
英国的商业解决方案

UK Business Solutions

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前言

Foreword

贸易投资部长为面向中国的英国行业检索资料所做的前言

毫无疑问,全球经济衰退对贸易产生了重大影响。随着国际需求的急剧滑坡,中国采取了必要的内需刺激措施,为促进投资和恢复增长创造了重要条件。

中国在20国峰会上发挥了建设性的作用。和英国一样,中国认为需要加大国际之间的合作。两国政府都认为,我们的发展依赖于世界贸易的开放,因此我们必须全力地避免保护主义的出现。

英国政府最近宣布了长远的经济复苏战略计划。本着推动新产业发展的精神,我们制定了注重“新行业、新就业”的国策,政府将加强其促进英国企业和劳动者未来在全球市场竞争中取胜的作用,并将为此作出更大的努力。

此战略的行动计划注重具体的领域和市场,将“低碳经济”和“数字英国”纳入了我们的战略范围。

中国为应对经济下滑而推出的4000亿英镑财政刺激方案定将能加大农村建设、公共医疗、教育和生态项目的投资力度。英国在这些领域拥有得天独厚的优势,可以为它们提供解决方案。

我相信,英国有大量的技术和经验值得中国借鉴,英国的公司将继续在各个领域提供中国所需的产品与服务,推动两国贸易关系的进一步发展。这本检索资料简要地介绍了英国电力、先进工程、环境等经济发展所不可或缺的关键行业。

谨此向您奉上此检索资料。



阿伯索赫勋爵戴维斯
贸易投资部长

Lord Davies of Abersoch
Minister for Trade and Investment

05 There is no doubt of the impact that the global economic downturn has had on trade. With international demand in a slump, China has taken some necessary steps to stimulate domestic demand, tapping into its reserves and providing much potential for investment and growth.

China played a constructive role at the G20 Summit, recognising – as does the UK – that there needs to be greater international collaboration. Our respective governments agree that we must be relentless in avoiding protectionism, not least because of our dependence on the world remaining open for business.

The UK government recently announced its strategic vision for Britain's economic recovery. We have set out in the spirit of a new industrial activism with a focus on 'New Industry, New Jobs', where the Government will reinforce its role and efforts in ensuring UK businesses and workers can compete successfully for the jobs of the future, across the world.

The action plan following this strategy will pay attention to specific sectors and markets, and aim to incorporate our approaches for a Low Carbon economy and Digital Britain.

China's response to their downturn with a fiscal stimulus package of £400 billion will see investment in the areas of rural development, public health, education and ecological projects. This is ideal because the UK has particular strengths in providing solutions in these sectors.

I believe that we have much to offer and that our companies can continue to offer a broad range of products and services contributing to our trading relationship. These fiches provide an overview of the breadth and depth of that offering from a selection of key sectors including power, advanced engineering and the environment, all of which are crucial to the development of any vibrant economy.

It is against this backdrop that I present and commend this overview to you.

简介

Introduction

为实现两国总理在2008年1月英中峰会上制定的在2010年将两国双边贸易额增加到600亿美元的目标,我们目前已采取重要措施。

今年初,温家宝总理率领100家中国公司参加了英中商贸峰会,与300家英国企业进行互动。峰会结束后不久,陈德铭部长就率领一个由150家中国企业组成的强大采购阵容前来英国。400家英国公司的代表与来自中国的到访者进行了会面,签署了价值22亿英镑的合同,英国商贸大臣曼德尔森向陈部长递交了一份记录着1,000家有兴趣向中国出售产品与服务的英国公司名单。

这些重大举措表明了两国政府为各自企业在对方国家运作创造条件所做的承诺。当然,除了这些重大活动之外,英国贸易投资总署和英中贸易协会每年还组织数百次的互访和其他英中商贸活动。

我们制作这份“英国能力概述”资料,其目的是要更明确地介绍英国各个行业所能提供的解决方案,包括帮助中国满足自身需要和需求的实际示例。

希望这份资料能帮助中国了解其感兴趣的英国行业的实力。欢迎中国商务部与我们的使馆人员进一步接触。

09 We have taken important steps to achieve the goal of increasing bilateral trade between our two countries to US\$60 billion by 2010. This was set by our respective Premiers at the UK-China Summit in January 2008.

Earlier this year Premier Wen, accompanied by 100 Chinese companies, attended the UK-China Business Summit and interacted with 300 UK companies. The Summit was followed soon after by a 150 strong Buyer Mission to the UK led by Minister Chen Deming. Representatives of 400 UK companies met the Chinese visitors, contracts worth \$2.2 billion were signed and UK Trade Secretary Lord Mandelson presented Minister Chen with a list of 1,000 UK companies interested in selling goods and services to China.

These are significant measures and indicate the commitment both our governments have to creating conditions in which our respective companies can successfully work with one another. These events

are of course in addition to a programme of several hundred missions and other UK-China business events organised each year by UK Trade & Investment and the China-Britain Business Council.

Our intention in producing this overview of capabilities is to provide a clearer perspective of sector-specific solutions available within UK industry, including practical examples to help China match with its own needs/requirements.

We hope this document goes some way to providing an introduction to UK industry strengths in sectors of interest to China. We welcome further engagement between MOFCOM and our embassy officials.

能源

(实施低碳计划)

Energy

(Incorporating Low Carbon) 10

- 英国目前是世界第13大油气生产国,日产量约250万桶
- 2007年,英国油气业总勘探与开采支出为62亿英镑,若将运营开支计算在内,此数额将翻番
- 从事油气相关产品与服务出口工作的员工总数为100,000名,自2006/07年度以来,核心供应链的就业人数上升了10%

- 11
- The UK is currently the world's 13th largest producer of oil and gas overall, with daily production of around 2.5 million barrels of oil equivalent (boe).
 - In 2007 total exploration and production expenditure in the UK oil and gas industry was £6.2 billion. Including operational expenditure doubles that figure.
 - There are 100,000 employed in jobs exporting oil and gas related goods and services with core supply chain employment experiencing a 10% increase since 2006/07.

商业解决方案：石油和天然气 Business Solutions: Oil and Gas

英国的油气供应链业建立了强大的知识基础，一直以卓越的学术、工程与专业能力为依托，为客户提供高价值、高科技产品与服务。世界上一些最大、最成功的国际石油公司均来自英国，例如英国石油（BP）、壳牌公司（Shell）以及英国天然气集团（BG Group）。

专业服务

英国能为国际油气行业提供各种各样的专业化服务，其中涉及世界著名的银行业、会计业、尽职调查、管理咨询、法律、经纪、保险与风险分析服务提供商。英国的金融行业是油气行业十分活跃的重要投资者。在为油气业提供教育与培训方面，英国也是一个世界领先者，著名的公司包括Petrofac、Univation、Weatherford等等

岩土技术与油气藏服务

英国活跃在许多技术与咨询细分市场领域，例如油气储层的勘探、鉴别、分析与量化评估。例如，IMC Geophysics International Ltd 是英国地球物理技术工程领域的一家领先承包商，英国的学术与研究机构是卓越的油气藏特性和性能研究中心。英国地质勘查公司（British Geological Survey）也是油气藏地质科学和先进地震技术领域的世界领导者，擅长于对影响油、水、气和二氧化碳移动状况的地

下岩石储层小结构进行地球物理学鉴定。其他英国公司包括Scott Pickford、Gaffney Cline以及Fugro Survey。

钻井及油气井服务

平台钻井技术尤其是英国的强项，KCA Deutag是该领域首屈一指的英国承包商。该公司除在北海从事大规模钻井作业之外，还在阿塞拜疆、伊朗、西伯利亚和萨哈林岛等高难度地区运营。包括FMC和Expro UK在内的英国公司还参与从油气井规划与管理直到退役等多领域的专业咨询服务。

工程设计与项目管理

该领域内的领先英国公司无论以产出量还是以生产规模来衡量，都是世界级企业。他们在世界各地竞争大型项目，在不断开拓新的油气疆域方面发挥着重大的作用。这些公司的能力范围十分广泛，从新油气田前端工程研究直到大型设施的安装和调试管理。大多数大型工程、设计与项目管理承包商都在英国设有运营基地，并且大多数集中在大伦敦地区。AMEC是一家在该领域领先的英国企业，在中国承建有大量工程项目。其他重要的英国承包商包括Foster Wheeler Energy Ltd、Costains、Wood Group、Jacobs、W.S. Atkins、KBR、PSN、Whessoe以及KBC Process Technology Ltd。

专业工程咨询

英国现已成为提供特种海洋工程咨询与设计服务的一个重要中心，许多英国公司在世界各地为大型承包商和/或石油公司提供服务。有些咨询公司（例如MCS、2H Offshore）参与海底管线、动态立管和电缆设计；有些公司（例如BMT）提供专业的海洋咨询服务。

工艺设备

英国约有4,000家在全球享有崇高声誉的工艺装置制造商和供应商，他们提供的产品和设备能在质量与可靠性高于一切的关键性应用场合使用，深得客户信赖。例如，Axsia Serck Baker是一家领先的英国咨询、承包与项目管理公司，为国际油气行业交付工艺系统。其他公司包括Alderley Systems、Serck Controls以及Wilsons plc。

燃气轮机、汽轮机和柴油发动机

燃气轮机和柴油发动机是驱动发电机、泵类设备和压缩机的主要动力设备。工业用燃气轮机领域的世界领先者劳斯莱斯公司（Rolls Royce）提供大型输气管线压缩机和海上平台所需要的原动力设备。Peter Brotherhood Ltd为世界上许多领先运营商提供汽轮机交流发电机组。

- 13 The UK oil & gas supply chain has evolved into a major knowledge base, providing high-value, high-technology products and services supported by a tradition of academic, engineering and professional excellence. Some of the world's largest and most successful international oil companies are based in the UK, namely BP, Shell and BG Group.

Professional Services

The UK offers a very wide range of professional services to the international oil & gas industry. These include world-famous providers of services in banking, accountancy, due diligence, management consultancy, legal, brokerage, insurance and risk analysis. The UK financial sector is an active and major investor in the oil & gas industry. The UK is also a world leader in providing education and training to the sector, through companies such as Petrofac, Univation and Weatherford, among many others.

Geotechnical & Reservoir Services

The UK is active in a number of niche areas of technology and consulting used in the exploration, identification, analysis and quantification of oil & gas reserves. IMC Geophysics International Ltd, for example, is a leading UK geophysical contractor, while the UK's academic and research institutions are centres of excellence for understanding the behaviour and performance of oil & gas reservoirs. They include the British Geological

Survey, a world leader in reservoir geoscience and advanced seismic techniques – i.e. the geophysical characterisation of small structures within underground rock reservoirs that influence the movement of oil, water, gas or CO₂. Other UK companies include Scott Pickford, Gaffney Cline and Fugro Survey.

Drilling & Well Services

Platform drilling is a particular UK strength, with KCA Deutag the leading UK contractor. In addition to its substantial North Sea platform drilling operations, it operates in demanding areas such as Azerbaijan, Iran, Siberia and Sakhalin Island. UK companies, including FMC and Expro UK, are also involved in many specialised areas of consultancy, ranging from well planning and management through to well decommissioning.

Engineering Design & Project Management (EDPM)

The leading UK companies in this sector boast world-class output and volume, completing major projects around the globe and playing a significant part in pushing back the frontiers of oil & gas developments. Company capabilities range from front-end engineering studies for new oil & gas fields, through to management of installation and the commissioning of major facilities. Most of the major EDPM contractors have operations in the UK, with a considerable concentration in the Greater London area. AMEC is the leading UK-owned company in this field and has worked extensively in

China. Other major UK-based contractors include Foster Wheeler Energy Ltd, Costains, Wood Group, Jacobs, W.S. Atkins, KBR, PSN, Whessoe and KBC Process Technology Ltd.

Specialist Engineering Consultancy

The UK has developed into a major centre for the provision of specialised offshore engineering consultancy and design services, with many UK firms operating on a global basis for the major contractors and/or oil companies. Some, such as MCS or 2H Offshore, are involved in the design of subsea pipelines, dynamic risers and cables, while others, such as BMT, provide specialist marine consultancy services.

Process Equipment

The top tier of the estimated 4,000 UK process plant manufacturers and suppliers is highly regarded worldwide and is particularly trusted to deliver results in critical situations where quality and reliability are the overriding factors. Axsis Serck Baker, for example, is a leading UK consultative, contracting and project management company executing process systems for the oil & gas industry internationally. Other companies include Alderley Systems, Serck Controls and Wilsons plc.

Gas Turbines, Steam Turbines and Diesel Engines

Gas turbines and diesel engines are major items of equipment used to drive generators, pumps and

泵类

油气及石化业是泵类设备的主要使用者。英国在泵类设备及流体操作系统的设计、制造与服务领域享有卓越的工程声誉。业内大型供应商包括Clyde Pumps公司(前称 Weir Pumps)以及Hayward Tyler, 后者设计与制造各种供海上平台和海底高压泵所用的充液感应式潜水电机。

阀门及机械部件

总体来说,英国公司比较注重产品专业性和高质量,使用各类不锈钢及高温合金设计和制造高压阀门和执行器。Weir Power & Industrial便是该领域的一家大型公司,它旗下包括由专业阀门制造商组成的大型集团;该集团遍布世界各地,主要制造球形阀、先导式安全阀、蝶阀、安全阀以及其他产品。Rotork供应阀门执行器以及相关的控制系统。

仪器与控制系统

英国境内有大量专业化企业,专门从事各工业子产业仪器仪表及控制系统的设计与制造。产品应用范围十分广泛,从油气井现场测量,到各种各样的海底仪器和传感器,应有尽有。该领域的领先英国公司包括Cameron Measurement Systems、ICS Triplex以及Parker Instrumentation。

电气系统

英国公司供应各类电气设备、配电系统和设备。他们制造各类控制屏、变频器和发电机组。许多设备都是专门为危险区应用而设计的,具有防火、防爆性能,包括机柜、接线盒和控制屏。临时电源租赁业务也很活跃,包括提供撬装机组(skid-mounted units)、货柜式电力模块(containerised power modules)等。英国公司Aggreko是租赁业务方面的市场领导者。

海底工程

英国具有专门的海底技术。北海油气田开发过程中所采用的关键性技术已在世界各地得到普遍应用。

早在1974年,英国就率先使用海底连接管道连接海底油气井的方式来开采石油,北海因此成了最大的海底油气开采市场,其中使用的所有硬件设备几乎都是在英国设计制造的,包括海底油井盖、柔性管线、控制集成管和控制系統。海底油气开采已成为全球主要的油气增长来源。

英国虽并不拥有大型海上装备船,但当今所采用的许多技术都是为开发北海油气田而开发的。开发北海油气田所掌握的精湛技能专长更使阿伯丁成为深海项目承包领域一个举世瞩目的卓越中心,许多国际公司都将其国际业

务全部或部分设在阿伯丁。例如Oceaneering、Subsea 7、Technip UK和Acergy。

英国因此还是遥控水下航行器(ROV)开发领域的世界领导者。例如, Fugro-Rovtech公司设计与制造种供油气业和其他深海作业部门使用的各类水下电子设备、水下照相机、声纳与传感器产品。

管线

“北海标准”的建立是英国海底管线工程强大实力的体现。Advantica、Penspen以及JP Kenny等公司都已成长为海底管线工程与项目管理领域的全球领导企业。

英国制造各式各样的的管线产品和元件。Wellstream是高端技术领域的领先制造商,提供海底使用的高压、非黏结型柔性管线和立管系统。Brinker Technology是管道完整性服务的领先提供者。Duco是集成管产品的领先制造商。

物流与供应

随着全球范围内海上运营开支的不断攀升,物流与供应操作的重要性得到进一步的体现。主要服务包括物流运输、燃料及润滑油、环境服务、货运代理和人力资源服务。ASCO便是一家英国的世界级服务提供商。该公司为国际油

- 15 compressors. Rolls-Royce, a world leader in industrial gas turbines, provides the prime movers for the compressors used on major gas transmission lines and offshore platforms. Peter Brotherhood Ltd has supplied many of the world's leading operators with steam turbine alternator sets.

Pumps

The oil & gas and petrochemicals industries are major users of pumps. The UK has a reputation for engineering excellence in the design, manufacture and service of engineered pumps and fluid-handling systems. Major suppliers to the sector include Clyde Pumps (previously Weir Pumps) and Hayward Tyler, which designs and manufactures a wide range of fluid-filled submersible induction motors for offshore platforms and subsea high-pressure pumping applications.

Valves & Mechanical Components

In the main, UK companies tend to focus on specialised high-quality products, designing and manufacturing high-pressure valves and actuators in stainless steel and exotic alloys. Leading players include Weir Power & Industrial, which comprises a major unified group of specialist valve manufacturers located throughout the world who produce ball valves, pilot-operated safety valves, butterfly valves, safety valves and others. Rotork supplies valve actuators and associated control systems.

Instrumentation & Control

A wide range of instrumentation and control systems is designed and manufactured in the UK, with companies specialising in many of the industry sub-sectors. Firms manufacture products for applications ranging from taking in-situ measurements in oil & gas wells, to a very wide range of subsea instruments and sensors. Leading UK companies in this field include Cameron Measurement Systems, ICS Triplex and Parker Instrumentation.

