider impacts in Industry 4.0 and digital engineering, through unique initiatives such as the Quantum Technologies Innovation Centre (qtic.co.uk) and The Smart Internet Lab. The Bristol Composites Institute, renowned for its composites research and industrial ties, collaborates with the National Composites Centre, and is currently exploring wider opportunities with IIT Bombay.

India is emerging as a global leader in AI innovation, driving economic growth, creating new employment opportunities, and enhancing the international competitiveness of its industries.

4.2 Sustainable manufacturing

India is rapidly emerging as a leader in sustainable manufacturing, due to environmentally friendly production, sustainable supply chains, government initiatives, and the adoption of IoT, AI, and robotics — all of which are helping to optimise resource use and reduce waste. Smart factories are also becoming more common, enabling real-time monitoring and efficient production processes[9].

The novel partnership between Apollo Tyres and the University of Glasgow is a shining example of how academia can solve problems faced by the manufacturing sector, using futuristic energy-efficient solutions.

In January 2023, Apollo Tyres and the University of Glasgow launched an Industry-Sponsored PhD partnership to solve real-world manufacturing challenges faced by Apollo Tyres, using AI and ML. The main objectives included optimising Tyre Building Machine (TBM) processes, reducing Cured Tyre Scrap (which accounts for 10% of all extruded materials), reducing CO2 emissions, and developing digital twins for enhanced productivity, process monitoring and optimisation in Apollo Tyres' manufacturing operations.

Despite the complexities of applying AI/ML to industrial settings, the collaboration has made significant gains. The development of digital twins and ML algorithms is set to revolutionise process optimisation and predictive maintenance, marking a significant leap towards sustainable industrial practices. This partnership has also led to the establishment of a Digital Innovation Hub in London, which will drive innovation in digital manufacturing processes.

Manufacturing and design, along with combustion and energy, are some of the important themes being explored as part of a wider and strategic partnership between Brunel University London and the Indian Institute of Science (IISc) Bangalore. The partnership has achieved notable success. Backed by a £100,000 funding programme, six collaborative research projects have been executed between the two institutions and are still going strong, with plans underway for more activities including joint postgraduate teaching and awards. These projects focus on various important areas, including — improving combustion efficiency, reducing emissions, enhancing productivity, building advanced design methodologies, developing sustainable energy solutions, exploration of new materials and innovations in medical devices and healthcare technologies.

Machine learning is a key component of Coventry University's collaboration with L&T Technology Services (LTTS), an Indian engineering and technology services provider. This partnership, aimed at fostering next-generation engineering innovations in the automotive and manufacturing sectors, has been instrumental in developing advanced technologies. Over the course of 2021–2022, Coventry University's Centre for Future Transport and Cities (CFTC) and LTTS worked together to use ML tools and image processing technologies to automate the manual task of video annotation.

AI for smarter roads

Coventry University and L&T Technology Services developed an automated video annotation tool for Advanced Driver Assistance Systems (ADAS). The tool uses machine learning models and optical character recognition to detect objects in driving videos. The tool automatically annotates road users from cameras and LiDAR, as well as road markings from cameras, supporting AI training in cars.

The success of this project, running from September 2021 to October 2022, has led to the extension of the partnership for additional research projects, further advancing the integration of AI and automation in the automotive sector. Taking their work in AI one step further, Coventry University (as part of the activities under its new India Hub launched in Delhi earlier this year) signed a MOU with IIT Ropar in Punjab to explore dual degrees and joint PhDs in AI and Data Science, alongside the possibility of a Centre of Excellence in Applied AI next year.
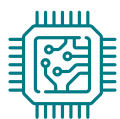
4.3 Semiconductors

India is making significant strides in the semiconductor industry. Valued at $22 billion (£17 bn) in 2019 and projected to nearly triple to $64 billion (£49 billion) by 2026, India's semiconductor market is poised for exponential growth on the back of business investments, local talent and its vibrant chip design industry. The government has plans to further boost this sector to $110 billion (£84 bn) by 2030[10].

Notable institutions like the Indian Institute of Science, Bangalore, and the Indian Institute of Technology, Bombay, have centres of excellence in nanoelectronics. The India Semiconductor Mission (ISM) is a government initiative that aims to build a robust semiconductor and display ecosystem, positioning India as a global hub for electronics manufacturing and design. India's efforts in the semiconductor sector are geared towards reducing dependency on imports and becoming a significant player in the global semiconductor supply chain.

The UK, with its expertise in areas like chip design, intellectual property and compound semiconductors, is perfectly placed and keen to help India achieve these ambitious goals. Recently, the UK and India signed a broad Technology Security Initiative, which includes joint efforts in chip design, advanced packaging, and compound semiconductors. This collaboration aims to enhance both countries' capabilities in critical areas such as telecommunications, cybersecurity, and sustainable technologies. This partnership is expected to foster innovation and strengthen the semiconductor supply chains between the two nations.

The University of Surrey's project 'Functionalising 2D Materials via Ion Irradiation for Opto-Electronic Semiconductor and Catalytic Applications' with the Indian Institute of Science and Educational Research (IISER) in Trivandrum is important for India to achieve its ambitions.

Funded by UKIERI in 2024 and scheduled to run until 2026, this project addresses the critical need for advancements in semiconductor technologies, which is essential for both the economy and national security of India and the UK.

By leveraging the capabilities of the Surrey Ion Beam Centre and the expertise of physicists at IISER Trivandrum, the project will achieve significant technological breakthroughs in semiconductor quantum materials. The research aligns with the Sustainable Development Goals, particularly in areas of global partnerships, clean energy, and innovation, and will also contribute to education and gender equality. The project, which started in April 2024, is expected to grow exponentially, driven by its potential to benefit areas such as sensing and energy research.

4.4 Cybersecurity

India's National Cyber Security Policy (NCSP) is designed to protect the country's critical information infrastructure and secure its cyberspace against growing threats. The policy emphasises the development of a robust cyber ecosystem, fostering public-private partnerships, and enhancing the capabilities of law enforcement agencies to tackle cybercrime effectively. Cybersecurity is paramount for the protection of India's digital economy, which includes vital sectors such as e-commerce, banking, and financial services[11]. By creating a secure digital environment, India aims to promote economic growth and attract foreign investments in technology-driven industries, ensuring the country's digital landscape remains resilient and trustworthy.

Cardiff University has been actively collaborating with IISc Bangalore, particularly in the field of cybersecurity. This partnership is part of the Global Wales programme, which

aims to strengthen academic ties and foster joint research initiatives in critical areas such as cybersecurity.

The partnership involves Cardiff University working closely with IISc to address contemporary challenges in cybersecurity. Researchers from both institutions are exploring innovative methods for threat detection, understanding cybercriminal behaviour, and developing predictive defence strategies. This collaboration also includes joint grant applications and the development of models to secure Internet of Things (IoT) devices, web applications, and provide counterintelligence to address cybercrimes such as phishing, cyber fraud, and counter adversarial attacks. The partnership's potential to advance the multi-faceted field of cybersecurity through shared expertise and resources is particularly exciting, and one that promises major benefits for both countries.

4.5 Telecommunications / ICT

With over 1.1 billion subscribers as of July 2024, India's telecommunications sector is one of the largest and fastest-growing in the world, and contributes significantly to India's economy. Not only does it account for a substantial portion of the GDP and provide millions of jobs, it also plays a crucial role in supporting other sectors through improved connectivity and digital services. The imbalance in tele-density (133.42% in urban areas vs. 59.48% in rural regions), coupled with the burgeoning demand for internet services in these areas, makes India a particularly exciting growth market for telecom providers[12].

