

A photograph showing two young women in a workshop or studio. The woman on the left has long brown hair and is wearing glasses and a light-colored, patterned top. She is smiling and looking towards the other woman. The woman on the right has long blonde hair and is wearing a red and white checkered shirt. She is holding a small object, possibly a piece of wood or a tool, and looking at it. They are surrounded by various materials and tools, including what looks like a wooden frame or structure in the foreground. The background is a bright, modern interior with large windows and a high ceiling.

The role of progressive universities
in the global knowledge economy

The University of the West of England (UWE Bristol) boasts one of the most impressive employment records in the higher education sector.

Over time, the university consistently outperforms in graduate employment across its courses. The Higher Education Statistics Agency (HESA) figures from June 2016 reveal that 96% of UWE Bristol graduates are in work or further study and 78% are in professional or managerial roles. Compared to an average for the sector of 94% in work or further study and 71% in professional or managerial roles.

78%

of UWE Bristol graduates are in professional roles within 6 months after graduating

Source: Destinations of Leavers from Higher Education HESA report 2016

96%

of UWE Bristol graduates are in work or study 6 months after graduating*

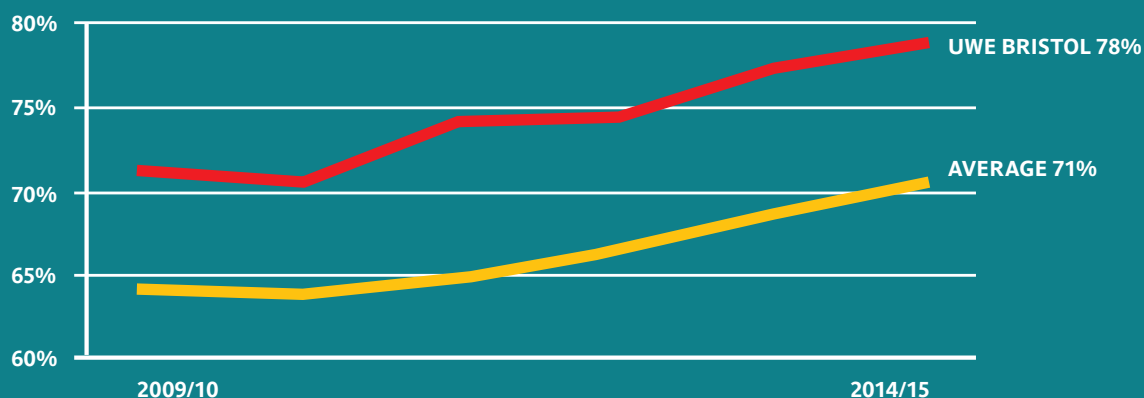
Source: Destinations of Leavers from Higher Education HESA report 2016
*Those available for employment

99%

of UWE Bristol graduates are in work or study 3½ years post-graduation, compared with a national average of 97% and a Russell Group average 98%

Source: Destinations of Leavers from Higher Education Longitudinal Survey 2015

Graduates in professional/managerial work 2009/10 to 2014/15



Source: Destination of Leavers from Higher Education Survey. Employment of 2016 Graduates

Foreword



Neil Carberry

Director,
Employment and skills,
CBI

University is an exciting place to be. For students, this is often a step away from home or home country for the first time; a step into a career or towards a career change. For the UK economy the research, ideas development, collaboration and invention taking place in higher education institutions is at the cutting edge of innovation – solving complex problems and developing new, life-changing concepts and products. With the world of work changing fast, and a growing need for higher level skills, universities have a crucial role to play, as this report recognises.

As seats of learning and innovation, universities act as anchors in local economies. As hubs for learning and creativity, incubators of ideas, hosts to world-beating research and teaching and as employers themselves, they are of massive significance to the whole UK. The University of the West of England (UWE Bristol) is a striking example of this, demonstrating a relentless commitment to give their students the best possible preparation for whatever their future, and the future for the UK economy, holds. At a national and a regional level it is clear that UWE Bristol's strong focus on collaborating with both private and public sector employers has helped give its students great employment prospects post-graduation.

The depth of UWE Bristol's links with business of all sizes from engineering and aerospace through to law and finance provide a case study of best practice for how a modern university can best set their students up for success. Collaboration of this kind and the innovative approaches to course design and delivery, will make a vital contribution to addressing our future skills needs. The higher education reforms currently in the pipeline are likely to drive the process further. Businesses that want to get ahead in the race for talent should use the opportunity to develop or deepen their engagement with our leading universities.