Electrical Systems

UK companies supply a wide range of electrical machinery, distribution systems and equipment. They manufacture control panels, frequency converters and generating sets. Much equipment is flame and explosion-proof, designed for hazardous areas, and includes enclosures, junction boxes and control panels. There is also a significant rental activity in providing temporary power, ranging from skid-mounted units to containerised power modules. The UK's Aggreko is a market leader in this activity.

Subsea Engineering

The UK has particular skills in the subsea sector. The key enabler technologies used in the development of the North Sea oilfields have found many applications worldwide.

Subsea wells tied back by seabed flowlines were used to produce the UK's first oil in 1974. The

North Sea subsequently became the largest market for subsea production, with virtually all the hardware, including subsea well heads, flexible flowlines, control umbilicals and control systems, being designed and produced there. Subsea production is a major growth area worldwide.

Although the UK is not an owner of major offshore installation vessels, many of the technologies in use were developed for the North Sea. The high levels of expertise gained in this environment make Aberdeen a particular centre of excellence for subsea contracting, with many international companies running part, or all, of their global operations from there. Examples include Oceaneering, Subsea 7, Technip UK and Acergy.

In support of this, the UK is also a world leader in the development of remotely controlled underwater vehicles (ROVs). Fugro-Rovtech, for example, designs and manufactures a very wide range of underwater electronics, cameras, sonars and sensors used in the oil & gas industry and other subsea sectors.

Pipelines

North Sea standards have resulted in subsea pipeline engineering becoming a key UK strength. Companies such as Advantica, Penspen and JP Kenny have grown to become leaders in subsea pipeline engineering and project management worldwide.

气行业提供供应链管理服务和解决方案。

环境

英国提供世界级的环境产品与服务, 在废水处理、固体废弃物管理、海洋与空气污染控制、土地复垦、回收与再用、环境监测与分析等领域拥有悠久的历史 and 强大实力。UK Spill是一家世界级石油泄漏事件响应企业, 客户包括全球各大石油公司。

- 17 A very wide range of pipeline products and components are manufactured in the UK. At the higher-tech end of the sector, Wellstream is a leading manufacturer of high-pressure, non-bonded flexible pipe and riser systems for subsea service, Brinker Technology is a leading provider of pipeline-integrity services, while Duco is a leading manufacturer of umbilicals.

Logistics & Supply

Offshore operational expenditure is growing worldwide, resulting in logistics and supply operations being of considerable importance. Key services encompass logistics, fuels and lubricants, environmental services, freight forwarding and personnel services. ASCO is an example of a UK world-class provider, offering supply-chain management services and solutions to the international oil & gas sector.

Environment

The UK offers world-class environmental goods and services, with long-established roots in wastewater treatment, solid waste management, marine and air pollution control, land remediation, recovery and recycling, environmental monitoring and analysis. UK Spill is a world-leading oil-spill response organisation, serving major oil companies across the globe.

能源

(实施低碳计划)

Energy

(Incorporating Low Carbon) 18

- 英国有数万个活跃在发电供应链上的企业, 该领域最大的公司名列英国大型企业之列
- 发电设备每年的出口量平均为20亿英镑, 与电力有关的服务业的出口量亦与此数额不相上下
- 英国核电行业的直接或间接员工总数约为80,000名, 核能比重占英国发电结构的20%, 出口创收约7亿英镑

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- There are tens of thousands of companies active in the power generation supply chain, the largest of which are among the UK's leading companies.
 - Exports of power generation equipment average around £2 billion per year, with power related services amounting to a similar figure.
 - The UK nuclear generation industry employs, directly and indirectly, about 80,000 people, provides about 20 per cent of the UK's electricity and earns the UK around £700 million in overseas business.



商业解决方案: 电力 Business Solutions: Power

资产管理

英国公司具备全面的电力资产管理经验和技能，能帮助您最有效地利用现有的发电和输配电资产。电力监管部门要求英国所有的电厂运营商必须以最有利于竞争的方式运作，因此，业内公司都已建立起能在电厂管理、设备维护、系统升级与监控、厂房与设备评估系统等方面帮助客户的综合技能。

业内主要英国公司包括：

Alstom：专业从事电力和电厂设备的翻新、改造和寿命期延长。

Quartzelec：拥有高压服务、旋转机械、建筑服务、电气及仪器仪表领域的电气工程技术和经验。

RWE Power International：提供的专业服务覆盖运营与维护的方方面面，从最初的建设和投入运营直至最终退役。业务范围：燃气轮机服务、风险评估流程、电厂信息服务、环境管理和电厂维护管理、发电厂修复及发电技术培训。

TWI：其前身是焊接研究所（Welding Institute），通过研究、咨询和培训服务提供以下各领域的解决方案：焊接、工程设计、探伤检查（NDT inspection）、材料、表面安装技术和生命周期完整性。

碳减排技术

英国公司为国内和国际市场开发了种类繁多的更清洁矿物燃料技术产品与服务。英国公司提供的碳减排技术产品与服务包括：清洁煤技术与应用、超临界锅炉、排放控制设备的安装、烟气清洁设备翻新、新兴的二氧化碳捕捉与储存（CCS）技术，以及旨在提高效率的设备改造。

业内主要英国公司包括：

Clyde Bergamann Materials Handling Ltd：提供高效率、专门用于发电业的材料输送解决方案。

Doosan Babcock Energy Limited (UK)：一家重要的锅炉供应商，专门经营超临界锅炉技术，包括 Posiflow 系统和生物质联合燃烧解决方案。

The Greenbank Group UK：为电力、煤炭、水泥、钢铁、造纸、玻璃、采矿等重工业及其它加工业提供专用产品、服务和解决方案。

Howden：为世界各国包括发电业在内的关键行业供应各类鼓风机、旋转式换热器、压缩机和气体清洁设备。

专业服务

英国具有提供专业咨询服务的悠久传统，这方面的专长是在15年监管政策变化和结构化市场演进过程中积累起来的。三大主要服务层面是：金融层面（在项目可行性和回报、资本结构、资金来源、税务和保险等领域提供咨询服务）；技术层面（提供下列项目或交易方面的咨询指导：工程、管理、IT、资源、环境、规划与市场）；法律层面（起草与修改关键法律、许可证、行业规范方面的建议与指导）。

业内主要英国公司包括：

CMS Cameron McKenna：提供各种与能源有关的法律服务，包括监管、重组、收购、输电项目、可再生能源等领域。

Halcrow：提供基础设施开发项目的规划、设计与管理专业服务。

Mott MacDonald：提供管理、工程与开发咨询服务解决方案。

Parson Brinckerhoff：提供涵盖整个开发过程的全方位服务，从最初的规划和可行性研究直到设计、许可申请、施工、投运和维护。

21 **Asset Management**

UK companies have developed comprehensive power asset management expertise to get the most from existing generating and transmission & distribution assets. All UK power station operators have been required to operate in a more competitive way and, as a result, companies across the sector have developed skills to provide assistance in areas such as plant management, equipment maintenance, system upgrades and monitoring and plant and machinery evaluation systems.

Key UK companies include:

Alstom: specialises in retrofit, life extension and refurbishment.

Quartzelec: has expertise in electrical engineering, within the areas of high voltage services, rotating machines, building services and electrical & instrumentation

RWE Power International: offers specialist services covering operations and maintenance, from construction and commissioning to eventual decommissioning. It has expertise in gas turbine services, risk assessment processes, power plant information systems, environmental management and power station maintenance management, plant rehabilitation and power generation training.

TWI: formerly The Welding Institute, TWI delivers solutions – through research, consultancy

and training services – in welding and joining, engineering, NDT inspection, materials, surfacing and lifecycle integrity.

Carbon Abatement Technologies

UK companies are developing an ever-widening range of cleaner fossil fuel technology products and services for application both domestically and throughout the world. Carbon abatement technology products and services available from UK companies include a wide range of options: using cleaner or cleaned coal; supercritical boilers; installing emissions-control equipment; retrofitting flue-gas cleaning plant; new emerging technologies around carbon dioxide capture and storage (CCS); and refurbishing plant to improve its efficiency.

Key UK companies include:

Clyde Bergamann Materials Handling Ltd: provides high-efficiency materials-handling solutions dedicated to the power-generation industry.

Doosan Babcock Energy Limited (UK): a major boiler supplier focusing on supercritical boiler technology, including the Posiflow system and biomass co-firing solutions.

The Greenbank Group UK: provides specialist products, services and solutions for heavy industry in power, coal, cement, steel, paper, glass, minerals and other processing sectors.

Howden: supplies fans, rotary heat exchangers, compressors and gas cleaning equipment throughout the world to key industries, including power generation.

Professional Services

The UK has a strong tradition in professional advisory services developed through the course of over a decade and a half of regulatory changes and structural market shifts. The three main areas are – financial (advice on issues such as project feasibility and returns, capital structures, sources of funds, taxation and insurance); technical (advice on the following aspects of projects or transactions: engineering, management, IT, resources, environmental, planning and markets); and legal (advice on the drawing up and revision of the key enabling law, licenses and industry codes).

Key UK companies include:

CMS Cameron McKenna: provides a range of energy-related legal services, covering such areas as regulation, restructuring, acquisitions, transmission projects and renewable-energy issues.

Halcrow: specialises in the provision of planning, design and management services for infrastructure development.

Mott MacDonald: delivers management, engineering and development consultancy solutions.

Parson Brickenhoff: provides services during the entire

可再生能源

英国率先发展了下列各领域的技术：海上风力发电场建造、资源评估、风力发电机组设计与培训，以及专用供应链组件。英国还是海浪和潮汐发电项目开发部署的领先者。英国的水电行业能为您提供优质产品与服务，范围覆盖水电项目的所有层面、类型和规模。

业内主要英国公司包括：

Gilbert Gilkes & Gordon Ltd: 水力发电机组和辅助设备制造商和设备供应商，最大装机容量20兆瓦。

SEaB Energy Ltd: 设计、制造和安装可再生能源微型发电系统，专门经营厌氧消化和风力发电机。

Senergy Econnect: 提供输配电网和系统运营方面的创新解决方案。

SMS Seals: 专业从事面向发电行业的各类机械密封解决方案的设计、测试、制造和供应。

热电联产

业内主要英国公司包括：

Centrax: 制造燃气轮机驱动的水力发电机组，装机容量：2.6至50兆瓦。项目规模不分大小，从发电机组的供应与调试运行，直至全盘承接整

个电厂项目工程、采购与施工建造合同。所有的发电机组均采用罗尔斯·罗伊斯公司的工业501型或遑达系列燃气轮机提供动力。

Energ-y: 提供不同容量的热电联产系统，容量范围：30千瓦至10兆瓦，既可与市电并网运行，也可孤岛式运行。

碳减排管理服务

伦敦的金融机构正在排放交易和碳融资方面发挥着领军作用。在促进清洁发展机制(CDM)和联合执行(JI)项目方面，英国扮演着项目来源和中介服务的领路人角色。伦敦云集了众多世界最大的私营部门碳基金，大量的多边基金也是经由设在伦敦的机构进行管理的。

业内主要英国公司包括：

Climate Change Capital: 一家投资管理与顾问公司，专门发掘全球低碳经济转型过程中所产生的投资机会。

EcoSecurities: 与减排信贷项目的设计者和购买者进行合作，构建温室气体减排项目并提供全程指导。

IT Power: 一家大型国际能源咨询公司，专门从事可持续能源技术与政策的顾问咨询服务。

核能供应链

英国的民用核电产业能承接约70%的核电厂兴建任务。并且具备全面的核燃料循环设施设计、制造、建设和运营支持能力，以及核电厂退役和核废物管理能力。

业内主要英国公司包括：

AMEC: 专门为全球能源、电力和加工业提供高价值咨询、工程和管理服务的供应商。

Antech Inc: 提供核电站仪器仪表解决方案，用于测量和鉴定特种核材料和废弃物中的放射性核素。

Centronic Ltd: 供应核辐射探测器产品的领先制造商。

Thompson Valves: 设计和制造供海上油气开采、石油化工、核能、航空航天和加工业所用的Maxseal电磁阀、IVP压力调节器和Ashford波纹管密封截止阀。

电网

英国拥有大量提供新输配电网(架空、地下及海底电网)工程、采购和建造服务的大型企业。英国制造商供应的电力设备种类繁多、规格齐全，从大型电力变压器、高压直流和继电保护设备，到低压变压器、开关和智能仪表，应有尽有。就资产管理而言，英国

- 23 development process, from initial planning and feasibility studies through design, permitting, construction, start-up operations and maintenance.

Renewables

UK initiatives have led to the development of expertise in offshore wind energy, resource assessment, wind-turbine design and training and specialist supply-chain components. The UK is also a leader in the development and early deployment of ocean wave and tidal current energy conversion. The UK hydro industry can provide high-quality products and services, covering all aspects, types and sizes of hydropower schemes.

Key UK companies include:

Gilbert Gilkes & Gordon Ltd: manufacturer and equipment supplier of hydro-electric turbines and ancillary equipment in the output power range up to 20MW.

SEaB Energy Ltd: designer, manufacturer and installer of renewable energy microgeneration systems, focusing on anaerobic digestion and small wind turbines.

Senergy Econnect: has developed innovative solutions in transmission networks, distribution networks and system operations.

SMS Seals: specialises in the design, test, manufacture and supply of an extensive range of mechanical sealing solutions for the power generation industry.

Combined Heat and Power

Key UK companies include:

Centrax: manufactures gas turbine-powered generator sets from 2.6 to 50 MWe. Any scope of supply is undertaken, from supply and commissioning for generator sets through to full EPC contracts for complete energy plant. All packages are powered by Rolls-Royce industrial 501 or Trent gas turbines.

Energy-y: provides CHP systems from 30 kW(e) to 10 MW(e) for use either in parallel and/or island mode generation.

Carbon Management Services

London's financial institutions are taking a leading role in emissions trading and carbon financing. The UK is a leading player in project origination and in intermediary services to facilitate development of CDM and JI projects. London is the home of the world's largest private-sector carbon funds, while a number of the multilateral funds are also managed through agents based in the UK capital.

Key UK companies include:

Climate Change Capital: an investment manager and adviser specialising in the opportunities generated by the global transition to the low-carbon economy.

Ecosecurities: structures and guides greenhouse gas emission reduction projects from beginning to end, working with both project developers and buyers of emission-reduction credits.

IT Power: a leading international energy consultancy which specialises in sustainable energy technologies and policy.

Nuclear Supply Chain

The UK civil nuclear power industry has the capability to provide around 70 per cent of a new nuclear power station. It also has a complete design, manufacture, construction and operational support capability for fuel cycle facilities, decommissioning and waste management.

Key UK companies include:

AMEC: a focused supplier of high-value consultancy, engineering and project management services to the world's energy, power and process industries.

Antech Inc: provides nuclear instrumentation solutions for the measurement and characterisation of special nuclear materials and radionuclides in waste.

Centronic Ltd: a leading manufacturer of radiation detectors.

Thompson Valves: designs and manufactures Maxseal solenoid valves, IVP pressure regulators and Ashford bellows-sealed globe valves for the offshore, petrochemical, nuclear, aerospace and process industries.

Networks

The UK hosts a number of major companies providing engineering,

是状态和服务质量监测领域的领先者。

业内主要英国公司包括:

Areva T & D: 提供电源配送、高压和中压变电站建造以及全球电网管理技术开发解决方案。

Balfour Beatty: 面向国际电力行业的大型输配电网工程承建商。

Brush Transformers: 制造各类变压器: 配电变压器、大功率变压器、干式变压器、牵引变压器和防火变压器, 并且提供ATL系列有载分接开关。

EA Technology: 电力资产管理领域的一家领先企业, 为能源供应、配送及使用能源的企业提供创新商业解决方案。

Lucy Switchgear: 提供配电系统所用的开关与保护解决方案。

英国的大型跨学科咨询服务集团拥有与众多电力领域有关的技术和经验。这些集团公司包括AMEC、Arup、Atkins Global、Halcrow、Jacobs、Mott MacDonald、PB Power和Rolls-Royce。

- 25 procurement and construction services for new transmission and distribution networks (overhead, underground and subsea). UK manufacturers can supply a wide range of equipment, from large transformers, HVDC and protection relay equipment to low-voltage transformers, switchgear and smart meters. In terms of asset management, the UK is a leader in condition monitoring and service quality monitoring.

Key UK companies include:

Areva T & D: offers solutions to bring electricity from the source onto the power network, build high- and medium-voltage substations and develop technologies to manage power grids worldwide.

Balfour Beatty: a leading supplier of power transmission and distribution networks to the international power supply industry.

Brush Transformers: manufactures a wide range of distribution, power, dry type, traction transformers and flameproof transformers, along with the ATL range of tapchangers.

EA Technology: a leading power asset management company which delivers innovative business solutions to firms which supply, distribute and use energy.

Lucy Switchgear: provides switching and protection solutions for electrical distribution systems.

The large UK multidisciplinary consultancy groups have expertise across a range of power-related areas. They include AMEC, Arup, Atkins Global, Halcrow, Jacobs, Mott MacDonald, PB Power and Rolls-Royce.

