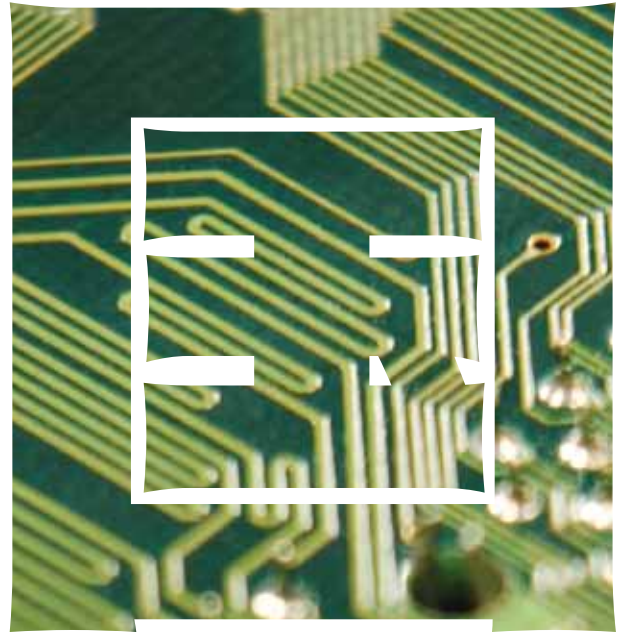
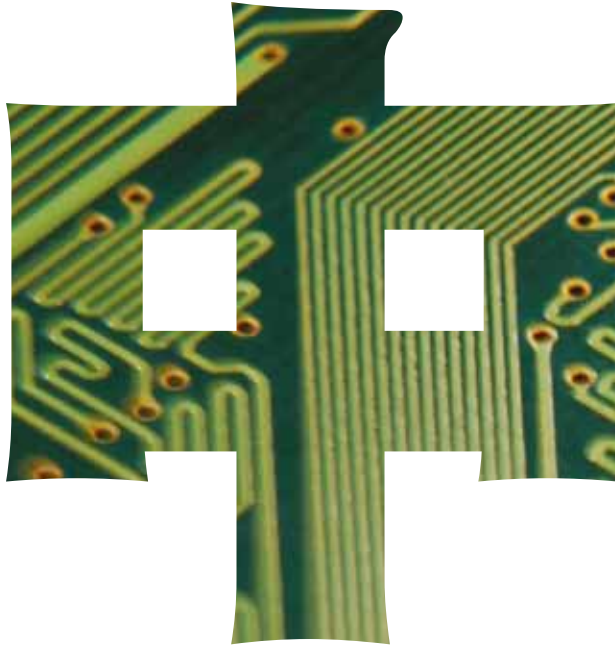


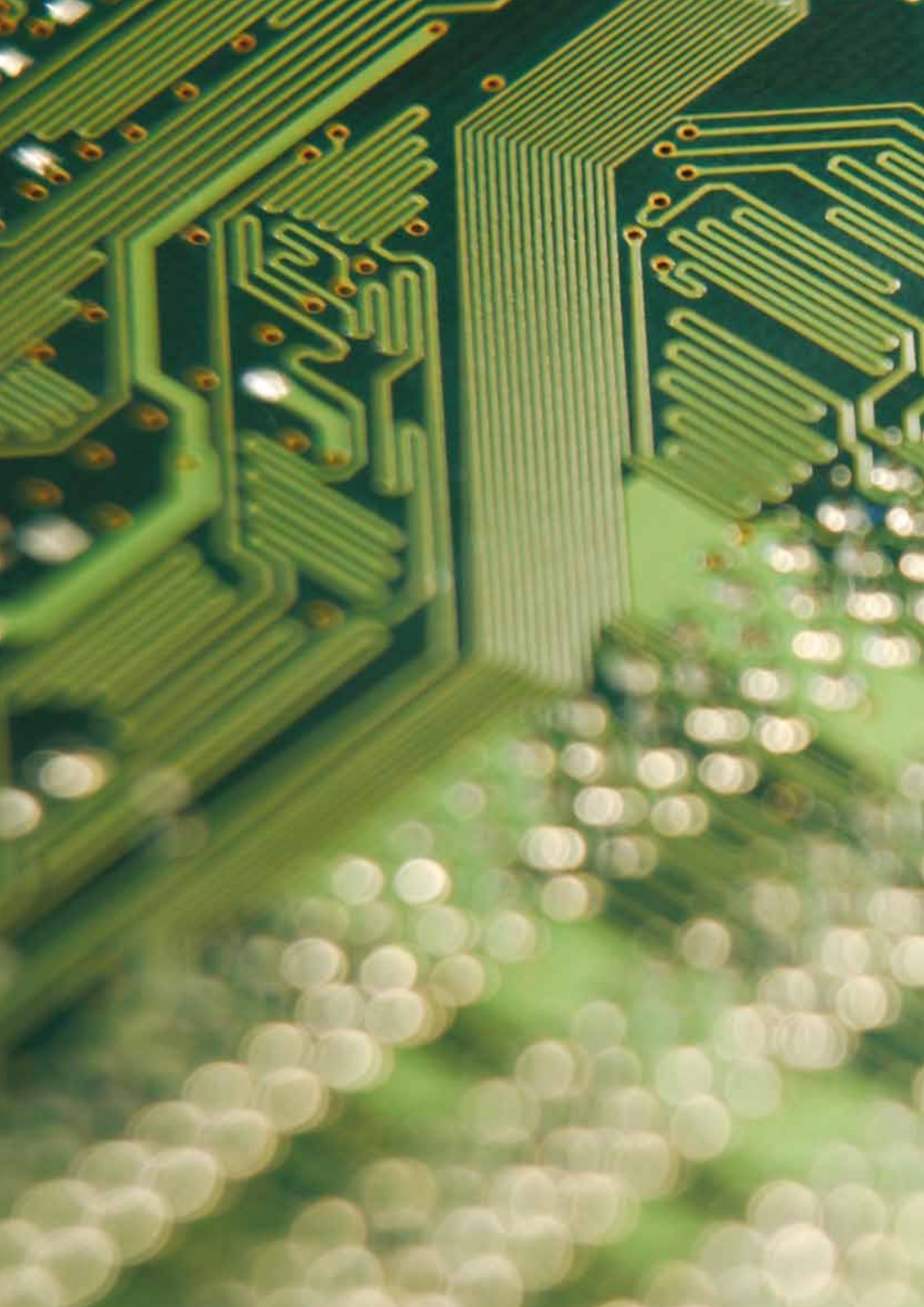


DEVELOPING YOUR INTERNATIONAL TRADE POTENTIAL



Software Industries in China
Opportunities for business





Traditionally, business interest from UK companies has generally focused on a small number of large established cities in China such as Beijing, Shanghai, Shenzhen and Guangzhou. However, these markets are becoming saturated, competition is intensifying and factor input costs are increasing. As a consequence companies are increasingly willing to consider venturing beyond these cities for business expansion and development.

In 2008 UK Trade & Investment and the China-Britain Business Council produced a report entitled "Opportunities for UK Businesses in China's Regional Cities". The aim of the research was to identify where, and how best, UK business can take advantage of the opportunities presented by the ongoing growth of China's regional cities.

In the original research China's ICT industry was identified as a growth sector and one where the UK's capabilities could help to meet China's requirements across a range of industries. The cluster of cities around Shanghai in the Yangtze River Delta region of China were also identified as being a major centre for China's software industry.

The "Software in China – Opportunities for Business" report aims to build upon the findings of the initial research by focusing on two major cities in the Yangtze River Delta region, Nanjing the capital of Jiangsu Province and Hangzhou the capital of Zhejiang Province. Where the initial report focused on the broad sector of ICT, this report narrows down the focus to the software sector and specifically the sub sectors of e-health, e-government and software for financial services.

"China's software sector is experiencing incredible growth, with revenue up almost thirty per cent in the first half of this year. This growth, fuelled by a huge increase in IT spending across the public and private sector, combined with a demand for software development talent and high-quality software products across a range of industry sectors is producing fantastic opportunities for British software companies."

Sir David Brewer, Chairman of the China-Britain Business Council

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Fast track to the world ^{UK}

CHINA'S SOFTWARE SECTOR

China's software industry has been growing steadily over the last ten years and is currently going through a period of transition. Historically, the larger domestic market players cut their teeth in outsourcing services, ie developing software for domestic and international clients.

Over the last decade there has been tremendous growth in home-grown application development across the whole spectrum of solutions and a number of significant companies have grown very rapidly.

By 2008 the Ministry of Information Industry Technology (MIIT) recorded 16,194 locally certified software companies, employing in excess of 1.5 million software-industry professionals. In addition, 49,087 indigenous software products had been approved for intellectual property rights protection. As a result, the current software market remains somewhat dominated by foreign brands that control approximately 65 per cent of the market.

While outsourcing still sits high on the government agenda, the rapid growth in IT spending among various industrial segments, including Government, banking and manufacturing have prompted the domestic software companies to develop their own Chinese characteristic products to meet demand. By the end of 2008 China's software sector generated RMB 757.2 billion of business revenue, an increase of 29.8 per cent over the same period of the previous year.

The figures speak for themselves. In 2008 and 2009 the industry continued to expand at a dramatic rate even during the downturn in international markets. Industry sales for the first six months of 2010 rose 29 per cent to RMB 604.8 billion (US\$89.3 billion), marking a significant upturn in business. (Source: MIIT)



A woman with dark hair is looking at a computer monitor in an office. The background shows several other computer monitors displaying various data and charts. The overall scene is a typical office environment.

US\$89.3bn

Industry sales for the first six months of 2010 rose 29 per cent to RMB 604.8 billion (US\$89.3 billion).

