At a time when it is global business partnerships and investments that will get the world back to growth, nothing symbolises the opportunity of partnership and collaboration more than the Olympics.

And I believe, passionately, that Britain is the best place to do business.

We have a time zone where you can trade with Asia in the morning and America in the afternoon. We have the language of business, the easiest access to the European market, some of the best universities in the world and a great industrial base.

We are a country committed to enterprise and openness. And from tax to regulation, from business finance to investment in infrastructure, we are absolutely focused on doing everything possible to support enterprise and make Britain the best place in the world in which to start or grow a business.

We think this is a great place to visit, to invest and to do business.

Welcome to GREAT Britain.

David Cameron
Prime Minister
From the moment of winning the Olympic bid the UK has been planning not only for the Games themselves, but also the business legacy that follows.
Countries that host the Olympic and Paralympic Games tend to benefit from improved infrastructure, a higher profile and raised aspirations for many years afterwards. The UK is also looking to build a sustainable legacy for British business.

According to Lord Green: “The UK has built legacy into every strand of its planning for the Games. I believe we can derive over £13 billion benefit to the UK economy over the next four years as a result of hosting the Games.”

The potential business legacy of London 2012 is already apparent in the area around the Olympic Park itself. It has been transformed from one of London’s most deprived districts into the city’s newest business quarter, including a £125 million investment to treble capacity at Stratford Regional Station.

According to Tom Jones of Populous, one of the architects behind the main London 2012 stadium, the legacy has been at the forefront of planning from day one. He says: “It is a masterplan that caters for the long-term needs of London, and the key innovation has been to look 10 or 20 years beyond the Games themselves. People will look back and see how successful the investment in the Olympic Park was as a catalyst for significant redevelopment of that part of the city.”

The positive effect does not stop in East London. A series of networking clubs, supplier databases and online innovation showcases is ensuring the UK as a whole benefits from the business legacy of the Games. A flagship initiative, the Host2Host programme, is connecting UK experts that have worked on London 2012 with preceding and succeeding Olympic hosts, including China, Russia and Brazil.

One of the many companies to benefit from these programmes has been AECOM, which helped develop the Legacy Masterplan Framework for 2012. Executive Director Bill Hanway comments: “The expertise we acquired working on the London Olympics really put us ahead of the pack and helped us win an international competition held by Rio to design a masterplan.”
IN PURSUIT OF PERFECTION:
THE COMPANIES BEHIND THE GAMES

The Olympic and Paralympic Games are all about being the best in the world. Behind every gold medallist are years of training, dedication and constant improvement. The companies working to make the Games happen share this quest for excellence.

ATKINS
Engineering and design consultancy Atkins helped transform 246 hectares of heavily polluted industrial land into today’s Olympic Park. Over two million cubic metres of contaminated soil were cleaned, 310,000 plants installed and thousands of animals relocated. Innovation was also required at Greenwich Park, where the company designed a solution to mimic the properties of natural ground so horses would not be spooked by vibrations during equestrian events. Atkins used over 30 types of engineering and environmental science disciplines on its London 2012 work. According to David Tonkin, Atkins’ UK CEO: “The Games is a real example of what engineering can achieve and something we hope will inspire the next generation of engineers.” The project has already helped Atkins win a major project in Qatar and generated other new business leads.

STRI
Sports Turf Research Institute (STRI) offer specialist services for the research, design, construction and management of sports pitches and sports surfaces. Based in Yorkshire, they have capitalised on the business opportunities presented by the Games by securing a contract to develop the Equestrian Cross Country Course in Greenwich Park. STRI won the contract by demonstrating how the Course could be built with no adverse effects to the important archaeological, ecological and cultural features of the surrounding environment. The job has been completed as planned and with its stunning backdrop of Canary Wharf and the City of London, the course is set to be one of the most spectacular of all the Olympic venues. “Working on this project has allowed STRI to develop further links with the equestrian world,” says Gordon McKillop, Chief Executive at STRI, “whilst expanding our client base, and providing a platform for future growth.”

GLAXOSMITHKLINE
GlaxoSmithKline (GSK), the world’s fourth-largest pharmaceutical company, is providing the official anti-doping laboratory for the London 2012 Games. GSK has formed a partnership with King’s College London to create a state-of-the-art laboratory, accredited by the World Anti-Doping Agency, which will oversee a total of 6,250 drug tests – the most ever at an Olympic and Paralympic Games. In this particular race GSK is using science to beat the clock – just one test will check for over 60 prohibited substances.

Kerry O’Callaghan, Head of Global Brand Communication at GSK, adds: “Science is at the very heart of everything we do at GSK and we’re passionate about using our scientific expertise to support the integrity of the Games and the health of all athletes. Supporting the greatest show on earth in the UK, where we are headquartered, presents a once-in-a-lifetime opportunity for GSK.”
“The shape and form of the Orbit suggest instability, but it is an incredibly stable structure. The principal idea signals that 21st-century Britain is looking ahead and is at the forefront of new energies that in themselves create stabilities.”