基础设施

(实施低碳计划)

Infrastructure (Incorporating Low Carbon) 26

- 英国的建筑业规模名列欧盟第二, 每年出口的服务价值70亿英镑。
- 英国拥有许多世界著名的建筑设计公司, 其中, 根据营业额来衡量, 有五家与美国、日本和中国的建筑师事务所一同跻身世界10强之列。
- 英国的建筑设计师经常荣获国际权威奖项。自1979年起, 英国已有四名建筑师赢得业内人人想望的普利兹克奖 (Pritzker Architecture Prize), 这是建筑业公认的最高荣誉, 获奖者分别是詹姆斯·斯特林 (James Stirling)、诺曼·福斯特 (Norman Foster)、理查德·罗杰斯 (Richard Rogers) 和第一位获此殊荣的女建筑设计师扎哈·哈迪德 (Zaha Hadid)。
- 英国的建筑师事务所是当今低碳和可持续 (社会与环境) 建筑设计领域的先驱, 活跃在生态与节能型建筑的最前沿。著名的建筑师事务所包括: Foster + Partners、Rogers Stirk Harbour + Partners、Edward Cullinan Architects、Bennetts Associates和 Bill Dunster Architects

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- The UK construction industry is the second largest in the European Union and exports more than £7 billion worth of services annually.
 - The UK is home to many world-famous architects, five of which are ranked in the Top 10 by income, as the largest architectural practices in the world, alongside US, Japan and China.
 - UK-based architects are regular winners of prestigious international awards. Since 1979, there have been four UK winners of the coveted Pritzker Architecture Prize, widely regarded as the profession's highest honour – James Stirling, Norman Foster, Richard Rogers and Zaha Hadid, the first woman to have ever been awarded the prize.
 - UK architectural practices are pioneers in leading-edge, low-carbon and sustainable architectural design, both social and environmental, and are at the forefront of ecologically friendly, energy-efficient buildings. Practices include Foster + Partners, Rogers Stirk Harbour + Partners, Edward Cullinan Architects, Bennetts Associates and Bill Dunster Architects.

商业解决方案：建筑 Business Solutions: Construction

建筑服务

从出口和海外运营的角度来看,英国建筑业内最活跃、最健全的行业是建筑服务业。除有许多重要的国际工程咨询公司之外,英国的建筑设计和商业操作在欧洲占主导地位,声誉和服务质量名列世界排行榜前十名。

在这些领域中,英国的公司主要参与而非总承包项目工程,但是现在也开始有一些工程公司承担项目管理业务。

活跃在中国市场上的英国建筑公司包括:

Arup: 在中国已承接逾500个项目,包括体育场馆、摩天大楼、机场、桥梁、高速公路和铁路项目。鸟巢奥林匹克体育场鸟巢便是一例。该公司为该项目提供了全方面的跨学科项目服务,包括体育场建筑设计、结构、机械、电气及公共卫生工程设计;隔音和消防策略,以及体育场照明。Arup公司的东亚地区规划团队目前也正在参与北京的第一个可持续城市——位于丰台区长辛店的长兴国际生态城——的蓝图规划。

Atkins: 今年年初,该公司经国际专家评委评选,在中国获得一个大型集装箱码头新建项目。项目所在地是宁波以东25公里的梅山岛。

Mott MacDonald: 目前正在协助政府、私营部门客户和开发商完成多个工程项目,包括香港青屿干线、北京地铁、北京摩天轮、来宾B电厂、翔天廊项目(Skyplaza)和水资源管理项目。

可持续性/绿色建筑

英国针对绿色建筑行业的立法规定,建造新建筑或翻新建筑物,必须考虑和实施可持续设计倡议。这些倡议内容涉及广泛,涵盖节能、生态、居住者福祉等众多问题。我们的一个关键优势在于设计和采购低碳解决方案的能力。这种整体方法确保了节水、生物多样性、居住者福祉等因素与能源的使用一样,都得到同等程序的考虑。

英国的建筑行业能为境内外项目提供量身定做的解决方案。这一专长由于制造商、供应商和居住者对气候变化影响的日益深刻理解而得到增强。

主要英国公司包括: Scott Wilson 是一家致力于减少建筑和基础设施碳排放的跨学科国际设计与工程咨询公司; Zedfactory 是作为英国首批生态社区之一的、位于伦敦南部贝丁顿的零能耗发展项目(BedZED)的开发商; Sheppard Robson 则是第一座无碳住宅建筑设计企业。该公司荣获2006年英国建筑杂志颁发的2006年最佳可持续发展设计企业奖。

振兴

英国拥有振兴社区及基础设施经济的独特能力。其他任何国家都没有像英国这样拥有实施大规模一体化振兴项目的丰富经验与全面技能。振兴项目的宗旨是要改善贫困区面貌和协助困难人群。振兴项目的规模是没有上限的,振兴范围可涵盖整个城镇、整个城市乃至整个大区。但成功取决于多种技能和经验——英国在建筑设计、规划、土地复垦、工程学等领域拥有振兴项目所需要的大量专长。

业内主要公司包括:

DEGW: 是一家在全球12个办事处运作的领先战略设计咨询公司。他们凭借独特的专业技能,解决从长期物业战略到设计概念的实际实施的大量设计问题。

Paul Hogarth Company: 专业从事景观设计与蓝图规划,与经济学家、规划部门、交通咨询部门密切合作,完成重大振兴项目。

Urban Splash: 从事褐色土地振兴的大型开发商,创建能与更大范围内的社区有机融合的工作场所。

Waterman International: 能为全球客户提供经济、创新解决方案的大型跨学科咨询公司,专注于可持续的社区和室内环境。

29 **Construction Services**

By far the most active and strongest sub-sector of the UK construction industry in terms of exporting/working overseas is construction services. As well as boasting major international engineering consultancies, the UK's architectural and commercial practices lead Europe and command a top-ten ranking in world league tables in terms of reputation and quality of services, as do the UK's cost consultants.

UK companies in these areas are part of the supply chain for a project rather than the main contractor, although some engineering firms also now act as project managers.

UK construction companies active in China include:

Arup: has worked on more than 500 projects in China, including sports venues, skyscrapers, airports, bridges, roads and railways. Examples include the Birds Nest Olympic Stadium, where Arup provided a full multidisciplinary service, including sports architecture, structural, mechanical, electrical, public health engineering, acoustics, fire strategy and sports lighting. Arup's East Asia planning team is also currently working on the masterplanning of Beijing's first sustainable city – Changxing Eco-city in Changxindian, Fengtai district.

Atkins: chosen earlier this year by an international judging panel as the winning designer of a major

new container port in China. The project will be built on Mei Shan Island, about 25 kms northeast of Ningbo.

Mott MacDonald: currently assisting government, private-sector clients and developers on an array of assignments, including the award-winning Lantau Link, Beijing Metro, Beijing Great Wheel, Laibin B Power Station, Skyplaza and Water Resource Management Project.

Sustainable/Green Buildings

The UK green buildings sub-sector has been driven by legislation to consider and implement sustainable design initiatives when procuring new or refurbishing existing buildings. The initiatives employed are diverse, covering issues such as energy conservation, ecology and occupant wellbeing. A key UK strength is its expertise in designing, procuring and delivering low-carbon solutions. The UK's holistic approach ensures that factors such as water conservation, biodiversity and occupant wellbeing are given equal consideration to energy use.

The UK construction sector is able to provide bespoke solutions to local projects both domestically and overseas. This expertise is augmented by manufacturers, suppliers and occupiers who have an ever-increasing understanding of the impact of climate change.

Leading UK companies include Scott Wilson, a multidisciplinary international design and engineering consultancy delivering low-carbon buildings and infrastructure; Zedfactory, the developer of Bedzed, one of the first sustainable developments in the UK; and Sheppard Robson, architects of the first zero-carbon home and the inaugural winner of Sustainable Designer of the Year 2006 (Building magazine)

Regeneration

The UK is uniquely skilled in the revitalisation of communities and the infrastructure and economies upon which they depend. No other nation has the depth of experience or holistic range of skills in delivering large-scale programmes of integrated regeneration, which aims to improve deprived places and assist deprived people. There is no limit to the scale of regeneration programmes – whole towns, cities and even regions can be covered. However, success is dependent on skills and experience – something which the UK has in abundance, with expertise in such areas as architecture, planning, land remediation and engineering.

Leading UK companies include:

DEGW: a leading strategic design consultancy operating from 12 offices worldwide. Its unique mix of professional skills enables the firm to address a wide range of design issues, ranging from long-term real-estate strategy to the practical implementation of design concepts.

建筑产品

英国的建筑业规模庞大且种类繁多, 雇员总数约210万人。近年来, 英国通过发展具备了整合供应链、扩大协作与合作以及推广建筑管理技术、复杂绩效衡量方法以及公共项目公私合营融资(PFI) 模式的能力。

英国的产品制造商生产的产品、元器件和材料种类齐全, 能满足现代建筑开发项目的需要。这些公司在许多行业都是世界领导者, 拥有强大的创新性设计能力, 生产的产品能一次性地满足设计师和承包商最严苛的需要。此外, 厂家还会作出全面而丰厚的售后服务承诺, 海外客户通常能就地获取这些售后服务。

主要英国公司包括全球运营的钢铁制造商和供应商。

康力斯集团 (Corus Group) 旗下的Vimpex Ltd提供创新性消防系统; Frenger Systems是一家冷管技术产品制造商, 产品能替代传统式空调。

建筑设计

英国的建筑设计公司是交通基础设施例如干线铁路的延伸和重建工程以及地铁和国际机场建设等项目设计的世界领导者。他们是交通基础设施设计领域的世界领导者。英国的经验技术已广泛应

用于干线铁路的延伸和重建、地铁以及国际机场建设等大型项目。

例如, Foster + Partners参与过北京国际机场 (世界最大的交通基础设施项目之一) 和香港国际机场的设计。

此外, 英国的建筑设计师还拥有新型民宅和办公楼设计方面的丰富经验。例如Richard Rogers设计过英国米尔顿凯恩斯 (Milton Keynes) 的Oxley Woods居民区, 区内的房屋皆采用可持续材料和独特技术, 包括“生态帽”(EcoHat), 即重复利用热空气来优化能耗, 提供被动式太阳能热水器, 以及通过布局来优化空间和自然采光。

英国的咨询工程师在为北京的鸟巢和水立方奥运场馆的设计方面也发挥了重大作用。

- 31 The Paul Hogarth Company: landscape architects and masterplanners, who work closely with economists, planners and transportation consultants on major regeneration projects.

Urban Splash: major developers of brownfield regeneration sites, creating work places that are part of wider communities.

Waterman International: a multidisciplinary consultancy delivering economic and innovative solutions to clients globally, whilst working towards sustainable communities and building environments.

Construction Products

The UK construction industry is large and varied, employing some 2.1 million people. In recent years, the UK has developed expertise in the integration of supply chains; the increased use of collaboration and partnering; construction management techniques; sophisticated performance-measurement methodologies; and the Private Finance Initiative for public-sector projects.

UK product manufacturers and suppliers produce the whole range of products, components and materials that are needed for modern construction developments. In many sectors, these firms are world leaders and have extensive innovatory design capability, enabling them to manufacture products on a one-off basis to meet the needs of

the most demanding designer or contractor. This is supported by a strong commitment to comprehensive after-sales technical service, often through a local presence in overseas markets.

Leading UK companies include global steel manufacturer and supplier

Corus Group; Vimpex Ltd, a supplier of innovative fire-protection systems; and Frenger Systems, a manufacturer of Chilled Beam technology as a sustainable alternative to air conditioning.

Architecture

UK-based architects have an unparalleled depth and diversity of experience in a vast range of industry specialisms. They include the architecture of transport infrastructure, where the UK has used its expertise in the extension and redevelopment of major railway and metro stations and international airports.

Foster + Partners, for example, designed the new Beijing International Airport, one of the largest transport infrastructure projects in the world, as well as Chek Lap Kok Airport in Hong Kong.

In addition, UK architects are highly experienced in innovative residential and office architecture. Richard Rogers, for example, designed the Oxley Woods housing development in Milton Keynes, where homes are constructed

from sustainable materials and employ unique features. These include an 'EcoHat', allowing hot air to be re-used to optimise energy consumption and providing passive solar water heating, as well as layouts which optimise space and light.

UK consulting engineers, for example, played a key role in delivering the iconic Birds Nest Stadium and Watercube at the 2008 Beijing Olympics.

基础设施

(实施低碳计划)

Infrastructure

(Incorporating Low Carbon) 32

- 英国环境产业的产品与服务的市场价值为250亿英镑, 全球市场的总价值为26,350亿英镑
- 英国的环境和水业不断推出帮助全球低碳经济转型的解决方案
- 英国的环境经济未来八年内预计将增长45%

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- The market value for the UK environmental goods and services sector is £25 billion in a global market value of £2,635 billion
 - The UK environment and water sector is producing solutions to help the transition to a global low carbon economy
 - The UK environmental economy is predicted to grow by about 45 per cent over the next eight years

商业解决方案：环境 Business Solutions: Environment

英国的环境与水资源行业素以世界领先的能力和优越的解决方案与服务而在国际上享有盛誉。该行业综合了它的传统工业专长和卓越的科学技术能力,形成一套强大而新颖的技术创新、法规监管和政策制定方法,确保其在全球的竞争优势。

Arup、Atkins、Mott MacDonald、Scott Wilson以及Halcrow等许多大型英国环保企业近年来已成功在中国上市运作。

废弃物管理

英国在全球各地拥有消除、减少、再用、再生、处理与处置废弃产品的技能以及运作能力和技术。

快速发展的英国废弃物管理行业雇有70,000名员工、年产值达80亿英镑,尤其以新颖的技术解决方案和在填埋工程与设计以及污染治理与控制领域的专长而著称。

业内主要的英国公司包括:

AEA Technology: 一家领先的环保咨询与环保技术公司。该公司跨学科专长包括废弃物管理策略与政策制定,以及公私营合作式(PFI/PPP)采购。

Enviros: 一家咨询公司,主要服务范围包括废弃物处理设施的规划与许可、欧盟综合污染防治

(IPPC)指令、垃圾填埋技术开发等。

Geotechnical Instruments (UK) Ltd: 提供各类监控与监测仪器仪表,包括垃圾填埋及填埋场气体分析。

Grundon Waste Management: 收集并处置非危险性及危险性废弃物、管理材料循环回收处理场、填埋场和热处理设施。

Orchid Environmental Ltd: 从事城市固体垃圾的机械热处理,生产回收母粒和垃圾衍生燃料。

Organics: 设计、建造、安装和调试各类环境控制设备,主要经营干废物高温分解/气化系统、优质填埋场废气燃烧器和垃圾渗滤液处理设施。

Pakawaste: 制造和供应废弃物处理设备,包括压实机、打捆机、粉碎机、洗涤机和翻斗车。

Taylor: 制造废物收集与回收钢制容器。

污染土地复垦

英国是污染土地复垦(CLR)领域的世界领导者,既有专业化供应商,又有全球性跨学科企业。

污染土地复垦属于英国的创新行

业,具有复垦、场地勘测和岩土技术雄厚以及项目管理和土木工程能力强大等特点,并且以提供与责任转移有关的法律与保险解决方案而著称。目前英国正在为CLR活动开辟新的融资途径。

业内主要的英国公司包括:

Atkins: 拥有30多年的污染土地治理经验,在过去的三年,连续参加环境咨询服务问卷调查的客户评为英国最佳的污染土地治理服务企业。

Bilfinger Berger Environmental: 一家土壤和地下水修复工程承包商,具有专业的修复系统设计和建造经验,利用专利技术提供“一站式”服务。

DEC (DEME Environmental Contractors): 是欧洲最大、经验最丰富的环境承包商之一,素以提供创新性全套环保解决方案而蜚声国际。

Ecologica Environmental Solutions UK: 专业的污染土地和地下水治理企业,业务范围涵盖从案头研究、场地勘测到修复的污染土地复垦的所有阶段。

Entec Uk Ltd: 英国最大的环境与工程咨询公司之一,提供各类褐色土地治理服务。

35 The UK's environment & water sector has an international reputation for world-leading capabilities and outstanding solutions and services. It combines traditional industrial expertise and scientific excellence with a strong innovative approach to technology, regulation and policy to ensure global competitive advantage.

A number of large UK environmental companies such as Arup, Atkins, Mott MacDonald, Scott Wilson and Halcrow have successfully done business in China in recent years.

Waste Management

The UK has the skills, operational capabilities and technologies to eliminate, reduce, reuse, recycle, treat and dispose of waste products worldwide.

Employing 70,000 people and boasting an annual turnover of £8 billion, the UK's fast-growing waste management sector is particularly renowned for its innovative technological solutions and its expertise in landfill engineering and design and pollution-abatement controls.

Leading UK companies in this area include:

AEA Technology: environmental consultancy and technology. Its multidisciplinary expertise includes waste management strategy and policy development and PFI/PPP procurement.

Enviros: consulting services such as planning and permitting

for waste facilities, IPPC and landfill development.

Geotechnical Instruments (UK) Ltd: monitoring and instrumentation equipment, including landfill and landfill gas analysis.

Grundon Waste Management: collection and disposal of non-hazardous and hazardous waste, operation of materials recycling facilities, landfills and thermal treatment facilities.

Orchid Environmental Ltd: mechanical heat treatment for the processing of municipal solid waste, producing recyclates and refuse derived fuels.

Organics: designs, builds, installs and commissions a wide range of environmental control plant, specialising in dry-waste pyrolysis/gasification systems, high-quality landfill gas flares and leachate treatment facilities.

Pakawaste: manufacturer and supplier of waste-handling equipment, including compactors, balers, shredders, washers and tipper.

Taylor: manufactures steel recycling and waste containers.