14 out of 20

Beijing is the location of headquarters for all the major ICT distributors, with 14 of the top 20 distributors based there.

Industry Growth

As recently as August 2010 the Chinese Government issued a preferential policy to foster the development and expansion of software companies, and this preferential tax policy has been applied to software and other high-tech companies.

Traditionally, growth in the hardware sector has outshone that of software. However, the massive stimulus package announced by central Government in 2009 is expected to lead to even higher-than-average software growth rates compared with hardware and other sectors of the economy.

Rapid growth in IT spending among various industrial segments, including Government, banking and manufacturing is likely to propel the domestic software industry in the near future and it is from the domestic market that the most significant growth is expected.

Key Players

Competition in the ICT space in China is highly competitive though fragmented. Multinational corporations (MNCs) with an established presence include Microsoft, Oracle, SAP and CISCO. In addition to MNCs, domestic companies such as Neusoft, Beyondsoft, Shanghai UFIDA and VancelInfo are steadily making their mark in the market, with each company now employing many thousands of staff.

The main domestic software companies are Insigma, Panda Electronics, Langchao, Neusoft, UFIDA and Beyondsoft. The largest software vendors are CS&S, Neusoft, UFSOFT, Kingdee, ZTE, Langchao, BaoSight, CVIC, and New Grand. The foreign competition is dominated by US companies. The local market still lacks core technologies, high-end software development talent and consistently high-quality software products but this situation is changing rapidly as companies adopt more rigorous processes and techniques from the west.



Rapid growth in IT spending among various industrial segments, including Government, banking and manufacturing is likely to propel the domestic software industry in the near future.

Distribution Channels

In China, ICT products are mainly sold through distributors, systems integrators or directly into the retail market. Only limited sales are currently made via the internet.

Distributors

Digital China leads Chinese ICT distributors and in 2008 achieved RMB 21 billion annual sales followed by ECS China (RMB 10 billion) and IM China (RMB 8 billion).

Beijing is the location of headquarters for all the major ICT distributors, with 14 of the top 20 distributors based there. It is worth noting almost 90 per cent of distributors are reportedly operating with an average profit margin lower than 10 per cent. Network appliances, storage, software and high-end servers generate higher profits than desktop PCs, laptops and printers (15 per cent as opposed to 3 per cent on average).

Systems Integrators

Currently in China, IBM, Digital China, HP, UFIDA Software and Oracle rank top of the major systems integrators in terms of solution provision, integration and after-sales service.

However, given stiff competition, the market share for each of these firms is low, for example IBM, ranked number 1, holding only 4 per cent of the China market. The top ten systems integrators have a combined share of 29 per cent of that market and with more expansive technological capabilities are able to enjoy better profit margins when compared with small and medium integrators.

E-GOVERNMENT IN CHINA

For the purposes of this report, e-government includes digital and network areas of national administration including modern computing, network communications, technical support, daily government affairs, information gathering and dissemination, and public administration.

These technologies can serve a variety of purposes: better delivery of governmental services to citizens, improved interactions with business and industry, empowering citizens through access to information, and more efficient management of government. The resulting benefits include less

corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions. In general, e-government can be broken down in terms of the following categories (Xiang Zhou, *Journal of Computer-Mediated Communication*):

Categories of E-government			
Sectors	E-governance	E-service	E-knowledge
Government-to-Citizen	Encouraging citizens to become involved in participatory access to the political process through online discussion forums, chat rooms, etc.	Provide electronic opportunities to conduct activities such as making payments or obtaining consulting services for individuals.	Provide information about governmental activities that are important to citizens.
Government-to-Business	Providing businesses with opportunities to give input on business regulations.	Make payments, file for licences, download files needed for business, etc.	Deliver information relevant to specific business needs.
Government-to-Government	Facilitate communication among government agencies to enhance interrelationships among agencies.	Exchange files between agencies; provide internal government services.	Intergovernmental access to government information systems.





In China, e-government has been a relevant topic since the early 1990s when reformation of the information services was highlighted in national policy. Through the initiatives outlined below (the earliest of which began in 1993), the central Government has managed to prevail on government agencies and administration to use online services, networks and computers – with varied success.

Initiatives

The Golden Projects

The Golden Projects, initiated in the early 1990s, were a systematic and determined effort by national Government to develop China's telecommunications and information infrastructure.

Stated aims included:

- the building of a national information highway as a path to modernisation and economic development,
- being a major driver in the development of the indigenous information technology, and
- unifying the country by drawing provinces to the capital and therefore allowing Government to act across ministerial and industrial demarcation lines.

The three main projects were Golden Bridge, Golden Card and Golden Customs, as outlined below:

Golden Bridge 1993

Golden Bridge is the infrastructure for "informatising" the national economy. At its core is a project to build the infrastructure backbone over which other information services will run.

Golden Card 1994-2003

Golden Card was initiated in 1994 with the intention of creating a unified payment clearance system to allow the widespread use of credit and debit cards across China.

Golden Customs 1993

The Golden Customs project was intended to create an integrated data communications system connecting foreign trade companies, banks, and the customs and tax authorities. The system aimed to speed up customs clearance and strengthen authorities' ability to collect tax and duty payments. The Golden Customs project allows companies to submit import and export declarations to the customs authorities, calculate duty payments, and check import and export statistics.

See below for a full list of China's "Golden" projects:

Name	Main Participants	Purpose
Golden Bridge (Jin Qiao)	China Im-Ex Bank; Ministry of Finance; State Information Centre	To build a public network backbone and international network interface capable of transmitting data, voice, image and multimedia information.
Golden Card	MII; MEI; State Information Centre; JiTong	To build a national banking and credit card system using telecom networks to replace cash transactions with an electronic systems for savings, withdrawals, and payments.
Golden Customs	MOFTEC; Customs Dept; JiTong	To establish networks capable of handling foreign-trade taxes, foreign currency settlements, domestic returns, quota management systems, an electronic data interchange (EDI) and statistical databases.
Golden Sea	State Statistical Bureau; PBoC; State Information Centre	To build a data network linking top government leaders with other institutions, organisations and offices under the direct jurisdiction of the Communist Party Central Committee.
Golden Macro	China Im-Ex Bank; Ministry of Finance; State Information Centre	To develop a state economic and policy support system by setting up databases unifying industries, taxation, prices, investments, resources, capital energy, transportation and information exchange.
Golden Tax	Ministry of Finance; MII; State Taxation; Great Wall Computer Co	To make use of computerised work unit tax receipts and direct bank connections to aid the flow and use of funds across China.
Golden Intelligence	State Education Commission	To enable teachers and research professionals to have timely and precise information and to enable international and local communication and co-operation.
Golden Enterprise	State Economic and Trade Commission	To design and build an integrated enterprise target (quota) and distribution system; to build a countrywide enterprise and product database.
Golden Agriculture	Ministry of Agriculture	To develop and monitor agricultural supervisory committees, and the calculation and forecasting system.
Golden Health	Ministry of Health	To develop and apply computer technology, communications technology and scientific information distribution to the medical sector.
Golden Info	State Statistical Bureau	To develop real-time information flows.
Golden Housing		To create a property information network.
Golden Switch	MII	To build China's domestic digital switch manufacturing industry.
Golden Cellular	MII	To provide the basis for a co-ordinated mobile communications strategy, and to develop national roaming standards and systems.

Although e-government has been given much attention in state media there is still much room for development.

Once these infrastructural foundations were initiated and gained momentum, the central Government announced a new plan, founded upon three specific projects: Government Online, Enterprise Online and Family Online.

Government Online Project (GOP)

The Government Online Project was initiated in 1999 and comprised three stages:

Enabling Technologies – focused on connecting 800-1,000 government offices and agencies to the internet.

Information Sharing – focused on having government offices and agencies move their information systems into compatible electronic forms.

Paperless Government – aimed at seeing government offices and agencies becoming paperless.

The purpose of the GOP was to create a centrally accessible administrative system that collected and transported data to and from users – users being the public and the enterprise system, as well as government departments. The project aimed to interconnect government offices of every province, autonomous region and municipality. This programme was intended to run until 2010.

The network was set to promote the establishment of formal government websites to provide information and services and then, in theory, also facilitate collaboration between the Government and the nation's growing number of IT enterprises (ISPs, ICPs, software and hardware manufacturers).

By developing the basic infrastructure and encouraging government agencies at all levels to incorporate internet technologies, the Government hoped to set the tone for online development and, ultimately, e-commerce. This included online government procurement bidding, online welfare payments, information centre, electronic document management and publication, electronic tax and digital identification.

Official goals of the GOP were to:

- provide more effective co-ordination between and across government organisations, both horizontally (between ministries) and vertically (from centre to locality),
- build up national and worldwide confidence of the Chinese central and local governments' presence on, and commitment to, the internet,
- make government information available to the public while also reducing government expenses by increasing administrative efficiency,
- lay a base for the establishment and growth of China's "electronic government" and encourage electronic procurement, and
- begin to accelerate the acceptance and use of the information economy in China.

Similarly to earlier projects, successful GOP implementation was patchy and ran into several problems and delays, not least because there was an absence of planning in standardisation and unifying systems. This, in turn, led to a lack of connectivity between different government departments and regions.



E-government Today

According to the various official sources, although e-government has been given much attention in state media there is still much room for development. The State Department currently outlines the need for e-government in China including automation and digitisation of the workplace and the need for an open and modern system; however, there are some evident problems in cohesion between the various projects launched and different state departments.

In 2001 the State Department created a new body specifically focused on the information services of the Government. However, there still remains no single body concerned with the overall development of e-government in China. Although e-government forms part of a national plan, different departments seem to take responsibility for different projects, which would explain why previous initiatives have had trouble in linking different government departments together online.

