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Executive Summary

Primary care services in the UK are mature and highly developed. Well known for their general practices and general practitioners, the primary care service model is respected and replicated by many countries across the world. The reforms led by the UK government in recent years present opportunities to both UK and overseas investors. This report identifies foreign direct investment (FDI) opportunities for Chinese investors through detailed market analysis in each of the five sectors of the UK primary care market.

UK primary care can be categorised into the following five sectors along the supply chain: primary care services (including residential care services), education and training, health insurance, infrastructure and facilities, and health IT. Each sector is described and analysed in detail, including supply and demand, leading providers, market size, growth potential and the competitive landscape to help Chinese investors better understand the market and provide potential to seize opportunities.

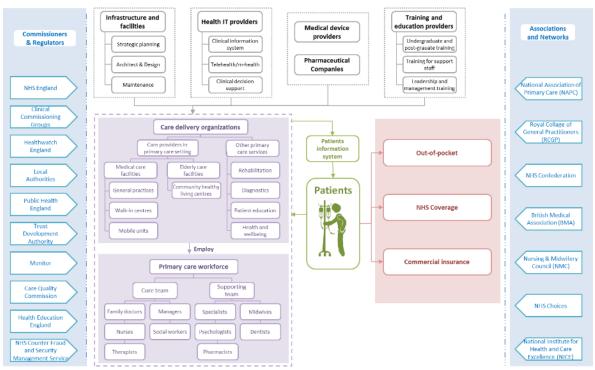


Figure 1 Eco-system mapping of the UK primary care market

Nine key opportunities have been identified across the five sectors after market analysis and interviews with key stakeholders and potential investors in both China and the UK.



Sub-sectors	Identified opportunities
Primary care services	 Establish new GP chain brands and clinics Acquire or invest in existing clinics or chain brands and expand practices in the UK Acquire or invest in existing Residential Elderly Care (REC) providers
Education and training	4. Establish new training providers5. Acquire or invest in existing training providers
Health insurance	N/A
Infrastructure and facilities	N/A
Health IT	6. Establish new Telecare/Telehealth providers7. Acquire or invest in existing UK Telecare/Telehealth providers8. Establish new mobile health (mHealth) apps providers9. Acquire or invest in existing mHealth apps providers

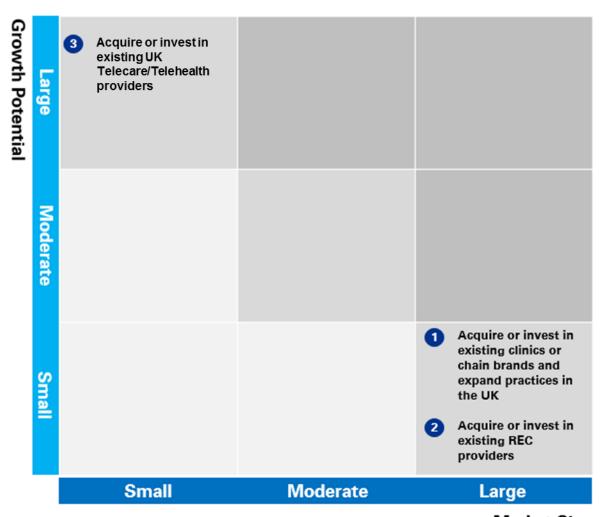
Table 1 FDI opportunities in the UK primary care market

To analyse the feasibility of these opportunities, assessment has been carried out against the capabilities of Chinese investors. Generally speaking, as China is less developed in primary care services with lower expertise and quality in general practice, there is limited capability for Chinese investors to directly establish new businesses and practices in the UK. As a result, Chinese investors interested in the UK market are mainly large investment groups seeking diversification and expansion of service lines. Therefore, we have identified three opportunities out of the original nine for further evaluation:

- 1. Acquire or invest in existing clinics or chain brands and expand practices in the UK
- 2. Acquiring or investing in existing REC providers
- 3. Acquire or invest in existing UK Telecare/Telehealth providers

A three-by-three matrix is used in assessing the market size and growth potential for each opportunity to determine the feasibility of each. As illustrated by the matrix, the market potential of these three opportunities is not limited (defined as a small or moderate market with small or moderate growth potential). For the identified opportunities, a number of success factors for investors are highlighted, as well as challenges and risks. Later chapters offer advice to potential investors on how best to enter the UK primary care market.





Market Size

Market size	Growth potential
Large: over £10 billion	Large: over 10% CAGR
Moderate: £1 billion to £10 billion	Moderate: 5%-10% CAGR
Small: less than £1 billion	Small: less than 5% CAGR

Figure 2 Assessment against market size and growth potential



Key success factors

Challenges and risks

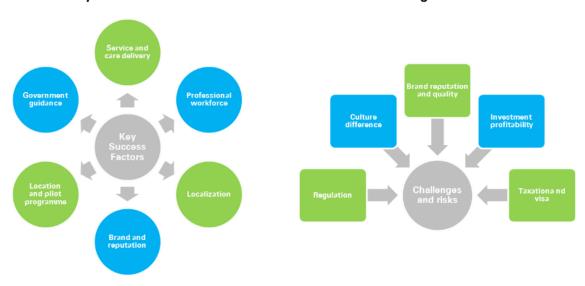


Figure 3 Success factors, challenges and risks

Recommendations are provided to potential investors, based on the above analysis, to help them enter into the primary care sector in the UK more effectively.





1 Introduction

Over the last fifty years, the UK has led the world in establishing and developing primary care, and the system is known for its service delivery, quality and accessibility. Many countries around the world look to it as a model to emulate. UK primary care is a crucial part of an integrated, comprehensive and mature healthcare system. It provides continuity and coordination of care while acting as the gatekeeper for access to specialist hospital services. The general practitioner (GP) and their team is the most common access point.

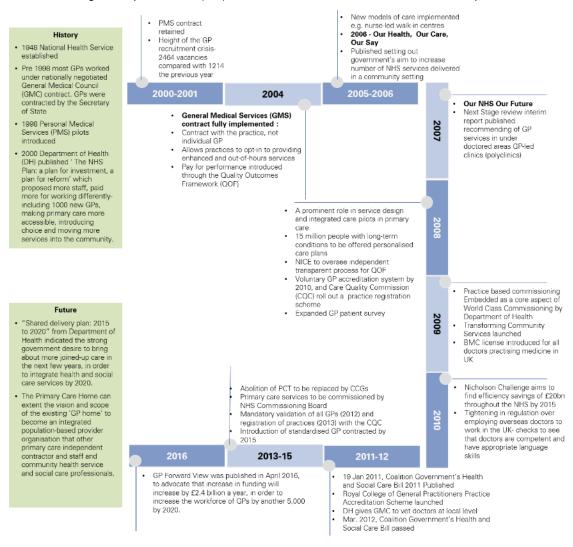


Figure 4 Development of the UK primary care market

Source: Deloitte, GP Forward View; KPMG China Analysis

Each of the four countries within the UK has a publicly funded healthcare system referred to as the National Health Service (NHS). Each system operates independently, and is politically accountable to the relevant government. The system we focus mainly upon in this report is the NHS in England as it is the largest market and provides the most opportunity with regard to scale and size.

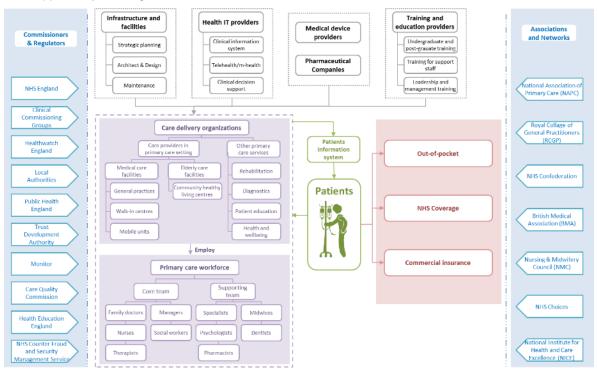


Figure 5 Eco-system mapping of the UK primary care market



2 Analysis of the UK primary care market

2.1 Primary care service

2.1.1 Demand and supply

Demographics

In 2015, 17.8% of the UK population was aged 65 or above (a total of more than 11.6 million). It is expected to reach 20.2% (more than 14 million) by 2025 and 23% by 2035. The growing ageing population will significantly increase demand for primary care and elderly care services. Based on the current service provision and consultation rates¹, the number of annual GP consultations will reach 433 million by 2035.

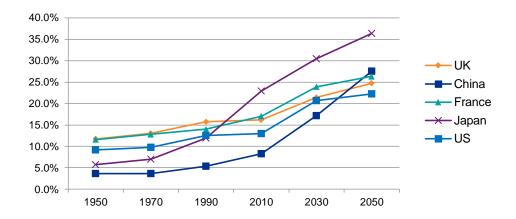


Figure 6 Population aged 65+ as % of total Population



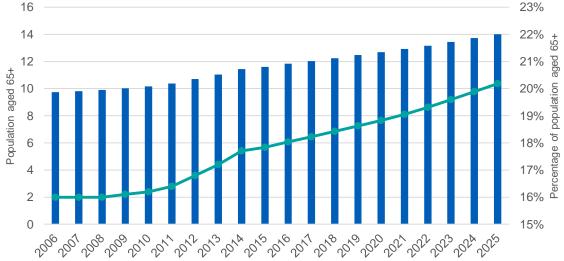


Figure 7 Population aged 65 and above in the UK

Source: World Bank, Office for National Statistics UK 2015; KPMG China Analysis

¹ Trends in Consultation Rates in General Practice 1995/1996 to 2008/2009: Analysis of the QResearch® database



Health Status

Due to the increase in the ageing population and longer life expectancy, chronic disease has become the leading cause of death in the UK. According to the World Health Organisation, chronic diseases were estimated to account for 89% of UK deaths in 2014. According to Public Health England, over 5 million people were unaware of having high blood pressure in 2014. Diseases caused by high blood pressure alone are estimated to cost over £2 billion every year for the NHS. The Department of Health estimated that up to 75% of people above 75 were suffering from chronic diseases, and the prevalence of certain diseases in the elderly population is expected to double by 2030.