Contaminated Land Remediation

The UK is a world leader in contaminated land remediation (CLR), boasting an extensive range of companies from specialist providers to global multidisciplinary organisations.

Characterised by considerable remediation, site investigation and geotechnical expertise, as well as strong project management and civil engineering capabilities, this innovative UK sub-sector is renowned for providing legal and insurance solutions relating to liability transfer and is developing novel approaches for financing CLR activity.

Key UK companies include:

Atkins: over 30 years' experience in the contaminated land sector and voted by clients in the Environmental Consultancy Survey for the last three years as having the best reputation in the UK for providing contaminated land services.

Bilfinger Berger Environmental: remediation contractors who are experienced in the design and build of specialist remediation systems for soils and groundwaters, utilising patented techniques to offer a "one stop" service.

DEC (DEME Environmental Contractors): one of Europe's largest, most experienced environmental contractors, with a reputation for innovative total package solutions.

Ecologica Environmental Solutions UK: contaminated land and groundwater specialist company which undertakes all stages of contaminated land work, including desk studies, site investigations and remediation.

Entec UK Ltd: one of the UK's largest environmental and engineering

Land Clean Limited: 专业的污染治理承包商, 积累了大量的客户和丰富的项目经验, 专门从事热解吸、异位生物修复和污染水处理。

QDS Environmental Ltd: 污染治理承包商, 提供专业的污染土壤和地下水治理服务。

Regenesis Ltd: 设计、制造与供应多种用于治理污染含水层的专业修复产品。

空气污染控制

英国公司活跃在多个与空气污染有关的技术与服务行业, 包括微粒控制法、气体控制法、监测技术、咨询服务与支持。

英国推出了大量极富创新的碳减排或捕获产品, 并拥有强大的空气污染控制设备设计、开发、安装和运营能力。

显示英国在这一领域居于主导地位的一个重要例子是排放交易计划, 它是全世界的首个此类计划, 成功地将伦敦打造成了国际碳排放交易市场的中心。

AAF: 拥有70多年的经验, 开创出许多新的空气污染控制技术。

AEA Technology: 拥有强大的科研实力, 仅空气质量领域就有120

名科研、咨询和技术人员, 业务包括全国空气污染评估、接触评定、化学建模、库存开发及公共宣传。

CSO Technik: 设计、制造、安装和调试异味控制系统、集尘系统、挥发性有机气体减排系统。

Chemviron Carbon Ltd: 全球活性炭和排放控制系统供应商。

Dunphy Combustion Ltd: 专门从事低排放燃烧设备生产的企业。

Enviro Technology Services plc: 设计、供应和安装空气质量监测系统, 并提供售后服务。

Osprey Corporation Ltd: 设计、供应和安装污染处理和热回收系统。

Signal Group Ltd: 设计、制造和支持大量固定式、便携式连续排放监测系统和空气质量监测系统。

垃圾发电

英国有一个欣欣向荣、富有创新能力的“垃圾变能源”产业, 它成功地利用它的可再生能源资源和在废弃物管理、油气及海洋等传统优势行业发展得到的世界领先技术, 实施了带动投资的国家政策与项目。

英国富有竞争力的能源管理专长和技术体现在众多行业及应用领域, 能帮助客户改善能源效率, 降低成本。

业内主要英国公司包括:

Advanced Plasma Power: 旨在将气体等离子技术的垃圾发电应用推向商业市场。

Clarke Energy Ltd: 一家能源系统公司, 提供各类绿色发电解决方案, 是气体管理技术和废弃物处理设施的“全盘解决方案”提供者。

ENER-G Natural Power Ltd: 该公司是英国最大的、利用垃圾填埋气发电的独立发电企业之一, 它在英国境内外承接项目, 总装机容量超过100兆瓦。

Graveson Energy Management Ltd: 该公司开发了一种独特而先进的热能转换系统, 利用该技术能将多种废弃材料转换成能源。

Orchid Environmental Ltd: 这是流程设计与工程领域的一家国际知名企业, 拥有适用于众多行业的材料处理经验。

环境监测与仪器仪表

凭借强大的测量与通讯技术能力, 英国已成为环境咨询、温室气

37 consultancies, offering a wide range of brownfield land services.

Land Clean Limited: specialist remediation contractor, which has built up an extensive portfolio of contacts and experience specialising in thermal desorption, ex-situ bioremediation and contaminated water treatment.

QDS Environmental Ltd: remediation contractor providing specialist services for the treatment of contaminated soils and groundwater.

Regenesis Ltd: designs, manufactures and supplies a range of speciality remediation products for the restoration of contaminated aquifers.

Air Pollution Control

UK companies have a wide range of experience in a variety of air pollution-related technology and service groups, including particulate control methods, gaseous control methods, monitoring technology, consultancy and support.

Many of the most innovative products for the reduction or capture of carbon emissions have come out of the UK, which has also developed strong capabilities in the design, development, installation and operation of air-pollution control equipment.

A key example of the UK's prominence in this area is its emissions trading scheme, the first of its kind in the world, which

placed London at the hub of the international carbon market.

AAF: with over 70 years of experience, AAF has pioneered many of the technologies used to control air pollution.

AEA Technology: boasting 120 scientific, consulting and technical staff working on air quality alone, its scientific expertise includes national air pollution assessment, exposure assessment, chemical modelling, inventory development and public information.

CSO Technik: designs, manufactures, installs and commissions odour-control systems, dust collection systems and VOC abatement systems.

Chemviron Carbon Ltd: worldwide supplier of activated carbons and emission control systems.

Dunphy Combustion Ltd: proven expertise in manufacturing low-emission combustion equipment.

Enviro Technology Services plc: designs, supplies and installs air-monitoring systems.

Osprey Corporation Ltd: designs, supplies and installs pollution and heat-recovery systems.

Signal Group Ltd: designs, manufactures and supports a wide range of fixed and portable continuous emissions monitoring systems and air quality monitoring systems.

Waste to Energy

The UK has a thriving and innovative waste-to-energy sub-sector, having successfully taken advantage of its renewable-energy resources; its world-leading expertise derived from traditional strengths in the waste management, oil, gas and marine industries; and its investment-generating national policies and programmes.

The UK boasts competitive energy management expertise and technologies in a wide range of industries and applications, helping clients improve energy efficiency and reduce costs.

Key UK companies include:

Advanced Plasma Power: commercialises Gasplasma technology for waste-to-energy plants.

Clarke Energy Ltd: energy systems company offering a wide range of green power generation solutions, as well as a "total solution" provider of gas engine generation, gas management and waste-treatment facilities.

ENER-G Natural Power Ltd: one of the UK's largest independent generators of electricity from landfill gas, with over 100 MW of contracted capacity in the UK and overseas.

Graveson Energy Management Ltd: develops a unique advanced thermal conversion system that recovers energy from a wide selection of waste materials.

体减排市场、实验室分析、环境与排放监测以及仪器仪表设备等领域的世界级供应者。

业内主要英国公司包括：

ABB: 提供分析仪器与系统, 流量、压力与温度测量, 记录仪和控制器等专用产品。

Casella Measurement: 各类设备包括灰尘与噪音监测、室内空气质量监测、气象设备和监测用环境室 (environmental enclosures)。

Codel International: 提供用于监测燃烧流程和大气污染物排放量的各类高科技仪器仪表产品。

PCME: 提供各类技术和仪器仪表, 例如过滤器故障性能监测和微粒排放测量。

Servomex Group Ltd: 专业的气体分析仪生产企业, 尤其提供顺磁性氧气和红外传感器等非消耗性测量技术产品。

Signal Group Ltd: 制造测量连续排放、环境空气质量和各类气体所使用的气体分析仪、系统、测试设备及其附件。

水和废水处理

英国走在全球水/废水行业的最前沿, 业内公司数目众多, 包括从

大型公用设备公司到为其提供支持的制造和服务企业。英国的水资源企业拥有全球领先的工程、技术和管理人才, 可以为海外市场提供高质量服务。

英国的监管框架推动了一个高效率创新产业的发展, 可协助提供最高水平的环境保护、质量维护和客户保护。业内公司拥有与政府合作的丰富经验, 受到了世界各国的青睐。

业内主要英国公司包括：

ABB Limited: 水质监测和仪器仪表领域的全球领导者, 该公司不仅提供符合国际质量标准认证的解决方案, 而且拥有一个由制造工厂和位于战略要地的校准实验室所构成的全球网络。

Biwater Group: 作为一家工艺流程承包商, 已经在中国运营多年。集团旗下的子公司Cascal为新民、七台河、燕郊和福州提供供水服务。

Halcrow: 该公司的水业咨询服务涵盖水资源行业的各个领域, 包括供水、污水处理、水资源、水坝和水工建筑、灌溉与疏水、河流与内陆水路, 以及洪涝控制。

Microbac: 拥有20年的生物质工程经验, 能为全球客户提供全套污水处理技术与设施。

Mott MacDonald: 一家管理、工程与开发咨询服务公司, 服务对象包括全球公共与私营两大部门。目前, 该公司正在为中国的一项地标性工程提供服务, 该项目旨在通过采用水资源一体化管理模式, 为更有效的水务政策制定和水治理提供支持。

Wallingford Software: 该软件公司为水行业提供市场领先的软件工具。产品包括用于支持水分配、污水处理、河流管理以及海岸工程规划与运行的数据管理和网络建模软件。

- 39 Orchid Environmental Ltd: internationally recognised expertise in process design and engineering, and materials-handling experience across a range of industries.

Environmental Monitoring and Instrumentation

Building on existing expertise in measurement and communication technology, the UK is a world-class provider in the field of environmental consultancy, greenhouse gas abatement markets, laboratory analysis and environmental and emissions monitoring and instrumentation equipment.

Key UK companies include:

ABB: specialises in analytical instruments and systems and flow, pressure and temperature measurement recorders and controllers.

Casella Measurement: offers a range of equipment, including dust and noise monitors, indoor air-quality monitors, meteorological equipment and environmental enclosures for monitoring.

Codel International: provides high-technology instrumentation for monitoring combustion processes and atmospheric pollution emissions.

PCME: supplier of technologies and instruments for areas such as filter-failure performance monitoring and particulate emission measurement.

Servomex Group Ltd: specialists in gas analysers, with particular expertise in non-depleting measurement technologies such as paramagnetic oxygen and infra-red sensors.

Signal Group Ltd: manufactures gas analysers, systems, test equipment and accessories for measuring continuous emissions, ambient air quality and gases.

Water and Wastewater Treatment

The UK is at the global forefront of the waste/wastewater sub-sector, embracing a wide range of companies from large professional utilities to the manufacturing and service firms that support them. Employing world-leading engineering, technological and managerial talent, the UK-based water industry has much to offer overseas markets.

The UK regulatory framework has driven an efficient, innovative industry which can operate to the highest levels of environmental protection, quality maintenance and customer protection. It also has considerable experience of working in partnership with government, something which is prized around the world.

Key UK companies include:

ABB Limited: a global leader on water monitoring and instrumentation, with solutions certified to international standards and a worldwide network of manufacturing

plants and strategically situated calibration labs.

Biwater Group: has had a presence in China as a process contractor for many years. Its subsidiary, Cascal, provides water-supply services in Xinmin, Qitaihe, Yanjiao and Fuzhou.

Halcrow: its water consultancy division covers all aspects of the water sector, including water supply, wastewater, water resources, dams and hydraulic structures, irrigation and drainage, rivers and inland waterways and flood control.

Microbac: 20 years' experience in biomass engineering, offering complete wastewater treatment packages to clients throughout the world.

Mott Macdonald: management, engineering and development consultancy serving the public and private sectors worldwide. It is currently working on a landmark project in China to support stronger water policy development and governance through the introduction of integrated water resources management approaches.

Wallingford Software: produces market-leading software tools for the water industry. Products include data management and network-modelling software to support planning and operations in water distribution, sewerage provision, river management and coastal engineering.

基础设施

(实施低碳计划)

Infrastructure

(Incorporating Low Carbon) 40

港口

- 英国海事行业年产值370亿英镑, 海外创收10亿英镑
- 英国公司在汇集港口规划与设计的综合能力方面跻身世界最佳之列
- 伦敦是服务全球海事行业的首屈一指的金融、法律和保险中心

铁路

- 英国的铁路行业享有率先创新、拥有一流解决方案能力的全球盛誉, 能提供面面俱到的产品与服务: 从制动元件到重大基础设施项目, 从创新融资到监管改革, 一应俱全。对提高铁路运输各个层面的可持续性所做出的承诺是保障铁路行业发展的最重要的支柱
- 英国铁路业是欧洲增长速度最快的行业。2007年, 英国铁路客运量达480亿乘客公里, 实现了连续13年增长

机场

- 英国各机场每年总营收50亿美元, 伦敦是世界最繁忙的航空枢纽, 伦敦的几个机场年旅客总吞吐量达1.2亿人次
- 在机场基础设施设计与升级方面, 英国的建筑设计和土木工程名列世界之最
- 英国的经验技术已出口到世界各国, 帮助客户降低机场的环境影响, 并已被纳入许多新建筑物的设计和运行实践

41 Ports

- The UK maritime sector has an annual turnover of £37 billion and generates £1 billion in overseas earnings.
- UK companies are amongst the very best in the world at drawing together all the different strands of port planning and design.
- London is the number one financial, legal and insurance centre for the global maritime industry.

Rail

- The UK's rail sector enjoys a global reputation for spearheading innovation and delivering first class solutions, products and services from brake components to major infrastructure projects and from innovative finance to regulatory reform, underpinning everything is a commitment to improving the sustainability of rail transport at every level.
- Britain's railways are the fastest growing in Europe. With more than 48 billion passenger kilometres recorded on UK Railways in 2007, this is the 13th consecutive year of growth.

Airports

- UK airports generate US\$5 billion of revenue in a year and London is the busiest aviation centre in the world with its airports handling 120 million passengers annually.
- UK architects and civil engineers are amongst the best in the world when designing and upgrading airport infrastructure.
- UK expertise is being used around the world to reduce airport environmental footprints and is being incorporated into many building designs and operational practices.

商业解决方案：公共交通
Business Solutions: Mass Transport

铁路

英国的铁路业闻名全球，为巩固其在国际市场上的领先地位，仍在不断创新。英国的铁路行业能够在市场条件或技术要求发生变化时迅即做出有效反应，在最短的时间内提供最佳的解决方案。

全面促进铁路交通的可持续发展，一直是英国铁路业的头等大事。

基础设施部件

英国的铁路企业能帮助您满足日益增长的高可靠性、高效率基础设施部件需求，例如电源设备（包括架空接触网或第三轨/导电轨）、改进轨道质量或运用最先进的技术对基础设施条件进行准确评估。英国具有帮助您提高可靠性、扩大产能、增强安全性的全方位经验和技能。

业内主要英国公司包括：

Brecknell Willis: 该公司在天津设有独资企业，专门为中国城市地铁系统以及列车和有轨电车上的集电器生产接触轨道。最近的项目包括北京地铁5号线和“奥运专线”。

Holdfast: 为铁路、公路、有轨电车和行人横道平台设计和提供创新解决方案。

Pandrol: 铁路钢轨扣件制造与设计领域的全球市场领先者，提供具有创新性、高价值、高质量的解决方案。

基础设施承包商

英国的铁路工程设计和承包商素以创新思维和高生产效率著称，他们活跃在世界各地，帮助各国升级现有铁路网络或建设新铁路网。

业内主要英国公司包括：

AMEC SPIE Rail: 是世界最大的基础设施承包与项目管理公司之一，拥有承接高难度项目的丰富经验。

Balfour Beatty Rail: 自1983年首次赢得为中国铁路部门提供电气设备的订单以来，便一直参与中国铁路业的建设。

Jarvis plc: 一家专业服务公司，提供全面的铁路网络支持、货运、轨道机械维护和设备。

信号系统

在欧洲铁路运输管理系统（ERTMS）的开发与安装方面，英国的铁路业继续扮演着全面的重要角色，这一新型信号及列车保护系统现已在许多欧洲国家投入运营。安装新的信号系统只是铁路业的一个方面，在经历过艰

难条件磨练后，英国公司还拥有对无论是城市地铁还是传统铁路的现有系统进行升级的经验和技能。

业内主要英国公司包括：

Bombardier Transportation: 该公司的铁路信号产品业务部门设在英国，被誉为“国际卓越制造中心”，因提供铁路信号解决方案而全球闻名。

Signal House Ltd: 提供现代铁路系统所需要的电气、机械、土木工程应用设备与技术。制造各类广泛应用的信号头产品。

Westinghouse Rail Systems Limited: 一家铁路信号系统与控制技术公司，该公司为北京地铁提供了自动列车控制升级系统，目前正在参与北京地铁5号线项目建设。

铁道车辆

现代铁道车辆的可靠性、安全性和效能是上一代工程师梦寐以求的，英国的技术与知识正在被证明是进一步完善这些因素的关键。英国公司是欧洲铁道车辆租赁业的领路人，从货运机车到最新的通勤列车，英国以其卓越的技术专长为出行者提供新一代旅客列车，替代他们的轿车出行。

43 Rail

The UK's world-renowned rail industry continues to innovate to further its leading position in international markets. When market conditions or technical requirements change, the UK rail sector is able to respond quickly and effectively to offer the best possible solutions in the shortest possible time.

Underpinning everything is its commitment to improving the sustainability of rail transport at every level.