Despite a lack of cohesion, e-government in the country can be described in terms of a "two internets, one site, four databases and the twelve Golden Projects model". This equates to:

- a government intranet (internal) and internet (external),
- a website which acts as a government portal,
- four fundamental databases for the population, the government bodies that form part of the judicial system, land and resources, and macro economics, and
- 12 business systems (Golden Initiatives outlined above).

It is worth mentioning that the foundations for e-government appear relatively well established; however, there is a notable gap in that its usage is still very limited. Some application software has already been developed and the majority of government bodies have installed modern computers which have broadband connections, and authentic versions of software installed.

However, the degree to which the state is using online facilities is still relatively low when compared to other countries in Asia. Moreover, many of its applications are still limited to low levels of office automation, and computers with high-end configurations are employed for non-work related tasks.

There is also a large difference in the development of e-government between different regions and different government departments. In general, the eastern/coastal regions of the country appear to have developed and employed e-government to a greater degree than the western/central regions. In addition, government bodies at district level/central government level appear much better equipped than those at local levels.

The situation of e-government can therefore be summarised as being in a bottleneck. Its foundations are nearly completed and there is a current push to develop applications for these facilities. However, various problems arise in that there is no single body charged with the overall management of e-government in China, limited legal safeguards have been established, and government staff are unfamiliar with e-government methods.

E-government Opportunities in Nanjing

Nanjing is the capital city of Jiangsu Province and one of the four great ancient capitals of China. With a population of 7.7 million, it lies 171 miles north west of Shanghai and covers 2,541 square miles of the lower Yangtze River Delta. Nanjing has the third largest economy after Suzhou and Wuxi in Jiangsu province.

Since 2003, in accordance with national initiatives, Nanjing municipal government took steps towards establishing an e-government platform. In 2004 the platform came into existence and today incorporates more than 190 work units including the Nanjing City Publicity Department, Nanjing Municipal Administrative Office, relevant bureaus and government offices of every county and district within the city.

The government network in Nanjing is maintained by Harbour Networks, a Beijing company and a subsidiary of Huawei Technologies Co Ltd. The network offers the following six services:

- Promulgation of electronic versions of official documents
- An inbox for matters concerning the mayor
- Meeting notices sent via the internet
- Electronic versions of government information services
- Online business watchdog
- Electronic enquiries about official government documents

The network incorporates ERRP Core link protection and an RPR Ethernet. In order to ensure it keeps up to date with increased traffic, a 1 gigabyte core and connection is also employed. In terms of network safety, Harbour Networks has provided network management technology that includes access layer virus protection, IDS linkage, 802.1 I.D. authentication and user access control.

Other companies providing e-government products/services in Nanjing include Nanjing Renfeng Co Ltd that supply solutions for government file management and IBM that provide Service Orientated Architecture solutions.

In the next few years Nanjing municipal government plan to develop and roll out a variety of services, notably in the Government to Consumer sector. E-governance and e-knowledge will be priority areas. Strategic planning towards the goal of the "Internet of Things" is underway and the government is keen to develop a better understanding of viable applications in the delivery of services to citizens. To allow itself to be successful, the government is studying, with some urgency, available technologies and providers to create a unified platform for all e-government services.

The Nanjing Information Office stated there were opportunities in services management, consulting in e-government systems and related cloud management technologies. The government did use IBM previously but found it expensive and not able to localise/customise technologies to their particular needs. Working with a local partner in delivery of these services was suggested as a more productive model.

In addition, the government is keen to interact with UK companies that can demonstrate innovative government-to-consumer applications. One specific goal of the city's strategic plan of city-wide digitisation projects is greater citizen participation. While the government does have an overall strategic plan, they would welcome approaches from companies that can offer applications which can deliver previously unconsidered services.

Sinosoft Technology plc

Sinosoft Technology plc is a Nanjing-based company that specialises in e-government – including tax, administration and system integration services. Nanjing Tax Bureau uses software systems developed by Sinosoft and the company is now attempting to persuade other municipal governments around the country to adopt this technology. Established in 1999, the company now employs 400 staff and is AIM-listed. Thirty-two per cent of the staff have masters or doctoral degrees and the company employs a very strong focus on R&D. The company raised awareness of its expertise by winning awards which has resulted in it now being a member of a group charged with the standardisation of national e-government. In discussion with Sinosoft, they felt that developing awareness of the local market needs was essential as government decision-makers often do not know what is needed/can be achieved. As such, they employ a strategy whereby they adopt a consultation approach prior to developing sales leads.

Sinosoft Technology has a range of existing products for the e-government market including the: Skytech e-Government (.NET) System, Skytech Linked Approval System, Skytech e-Government Data Exchange Platform, Skytech Public Document Exchange Middleware, Skytech Standardised Website System and Skytech XML Work Platform.

The company is involved in a number of e-government projects this year and has already agreed on a strategic alliance with one UK company (see NorthgateArinso Case Study). It is keen to engage and interact with others that can demonstrate quality products, skills and technical awareness in the government-to-consumer and government-to-business subsectors.

www.sinosoft-technology.com

In the next few years Nanjing municipal government plan to develop and roll out a variety of services, notably in the Government to Consumer sector. E-governance and e-knowledge will be priority areas.

E-government Opportunities in Hangzhou

Hangzhou is the capital of Zhejiang province. It lies 117 miles south west of Shanghai, covers a total area of 6,408 square miles and has a population of 7.9 million. It has the third-largest GDP in the Yangtze River Delta, after Shanghai and Suzhou. Hangzhou is home to 47,300 RMB millionaires, more than any other Chinese city outside of Beijing, Shanghai and Guangzhou.

Both Hangzhou and Nanjing are highly ranked among cities doing the best in getting the government online. Hangzhou began office automation in 1989 and had connected all government and Party offices (including districts and rural county offices) on a government intranet by 1997. Hangzhou's first city government website was launched in 1999.

In 2003 the city government launched its Citizens' Mailboxes initiative offering email addresses ending in @hz.cn to Hangzhou residents. These mailboxes provided web-based email access to anyone in Hangzhou who cared to register for them. Hangzhou was apparently the first city in the country to provide such a service.

In the same year the government began to develop a multiuse smart-card system that provided services to citizens in areas such as public transport payment, libraries, taxi and train payments and identification for health insurance. This was put into practice in 2006 and now all Hangzhou citizens can opt to use the cards.

By the end of 2008 the municipal government's website had registered 660 million clicks and the number of web pages browsed had reached 83.76 million. The website currently provides multiple online interconnected services, such as tax reports, annual enterprise examinations, notary services, consulting and complaint services.

Recent e-government initiatives in Hangzhou include the deployment of the TIBCO Enterprise Messaging Service and TIBCO ActiveMatrix BusinessWorks for its government information sharing and business collaboration initiative in 2008.

This initiative was planned to facilitate the integration and real-time flow of data across its information systems. TIBCO was selected for the e-government project because the software was the "fastest, most secure and most reliable solution we evaluated... and importantly, TIBCO allowed us to achieve real-time data exchange in a multivendor environment, so we did not need to replace the incompatible legacy applications and platforms that had been deployed throughout government".

The HC3 initiative involved the design and deployment of Hangzhou's Wireless Metropolitan Area Network (MAN). When complete, it will cover the entire Hangzhou area (16,600 square metres), providing wireless internet access to all in the area. The MAN provides a wireless e-government intranet as well as public internet applications; broadband data service applications as well as narrowband data and voice applications; and is capable of outdoor and indoor usage.

In recent years, e-government projects in Hangzhou have focused on overcoming "seven difficulties" in relevant public fields, notably: social insurance services, supervision of food and medical products, intelligent traffic systems, environmental monitoring, social stability, public health and disaster response.

The Hangzhou municipal government has identified citizens' efficient access to government services as their highest priority and welcomes approaches from

UK software companies that can work with relevant departments to deliver more comprehensive government-to-citizen services.

In the case of applications targeted at the government-to-government subsector, it is acknowledged that having a Chinese partner as an interface would be a more sensible approach. A Chinese partner could also facilitate services management contracts.

In 2010 Hangzhou also announced a new electronic information project that will focus on the "Internet of Things" and unlock the potential of Hangzhou's wireless network technology. A current priority is the development of a unified platform to allow all government systems and applications to interoperate effectively and cloud management technologies were raised as an area of interest. However companies wishing to provide consulting and services in these areas would need to move quickly to take advantage of these time-limited opportunities.

In addition, Hangzhou Science & Technology Bureau, Hangzhou Association for Science and Technology and Hangzhou Science & Technology Consulting Center all stated particular interests in the field of intelligent building software and systems and energy management systems. While this may not meet the specific criteria of e-government, there appear to be opportunities for companies active in this area to develop business with the relevant government offices.

Insigma Technology

Insigma Technology is a Hangzhou-based company that was originally a spin-out from Zhejiang University. Now ranking in the top ten largest IT outsourcing companies in the country, it is reported to employ several thousand staff. While the company provides a range of outsourcing services, it is also heavily involved in e-government and has developed a concept entitled "Intelligent City". Intelligent City is designed to create a platform which provides a convenient, efficient and flexible tool for generating and implementing decisions related to city management and operation. Hangzhou government's healthcare databases and structure were completed by Insigma. The company is open to approaches from UK companies to work as alliance partners in the localisation and/or customisation of applications targeting municipal governments, in Hangzhou and elsewhere.

www.insigma.com.cn

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CASE STUDY:

NORTHGATEARINSO

The following case study is an example of a UK based business that has had success in China's regional cities.

NorthgateArinso is a leading UK-based global human resources software and services provider offering HR business solutions to employers of all sizes, including Fortune 500 companies and many public sector organisations. The company's products support key HR areas like workforce administration, payroll, benefits, recruitment, learning, and talent management. With a wealth of experience in international service delivery the company has more than 8,000 employees in 35 countries across five continents, and supports customers in more than 100 countries.