Vision



Professor Steve West
Vice-Chancellor,
President and CEO,
University of the West of England

The UK needs a talent revolution to meet the challenges of the high-tech knowledge economy. We know that 80% of new jobs are in high-skill areas, placing universities and our graduates at the heart of the future workforce.

We need to equip graduates with the right skills and mindset to drive growth and productivity. We need to teach not just the functional skills, but focus on real world learning experiences that allows them to be adaptable, enterprising and ready for work.

As universities, we can't do this in isolation. We need to collaborate with business, the public sector and government to map skill shortages, develop courses and provide internships and work placement opportunities. Universities need to do more to give students real work place opportunities. The latest Higher Education Statistics Agency (HESA) figures show that more than 90% of UWE Bristol graduates that worked with an employer during their degree found professional and managerial jobs compared with 78% overall.

Engaging with business has helped UWE Bristol achieve one of the best graduate employment records in higher education. We have one of the largest paid internship programme in the UK, arranging over 2,000 internships since 2010. GE (Aviation) and Airbus play an integral role in our aerospace engineering degrees and our joint degree apprenticeships at the University. We have also developed a new forensic computing course to meet the demand for experts in computer crime that helps make our students the most sought after university by management consultants outside the Russell Group.

We are also home to the Bristol Robotics Laboratory, in collaboration with the University of Bristol, where more than 150 academics, researchers and industry practitioners are leading cutting edge research ranging from human-robot interaction to driverless cars.

Universities have a critical role to play, nurturing innovative and enterprising graduates able to compete in the global economy. By working closely with collaborative partners, universities can help create the skills and mindset that will power the UK economy.

Top non-Russell Group universities for management consultants*

- 1 UWE Bristol (University of the West of England)**
- 2 Loughborough University
- 3 University of Leicester
- 4 University of Portsmouth
- 5 University of Sussex
- 6 Brunel University
- 7 University of Reading
- 8 Nottingham Trent
- 9 Aston Business School
- 10 Heriot Watt University

*Source: Our Consulting Future. Skills Survey. Management Consultancies Report 2016

Preparing graduates for the global knowledge economy

Progressive universities and businesses are working together to transform the effectiveness of Higher Education (HE) and drive business competitiveness. From innovation and research to mapping skills needed by a new generation of graduates, closer collaboration between education and industry is helping the UK compete in the global knowledge economy.

UWE Bristol is at the forefront of this collaboration. From healthcare to robotics it is working with businesses to prepare resilient graduates with the core skills and a flexible mindset to adapt to an unpredictable future. This has enabled UWE Bristol to achieve one of the most impressive employment records in the higher education sector, consistently outperforming in graduate employment year on year against the average for the university sector.

“To be effective universities must work hard to stay close to business; build strong partnerships with local and nationally significant employers; show that they value and respect the voice of industry and look for ways of making their knowledge and research base more accessible to business. This is a partnership of genuine mutual benefit.”

Lord Bichard, Chair of the Board of the National Audit Office and former Permanent Secretary of the Department for Education and Employment.
Chair of UWE Bristol Faculty of Business and Law advisory board.