Cecil Balmond, Co-Designer of the ArcelorMittal Orbit
The UK’s open and business-oriented economy is a magnet for foreign companies and is attracting more inward investment than any other country in Europe.
**WELCOMING THE WORLD**

*Investment from both developing and developed markets is reshaping the business landscape.*

If UK athletes score as highly on the medal table as their country does on inward investment tables then the hosts are in for a record haul.

In 2011, the UK retained over US$1 trillion of foreign direct investment, making it Europe’s top recipient and second largest in the world.

In a stormy global economy, attracting these flows of inward investment is becoming ever-more important and also more complicated, with sources of investment changing fast.

Stuart Gulliver, Group Chief Executive of HSBC, explains that the high-growth markets of today are likely to be the main investors of tomorrow. “The world in 2050 will be very different to the world in 2012,” he states. “It is the economies which are currently classed as ‘emerging’ that will power global growth over the next four decades. They will contribute twice as much growth as the developed markets over this period, and by 2050 will be bigger collectively than the current ‘developed’ markets.”

He continues: “This ‘South-South’ trade will be financed not just by euros or dollars, but by China’s renminbi, which will become the world’s third-largest trade currency in 2012.”

The UK, argues Gulliver, is well placed to benefit from these macroeconomic shifts. “London’s banks already have unparalleled reach into both developed and developing economies, linking the old trading networks with the new,” he says. “In April 2012, London witnessed the issuance of the first international renminbi-denominated bond outside Chinese sovereign territory, marking a major milestone in its development as a premier international trading centre for the currency.”

London’s current record backs up Gulliver’s argument. The UK capital houses over 250 foreign banks, 200 overseas law firms and 175 countries’ embassies. It’s also the most popular base for European corporate headquarters. It’s an attraction that benefits the whole of the country.

“We live in an ever-more complex, interconnected world — but with complexity comes opportunity,” states Gulliver. “UK financial institutions are at the forefront of infrastructure funding, finding innovative ways to finance the infrastructure needed to support rapid growth in the world’s faster-growing economies. HSBC and London stand ready to help investors plot the right path,” adds the HSBC boss.

Britain is a magnet for companies with global aspirations across a range of sectors. The UK’s status as an easy, protected, well connected, stable and smart national base has brought in some of the biggest names from manufacturing to marketing, accountancy to architecture and farming to pharmaceuticals.

Among the many examples are Nissan, the Japanese automotive firm that has invested over £3.4 billion in its Sunderland plant and produced over 6.4 million cars there, and Canadian aerospace giant Bombardier, which has invested more than £1.8 billion in operations in Northern Ireland since 1989. Moreover, Chinese ICT provider Huawei is increasing its UK workforce from 700 to over 1,000 and Swiss multinational Nestlé has built up a UK business with a turnover of more than £2 billion.

It’s a reminder that despite the changing global economy the UK is still able to attract world-leading businesses to its shores.
Almost one in five UK firms established in the last five years have been ‘Born Global’, i.e. generate at least a quarter of sales from overseas from the start.

The UK is the number-one location for European headquarters, with more overseas companies choosing to set up there than anywhere else.
INTER NATIONAL TRADE SHOWS THE PATH TO GROWTH

The history of Britain is a history of trade. From the spice trails connecting Europe and Asia, to the trade boom fuelled by the Industrial Revolution, Britain has always faced outwards.

The UK’s current economic strategy still places enormous importance on trade. The value of exports from the UK rose by 10.5 per cent last year, according to HM Revenue & Customs, with exports to traditional destinations such as the US and Germany rising by £1.8 billion and £4.6 billion respectively despite the tough economic climate. However, the big trade story comes from high-growth markets, such as India and China, which are rapidly moving up the list of Britain’s top 50 export destinations.

UK trade with India, for example, grew by 44 per cent in 2011. These high-growth economies offer British businesses new markets and opportunities, especially in research intensive, high-value sectors like high technology manufacturing, luxury goods and the service industries.

Indeed, free trade has always provided Britain’s path to growth. British businesses in these sectors have unmatched expertise and represent the country’s most likely drivers of jobs and growth over the long term.

Many happen to be small and medium-sized enterprises (SMEs) too. Unlike their larger peers, however, they often do not have the confidence and experience to take on exports and far less room to absorb the costs of a failed attempt to crack an overseas market. Organisations like UK Trade & Investment can help these businesses get started by finding the right people for them to talk to, investigate markets, set up meetings and open new trade corridors.

With the Government looking to more than double annual UK exports to £1trillion by 2020, additional measures have been announced to help UK businesses export. These include the National Export Challenge to get 100,000 more SMEs exporting by 2020 and new commitments to extend the role of UK Export Finance.

As high-growth markets continue to show strong, long-term growth, so too can we expect more British companies to reconnect with the UK’s overseas trading heritage in the coming years.

The UK is one of the easiest places to start up a business in Europe.

Qingdao, China. In 2011, UK goods exports to China grew by 22 per cent.
From Hong Kong to Hollywood, the UK’s creative sector has spread across the world and is reported to have grown twice as fast as the rest of the country’s economy over the past decade. The UK now lays claim to having the largest creative sector per head in the world.