Realising its vast potential, the Indian government has introduced several initiatives to boost the telecom sector, including the Production-Linked Incentive (PLI) scheme to enhance domestic manufacturing capabilities, and the rollout of 5G services. Consequently, the sector is rapidly evolving

with advancements in 4G and 5G technologies, IoT, and next-generation networks. These developments are expected to drive further growth and innovation in the days to come[13].

The importance of India to the UK in the ICT sector and Future Networks research was clear from the signing of a new UK India MOU Telecommunications / ICT and a Joint Declaration of Intent on Digital and Technology, linked to the UK-India Roadmap for 2030.

This led to the establishment of the UK-India Future Networks Initiative (UKI-FNI), a strategic collaboration between scientists and engineers in both countries, led by Professor Gerard Parr from the University of East Anglia, with partners from the Universities of Surrey, Southampton, and University College London, and Indian counterparts from the Indian Institute of Science and IIT Delhi.

Funded by the UK Engineering & Physical Sciences Research Council (EPSRC), this initiative focuses on exploring advanced innovations in supply chains for hardware and software systems, providing connectivity and services for future digital networks. The project will leverage a testbed connecting the UK and India to trial these solutions, addressing business drivers that aim to increase competitiveness and diversify vendor choice for telecom systems. The initiative also aims to develop a joint vision and research strategy in Beyond 5G and 6G.

India's strong research base in networking software, combined with its seven telecom Centres of Excellence and testbeds, will be instrumental in linking UK and Indian engineers and achieving these goals. The project builds on past collaborations such as India-UK Advanced Technology Centre and aims to strengthen ties between UK and Indian researchers and businesses, enhancing technical expertise and safeguarding policy interests.

The UK-India Future Networks Initiative offers several key benefits, including:

- Enabling a research-led approach to addressing the engineering challenges posed by the integration and testing of non-standard hardware and software components for large-scale OpenRAN deployments.

- Providing opportunities to innovate in next-generation mobile communications that support vendor diversification and open-source development, allowing new entrants into the market.

- Assisting in the realisation of the UK's Combined Telecommunications Strategy by scoping policies and protocols with India as a strategic partner.

- Supporting the design, deployment, and operation of joint testbeds for field trials of OpenRAN systems and components on a larger scale than possible in the UK alone.

- Facilitating the exploration of new service and business models to support new entrants in the telecommunications market.

- Investigating potential Foreign Direct Investment (FDI) opportunities from India into the UK's ICT sector, while growing business opportunities for UK companies in India.

- Exploring regulatory issues in both countries, enabling them to jointly influence future 5.5G and 6G standards and intellectual property rights (IPR) policies.

Ultimately, the project seeks to unite leading UK and Indian engineers, scientists, industry experts, and government agencies to lay the foundation for long-term collaboration between the two countries, and shape the future of digital telecommunications.

Challenges and solutions

UK and Indian academic institutions celebrate successes. But challenges such as complex regulations, funding issues, and logistical difficulties remain. How can we overcome these challenges and make the partnership more impactful?

Clearly, as can be seen from all the above examples, there is much to celebrate. UK and Indian academic institutions are achieving considerable success. However, it is important to note that there have been, and continue to hold, challenges.

One major issue is navigating complex regulatory environments, which can create barriers to progress, and complicate the implementation of new initiatives. Securing sustained funding is another critical challenge, impacting the scale and continuity of research efforts. Logistical difficulties, such as coordinating activities across different time zones and managing disruptions such as the COVID-19 pandemic, has further complicated project execution in recent years. Additionally, integrating diverse research outcomes into practical applications can be problematic, especially when there are discrepancies in infrastructure and resources. Maintaining momentum and ensuring long-term impact also pose ongoing challenges. Addressing these issues is crucial for the success of these international collaborations, enabling them to effectively overcome global challenges.

Conclusion and recommendations

This report underscores the significant contributions that UK and Indian universities are making to India's economic and social needs through strategic collaborations across critical sectors, such as climate change adaptation, food security, public health, and many more. These partnerships are not just academic exercises, they are vital drivers of sustainable development and resilience, aligning with both India's economic goals and the broader objectives of the United Nations' Sustainable Development Goals.

However, there is scope for the partnerships outlined in this report to be scaled with more support from industry and governments. There is also scope for many more such partnerships to be formed – with greater economic and societal impact. There is huge potential for the benefits of UK-India R+D collaborations to be deployed in third countries, particularly developing countries. We believe that implementation of the following recommendations will help achieve the full potential of UK-India academic-industry collaboration:

5.1 Recommendations for governments

There are three broad recommendations for the UK and Indian Governments that we believe will achieve greater success for UK-India R&D partnerships to have a global impact:

Sustain and grow funding for UK-India R&D projects and catalyse crowd-sourcing to draw in funds from the private sector, philanthropists, and international organisations. This would:

a. Enable projects going from theory, or the lab, into practice

b. Increase the likelihood of projects delivering impact at scale

c. Accelerate capacity building across institutions, removing the current discrepancy in infrastructure and resources.

Take a global approach by:

a. Pooling some Official Development Assistance funds to support collaborative R+D projects that include partners from, and deliver impact in, countries across the developing world

b. Identify ways to transfer UK-India R&D and its applications to the developing world.

The UK and Indian Government should create a 'channel' or 'mechanism' to facilitate and support more UK-India technology partnerships. Benefits could include:

a. A wider pool of participating universities, scientists, and businesses;

b. Dialogue between regulators, leading to harmonisation, which will enable smoother project implementation

c. Clear guidelines and communication between regulatory bodies in both countries to reduce delays and ensure compliance, particularly in areas such as medical device regulations and pharmaceutical safety standards. For instance, leveraging the UK's experience with the Medicines and Healthcare products Regulatory Agency (MHRA) can enhance project implementations in health technologies. Additionally, sharing best practices in fraud prevention and control, along with using AI for compliance monitoring, can significantly improve healthcare delivery in India

d. Knowledge-sharing on good project management practices to build capacity and expertise.

5.2 Recommendations for universities

In our discussions with UK universities and their India partners while producing this report, we identified several best practice examples. The main message is that universities and industry should work more closely together to deepen knowledge sharing, and resource and capacity development. This includes:

1. Improving existing facilities and expertise in both countries to support project objectives and address any current disparities
2. Organising training programmes, workshops, and exchanges to ensure effective translation of research into practical applications
3. Promoting intercultural dialogue and joint problem-solving to address cultural and operational differences. Universities should tailor approaches to local contexts to align team members with project goals.

Increased awareness and recognition of the benefits of these UK-India R&D partnerships will attract more funding, inspire more innovation, and encourage broader participation. Addressing existing challenges will also enable the identification of new opportunities for further collaboration between India and the UK. This report therefore highlights the value of bilateral partnerships and advocates for the expansion of such initiatives.
By raising awareness and showcasing UK and Indian universities as a force for good both in India and the world, we hope to pave the way for deeper and more impactful collaboration between UK and Indian organisations across a wide spectrum – academic, civic, business and government entities.

This will, in turn, strengthen the 'living bridge' between the two nations, as well as contribute towards global efforts in achieving the SDGs.

The examples set by these collaborations highlight the transformative power of international partnerships, and demonstrate how academic institutions can be catalysts for meaningful change and progress towards a more equitable and sustainable future for all.

By raising awareness and showcasing UK and Indian universities as a force for good both in India and the world, we hope to pave the way for deeper and more impactful collaboration between UK and Indian organisations across the spectrum – be it academic, civic, business or governmental entities.