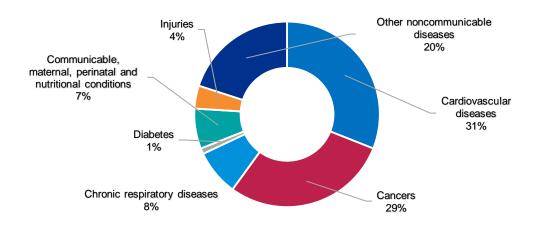


Figure 8 Proportional mortality (% of total deaths) in 2014

Source: World Health Organisation 2015; KPMG China Analysis

Political Context

In the UK, although primary care provided more than 90% of the total consultations, government spending on general practice (excluding the reimbursement of the drugs) accounts for only 8% of the expenditure of the National Health Service (NHS).

To meet primary care demand more effectively, greater investment is gradually being made in general practice. In 2014/2015, total spending on general practice, excluding the reimbursement of drugs, was £9.8 billion, compared with £9.5 billion in 2013/2014, demonstrating an increase of 2.7%. Further funding increases have recently been announced; in *The General Practice Forward View*, published by NHS England in April 2016, a commitment was made that spending on GP services will rise to more than £12 billion a year by 2020/2021. This amounts to a real-term increase of around 14% and will take primary care spending to around 10% of the total NHS budget in England.



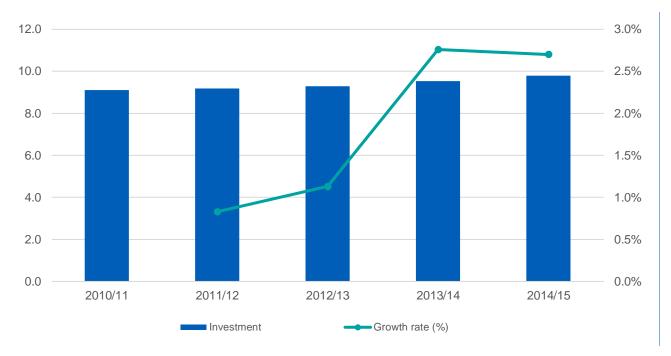


Figure 9 UK investment in general practice (£ billion)

Source: Health and Social Care Information Centre

Demand

The number of patient consultations rose from 171 million in 1995 to over 300 million in 2008, with 75% total growth and 5% annually. From 2008 to 2013 it grew another 13% to 340 million². The pressures continue, with both a growing number of elderly and a growing total population. To manage this demand more effectively, the government is proposing two major changes – better access and better integration with other services.

By 2020, the government has planned that everyone should be able to see a GP seven days a week from 8am to 8pm, and people over 75 will be guaranteed a same-day appointment. Everyone will have the right to a specific, named GP who will be responsible for coordinating their care, which means that a greater demand for GPs will need to be met in the near future.

The "Shared Delivery Plan: 2015 to 2020" from the Department of Health indicates a strong government desire to integrate primary, acute and social care by 2020. This is seen as particularly important for care of the elderly with long-term conditions, so they can be cared for more effectively in the community, with fewer hospital admissions. There will be increased emphasis on prevention, and shaping services around the needs of the patient.

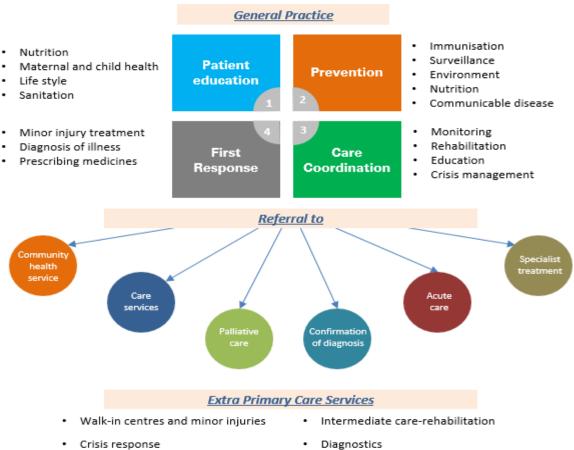
Supply

The traditional pattern of primary care consultations is mainly provided by GPs, including patient education, prevention, first response and care coordination. If further treatment is needed, patients are referred to other services such as hospital specialists and community health services. To cope more effectively with the growing demand, the pattern of service delivery is beginning to change. The next wave of reforms planned by the government was summarised in the *Five Year GP Forward View*, published in 2016, which

included an estimated funding increase of £2.4 billion by 2020/2021, and an additional 5,000 full-time GPs and 3,000 fully funded practice-based mental health therapists. This indicates that the UK government has realised the need to increase supply for primary care services, in order to mitigate the effects of increasing chronic disease and an ageing population.

² Fact or fiction? Demand for GP appointments is driving the 'crisis' in general practice, Nuffield Trust





- Health promotion
- Specialist needs
- Learning difficulties, mental health, community paediatrics and care of the elderly

Figure 10 Traditional primary care services in the UK

Family planning

Prison health

Pharmaceutical advice

Source: DIT; KPMG China Analysis

A newly-developed primary care delivery model, the Primary Care Home (PCH), has the following characteristics:

- provision of care to a defined, registered population of between 30,000 and 50,000
- a combined focus on personalisation of care with improvements in population health outcomes
- an integrated multidisciplinary workforce, normally 8 to 12 people, with a strong focus on partnerships spanning primary, secondary and social care
- aligned clinical financial drivers through a unified, capitated budget with appropriate shared risks and rewards
- driving behavioural and cultural change to improve prevention and encourage people to take responsibility for their own health



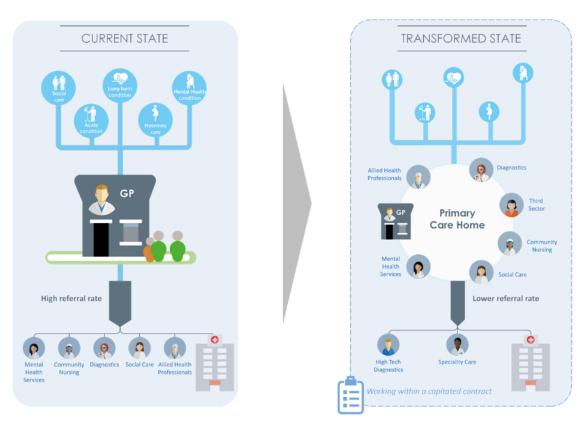


Figure 11 PCH model

Source: New Care Model Style Primary Care Programme; KPMG China Analysis



Using more complex nursing skill mix	Nurse Practitioners (NPs) working with GPs to deliver care can alleviate some of the burden of demand in both clinics and traditional practice settings. Training for NPs is aligned with basic primary care services, allowing them to diagnose and treat many common conditions. Research demonstrates that NPs provide high-quality patient care with high patient satisfaction.
Pharmacist-led care	Pharmacists are a large but underused resource in the UK and could fill certain roles to reduce the number of GP visits. This includes playing a bigger role in the management of care, particularly medication use and adherence. An effective community-based pharmaceutical care service can reduce demands on primary care and demonstrate improved value for money in healthcare spending. Pharmacists that have developed a pharmaceutical care service undertake health-checks, blood pressure checks, weight and anti-smoking support. They track disease management and determine when a GP visit is necessary. The <i>GP Forward View</i> promised £112m to enable every practice access to a clinical pharmacist, leading to an additional 640 pharmacists in general practice by April 2017 and 1,500 by 2020.
Group visits or clinics for groups of people with the same condition	Practitioner-led group educational sessions enable practice staff to provide care and counselling to greater number of patients. Patients benefit from hearing the advice and questions of others, and the sessions can be particularly effective for routine follow-ups and chronic disease management. This approach can also benefit smoking cessation, weight management and sensible drinking initiatives, with a growing body of evidence suggesting that group visits result in better outcomes than one-on-one consultations.
Productive General Practice	"Productive General Practice" is a productivity programme based on lean principles that allows GPs to spend more time with patients. A survey of 71 GPs and practice managers by the NHS Institute for Innovation and Improvement identified that administrative and managerial processes created additional work and wasted time. Practices wanted to spend more time with complex patients, increase safety, improve teamwork, manage their increasing workload and take on opportunities offered by reforms. They also wanted to make the workplace more efficient, manage demand and capacity and streamline patient consulting. The institute launched the Productive General Practice in 2011, drawing on experience in implementing the 'productive ward' in hospitals. <i>GP Forward View</i> promised an investment of £30m in a 'Releasing Time for Care' programme to help release capacity within general practices, together with other measures to tackle bureaucracy.
Integrating pathway hubs	Despite healthcare being complex, the traditional approach has been to micro-commission, micro-contract and micro-manage providers and the supply chain, leading to a fragmented delivery system and poor care coordination. One option is to commission the use of an integrated pathway delivered by a prime contractor. This may be a single accountable provider with responsibility for the cost and quality of a programme such as respiratory health, or a care group such as the frail elderly.