FILM
From James Bond to Harry Potter the UK film industry is a blockbuster in itself. It has won more than 20 Oscars in the last five years, production companies such as Working Title have established themselves as global players, studios such as Pinewood boast internationally-recognised facilities, and UK expertise in post-production means the magic of the movies is often conjured up in Britain. However, the most spectacular special effect is reserved for the cash registers: films produced in the UK boasted a 17 per cent share of the global box office in 2011, according to the British Film Institute.

MUSIC
The UK’s music industry is one of the country’s most powerful international success stories. UK artists accounted for almost 12 per cent of global music sales in 2010, boosted by a thriving digital music scene. It is not just the famous names such as Adele, Coldplay or the Rolling Stones (to name but three), but also the composers, concert promoters, producers and publishers that make the UK music scene worth almost £4 billion a year. Academic institutions like the BRIT School, which taught Leona Lewis, Jessie J and the late Amy Winehouse, are also offering UK music expertise to a new generation.

FASHION
The most vital statistics in the global fashion industry belong to British fashion houses. Iconic luxury brand Burberry, for example, reported record sales of £1.3 billion in six months in 2012. UK design schools lead the world, with the likes of Central Saint Martins College and Cordwainers at the London College of Fashion boasting alumni such as Stella McCartney, Jimmy Choo and Patrick Cox. Alongside the likes of Sir Paul Smith, Dame Vivienne Westwood and Sarah Burton for Alexander McQueen, the UK is the must-have accessory in the global fashion business.

ARTS
Alongside the 2012 Games the UK has also run a ‘Cultural Olympiad’ - a series of programmes, projects and events that over 16 million people across the UK have taken part in. Encompassing theatre, dance, music and much more, the Cultural Olympiad has been the largest cultural celebration in the history of the modern Olympic and Paralympic movement. The British see culture as a defining part of who they are, and on the world stage British culture is a big draw. Britain has 2,500 museums, five of which are in the 20 most visited museums in the world, and foreign visitors spend £4.5 billion annually exploring British culture and heritage.

ANIMATION
The UK is a world-recognised centre for animation. UK animators are responsible for global hits such as Wallace & Gromit, Charlie & Lola, In the Night Garden and Peppa Pig. Peppa Pig is now watched in 180 countries and has DVD sales of over five million. It’s far from child’s play though as over three-quarters of employees in the UK animation sector are graduates and more than a third have a postgraduate qualification. UK-based animators are also renowned as pioneers in the production of computer-generated animation for digital games, creating characters like Lara Croft and the world of Grand Theft Auto. Computer games made in UK studios generate global sales of around £1.7 billion a year.
Dame Vivienne Westwood, fashion designer
IN THE MODERN ECONOMY, GOOD DESIGN IS GOOD BUSINESS

The design industry has become an engine of commerce and innovation in the UK, and is being used to create everything from simpler gadgets to safer public spaces and faster Formula 1 cars.

The design industry used to be seen as a narrow domain for graphic artists and architects. But in the UK design has evolved into a multidisciplinary sector that makes a wide range of products more usable, more sustainable and more attractive. UK designers export more than £100 million in services each year and seven of the world’s top 50 design firms are located in the UK.

DESIGN MATTERS

“Design is difficult to get a handle on,” explains Sir John Sorrell, Founder of the London Design Festival. “However most of the world’s great companies are built around good design. Forward-thinking managers, policymakers and decision-makers increasingly recognise that if they want their product or service to be high quality, sustainable and pleasing to the senses, then it all starts by employing intelligent design.”

Design in a business sense is the discipline that fuses hard-nosed commerce with art, technology and customer empathy. It can help companies to transform their performance. Today, the ‘design thinking’ that has turned the likes of Apple into a global leader is closely studied by entrepreneurs around the world. Vast new markets are opening up for companies that have used design to ensure their products and services more closely reflect the specific needs and circumstances of their customers.

“Since we started the London Design Festival in 2003, over 80 cities around the world have started their own versions,” says Sir John. “That speaks for itself.” The UK has evolved a unique ability to fold different design disciplines together and innovate. Its world-class art and design colleges, fuse with the country’s inherent strengths in design and technology to create a sector with an extraordinary range, mix and quality of creative expertise.

BRITISH DESIGN IS WORLD DESIGN

The design industry also reveals the many diverse influences at work in Britain.

The UK is a very multicultural country; in London more than 300 languages are spoken every day. This makes it a uniquely creative destination. The UK’s arts colleges, such as Central Saint Martins, the Glasgow School of Art and the University of the Arts London, are a magnet for international students and provide a conveyor belt of talent for over 30 different design disciplines.

SHOW HOUSE

Some of the best UK design has been on display at the British Business Embassy, a unique series of events at Lancaster House during the Olympic and Paralympic Games. The neo-classical mansion in the heart of London has been restyled and re-imagined to show the world’s business leaders the power of UK design.

This remarkable transformation has been overseen by a creative panel led by Sir John Sorrell, with Diana Yakeley, President of the British Institute of Interior Design, and includes work by Waugh Thistleton Architects. Designers such as Lee Broom, Thomas Heatherwick, Sir Terence Conran, Ron Arad, Ross Lovegrove, David Mellor and Based Upon have contributed, while national art treasures have been showcased by the Government Art Collection and Whitechapel Gallery. Examples of the designs on display can be found overleaf.