More than

90%

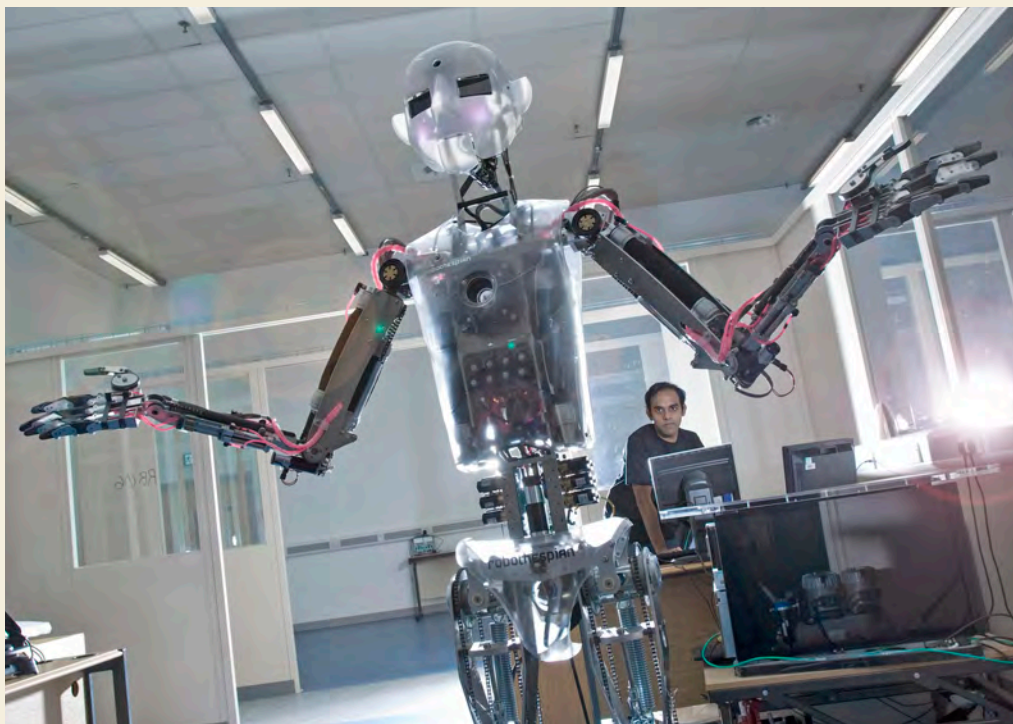
of UWE Bristol graduates that worked with an employer during their degree found professional jobs

Source: Destinations of Leavers from Higher Education 2016

Bristol Robotics Laboratory

In IP revenue alone, the Higher Education sector generated £86.6 million in 2012/13, as well as £376 million from graduate start-ups and a further £2.7 billion from working with business. [Universities UK, The Impact of Universities on the UK Economy 2014].

UWE Bristol is at the cutting edge of innovation and research and home to the largest and most comprehensive academic centre for multidisciplinary robotics research in the UK. The Bristol Robotics Laboratory (BRL) is a collaborative partnership between UWE Bristol and the University of Bristol. With more than 150 academics, researchers and industry practitioners it produces leading research, ranging from human-robot interaction to drones; to driverless cars with Atkins; converting urine into electricity with the support of the Gates Foundation and Oxfam; and creating the retirement home of the future.



BRL offers a full range of taught courses at undergraduate and postgraduate levels. It is a UK Centre for Doctoral Training in Robotics and Autonomous Systems, which uses industrial engagement for research and training on real world challenges.

The BRL Technology Business Incubator provides facilities for early stage start-ups along with business support including mentoring, technical guidance and access to industry specialists and investors. Award winning companies that have grown out of the BRL incubator include Open Bionics, developing low cost bionic hands, REACH Robotics a games technology start up and Folium Optics which has developed products to improve medical adherence.

Bridging the skills gap

“The UK’s skills weaknesses – and failure to grow a serious system of respected employer-led professional and technical qualifications – are of such long standing, and such intractability, that only the most radical action can address them.”

HM Treasury - Fixing the foundations: Creating a more prosperous nation, July 2015

It’s clear that if the UK is to build a strong economic future around a knowledge based high tech economy, it will require more highly skilled graduates and technicians. The CBI in their report Better off Britain forecast that by 2022 half of all jobs will require workers to have completed some form of higher education. The Perkins Review, in reference to the Royal Academy of Engineering’s report on “Jobs and Growth”, forecasted that between 2012 and 2020, the UK economy will require over 100,000 new professional scientists, engineers and technologists each year. A large number of these will need to be graduates from higher education.

To achieve this growth, universities must forge closer links with government, the public sector and business and become more adept at mapping the skills required for the future. For UWE Bristol this has led to collaboration with SMEs, industry and the health sector to address the shortage of graduates with specific skills required both nationally and regionally. Skills mapping has enabled the university to create and expand courses and focus more effectively on particular specialisms.

Following consultations with engineering businesses four years ago, UWE Bristol has doubled the number of engineering graduates it now produces. Earlier this year Engineering UK predicted 16,000 more engineers will be needed in the South West by 2022, so the university has doubled again the number of engineering graduates to meet the needs of GE (Aviation), Airbus, GKN Aerospace and the many SMEs that provide the supply chain to aerospace. UWE Bristol is working with local businesses to train these engineering graduates in order to meet this demand.