Together, we innovate

Knowledge provider

EY

Shape the future with confidence

Education sector specialist team

For further details, please connect with our team
UK Desk: Amit B Jain: amit.b.jain1@uk.ey.com
India Desk: Prerna Kumari: prerna.kumari@in.ey.com
Divya Sahni: divya.sahni@in.ey.com

Amitabh Jhingan, Global Education Lead and Partner, EY-Parthenon

Vishal Malhotra, Partner, EY India, Tax

Avantika Tomar, Partner, EY-Parthenon

Amit B. Jain, International Director and Partner, EY-UK, Tax

Mithun D'Souza, Partner, EY-India, Tax

Shrayansh Jain, Partner, EY-India, Tax

Divya Sahni, Lead TNE and Internationalisation, EY-India

Prerna Kumari, Lead Markets, EY-India

Engaging with India's higher education landscape

India, the world's 3rd last economy, stands at a pivotal moment in its economy journey, driven by an ambitious growth target of becoming a $30 trillion economy by 2047. With a focus on innovation, industry collaboration and skill development, India is keen to enhance its competitive edge across sectors like digital technology, renewable energy and advanced manufacturing. This trajectory not only underscores the nation's expanding role on the global stage, but also signals new opportunities for investment, research and educational exchange.

As part of this broader vision, India's higher education landscape is undergoing a transformative shift, with internationalisation emerging as a central focus of recent reforms. The country has evolved from being a source market for inbound students to offering UK universities robust, nationally driven opportunities for TNE engagement. Recent policy changes spearheaded by Ministry of Education and the UGC have paved the way for new collaboration models, ranging from strategic research partnerships to the establishment of full-fledged branch campuses. The new policy framework reflects both the Indian government and state governments dedication to attracting the world's top 500 universities / programmes to India, aiming to meet the growing demand and enhance the quality of the education ecosystem.

To make the most of these opportunities, UK institutions need a nuanced understanding of India's priorities, spanning knowledge exchange, evolving tax & regulatory environment, technology transfer, R&D, intersectoral partnerships and commencement / expansion of non-core education activities that address critical areas of national development.

About EY

EY is a global professional services organisation with a mission to build a better working world. Through our four integrated service lines—Assurance, Consulting, Strategy and Transactions, and Tax—we leverage extensive sector knowledge to help clients seize opportunities, manage risks, and achieve sustainable growth.

With over 30 years of experience, EY is a global leader in education advisory, working across both the public and private sectors. Our teams are uniquely positioned to analyse both the supply and demand sides of education, tracking trends locally and globally. We offer a comprehensive suite of services, spanning from strategy to implementation, for various sub-sectors including K-12 systems and schools, higher education, workforce development, education service providers, and education transactions. EY-Parthenon, our strategy consulting arm, brings unique expertise in the education sector, completing more than 300 projects annually. Our education team is a trusted advisor to institutions and organisations worldwide, offering strategic insights and practical support.

At EY, we are poised to support UK universities in navigating new complexities—ensuring alignment with national and state-level policies, assessing impact, design a comprehensive India entry strategy and building impactful relationships with India's academic and industrial ecosystems. For UK universities specifically exploring TNE in India, EY can provide full-suite as well as tailored services focussing on market landscape analysis, partnership validation, IBC application filing, holding structure set-up, understanding tax & regulatory implications, financial & accounting support, pre-set-up & post set-up compliances. Our deep understanding of India's evolving higher education sector positions us to help UK institutions identify impactful ways to engage with India's academic and policy landscape.

Together, we innovate

Global Education's (GEDU) journey began when CEO Dr. Vishwajeet Rana founded the Lokmani Education Trust. The aim was to provide free education to women from poor and conservative areas in Uttar Pradesh, India.

GEDU is now delivering high-quality education across 12 countries, with over 60,000 students, and that number continues to grow.

The portfolio currently sits at 13 brands, offering a wide range of courses from across a spate of different sectors in the UK, US, Europe, Middle East and Asia Pacific.

A key pillar of the GEDU Group, Global Banking School has more than 30,000 students across London, Birmingham, Manchester and Leeds.

It works in partnership with leading UK universities to deliver the highest quality programmes across business and management, banking and finance, health and social care, digital technologies and construction management.

It offers unparalleled access and flexibility to its students, allowing them to fit their studies around their busy lives.

On the other side of the world, the Australian Performing Arts Conservatory is training the next generation of Australian stage and screen, with hands-on mentorship from industry-leading professionals.

Recently, GEDU announced its first step into the K12 arena through a ground-breaking partnership with Queen Elizabeth's School. The partnership will now expand its offering into the Indian and UAE markets under the Queen Elizabeth's Global Schools brand.

GEDU cherishes diversity. Through this diversity, the portfolio gets its strength to change lives through education. It cares for its students, values entrepreneurial spirit, and wants to make a significant contribution to all its communities. These are just some of the values that make GEDU what it is today.

Together, we innovate

indigo

creative process outsourcing

Indigo CPO is the B2B world's preferred outsourcing partner.

With offices in the London and Mumbai it is the only specialist creative outsourcing business in the UK-India corridor.

Indigo CPO offers services in content and digital design, transcreation, video production and research.

Clients in education, professional services and creative agencies use its 'virtual studio' to add scale to their workforces by tapping into pools of cost-effective, highly skilled Indian talent. As well as cost benefits they also enjoy advantages of skills and scale.

Indigo CPO is a member of MSDUK, the Design Business Association and the Global Sourcing Association where it advocates for India as an outsourcing destination.

Founders Mark Hannant and Munni Trivedi split their time between London and Mumbai.

Aspiration Nation:

Why young Indians are swiping right on overseas education', published by Indigo CPO and its sister concern teammagenta, looks at booming demand from Indian students. It considers how much of that demand is in tier 2 and tier 3 cities and offers tips to UK universities keen to gain a larger share of that exciting market.

E: munni.trivedi@indigocpo.com

M: +44 7810 036872

www.indigocpo.com

Acknowledgements

UKIBC would like to extend our sincere gratitude to all the universities and academic institutions whose contributions have been instrumental in shaping this report and providing a fresh insight into the diversity and breadth of university-led R&D collaborations in the UK India corridor.

These include the universities of Bristol, Brunel, Cardiff, Coventry, Cambridge, Durham, East Anglia, Edinburgh, Glasgow, Liverpool, Manchester, Reading, St Andrews, Swansea, Strathclyde, Surrey, Imperial College, King's College London, UCL as well as Global Education Holdings (GEDU) and Universities Wales.

We also wish to express our deepest appreciation to the Indian High Commission for their unwavering support and commitment at every stage of this important project, which will go a long way in further boosting research collaborations between our two nations.

Our special thanks to our sponsors Global Education Holdings Ltd (GEDU), EY and Indigo CPO for their wonderful generosity and support and without whom this endeavour would not have been possible.

Lastly, a huge and heartfelt thank you to our excellent colleagues Vidhi Vyas, Tara Panjwani and Kevin McCole for their valuable inputs and camaraderie and for making this team effort an enjoyable and memorable experience.

Thank you all for your contributions and support.

Collaborative publications and research initiatives

This section highlights some of the recent publications of the research initiatives produced through partnerships between UK and Indian universities and Indian industry. Here, we showcase a selection of joint studies, articles, and papers that reflect the shared commitment of both nations to advancing knowledge across diverse fields.

Durham University

Durham University has achieved over 168 co-publications with Indian universities in 2023 alone, reflecting a vibrant partnership in research and innovation. Over the past three years, Durham has collaborated on 633 publications with more than 120 Indian universities. These joint efforts span diverse fields, as illustrated by:

• "Phosphorylation of AGO1a by MAP Kinases is Required for miRNA-Mediated Resistance Against Xanthomonas oryzae pv. oryzae Infection in Rice", co-authored with researchers from the National Institute of Plant Genome Research and Elizer Joldan Memorial College, Ladakh.

• "Intermittent Demand, Inventory Obsolescence, and Temporal Aggregation Forecasts", in partnership with the Indian Institute of Management Kashipur and IIT Kharagpur.This dynamic collaboration underscores Durham's commitment to advancing impactful, cross-border research with Indian academia.