Sir Paul Smith, designer

01

The UK design sector, including architects, branding agencies, craft workers and manufacturing design, exports more than £100 million in services each year.
AN APPETITE FOR GROWTH
The London 2012 Games will be one of the UK’s biggest catering operations.

Over 14 million meals will be served and caterers must consider foods from all 205 competing nations alongside dietary requirements such as halal, rigorous health and safety standards and local and ethical sourcing.

People who still associate British cuisine with a fried breakfast may think the UK is not up to the task, but they are in for a shock.

The British food and drink sector has undergone an incredible renaissance in recent years and is now worth £76 billion per year. The UK now boasts 145 Michelin starred restaurants and a further 117 Bibs Gourmands.

Companies such as Bibendum Wine Ltd – the UK’s leading independent wine merchant – are prospering from this resurgence. Bibendum is providing all delegates at the British Business Embassy with British boutique beers and fine wines such as the Nyetimber Classic Cuvée 2007, produced in West Sussex and winner of an incredible 65 international awards.

“2012 is the perfect time to show the visiting world just how good UK food and drink really are” adds Bibendum’s Marketing Director, Fiona Cochran.
DESIGNING THE EXTRAORDINARY

Whether it’s a wing of a house or a wing of an aeroplane the UK has design in its DNA. From clocks to candlesticks, the ‘Best of British’ interior designs displayed on this page are all part of the British Business Embassy created at Lancaster House and offer a glimpse of a design industry that boasts over 230,000 designers, making it the biggest in Europe.

01 Maritime, Benjamin Hubert for Casamania - Hubert’s research into new forms and materials helped create this elegant and refined chair carefully constructed from solid timber and inspired by the maritime world.

02 Crack coffee table, Based Upon - This sculpted item of furniture in bronze is inspired by parched desert lands. The crack, which so often symbolises poverty and fragmentation, has been reinterpreted as a statement of luxurious affluence.

03 Billet 5, Extrusion 4, co-produced by Heatherwick Studio and Haunch of Venison - This innovative project takes technology from the aerospace industry and uses it to produce a dramatic aluminium and nickel-plated bench, which has undergone 300 hours of polishing.

Scan the QR to see designs featured at the British Business Embassy.
04 Mirror, Mirror, Jason Bruges Studio - Mirror, Mirror is a playful work bringing together multiple reflections. White dot matrix digital panels seem to float on water, awakening for visitors, while cameras capture a chosen destination and simultaneously reflect it back to the viewer.

05 Camberwell desk, Benchmark - This desk, designed by Sir Terence Conran, blends a classic stained oak and lacquered style with a lift up lid for cable management and to hold a keyboard or laptop.

06 Lola Ottoman, AKQ Design - This iconic ottoman was given a starring role in the film Sex and the City 2, chosen to bring colour, style and whimsy to the main character’s apartment. It is more like artwork than conventional fabric.

07 Stainless-steel candelabrum, Corin Mellor for David Mellor Design Ltd - Standing two metres high, Corin Mellor’s decorative metalwork combines traditional metalworking skills with evolving new technologies.
From fast-growing start-ups to global multinationals, the UK has built the biggest technology sector in Europe and is plugged into the next phase of the digital revolution.
In the Mexico City Olympics of 1968 US athlete Dick Fosbury struck gold in the high jump with a radical innovation. While his competitors tried the traditional scissor kicking or straddling technique, Fosbury leaped to gold with his revolutionary ‘flop’. It was a game-changing innovation that broke the Olympic record and improved the discipline forever.

Technology is doing to global business what Fosbury did to the high jump. It is tearing down the barriers and the certainties of old and, driven by the internet, is making the world everyone’s local market. The Olympics themselves are evidence of this changing world.

In 1984 Los Angeles, the Olympic movement issued its first email and in 1996 in Atlanta, the Olympics had its first website. In Beijing in 2008, Facebook and Twitter were emerging and the total number of hours of TV coverage surpassed all previous coverage added together.

At London 2012, British communications giant BT has designed and is delivering the first ever converged communications network for a summer Olympics. It’s a technology that will set the bar for future Olympics and other major global sporting events.

The converged network means that services such as voice and data are combined to run over one seamless all-purpose network. BT’s single network supports 80,000 connections across 94 locations, carrying voice, data, mobile, broadcast and wireless internet traffic.

It means improved energy efficiency, avoiding the need to build and power separate networks, and maximises the potential for re-use after the Games.

On top of this, if athletes need to get online, BT is providing a superfast fibre broadband network in the Athletes’ Village.

The UK is also fusing the business legacy of hosting the Olympics with its £130 billion ICT sector. After the Games, the UK’s rapidly emerging digital hub of Tech City in East London will stretch into the Olympic Park and beyond, enhancing its reputation as one of Europe’s most dynamic places to set up a tech, digital or creative media company.

Tech City is backed by the Government and the nearby City of London – the largest private equity industry in Europe – with increasingly strong links to its American counterpart, Silicon Valley. That’s made it one of the largest concentrations of small fast-growing technology companies in Europe, and many of the biggest industry names, including Cisco and Google, are committed to being there.