Multidisciplinary assessment and treatment services involving redesign of a care pathway The Pennine Musculoskeletal Partnership in northern England is a GP-led integrated clinical assessment and treatment service (ICATS) launched in 2006, providing on-site access to rheumatologists, orthopaedics, physiotherapists and an occupational therapist. Close cooperation between GP commissioners and the partnership has resulted in effective local practice-based commissioning, with clinicians designing and delivering the service, leading to a coherent patient journey with shorter waiting times.

Primary care led specialist clinics or Rapid Access and Treatment Centres These are typically nurse-led clinics, staffed by experienced specialist nurses trained in condition assessment and disease management, and supported by a GP with a special interest or a hospital registrar with access to a consultant. Access to the clinic is usually within two weeks of referral; clinics are usually run at least twice a week, with appointments lasting 45 minutes to one hour. Patients have rapid access to diagnostics such as musculoskeletal ultrasound and a radiologist or rheumatologist to assist in interpreting results. The clinic also shares information with GPs based on clear, simple guidelines to encourage them to refer immediately those people who, for example, show symptoms of inflammatory arthritis, rather than carry out their own investigations.

Table 2 Other service and care delivery models in the UK

Source: Deloitte; KPMG China Analysis

2.1.2 Providers and competition

General practice and private investors

In the UK, general practices are the majority provider of primary care services. Nearly all of them are independent contractors to the NHS who distribute any profits amongst themselves as practices. Independent sector providers of primary care (GPs and out-of-hours services) together generated annual revenues estimated at £11.0 billion in 2011, representing 96% of the estimated total market size (independent and public sector providers combined) of £11.7 billion a year.

Publicly funded by the NHS, the primary care market has attracted a large number of private equity investors, most of which run general practices and clinics to provide treatment services, urgent care, out-of-hours services and diagnostics. Some GPs have set up partnerships, with great potential for further development of a currently embryonic corporate model of general practice characterised by multi-practice groups with salaried medical staff (as opposed to being partners in the practice).

There are already corporate chains that have started to acquire or invest in individual GP practices in the UK, such as Bupa and Care UK.



Company name	Services provided		
The Practice PLC	 Work with local teams to run GP surgeries, walk in centres and community based outpatient clinics on behalf of the NHS Run eight "equitable access" health centres and 68 GP practices (the largest in the UK) includes 60 mainstream general practices on standard national contracts, known as General Medical Services (GMS) and Personal Medical Services (PMS) 		
	 Usually, GP practices with private investors are banned from holding these national contracts with the NHS, but The Practice found a legitimate way of avoiding the ban. 		
 Run 56 health centres across the country offering private GP services appointments, musculoskeletal services, dermatology and non-su treatments, as well as a range of health assessments 			
	The UK's largest independent provider of health and social care		
	Acquired the largest private equity-backed primary provider, Harmoni, in 2012.		
Care UK	 Healthcare services include treatment centres, GP practices, NHS walk-in centres, GP out-of-hours, prison health services and clinical assessment and diagnostics facilities 		
	 By 2015 Care UK owned more than 50 NHS primary care facilities, and generated £341 million from healthcare services (including a few secondary care facilities), with an adjusted EBITDA of £24.9 million 		
	London's largest primary care provider		
AT Medics	• Services include 24 primary care sites, two minor injuries units, an urgent care centre and a walk-in-centre		
	Provide care for over 135,000 patients each year		
	Led by six GP directors who are all London Deanery accredited educators		
DMC Healthcare	 Provide a wide-range of services to NHS patients on behalf of CCGs and NHS trusts across England Services include six long-standing GP surgeries, three walk-in centre and 15 consultant-led community based outpatient clinics Deliver care to over 100,000 NHS patients each year 		

Table 3 Leading private invested GP chain brands

Residential elderly care (REC) providers

Local authorities are responsible for commissioning care services for the elderly and covering a significant proportion of the total costs, depending on the individual's ability to pay.

REC homes and organisations that provide long-term housing and care for the elderly are a major type of residential elderly care provider. Prior to 2008, the REC sector experienced a decade of falling use, associated with budgetary constraints and local authorities conducting needs-based assessments. However, since 2008, the private and voluntary providers (such as the independent sector) have experienced increasing demand and now account for 78% of the market (by number of beds). Four Seasons Health Care, Bupa Care Homes, HC-One Ltd and Barchester Healthcare Ltd are the four leading providers of the private elderly care providers in the UK, accounting for more than 15% of the market by bed numbers.



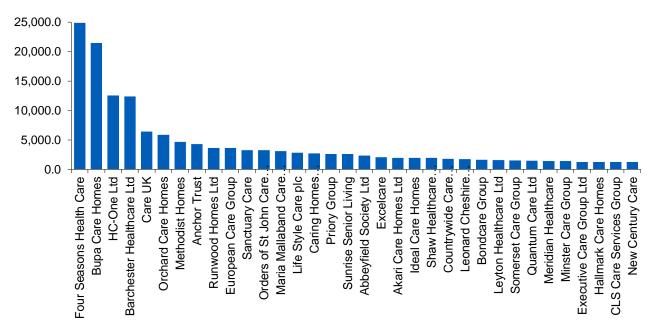


Figure 12 Top REC providers by number of beds

Integrated care providers

Some providers focus on providing integrated primary care and long-term social care. The care delivery models of UK companies such as Tunstall Healthcare are an example in which Chinese providers may be interested, with on-line services including remote Telehealth/Telecare monitoring, and off-line services including daily care, nursing and rehabilitation care, connected through IT. Another leading integrated care providers include Northumbia Healthcare.

Company name	Northumbria Healthcare		
Competitive strength	 Health services in North Tyneside and health and social care services in Northumberland look after the well-being of a population of around 500,000 Capacity to carry out around 1.4 million appointments per year with patients outside of hospital, and provide 78,000 adult social care appointments including home visits Integrated care provider covering hospital care, community health services and adult social care via one specialist emergency care hospital, three general hospitals, several community hospitals, one integrated health and social care facility, one elderly care unit, outpatient and diagnostic centres Able to provide joint care for patients and give people the support they need to return home after a stay within hospitals or facilities, and strong relationships with GPs help to deliver seamless care for patients 		
Integrated care services	 Provide NHS care outside of hospitals in a variety of settings Provide adult social care services in Northumberland to support people to live independently at home. Social care services include: managing long term condition and illness, living independently at home, equipment and adaptations and care homes. Elderly care services include: elderly care facility. Nursing at home services include: district nursing, community nursing and cardiac rehabilitation Provide hospital and social care in more than 20 service sectors 		

Table 4 Case study of Northumbria Healthcare



2.1.3 Market size and growth potential

In 2014/15, the UK government invested £9.8 billion in general practice. Public sector spending accounted for 83.3% of total healthcare expenditure in the UK, with the remaining 16.7% being private. Therefore, it is assumed that the market size for general practice in the UK is around £12 billion. Based on the continuous growth in patient consultations and the ageing population, the general practice market is expected to grow at a CAGR of 3%-5% in the coming years.

In the past few years, because of the national aim to reduce costs and provide need based assessments for REC services, the private sector has been gradually increasing its market share and beds. In 2012, local authority and NHS beds accounted for 8% of the total REC beds, but it is expected that by 2022, the number of local authority and NHS beds will account for only 3.2% of the total beds. In contrast, the private sector will continue to develop and experience an increase of more than 78,000 beds by 2022.

The private REC sector is currently valued at £11.2 billion, accounting for 73% of the total REC market. The elderly population is expected to reach to more than 14 million (20.2% of the population) by 2025, with a CAGR of 1.9% from 2016. This increase will drive up demand significantly and increase the REC market by at least £3 billion by 2025.

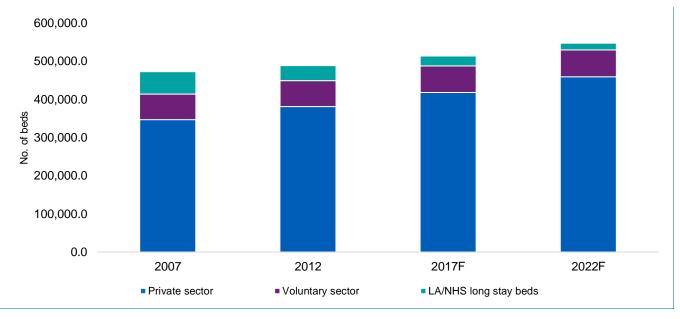


Figure 13 Number of registered REC beds in the UK

Source: L&B Care of Elderly People 2012/13; KPMG China Analysis



2.1.4 Commissioning and regulation

Commissioning

1. NHS England

NHS England leads the National Health Service in England. Its responsibilities include setting the priorities and direction of the NHS under guidance from government as well as encouraging and informing the national debate on improving health and care. NHS England distributes more than £100 billion and holds organisations to account for spending this money effectively for patients and efficiently for the tax payer.

2. Public Health England (PHE)

PHE is an executive agency of the Department of Health that began operating on 1 April 2013. Responsilities include:

- Making the public healthier by encouraging debate on healthy living, advising the government and supporting
 work by local authorities, the NHS and others.
- Supporting the public so they can protect and improve their own health.
- Protecting the nation's health through the national health protection service, which works on a wide range of issues such as infectious diseases and public health emergencies.
- Sharing information and expertise with local authorities, industry and the NHS to help them make improvements in the public's health.