The UK will need over 100,000 new scientists, engineers and technologists every year between 2012-2020. UWE Bristol has already doubled the number of engineering students over the last 4 years. It has developed highly valued, trailblazing Degree Apprenticeships with GE (Aviation) in collaboration with Gloucestershire College, and with Airbus and City of Bristol College.

“Given the nature of our work, having people with the right skills is vital to our continued and future success. As a global business, we are fortunate to be able to source candidates from around the world. The University of the West of England has a key role to play in understanding our current and future skills needs and developing the programmes necessary to deliver first class graduates with both the technical expertise and the professional abilities we require.”

Mark Stewart, Airbus UK General Manager and HR Director

For graduates, this collaboration offers real world experience and improved employment prospects. The latest Destination of Leavers (HESA) figures found that UWE Bristol's approach led to 92% of Aerospace graduates securing graduate level positions in just 6 months after graduation – 14% higher than the national average.

It's not only in STEM subjects where employers are facing a shortage of skilled graduates. The government has asked universities to provide 10,000 nurses over the life of the parliament. As the largest university trainer for the NHS, UWE Bristol is looking to meet this challenge for the NHS, local councils and private sector by expanding the number of places it offers on its nursing courses.

Close collaboration with the regions' public and private health bodies enables the university to place virtually every allied health professional and achieve almost 100% in professional nursing employment.

As the largest university trainer for the NHS, the NHS has been keen to ensure UWE Bristol has the very latest equipment and facilities. There is a Virtual Linear Accelerator that trains students to deliver doses of radiotherapy to tumours and a nursing simulation suite that means graduates are able to contribute from day one in the workplace. The university's links with the NHS means it can provide strong placements in practice.



“It is now slightly old fashioned to think ‘I’m going to go to school, then I’m going to go to university and then I’m going to get a job’. The apprenticeship process and range of options is proving incredibly useful.”

John Manzoni, Chief Executive of the Civil Service and Permanent Secretary (Cabinet Office)

Listening to employers is also leading to the creation of new courses.

Management consultancies predict that cybercrime is on the increase and is set to grow, so UWE Bristol has developed a cutting edge degree in forensics and cyber security. Students receive hands on investigation experience at a scene of crime house, investigate computer crimes and assess the integrity of forensic data and computer security systems.

Other courses have been designed to meet the needs of employers but also appeal to students. The multi-million games technology industry is supported by UWE Bristol's popular Games Technology degree. Students have the opportunity to take part in consultancy projects that have ranged from solutions for Bloodhound SSC to the RNLI. The combination of programming and real world experience makes these students very employable.

For businesses, closer links with universities enables them to help develop people with the right knowledge and skills to meet their future needs. They benefit from the world-leading academic expertise and research UK universities offer. Universities need business input to ensure the quality and relevance of their courses.

Rebecca's story

"I studied BSc(Hons) Adult Nursing at UWE Gloucester campus because I always had a specific career in mind and I wanted to be able to undertake a course I loved whilst remaining at home in an area I love. UWE Bristol seemed the only obvious choice!

I expected to leave with the fundamental practical and theoretical skills to 'be a nurse' however, I've left with so much more. I have gained in-depth theoretical and practical knowledge, advanced communication skills, critical thinking, adaptability, confidence in leading and teaching others. The experience has reinforced my compassion and enjoyment for the job.

I was offered a job 3 months before completing my degree in exact the area I hoped for! I am very happy with my career progression. I knew I wanted to pursue a career in elderly care and from here, I have an ambition to specialise further in dementia care."

Rebecca, BSc(Hons) Adult Nursing



A new generation of graduates

Not only will universities have to produce more graduates in the future, they must also prepare them for a rapidly changing work environment.

Today's graduates are facing an unprecedented challenge. By 2020, more than a third of the desired core skills of most occupations will be comprised of skills that are not considered crucial to the job today. Two thirds of children entering primary school today will end up working in completely new jobs that don't yet exist. [The World Economic Forum Future of Jobs Report - Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution, January 2016]

In the future, careers will require flexible, transferable talents such as complex problem-solving, entrepreneurialism and emotional intelligence. Schools and universities need to move away from teaching purely functional skills that are outdated almost as soon as they are learned and focus on real-world learning experiences. For example, unemployment is often high amongst computing graduates because the three-year degree is often out of date once students graduate. UWE Bristol has 86% of its computer science students in professional and graduate jobs just 6 months after graduation, significantly above the UK average.