At a time when technology is redefining the way we do business, the likes of BT and Tech City are making the UK an increasingly important component in the global technology market.
FIVE UK TECHNOLOGY COMPANIES TO WATCH

ARM HOLDINGS
You have probably used ARM technology in the last few hours. ARM microprocessor technology is found in more than 95 per cent of the world’s smartphones. The Cambridge-based firm puts the smart into smartphones and beyond; from digital televisions to cars, washing machines and power-efficient servers.

DOUBLE NEGATIVE
Double Negative is the UK’s largest film-only visual effects (VFX) company, with credits including Inception – for which it won an Oscar. With 900 people in their London office and more in Singapore, Double Negative is a definite positive for London’s reputation as the world’s VFX centre.

RANDOM42
Random42 is a specialist medical animation company, providing animations for the pharmaceutical and biotech industry. Their use of 3D technology and animation brings to life how a drug works within the body, drilling down to the sub-cellular level. Their innovative animations have been embraced as a vital tool in the pharmaceutical industry – helping Random42 win over 70 industry awards and become the world’s premier medical animation company.

MIND CANDY
Mind Candy is the company behind Moshi Monsters, a social networking online game for 7-12 year-olds. Players care for a pet monster and solve puzzles to earn rewards. Moshi Monsters has signed up a reported 50 million kids worldwide in less than three years and has been valued at US$200 million. From virtual to reality.

AURASMA
Aurasma is an augmented reality technology, available on mobile devices. Developed in Cambridge, it has had over four million downloads since launching last year. Aurasma recognises images and objects in the real world then overlays interactive digital content such as videos, audio and animation. Point Aurasma at an enabled football shirt, for example, and it can augment it with video footage of the team’s latest match.
ONLINE RETAIL MARKET MATURES ACROSS EUROPE

It is just 12 years old, but the UK online retail market has already come of age, and is now valued at around £70 billion.

Just a few months into the new millennium the flotation of the travel and leisure bookings site Lastminute.com on the London Stock Exchange, valued at a then staggering £571 million, felt like an instant of birth for this new sector. The market has grown up quickly since then and the UK has become a global leader, second only to the US in terms of market value. Britain’s 228,000 online retail businesses export more than the rest of Europe’s e-retailers put together. The number of online retailers in the UK is expected to double to 1.5 million by 2015.

NET-A-PORTER.COM was launched in June 2000 by Natalie Massenet and has exemplified this growth, successfully establishing itself as the world’s premier luxury online fashion retailer. Presented in the style of a fashion magazine, NET-A-PORTER.COM features collections from over 350 of the world’s most coveted designers. In April 2010, the international luxury goods group Richemont acquired the majority of shares in NET-A-PORTER.COM, at a valuation of £350 million. It was also in 2000 that advertising executive Nick Robertson decided to start an online clothes site, inspired by TV and film stars. It was called As-Seen-On-Screen.com, or ASOS.com as it is now known. From fairly humble beginnings the clothing retailer grew to reported sales of £495 million in 2011/12, including massive growth in China, where Western fashion has captured consumer imagination.

And it’s not only specialist online retailers that are doing well. Online sales at clothing company Next are now responsible for a third of brand sales and more than a fifth of all John Lewis sales are now online. Use of mobile internet is also on the up for retailers and the UK market could be a sign of things to come for both emerging and mature economies. In the UK, sales through mobile devices are growing at remarkable speed. Research from Interactive Media in Retail Group found it broke the five per cent barrier of total e-retail sales for the first time in Q4 2011.

As convergence happens across TV, internet, phone, mobile and video, expect the UK – with its love of the new combined with strong creative industries – to continue to generate new business models in this exciting digital space.

01
The UK is the largest market in Europe for consumer electronics, with a 22% market share.

02
The UK is a leader in e-commerce, spending more per capita than any other country in Europe.

03
The UK is Europe’s leading market for software and IT services with a market value of £58 billion in 2011.

With its European HQ based in Surrey, Samsung says the UK embraces cutting-edge technology, and has a research and business infrastructure designed to stimulate and capitalise on innovation.
SeaGen, the world’s first commercialised tidal energy system

London 2012 will be the world’s first truly sustainable summer Olympic and Paralympic Games and reflects a green revolution in the business world.
A NEW GENERATION OF LOW CARBON COMPANIES POWER AHEAD

There is a new wave of global businesses benefiting from green growth. From electric engines to energy efficiency, wind power to waste, the global market for low carbon environmental goods and services has been estimated to be worth around £3.2 trillion, and is forecast to grow to £4 trillion by 2015. The US and China offer the biggest markets for these goods, with Germany and the UK leading the way in Europe. The UK has been especially effective at using its 12,000 km of coastline and is the world’s most innovative developer of marine energy. It holds more patents in marine energy than any other country and one in four of all wave and tidal technologies are being developed in Britain.

“In terms of tidal potential alone, the UK has enough capacity to supply approximately 12 per cent of its current demand,” explains Andrew Tyler, CEO of marine energy firm Marine Current Turbines (MCT). MCT recently became part of Siemens and is an example of how innovative engineering is shaping the future of this sector.