This dynamic collaboration underscores Durham's commitment to advancing impactful, cross-border research with Indian academia.

Imperial College London

Imperial College London is actively engaged in addressing antimicrobial resistance through the AMR Watch initiative. This collaborative platform brings together researchers from various disciplines to produce impactful publications and research findings aimed at tackling global

health threats posed by antimicrobial resistance. For more information, visit the AMR Watch page.

University of Edinburgh

• Bharath Y., Bliznashka L., Kumar T.V., Jonnala V., Chekka V., Yebushi S., Roy A., Venkateshmurthy N., Prabhakaran P., & Jaacks L. (2024). Evidence of potential impacts of a nutrition-sensitive agroecology program in Andhra Pradesh, India, on dietary diversity, nutritional status, and child development. PLOS ONE, 19(5): e0286356.

• Jaacks L.M., Bliznashka L., Craig P., Eddleston M., Gathorne-Hardy A., Kumar R., Mohan S., Norrie J., Rajan S., Roy A., Yandrapu B., Venkateshmurthy N.S., & Prabhakaran P. Co-Benefits of Large-scale Organic Farming on Human Health (BLOOM): Protocol for a cluster-randomised controlled evaluation of Andhra Pradesh Community-managed Natural Farming (APCNF) in India. PLoS ONE, 18(3): e0281677.

• Jaacks L.M., Serupally R., Dabholkar S., Venkateshmurthy N.S., Mohan S., Roy A., Prabhakaran P., Smith B., Gathorne-Hardy A., Veluguri D., & Eddleston M. Impact of large-scale, government-legislated and funded organic farming training on pesticide use: A cross-sectional study from Andhra Pradesh, India. Lancet Planetary Health, 2022, 310-319.

King's College London

• **Project Title:** "Effect of Vitamin D3 Supplements on Development of Advanced Cancer"

This study, led by researchers from Harvard University and others, investigates the potential role of vitamin D3 supplements in reducing the risk of advanced cancer among adults. Read more here https://jamanetwork.com/

journals/jamaoncology/fullarticle/2775243

• **Project Title:** "Participation of Lower and Upper Middle–Income Countries in Oncology Clinical Trials Led by High-Income Countries"

University of Cambridge

Over the past five years, research collaborations between Cambridge University and Indian academic institutions have resulted in 927 co-publications, as recorded in the Dimensions database. By focusing on publications with no more than ten authors, these works demonstrate the depth of genuine academic partnerships. The majority of these publications fall within STEM and biomedical fields, with significant contributions in Engineering, Physics, Chemistry, Biology, and Biomedicine. This collaborative research has been featured in a diverse range of prestigious journals, including Nature, Astrophysics Journal, Advanced Materials, Journal of Fluid Mechanics, Nanotechnology, Parasitology, Cognitive Science & Technology, The Lancet, and Science.

University College London (UCL)

UCL has contributed to the field of healthcare engineering through the UCL Ventura project, which focuses on the development of a high-performance ventilator in response to the COVID-19 pandemic. This initiative has led to impactful publications that reflect collaborative research efforts with Indian institutions. For more information, visit the UCL Ventura page.

Swansea University and other UK and Indian institutions:

Sunrise Network is dedicated to fostering innovative research collaborations between UK and Indian academic institutions. By leveraging expertise in areas such as public health, education, and sustainable development, the network aims to produce impactful publications that address pressing global challenges. For more information, visit the Sunrise Network page.

University of Liverpool

• Bluett-Duncan M., Pickles A., Chandra P.S., Hill J., Kishore M.T., Satyanarayana V., & Sharp H. (2024). Experience and Reporting of Postnatal Depression Across Cultures: A Comparison Using Anchoring Vignettes of Mothers in the United Kingdom and India. American Journal of Epidemiology, 193(1), 214–226. https://doi.org/10.1093/aje/kwad182.

• Bozicevic L., Hill J., Chandra P.S., Omirou A., Holla C., Wright N., & Sharp H. (2023). Cross-cultural differences in early caregiving: levels of mind-mindedness and instruction in UK and India. Frontiers in Child and Adolescent Psychiatry, 2. https://doi.org/10.3389/frcha.2023.1124883

• Hodsoll J., Pickles A., Bozicevic L., Supraja T.A., Hill J., Chandra P.S., & Sharp H. (2022). A Comparison of Non-verbal Maternal Care of Male and Female Infants in India and the United Kingdom: The Parent-Infant Caregiving Touch Scale in Two Cultures. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.852618.

• Chandra P.S., Bajaj A., Desai G., Satyanarayana V.A., Sharp H.M., Ganjekar S., & Kandavel T. (2021). Anxiety and depressive symptoms in pregnancy predict low birth weight differentially in male and female infants-findings from an urban pregnancy cohort in India. Social Psychiatry and Psychiatric Epidemiology, 56(12), 2263-2274. https://doi.org/10.1007/s00127-021-02106-9.

Brain Infections

• Damodar T., Dunai C., Prabhu N., Jose M., Akhila L., Kinhal U.V., & Mani R.S. (2024). Diagnostic markers of acute encephalitis syndrome and COVID-associated multisystem inflammatory syndrome in children from Southern India. Journal of Medical Virology, 96(5), e29666. https://doi.org/10.1002/jmv.29666.

• Rupali P., Singh B., Gracelin Princy N., Sara John J., Kuehn R., Solomon T., & Garner P. (2024). The India brain infections guidelines project: Global evidence for local application. Clinical Epidemiology and Global Health, 27, 101560. https://doi.org/10.1016/j.cegh.2024.101560.

• Suma R., Netravathi M., Gururaj G., Thomas P.T., Singh B., Solomon T., & Banandur P.S. (2023). Profile of Acute Encephalitis Syndrome Patients from South India. Journal of Global Infectious Diseases, 15(4), 156-165. https://doi.org/10.4103/jgid.jgid_19_23.

• Hills S.L., Netravathi M., & Solomon T. (2023). Japanese Encephalitis among Adults: A Review. The American Journal of Tropical Medicine and Hygiene, tpmd230036. https://doi.org/10.4269/ajtmh.23-0036.

• Damodar T., Singh B., Prabhu N., Marate S., Gowda V.K., Lalitha A.V., & Yadav R. (2023). Association of Scrub Typhus in Children with Acute Encephalitis Syndrome and Meningoencephalitis, Southern India. Emerging Infectious Diseases, 29(4), 711-722. https://doi.org/10.3201/eid2904.221157.

• Alam A.M., Gillespie C.S., Goodall J., Damodar T., Turtle L., Vasanthapuram R., & Michael B.D. (2022). Neurological manifestations of scrub typhus infection: A systematic review and meta-analysis of clinical features and case fatality. PLOS Neglected Tropical Diseases, 16(11). https://doi.org/10.1371/journal.pntd.0010952.

References

1   Economic Times Energy World: 'India targets 500 GW renewable energy by 2030, plans 9.15 lakh crore investment in transmission.

2   ET Government: 'Leading the change: India's clean energy priorities for 2024 and beyond.

3   International Trade Administration: India Offshore Wind Energy

4   Business Insider: 'Rising air pollution in India led to 1.67 million deaths and a loss of $36.8 billion in 2019, according to a Lancet report

5   Summary of the Union Budget 2024-25Press Information Bureau (PIB) July 2024.

6   The Ayushman Bharat Digital Mission (ABDM) seeks to improve equitable healthcare access through digital health records, telemedicine, and national service portability. For further details, refer to the Ayushman Bharat Digital Mission https://abdm.gov.in/).