In addition, one of the company's flagship products is PROIV, a rapid application development (RAD) tool behind numerous commercial, industrial and administrative software applications. Organisations including tax authorities, retailers, engineering companies, media operators and software houses use PROIV to build applications.

The company was keen to develop licensing opportunities for PROIV in the mainland market. However, despite having considerable experience in international markets (and also an office in Taiwan) it chose to take a cautious approach in its attempt to find an implementation partner on the mainland.

In 2008 the company approached UKTI and commissioned a report via the Overseas Market Introduction Service (OMIS). CBBC identified a range of software companies that met the company's criteria and NorthgateArinso visited the market in November of that year.

Travelling across the country, NorthgateArinso representatives met decision-makers of companies ranging from some of the largest IT developers and service providers to more specialist and niche players. The company took a patient approach to determine the best fit between both parties and eventually chose to partner with Sinsoft Technologies, which although listed on the Alternative Investment Market in London, is headquartered in Nanjing.

The two parties signed a memorandum of understanding (MOU) and became strategic partners. Utilising PROIV and NorthgateArinso's specialist expertise in application build, Sinsoft is adding market awareness, networks and localisation and customisation skills to the mix.

Patience and relationship-building were the key ingredients in our success. As market entrants we were able to rely on advice from UKTI & CBBC. UK companies are no longer pioneers when approaching the Chinese market; the expertise is there.

E-HEALTH IN CHINA

There are over 65,000 hospitals nationwide. Of these, 75 per cent are non-grade facilities. They appear poorly equipped with fewer than 20 hospital beds in rural areas. There has been a dramatic increase over the last 25 years in private and foreign-invested hospitals, as well as foreign/private funded/managed facilities including general hospitals, specialist clinics and specialist hospitals (such as gynaecology hospitals).

There are currently over 3,500 private hospitals in China. Foreign-invested private hospitals number approximately 100 and are operating with strong restrictions, including the requirement that foreign investors have to partner with local hospitals and that local Health Bureaus have a hand in managing the resulting joint ventures. China is however, considering relaxing some of its rules on Wholly Foreign Owned Enterprises (WFOE) in the healthcare sector since recently the Chinese State Council (National Panel of Healthcare Reform) has confirmed it will run pilots on foreign wholly owned and managed hospitals which may enhance opportunities in this sector.

Hospital Categories

Chinese hospitals can be categorised into five types, three tiers, and three grades.

Types

- Public health system hospitals
- Military hospitals
- Hospitals funded by Ministries
- Private, shareholdings and Sino-foreign JV hospitals
- Hospitals affiliated to medical education and research institutes

The classifications of hospitals are as follows:

Tiers

Tier 3 – Municipal level, generally the best and largest size of medical institution available in the country. This size of institution will have around 1,500 hospital beds and have facilities to deliver complex, specialised diagnoses, medical training and R&D.

Tier 2 – District level, is smaller than a municipal level institution but still offers a reasonable level of care. Generally, they are less specialised and tend to focus on general, simple diagnoses and may be capable of training employees.

Tier 1 – Community level, eg district or street clinics. Generally, medical institutions in this tier will have no distinct medical departments, only simple facilities and limited staff numbers.

Grades

Hospitals within each tier are graded into A, B or C.

In general, the gap between each tier is significant. Within the same tier, different grades represent a smaller hierarchical difference. The top hospitals (Tier 3, Class A) would usually be more likely to have the capacity and willingness to invest in imported medical and technological products/equipment.



A close-up photograph of a person wearing blue medical scrubs. They are holding a black handheld medical device with a stylus in their right hand, pointing it at the screen. The device has a small screen and a keypad. In the background, another person's hand is visible, holding a white medical device with a blue cord. The overall scene suggests a clinical or hospital setting.

3,500 +

There are currently over 3,500 private hospitals in China.



Current Healthcare System

The primary healthcare facilities concept, better known as Community Health Centres (CHC) and Community Health Stations (CHS) in urban China, was first initiated in 1997 due to rising public outcry towards increasingly unaffordable and inaccessible healthcare at the tertiary-care hospitals in the urban cities. Thus, the Chinese central Government began shifting focus from purely large general hospitals development to include primary community healthcare.

Under the directive of China's Ministry of Health (MOH), CHC and CHS healthcare functions broadly encompasses two major areas, namely public health and primary medical care focused on six main service functions, namely:

- Health education
- Disease prevention
- Health management
- Primary medical care
- Family planning
- Rehabilitation

CHC and CHS are responsible, as a "gatekeeper", for providing education and treatment of common and frequently occurring diseases, as per the traditional concept of a family physician for everyone in the community. The focus is on disease prevention, early diagnosis, basic medical management and monitoring, rehabilitation and recovery.

According to China's MOH, the establishment target is that there will be a CHC for every 30,000 to 100,000 of the urban population, to take care of their community medical needs, with each CHC ideally supported by several smaller CHS (as required), enabling the community under the CHC coverage to have access to medical treatment within 15 minutes' walk. For cities/districts where the city urban population is too sparse and with limited resources, CHCs are generally not established. In these cases, the less equipped and basic CHS becomes the major primary healthcare establishment to serve the population.

After the SARS outbreak in 2003, for the next four years China's CHC infrastructure grew tremendously – an annual growth rate of 37.5 per cent – with CHC outpatient visits growing even faster at an annual growth rate of 39.0 per cent.

Plagued by a financial burden from pensions and medical spending related to an increasing incidence of chronic diseases in an ageing population; pollution, smoking, dietary changes and lack of exercise as a result of increasing affluence; expensive costs of quality medical care for the general population; and unrelenting congestion situations at tier 2 and tier 3 hospitals, the Government has embraced community outreach intervention through CHC and CHS as the most cost-effective strategy to address this situation, supplemented by advanced medical care support from advanced tier hospitals.

Challenges under the Current System

Rising Costs

Hospitals are now competing with each other for patients. This has had the net effect of pushing up the overall cost of healthcare, as hospitals compete to persuade patients that they have the most up-to-date facilities, and passing on the costs to patients.

Increasingly, however, many patients find themselves unable to afford or unwilling to pay for healthcare. Despite economic growth, rising incomes have not kept up with healthcare costs. While incomes have increased between five and sevenfold since 1990, healthcare costs have risen faster – between ten and twelvefold for inpatient and outpatient services, respectively.

According to China's MOH, the establishment target is that there will be a CHC for every 30,000 to 100,000 of the urban population, to take care of their community medical needs.

The Government has attempted to redress this by establishing price controls, introducing maximum inpatient times for certain treatments and by bringing down the cost of some essential medicines. In the last two years the Government has reduced the price of 260 drugs by an average of 19 per cent.

However, both healthcare institutions and pharmaceutical firms have been adept at finding ways around these measures. Many manufacturers simply stopped supplying the drugs covered by the price controls, switching to more profitable drugs instead. Hospitals also began unbundling fixed-price services in order to be able to charge for individual components and increase revenues.

Inefficiencies

China's healthcare problems do not stem from a lack of medical facilities – it has 1.5 doctors and 2.1 hospital beds per 1,000 people, putting it in seventieth place globally in terms of supply (40 places above its per capita GDP ranking). Nor do they stem from a lack of central funding. The major issue is inefficiency.

Excessive competition between healthcare providers results in waste. The money used to buy a new CAT scan machine, for example, could be put to better use if the hospital didn't have to keep upgrading in order to compete. Equally, unnecessary prescriptions and treatments, as well as being inadvisable for health reasons, are a drain on resources. According to World Bank analyses, 52 per cent of medical spending in China goes towards drugs (as compared to a figure of 10 per cent in the USA), and this is a direct factor contributing to the waste of between 12 per cent and 37 per cent of medical spending in China.

Other key indicators show inefficient use of hospital resources. Overall, bed occupancy rates stand at around 33 per cent (and are falling) due to over-supply, while Chinese doctors on average carry out fewer than five clinical sessions per day, compared to ten in more developed countries.

Current Reforms

The Chinese public is becoming increasingly aware of the flaws in the health system and this has encouraged the Government to make healthcare reforms a priority. In January 2009 China announced an RMB 850 billion (US\$124 billion) stimulus package over three years to be used to fundamentally reshape the nation's healthcare sector.

A key element of the plan is to modernise healthcare services with digital hospitalisation, electronic medical records, and next-generation information networks. The goal is to dramatically improve healthcare service quality and, importantly, to enable virtual healthcare services that can overcome service disparities between rich areas and poor. But the lack of technical standardisation complicates take-up and adoption of unified e-healthcare solutions.

The stakes are high for the Government – and for UK and other international technology companies seeking positions in this large and fast-moving market.

The stimulus plan seeks to address five policy objectives:

- Increase the number and quality of healthcare facilities
- Establish universal healthcare insurance
- Reform pharmaceutical and drugs distribution
- Improve public healthcare
- Hospital reform – aimed at better training for professionals as well as increased investment in healthcare IT

Aspects of the reform agenda depend on new structural capabilities that can only be made possible through comprehensive application of information and communications technologies.

Improved transparency, lower costs, higher efficiency, remote healthcare, universal insurance and interoperability among 14 systems and shared resources all depend on new information technology platforms.

The Healthcare IT Market

Healthcare IT (HIT) spending reached US\$970 million in 2007, up 62.7 per cent from the previous year, according to the China Hospital Information Management Association (CHIMA). Growth has averaged about 20 per cent per year since 2004. Compound annual growth for 2007-2012 is estimated at 21.2 per cent. Sales are estimated to have reached US\$1.2 billion in 2008, before the addition of new investment from the stimulus package.