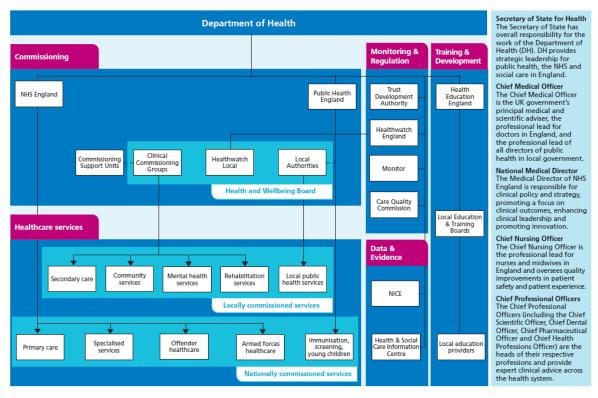


Figure 14 Commissioning and regulation of primary care service in the UK

Source: NHS England

3. Clinical Commissioning Groups (CCGs)

Established on 1 April 2013, the aim of CCGs is to give GPs and other clinicians the power to influence commissioning decisions for their patients and include all GP groups within a set geographical area. CCGs are responsible for managing primary care commissioning, including the administration of NHS contracts for NHS GP practices.

CCGs work with patients and healthcare professionals and in partnership with local communities and local authorities to shape the healthcare commissioning agenda, and therefore set the provision of services. The board of each CCG is required to have, in addition to GPs and NHS managers, at least one registered nurse and a doctor who is a secondary care specialist. CCGs are also responsible for arranging emergency and urgent care services, and the commissioning of services for any unregistered patients who live in their area. There are approximately 200 CCGs across England.

In 2016/17, a new CCG Improvement and Assessment Framework is being introduced. This new framework covers indicators in four domains: better health, better care, sustainability and leadership. With detailed indicators under each domain, this framework will play an important part in the delivery of the Five Year Forward View.

4. Local authorities

Local authorities' statutory responsibilities for public health services are set out in the *Health and Social Care Act 2012*. The Act conferred new duties on local authorities to improve public health. It abolished primary care trusts and transferred much of their responsibility for public health to local authorities from 1 April 2013. From this date, local authorities have had a new duty to take such steps as they consider appropriate for improving the health of the people in their areas. Local authorities also inherited responsibility for a range of public health services previously provided by the NHS including most sexual health services and services to address drug and alcohol misuse.



Monitoring and regulation

1. NHS Improvement

NHS Improvement is a regulatory body founded on 1 April 2016. It amalgamates Monitor, the NHS Trust Development Authority, Patient Safety, the National Reporting and Learning System, the Advancing Change Team and the Intensive Support Teams.

NHS Improvement is responsible for overseeing all NHS hospitals, as well as independent providers that provide NHS funded care. It regulates and supports these providers to provide patients with safe, high quality and compassionate care. By holding providers to account and, where necessary, intervening, NHS Improvement helps the NHS to meet its short-term challenges and secure its future.

- Previously, Monitor was an executive non-departmental public body of the Department of Health. It was the sector regulator for authorising, monitoring and regulating NHS Foundation Trusts.
- Previously, the NHS Trust Development Authority (TDA) was responsible for providing support, oversight and governance for 86 NHS Trusts those which had not been granted Foundation status.

2. Care Quality Commission (CQC)

CQC is an executive non-departmental public body of the Department of Health. It was established in 2009 to regulate and inspect health and social care services in England.

The CQC's role is to ensure hospitals, care homes, dental and general practices and other care services in England provide people with safe, effective and high-quality care, and to encourage these services to improve. It carries out its role through checks during the registration process for all new care services, inspections, and monitoring of a range of data sources that might indicate service issues.

3. Healthwatch

The health and social care reforms of 2012 had the declared aim of "putting people at the centre of health and social care". To help realise that ambition, the reforms created a Healthwatch body in every one of the 152 local authority areas across England, as well as Healthwatch England, the statutory national body.

Healthwatch England's purpose is to understand the needs, experiences and concerns of people who use health and social care services and to speak on their behalf. The Healthwatch network works together to share information, expertise and learning in order to improve health and social care services.

Training and development

1. Health Education England (HEE)

HEE sits within the Department of Health, and is responsible for the training and development of the NHS workforce. Its major scope of works include:

- (1) Planning and commissioning: to determine the workforce required by the NHS to deliver necessary services and commission medical education institutions (dental & medical universities and other deanaries) to ensure the adequate number of people are trained as professionals. In addition, the HEE also sets requirements for the educational institutions to ensure that the workforce is qualified to deliver the necessary services.
- (2) Attracting and recruiting professionals: the NHS must be able to recruit the necessary workforce across all types of required professions e.g. doctors, nurses, physiotherapists, etc.
- (3) Developing the existing workforce: ensuring the development of the existing NHS workforce to continue to deliver high quality services through continuing professional development.
- (4) Research, learning and innovation: The NHS workforce should all have access to required knowlldge and learning to promote clinical development.

2.1.5 Opportunities

1. Establish new GP chain brands and clinics

Most primary care clinics are owned and operated by individuals or groups of GPs, providing care services to nearby residents. Due to GP shortages and increased prevalence of chronic diseases, demand for primary care services is increasing significantly, GP clinics are experiencing much higher patient volumes. This means there are opportunities to establish new GP clinics and chain brands.



2. Acquire or invest in existing clinics or chain brands and expand practices in the UK

Another way to enter the UK primary care market is to invest in existing clinics or corporate chains and expand by acquiring additional practices. This will allow the investors to gain market share with existing patient population more rapidly, without having to build their brand recognition and reputation in new localities.

3. Acquire or invest in existing Residential Elderly Care (REC) providers

The residential elderly care market has become an increasingly important part of the primary care service. Among the 32 investment deals made in the UK primary care market since 2013, 18 of them focused on the REC market, indicating strong market value and growth potential.

Similar to the primary care service provider sector, investors in the UK REC sector could consider importing their brands into China. Elderly care facilities are a rapidly growing market in China due to the increasing elderly population and one-child policy. Real estate companies and investors in China are already eyeing or entering into the elderly care market. However, there is a shortage of qualified service operators in China to manage and operate these care facilities. Therefore, it is strongly recommended for potential and existing elderly care investors in China to consider acquiring a UK brand with high service quality and experience in managing and operating such facilities. They may be able to earn a share of the growing market in the UK as well as penetrate the elderly care market in China.

2.2 Education and training

2.2.1 Demand and supply

1. GPs

In 2015, there were 66,351 GPs in the UK, accounting for 24.2% of all registered doctors. Along with the expansion of services delivered by primary care and GPs in recent years, the number of GPs is increasing. However, the number of GPs per 100,000 people decreased from 2011 to 2013.

The government recognises that there is a shortage of GPs, and has now advocated in the *GP Forward View* that an additional 5,000 extra GPs will be added by 2020³.

The new role of physician associate is a way in which the shortage of GPs is being addressed. Authorised and supervised by a GP, the physician associates provide generalist clinical care in general practice, typically

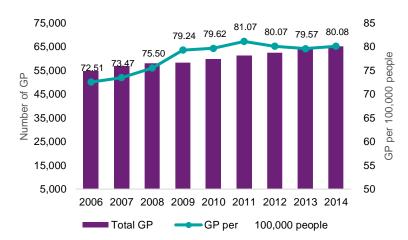


Figure 15 Registered GP doctors (2006-2014)
Source: European HFA Database 2015; KPMG China Analysis

seeing patients with acute minor illnesses. The Fisher Medical Centre in Skipton, Yorkshire has used this innovative idea to employ physician associates to replace retiring GP partners. As a result, two physician associates each see around 20 people a day. Physician associates are not able to prescribe medicine, so they work closely with GPs, consulting them when they have a patient who requires a prescription. They also carry out telephone consultations and assist the GPs in reviewing investigations and correspondence.

2. Nurse Practitioners (NPs)

Depending on training and experience, nurses in general practices and community services assume a wide range of primary care responsibilities, especially around chronic disease management. Supported by healthcare assistants and working with GPs, nurses are also responsible for managing certain long-term

³ General Practice Forward View, Chapter 2 Workforce



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conditions (e.g. diabetes and asthma), child care and mental care, as well as taking on generalist roles including the management of acute minor illness. However, there are also difficulties recruiting nurses, due to an ageing workforce and a lack of appropriately trained community nurses. 64% of general practice nurses are over 50, with only 3% under 40. Between 2001 and 2011, the number of community nurses fell 38%. Although this has been compensated for to a degree by the appointment of more specialist nurses and healthcare assistants, the increasingly complex general nursing care and 24-hour nursing services needed by patients require an increase in both the number and skill of community nurses.

New roles are gradually being identified to cover the shortage of community nurses, such as healthcare assistants, who carry out health assessments, perform routine tests, help people monitor their conditions and perform administrative tasks. In Nottingham City Care, healthcare assistants are being used to assess urgent requests for community support and receive training that would enable them to both assess and meet some of the needs traditionally associated with community nursing, physiotherapy and social work.

Working with general practice teams and under appropriate supervision of GPs and physician associates, healthcare assistants have significant potential to address workload issues in primary care. However, the governance and training system to ensure quality and safety of their work needs to be further developed.

3. Practice managers

The practice manager plays a key role in UK general practice, responsible for both day-to-day management and strategic planning, for one or more partner medical practices. Unlike GPs or nurse practitioners, practice managers may not be a healthcare professional. They need a wide range of management skills, including finance, change management, communications, leadership and motivation, organisation, negotiation and confidence in IT.

Relevant qualifications for a practice manager include Certificate/Diploma in Primary Care and Health Management (DPCHM) awarded by the Association of Medical Secretaries, Practice Managers, Administrators and Receptionists (AMSPAR), and Vocational Training Scheme for General Practice Managers (VTSGPM) awarded by the Institute of Healthcare Management (IHM).