According to Tyler: “SeaGen, developed by MCT, is the first fully commercialised tidal energy system and comes from over 20 years of extensive, cutting-edge research and development. The rotors are positioned within the top third of the water column where the tidal flow is the fastest, ensuring maximum power output from the device.” In the corporate world it’s increasingly clear that sustainable business means good business. Mike Wright, Executive Director, Jaguar Land Rover, comments: “We believe that our use of environmental innovation is strongly tied to our long-term success. Jaguar Land Rover is investing £2 billion this year in new products and automotive environmental technologies such as automatic intelligent stop/start systems, smaller and more efficient engines, hybrid technology and lightweight vehicles because we believe it will further enhance the strong reputation of our brands and deliver profitable growth.”

The launch of more efficient products along with an integrated CO2 offset programme clearly demonstrates Jaguar Land Rover’s investments in green technologies and its commitment to sustainable global growth.

In the investment world too, a new generation of green funding is emerging. The first Green Investment Bank is being established in the UK with a £3 billion remit and a similar institution has recently been announced in Australia. Now more than ever global businesses are turning to low carbon for high returns.

**BAM NUTTALL**

BAM Nuttall is a large civil engineering contractor with an established reputation for delivering complex and challenging projects that have played a significant role in shaping the infrastructure of modern Britain. The company has been active on the Olympic Park for the last five years, carrying out remediation and demolition work as well as landscaping and bridge construction. But its job doesn’t finish there. Once the Games are completed BAM Nuttall will reconfigure and landscape the Olympic Park into the new Queen Elizabeth Olympic Park. The job will ensure that surrounding communities are connected to the heart of the Park with new footways and cycle paths. 2,000 new trees will be planted and the area of parkland will be doubled to around 102 hectares - five times the size of the famous Park Güell in Barcelona. Stephen Fox, CEO of BAM Nuttall adds: “It’s important to our company that we are able to utilise our specialist skills to create a permanent legacy, and assist in the regeneration of this area of London.”

**ANDREW MILL**

Chief Executive,

NAREC

Narec is one of the UK’s leading centres for advancing the development and integration of renewable energy.

How important is innovation in the sector?

Innovation is at the centre of everything we do. I believe the UK has the most comprehensive and advanced set of facilities for offshore wind and marine renewables technology validation and development anywhere in the world. The £70 million FifeMarin Project, helping to test new technologies, is an example of this.

What are the strengths of the UK?

We are an island nation with a strong marine heritage and a global reputation for engineering innovation. The UK is also leading the world with 2GW of electricity generation from offshore wind and this could grow up to 20 times by 2030.
ON TRACK FOR SUSTAINABILITY

The Velodrome is not only one of the most iconic buildings on the Olympic Park, it is also one of the Park’s most sustainable venues. It has so far met or exceeded all the sustainability targets set for it by the London 2012 organising committee.

ROOF
The cable net roof is built to be structurally efficient, saving around 1,000 tonnes of steel compared to a more standard form of roof. The shape of the roof - which is pulled down in the centre where it’s not needed - minimises the space needed for heating.

ROOFLIGHTS
The Velodrome roof is covered by an even distribution of rooflights, maximising the use of daylight to save energy, without the overall insulation for the building being compromised. Special diffusing glass has been used to ensure a high level of light inside the building while avoiding patches of sunlight appearing on the track.
OUTER WALLS
The ventilation and insulation in the building are based on the results of thousands of computer simulations that calculated the ideal requirements for air inlets and outlets, and allow passive cooling when warm.

POWER
The electricity and heating provided to the Velodrome are provided by the Olympic Park’s sustainable combined heat and power plant, one of the most efficient ways to generate electricity.

LIGHTING
Energy-efficient artificial lighting is linked to an intelligent control system.

LAVATORIES
All toilet flushing, as well as irrigation for the surrounding Velopark, comes from rainwater collected from the building’s roof. This innovation, alongside other water-saving fittings has put the building on course to reduce potable water demand by 70 per cent annually.
INNOVATION IS GREAT BRITAIN

The UK is unique in its ability to nurture and enhance innovation. From tiny nanotechnology to the engine of the enormous A380 Airbus, many ideas that will shape the future are being conceived or developed in Britain.

HOW BRITAIN BECAME THE INNOVATION NATION

The UK’s talent for innovation is highlighted by one of its latest creations – the Olympic Torch for London 2012. The iconic torch has been created by East London designers Edward Barber and Jay Osgerby and is not only beautiful to look at – as you might expect from two furniture designers – but is also an exemplar of Great British innovation. The 8,000 perforations in the gold-coloured aluminium torch are cut with laser technology that only became available in the last year. The perforations help channel the heat from the flames to allow the 8,000 Olympic Torchbearers to carry it with ease. Without the latest innovation, this design would be impossible.

The torch brings up to date a historic path of innovation that winds through the history of the country. The UK’s pioneering approach has helped found the modern world through creations as varied as the steam engine, the multinational corporation, computer programming, penicillin and football. More recently, it has helped reinvent the world for the 21st Century with breakthroughs such as the World Wide Web, fibre optics and graphene. Its unique fusion of creativity, entrepreneurialism and invention has seen the UK awarded 76 Nobel Prizes in science and technology.