CHIMA estimates China will allocate 1.2 per cent to 1.8 per cent of the total US\$124 billion stimulus budget toward healthcare IT, or approximately US\$1.45 billion to US\$2.6 billion incremental investment for 2009-2011. Total healthcare IT spending could thus top US\$2 billion per annum in the years ahead.

The bulk of spending, about 73 per cent, has been within hospitals themselves. Future spending will be concentrated in establishing Regional Healthcare Information Networks (RHIN): data centres and telecommunications networks to share data and clinical services among geographically dispersed communities. Few hospitals

and regional health authorities have begun implementing RHINs – sometimes referred to in China as “regional collaborative medical services” – though regional health is a centrepiece of the Government's reform effort. Most healthcare IT investments have been in systems and hardware rather than software and applications (software 12 per cent/hardware 74 per cent/services 14 per cent, source: IDC).

Chinese hospitals invest 2 per cent to 5 per cent of operating revenues on average into IT compared with 12 per cent to 15 per cent in the USA, according to CHIMA estimates. It bears noting that there is a wide disparity in spending levels by geography, with most extensive commitments having been made in the wealthier Eastern provinces. Rural spending on healthcare IT is minimal.

Hospital capital spending is highly decentralised with each facility making its own purchasing decisions. A lack of standardisation has led to a plethora of unique or customised technical systems, with limited interoperability. The inability to transfer data effectively restricts patient and clinical care options and raises overall healthcare costs. Most systems in place today are associated chiefly with administrative management. Only the largest, wealthiest and most sophisticated hospitals have expanded their information systems to include clinical diagnosis, decision support, and electronic patient records.

Domestic Competition

Competition in the HIT market is heavily fragmented. As spending decisions are local and made at the discretion of hospital information management departments, there are consequently many niche players competing for market share.

CHIMA estimates that fewer than 20 out of the 300 Chinese independent software vendors (ISVs) involved in health informatics have more than 100 staff. Even the largest ISVs – Bsoft, Kingstar Winning, Neusoft – have failed to earn more than 8 per cent market share.

With so many buyers of hospital systems, and so many sellers, there are few industry norms. The notable exceptions are hospitals associated with the People's Liberation Army, which have a unified technological approach for many IT platforms and services.

US\$124bn

In January 2009 China announced an RMB 850 billion (US\$124 billion) stimulus package over three years to be used to fundamentally reshape the nation's healthcare sector.

Factors against Healthcare IT Implementation

While many hospitals are considering major upgrades of IT systems and big budgets are starting to become available to move towards digital hospitals with workstations, electronic medical records, PACS and other systems, there are hurdles that need to be overcome.

Currently, weak application software and implementation skills are delaying progress, and the poor results accomplished from past investments in IT are causing hesitation among leaders of Chinese hospitals to make future investments in IT.

This is mirrored by concern among HIT experts in China about the readiness of HIT software products, hardware platforms and integration tools to facilitate these goals.

Inexperience in the buying of HIT software products has followed a similar path to other countries around the world in their early stages of evolution and has resulted in poor buying decisions.

In some cases, hospital leadership is continuing to use poor buying and implementation approaches because they do not know that better ways are possible, and there is a strong momentum to continue with these approaches.

Forecast Advances in Healthcare IT

Despite the issues outlined above, analysts are forecasting major advances on a number of fronts: (Source: Dorenfest Group 2009)

- Better use of IT in clinical services
- Better use of IT in hospital management
- Digital hospitals with electronic health records will evolve with greater frequency
- Regional health networks will evolve
- Better systems integration and more standards to support IT progress
- Improved buying and implementation of IT software
- More use of consultants in IT planning and implementation

E-health Opportunities in Nanjing

As of 2010, there were 194 hospitals registered in Nanjing. Of these, 43 are private and 151 are state-owned. Broken into their individual rankings: 38 are tier 3, 38 are tier 2, 10 are tier 1 and the rest are unknown.

Nanjing health authorities reported a fragmented record of healthcare information technology implementation across the cities. Tier 3 and private hospitals are better equipped and, due to financial resources, able to invest more freely. However, given recent government announcements in funding availability for high-technology investments, opportunities are developing in the following fields:

- Electronic health records and patient administration systems (PAS)
- Remote monitoring and telemedicine
- Mobile-health in delivery of clinical services
- Health informatics and laboratory information systems (LIS)
- Digital databases (database warehouses)
- Clinical decision support systems
- Picture archiving and communications systems (PACS)
- Solutions integration

Sinosoft Technology plc

Sinosoft Technology plc (see NorthgateArinso case study) is keen to move into e-health and eager to establish additional international partnerships. It wishes to engage and interact with companies that can demonstrate quality products, skills and industry knowledge in the e-health sector.

www.sinosoft-technology.com

E-health Opportunities in Hangzhou

As of 2010 there were 144 hospitals registered in Hangzhou. Approximately 50 hospitals are privately owned, with the others state-owned.

The Tier 3 hospitals are increasingly looking to adopt high-end technologies in both administrative capacities as well as in clinical settings.

The level at which information technology has been established across city hospitals has been uneven. Systems such as hospital information systems (HIS), laboratory information systems (LIS), radiation information systems (RIS), and systems used in ward nurses' stations are improving daily and becoming commonplace. There are some hospitals that have already begun exploring areas of e-health and becoming fully digitised.

These areas include electronic medical records and clinical decision support systems, medical imaging PACS systems, remote diagnosis and monitoring systems and cost accounting systems.

However, the overall comprehensive nature of the systems is still lacking. Various kinds of medical and health information are scattered throughout health institutions and the share of resources is problematic.

Opportunities broadly lie across Hangzhou Health Bureau's short-term strategic goals:

- Development and use of electronic health records

All hospitals will be required to focus on electronic medical records to achieve seamless links and data integration as well as using information technology and optimal healthcare procedures.

This will include areas of healthcare work, examinations, medical imaging, anaesthetic used for operations, and mobile health treatment.

- Creation of health archives

The focus for 2010 is to establish archives for 10 to 20 per cent of the city's population. These archives will form requirements and standards to help promote hospitals' information systems as well as the interaction between health community health systems, emergency services and e-government systems. From this it will be possible to develop a blueprint for information sharing across related e-government systems.

- Systems integration and information sharing

The goal is to carry out integration of all previously established health and information systems separately used in hospitals and medical organisations.

In discussion with several relevant city and municipal government departments, all concurred with the need to strengthen digital exchange between hospitals, further use of wireless and other mobile-health technologies in clinical settings and the need for integrated administration systems software and hardware. Other common themes, where officials felt there were significant opportunities lay in patient administration systems (PAS), health informatics and laboratory information systems (LIS), intelligent billing and prescription management and scheduling, registration and admissions (private hospitals).

The First Affiliated Hospital of Medical School of Zhejiang University

The First Affiliated Hospital of Medical School of Zhejiang University is a Tier 3, Grade 1 hospital and ranks among the nation's top 100 hospitals. It serves as the centre for medical care, teaching, research and health consultation and guidance in Zhejiang Province. The hospital employs more than 3,000 people, including more than 390 medical and nursing specialists with senior degrees. It has 2,200 beds, 41 clinical departments and 23 technical departments.

The hospital has a strong in-house information technology team and they developed their own picture archiving communications system. In speaking with their Chief Technology Officer, he explained that the hospital also houses a key national laboratory and that while they have a laboratory sample management system in place, they would be interested in exploring more comprehensive laboratory information management systems. In addition to this they would also welcome approaches from UK companies active in patient and bed management and radiology information systems. He did also express a strong need for a good consultative approach in localisation of products.

Zhejiang Provincial People's Hospital

Zhejiang Provincial People's Hospital is a large provincial hospital and one of the most advanced in the region. Active in healthcare provision, education, research and healthcare provision, the hospital has already invested in a range of medical technologies including: superhigh field magnetic resonance (MR), multiple spiral CT, Gamma knife, linear accelerator, digital subtraction angiography (DSA), cardio-electro physiologic assessment system (Ensit 3000), coloured Doppler ultrasonography, hyperbaric oxygen chamber, laser in-situ keratomileusis (LASIK), flow cytometer (FCM), polymerase chain reaction (PCR) and other technologies totalling nearly one hundred pieces of advanced apparatus. The hospital also boasts a key organ transplantation research laboratory (heart transplantation sub-laboratory), key gastroenterology laboratory, an intensive care unit and a central laboratory.

The hospital already has electronic health records and patient management systems, though the contact stated that EHRs were still at an early stage and that the hospital was also interested in intelligent systems which can encourage use of electronic records. This was described as systems that are more interactive and prompt medical staff for and with relevant information. This request is being driven by medical staff.

The hospital also expressed an interest in telemedicine and mobile-health applications, both from data collection and diagnostic and treatment perspectives. More advanced laboratory information systems are also of interest.

www.hospitalstar.com

Insigma Technology

Insigma Technology is a Hangzhou-based company that was originally a spin-out from Zhejiang University. Now ranking in the top ten largest IT outsourcing companies in the country, the company is reported to employ several thousand staff. While the company provides a range of outsourcing services, it is interested in expanding into the e-health sector. Hangzhou government's healthcare databases and structure were completed by Insigma and the company enjoys excellent relationships there. It is open to approaches from UK companies to work as alliance partners in the localisation and/or customisation of applications targeting opportunities in e-health in Hangzhou and other regions.

www.insigma.com.cn



CASE STUDY:

DEXELA LTD

Dexela is a manufacturer of innovative technologies for fast, low-dose X-ray imaging. Formed in 2004, it pioneered developments in breast tomosynthesis, an advanced imaging technique focused on the early detection of breast cancer. The company's products are highly innovative, a fact recognised when Dexela won the International Innovation Category at the 2008 London Passport to Export Awards. Edward Bullard, Managing Director of Dexela says that its CMOS X-ray detectors "offer a unique combination of speed, image quality and form factor."