Infrastructure Components

UK rail companies can help in meeting growing demands for reliable and efficient components, in areas such as power-supply equipment (including overhead catenary or third rail), improving track quality or using cutting-edge technology to provide precise evaluation of infrastructure conditions. UK expertise is available across the board to improve reliability, increase capacity and generate quantifiable safety benefits.

Key UK companies include:

Brecknell Willis: its Wholly Owned Foreign Enterprise in Tianjin produces the conductor rail for Chinese metro systems and for electrical current collectors on trains and trams. Recent projects include Beijing's Metro Line 5 and the 'Olympic line'.

Holdfast: designs and supplies innovative solutions for rail, road, tram and pedestrian-crossing platforms.

Pandrol: the global market leader in rail-fastening manufacture and design, supplying innovative, good value and high-quality solutions.

Infrastructure Contractors

UK rail engineers and contractors, renowned for their innovative thinking and high productivity, are active all over the world in helping countries upgrade existing rail networks or commission new ones.

Key UK companies include:

AMEC SPIE Rail: one of the world's leading infrastructure contractors and project managers, well experienced in dealing with highly challenging contracts.

Balfour Beatty Rail: has been involved with the rail sector in China since 1983, when it won its first order for the supply of railway electrification equipment.

Jarvis plc: a professional services company providing comprehensive rail-network support, freight and on-track machine services and equipment.

Signalling

The UK rail industry continues to play a full part in the development and installation of the European Rail Traffic Management System (ERTMS), now operational in many European countries. Installing

new signalling systems is just one aspect of the sector, with UK companies also boasting expertise in upgrading existing systems, with hard-won experience in demanding conditions, both in metro systems and traditional railways.

Key UK companies include:

Bombardier Transportation: its UK-based signalling products division is regarded as an international manufacturing centre of excellence, with a world-leading reputation for rail-signalling solutions.

Signal House Ltd: offers electrical, mechanical and civil engineering applications for modern railway systems. It manufactures a range of signal heads for numerous applications.

Westinghouse Rail Systems Limited: a railway signalling and control technology company which has provided upgrades to Beijing's Metro Automatic Train Control system, as well as working on the city's Metro Line 5.

Rolling Stock

The reliability, safety and performance of the latest rolling stock is something that engineers of a generation ago could only have dreamt about, with UK technology and knowledge proving crucial in improving these factors still further. In areas such as new manufacturing or rolling stock leasing, from freight locomotives to the latest commuter passenger trains, UK expertise is delivering

Angel Trains: 一家英国铁路租赁公司, 享有欧洲铁路客货运领域强大而且不断增长的市场地位。

Bombardier Transportation: 英国最大的铁路机车车辆制造商, 向本土市场提供了大量的新型列车, 为旅客带来全新的体验。

Transys Projects Ltd: 一家独立工程公司和一揽子服务供应商, 在铁路领域拥有丰富的经验和技能。

安全

英国的铁路是世界上最安全的铁路网络之一, 这要归功于英国文化将安全问题视为头等大事。正是这种注重开发和采用高新技术的文化, 才最大限度地减少了旅客和铁路工作人员所面临的安全威胁。无论是制造商、承包商还是咨询公司, 都将安全问题看作一个持续改善的过程, 英国在提高铁路运营安全方面所积累的经验可供世界各国分享。

业内主要英国公司包括:

Interfleet Technology: 是一家咨询顾问公司, 拥有铁路业内众多领域的丰富经验, 包括安全稽核。

Oleo International: 为世界各国铁路业及电梯制造商提供碰撞能量吸收设备。

专业系统

技术创新的美誉意味着英国能以拥有大量世界上最先进的专业技术而感到自豪, 这些技术包括从资产预测分析到精密基础设施管理, 以及基于效益管理的订票系统。

业内主要英国公司包括:

Laser Rail: 隶属于Balfour Beatty Rail Group集团公司, 为铁路基础设施高精度测量领域提供创新性解决方案。

Qinetiq Rail: 为铁路业提供状态监测和预测因素分析。

Rail Technology Ltd: 是铁道系统状态监测设备专业领域的一家市场领先企业。

Westinghouse Platform Screen Doors: 下属Knorr-Bremse集团, 在广州设有合资企业, 满足中国现有地铁线和新建地铁线对位置探测系统(PSD)的需求。它还是一家为中国地铁系统提供制动控制系统的重要企业。

专业服务

对于铁路公司来说, 金融和法律服务现在比以往任何时候都更为关键。准备好满足投资计划、遵守日益严格的法规所需的充足资金, 从来没有像现在这样具有挑战性。

业内主要英国公司包括:

CMS Cameron McKenna LLP: 一家为企业、金融机构、公共和政府部门提供咨询服务的法律事务所。

PricewaterhouseCoopers LLP (普华永道): 为铁路业客户提供保险、税务和顾问指导服务, 为客户建立公众信任, 为他们提高价值。

UBS: 一家主要金融机构, 精通大型项目复杂而精细融资安排。

项目管理与设计

几十年以来, 英国在铁路项目规划与设计领域的专长一直备受推崇, 包括从轻轨到地铁乃至货运专用铁路。

业内主要英国公司包括:

Arup: 一家国际性工程咨询企业, 为铁路行业提供工程设计、规划和项目管理服务。

Corus: 不仅以铁路产品见称, 而且还提供广泛的咨询服务。

Halcrow: 全球大型工程咨询公司之一, 客户遍及世界各地。

Mott MacDonald: 中国郑州至西安客运专线项目一段工程的签约

45 a new generation of rolling stock to entice passengers out of their cars.

Angel Trains: a UK train leasing company with a significant and growing presence in Europe in both the passenger and freight sectors.

Bombardier Transportation: the biggest rolling-stock builder in the UK. It has supplied many of the new trains that have revolutionised the passenger experience in its home market.

Transys Projects Ltd: an independent engineering company and turnkey service provider, with extensive expertise in rail.

Safety

Thanks to a culture that places safety right at the top of the agenda, the UK has one of the safest railways in the world. It is a culture that places great emphasis on developing and using new technology to minimise risk to customers and staff alike. Whether they be manufacturers, contractors or consultants, UK companies see safety as a process of continuous improvement and have experience of improving safety in all aspects of rail operation all around the world.

Key UK companies include: Interfleet Technology: a consultancy with extensive expertise across a wide range of rail sectors, including safety audits.

Oleo International: supplies energy-absorption equipment to railways and elevator OEMs around the world.

Specialist Systems

The UK's reputation for innovation means that it now boasts some of the most advanced specialist techniques in the world, from predictive asset analysis to precision infrastructure management and yield management-based booking systems.

Key UK companies include:

Laser Rail: part of Balfour Beatty Rail Group, this company develops innovative solutions for the precise measurement of railway infrastructure.

Qinetiq Rail: provides condition monitoring and predictive analysis to the rail sector.

Rail Technology Ltd: a market-leading company specialising in condition-monitoring equipment for track systems.

Westinghouse Platform Screen Doors: part of the Knorr-Bremse Group, this company has set up a joint venture in Guangzhou to service the Chinese demand for PSD systems on existing and new metro lines. It is also a major supplier of brake control systems to metro systems in China.

Professional Services

Financial and legal services are more critical for railway companies today

than ever before. Ensuring sufficient funds for investment programmes and compliance with increasingly stringent legislation have never been more of a challenge.

Key UK companies include:

CMS Cameron McKenna LLP: law firm advising businesses, financial institutions, public bodies and governments.

PricewaterhouseCoopers LLP: provides industry-focused assurance, tax and advisory services to build public trust and enhance value for its clients in the rail sector.

UBS: a major financial institution specialising in complex and detailed financial arrangements.

Project Management and Design

For decades, UK expertise has been valued in planning and designing rail projects, from light rail and metro through to heavy-haul freight lines.

Key UK companies include:

Arup: a global firm of consulting engineers providing engineering design, planning and project management services in the rail sector.

Corus: renowned for its rail products, as well as an extensive range of consultancy services.

Halcrow: one of the world's leading engineering consultancies, with an extensive list of clients across the globe.

项目监理, 还是北京地铁1号和2号线升级项目合资企业成员。

机场

资源和能力

英国的机场行业经过多年发展, 现已成为一个全球的领导者, 拥有快速、有力响应当今行业关键挑战的能力。Halcrow、Mott McDonald、Atkins、Arup以及Lagan Construction等设计公司、建筑设计公司和工程公司采用最新技术帮助世界各地的运营商提升机场拓展能力。英国公司的业务几乎涵盖机场行业的所有专业领域, 包括保安、候机楼内部设计、零售、商业、专用设备、咨询服务、信息技术解决方案、行李与货物运输。

建筑设计/土木工程

英国的建筑设计师和土木工程师设计过许多世界最大的机场项目, 包括伦敦西斯罗机场的5号航站楼、北京机场3号航站楼、马德里巴哈拉斯机场、吉隆坡机场和印度德里机场。主要企业包括Foster + Partners、Richard Rogers、HOK以及Pascall + Watson。

安全

英国的技术与专业人才正在帮助世界各国的机场应对安全挑战。Serco、Qinetiq、Smiths

Detection等主要公司在为世界各地安装最新技术方面发挥着领导作用。

环境

随着世界各地的机场积极投资, 减少对环境的影响, 他们越来越求助于英国的专门技术和经验。这在新机场设计和早期蓝图规划中得到了体现。英国在该领域的重要学术机构包括曼彻斯特城市大学, 该校开设了有关机场可持续发展和减少碳排放的方法等方面的专业课程。

行李传送/货运

英国在国际货物运输方面中发挥着核心作用, 在货物、行李传输与运送技术方面, 积累了几代人的经验。Menzies Aviation、英航货运部 (British Airways World Cargo) 以及Alstec都采用最新技术开发出了现代化的系统。

专业设备

许多英国公司专门从事机场设备的生产和供应, 例如Douglas Equipment公司提供的现代飞机牵引车; SEV公司提供专用电动行李车。英国公司提供的其他专用设备包括高效照明产品、停机坪铺设、驱鸟技术等等。

航空管制

英国拥有这一重要领域的领先企业。例如, 国家空中交通服务公司

(NATS) 和Serco每年管理的、飞经世界上一些最繁忙、最复杂空域航班达2.2亿班次。他们提供空中交通管理 (ATM) 技能、产品和咨询服务。

候机楼内部装潢

随着机场候机楼创收与顾客体验成为人们关注的焦点, 齐备的商业设施和内部装潢设计发挥着日益重要的作用。Alpha Group便是英国机场内的领先零售商。

机场交通系统

英国正在开发创新性低碳系统, 用以改进机场的交通体系。例如, Advanced Transport Systems公司正在西斯罗机场5号航站楼推出一种旅客捷运系统, 该系统的无人驾驶小火车 (driverless taxipod) 采用专用轨道, 供在停车场和候机楼之间使用。

- 47 Mott MacDonald: contracted for project supervision for the first section of Central China's Zhengzhou-Xi'an PDL. It is also involved in a joint venture to upgrade Beijing's Metro Lines 1 and 2.

Airports

Resources and Capability

From the early days of aviation, the UK airports sector has grown and developed into a world leader, providing robust, pioneering responses to today's key industry challenges. Designers, architects and engineers from companies such as Halcrow, Mott McDonald, Atkins, Arup and Lagan Construction are enabling operators around the globe to develop their airports using the latest technology. UK firms cover nearly every discipline in the sector, including security, terminal interiors, retail, commercialisation, specialist equipment supply, consultancy, IT solutions and baggage and cargo handling.

Architectural Design/Civil Engineering

UK architects and civil engineers have designed a number of the world's largest airport developments, including Heathrow's Terminal 5, Beijing Terminal 3, Barajas Airport in Madrid and Kuala Lumpur and Delhi Airports. Key UK players include Foster + Partners, Richard Rogers, HOK and Pascall + Watson.

Safety and Security

UK technology and talent are helping airports around the world rise to safety and security challenges. Key companies such as Serco, Qinetiq and Smiths Detection play leading roles in installing the latest technologies across the globe.

Environmental

As airports around the world look to invest in initiatives to reduce their environmental footprints, they are increasingly looking to UK expertise. This expertise is being incorporated in new terminal designs and early-stage masterplanning. UK specialists in this area include Manchester Metropolitan University, which teaches courses on airport sustainability and ways to reduce carbon footprint.

Baggage Handling/Cargo

The UK has a central role in world cargo and has had generations of experience in freight and baggage-handling development. Menzies Aviation, BA World Cargo and Alstec have all developed modern systems using the latest technology.

Specialist Equipment

A number of UK companies specialise in airport equipment, including Douglas Equipment, which supplies modern aircraft tow tractors, and SEV, a supplier of electric baggage vehicles. UK companies also provide specialised equipment in areas such as

efficient lighting, apron paving and bird-scare technology.

Air Traffic Control

The UK has leading companies covering this important area. NATS and Serco, for example, handle 220 million flights per annum through some of the busiest and most complex airspace in the world. They provide ATM skills, products and consultancy services.

Terminal Interiors

Commercial facilities and interior design are playing increasingly important roles as revenue generation and customer experience take centre stage within the airport environment. They are in evidence within leading UK airport retailers such as Alpha Group.

Airport Transport Systems

New innovative, low-carbon systems are being developed in the UK to improve airport transit systems. Advanced Transport Systems, for example, is introducing a driverless taxi pod at Heathrow's Terminal 5 to and from the car parking area on a special dedicated track.

高新技术

Advanced Technologies

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- 英国是生命科学领域内富有创造力和成果产出能力的全球中心，能有效地帮助企业将创新成果转换为商业市场上的成功
- 英国的生命科学产业具有世界级研究水平和卓著的成绩记录，能提供解决全球和地方医疗卫生问题的高效创新方案，能汇集公共与私营两大部门的资金以加快创新流程，并能通过科研界与企业界的合作开辟研究成果进入市场的通道。

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- The UK is a global centre for life science creativity and delivery, enabling our businesses to drive innovation through to market success.
 - With its track record of world class research, the UK life sciences industry produces the most innovative, effective solutions to global and local health issues, bringing together funding from private and public sources to accelerate the flow of innovation and create routes to market through scientific and business collaboration.

商业解决方案：生命科学 Business Solutions: Life Sciences

英国在许多医疗产品与服务领域具备世界一流的资质,能为中国提供推动其雄心勃勃的医疗卫生改革计划所需要的卓越技能,包括医院管理能力、初级医疗保健人员的培训、帮助医护人员掌握糖尿病治疗与管理方法。

体外诊断

英国在开发体外诊断产品方面堪称出类拔萃,可提供的产品种类繁多,从各类免处方产品到检测工具、试剂、仪器仪表等专用诊断设备,一应俱全。英国的体外诊断行业还推出了大量辅助产品,例如配合诊疗设备使用的软件、用于检查系统性能的控制解决方案,并能为用户提供信息与培训。

业内主要英国公司包括:

Biotec Laboratories: 制造并在全球范围内销售医学实验室诊断器具和细菌学产品。

该公司的专业领域包括肺结核诊断产品。

Newmarket Laboratories: 开发与生产治疗传染病所用的优质免疫诊断学设备,客户包括欧洲各国的国家血液供应部门。

Randox Laboratories: 临床化学试剂与设备制造商。

3M Healthcare: 已开发出BacLite系统,能对MRSA(抗药性耐甲氧西林金黄色葡萄球菌,俗称“超级病菌”)进行迅速检测。采用这项技术可更快地获得化验结果,明确病菌携带体。

成像技术

英国拥有大量世界一流的成像企业,英国的科研人员在开创新颖的成像方法及利用数字成像、超声与分子成像等现有技术方面的创新能力尤其强大。成像创新领域的成就有助于疾病的早期发现和治疗。

主要英国组织包括:

Aston University (伯明翰阿斯顿大学): 拥有精湛的非侵入性成像技术及核磁共振(MRI)技术改进方面的研究能力。

Astron Clinica: 该公司开发出皮肤成像专利技术,该技术采用光分析皮肤成分,可深入到皮肤表层以下2毫米,使医生能看到皮肤以下的情形,帮助医生能更准确地诊断、治疗和监控皮肤状况和皮肤病。

Optos plc: 视网膜成像设备的世界领导者,能在0.25秒内一次捕捉产生约为视网膜82%的高分辨率图像。

创伤护理和高级创伤护理

英国是创伤护理市场上的全球佼佼者,有四家大型创伤护理公司或在英国拥有制造设施。

业内主要英国公司包括:

Activa Healthcare: 生产一种处方医用袜产品,用于治疗静脉曲张、腿溃疡和软组织损伤、扭伤及挫伤等疾病。

Advanced Medical Solutions: 用医用胶粘剂作为护肤屏障。

Johnson & Johnson: 强生公司的高级创伤护理产品全球开发中心设在英国。主要产品包括具有优异吸水特性的囊水肿创伤敷料,这种敷料能保持伤口湿润,创造伤口愈合所需要的最佳环境。

Smith & Nephew: 该公司的全球生产中心设在英国,世界上的高级创伤护理产品25%都是在这里制造的。

骨科医疗

人口老年化和生活习惯的改变意味着骨科医疗产品市场正在迅猛增长。骨科医疗是英国特别强大的医疗分支行业,主要公司包括:

Biocomposites: 开发与制造用于组织再生的钙复合物制备装置。

- 51 The UK has excellent credentials as a provider and source of excellence for many of the healthcare products and services China will need to take forward its ambitious reform programme - for example, hospital management, training of primary care health workers and helping them implement a strategy for treating diabetes. The sub sets listed below are specific areas where the UK can help.