Underpinning the UK’s ability to deliver innovation is its high-calibre research base. UK research accounts for 14 per cent of the world’s highly cited articles, behind only the USA.

If Britain can do hard science and cutting-edge engineering, it can also excel at the more whimsical end of innovation. As part of the Cultural Olympiad, a public arts programme featuring many thousands of events across the UK, a team from the traditional engineering centre of Coventry has created Godiva Awakes, a 10-metre-high marionette of the historic figure of Lady Godiva. The project brings engineering and puppetry together and Godiva Awakes will be pedalled to London by a team of 100 cyclists on a ‘Cyclopaedia’ – an ingenious contraption with little potential for practical application.

Long after Lady Godiva and the world’s athletes have left London, one of the features of the Olympic Park after the Games will be an Innovation Centre, focused on taking big ideas from small and medium-sized businesses in growth sectors to market. That is a reminder that innovations are not only integral to the UK’s history, but central to its future too.

The Olympic torch, with 8,000 laser-cut perforations to represent the 8,000 Torchbearers.
As well as projects such as Masdar City in Abu Dhabi, British engineering firm Mott MacDonald has led the design and build of the London 2012 Olympic shooting range. The venue is large, aesthetic and accessible, but, most unusually, it is temporary. Working with local contractors (engineers, architects and designers), the company created one of the world’s first large-scale sports ‘flat pack’ venues. Every component can be taken down, reused, recycled or rehired. Considering the superstructure weighs around 690 tonnes and needs 18,000 sq m of external fabric, that has been a remarkable feat. Leon Higgins, Divisional Director at Mott MacDonald explains: “Producing a totally reusable building took a lot of ‘controlled innovation’, which pays a great deal of attention to quality and takes the risk out of being on the cutting edge. That is something British engineers do better than anyone else in the world.”

Watson Steel Structures in Bolton in the north of England won the contract to fabricate the steel for the iconic ArcelorMittal Orbit. It was no ordinary contract. The structure needed more than five miles of tubular steel and is the largest piece of public art in the UK, standing over 100 metres tall. Its looping structure meant that tens of thousands of joints needed to be built to millimetre perfection. Watson Steel used what they describe as, “a very British combination” of creativity and precision engineering to get the job done, developing a new computer-controlled laser system that ensured the pinpoint accuracy required. Having already worked on projects such as the Emirates Stadium, the London 2012 Olympic Stadium and Heathrow’s Terminal 5, successful completion of this structure is helping to build the company’s international reputation.

01 The UK has won 76 Nobel Prizes for science and technology. That’s second in the world and more than anywhere else in Europe.

02 19% of the world’s top-selling medicines were developed in the UK – in this, Britain is second only to the US.

03 The UK is a world leader in innovation, ranking second globally for the quality of its research base.

Intelligent Energy’s ENV, the world’s first purpose-built hydrogen fuel cell motorbike.
FIVE IDEAS TO WATCH
The seeding ground for much of Britain’s innovation is its outstanding universities. The UK is home to four of the world’s top 10 universities and high academic standards help the country punch above its weight in research and development. There are thousands of potentially world-changing research projects underway at British universities.

INVISIBILITY CLOAK
It might sound unbelievable, but researchers at the University of Birmingham are developing the technology to produce invisibility cloaks. The Birmingham team is currently using calcite crystal to bend light so that small-scale objects ‘disappear’.

MICRO ROBOT
Researchers at Newcastle University are developing a prototype micro-robot, measuring less than one centimetre long, which can swim through a body to search for diseases. The robot is inspired by nature as it is based on the sea lamprey and uses glucose as an energy source. As well as helping find undetected viruses the robot is a first step on the road to advanced prosthetics.

SOUND LASER
A team at the University of Nottingham is exploring a new source of sound energy. The researchers are using miniscule devices made up of semiconducting materials to harness sound waves in a similar way to how light is used in a laser beam, with the potential to provide a viable hypersound source for biomedical, novel materials and energy applications in the future.

CLOUD COMPUTING FOR AFRICA
A new project at Birmingham City University has the potential to improve the lives of millions of people. Researchers are trying to deliver cloud computing, which uses a network hosted on the internet rather than needing to power large amounts of memory at source, to remote parts of Africa using a simple USB stick. This uses technology that is inexpensive and needs minimal energy, so enabling remote villages to go online.
THE INNOVATIVE SPIRIT BEHIND THE MOST ACCESSIBLE GAMES

London 2012 will be the most accessible Games ever for athletes and spectators, and the organisers have had to take an innovative approach to public transport.

Across the UK, train platforms are being widened, buses fitted with low floors and river piers given ramps. More than 8,250 London buses have been fitted with the new iBus system, an innovative real-time information system which makes it easier for the visually and hearing impaired to ensure they get off at the right stop.

The UK’s commitment to running such an accessible Games will come as no surprise to those familiar with Olympic history; The Paralympics were born in the UK. It was in 1948, when Sir Ludwig Guttmann, a neurologist working with British war veterans with spinal injuries at Stoke Mandeville Hospital, first began using sport as part of the rehabilitation programmes of his patients. What began at Stoke Mandeville 64 years ago has returned to the UK as the world’s second-largest sports event; the Paralympic Games.