The Chinese market is potentially the second-largest in the world for Dexela, after the USA. Dexela's connection with China was established at the launch event of its family of flat panel CMOS X-ray detectors last November in Chicago, at which Dexela was approached by several Chinese companies interested in integrating Dexela's detectors into products targeted at the China market. As a result, and after conducting due diligence, Dexela appointed a Chinese distributor, Titan Electro-Optics Co Ltd, which has its headquarters in Beijing.

Dexela has found working with a distributor to be beneficial as it is able to take advantage of Titan's well-established sales network, selling into research labs and manufacturers in the major cities including Beijing, Shanghai, Shenzhen, Chengdu and Xi'an. Titan can also offer local technical advice and assistance to customers.

One way that Dexela has found very effective to meet potential clients is to exhibit at various trade shows. According to Edward: "Exhibiting at international trade shows is an effective way to raise our profile and we have met a number of new potential Chinese customers this way."

Dexela was recently approached by a Chinese OEM at a European show. After the show Dexela management met with the customer in Beijing and the customer then visited Dexela in the UK. Dexela will be attending the China International Medical Equipment Fair (CMEF) in Shenyang with a view to getting more exposure to potential customers in China.

Dexela's products are currently sold through distributors to medical, dental and industrial system manufacturers and also to research institutes.

"Exhibiting at international trade shows is an effective way to raise our profile and we have met a number of new potential Chinese customers this way."

Edward Bullard, Managing Director
– Dexela Ltd

FINANCIAL SERVICES SOFTWARE IN CHINA

19.2%

Despite its small size, the banking IT solutions market should grow faster than the broader software market at a 2009-2013 CAGR of 19.2 per cent, according to IDC estimates.

Banking and Insurance IT Market

The Chinese banking industry spends a very small amount on IT solutions considering the size of its asset base. In 2008 the industry spent only US\$894 million on IT solutions while its total assets hit US\$7.9 trillion.

It is estimated that Chinese banks on average spend only one-tenth of what their US counterparts spend on software, as a percentage of assets.

Despite its small size, the banking IT solutions market should grow faster than the broader software market at a 2009-2013 CAGR of 19.2 per cent, according to IDC estimates. By 2013 the Chinese banking IT solutions market should reach US\$2.2 billion.

There are four main catalysts for increased banking software spending:

- Several major Chinese banks are now public companies and face greater demands for transparency and internal controls both at home and abroad.
- The Chinese Banking Regulatory Commission is in the process of modernising the regulatory framework of the Chinese banking system.
- The Eleventh Five Year Plan emphasised the need for the banking industry to increase IT spending.
- Chinese banking customers are beginning to demand more services from their banks.

The size of the opportunity in this market will likely drive consolidation. Currently, the Chinese banking IT solutions market is very fragmented, with Longtop Financial Technologies, the largest vendor, only commanding 5.7 per cent of the market in 2008 and 8 per cent in 2009.

In the next five years, risk management, financial auditing and control, business intelligence/decision-making support management and internet banking solutions will be the fastest-growing segments of the IT solutions market within the banking industry.

The top ten companies in the Chinese retail banking industry in terms of estimated IT spending paid out the largest portion of their IT budgets on services, a segment that accounted for about 30 per cent of their IT budgets among these firms. This was followed by China Construction Bank and Bank of China.

Among the top ten companies, a major portion of IT spending is allocated to internal IT. Internal IT alone accounted for 28 per cent of the total estimated IT spending by these companies. Industrial and Commercial Bank of China remained the leading company in terms of IT spending, followed by China Construction Bank and Bank of China. An example of in-house development in the insurance industry is Ping An Insurance, one of the largest national general insurers, which employs more than 2,000 staff in its IT support and development divisions.



Investment groups reported in late 2010 that China's insurance and banking software market is expected to experience rapid growth in coming years.

With regard to insurance institutions – expanding insurance sales channels, improving customer service capacity and accelerating the occupation of market share, IT divisions will increase their investments into systems such as decision support, e-business, call centre and customer relationship management (CRM). These will, consequently, emerge as some of the fastest-growing solution segments in the insurance solution market in China.

Investment groups reported in late 2010 that China's insurance and banking software market is expected to experience rapid growth in coming years as more enterprises (both private and state owned) build out their software portfolios to take advantage of continued macroeconomic strength. However, rampant piracy and a tradition of assigning little value to software may still hinder the market's development. A consultative approach to selling is crucial.

The Chinese Government continues to shape the development of this still-nascent market. Local vendors like Kingdee, Longtop Financial Technologies and UFIDA should have the advantage due to favourable government policies.

Major international vendors, despite controlling significant market share in the global software market, are likely to have to develop and maintain strong relationships with local rivals and the Government to succeed over the long term. Western vendors should increasingly follow the examples of IBM, Microsoft and Oracle in this regard.

Prominent IT Service Providers

IBM is still the dominant foreign player in the market with approximately 6 per cent of market share, followed by SAP with 3 per cent and Oracle. Other foreign companies targeting the Chinese market include Sungard.

Domestic competition is fragmented but strong, with Longtop Financial the leading player in China with 8 per cent of the banking sector and 13 per cent of the insurance sector. Yucheng, Digital China, Shanghai UFIDA, Global Infotech and Vanda Group feature among the other leading domestic companies.

Profiles of the leading players are included in Appendix 1.

Financial Services Software Opportunities in Nanjing

Currently, Nanjing has a total of 26 banking and more than 60 insurance institutions at provincial level or above.

A further breakdown reveals three policy banks, 18 domestic commercial banks and five foreign commercial banks. Foreign banks, including Standard Chartered, Mizuho, Bank of East Asia, KBC and Hang Seng Bank have set up operations or representative offices.

The insurance sector is growing at an accelerated rate across the province and by the end of 2008 premium income reached US\$11 billion – an increase on the previous year of 34 per cent – and ranked number two in China, second only to Guangdong province.

UK insurance institutions are represented in the province by Aviva, Prudential and Standard Life, all of which have entered into joint ventures, and Royal & Sun Alliance that has a branch office in Nanjing. Foreign insurance providers hold an estimated 5 per cent of the provincial insurance market. Provincial and city governments are particularly keen to attract additional foreign investors from the UK insurance sector as they bring management expertise and new technology.

In Nanjing, while national operations are present, the largest banking operations native to the province are the Bank of Jiangsu and the Bank of Nanjing. The Bank of Jiangsu was created from ten city commercial banks including those in other provincial cities of Wuxi and Suzhou. The former 11 banks in Jiangsu were consolidated into two separate operations in 2006 – Bank of Nanjing and Bank of Jiangsu.

Bank of Nanjing

Over the last couple of years the Bank of Nanjing has evolved significantly from a city commercial bank present only in Nanjing city into a regional bank with a broad network in many economically affluent cities of the Yangtze River Delta as well as Beijing, Shanghai and Guangdong with a total of 74 branches. The Bank of Nanjing is first and foremost a bank that provides full-range banking services to meet the needs of Chinese and international SMEs, altogether it has over 100,000 corporate clients. The bank also has a large individual client base with over 2 million individual clients. The Bank is also one of the key players in the Chinese inter-bank bond trading and bond underwriting market. In 2005 Bank of Nanjing welcomed BNP Paribas as its strategic partner who subsequently provided technical support in areas such as risk management, governance and process optimisation. The bank's market capitalisation at 1 June 2010 was US\$4.5 billion.

The bank operates a large IT department and utilises a mix of in-house applications as well as applications from external providers. Its core technologies are IBM and Oracle systems.

Over the course of the next three years, opportunities exist for UK companies to provide internet banking, solutions integration, data warehousing, CRM systems, management information systems and risk management solutions to the bank of Nanjing.

The Bank of Nanjing currently develop systems with external vendors based on a consultative approach. Specifically, they identified the process as: Needs; consult; plan; implement; run. Given this approach they indicated a need for an overseas vendor to either have

extensive in-market experience and/or employ a local partner with whom they can interface and ensure that technologies are properly localised.

Jiangsu Provincial Department for Banking & Insurance

Jiangsu Provincial Department for Banking & Insurance is the government entity responsible for overseeing the development of these industries and works in conjunction with the China Insurance Regulatory Commission (CIRC) and China Banking Regulatory Commission (CBRC) to ensure regulatory compliance.

In discussion with the department, they explained that each province in China has a system for non-listed companies to exchange shares. This over-the-counter (OTC) market is expected to grow rapidly in Jiangsu. The province would like to explore a system whereby they can operate an inter-provincial OTC market platform and are willing to meet with UK software companies with experience, product and/or service capability in this field.

Sinosoft Technology plc

Nanjing Tax Bureau uses software systems developed by Sinosoft Technology plc (see Northgate Arinso case study). Sinosoft are now attempting to get other municipal governments around the country to adopt this technology and are keen to engage and interact with other companies that can demonstrate quality products, skills and technical awareness in various financial services subsectors.

Financial Services Software Opportunities in Hangzhou

By 2009 the financial services sector in Hangzhou was represented by more than 20 banks and over 70 insurance companies. In addition, there are more than 150 insurance agencies in the city. According to government reports, the realised value-add of the financial services sector totalled more than US\$5.6 billion, up by more than 15 per cent over the previous year. Eight foreign banking institutions have a presence in the city.

The insurance industry continued to enjoy strong growth, with annual premiums recorded at more than US\$2 billion by the end of 2009, a year-on-year increase of more than 30 per cent.

Zheshang Insurance

Zheshang Insurance began operations in June 2009 and is the first national general insurance company to be based in Zhejiang province. The company is 53 per cent- owned by Government with the remaining stake held by private entrepreneurs. The company recorded US\$1.8 million in premiums in its first six months of operation.