In-Vitro Diagnostics

The UK excels in the development of in-vitro diagnostic products, ranging from over-the-counter products to specialist diagnostics such as test kits, reagents and instrumentation. The In-Vitro diagnostics industry also produces a number of accessory products like software programmes to run the instruments, control solutions to check the performance of the systems in addition to supplying information and training for users.

Randox Laboratories: Manufacturer of clinical chemistry reagents and equipment.

Newmarket Laboratories: Development and production of high-quality immunodiagnostics for infectious diseases and supplier to national blood supply services throughout Europe.

3M Healthcare: Developed the BacLite system, which enables rapid testing for MRSA. The technology leads to faster processing and production of results, identifying carriers of the bacteria.

Biotec Laboratories: Manufactures medical laboratory diagnostics and bacteriology products and distributes them worldwide. The company markets products for the detection of tuberculosis.

Imaging

The UK is home to several of the world's leading imaging organisations, with UK researchers having a particular strength in the innovation of new ways of imaging and the adaptation of existing technologies, such as digital imaging, ultrasound and molecular imaging. Achievements in imaging innovation are leading to the earlier detection and treatment of disease.

Aston University: Home to research on non-invasive imaging techniques and improvement of MRI technology.

Optos plc: Global leader in retinal imaging devices, can produce high-resolution images of approximately 82 per cent of the retina in a single capture in 0.25 seconds.

Astron Clinica: Developed its own method of skin imaging which uses light to analyse skin components to a depth of 2mm beneath the surface, enabling the clinician to look under the surface of the skin, helping clinicians diagnose, treat and monitor skin conditions and diseases more accurately.

Wound Care and Advanced Wound Care

The UK is a global player in the wound care market, with four of

the world's leading wound care companies being based, or having manufacturing facilities here.

Smith & Nephew: Has its global manufacturing site in the UK and manufactures 25 per cent of the world's advanced woundcare products.

Johnson & Johnson: Has its worldwide centre for the development of advanced wound care products in the UK. Its key products include highly absorbent hydrocellular dressings to keep wounds moist and maintain an optimum environment for improved healing.

Advanced Medical Solutions: Uses medical adhesives as a barrier for the protection of skin through the production of a liquid barrier film that is painted on to the skin.

Activa Healthcare: Produces prescription hosiery to help with conditions such as varicose veins, leg ulcers and soft tissue injuries as well as sprains and strains.

Orthopaedics

Aging populations and changing lifestyle habits mean that the market for orthopaedic products is growing rapidly. Orthopaedics is a sector in which the UK is particularly strong.

Smith & Nephew: Their York research centre is leading the way on the production of new materials – from improved knee replacements to extending the life of hip replacements by reducing wear and tear.

Biomet UK: 制造优质植入产品。

Smith & Nephew: 该公司设在约克的研究中心正在率先生产各类新材料——从更先进的膝关节到延长人工髋关节的防磨损性能和耐用性。

再生医学

再生医学是一门重要且发展迅猛的新兴学科, 具有治疗多种疾病的强大潜力。该学科涵盖范围极广, 从新颖的药物到基于细胞的治疗方法, 例如干细胞和组织工程学。英国处于该领域学术研究和商业应用的世界领先地位, 并已建立起一个先进且具人性化的监管和伦理框架。

主要英国公司包括:

Stem Cell Sciences: 为干细胞研究和新药研制市场提供产品和前沿技术。

University of Nottingham (诺丁汉大学): 拥有英国第一个专注于再生模拟的大型组织工程研究中心。

糖尿病控制

2001年英国实施了一项糖尿病治疗策略, 后续研究结果表明, 糖尿病护理水平得到明显提高。例如, 越来越多的患者能获得有助于预防或推迟并发症的关键性测试与测量。

该领域的主要英国公司包括 Diabetes UK和Axis-Shield, 他们提供最新的诊断服务并不断在开发新疗法。

心脏病学

心脏病和心血管病是中国医疗领域的一个重要关注点, 英国的科研界在该领域颇有建树。例如, 纽卡斯尔大学的研究人员正在开发一种能减少测量误差的智能型血压检测装置, 并探寻如何采用非侵入方式来评估心脏病。

该领域的主要英国公司包括:

Cardionetics: 提供用于诊断、监测和普查的新型软件解决方案。该公司已开发出一种智能型心率监视器, 这种监视器能自动实时输出心电图, 使住院病人的比例降低了60%。

Kimal: 生产各类与心脏病学有关的无菌操作包, 年产量超过300,000件, 产品出口到22个国家。该公司还制造安装起搏器所需要的各种心脏导管及辅助器件。

临床研究

英国制药业每年的研发开支逾60亿英镑, 其中相当大一部分投资于新药的临床试验, 以保持其在临床研究领域的世界领先地位。

主要组织包括临床签约研究协会 (Clinical Contract Research Association), 这是一个行业支持和游说机构, 代表全英国为制药及生物技术行业提供临床签约开发服务的所有公司企业的利益。

医疗耗材及呼吸机

Smiths Medical: 提供种类齐全的医疗耗材, 产品覆盖通气、血管通路、气管切开术、呼吸系统等各个领域。该公司拥有12大知名品牌, 在设计与生产高质量呼吸机方面更是出类拔萃。

- 53 UK-based companies specialising in orthopaedics include Biomet UK which manufactures high quality implants and Biocomposites which develops and manufactures synthetic calcium composite devices for tissue regeneration.

Regenerative Medicine

Regenerative medicine is an important and rapidly emerging area of science with the potential to treat a number of diseases and disorders. It spans everything from novel pharmaceuticals through to cell based therapies including stem cells and tissue engineering. The UK has a major academic and commercial lead in this area and has an advanced and sensible regulatory and ethical framework.

Stem Cell Sciences: provide products and cutting-edge technologies to the stem cell research and drug discovery markets.

University of Nottingham: houses the first large tissue engineering group in the UK which is focused on the stimulation of regeneration.

Control of Diabetes

A strategy for treating diabetes was implemented in the UK in 2001 and follow-up has shown that there are clear improvements in the level of diabetes care being provided. For example, more and more people are getting the key tests and measurements they need to help prevent or delay the complications of the disease.

Diabetes UK, Axis Shield: offer latest diagnostic services and developing new therapies.

Cardiology

Heart disease and cardiovascular disorders are a major concern in China and the UK's research community has a strong interest in this field.

Researchers at the University of Newcastle are developing an intelligent blood pressure measurement device to reduce measurement variability, as well as looking at how the assessment of heart disease can be made less invasive.

Cardionetics: Provides innovative software solutions for diagnostic, monitoring and screening. It has developed an intelligent heart monitor that provides real time automated ECGs, saving hospital referrals from GPs by 60 per cent.

Kimal: Produces a range of sterile procedure packs for use in cardiology, manufacturing more than 300,000 packs every year for export to 22 countries worldwide. The company also manufactures a variety of cardiac catheters and accessories for use in the fitting of pacemakers.

Healthcare Infrastructure

There are a number of consultancy practices in the UK specialising in advising governments on how to structure and organise healthcare services.

International Hospitals Group: Offer healthcare consultancy worldwide from the design of small, mobile clinics to the development of large general hospitals.

PRP Architects: Specialise in working on acute, intermediate and primary healthcare projects. Projects cover the procurement and design of buildings including community hospitals, new wards and projects to upgrade existing hospital facilities.

Clinical Research

The pharmaceutical industry spends over £6 billion on R&D in the UK, investing significant amounts into clinical trials and positioning itself as a world leader in clinical research.

Clinical Contract Research Association (CCRA): The CCRA is a support and lobbying body for all UK-based organisations that provide clinical contract development services for the pharmaceutical and biotechnology industries.

Consumables & Ventilators

Smiths Medical: offers a comprehensive portfolio of medical consumables covering various areas, such as ventilation, vascular access, tracheotomy, respiratory etc. It has 12 of the most respected and easily recognisable brands and excels in designing and producing high-quality ventilators.

高新技术

Advanced Technologies

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- 英国拥有欧洲最大的信息与通讯技术 (ICT) 产业，业内员工总数超过一百万人，对GDP的贡献比例为10%。
- 英国是欧盟境内吸引软件公司最成功的国家——投资额占欧盟总投资的28%。
- 英国有73个开设物理、计算机和电子电气工程专业的大学系部获得5或5+英国高等院校科研评估 (RAE rating) 得分

- 55
- The UK is home to Europe's largest ICT industry, employing over 1 million people and contributing 10 per cent of UK GDP.
 - The UK is the most successful location in the EU for attracting software companies – the UK accounts for 28 per cent of total investment in the EU.
 - There are 73 University departments teaching Physics, Computing and Electronic & Electrical Engineering with a 5 or 5* RAE rating.

商业解决方案：信息与通讯技术
(实施“数字英国”计划)
Business Solutions: Information
and Communications Technology
(Incorporating Digital Britain)

信息与通讯技术 (ICT) 属于大型产业, 涉及众多的技术和应用领域。英国属于知识密集型经济体, 拥有开放而宽松的监管环境, 为企业的发展和壮大提供一个积极的创新市场。

通讯

业内主要英国公司包括:

Aircom International: 独立的网络管理工具与服务提供商, 专门从事IP和蜂窝网络端对端网络规划、共享、服务外包和运营支持系统 (OSS) 优化。

Esendex: 商业通讯领域的一家国际供应商, 为全球5000多家公司提供Web SMS、Email SMS、PC SMS、SMS API 以及各类其他通讯服务。

NDS: 为付费电视运营商提供成熟技术, 使其能安全地将数字内容传送给电视机、机顶盒、数字录像机、PC电脑、便携式媒体播放器、可移动存储介质以及其他移动器件, 助其创造收益。

Palringo: 提供具有多种通讯功能的组合式移动服务: 对讲机式语音通讯 (语音即时通讯); 即时通讯的实时文字聊天功能; 并能共享照片、地点和在线状况——所有这些都能够在不借手机的情况下通过多种移动和PC电脑平台得以实现。

电子业

业内主要英国公司包括:

ARM: 该公司设计的芯片技术是各类先进数字产品的核心, 包括无线、网络技术、消费者娱乐解决方案、成像技术、汽车电子、安防和储存器件等等。ARM是知识产权 (IP) 授权公司, 提供参考设计和IP芯核、图形处理器、使能软件 (enabling software)、单元库 (celllibraries)、嵌入式存储器、高速连接性产品、各类外围设备和开发工具。

Elonics: 一家无生产线 (fabless) 的混合信号半导体设计公司, 专业从事多波段射频集成电路产品的设计与开发。该公司的 DigitalTune™ 专利产品是一款创新射频平台, 是众多可重新配置 CMOS RF 前端产品的基础。

Imagination Technologies: 提供各类消费电子产品中不可缺少的多媒体及通讯半导体IP芯核。产品授权给大型半导体制造商, 供其在高度复杂的芯片级系统器件中使用。

Innovision Research and Technology: 为无线连接性解决方案提供创新的、引领市场的集成电路产品。该公司的主营业务是短距离数据通讯, 包括器件对器件和各种无源或有源产品, 尤

其注重于近场通讯和无线电射频识别 (RFID) 解决方案。

Plastic Logic: 卡文迪什实验室 (Cavendish Laboratory) 业务剥离而产生的一家公司, 它主要使用塑料电子技术开发各类产品。

Sondrel: 提供从RTL到GDSII的全方位专业设计服务, 包括布局与布线优化、合成/优化、提取和验证。

零售与物流

业内主要英国公司包括:

Consult Hyperion: 独立的IT咨询公司, 拥有21年为政府部门、金融机构、电信运营商及其供应商提供咨询服务的经验, 帮助客户探寻如何利用高科技支付账款、身份管理、售票验票和其他电子交易服务。目前该公司向世界各地公司和组织推出的服务包括非接触式支付、近场通讯、身份卡证、移动汇款以及MIFARE票务系统策略迁移。

Ubisense: 提供15厘米、三维精确度、一秒钟之内的实时响应, 可在众多标准网络的高难度环境下保持长期稳定运行。

电子医务

业内主要英国公司包括:

- 57 ICT is a broad-based sector embracing many different technologies and applications. The UK has a knowledge-driven economy and a liberalised and light-touch regulatory environment and provides a stimulating and innovative market in which companies can develop and thrive.

Communications

Key UK companies include:

Aircom International: independent provider of network management tools and services, specialising in end-to-end network planning, sharing, outsourcing and OSS optimisation for IP and cellular networks.

Esendex: international provider of business communications offering Web SMS, Email SMS, PC SMS, SMS API and a range of other communication services to over 5,000 companies across the world.

NDS: creates proven technologies that allow pay-TV operators to generate revenues by securely delivering digital content to TVs, set-top boxes, digital video recorders, PCs, portable media players, removable media and other mobile devices.

Palringo: mobile service that combines walkie-talkie style voice (vocal instant messaging); the real-time text chat functionality of instant messaging; and the ability to share pictures, location and presence – all within the context of a discussion across multiple

mobile and PC platforms with handset independence.

Electronics

Key UK companies include:

ARM: designs the technology that is at the heart of advanced digital products, from wireless, networking and consumer entertainment solutions to imaging, automotive, security and storage devices. It is an IP-licensing company providing reference designs and IP cores, graphics processors, enabling software, cell libraries, embedded memories, high-speed connectivity products, peripherals and development tools.

Elonics: a fabless mixed-signal semiconductor company specialising in the design and development of multi-band radio frequency IC products. It has developed an innovative radio frequency architecture called DigitalTune™ that is the foundation for a family of reconfigurable CMOS RF front-end products.

Imagination Technologies: provides multimedia and communications semiconductor IP cores that drive consumer electronics products. It is licensed by leading semiconductor manufacturers for use in highly complex System-on-Chip devices.

Innovision Research and Technology: delivers innovative and market-leading ICs for wireless connectivity solutions. Its primary focus is on short-range data communication from one device

to another, passive and/or active, with a special emphasis on near-field communications and RFID solutions.

Plastic Logic: was spun out of Cavendish Laboratory to develop a broad range of products using plastic electronics technology.

Sondrel: specialises in offering full RTL to GDSII design services, including Place and Route, synthesis/ optimisation, extraction and verification.

Retail and Logistics

Key UK companies include:

Consult Hyperion: independent IT consultancy with more than 21 years' experience of advising government, financial organisations, telecoms operators and their suppliers how to exploit new technology for payments, identity management, ticketing and other electronic transactions services. It is currently advising organisations around the world on contactless payments, near-field communications, identity cards, mobile money transfers and migration strategies for MIFARE-based ticketing systems.

Ubisense: provides 15cm 3D accuracy, real-time sub-second response and proven robustness in challenging environments across standard networks.

e-Healthcare

Key UK companies include:

BT Health: delivers large-scale e-health programmes worldwide.

BT Health: 全球范围实施大规模电子医务计划。

Toumaz: 提供全面的技术平台, 使医务人员通过无线、智能化、低成本的方式持续监测人体健康状况。

Tunstall Group: 提供远程医疗 (telehealth) 解决方案, 能为慢性病患者在自己的家庭环境下提供量身定制的医疗护理服务。

企业系统软件与服务

业内主要英国公司包括:

Enforce-IT: 提供便于相关部门有效管理执法活动的各类产品与服务。

Inforsense: 提供各种高度灵活、可预测、视觉化的企业商务智能和报告软件。

Sage: 提供各类商务软件与服务, 包括财务管理、薪金支付系统运营、客户与供应商关系管理、业务规划和人事部门支持软件。

Sophos: IT安防与控制领域的世界领导者, 能针对已知和未知恶意软件、间谍软件、侵入软件、用户并不想置于计算机中的程序、垃圾邮件以及违规行为, 提供防卫和全面的网络访问控制。

- 59 Toumaz: provides the complete technology platform to allow healthcare providers to monitor the human body continuously, wirelessly, intelligently and at low-cost.

Tunstall Group: provides telehealth solutions offering a way of delivering tailored care for patients with long-term conditions in their own homes.

Enterprise Systems Software and Services

Key UK companies include:

Enforce-IT: offers a range of products and services which enable organisations to manage enforcement activities effectively.

Inforsense: provides a suite of highly agile, predictive and visual enterprise business intelligence and reporting software.

Sage: offers a range of business software and services, including software to manage finances, run the payroll, manage customer and supplier relationships, plan the business and support the HR function.