A LIFE SCIENTIFIC

Today the UK has capitalised on its culture of scientific innovation and is rated as the best European location for bioscience, healthcare and clinical research. That standing is thanks in part to a culture of collaboration between industry, academia and the National Health Service, which spends around £20 billion a year on goods and services.

The UK’s formidable innovation industry has been harnessed to help Paralympic athletes and in the last three Paralympic Games the British team has never finished lower than second in the medal table.

Ottobock Healthcare in the UK, part of the Ottobock global group of companies based in Germany, has been applying the latest medical innovation to design sport wheelchairs using the strongest weldable aluminium alloy, state-of-the-art tubing and a treatment that makes the surface almost as hard as the world’s hardest material, diamond.

The result is a powerful, lightweight and responsive chair that athletes need in the fast-moving high-impact sport of wheelchair rugby.

Phil Yates, Managing Director of Ottobock Healthcare UK said: “We produce a wide range of innovative healthcare products for people with restricted mobility. Research and development is vital to Ottobock and for over 34 years we have been operating in the UK providing access to products at the cutting edge of technology.”

The commitment to rehabilitation that led to the Stoke Mandeville Games remains strong in the UK. It has one of the world’s strongest and most productive life science economies, comprising around 4,500 firms and an annual turnover of over £50 billion.

01
The UK is home to four of the world’s top 10 universities.

02
The UK attracts almost 10% of the world’s pharmaceutical R&D funding.

03
The UK has the largest biopharmaceutical pipeline in the EU, with 20% of biopharmaceuticals in development originating here.
The UK is a world-class platform for international business. With low tax and less regulation it is one of the easiest places to start a business and achieve global success. No wonder more companies have based their European headquarters in the UK than anywhere else.

"From a business perspective, the UK is a great place to invest in. We particularly value the UK's 'innovative ecosystem.'"  
Elizabeth Kanter, Research in Motion

"Northern Ireland has become a favoured location for Citi for a number of reasons, including proximity to London, excellent transport links and telecommunications infrastructure. However, the key factor is the quality of the talent pool available locally."  
Brian McAteavey, Citi Belfast

"Being in London, one of the world's leading financial centres, is a key part of our global strategy. From here, we are in the ideal place to support our clients across the EMEA region."  
Jaime Gornstejn, Brazilian Development Bank (BNDES)
“We have always benefited from the UK’s dedicated, flexible and highly skilled workforce.”
Eric Le Corre, Michelin UK

“We established our European headquarters in the UK because it is the leading communications hub and gateway to Europe.”
Mr Ou Yan, China Telecom (Europe) Limited

“The UK is a cornerstone of our global success. We have access to fantastic market opportunities, world-class skills and an open and highly supportive business environment.”
Mr Anwar Hasan, Tata Ltd

“Siemens is creating jobs and investing in manufacturing and training in the UK. We are proud to be a part of the renaissance in UK manufacturing, helping to create a more balanced British economy.”
Roland Aurich, Siemens plc

“Being in the UK helps Mitsubishi Power Systems Europe get closer to our UK and European customers... as an inward investor we were and are made to feel welcome and valued.”
Akio Fukui, Mitsubishi Power Systems Europe

“Our UK office has proven a solid base for engaging key markets locally, and bringing our technology to Europe and beyond.”
Robert Waldie, Opengear
To find out more, scan this code with your smart phone.
www.ukti.gov.uk
+44(0)20 7215 5000

UK Trade & Investment is the Government Department that helps UK-based companies succeed in the global economy. We also help overseas companies bring their high-quality investment to the UK's dynamic economy acknowledged as Europe's best place from which to succeed in global business.

Whereas every effort has been made to ensure that the information given in this document is accurate, neither UK Trade & Investment nor its parent Departments (the Department for Business, Innovation and Skills, and the Foreign & Commonwealth Office) accept liability for any errors, omissions or misleading statements, and no warranty is given or responsibility accepted as to the standing if any individual, firm, company or other organisation mentioned.

The paper in this document is made from 100 per cent recycled waste pulp and is totally chlorine free. The inks are vegetable oil-based and contain resins from plants/trees.

Published July 2012
by UK Trade & Investment
© Crown Copyright
URN 12/945

© Crown copyright 2012.
You may re-use this information (excluding logos and images) free of charge in any format or medium, under the terms of the
Open Government Licence.
To view this licence, visit:
http://www.nationalarchives.gov.uk/doc/open-government-licence/
Or you can e-mail:
publishing@nationalarchives.gsi.gov.uk
Where we have identified any third party
copyright information you will need to
obtain permission from the copyright
holders concerned:
Any enquiries regarding this publication
should be e-mailed to us at:
equities@ukti.gsi.gov.uk
Or you can call:
+44 (0)20 7215 5000
This publication is also available at:
www.ukti.gov.uk

Front cover: Vodafone McLaren Mercedes
Formula 1 car. More Grand Prix cars are
built in the UK than any other country.