The company operates a centralised IT management platform (with integrity systems) that was developed and implemented by iSoftstone, a large Beijing-based IT solutions provider. The company utilises Oracle for its accounting systems and developed its reinsurance and actuarial systems in-house.

A key company contact within Zheshang Insurance worked in the City of London for almost ten years and is keen to implement various technologies whose benefits he witnessed, while working overseas.

The company contact commented that the centralised IT management platform offered very fixed functionality and that it was very difficult to integrate new applications. He stated that he would consider a new core system as long as it was cost effective and there was compatibility with existing systems. He said that a UK technology company with good industry experience would be invaluable as Chinese solution providers do not have the in-depth industry experience of many overseas companies.

As a new company, Zheshang has a plan to develop new systems in the coming year. The areas where he would consider approaches from UK software solutions providers include e-commerce solutions, call centre operations and CRM.

The company currently has no front desk and operates a very small call centre dealing in product consultation and complaints. There is no CRM system in place and precious data is being lost, therefore CRM solutions are seen as a priority.

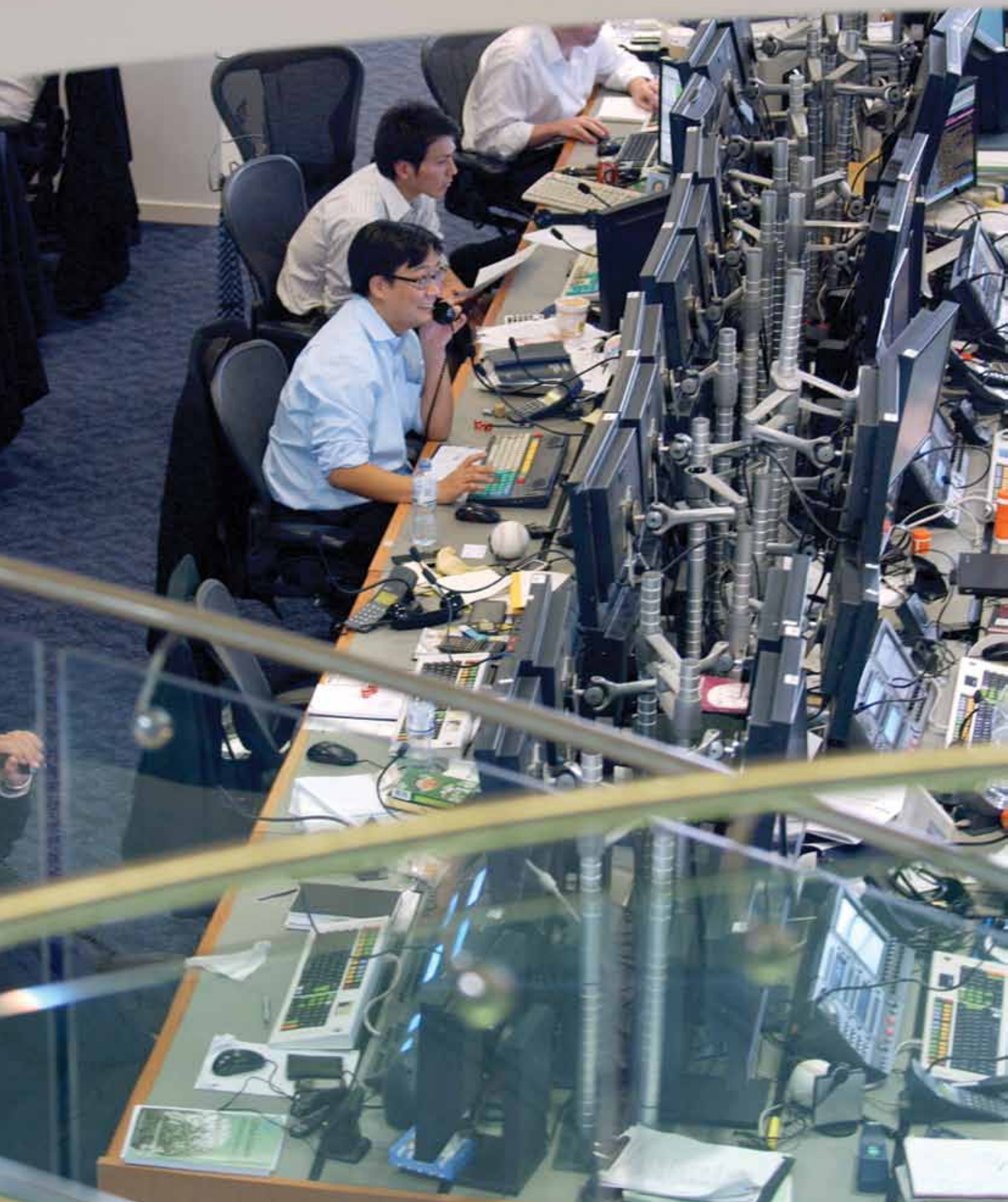
Hengtian Software

Hengtian Software is a Hangzhou-based company and was formed by an alliance between Insigma Technology, State Street (a very large US financial services group) and Zhejiang University. With several thousand staff, it is designed to provide top quality and highly sophisticated technology development and support services to global financial institutions. Hengtian states that it possesses full capabilities in application development, legacy system re-engineering, porting and migration, advanced research and development, technical support services, testing and quality assurance and advanced IT consulting services.

Hengtian is willing to consider acting as a localisation/customisation or strategic alliance partner to UK software companies wishing to enter the financial services sectors in Hangzhou and other regions in China.

30% +

The insurance industry continued to enjoy strong growth, with annual premiums recorded at more than US\$2 billion by the end of 2009, a year-on-year increase of more than 30 per cent.



CASE STUDY:

STRATEGIC SYSTEMS SOLUTIONS

Strategic Systems Solutions (SSS) is an information technology and business process outsourcing consultancy. It helps companies to address technology and back-office requirements and solve the complex software application and multi-platform challenges inherent in large-scale transaction processing environments. It has offshore centres in Singapore, Philippines and China. SSS set up its wholly foreign-owned enterprise in Hangzhou in 2003. Among all the countries it visited, China stood out on many fronts. "We were amazed by China's infrastructure, maturity and quality of people. There was also substantial government support available to foreign enterprises," says Nic Desai, Sales Director of SSS.

SSS chose Hangzhou because of its relatively low operation costs and convenient location close to Shanghai. In addition, Hangzhou is home to a great pool of talent, attracted to the city by the beautiful living environment it offers. SSS has just opened a second office there to increase its business continuity planning and demand response capabilities. At present, SSS's clients are all UK- or USA-based, although it has been recently engaging with potential Chinese clients.

According to Nic the two biggest concerns from their clients relate to intellectual property rights and data security. "IPR hasn't been an issue for us. The Chinese Government treats IPR very seriously and we haven't experienced any problems in this area. As for data security, our clients are protected via the European data protection act as our Head Office is in the UK". Nic adds, "Clients are very comfortable and confident with our services because of our stringent security control process".

In Nic's experience, having good contacts with local government are extremely beneficial. "Problems can be solved on the phone if you have a good connection locally," Nic explains. Support from the UK also plays an important role: "When we first entered the China market, both UKTI and the China-Britain Business Council helped us to establish ties with the Chinese Government. Our CEO was once invited to a state banquet to dine with President Hu Jintao! This was great for our profile and local connections".

There is competition both from local companies and foreign ones but SSS has its own way to differentiate their position. "We attract better talent as we offer real world opportunities to grow their career in a fair and ability rewarding organisation. We always pay above market rates to maintain our advantage. We also keep an eye on the various job forums to follow our employees' feedback.

For their future plans, SSS is looking at expanding its operation to Kunshan in Jiangsu province and possibly Shenzhen. It hopes to continue its growth and win business from local clients in China's finance industry.

Nic offers the following advice to other UK companies: "If you want to enter the China market, be clear about what you want to achieve. Chinese customers have a different mindset so your approach will have to adapt accordingly." Nic concludes: "Seek support from both CBBC and UKTI. If you have any questions they are great resources and are enormously helpful".

"When we first entered the China market, both UKTI and the China-Britain Business Council helped us to establish ties with the Chinese Government."

Nic Desai, Sales Director
– Strategic Systems Solutions

MARKET ENTRY ROUTES

For all software subsectors it is essential to have a presence in the market to provide adequate aftercare service and manage relationships. The alternatives are to seek a local partner or to invest in your own operation. This is especially true in selling into local government and state-owned enterprises (healthcare and financial institutions).

There are, of course, advantages and disadvantages in taking on a local partner or setting up your own operation.

Local partner:

- Market knowledge and understanding the needs of the clients: this is particularly important when considering localisation of the product. The Chinese user experience can be different to that of foreign users and some clients are keen to have a Chinese interface who understands the need for full customisation of the product.
- Existing industry and government relationships: this can be key as very few, if any, UK software companies have brand awareness in the Chinese market.
- Less expensive compared with setting up a foreign-invested enterprise in China and usually provides faster market access.
- Working with a partner would entail a fully developed intellectual property (IP) strategy to be in place prior to market entry. Take advice.

Own operation:

Advantages of management, marketing and pricing control. Allows company to have direct control and management of system integrators and/or VARs.

- No need to invest time in managing a partnership arrangement.
- If planning to trade and invoice in-market, will require cost of setting up a wholly foreign-owned enterprise (WFOE).
- Market access issues (see below). Selling directly to Government or state-owned enterprises may be restricted.
- Takes time to develop market awareness, networks, influencers. Slower route to market.
- Incentives (mostly tax-based) are provided to companies by national Government and by municipal governments (varied according to local preferential policies).