“Technical skills are of course important but for me the most important qualities in graduates is energy, dynamism and enthusiasm - a belief in what you are doing.”

Simon Walker, Director General of the Institute of Directors

At UWE Bristol, students are encouraged to identify the relevance of their degree in the modern world. Working over the next 50 to 60 years, they are unlikely to have the same job for life, but will need to keep changing and refreshing and challenging themselves. Progressive universities must help students develop an attitude of mind that's ready for work in the global knowledge economy.

Workplace experience is traditionally associated with subjects such as law, nursing or engineering, but UWE Bristol is also encouraging students of subjects such as history or philosophy to consider workplace applications – from the ethics of GM food to how robots might interface with society. They also undertake work experience with the National Trust and Bristol City Council.

“We have to work closely with employers to understand what they need. Yes, they want graduates that have the functional skills, but they also need to be numerate, flexible and rounded individuals. That's the package employers expect during the undergraduate time at university.”

“Increasingly it's not good enough just to have the knowledge. It's not good enough to just have the information, you have to apply it to different contexts. And that's where you move into the application of knowledge and the extension of knowledge. As universities, we need to ensure that students have the underpinning knowledge that is then applied in practice settings. We have to provide an environment where they can use knowledge in a way that might help them in a workplace setting. It is about developing flexibility and creativity. The ability to analyse and to work from the known to unknown with an evidence base that supports this. So graduates regardless of where they are coming from have a flexibility of mind that will enable them to cope with uncertainty to make informed decisions and actions. That's what I think universities are there for.”

Professor Steve West,
Vice-Chancellor, UWE Bristol

Workplace experience

UWE Bristol works with employers, professional bodies and the Local Enterprise Partnership to provide students with real world opportunities, teaching students the importance of how to apply and extend their knowledge in a work environment.

All students can take part in placements, project work or internships across business sectors. UWE runs one of the largest intern programmes in the UK, largely with SMEs.

Finance, Accountancy and Law

£50m is being invested in UWE Bristol's new Faculty of Business and Law building, which will house a mix of employers, academics and students. The University's industry connections mean students are taught and mentored by visiting and guest professors from practice including senior staff from companies like HP and regional entrepreneurs. UWE Bristol works closely with professional bodies, practices and firms to design the curriculum and the students qualify in professional qualifications alongside their study. Courses give hands on experience, for example providing students with access to a Bloomberg financial trading room.

Law students practice in a state of the art mock courtroom applying the skills that have been developed during study. They also benefit from the opportunity to offer pro bono services to the community supported by local practices and so gain experience of legal work and are involved in actual case work.



UWE Bristol students volunteer at the Avon & Bristol Law Centre advising claimants challenging changes made to their disability entitlement. They recently helped win more than £1 million in benefits for clients incorrectly judged to be capable of working by the Department for Work and Pensions. Since the project began three years ago, the success rate of appeals made by the students and Law Centre stands well above the national average at 95%.

The university offers Enterprise Internships to support students becoming the entrepreneurs of the future as well as Green Internships which give students the opportunity to gain experience in Bristol's growing sustainability economy.

For entrepreneurs, UWE Enterprise runs a wide range of activities, including the UWE Bristol mentor scheme, bringing students together with experienced professionals, and our entrepreneur support programmes, offering direct investment in young talented people with great ideas.

UWE Bristol is testing the boundaries of the traditional degree. The Team Entrepreneurship course gives over 100 students a highly practical, non-traditional way to learn about running a business. Working in their own high-tech 'hub' rather than a classroom, they have coaching sessions and workshops, rather than compulsory lectures. Students set up and run their own company that will earn money finding and completing real projects for real companies. It has inspired and engaged many of those that might have previously been put off traditional university courses.

"Building close links with local employers is the key to success as we really drive the enterprise agenda forward. Our innovation networks have already supported over 700 SMEs; our Graduate Talent West portal provides access to our 6,000 graduates each year and we run one of the largest paid internship programmes in the country."

Professor Steve West,
Vice-Chancellor, UWE Bristol

"Universities like UWE Bristol and the other University Alliance group universities that traditionally had a much closer linkage to the local employers are quite well placed because they know about the job opportunities and can help. Many traditional universities are catching up because that is not what they saw themselves as doing."