2.2.2 Providers and competition

• Degree level education

It takes at least 10 years to become a GP in the UK. The first step is to gain entry to a UK medical school and obtain a Bachelor Degree in Medicine. There are currently 32 medical schools in the UK providing such programmes, 24 of them in England. During the five years of training, students will learn the basics of clinical medicine.

Once graduated, these prospective GPs will enter a two-year foundation programme – a rotation of jobs in various specialties, from surgical to medical departments. Attendees get a great deal of hands-on experience and training in general medicine.

After completion of the foundation programme, doctors who wish to work in general practice will need to participate in another three years of GP specialty training, where they will rotate in GP related specialties such as geriatric medicine and paediatrics.

Please refer to the table below for a detailed description of each stage:

Steps	Time duration	Obtained upon completion	Major provider and description
1. Medical degree	5 years	Bachelor of Medicine	32 medical schools in the UK, including 5 of the world's top ten universities for clinical, pre-clinical and health subjects ⁴ • Oxford University (1 st) • Cambridge University (3 rd) • University College London (4 th) • Imperial College London (5 th) • King's College London (8 th)

 $^{^4\, \}text{The 2015-2016 Times Higher Education World University Rankings Clinical, Pre-Clinical and Health table.}$



Steps	Time duration	Obtained upon completion	Major provider and description
2. Foundation Programme	2 years	Foundation Achievement of Competence Document (FACD) to indicate that the participant is ready to enter a specialty	 Six four-month or eight three-month job rotations in a variety of specialties. Provided by "Foundation Schools", which include medical schools, teaching hospitals, local deanery trusts, and other organisations such as hospices. Enrolees will participate in a variety of specialty training ranging from surgical to general medicine.
3. GP specialty training	3 years	Certificate of Completion of their specialty training in GP	 Working 18 months as specialty registrar where trainee completes a mixture of jobs in hospital specialties such as obstetrics, gynaecology, paediatrics, geriatric medicine, accident and emergency or psychiatry. Another 18-month programme as a GP specialty registrar in general practice. Before completion of the training, attendees also are required to participate in the qualification of Membership of the Royal College of General Practitioners (MRCGP – see below).

Table 5 Education and training of GPs in the UK

Accreditation/certification training

Before being qualified as GP specialists, all attendees need to obtain a Membership of the Royal College of General Practitioners (MRCGP), which is required before completion of the three-year GP specialty training. The MRCGP qualification has three parts: a knowledge-based exam with multiple choice questions called the Applied Knowledge Test (AKT), a clinical skills assessment (CSA), and a Workplace Based Assessment (WPBA).

The Royal College of General Practitioners (RCGP) is the only provider for accrediting the MRCGP qualification, and one of the organisations who may provide training courses for the AKT and CSA exams. Average costs are £175 for an AKT preparation course and £380 for a CSA preparation course. International membership is also available for overseas residents who have passed the MRCGP accredited examination.

Continuing education/training for GPs and supporting staff

Once registered as a GP in the UK, doctors must participate in various training and education courses and events to earn Continuing Professional Development (CPD) credits. Currently all GPs are required to earn at least 250 credits within five years to maintain their licences. Such credits can be earned by attending on-site courses, online webinars as well as conferences and events. All courses and events need to be accredited by the RCGP. Providers of the CPD credit courses include major medical universities such as Birmingham University as well as other organisations such as Annie Barr and AT Medics.

In addition to GP CPD training, there are also organisations in the UK providing professional and continuing education to supporting staff in general practices. Annie Barr is one such provider.

Training and certification for practice managers

The DPHCM is open to existing and potential managers (with a management related background) in health or social care. To gain entry to the programme, candidates need to be recommended by an appropriate employer and accepted by a recognised centre following an interview. The course contains modules covering the various topics in a primary care and health environment, including managing medical ethics and legal requirements, financial management and budgeting, managing information and communications, leading teams and developing and improving services⁵.



⁵ Healthcareers

The VTSGPM is delivered part-time over 36 weeks using a blended learning model. This includes one full day of teaching every two weeks and independent study in between. Guided study materials are provided and candidates are supported by appropriately qualified tutors both during attendance and through distance learning methods such as email, structured email tutorials and telephone contact⁶.

2.2.3 Market size and growth potential

With 4,412 newly registered GPs in 2015, the size of the MRCGP training market was approximately £2.5 million. With approximately 5,300 new GPs needing to be added annually between 2015 and 2020, under the government's aim to increase the total number of GPs, the market size of MRCGP training will reach more than £3.1 million. Consequently, the market for GP CPD and training of supporting staff are all expected to rise in the coming five years.

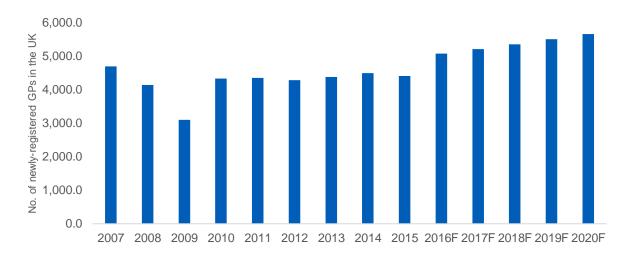


Figure 16 Number of newly-registered GPs in the UK (2007-2020)

Source: General Medical Council UK 2015; KPMG China Analysis

2.2.4 Opportunities

1. Establish new training providers

Training in the primary care sector is considered a worthwhile investment because of the planned growth in the number of GPs. Continuing education and further training are necessary and popular. The market for GP training will grow by about 24% by 2020.

2. Acquire or invest in existing training providers

The growth in training means there is an opportunity for Chinese investors to consider acquiring an existing training provider, with a view to eventually introducing them into the Chinese market.

2.3 Health insurance

2.3.1 Demand and supply

Although most general practices are funded by the NHS, approximately 11% of the population has private health insurance. The major reason for having private health insurance is to gain faster, more convenient access to care. There are a number of private hospitals in the UK which provide services (mostly elective treatments) to privately insured patients. There are also private GP clinics, usually with quicker appointments and shorter waiting times. In addition, private insurance may assist when long term care services are needed; although the government provides public coverage for long-term care services, people with saving and assets valued higher than £23,250



6 ibid

generally have to cover their own costs, so some people seek insurance for long-term care which tends to be expensive.

2.3.2 Providers and competition

Major providers of private health insurance include Bupa, AXA PPP Healthcare, Norwich Union, and HSA. Bupa is the largest private insurance provider in the UK. Basing market share upon the number of clients, the top four account for 62% and the top nine account for nearly 75%. This suggests the private health insurance market in the UK is centralised, leaving little room for new entrants.

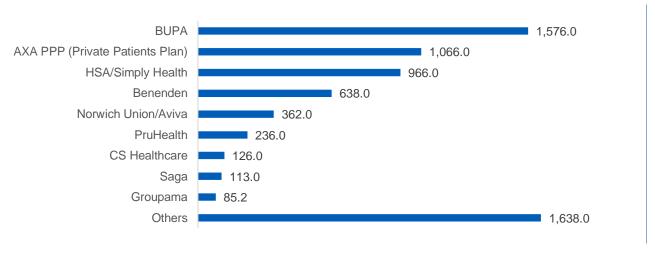


Figure 17 Market size of private health insurance (by number of people in thousands)

Source: Statistics 2015; KPMG China Analysis

Company name	Bupa	
Year of establishment:	1947	
Headquarters:	London, UK	
Major products/services:	Private health insurance, care homes, hospitals, dental clinics, GP clinics, etc.	
Number of people covered in UK:	: 1,576,000	
Types of insurance offered:	 Voluntary health insurance Business health insurance Private dental insurance Insurance plans for elderly care Insurance plans for long term care 	
Total revenue in 2014:	£9.8 billion	
Net profit in 2014:	£523 million	

Table 6 Case study of Bupa

2.3.3 Market size and growth potential

The total value of the private insurance market in the UK is worth around £50 billion in 2014. However, for private insurance holders, private insurance is usually used for secondary care services when elective treatments are involved. It accounts for only a very small percentage of the primary care market. GP services are contracted overwhelmingly with the NHS. Private insurance is limited and the private insurance market for the primary care sector is small.



2.3.4 Opportunities

Due to the limited size of the private health insurance market in primary care and high centralisation, we did not identify any significant FDI opportunities in health insurance.

2.4 Infrastructure and facilities

2.4.1 Demand and supply

1. Infrastructure services

Infrastructure related services, including architecture, facilities design and operations design of hospitals and clinics, are well developed. UK companies are highly competitive in providing consultancy to new and existing facilities.

Operations related consulting services vary greatly, covering health need/demand analysis, strategy development, care model design, service and operations design, master planning, commercial model design, workforce development and leadership management. In recent years, consulting services covering the entire investment period have been highly encouraged.

2. Facility services

Unlike hospitals, there is much less of a need for facility services in general practices and clinics. However, as such practices and clinics are mostly owned by GPs, back-office administrative support services from

Integrated front-end operation consulting services

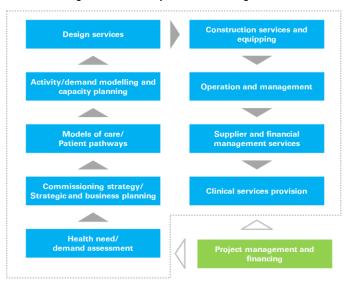


Figure 18 Integrated front-end operation consulting services in the UK

Source: Healthcare UK, KPMG China Analysis

outsourcing providers are needed to cut operating costs and improve efficiency.