Sophos: a world leader in IT security and control, defending against known and unknown malware, spyware, intrusions, unwanted applications, spam, and policy abuse, and providing comprehensive network access control

高新技术

Advanced Technologies

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- 英国是世界第6大制造国, 制造业每年的研发投入逾100亿英镑
- 在全球范围来说, 英国航空航天业规模仅次于美国, 年产值为198.4亿英镑, 资金投入29.2亿英镑。英国业内公司的新订单价值443.8亿英镑
- 太空产业如今已是英国附加值最高的产业之一。该产业支撑着全英国的70,000个就业, 经济贡献将近70亿英镑
- 全球10大汽车制造商中有6家, 20家汽车零部件制造商中有19家, 都已在英国设立制造基地
- 十个一级方程式赛车车队当中有六个设在英国——雷诺 (Renault)、威廉姆斯 (Williams)、迈凯轮 (McLaren)、红牛 (Red Bull Racing)、印度动力车队 (Force India) (红牛和印度动力车队的大本营均设在银石)、以及新成立的Brawn F1
- 许多英国建筑设备制造商的出口业务占其总业务的80%以上, 产品出口到200多个国家。英国公司立足于先进技术与生产的最前沿, 制造具有长期可靠性、符合严格质量标准的高质量产品, 并提供全面的售后服务

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- The UK is the world's 6th largest manufacturer and manufacturing industries annually spend more than £10 billion on R&D.
 - Globally the UK Aerospace industry is second only to the US, with a turnover of £19.84 billion expenditure of £2.92 billion. New order intake in the UK is £44.38 billion.
 - Space is one of the highest value-adding sectors in Britain today. It supports up to 70,000 jobs throughout the UK and contributes nearly £7 billion to the economy.
 - Six out of the top ten global vehicle makers and 19 of the top 20 auto parts makers have a UK manufacturing presence.
 - Six out of the ten Formula One teams are based in the UK – Renault, Williams, McLaren, Red Bull Racing, Force India (Red Bull and Force India are both based at Silverstone) and the newly formed Brawn F1.
 - Many UK construction equipment manufacturers export over 80 per cent of their production to more than 200 countries. UK companies are at the forefront of advanced technology and production and manufacture products of proven reliability to high quality standards with a full after sales service.

商业解决方案：先进工程行业
Business Solutions: Advanced Engineering

航空航天

机翼: 英国是拥有复杂飞机机翼设计、测试、整合与制造能力的为数不多的几个国家之一。世界上所有的大型飞机的机翼50%是由英国公司生产的。即将在英国制造的空中客车A350型客机的复合材料机翼将是世界上最大的复合材料机翼。

Airbus UK (空中客车英国公司): 拥有机翼设计与制造经验和技​​术。位于Filton的设计中心(空客的六个设计中心之一) 负责管理所有型号的空客飞机机翼的设计。该中心还负责起落架和燃油系统的设计整合。除了设计工程之外, Filton还制造机翼构件, 并将已装配的机翼组件运送至位于威尔士北部的Broughton去进行总装。Broughton总装基地负责总装所有空客系列机型的机翼。

GKN: 这是一家为各主要固定式和旋翼式飞机机翼平台供应机翼组件的一级供应商。该公司是复合材料与金属材料技术领域的领先者, 军用和民用市场并重。

Spirit Aerosystems (Europe) Ltd: 空客最大的机身供应商, 并且是大型机翼结构的关键供应商, 获得空中客车飞机项目的“终身合同”, 交付的产品涵盖所有空客机型, 包括A380型新客机。

飞机发动机: 英国是飞机发动机供应领域的世界领导者。英国为波音787、空客380等大型飞机计划提供飞机发动机。罗尔斯·罗伊斯发动机更已在世界各地600多架飞机上使用。

Rolls-Royce (罗尔斯·罗伊斯公司): 拥有领先世界的宇航业务、庞大的产品组合和强大的燃气轮机实力。享有世界第二大发动机制造商盛誉, 是世界最大的现代、大型涡扇发动机和商用喷气机供应商。世界上的600家航空公司、4000家公务机和通用飞机运营商皆使用罗尔斯·罗伊斯公司的发动机, 服役中的罗尔斯·罗伊斯公司喷气发动机总数为12,400台, 遑达系列发动机的市场份额占50%。

可持续航空业: 英国是世界第一个可持续航空战略的领路人, 为环境技术的研发投入了巨额资金。例如, 英国的商业界正与政府联手, 共同维护英国在开发与生产宇航和汽车业先进复合结构领域的领先地位。这方面的例子包括英国建造的奔驰SLR迈凯轮赛车 (Mercedes SLR McLaren)、空中客车A380机翼, 以及GKN制造的A400m翼梁。

飞行器系统: 英国拥有众多飞行器系统领域的精湛技术, 包括作动机制、机身设备、航空电子、

计算机系统和软件、弹射座椅、环境控制与生命保障、飞行及燃油系统、地面支持与通讯设备, 以及起落架。在起落架方面, 举例来说, 梅西埃-道蒂公司 (Messier-Dowty) 的英国分公司参与了供应众多空中客车和福克 (Fokker) 短途支线飞机起落架的研究、开发与制造。Martin-Baker则是弹射座椅领域的世界领导者。英国制造的飞机弹射座椅在全球的安装总量已超过75,000套。

汽车

汽车生产与销售: 英国有生产汽车与发动机的悠久历史, 去年英国生产了约160万辆汽车。尼桑 (Nissan) 等公司看准了英国的实力, 该公司的畅销车逍客 (Qashqai) 便是在英国设计、制造并且从英国出口到世界其他国家。

英国的出租车制造商London Taxi International与上海吉利合资, 制造偶像型伦敦出租车。上海车厂已于2008年12月投产, 生产的车辆销往全球。

捷豹-路虎、劳斯莱斯、宾利和阿斯顿·马丁等英国著名的豪华车品牌都已进入中国市场, 并已在中国各大城市和省份设立了经销网点。在英国独家制造的宝马迷你车 (Mini) 也深受中国消费者的欢迎, 迄今已售出数千台。

63 Aerospace

Aero wings

The UK is one of the few countries with the capability to design, test, integrate and manufacture complex aircraft wings. UK companies produce wings for 50 per cent of all large aircraft in the world. The A350 composite wing that will be manufactured in the UK will be the largest composite wing anywhere in the world.

Airbus UK: Expertise in the design and manufacturing of wings. The design office at Filton – one of six within Airbus – manages the design of all wings for the whole Airbus family of aircraft. It is also responsible for the design integration of the landing gears and fuel systems. As well as design engineering, Filton manufactures wing components and assembles parts prior to delivery to Broughton for inclusion in wing assembly. The Broughton site is responsible for assembling the wings for all Airbus aircraft.

GKN: A First Tier supplier working on every major fixed and rotary-wing aerospace platform. A leader in composite and metallic technologies, equally focused on military and civil markets.

Spirit Aerosystems (Europe) Ltd: The largest airframe supplier to Airbus and a key supplier of major wing structures with “life of program” contracts, delivering products across the entire Airbus range, including the new A380 aircraft.

Aero engines

The UK is a world leader in aero engines supplying major aircraft programmes such as the Boeing 787 and Airbus 380. Rolls-Royce engines are used by more than 600 airlines around the world.

Rolls-Royce: world-leading aerospace business with a wide product portfolio and major strength in gas turbine technology. Established as the world’s number two engine maker overall, number one in modern, large turbofans and supplier of business jets. 600 airlines and 4,000 corporate and utility operators rely on Rolls-Royce power and the company has 12,400 jet engines in service, the Trent family market share being 50 per cent.

Sustainable aviation

The UK is leading the way with the world’s first sustainable aviation strategy, supported by considerable R&D investment into environmental technology. For example, UK businesses and Government are working together to maintain the UK’s leading position in the development and production of advanced composite structures for aerospace and automotive application. Examples include the British built Mercedes SLR McLaren, the Airbus A380 wing and the A440m wing spar built by GKN.

Aircraft systems

The UK is expert in all areas of aircraft systems including actuation, airframe equipment,

avionics, computer systems and software, ejection seats, environmental and life support, flight and fuel systems, ground support and communications equipment and landing gear. In landing gear, eg the UK arm of Messier-Dowty is involved in the research, development and manufacture of landing gear, supplying much of the Airbus passenger aircraft and Fokker commuter aircraft. And in ejection seats, Martin-Baker is a world-leader. Over 75,000 UK-built ejection seats have been fitted to aircraft worldwide.

Automotive**Vehicle production and sales**

The UK has a rich history of vehicle and engine production and last year produced some 1.6m vehicles. Companies like Nissan recognise the strengths of the UK and their successful Qashqai is designed, engineered, built and exported from here.

London Taxi International has a joint venture in Shanghai with Geely to manufacture the iconic London Taxi. Production in Shanghai began in December 2008 for worldwide sales and distribution.

The UK’s leading premium brand manufacturers such as Jaguar Land Rover, Rolls Royce, Bentley and Aston Martin are all present in China with a wide geographical range of distributors and dealers. BMW’s Mini, manufactured solely

今年二月, 捷豹-路虎签订了一份为中汽南方投资集团提供13,000台汽车的订单。

设计工程: 英国有很多世界级的独立设计与工程公司。如今已有十多家英国设计工程公司在中国与中国的本土汽车制造商积极进行合作。他们的客户皆为国际性汽车厂商和一级供应商。这些公司总共占有约20%的全球独立签约设计工程市场。他们从事的很多工作都具有很强的保密性, 因为其设计结果可能会成为客户的知识产权, 而且信息传播的最终控制权也会为客户所掌握。

在业内约50家公司当中, 每家公司都有多种能力, 其中包括产品概念、传动系设计与开发、原型设计与开发、安全、材料与复合技术、电子技术、精整精饰、测试、性能模拟、生产与培训。

传动系设计与开发是多家英国设计工程公司能提供的一项重要能力。Ricardo是一家技术、产品创新、工程解决方案和战略咨询领域的领先供应商, 能够应对高难度挑战, 包括业务战略与重组、流程再造、产品设计、开发、工程、测试和系统整合。Zytek Group集团公司最初为一级方程式赛车而设计的电子发动机管理系统的应用范围现已扩大到包括本田、小精灵 (Smart) 和通

汽 (GM) 在内的其他车商。Zytek 亦为Modec电动运输卡车提供电动动力总成。从事传动系设计工程的其他公司包括Caparo Vehicle Technologies、Mahle Powertrain、Prodrive Automotive Technology以及RLE International。

Ricardo和Mahle Powertrain专业实施发动机 (包括混合动力发动机) 的开发计划。Lotus Engineering、MIRA、Arup Vehicle Design以及Prodrive拥有服务全球客户的丰富经验, 并在积极与中国车商合作, 实施汽车开发项目。

CGI和Technicon Design则是与中国车商积极进行合作的两个专家级设计与造型咨询顾问公司。

以上八家英国公司都在上海设有办事处。

此外, Contechs Consulting (内部装璜及零组件设计与开发)、Millbrook (产品及零组件开发与测试)、Revolve Technologies和Cosworth (发动机及混合动力发动机设计与开发) 等公司凭借其世界级的工程服务能力也在积极寻求进入中国汽车市场的机会。

零组件制造与供应: 英国的一级汽车零组件制造商亦在中国的汽车行业发挥着重要作用。著名的公司包

括GKN (传动轴)、Pilkington (挡风玻璃)、Tomkins (各类零部件)、TI Automotive (液体和燃油输送系统) 以及Johnson Matthey (催化转化器)。英国的许多二级和三级零组件供应商也都已活跃在中国市场上, 例如Hamlin (开关和传感器)。

业内有众多提供测试服务的公司, 例如Anthony Best Dynamics, 他们可提供全方位的服务及设备, 包括由丰田公司安装的SPMM 4000 HC (运动车身悬挂参数测量设备)。Tickford Powertrain Test公司的传动系统操纵件, 用来进行发动机、传动系统和整车的测试。

MIRALtd公司 (原名: 汽车产业研究协会) 提供的大量服务包括风动实验室、碰撞测试和试车道、产品工程、检测、咨询、认证、研究、培训、软件和标定服务。

汽车业低碳技术: 英国的汽车业具有协作进行低碳汽车研究、开发、展示与部署的强大优势。不仅要实现低碳目标, 而且要实现低成本运行, 因为, 若要实现碳减排指标, 这类汽车必须价格便宜、便于全球消费者购买。协作至关重要, 因为没有哪一个国家兼有实现低成本、低碳车辆目标所需要的技术推动和市场拉动两大优势。英国拥有汽车业界成功合作的长期成绩记录。

65 in the UK, is also a widely popular car in China with many thousands already sold.

In February, Jaguar-Land Rover signed an order to supply 13,000 vehicles to the SCAS investment group.

Design engineering

The UK is home to a number of world class independent design and engineering companies. In China there are more than a dozen British design engineering companies actively working with Chinese vehicle manufacturers. Their clients are international vehicle producers and Tier 1 suppliers. Between them, they probably have 20% of the world's independent contract design engineering market. Much of their work is highly confidential as the results of their work may become the property of their clients who ultimately control the dissemination of information.

Each of the 50 or so companies in the sector shares a number of capabilities which may include product concept, vehicle design, design analysis, powertrain design and development, prototype design and development, safety, materials and composite technology, electronics, refinement, testing, performance simulation, production and training.

Powertrain design and development

A major capability offered by several UK design engineering houses. Ricardo is a leading

provider of technology, product innovation, engineering solutions and strategic consulting able to take on the greatest challenges including business strategy and restructuring, process re-engineering, product design, development, engineering, testing and systems integration. Zytec Group's electronic engine management systems, initially for Formula One and since for other car manufacturers, including Honda, Smart and GM. Zytec also supply the Electric Powertrain for Modec electric delivery trucks. Other companies involved in powertrain design engineering include Caparo Vehicle Technologies, Mahle Powertrain, Prodrive Automotive Technology and RLE International.

Ricardo and Mahle Powertrain specialise in engine (including hybrid engine) development programmes. Lotus Engineering, MIRA, Arup Vehicle Design and Prodrive have extensive experience with world wide customers and are actively engaged with Chinese vehicle manufacturers on vehicle development programmes.

CGI and Technicon Design are specialist design and styling consultancies and are also working with a range of Chinese vehicle manufacturers.

All these eight companies have offices in Shanghai.

In addition to these, companies such as Contechs Consulting

(interior trim and component design and development), Millbrook (product and component development and testing), Revolve Technologies and Cosworth (engine and hybrid engine design and development) are also actively seeking to break into the Chinese automotive sector with their world class engineering services.

Component Manufacture and Supply

British Tier 1 automotive component manufacturers are also playing a significant role in the Chinese automotive sector. These include GKN (driveshafts), Pilkington (windscreens), Tomkins (various), TI Automotive (fluid and fuel handling systems) and Johnson Matthey (catalytic converters). Many Tier 2 and Tier 3 component supplier from Britain are also active in China, such as Hamlin (switches and sensors).

Testing services are offered by several companies in the sector, including Anthony Best Dynamics who offer a full range of services and equipment including the installation by Toyota of the SPMM 4000 HC (moving body Suspension Parameter Measurement Machine). Tickford Powertrain Test powertrain operations are used to test engines, transmissions, engines and complete vehicles.

The extensive services of MIRA Ltd (formerly the Motor Industry Research Association) include a wind tunnel, crash testing and a test track in addition to product

Cenex是英国的低碳及燃料电池技术的卓越中心。Cenex正在积极支持英国在低碳技术及其在各类机动车(小至两轮轻骑,大至远途载重卡车)应用领域拥有世界领先能力的企业及大学。这些低碳技术包括有助于使用各类低碳能源(例如氢、天然气和高度可再生的生物燃油)的燃烧技术;效率更高的内燃机和传动系统;有助于降低车身重量的轻质材料;能利用制动能源并能降低发动机排气量的混合动力系统;燃料电池和电动汽车技术,包括电机、动力电子技术和电池管理系统。Cenex与技术开发商协作,共同将新颖的低碳车辆纳入小型车队演示项目,同时也与车队运营企业协作,帮助他们学会适应并管理其车队中的新型和新兴的低碳车辆。

Intelligent Energy是一家清洁动力系统公司,该公司拥有多种领先燃料电池和制氢技术,这类技术可与交通、航空航天和国防、分布式发电和移动电源消费市场进行整合。Intelligent Energy研制出多种高科技燃料电池“发动机”,这类发动机如今已成功地很多不同类型的车辆上使用,包括摩托车和运货车。

BBIG公司也已成功地设计和开发大量电动汽车,例如送奶车和送货车。

混合发动机和未来的动力服务英国早已是传统型发动机的制造大国,最近福特汽车公司的投资更进一步扩大了汽车发动机产能,年产量增加了三百万台。Zytek、TRW Conekt等英国公司正在研制混合式和电动传动系统与设备,支持世界各国的车商。

英国大学与汽车业内企业正在联手进行可替代动力领域的大量研究工作。例如,伯明翰大学的汽车技术研究中心正在与捷豹-路虎研究中心(Jaguar-LandRover Research)、Johnson Matthey、Shell Global Solutions UK和Deutz UK联合实施各重大项目,共同开发下列新技术:超清洁高效燃烧技术、新型生物燃油、燃料预处理(燃料重整制氢)及排气后处理、非金属变速齿轮箱和新型发动机。

先进制造

作为世界第6大先进制造国,英国是名副其实的全球供应商,也是服务下列各产业的全球供应链的有机组成部分:航空航天、汽车、国防、油气、医疗器械。英国是许多重量级国际制造商的大本营,例如BAE Systems(英国宇航系统集团)、Rolls Royce(罗尔斯·罗伊斯)、Airbus(空中客车)、GKN、Caterpillar(卡特彼勒)、Ford(福特)、BMW(宝马)

、Honda(本田)等。英国的先进制造业内公司与这些跨国企业密切合作,共同响应航空业减噪减排和汽车业更严格的排放控制等重要需求。英国先进制造领域开发的精益制造工艺与技术能帮助客户提高生产率、灵活性和质量,保证他们在国际市场上的竞争优势。

计量:英国有众多计量领域的著名企业,例如Renishaw、Newall Measurement Systems和Bowers Metrology Group,可为您提供面面俱到的计量解决方案、产品与服务。

精密加工:英国的Lapmaster International等公司能提供对细微公差要求极为严格的机加工工件。业内公司能处理各种尺寸的工件,为全球客户提供最高层级的服务。

快速成型:英国在创造新技术方面处于领先地位,帮助用户加快产品进入市场的进程,知名企业包括Rigibore、Group Rhodes、HK等公司。

制造业软件:英国汇集了众多CAD/CAM软件开发方面的世界领先企业,这些公司专门从事三维设计、制造并检查复杂形状。Delcam、Alphacam、Edgecam等英国公司开发的软硬

67 engineering, testing, consultancy, certification, research, training, software and calibration services

Low Carbon Technology for Motor Industries

The UK's motor industries are well placed to collaborate on low carbon vehicle research, development, demonstration and deployment. The goal is low cost as well as low carbon as these vehicles have to be affordable and therefore accessible for consumers across global markets if carbon reduction targets are to be met. Collaboration is essential as no one country has both the technology push, and market pull required to deliver on the goal of low cost, low carbon vehicles. The UK has a longstanding track record of successful collaborations across motor industry sectors.