Sir Howard Davies, Chairman of the Royal Bank of Scotland



Connecting with a thriving city

Strong foundations in the regional economy have been central to UWE Bristol's success in building collaboration and innovation. It has developed close links with local businesses and public sector bodies – working together to encourage economic growth and improved productivity in the region. By understanding both the students and the local economy it has created a vital role as an anchor institution.

UWE Bristol is ideally placed as a regional hub for innovation and enterprise. The University is located in a thriving and ambitious city-region, with a Local Enterprise Partnership that has been credited as the best in the country.

One of the most exciting case studies of collaboration and innovation is the creation of the West of England University Enterprise Zone (UEZ), due for completion in late 2016. The West of England UEZ will provide a business 'hatchery', incubation and grow on space for businesses specialising in robotics, biosciences, biomedicine and other high tech areas. The UEZ will assist high technology high growth companies in the fields of robotics and autonomous systems, Biosciences, Health sciences and related sectors.

West of England University Enterprise Zone

Located alongside Bristol Robotics Laboratory, the West of England University Enterprise Zone (UEZ) will promote university-business collaboration, provide space for new and growing businesses, access to specialist facilities and expertise, and business support.

As one of only four in country, the £16.5m project is supported by £4m from the government with match-funding from the Local Enterprise Partnership, business and UWE Bristol itself. The Zone is expected to generate over 500 new jobs and more than £50m for the local economy.

It has been developed in collaboration with the West of England Local Enterprise Partnership and the University of Bristol with strong support from South Gloucestershire Council, the University of Bath and the West of England Academic Health Science Network.

The University Enterprise Zone will help to drive forwards the major cluster of high growth, innovative, technology-based businesses in the West of England. This is one of a small number of national 'pilot' projects, which provides the opportunity to demonstrate how collaboration between business and universities can drive innovation, jobs and business growth.

"The UEZ will provide access to the sorts of facilities and expertise that would otherwise be out of reach for new and growing businesses. It will provide 'wet labs' – currently a real gap in the market – it will promote collaboration and networking between businesses, university researchers, students and graduates and there will be dedicated business support and services from the University, Bristol Business School and partner organisations."

Professor Martin Boddy,
Pro Vice-Chancellor for Research and
Business Engagement at UWE Bristol

Cinematic and photography students benefit from Bristol's creative economy. The most recent HESA figures show that graduate employment is 11% higher than the national average. The UWE Bristol City Campus provides live environments for the students to work in across the Arnolfini, BBC, Spike Island, Aardman and Watershed. The students also participate in the Encounters Film Festival, The Royal Television Society awards and others.

The university has recognised the value of the local population. In an age where internationalism in higher education and where attracting foreign students has been the goal, UWE Bristol is creating a more local model. The university appeals to many local students, attracted by its reputation as a centre for local innovation and links to employers in the region.

In pursuing a more localized, skills based approach, UWE Bristol has revisited some of the principles of the polytechnic out of which it was founded. The university has adapted to the needs of the local economy by encouraging entrepreneurialism and understanding local skills needs.

In parts of Bristol only 5% of 18 year olds apply to University compared to others where over 90% apply. The University has used its £12m annual widening participation programme to attract, retain and ensure strong graduate outcomes for students from low participating areas. In this year's figures students in the lowest quintile of participation achieve strong employment results, with 79% achieving professional positions within 6 months of graduation, higher than the average for graduates.

“Universities need to continually evolve and develop both as institutions and also in terms of the courses and qualifications that they offer. This includes seeking new and innovative ways to deliver services to learners and businesses that meet their changing needs and expectations. From the LEP's perspective a high quality and responsive HE sector in the West of England is integral to maximising economic growth potential and increasing productivity and overall business competitiveness.”

Stephen Robertson, Chairman, West of England Local Enterprise Partnership

UWE Bristol is also playing a key role with the University of Bristol on the UNESCO Learning City initiative. The aims of this partnership are to improve learning opportunities across the city, develop a world class workforce for the city and equip people with the skills they need for work and life.