2.4.2 Providers and competition

1. Infrastructure services

There are numerous highly specialised design and consulting firms in healthcare, some of which are already seeking expansion to China, India and other countries. Most of these companies can provide integrated design and consulting services related to hospitals, clinics and community centres, with some of them focusing more on architecture and facilities design, (e.g. Medical Architecture, TFP Ryder) and others on operations design (e.g. International Hospitals Groups (IHG), Strategic Health Planning).

In addition to the above providers, leading architecture and design groups are also entering healthcare to provide services for hospitals and community centres. The same has happened to leading primary care services providers seeking expansion into consulting as industry experts. For instance, AT Medics is providing operation design to newly established clinics, while the RCGP and Annie Barr focus on consulting services for GP and supporting staff training.



Sectors	Leading players	
Healthcare architecture design	Medical ArchitectureTFP Ryder	DWA HealthcareFoster and Partners
Healthcare operation design	Strategic Health Planning	• IHG
Leading architecture design firms	EC HarrisArup	• Atkins
Industrial experts providing consulting services	AT MedicsAnnie Barr	RCGPAccendo Care

Table 7 Leading infrastructure related design services providers in the UK

2. Facility services

NHS Shared Business Services (NHS SBS) is the largest provider of facility services to the NHS in England. This includes back-office administrative support for GP practices, dental practices, community pharmacies and optometrists. Through modernising the administrative processes of primary care clinics, NHS SBS is able to help the practices save 30-40% of in-house operating costs.

Sector	Major services
Registration	Processing and validation of registrations with GPs Management of data quality within the patient registration process, to improve accuracy and reduce corrections
Medical records management	Transferring physical records from GP to GP to provide a secure, timely and cost-effective transition Transferring and forwarding correspondence from acute and secondary providers for records in transit from GP to GP
Call and recall for screening	Managing the end-to-end administrative process for screening
Performer list management and pharmaceutical market entry	Management of the application process for performers Validation of performer application details, including third party checks and qualifications Provision of regulatory advice for performer list applications Provision of support and advice if required for appeal cases, e.g. conditional acceptance or rejected applications
Payment processing	Monthly and quarterly GMS and PMS payments to GP practices, including the processing of superannuation pension contributions Monthly ophthalmic payments and probity activities
Contractor supplies	Ordering and supply of subscriptions, needles, syringes and waste disposal units



Sector	Major services
List validation	Ensuring patient data is accurate, complete and current, to enhance patient services and deliver significant cost savings Enabling improved patient management and communications
Value-added services	Bulk mailings and print services, for example to streamline patient registration Medical records management, including storage, barcoding, printing and scanning

Table 8 Case study of NHS-SBS

2.4.3 Opportunities

As competition is already intense in infrastructure services with numerous leading players, and market centralisation is high in facility services, no major FDI opportunities are identified relating to infrastructure and facilities.

2.5 Health IT

2.5.1 Demand and supply

With demand for primary and elderly care increasing, IT has enormous potential to improve healthcare access, quality and efficiency, and it will be the key to delivering the government's programme for NHS improvement.

1. National Programme for IT

The counterpart of China's Regional Health Information Network (RHIN) in the NHS is the National Programme for IT (NPfIT), initiated in 2002. It aimed to support general practices, connecting GPs and patients in sharing information with other healthcare facilities such as pharmacies and hospitals through integrated electronic patient record systems. It also aimed to facilitate online 'choose and book' services for appointments, computerised referral and prescription systems and build a robust network infrastructure for such purposes. The £6 billion programme was contracted with four system integrators: British Telecom, Accenture, CSC Alliance and Fujitsu Alliance. The major product and solution vendors included CSW, IDX (GE), Cerner and iSoft. After a history marked by delays, stakeholder opposition and implementation problems, the programme was dismantled by the government in 2011. Overall, it is believed that NPfIT did a reasonable job in some areas, including the introduction of infrastructure and specialist imaging systems for trusts, but it failed on electronic patient record integration, and major parts of the programme were never completed.

The large long-term contracts with major vendors in the NPfIT programme inhibited demand in the health IT market, and the new system was not well developed. In July 2013 the NHS announced the Open Source Plan to encourage open sourcing option for trusts looking to invest in electronic patient record systems, with funding of £260 million. Fundamentally different from the top-down approach of NPfIT, all hospitals can now choose products and services freely under this plan, based on unified technical standards. Compared with commercial EPR systems which will cost millions, or even tens of millions, open source software can provide a cheaper alternative in terms of license fees. Furthermore, open source software is expected to help reduce risks and drive common, joint solutions, as well as develop a vibrant market from which the IT industry and the wider economy will benefit.

At present, a GP practice can acquire or invest in a contractual framework to be supplied with IT through GP System of Choice (GPSoC), where the IT products and services are split into three lots:

Lot 1: GP principal clinical systems and subsidiary modules, which includes GP Principal Clinical Systems, appointment software, decision support tools and patient facing services. Subsidiary modules will become available and, where required, will integrate with Principal Clinical Systems through a common interface.

Lot 2: GP practice with office hardware, medical devices, training and consulting, which may integrate with the principal clinical systems.

Lot 3: Assistance for GP practices to share information with other healthcare providers, such as hospitals and pharmacies, to deliver a better end-to-end service for patients.



Lot 1 is supported by central public funding for key GP IT systems used in the delivery of patient care. Central funding covers the charges for the Principal Clinical System licence, support and up to £2,000 of the cost of deployment. The annual licence and support charge for deployment of subsidiary modules will also be centrally funded, while the charges for deployment must be met locally. Local organisations must pay for services provided by Lot 1 suppliers that have not completed the assurance process to qualify as a GPSoC Service. There is no central funding for services in Lot 2 or Lot 3.

From the perspective of data aggregation and use, the NHS has major advantages over many other health systems in its high proportion of electronic records and use of a common identifier for each patient. Several parts of the country, such as northwest London, have been able to create a single database that captures the data of primary care, community care, social care and acute care at the patient level, completely or partially, from different data sources, and formulate insights from analysing the data. However, a great deal of data still sits in silos.

2. mHealth, Telehealth & Telecare

Solutions of mHealth, Telehealth and Telecare satisfy consumers' needs to increase access to health information and enhance their engagement in health management. It also enables better chronic care management and post-acute discharge monitoring, potentially reducing costs.

mHealth refers to health care practice supported by mobile devices. As in China, using an app is the most common approach. The health app market is divided into consumer-driven purchases handling low-confidentiality data, such as personal wellness and activity data, which is attractive to commercial companies, and systems handling medium to high confidentiality data, e.g. health data, personal medical records and genomics data, used by clinicians, patients or hospital reporting systems.

mHealth solutions in the second group offer the greatest potential to improve health outcomes. Overall, the consumer demand for mHealth apps is high, but monetising them in the UK, as in many other countries, is difficult because of a lack of clear reimbursement models.

Telecare involves remote computer-based health monitoring from home and has been promoted as a means of managing the aging population group with long-term conditions to reduce unnecessary hospitalisation and encourage self-care and autonomy. Telehealth collects vital sign data and uploads it to professional medical institutions for clinical review, aimed at educating and supporting people to identify and manage changes in their condition. Together, Telecare and Telehealth can provide a people-centred, integrated and home-based care system to help people live independently for longer and support clinicians in case management and decision making by providing them with relevant, reliable information to help them target clinical care where it is needed most.

Demand	Independence Safety Timely support Peace of mind	Freedom Mobility Autonomy Confidence	Social engagement Maintain connections Address loneliness Community involvement	Health & Wellness Self-management Prevention Case management Monitoring and Support
Supply	Independent living through monitoring and supporting customers and caregivers at home	Assisted living through supporting care-givers to deliver care effectively and efficiently	Turnkey service through call centres	Remote Healthcare service through helping clinicians manage patients' needs

Table 9 Demand and supply of Telecare services in the UK

It is estimated that around 90% of UK Telecare sales are to the statutory market. Local authorities are key customers, having access to end-users as well as decision-making power for state-provided Telehealth and Telecare solutions. The 10% of private pay customers includes individual consumers, who typically buy directly



from Telecare providers or through charities such as Age UK, or private care homes. There is an increasing requirement for local authority users to co-pay out-of-pocket costs for their service.

2.5.2 Providers and competition

There are thousands of vendors, both UK and global companies, competing in different health sectors. In the area of primary care, there were 17 suppliers contracted with GP System of Choice (GPSoC) for GP Principal Clinical Systems and Subsidiary Modules in March and May 2014. Together they provide GP Principal Clinical Systems for over 75% of GP practices in England.

List of the 17 suppliers		
Advanced Healthcare	 Infermed 	• PCTI
Black Pear Software	• INPS	Prescribing Services LTD
(BMJ) Informatica Systems	Integrated Care 24	• TPP
DXS International	Merck Sharp and Dohme	United Health
• EMIS	 Microtest 	Wiggly Amps
iPlato Limited	PAERS Limited	

Table 10 Suppliers contracted with GPSoC

Like other countries, the mHealth market is highly fragmented. It is estimated that around 500 companies focus on health⁷ apps, excluding established software vendors and healthcare systems.

There are over 25 players on the National Telehealth Framework. Tunstall is the dominant player, providing home units, alert devices, sensors, home accessories, monitors and peripherals, as well as monitoring services delivered through monitoring centres. Other leading firms include Doboco, O2 Healthcare, Chubb Community Care, Just Checking, Care Innovation, Tynetec, Telesupport, Invicta Telecare, Bosch and Phillips Healthcare.