The UK's Centre of Excellence for Low Carbon and Fuel Cell Technologies is Cenex. Cenex is actively seeking to support a wide range of companies and universities in the UK with world leading capabilities in low carbon technologies and their application in motor vehicles from 2-wheelers through to long haul trucks. These low carbon technologies include combustion technologies that facilitate the use of low carbon energy sources including hydrogen, natural gas and high renewable content bio-fuels; more efficient internal combustion engines and drivelines; light-weight materials for weight reduction; hybrid systems that capture energy from

braking as well as enabling engine downsizing; fuel cells and electric vehicle technologies including motors, power electronics and battery management systems. Cenex works with technology developers to bring innovative low carbon vehicles into small fleet demonstration projects whilst simultaneously working with fleet operating organisations to help them learn they can live with new and emerging low carbon vehicles in their fleets.

Intelligent Energy is a clean power systems company, with a range of leading fuel cell and hydrogen generation technologies for integration into products in transportation, aerospace and defence, distributed generation and portable consumer power markets. Intelligent Energy has developed a range of high-technology fuel cell "engines" which are now running successfully in a range of vehicles including motorcycles and delivery vans.

BBIG has also successfully designed and developed a wide range of electric vehicles from milk floats to delivery vans

Hybrid Engines and future power services

The UK is already a major manufacturer of conventional engines, with recent investment by Ford Motor Company producing an additional capability of three million vehicles annually. UK companies such as Zyteck and TRW

Conekt are developing hybrid and electric transmission systems and equipment to support the world's vehicle manufacturers.

Much research work in the alternative power sector is being carried out by British universities in conjunction with automotive companies. For example, the University of Birmingham's Vehicle Technology Research Centre is developing new technologies for super-clean and efficient combustion, new bio-fuels, fuel pre-treatment (hydrogen from fuel reforming) and exhaust aftertreatment, non-metallic gears and novel engines in major projects with Jaguar-LandRover Research, Johnson Matthey, Shell Global Solutions UK and Deutz UK.

Advanced Manufacturing

As the 6th largest advanced manufacturer in the world, the UK is a truly global supplier being an integral part of international supply chains for the aerospace, automotive, defence, oil and gas, medical devices sectors. The UK is home to major international manufacturing brands such as BAE Systems, Rolls Royce, Airbus, GKN, Caterpillar, Ford, BMW, Honda and Airbus. UK advanced manufacturers work closely with these firms responding to key drivers such as the need to reduce noise and emissions in the aerospace sector and tighter emission controls within the automotive sector. The latest lean manufacturing processes and

件产品,从概念设计到制模和工具制造,应用范围十分广泛。

制造业仿真: MachineWorks等英国公司提供的软件可准确呈现整个机械工具的视觉效果、制作模型、并预测出机械设备和工具在整个制造过程中的运转情况。

车削、磨削及金属成型: 英国的机床制造商生产种类齐全的机加工设备,从量身订制的机械和液压冲床到提供先进的组合式/CNC数控机床和激光造型机,范围极为广泛。Cincinnati Machine (辛辛那提机械公司)、Bridgeport以及C Dugard等英国公司皆提供世界一流的机床和车削加工中心。的确,600 Group公司拥有欧洲产能最大的机床制造工厂,并且是世界上最大的手动/CNC车床制造商。

切削机床: 该领域的创新技术包括:引进用于钢材车削和磨削的新型嵌入倾斜度以及用于增强切削工具强度、可靠性、耐用性、扩大应用范围以适应不同车间物料的各种发明创造。业内著名的英国企业包括Brooke Cutting Tools、Cogsdill-Nuneaton、Dathan Tool & Gauge等等。

先进材料

先进的材料技术是制造业的基

础,不断推动着诸如汽车、宇航、发电、建筑、保安、医疗卫生、电子产品、消费产品以及零售业等众多领域的创新。然而,材料应用方面的不断发展,加之气候变化带来的挑战以及对可持续性的要求,意味着材料工艺技术必须不断推陈出新,才能满足社会对可持续解决方案的需求。英国的材料业充满活力,拥有强大的专长和丰富的经验,能以新颖的材料解决方案满足这些需要。

就学术水平而言,英国的材料科学与研发长期以来一直享有盛誉,排在世界第四位,仅次于美国、日本和德国。在私营部门和工业材料研究领域,英国拥有众多引以为豪的研究和技术企业,比如:TWI、QinetiQ、NPL、CERAM以及罗尔斯·罗伊斯、英国宇航系统集团、康力斯集团(Corus)、GKN、Hexcel等重量级的公司。英国的协作研究文化可体现在127个材料领域的合作研究项目上,这些项目都是由英国政府的高科技战略委员会(Technology Strategy Board)资助的。

塑性电子材料: 英国是该领域公认的世界领导者。塑性电子技术促进了价格低廉、灵活器件的产生,实现了电子产品和纺织品的集成,并且开创出一系列其他无硅器件。Plastic Logic公司所做

的努力将会使人们的阅读和书写方法发生根本性改变,Exopack Advanced Coatings则是精密镀膜胶片与纸张以及专用基板材料领域的领路人。

结构材料: 英国在开发金属系统方面的世界级专长,结合复合材料方面的优势,意味着英国可为许多领域提供最新的轻型与可回收解决方案。

金属: 英国在开发多种金属系统方面拥有世界一流的技术,这些金属包括钢铁、铝、超耐热合金,钛和镁。这一专长是建立在众多研发机构提供支持的基础之上的,为设计、结构整体性、表面工程、粉末冶金、塑模、流程开发、制备与连接等领域提供强大的创新技能平台。业内有Sheffield Forgemasters、DavyMarkham等知名企业。

塑料: 英国的塑料行业是全球领导者,业内公司活跃在先进技术的最前沿。英国塑料行业在三大核心领域领先于世界,即:材料与添加剂制造、材料加工设备、机械制造。领先企业包括Perrite、Cinepres Gas Injection、MSA Engineering。

纳米技术: 英国在纳米技术研究方面达到国际一流水平,业内公司能通过英国政府的纳米技术

- 69 techniques developed by the UK advanced manufacturing sector, enable customers to improve their productivity, flexibility and quality so they can remain competitive in the global marketplace.

Metrology

The UK metrology sector includes a range of world-leading brands, such as Renishaw, Newall Measurement Systems and Bowers Metrology Group, that offer a broad spectrum of dimensional measurement solutions, products and services.

Precision Machining

UK companies, such as Lapmaster International, machine components to the tightest of tolerances. Firms have the ability to handle all sizes of work piece, and as such provide the highest level of service to their global customer base.

Rapid Prototyping

This is an area where the UK leads in creating new technologies that enable the customer to speed up the 'product to market' with companies such as Rigibore, Group Rhodes and HK strong in this area.

Manufacturing Software

The UK is home to a number of world leaders in the development of CAD/CAM software for three dimensional design, manufacture and inspection of complex shapes. UK companies such as Delcam, Alphacam and Edgcam develop software and hardware products

for use in applications from conceptual design to pattern-making and toolmaking.

Manufacturing Simulation

Companies such as MachineWorks provide software that allows complete machine tools to be accurately visualised and modelled and their movements predicted throughout the manufacturing process.

Turning, Milling and Metal Forming

UK machine tool builders produce a wide range of equipment from bespoke mechanical and hydraulic presses to advanced combination/CNC lathes and laser profiling machines. UK companies such as Cincinnati Machine, Bridgeport and C Dugard provide world class machining and turning centres. Indeed, the 600 Group boasts the largest volume lathe manufacturing plant in Europe and is the largest manufacturer of manual/CNC lathes in the world.

Cutting Tools

This is an area where innovations have included the introduction of new insert grades for steel turning and milling and advances to improve strength, reliability and durability of cutting tools as well as broadening their application range to adapt to the variations in workplace materials. Strong UK companies in the sector include Brooke Cutting Tools, Cogsdill-Nuneaton and Dathan Tool & Gauge.

Advanced Materials

Advanced materials technologies underpin manufacturing and contribute to innovation in automotive, aerospace, power generation, construction, security, healthcare, electronics, consumer goods and retail. However, the continued growth in the use of materials, together with the challenges posed by climate change and the quest for sustainability mean that materials innovations now need to satisfy society's demand with sustainable solutions. The UK has a vibrant materials industry with the expertise and experience to deliver innovative materials solutions to match these requirements.

The UK has a long established reputation for academic excellence in materials science, research and development, ranked fourth in the world behind the USA, Japan and Germany. In the private and industrial materials research sector, the UK boasts research and technology organisations such as TWI, QinetiQ, NPL and CERAM and heavy-weights such as Rolls-Royce, BAE Systems, Corus, GKN and Hexcel. We have a culture of collaborative research leading to 127 materials-focused collaborative research projects funded by the UK Government's Technology Strategy Board.

Plastic electronics

The UK is a recognised world leader in this field. This facilitates the creation of inexpensive flexible

战略计划 (UK Nanotechnology Strategy) 获得大量资助。Oxonica、G24 Innovations Ltd 等公司皆为将纳米技术推向市场的先驱型企业。

- 71 devices and the integration of electronics with fabrics and a whole host of other non-silicon devices. Plastic Logic is working to transform the way we read the written word and Exopack Advanced Coatings are leaders in precision coated films, papers and speciality substrates.

Structural materials

The UK's world-class expertise in the development of many metallic systems coupled with the UK's recognised strengths in composite materials mean the UK leads the way in development of new lightweight and recyclable solutions for many sectors.

Metals

The UK has world-class expertise in the development of many metallic systems, including steels, aluminium, high temperature superalloys, titanium, and magnesium. Supporting this expertise there is an extensive R&D infrastructure, providing a strong and innovative platform of skills in design, structural integrity, surface engineering, powder metallurgy, modelling, process development, fabrication and joining. Major companies such as Sheffield Forgemasters and DavyMarkham operate in the UK.

Plastics

The UK Plastics industry is a global leader operating at the cutting edge of technology. The industry is a dominant player worldwide in the three core sectors that make up the plastics

industry: material and additive manufacture, material processors and machinery manufacture. The UK is home to such leading players as Perrite, Cinepres Gas Injection and MSA Engineering.

Nanotechnology

The UK has a world-class reputation in nanotechnology research which is receiving significant support through the UK Nanotechnology Strategy. Companies such as Oxonica and G24 Innovations Ltd are leading the way in bringing nanotechnology to the market.

教育

Education

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- 教育与培训为任何产业 (例如能源、金融、医疗卫生及零售业) 的重要组成部分, 英国是发展教育界与企业界合作关系的世界领导者
- 大约有356,000名国际学生在英国的高等院校就读, 此外更有三百万学生在海外参加英国的考试
- 英国是远程教学和电子教材与教学计划方面的领先创新者

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- Education and training is a key component in every business sector (such as energy, finance, healthcare, retail) and the UK is a global leader in developing partnerships between education and industry
- Around 356,000 international students study at UK universities and colleges, while a further three million students take UK exams overseas
- We are a leading innovator in distance and e-learning material and programmes

商业解决方案：教育与技能
Business Solutions: Education and Skills

教育资源

英国具备从学龄前教育到大学直至研究生教育所需的全面教育资源。产品范围十分广泛,从各类教具、小学教育玩具,到专门为中小学和大专院校的教学而设计的信息与通讯技术(ICT)系统,应有尽有。项目交付方面包括为阿曼实施的价值8千万英镑的苏丹喀布斯大学(Sultan Qaboos University)统包项目、土耳其大学项目(6千5百万英镑)和墨西哥维拉克斯(Veracruz)的几所职业院校的现代化升级项目(3千5百万英镑)。这些项目全都严格按照客户的具体规格要求而提供。

领先公司包括Promethean(互动式白板)和Pearson Group(教育资源)。Findel Education提供全面覆盖从学龄前教育直至大学教育所需要的各种教育资源。Gym Kids是一家享有国际声誉的英国公司,该公司提供面向幼儿园和小学的健身设备,帮助孩子们从小锻炼身体,解决越来越突出的儿童肥胖症问题。Gratnells是学校家具产品的全球领先供应商,产品远销44个海外国家。

教育软件是英国的另一个重要实力。Crick Software、2Simple等英国公司皆因能提供新颖、精彩的ICT教学方案而蜚声国际,Channel 4 Learning等公司则提供面向中小学生的在线产品。

文化课学习

英国的高等院校凭借其卓越的教学质量而誉满全球,英国大学各个学科领域的文凭更是受到国际公认。诺丁汉大学在中国宁波设有分校;利物浦大学也已与西安交通大学联手,在苏州建立一所独立的研究性大学。牛津、剑桥、帝国理工和许多其他高校更是世界上各重要学术与研究机构有口皆碑的。目前总共有4万5千名中国留学生在英国高校就读,此外还有3万2千5百名学子通过远程教学方式修读英国的学位或资质。

职业培训

英国的大专院校开设大量职业培训课程,能满足任何专业的学习需求。TVET UK提供帮助您寻找英国职业培训课程的“一站式”服务。

英语培训(ELT)

英国是英语的故乡,我们的ELT培训学校和培训公司能提供可满足任何需求的众多课程。我们的商业英语培训机构尤其擅长为来自不同文化背景的企业和个人进修者提供高效率培训服务。English UK及其下属机构Business English UK是该领域的两家行业协会。

特殊教育需求

英国拥有能满足有特殊教育需

求的儿童和成年人学习需要的悠久历史和丰富经验。英国能提供世界级的教师培训和教育资源。特殊教育需求全国联合会(NASEN)是该领域的领头机构。Smart Kids等公司为有智力障碍的儿童提供富有创新和富有挑战意义的教育资源。

企业培训

英国的公司和高等院校是为商业界人士提供培训的世界领导者,培训领域包括领导力、管理才能和各类软技能(统称为“持续专业发展”)。培训地点可选在英国本土,在客户所在地、在线学习或各种成分兼有。英国培训通道及英国培训与发展学会(The Training Gateway and British Institute for Learning & Development)提供通往英国各大培训机构的通道,例如Caspian Learning,该机构正在开发基于博弈理论的前沿培训计划。

为可持续发展而进行培训

英国是教育可持续发展(ESD)培训领域的世界领导者,运用教师培训、教材开发、校舍设计与建造以及“绿色”教学资源,将低碳议程带入教育世界。巴斯大学(University of Bath)是ESD政策领域的领先教育机构,Field Studies Council(英国田野研究协会)更已在很多国际市场运行ESD培训项目。

75 Educational resources

The UK is able to meet all educational resource needs from pre-school to university and beyond. Products range from teaching aids, through educational toys to bespoke ICT systems for schools, colleges and universities. Projects delivered include turnkey delivery of Sultan Qaboos University, Oman (£80m.), Turkish Universities Project (£65m) and the modernisation of vocational colleges in Veracruz, Mexico (£35m). All were tailored to precise client specification.

Leading companies include Promethean (interactive whiteboards) and the Pearson Group (educational resources)

Academic learning

The UK's universities have a global reputation for the excellence of their academic offer, and the portability and recognition of UK qualifications in all fields. Nottingham University has a campus in China at Ningbo, and the University of Liverpool has partnered with Xi'an Jiaotong University to establish an independent research-led university in Suzhou.

Vocational training

The UK's colleges and universities offer a wide range of vocational training and can meet any occupation-based learning requirement. TVET UK is the "one-stop shop" for sourcing UK vocational training.

English Language Training (ELT)

The UK is the home of the English language, and our ELT schools and companies offer a huge range of courses to meet any need. Our Business English providers, especially, offer culturally sensitive training for corporate and individual users. English UK and its subsidiary Business English UK are the trade associations covering this sector.

Special Educational Needs

The UK has long experience of meeting the needs of children and adults with special learning needs. World class teacher training and educational resources are available from the UK. The National Association for Special Educational Needs (NASEN) is the UK's leading body in this field.

Corporate Training

UK companies, universities and colleges are world-leaders in the provision of training to the business world, in areas such as leadership, management and soft skills – known as Continuing Professional Development. Delivery can be in the UK, in market, online or blended learning. The Training Gateway and British Institute for Learning & Development offer access to all major UK providers of corporate training.

Education for Sustainable Development

The UK is a world leader in the field of ESD, using teacher training, syllabus development, school design and build and "green"

teaching resources to bring the low carbon agenda in to the world of education. The University of Bath is one of the leading organisations in the field of ESD policy.

联系方式

Contact

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我们希望这份资料对您有用处。
如欲了解更多信息, 请联络:

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