7   The World Health Organization (WHO) (www.who.int/india/health-topics/snakebite).

8   The Government of India's #AIforAll strategy, introduced by NITI Aayog, promotes AI integration across sectors like healthcare, agriculture, and education to fosterinclusive growth and ethical AI use: NITI Aayog (https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf).

9   How India is carving out its role in the Intelligent Age," World Economic Forum, September 2024, https://www.weforum.org/agenda/2024/09/india-role-in-the-intelligent-age/.

10 India's Semiconductor Market Projected to Surpass $100 Billion in Revenues by 2030," SME Times, October 16, 2024, https://www.smetimes.in/smetimes/news/industry/2024/Oct/16/india-semiconductor-market-projection.html.

11 "Cybersecurity in India: National Cyber Security Policy and Initiatives," International Journal of Creative Research Thoughts (IJCRT), Volume 12, Issue 8, August 2024, https://www.ijcrt.org/papers/IJCRT2408785.pdf.

12 Telecommunications Industry in India," India Brand Equity Foundation (IBEF), accessed October 2024, https://www.ibef.org/industry/telecommunications-india.aspx.

13 Telecom Sector: An Overview of Initiatives and Growth," Press Information Bureau (PIB), October 2024, https://pib.gov.in/PressReleasePage.aspx?PRID=1872271.

14 The UK and India Sign a New Technology and Security Initiative: What Does It Mean for the UK Tech Sector?" TechUK, accessed October 2024, https://www.techuk.org/resourcethe- uk-and-india-sign-a-new-technology-and-security-initiative-what-does-it-mean-for-the-uk-tech-sector.html.

Directory

From cutting-edge research to impactful projects, this directory captures UK-India partnerships. Universities and industries unite here to address India's economic priorities, pushing for a sustainable and equitable future.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Brunel University	Brunel-IISc strategic relationship	**Others: Education**	• Brunel University • IISC Bengaluru	2020	Still active	UK, India	—	—

Participants	Scope of the project
—	• Promote academic, scientific, and cultural collaboration between the institutions. • Promote staff and postgraduate research student exchanges. • Promote research collaboration through co-supervision of PhD projects. • Develop taught student exchange links. • Co-operate in taught programmes, in fields of mutual interest. • Exchange of academic materials and publications. • Provide cultural and intellectual enrichment opportunities for staff and students of both parties.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Cambridge University	TIGR²ESS: Transforming India's green revolution by research and empowerment for sustainable food supplies	**Sustainable agriculture and food security**	**UK** • University of Cambridge • John Innes Centre • University of East Anglia • Rothamsted Research • National Institute of Agricultural Botany • University of Essex • University of Hull **India** • Banaras Hindu University • Department of Biotechnology • Centers for Internl Projects Trust • Christian Medical College, Vellore • CRIKC • CSIR-NISTADS • ICRISAT • Indira Gandhi Nat Open University • IIT Ropar • IIT Bombay • Iora • Kalinga Institute of Social Sciences • IIT Bhubaneswar • MS Swaminathan Research Foundation • Nabakrushna Choudhury Centre for Development Studies • NIPGR • NIAS • Panjab University • PRADAN • Punjab Agricultural University • Borlaug Institute for South Asia • Tata Institute of Social Sciences • University of Tamil Nadu • Vertiver Private Ltd	February 2017	June 2022	India & UK	UK's Global Challenges Research Fund	£7,035,021

Participants	Scope of the project
Prof. Howard Griffiths	• Develop strong alliances between UK and Indian experts in crop science, food security, hydrology, social science, and policy for knowledge exchange. • Define sustainable outcomes for India's Green Revolution, and set policy agenda. • Focus research on societal needs, technological capabilities, equality, female empowerment, entrepreneurship, and educate rural female farmers.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Cardiff University	• Edge computing and analytics • Edge computing based human computer interaction	**Sustainable agriculture and food security**	• Cardiff University • Welsh School of Architecture • IIT Ropar (India)	2021 2020	2022 2021	India & UK	British Council	£20,000 £3000
	Participants	**Scope of the project**						
	Cardiff University Prof. Omer Rana **Welsh School of Architecture** Dr. Shibu Raman **IIT Ropar** Dr. Nitin Auluck Dr. Amanjor Kaur Ashish Kumar Kaushal, a PhD student	How machine learning and edge computing can improve the performance of applications in agriculture.						
	Smart city project	**Healthcare**	• Cardiff University • The School of Planning and Architecture (SPA), India • Infrastructure Development Corporation in Karnataka • Welsh Government in India • IIT Ropar	2004 (MoU renewed in 2024)	Ongoing	India	• EPSRC/UKIRI/ • Ministry of Urban development	—
	Participants	**Scope of the project**						
	Dr. Ramen	Research on fragile architectural/urban heritage, sustainable housing, the liveability of urban places, challenges of rapid urbanisation, the production of urban heat islands, and the intersections of health and air quality.						
	National chemical lab	**Climate change**	• Cardiff University • Johnson Matthey • National Chemical Laboratory, Pune	June 2020	June 2022	India	Global Wales International Research Mobility Fund	£2450
	Participants	**Scope of the project**						
	Dr. M. Sankar	Work on battery technologies.						

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Coventry University	Prediction of hydrogen embrittlement (H2E) failure on welded and 3D printed parts using AI	**Climate change**	• Coventry University (CU), • Vellore Institute of Technology (VIT), India	March 2024	Still active/ March 2026	UK & India	—	—

Participants	Scope of the project
Prof. Arivazhagan Anbalagan	• Promote collaborative research efforts between CU and VIT for AI-enriched predictive modelling of H2E on welded and 3D-printed parts. • Achieve a technology readiness level of 3 for AI-driven predictive models by ensuring the reliability of H2E through continuous validation. • Enhance AI-based research mobility through PhD studentships and joint courses. • Seek further joint opportunities to expand the present collaboration through research funders in India, the UK, and Europe (EPSRC, DST India, and EU Horizon).

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Development of intelligent annotation tool	**Other: Emerging technologies**	• Coventry University (CU) • L&T Technology Services Ltd, Bengaluru	September 2021	October 2022	Bengaluru, India	—	—

Participants	Scope of the project
Ian Chambers	• Develop video labelling, annotation, and anonymisation tools. • Integrate the tools with enterprise applications for quality monitoring and management.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Teachers on the move: Evidence from a large-scale learning intervention during lockdown	**Healthcare**	• Coventry University (CU) • University of St Andrews, Scotland • Education ASPIRE (NGO), India • Tata Steel Foundation, India	January 2021	March 2024	Odisha, Jharkhand, (India)	Tata Steel Foundation Scottish Funding Council	£1,094,771

Participants	Scope of the project
Prof. Kratika Bhatia	Present evidence from a large-scale para-teacher program that delivered learning resources to children at home during Covid-19.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Coventry University	How to make decentralisation work? Evidence from a capacity-building intervention in local governance	Healthcare	• Coventry University (CU) • University of St Andrews, Scotland • Education ASPIRE (NGO), India • Tata Steel Foundation, India	November 2019	Still active	Odisha, India	—	—

Participants	**Scope of the project**
—	Evaluate a capacity-building intervention to improve Gram Panchayat fiscal and financial planning through training local leaders and Panchayati Raj staff.

| | Transversal skills & design-for-change: Adolescent development study | Healthcare | • Coventry University (CU)
 • Education ASPIRE (NGO), India
 • Institute for Fiscal Studies
 • Yale University | January 2024 | Still active | Odisha, India | — | — |

Participants	**Scope of the project**
—	Explore the impact of transversal skills and the design-for-change strategy on the cognitive development, learning outcomes, and life choices of adolescents.

| | Educate, organise, and empower: Transforming lives of tribal children in central India | Healthcare | • Coventry University (CU)
 • Education ASPIRE (NGO), India
 • University of St Andrews, Scotland | February 2024 | Still active | India | — | — |