2.5.3 Market size and growth potential

According to a study commissioned by the UK government's Office for Life Sciences, the market for health IT including digital health systems, data analytics, Telecare, Telehealth and mHealth was £2 billion in 2014 and is expected to grow to £2.9 billion by 2018. Digital health systems represent the largest market both globally and in the UK, where they contribute 66% of digital health sales. The most promising market for growth is mHealth apps. Although it is currently the smallest health IT market sub-sector, it is predicted to grow at 35% in the UK and 49% globally from 2014-2018.

The largest, and slowest growing, health IT sector in the UK is digital health system, including health records and e-prescribing, with an estimated size of £1.3 billion.

Data analytics is an emergent and fast growing sector; it is currently immature but expected to grow rapidly – around 24% by 2018.

The UK has the highest Telecare penetration per capita in the over-65 category of any global market. The strength of the UK market and global position is in part due to the UK being an early adopter, supported by large local government programmes for Telecare. The UK market is well established and not expected to grow rapidly, with a CAGR of 4%-5%, taking it from £245 million in 2014 to £290 million in 2018.

Telehealth is a faster growing and more dynamic market. The UK market is expected to grow at a CAGR of 13% from £90 million in 2014 to £150 million in 2018. However, the adoption of Telehealth faces a number of barriers, including the perceived lack of evidence around cost-effectiveness, reimbursement mechanisms and clinical buyin. While reduced costs and improved capability of the technology are opening up opportunities in the short to medium term, progress in the UK is at risk as systems which are currently fixed line and hardware-dependent

 $^{^{\}rm 7}$ Digital Health in the UK: The industry for the office of life science



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become increasingly mobile-based. Transformation of these systems into mobile-based means that previous input will no longer be useful.

MHealth, or health related apps and wearable devices, is an emerging market which is still small and fragmented. However, the mHealth apps sub-sector is growing rapidly, and is predicted to be the fastest growing segment in health IT, with a CAGR of around 35% in the UK from £80 million in 2014 to £250 million in 2018. The wearable market is expected to grow from £100 million in 2014 to £240 million in 2018. There is a high consumer demand for mHealth apps, but monetising them in the UK is difficult due to a lack of clear reimbursement models, both in the NHS and elsewhere in Europe.

2.5.4 Opportunities

1. Establish new Telecare/Telehealth providers

The UK has been an early adopter of Telecare/Telehealth. Multi-centred, randomised controlled trials provide some evidence of the value of Telecare/Telehealth, and NHS plans and local government programmes are encouraging its wider adoption. All these factors have led to a relatively mature market in the UK, with well-established players like Tunstall and others. There is also an opportunity for Chinese players to provide innovative Telecare/Telehealth solutions in this well-established market.

2. Acquire or invest in existing UK Telecare/Telehealth providers

Current Telecare/Telehealthcare market in China lacks diversity in terms of the types of products offered. Many investors in China are seeking validated solutions as well as experience and knowledge of business models to deliver Telecare/Telehealth services effectively and profitably in China. One way to achieve this is for Chinese players to acquire or invest in UK Telecare/Telehealth players and develop capabilities to seek business expansion in both UK and China. This may create high potential for FDI opportunities.

3. Establish new mobile health (mHealth) apps providers

MHealth apps sub-sector is fragmented and predicted to be the fastest growing segment in the UK health IT sector. With a much bigger population base, the mHealth apps sub-sector is developing faster in China with leading players already emerging, for example Dingxiangyuan (丁香园), Xunyiwenyao (寻医问药) and Dr Chunyu (春雨医牛). These companies could consider competing in the UK market.

4. Acquire or invest in existing mHealth apps providers

Interviews with some of the Chinese leading mHealth players have shown that, although they are emerging rapidly in the Chinese market with clear advantages, they still lack a profitable business model. These companies are interested in finding innovative models and products from other countries such as the UK, which could help them compete in the Chinese market and develop an effective business model in China. These companies may consider acquiring and investing any potential innovative mHealth players in the UK.



3 Assessment of FDI opportunities

3.1 Summary of identified FDI opportunities

FDI opportunities in the UK primary care market appear to lie mainly in areas such as provision of both GP and REC services, training of primary/elderly care workforce, and Telecare/Telehealth. Other sectors such as health insurance, facility and infrastructure consulting services have not been identified as significantly attractive markets for entrants, hence will not be further discussed in the remaining chapters.

The following FDI opportunities are identified:

- 1. Establish new GP chain brands and clinics
- Acquire or invest in existing clinics or chain brands and expand practices in the UK
- Acquire or invest in existing Residential Elderly Care (REC) providers
- 4. Establish new training providers
- 5. Acquire or invest in existing training providers
- 6. Establish new Telecare/Telehealth providers
- Acquire or invest in existing UK Telecare/Telehealth providers
- 8. Establish new mobile health (mHealth) apps providers
- Acquire or invest in existing mHealth apps providers

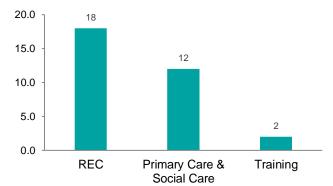


Figure 19 Number of deals in the UK primary care market since 2013

Source: Merger Market; KPMG China Analysis

Since 2013, there have been a total of 32 investment deals made in the sectors of residential elderly care, primary care services, social care services and training, with the majority in the first two areas.

3.2 Assessment of FDI opportunities against capabilities of Chinese investors

In order to analyse the feasibility of these FDI opportunities, we conducted an assessment against the capabilities of Chinese investors:

Opportunity	Capability of Chinese investors	Leading players in China
Establish new GP chain brand and clinics	 Financially capable for large investment groups in China China is less developed in primary care services with limited expertise in general practice General practices for foreign GPs are difficult in the UK Less willingness observed in employing local UK GPs for newly established clinics, as profitability is not as 	• N/A
	high as in China where high-end market is targeted	
2. Acquire or invest in existing clinics or chain brands and expand	 Currently, there is no existing Chinese player in the UK primary care service market The majority of Chinese investors are unfamiliar with the regulations and competition of the UK market and 	 Health 100 (investor of Health 100 and Ciming) iKang
practices in the UK	therefore are less willing to compete in a foreign market	China Life



Opportunity	Capability of Chinese investors	Leading players in China
	 Potential Chinese investors who may be interested in the UK market are mainly large investment groups who are seeking diversification and expansion of service line, such as health check-up groups, insurance groups, real estate groups and State Owned Enterprises (SOEs). Potential Chinese investors will want to acquire corporate brands from the UK and seek further expansion in both UK and China, as China is their major market 	TaikangPing AnWandaVanke
3. Acquire or invest in existing Residential Elderly Care (REC) providers	 Many Chinese investors are interested in REC sector as REC is an emerging market in China which investors are entering but lack expertise Potential Chinese investors who may be interested in UK REC market include Chinese large REC chain brands, insurance groups and real estate groups Potential Chinese investors will want to acquire corporate brands in REC area from the UK and seek further expansion in both UK and China 	 Cherish-yearn YueCheng Group China Life Taikang Vanke Poly Greentown
4. Establish new training providers	 Primary care related training in China, both for GPs and supporting staff, are not as developed as the UK market, so there are few or no existing providers with the capability to compete in the UK 	• N/A
5. Acquire or invest in existing training providers	 Current GP training providers in China are primarily medical universities and large hospitals, who are all publicly owned and are less able to enter the UK Training providers for supporting staff in China might be interested in UK expertise, but are usually small with little capability in foreign acquisition 	• N/A
6. Establish new Telecare/ Telehealth providers	 Chinese investors are unlikely to bring in advanced technology or solutions in Telecare/Telehealth as the UK is more advanced in this area 	Ali (阿里巴巴)Tencent (腾讯)China Life(中国人寿)
7. Acquire or invest in existing UK Telecare/ Telehealth providers	Due to the lack of mature business models for Telecare/Telehealth in China, potential Chinese investors will assess the applicability of UK solutions and the synergies with their portfolio companies	 Taikang (泰康) Neusoft (东软) Huawei (华为)
8. Establish new mobile health (mHealth) apps providers	 Chinese mHealth players are developing fast and many have attracted funding from investors Some players interviewed emphasised that their priority market is China within the next 2-3 years as they need to demonstrate success in Chinese market to the investors 	Dingxiangyuan(丁香园)Xunyiwenyao (寻医问药)
9. Acquire or invest in existing mHealth apps providers	 The biggest challenge facing all Chinese mHealth players is the lack of a sustainable profitable business model Chinese mHealth companies are interested in finding innovative models and products from other countries 	● Dr Chunyu● (春雨医生)



Opportunity	Capability of Chinese investors	Leading players in China
	 Companies in the US are currently being seen by Chinese mHealth companies as leading the innovative model development 	

Table 11 Assessment against capabilities of Chinese investors

From the analysis shown in Table 11, it is clear that there is limited capability and lack of willingness of Chinese investors for the following opportunities:

- Establish new GP chain brand and clinics
- Establish new training providers
- Acquire or invest in existing training providers
- Establish new Telecare/Telehealth providers
- Establish new mobile health (mHealth) apps providers
- Acquire or invest in existing mHealth apps providers

The above opportunities will not be discussed further in this report while the following three opportunities are further discussed:

- Acquire or invest in existing clinics or chain brands and expand practices in the UK
- Acquire or invest in existing Residential Elderly Care (REC) providers
- Acquire or invest in existing UK Telecare/Telehealth providers

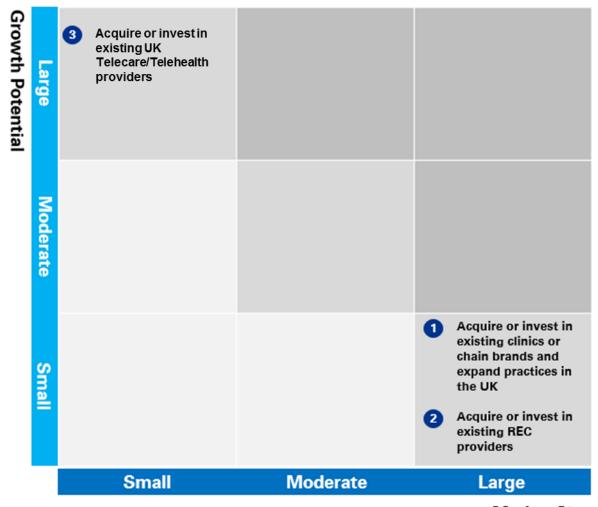
3.3 Assessment of FDI opportunities against market size and growth potential

In order to better understand whether the identified opportunities are feasible and attractive for Chinese investors, it is necessary to consider their market size and growth potential, to eliminate any with a small market size and limited growth potential.