79% | of students from areas in Bristol with low participation in higher education achieve professional positions within 6 months of graduation

Source: Destinations of Leavers from Higher Education 2016

Government, business and universities must work together

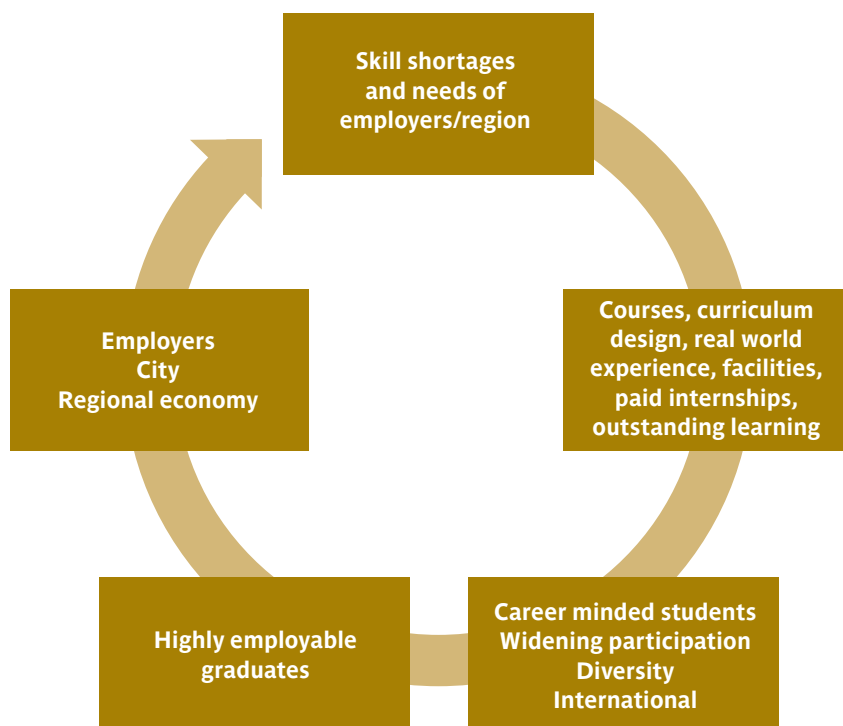
The future economic success of the UK relies on the ideas, knowledge and talent of graduates. To meet the growing demand for the skills required in today's competitive globalised economy, universities, public services, business and government must work together.

“For a talent revolution to take place, governments and businesses will need to profoundly change their approach to education, skills and employment, and their approach to working with each other. Businesses will need to put talent development and future workforce strategy front and centre to their growth. Firms can no longer be passive consumers of ready-made human capital. They require a new mind set to meet their talent needs and to optimize social outcomes... Businesses should work closely with governments, education providers and others to imagine what a true 21st century curriculum might look like.”

The World Economic Forum's Future of Jobs Report The Future of Jobs Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution January 2016

Universities lie at the heart of the UK's economic future and global competitiveness, but only by engaging with business and industry will they meet the rapidly changing demands of the knowledge economy. From research and innovation to mapping the skills of the future, it will be progressive, collaborative universities that will fulfill their role as key drivers productivity and economic growth.

UWE Bristol business and government partnership model



Acknowledgements

UWE Bristol would like to thank the following people who offered their assistance during the research for this report:

Adam Powell, Director of Skills, West of England Local Enterprise Partnership

Andy Green, Wing Commander and Bloodhound driver

Ann Francke, CEO, Chartered Management Institute

Sir Howard Davies, Chairman of the Royal Bank of Scotland

John Manzoni, Chief Executive of the Civil Service and Permanent Secretary (Cabinet Office)

Joshua Wakley, UWE Bristol graduate BA (Hons) Filmmaking & Creative Media

Katie Alcott, CEO and founder, Frank Water

Neil Carberry, Director, employment and skills, CBI

Mark Mason, founder and CEO Mubaloo

Mark Stewart, Airbus UK General Manager and HR Director

Lord Michael Bichard, Chair of the Board of the National Audit Office and former Permanent Secretary of the Department for Education and Employment. Chair of UWE Bristol Faculty of Business and Law advisory board

Neha Shahid Chaudhry, UWE Bristol graduate and Founder Walk to the Beat

Rebecca Potter, UWE Bristol graduate, BSc (Hons) Adult Nursing

Rob Wilson, UWE Bristol graduate BA (Hons) Team Entrepreneurship and Managing Director, Crowdreach

Simon Walker, Director General of the Institute of Directors

Stephen Robertson, Chairman, West of England Local Enterprise Partnership

Vincent Mckevitt, CEO and founder, Tossed salad bar chain

University of the West of England, Bristol
Frenchay Campus
Coldharbour Lane
Bristol BS16 1QY

www.uwe.ac.uk