Participants	**Scope of the project**
—	Reshape the future for children in the tribal region of Central India by universalising secondary education, eliminating child labour, and rejuvenating public schools through modern teaching practices and technology integration.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Durham University	Sustainable thermal energy	**Climate change**	Durham University, Amrita Vishwa Vidyapeetham, UKIBC	November 2021	March 2022	India	Innovate UK	£159,846

Participants	**Project deliverables**
Prof. Tony Roskilly Dr. Janie Ling-Chin Dr. Zhiwei Ma Dr. Huashan Bao Dr. Shivaprasad Vijayalakshmi	• Revolutionise energy-intensive foundation industries, including metals, cement, paper, glass, ceramics, and bulk chemicals, by capturing low-grade waste heat. • Maximise the reuse of low-grade waste heat to enhance sustainability and energy efficiency. • Identify gaps in thermal energy management. • Develop business cases for waste heat recovery.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
GEDU Global Education	GIFT city	**Others: Education**	GEDU Global Education (global)	2025	—	India	Government of India	£15.43 billion

Participants	**Scope of the project**
—	• Assist top-ranked UK universities in establishing branch campuses in India, starting with Gift City. Universities won't need to bear any financial risk, as GEDU will provide 100% investment. • Deliver world-class education while mitigating financial risk.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Glasgow University	Industry Sponsored PhD - a problem solving partnership	**Climate change Others: Manufacturing**	• University of Glasgow • Apollo Tyres	January 2023	Still active	Glasgow, Hungary	Apollo Tyres	£5 million

Participants	**Scope of the project**
—	• Cure tyre scrap reduction. • Develop digital twins to optimise tyre building machine processes. • Use AI, ML, and data mapping to improve efficiency, reduce waste, enhance product quality, and ensure sustainability.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Bringing researchers, partners & ideas together in the Mazumdar Shaw Advanced Research Centre (ARC)	**Others: Education**	• University of Glasgow • Mazumdar Shaw Advanced Research Centre (ARC)	2020	2025	Glasgow, Hungary	ARC	£118 million

Participants	**Scope of the project**
—	• Bring together researchers and ideas from across disciplines and sectors (academic/industrial/public and civic). • Transform the culture of research at the university by nurturing a free thinking, ambitious, fear-free scholarly community that is centred on open research, collaboration and co-operation.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Global Wales	Funding support	**Others: Education**	• IISc Bengaluru • Mangalore University • Raichur University • Tumkur University • Cardiff University • Swansea University • University of South Wales	January 2024	Still active	India & UK	—	—

Participants	**Scope of the project**
—	• Improve inter-institutional partnerships and relationships. • Identify options and opportunities for longer-term collaboration. • Enhance the reputational standing of Wales, HE sector, and its counterparts in India. • Identify opportunities for commercialisation, revenue, and income generation.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Imperial College London	**AMRWATCH:** Defining the AMR Burden and Antimicrobial Manufacturing Waste	**Climate change**	• Imperial's Centre for Environmental Policy (CEP) • Puducherry (Pondicherry) University • Other partners include Aarupadai Veedu Medical College & Hospital (AVMC) • Indian Institute of Technology (BHU) Varanasi • Indira Gandhi Medical College and Research Institute (IGMCRI)	September 2020	Still active	Chennai & Puducherry (India)	• UKRI • DBT • UK and Indian Research councils	£12 million

Participants	**Scope of the project**
—	• Understand the link between antibiotics and manufacturing waste. • Provide a platform to advise on the risk posed by antimicrobial manufacturing waste • Identify the need for risk-reducing investments by industry to deal with the proliferation of AMR.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Imperial College London	Research on non-communicable diseases and environmental change	**Healthcare**	• Imperial College London • George Institute for Global Health India	—	—	India	NIHR Global Health Research Centre	£10 million

Participants	Scope of the project
—	Tackle the dual challenge of a rapidly growing burden of non-communicable diseases and global environmental change in low- and middle-income countries.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	A partnership for high-impact science	**Climate change**	• Imperial College London • IISC Bangalore	—	—	India	• Imperial College London • IISC	—

Participants	Scope of the project
—	Co-create high-impact science and innovation to address global challenges and enable new technology

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Sustainable design and manufacturing	**Climate change**	• Imperial College London • Tata Steel	—	—	India	• Imperial College London • Tata Steel	£10 million

Participants	Scope of the project
—	Develop high performing and sustainable products in the automotive and clean energy industries.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
King's College London	King's College London and King's Health Partners (KHP) partnership with the Tata Memorial Centre (TMC) and Tata Memorial Hospital (TMH)	**Healthcare**	• King's College London • King's Health Partners (KHP) • Tata Memorial Centre (TMC) • Tata Memorial Hospital (TMH)	2019	Still active	Mumbai & London	**Global classrooms:** British Council and participating universities **TMC:** Various (including participating institutions, Government of India through the Department of Atomic Energy, the Wellcome Trust and UK MRC)	—

Participants	Scope of the project
Global classrooms: Undergraduate students and staff from participating universities **TMC:** Clinicians and academic staff and postgraduate students from TMC, TMH, King's and KHP	• Work with TMC on the development of the National Cancer Grid in India. • Support the development of research collaborations, staff, and postgraduate student exchange • Delivery of training and development opportunities for clinicians • Exchange of best practices in values-based healthcare and oncology treatment.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
King's College London	King's global classroom projects with Indian partners	**Healthcare**	• OP Jindal Global University (JGU) • National University of Juridical Sciences (NUJS) • Manipal Academy of Higher Education (MAHE)	2021	Still active	• Online (students in Delhi, Kolkata, Manipal and London) • And in-person in the Sundarbans region.	—	—
	Participants	**Scope of the project**						
	—	• The objective with MAHE was to facilitate the delivery of international learning opportunities for medical, dental, and nursing students during the Covid-19 pandemic. This became crucial when physical mobility was prohibited, and students were unable to complete their overseas elective placements as planned. • With JGU and NUJS, the objective was to co-design and co-deliver a new LLM module, 'Transnational Remedies for Legal Harms' for students from all three institutions. This was taught in an innovative global classroom, supported by a British Council Going Global award.						

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Manchester University	Treatment for cancer	**Healthcare**	• Manchester University • Tata Medical Center, Kolkata	—	2018	India	—	—
	Participants	**Scope of the project**						
	Prof. Vaskar Saha	• Standardise cancer treatment across India. • Creation of a dedicated paediatric cancer unit and a cancer research centre – the Tata Translational Cancer Research Centre (TTCRC).						

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Surrey University	**ASAP-DELHI** (An integrated study of air pollutant sources in the Delhi National Capital Region) CArE-Cities (Clean air engineering for cities) CArE-Homes (Clean air engineering for homes)	**Climate change**	Surrey University **ASAP-DELHI:** University of Birmingham, Indian Institute of Technology, Delhi. CArE-Cities: Indian Institute of Technology Delhi, Indian Institute of Technology, Madras CArE-Homes: Indian Institute of Technology, Delhi Indian Institute of Technology, Madras	ASAP-DELHI: November 2016 CArE-Cities: January 2019 CArE-Homes: February 2021	ASAP-DELHI: March 2022 CArE-Cities: July 2020 CArE-Homes: July 2021	Delhi, India Delhi, India Chennai, India	—	—

Participants	Scope of the project
University of Birmingham Prof. William Bloss **Indian Institute of Technology, Delhi** Prof. Mukesh Khare **Indian Institute of Technology, Madras** Prof. Shiva Nagendra	**ASAP-DELHI:** • Assess the sources, formation, characteristics, and burden of particulate matter in Delhi and NCR, focusing on PM2.5 and nanoparticles, which greatly impact human health. **CArE-Cities:** • Establish a multidisciplinary team to understand emissions, use low-cost pollution monitoring technology, and develop exposure reduction strategies in selected ODA cities. • Create a scientific framework to manage air pollution impacts on health. • Assess commuters' exposure and propose transport emission controls in Cairo and Sao Paulo; evaluate feasibility in Malawi, Tanzania, Iraq, Bangladesh, and Ethiopia. Develop larger research grant proposals based on findings. **CArE-Homes:** • Develop a scientific framework for managing indoor air pollution impacts on the health of low-income home residents in selected ODA cities.