Opportunity	Market size	Growth potential	Assessment result
Acquire or invest in existing clinics or chain brands and expand practices in the UK	Large	Small	Υ
2. Acquire or invest in existing Residential Elderly Care (REC) providers	Large	Small	Υ
3. Acquire or invest in existing UK Telecare/Telehealth providers	Small	Large	Υ

Table 12 Assessment against market size and growth potentials





Market Size

Figure 20 Assessment against market size and growth potential

Market size	Growth potential
Large: over £10 billion	Large: over 10% CAGR
Moderate: £1 billion to £10 billion	Moderate: 5%-10% CAGR
Small: less than £1 billion	Small: less than 5% CAGR

Based on the above analysis according to market size and growth potential, we can conclude that the three FDI opportunities will be considered further.



3.4 Assessment of FDI opportunities against regulatory requirements and competition

Opportunity	Regulatory	Competition
Acquire or invest in existing clinics or chain brands and further expand practices in the UK	 Currently allowed, but certain regulatory processes need to be followed No existing FDI in this area, but mergers and deals in provision of primary care and social care exist Certain NHS England processes and requirements for general practice mergers have to be followed All merger applications for general practices require approval by NHS England Foreigners who wish to practice as a GP in the UK need to go through a complete set of testing and training process specifically designed for overseastrained doctors. 	 Majority of GP clinics in UK are private and self-owned Several big brands already exist, still leaving room for mergers and entrants
2. Acquire or invest in existing Residential Elderly Care (REC) providers	 Currently allowed, but certain regulatory processes need to be followed No existing FDI in this area, but mergers and deals in provision of primary care and social care are already happening 	 78% of REC market (by number of beds) are private owned The market is decentralised with numerous players, which could be proper targets for mergers and acquisition
3. Acquire or invest in existing UK Telecare/Telehealth providers	 Currently allowed, but certain regulatory processes need to be followed No existing FDI in this area so far 	 Although Tunstall is a dominant player, the Telecare and Telehealth market is fragmented with over 60 players

Table 13 Opportunity assessment against regulatory requirements and competition



4 Key success factors

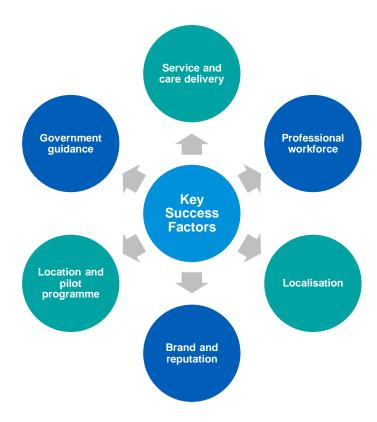


Figure 21 Key Success Factors



KSF	Details
Service and care delivery	 Incorporate improved and new primary care delivery models Focus on the integrated care delivery trend and government strategy Integrate primary care, social care, community care and Telecare Diversify care delivery and specialties according to client needs of different markets or locations Comply with the national requirements on care and service quality Ensure quality through developing continuous quality improvement programmes Set high standards to which all practices must comply
Professional workforce	 Employ highly trained and experienced practitioners and supporting workforce Employ local practice managers or management team Develop continuous training and development programmes for workforce, complying to national standards Develop quality standards that all caregivers must meet
Localisation and integration	 Incorporate foreign investment with local practices, especially in branding, workforce, strategy and business principles Integrate strengths and advantages of foreign investors and local practices Integrate and collaborate during acquisition and merging of GP clinics
Brand and reputation	 Continue to devote time and investment in maintaining and upgrading the reputation and recognition of acquired/invested brand Establish high brand reputation to better attract patients and compete with other brands Maintain the brand reputation by complying with standards
Location and pilot programme	 Set up the first practice as pilot programme or testing site before large investment and wide replication Select locations according to local demands and level of competition, especially the first pilot programme
Government guidance	 Follow and comply with the guidance provided by related government departments and commissions in the UK, such as the Department of Health, Healthcare UK, and the Department of International Trade (DIT) Seek help from UK government and its agencies if needed

Table 14 Analysis of key success factors



5 Challenges and risks

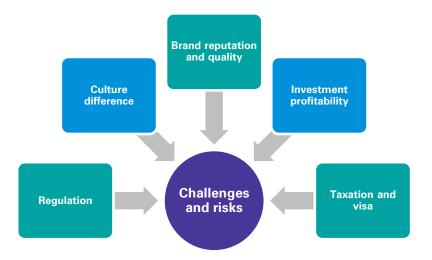


Figure 22 Challenges and risks

Challenges & risks	Details
Regulation	 Although the UK appears to be one of the easiest major economies in Europe to do business in⁸, there are still regulations and restrictions for entering and practising in primary care
	 All merger applications for general practices require approval by NHS England
	 Foreigners who wish to practice GP in the UK need to go through a complete set of testing and training processes designed for overseas- trained doctors
Cultural differences	Language and culture are both great barriers for foreign companies
	 Certain cultural differences may cause misunderstanding between partners and dissatisfaction from clients
Brand reputation	Chinese brand reputation and care quality are not highly recognised in UK
Investment profitability	 High cost of employment and low market recognition will limit the investment profitability, especially when pricing cannot be too high under NHS
Taxation and visa	Foreign taxation is not familiar to Chinese investors
	Different visa required for foreign workforce

Table 15 Analysis of challenges and risks

 $^{^{\}rm 8}$ Invest in the UK: your springboard for global growth, DIT



6 Recommendations

1. Comply with regulations and follow guidance from UK government departments and agencies

There are certain regulations and restrictions that Chinese investors will face (which might be quite different from the ones in China) during an FDI process and business expansion in foreign countries, including commercial regulations, trade and investment regulations and restrictions, foreign taxation and visas. Therefore, we strongly recommend that UK experienced lawyers are involved during the entire investment process. Also, since multiple guidance handbooks have been published by UK government departments, such as the Department of Health and the Department of International Trade, we encourage Chinese investors to follow such guidance, engage with, and seek help from these departments if necessary.

2. Acquire or invest in an existing brand rather than establishing new ones

Although there are opportunities for newly established general practices or chain brands, the merger and acquisition of existing ones is recommended rather than establishing new ones because of the lack of operational capability of Chinese investors. Additionally, the original brands or practices have an existing reputation, professional workforce and client base, which would help potential Chinese investors to reduce risks from lack of market recognition, as well as workforce recruitment. The potential investor could use the brand and group to acquire or invest in further practices in the UK to expand its market share if necessary.

3. Incorporate the new primary care delivery models

"The shared delivery plan: 2015 to 2020" from the Department of Health indicated the strong government desire to bring about more joined up care in the next few years, integrating health and social care services by 2020. Therefore, Chinese investors are encouraged to provide integrated care in their strategy, such as adhering closely to the Primary Care Home model or other new models of care delivery.

4. Localisation and integration during M&A process, and awareness of cultural differences

Localisation is a key issue in foreign investment, especially foreign M&A by Chinese investors, as Chinese brands or investment might be regarded as low quality or having a low reputation. To avoid this problem in foreign M&A, normally Chinese investors would choose to keep the original local employees (including professional workforce and management team) to maintain operations and brand reputation. However, this will create the problem of how to integrate the strategies of Chinese investors with the management philosophy of local management teams, as well as the demand of local UK customers. Therefore, Chinese investors need to understand the demand in the UK market and clarify what UK customers require, so that their business is well adjusted to the UK market and its operating model. During this localisation and adaptation process, Chinese investors need to be highly sensitive to cultural differences.

5. Set up a pilot programme before large investment or wide replication

Foreign investment and business expansion will face a series of risks, especially with localisation, market recognition and investment profitability. We strongly recommended that in the foreign market entry process, a pilot programme is set up before long-term investment or wide replication. In order to locate and carry out the first pilot programme successfully, Chinese investors may find a local partner with a good understanding of the local market and wide relationships with different stakeholders. Certain government bodies such as the Department for International Trade may also be useful partners.

6. Further expand business in the UK to maintain the reputation and recognition of the acquired/invested brand

Even though the purpose of some Chinese investors might be to buy out corporate brands from the UK and bring them back to China, so as to improve the reputation of the Chinese company in the Chinese market, it is vital that time and money is devoted to maintaining the reputation and recognition of the acquired/invested brand in both the UK and China, and to continue to expand the business in the UK. In this way the reputation of the UK brand can be further strengthened, with sustained high quality service delivery and outstanding brand image, which will bring a much longer and greater impact to the business in China.



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