	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	GIAN (Global Initiative for Academic Network)	**Climate change**	• Surrey University • IIT, Bhubaneswar • IIT, (ISM Dhanbad)	2015	2016	Odisha, India	—	—

Participants	Scope of the project
Prof. Subhamoy Bhattacharya	Built a strong relationship with Indian institutes in the area of offshore wind through PhD projects.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
Swansea University	SUNRISE	**Climate change Healthcare**	• Swansea University • Imperial College London • London South Bank University • Oxford • Cambridge University • Brunel University, • Indian Institutes of Science Education and Research, Pune • Jawaharlal Nehru Centre For Advanced Scientific Research • Indian Institute of Science, Bengaluru • IIT-Bombay • IIT-Delhi • IIT-Kanpur • Tata Institute of Social Sciences • Additional partners in Mexico, South Africa and Kazakhstan. • Also working with, Tata Steel, Nest-In, Ecofirst	2022	Still active	UK India South Africa Mexico Kazakhstan	Global Challenge Research Fund Carbon Trust	£1.5 million

Participants	Scope of the project
Prof. David Worsley Prof. Ian Mabbett	• Build a global and equitable collaboration in sustainable energy research. • Develop and evaluate low-cost solar technology, with a particular focus on flexible, thin film photovoltaics. • Investigate other renewable technologies, including electrical storage devices, energy efficient lighting, water purification techniques, and biomass energy. • How global science can be applied to the benefit of local communities and industries.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University College London	Powered by Tacilia	**Others: Emerging technologies**	• University College London • Global Disability Innovation Hub (GDI) • IIT Delhi • National Association for the Blind, Delhi • Blind Relief Association Delhi	November 2019	Still active	GDI Hub, UCL East, IIT Delhi (India)	—	—

Participants	Scope of the project
—	Develop cutting-edge technology to make braille and tactile graphics more accessible.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of Bristol	Energy transition	**Climate change**	• University of Bristol (UoB) • Federation of Indian Chambers of Commerce and Industry (FICCI) • Tata Institute of Fundamental Research (TIFR)	September 2023	Still active	Bristol & India	—	—

Participants	Scope of the project
UoB Prof. David Fermin Prof. Charl Faul **FICCI** Arpan Gupta **TIFR** Prof. Deepa Khushalani	• Research and development to reduce CO2 emissions, hydrogen generation, solar energy conversion, and storage technologies.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Composite research and education	**Others: Manufacturing**	• UoB's Composites Institute • National Composites Centre • UoB's Robotics Laboratory • Innovation and Knowledge Centre • IIT Bombay	—	—	Mumbai, India	—	—

Participants	Scope of the project
—	• Research and development of composites. • Research on robotics and automation. • Develop semiconductor power electronics.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Solve global environmental challenges	**Climate change**	• UoB's Cabot Institute for the Environment • IIT Kharagpur • IIT Madras • Indian Institute of Science Bengaluru	—	—	India	—	—

Participants	Scope of the project
Prof. Guy Howard Prof. Jeremey Philips Prof. Paul Bates	• Develop solutions for the impacts of environmental change. • Research on natural hazards • Map flood risk.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of Bristol	Antimicrobial resistance	**Healthcare**	• UoB's AMR Network • Postgraduate Institute for Medical Education & Research (India) • Banaras Hindu University • Indian Institute of Technology • National Environmental Engineering Research Institute (India) • Aligarh Muslim University	2020	2023	India	• Department of Biotechnology, Natural • Environment Research Council (India)	£3.8 million

Participants	**Scope of the project**
—	• Understand the extent of environmental antimicrobial pollution from antimicrobial manufacturing waste. • Develop methods and tools for the detection of active antimicrobials and resistant bacteria. • Determine the impact of antimicrobials on human and animal health.

	Treatment for infections	**Healthcare**	UoB's Elizabeth Blackwell Institute for Health Research	—	—	India	—	—

Participants	**Scope of the project**
Prof. Helen Lambert	• Work on prevention and treatments for infections including HIV/STIs. • Focus on treatment-seeking for antibiotics. • Work on plural health systems in India including Ayurveda. • Support hospital health workers during COVID-19

	Population health	**Healthcare**	• UoB • National Institute of Nutrition (NIN) (Hyderabad, India) • Public Health Foundation of India, Centre for Cancer Epidemiology (CCE) • Tata Memorial Hospital, National Health and Family Welfare Survey (NFHS)	—	—	India	—	—

Participants	**Scope of the project**
—	• Study the effects of rural-to-urban migration on obesity and diabetes in India. • Investigating the health of children and parents in Andhra Pradesh to uncover the long-term effects of early-life undernutrition and cardiovascular disease risk. • Longitudinal cohort study on nutrition. • Strengthen public health research capacity. • Analyse 200,000 largely rural participants to examine genes, risk factors, and diseases.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of East Anglia	University social responsibility	**Healthcare**	• University of East Anglia • University of Calcutta • University of Hyderabad • Jadavpur University • Government of India	2018	Ongoing	India	—	—

Participants	Scope of the project
Dr. Daniel Rycroft	• Release a USR guidebook. • Hold a USR policy dialogue in Kolkata.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Gendered cultures and climate justice	**Climate change** **Healthcare**	• University of East Anglia • UNESCO Centre for World Natural Heritage Management and Training	August 2018	September 2021	India	Global Challenges Research Fund	£299,490

Participants	Scope of the project
Prof. Nitya Rao	• Build strategies and partnerships to address urgent research and developmental needs in India. • Explore the role of gendered-indigenous knowledge in the context of resilient cities and climate justice. • Investigate the potential and issues related to smart citizenship in promoting sustainable cities and social justice.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Recovering with dignity	**Healthcare**	• University of East Anglia • India Institute of Human Settlements (Bengaluru)	August 2018	September 2021	India	Global Challenges Research Fund	£299,490

Participants	Scope of the project
University of East Anglia Prof. Nitya Rao **IIHS** Chandni Singh	• Generate knowledge on recovery experiences in post-disaster settings in India. • Test the hypothesis that dignified recovery processes for socially diverse populations • Include a travelling exhibition curated by disaster survivors.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	FOGGI: Fog over the Indo-Gangetic Plains of India	**Climate change**	• University of East Anglia —	September 2019	March 2021	India	Global Challenges Research Fund	£200,540

Participants	Scope of the project
Prof. Ian Renfrew	• How to better use current operational Numerical Weather Prediction (NWP) models to forecast fog over India. • Makes suggestions for potential future models to improve fog forecasting. • Builds capacity in fog research and model development research institutes and operational forecast centres in India.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of East Anglia	The UK-India Future Networks Initiative (UKI-FNI)	**Emerging technologies**	• University of East Anglia • University of Surrey • University of Southampton • UCL • Indian Institute of Science • IIT Delhi	—	—	India	UK Engineering & Physical Sciences Research Council (EPSRC)	—

Participants	Scope of the project
University of East Anglia Gerard Parr **Indian Institute of Science, Bangalore** K V S Hari **Regius Professor** Rahim Tafazolli **UCL** Steve Hailes **University of Southampton** Lajos Hanzo **Bharti School of Telecom** Technology and Management	• Explores advanced innovations in supply chains for hardware and software systems. • Provide connectivity and services for future digital networks, • Develop a joint vision and research strategy beyond 5G and 6G.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Academic social responsibility and the humanities in India (Under the Scheme for the Promotion of Academic and Research Collaboration (SPARC))	**Others: Education**	• University of East Anglia • Jadvapur University	July 2023	June 2025	West Bengal, India	Government of India	£10,000

Participants	Scope of the project
Prof Sanyantan Dasgupta and Dr. Daniel Rycroft	Research, archive, and translate indigenous and marginalised languages of West Bengal

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of Edinburgh	BLOOM (co-benefits of largescale organic farming on human health)	Healthcare	• Global Academy of Agriculture and Food Systems (GAAFS), • University of Edinburgh • Ashoka University (Delhi) • Rythu Sadhikara Samstha (Government of Andhra Pradesh) • University of Glasgow • Stanford University (USA) • Emory University (USA) • Public Health Foundation of India (Delhi) • Centre for Chronic Disease Control (Delhi) • Indian Council of Agricultural Research (Hyderabad) • Centre for Sustainable Agriculture (Hyderabad) • Ross Lifescience (Pune)	2016	Still active	Andhra Pradesh, India	UKRI (MRC)	Varying amounts

Participants	Scope of the project
Lindsay Jaacks (Lead) Michael Eddleston John Norrie Alfy Gathorne-Hardy	• Plan and implement programmes for the empowerment and all-round welfare of farmers. • Study the impact of agroecology on the health of farmers and their families. • Train farmers in sustainable farming methods and encourage them to transition away from monocropping, synthetic nitrogen, and harmful pesticides.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of Liverpool	The Partnership between the University of Liverpool and the National Institute of Mental Health and Neuroscience, (NIMHANS), Bengaluru	Healthcare	• University of Liverpool (UoL) • National Institute of Mental Health and Neuroscience, (NIMHANS), Bengaluru	2010	Still active	India & Liverpool	Pratishka Trust	£1.5 million

Participants	Scope of the project
UoL Prof. Tom Solomon Dr. Lance Turtle **NIMHANS** Prof. Prabha Chandra Dr. Netravathi M	• Overcome the roadblocks to implementation by implementing WHO surveillance standards and the Clinical Care Guidelines. • Collaborate on neuro-imaging and epilepsy themes. • Strengthen research on brain infection. • Support the dual PhD programme between UoL and NIMHANS and aid scientific meetings between the two organisations. * The partnership rolled out a major vaccination programme for Japanese encephalitis, saving 200,000 lives worldwide.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of Reading	Teaching partnership	**Sustainable agriculture and food security**	• University of Reading • Amity University • Jindal Global University • University of Reading India Office, Bengaluru	2020	Still active	India	—	—

Participants	**Scope of the project**
Dr. Sakthivel Vaiyapuri	• Promote productive and sustainable farming in the Indian Himalaya through ecological intensification. • Translate research opportunities to enhance pollination benefits. • Break the intergenerational cycle of malnutrition, food security, and poverty in low-income countries. • Understand the biophysical processes and extension mechanisms of Zero Budget Natural Farming (ZBNF) to support its wider application.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Student recruitment / Profile raising	**Others: Education**	• White Knight Education • OneStep Global	2022	Still active	Bengaluru, India	—	—

Participants	**Scope of the project**
—	• Increase the number of Indian students coming to UoR's UK campus. • Raise UoR's profile in India and improve the levels of engagement with various stakeholders—alumni, employers, government, NGOs, etc.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Understanding Zero Budget Natural Farming in Andhra Pradesh	**Sustainable agriculture and food security**	• University of Reading • Rythu Sadhikara Samstha (RySS) – farmer empowerment organisation	—	Still active	India	KfW Development Bank	—

Participants	**Scope of the project**
Sarah Duddigan (Geography & Environmental Science) Grady Walker (International Development)	To offer a holistic approach to support Zero Budget Natural Farming in Andhra Pradesh, India.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of Reading	Improving snakebite public awareness	**Healthcare**	• TCR Multispeciality Hospital • Manian Medical Centre • Trichy SRM Medical College & Research Centre • Madras Crocodile Bank Trust • Urvanam Wildlife Trust	2020	Still active	Krishnagiri Erode Trichy Chennai Madurai	• University of Reading • GCRF • ODA allocation	Varying amounts

Participants	Scope of the project
—	Aimed at members of the public and students in schools, colleges, and universities to improve awareness about snakes and snakebites

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	Policy development	**Healthcare**	• Ministry of Health (India) • National Centre for Disease Control • Madras Crocodile Bank Trust	2020	Still active	Delhi Chennai	• University of Reading • GCRF • ODA allocation	Varying amounts

Participants	Scope of the project
—	Develop various policies to mitigate the snakebite burden.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of St Andrews	Approaches to net zero	**Climate change**	• University of St Andrews • Indian Institute of Technology Madras	October 2021	July 2022	India	UK government	—

Participants	Scope of the project
Mr. Ian Hill	• Undertake research and share knowledge and understanding about low-carbon energy systems. • Share research and delivery expertise in the application of low-carbon technologies as part of an overall energy system. • Work together to develop a model for low-carbon innovation ecosystems.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
	India's blue carbon ecosystems	**Climate change**	• University of St Andrews • Gujarat Institute of Desert Research (GUIDE) • Ahmedabad University • National Centre for Coastal Research (NCCR), Chennai	2019	Still active	Gujarat, India	United Nations Ocean Decade Programme	—

Participants	Scope of the project
Prof. Bill Austin	• Use coastal ecosystems to capture significant carbon, supporting India's climate goals. • Strengthen climate defences as mangroves and seagrass beds reduce erosion and protect coastlines. • Support biodiversity by preserving habitats critical for marine life and local fisheries. • Drive economic growth through carbon credits and community-led conservation programmes.

University	Project	Categories	Partners	Started	Ended	Location	Funders	Value
University of Strathclyde	Low-cost Li-free battery-supercapacitor hybrid technologies for energising rural communities	**Climate change**	• University of Strathclyde • University College London • TIFR Hyderabad • IIT Bhubaneswar • KARMA Tech Ltd	November 2023	Still active (January 2025)	Hyderabad & Bhubaneswar	Royal Academy of Engineering	Varying amounts

Participants	Scope of the project
—	• Development of alternative high energy density (at least 500 Wh/kg), low-cost, Li-free hybrid electrochemical energy storage technology by integrating Zn batteries and carbon composite supercapacitors. • Implementation of low-cost electrochemical energy storage systems for rural lighting (100 Wh/kg) and drinking water pumping. • Training students and early career researchers in industrial settings and in sustainable energy awareness programmes.

UK INDIA
BUSINESS COUNCIL

Who are we?

The UK India Business Council is a strategic advisory and policy advocacy organisation with a mission to support businesses with the insights, networks, policy advocacy, services, and facilities needed to succeed in the UK and India. We believe passionately that the UK-India partnership creates jobs and growth in both countries, and that UK and Indian businesses have ideas, technology, services and products that can succeed in India and the UK respectively.

Get in touch

UK INDIA BUSINESS COUNCIL LONDON
3 Orchard Place
London
SW1H 0BF
enquiries@ukibc.com
Tel: +44 (0) 20 7592 3040

UK INDIA BUSINESS COUNCIL GURUGRAM
2nd Floor, Tower B, Smartworks, Golf view Tower,
Golf Course Road, Sector 42, Gurugram, 122002
enquiries@ukibc.com
Tel: +91 (0) 124 502 6059

Authors   Editor

Tara Panjwani   Kevin McCole
Vidhi Vyas

For enquiries reach out

enquiries@ukibc.com

Knowledge provider

EY Shape the future with confidence

gedu GLOBAL EDUCATION

indigo creative process outsourcing