65%

Foreign brands control approximately 65 per cent of China's software market.

49,087

49,087 indigenous software products had been approved for intellectual property rights protection by 2008.

Protecting Intellectual Property

Protecting intellectual property (IP) is one of the biggest issues UK companies face when entering China. There is a considerable although somewhat diminishing risk of piracy and counterfeiting in China.

There are laws to protect and enforce IP rights, but China's businesspeople do not have a long tradition of intellectual property compliance. Enforcement of the laws can sometimes prove difficult and there can also be inconsistencies of court proceedings on IP. However, the situation is improving.

China's IP law is different from that in the UK. China has a first-to-file system that requires no evidence of prior use or ownership, leaving registration of popular foreign marks open to third parties. It is important also to note that Chinese IP laws supersede international laws and existing patents are not enforceable on the mainland.

These legal differences and the risk of IP breaches mean that a UK company entering the market needs a well researched and executed strategy to protect its IP.

With regard to software as a service (SaaS) models, while they can be effective in managing IPR, they are in a nascent stage in China, occupying less than 1 per cent of all software market share. While it is expected that SaaS will become more prevalent in the next few years, many clients are inexperienced in these types of delivery and are often unwilling to experiment with little-known brands.

Managing IP in Partnerships

When considering international alliances, Chinese companies will, for historical reasons, opt first for a joint venture – a joint venture is a specific legal entity in China. We would recommend that new market entrants consider licensing and strategic alliances as a preferred option, as the time and cost required in managing a joint venture entity can be significant. Additionally, developing and managing a successful joint venture partnership usually requires an understanding of Chinese business culture that companies new to market will find difficult.

One of the best ways to keep a partner "honest" is to drip feed technology over time, where possible. Licensing or technology transfer agreements can be put in place that can effectively prevent a partner taking technologies to global markets and ensure they are concentrated on the domestic market – while at the same time remaining reliant on the foreign partner for technology.

For more information visit
www.china-iprhelpdesk.eu



According to the “Customs Import and Export Tariff of the People’s Republic of China” the tariff for software products is 0 per cent.

Duties/Taxes

Since China joined the WTO, tariffs for imported ICT products have been gradually lowered and in many cases totally phased out. According to the “Customs Import and Export Tariff of the People’s Republic of China” the tariff for software products is 0 per cent. VAT is levied differently depending on how the products are imported:

- If the software is integrated with hardware and imported, the VAT in 2010 is 0 per cent.
- If the software is imported for further development and will subsequently be re-exported, the VAT in 2010 was 0 per cent.
- If the software is imported alone and will be used in the Chinese market, the VAT in 2010 was 17 per cent.

Incentives

The Chinese Government has the following preferential tax policies for foreign direct investors who set up software enterprises on the mainland:

- A WFOE, that is a regular VAT payer who develops and sells software products, is eligible for a VAT refund after the software products are registered in China. This effectively reduces the effective VAT for a software company from 17 per cent to 3 per cent.
- After a newly established software enterprise is certified in China, enterprise income tax (EIT) is exempted in the first profitable year and the second year and then reduced by half from the third to the fifth year.
- Key software enterprises certified by the Chinese central Government are eligible for a lower EIT rate at 10 per cent. In 2008 Chinese central Government certified 186 key software enterprises.

CASE STUDY:

TDSI

Access control specialist TDSi is a leader in the design and manufacture of advanced access control solutions, with systems proven in installations across the world.

China is one of TDSi's key markets, and over the past 15 years the company has worked with a wide range of corporate and public sector organisations including Shanghai Metro, China National Petroleum Corporation, Bank of China, China Coal, China Telecom and China Netcom.

Acutely aware of the impact that cultural differences can have on conducting business in China, the company has developed a series of specific business development strategies, as Managing Director John Davies explained: "Clearly it's dangerous to assume that Chinese clients would want to use our software in exactly the same way as European customers. Consequently, we work closely with each customer to fully understand their individual needs. Where appropriate, we can then tailor systems specifically for the Chinese market – rather than relying on a generic solution".

To meet customers' requirements the company communicates regularly with all parties: "In China, our customers prefer to subcontract to engineering companies, so taking time to liaise fully with them is absolutely vital. We also make sure that all staff within our distribution partners are fully trained, so that they not only thoroughly understand how our systems work, but also the key questions that they need to ask end users."

According to John, customers in China have very specific demands with regard to software functionality. This in turn feeds into the company's product development programme, with many of the bespoke elements of software designed for Chinese companies now widely used by other clients.

To develop new business TDSi consults closely with government-funded research institutes, finding out what projects they are working on and which companies they are working with. "By talking to clients as early as possible in the process, we can provide a great deal of value at the design stage and help with the development of technical solutions." John also finds CBBC's network to be of great benefit: "Our ability to establish new contacts in China is often directly as a result of our association with CBBC".

A major issue for the company though has been the disproportionate amount of time that has to be allocated to business in China due to the very time-consuming tendering process and the need for much more "face time" to get to know the customers. The establishment of a dedicated WFOE in Shenzhen, which will be operational very shortly, will go a long way to addressing this.

John is extremely confident about TDSi's prospects for continued growth: "I can see our business in China doubling to 30 per cent of turnover over the next two to three years. We know that it's going to take a great deal of effort to achieve our goals, but equally we know that we have the products, strategy, team and determination to make it happen."

"By talking to clients as early as possible in the process, we can provide a great deal of value at the design stage and help with the development of technical solutions."

John Davies, Managing Director – TDSI



MARKET ACCESS ISSUES

Mandatory Registration of Software in Mainland China Market

All imported software used in mainland China needs to undergo a registration process via the Ministry of Industry & Information Technology, though it is in effect handled by the China Software Industry Association. Proof of copyright ownership and other IPR is needed for the licence to be issued. The licence is valid for five years, after which renewal is required. Some specialised software for use in network security, for example, also needs approval from the Public Security Bureau. The procedure is fairly straightforward and is as follows:

All applications for registration must first be submitted by the software import entity and be accepted and initially examined by the China Software Industry Association. The following information is required:

- 1) Software product registration application form
- 2) Copy of application business licence
- 3) Sample of the software product
- 4) Proof of software copyright owner's authorisation for business operation in China
- 5) Testing documents issued by a software testing company
- 6) Proof of compliance with China's software import procedures

Indigenous Innovation

Over the past few years the Chinese Government has tightened the regulations relating to the software sector.

From 2006 the Government began to draw up a series of policies referred to as "Indigenous Innovation", which were designed to promote the development of domestic technology and IP while reducing dependence on foreign technology.

The government policy was to create a procurement catalogue for government organisations and state-owned enterprises that would meet the conditions specified by Indigenous Innovation. Indigenous Innovation catalogues have now been published in Beijing, Chengdu, Fujian, Jiangxi, Shanghai, Tianjin and Wuhan, and each of these areas has started to implement procurement policies that favour indigenous innovation products.

A national catalogue called "The Circular on Promoting the Accreditation of New Indigenous Products in 2009 (Circular 618)" stipulating the regulations and accreditation procedures was released in November 2009. This naturally received strong criticism from the foreign media and foreign technology companies.

Another circular was published in April 2010 called "Draft Circular Regarding the Launch of the National Indigenous Innovation Production Accreditation Work for 2010". This circular took a softer stance on certain restrictions regarding intellectual property rights but upheld the rules laid out in Circular 618.

The main amendment in the new circular only requires the entity to have a lawful right to use the IP and not to actually own it.

The key elements of the latest circular relating to software are laid out below.

Products have to:

- comply with general PRC legal requirements and national industrial and technology policies,
- be advanced technology and either present clear benefits in conserving resources or significant progress with regard to structure, materials, quality and performance,
- have reliable quality and display compulsory accreditation (if subject to a mandatory product accreditation system) and have all special licences (if subject to a special licensing administration condition), and
- been manufactured and released in China by a legally registered company that: (i) owns the product's patents in China or has a licence to use the product's patents in China, (ii) has exclusive rights to use the product's registered trademark or has the right to use the trademark in China.

ENABLING INNOVATION UK – CHINA PARTNERSHIP IN ICT

Enabling Innovation UK – China Partnership in ICT is a strategic initiative launched in October 2008 in Beijing by UK Trade & Investment.

The aim of Enabling Innovation is to raise awareness of the proven track record, innovation and capability of the UK's technology industry. The initiative highlights that the UK technology industry is smart, responsible and connected, and is home to technology organisations which compete on the global stage.

UK Technology Companies in China

Some of the UK partners in Enabling Innovation 2009-2010 include well known and respected global brands such as ARM, BT, Sony Ericsson and Vodafone who are UK flagship companies in China. While hugely successful, large brands alone do not tell the whole story of success in partnership between UK and Chinese companies.

Enabling Innovation shows through seminars, forums and bidirectional visits of UK and Chinese companies that the UK offers technology that can enhance performance, efficiency and revenue within Chinese organisations, across the converging communications, broadcast, electronics and new media value chain. Our partner sponsors including, NDS, Sondrel, 4Energy, Symbian and picoChip are UK companies providing innovative embedded solutions within the products of some of China's largest and fastest growing companies.

As a well known brand, ARM provides core technology within mobile devices and its technology can be found in over 95 per cent of the worlds' mobile phones. Wolfson Microelectronics is a global leader in the supply of high performance mixed-signal semiconductors for the digital consumer products market. Few know that Sony Ericsson Mobile Communications, one of the world's leading global providers of mobile multimedia devices, has its global management headquarters in London.

These companies are just a few examples which illustrate the UK's expertise in the innovative application of technology that delivers in partnership, benefits that meet industry, business and consumer needs in China.

UK Technology is pioneering the road beyond 3G. picoChip, a leader in multi-core DSP, femtocells solutions extending mobile coverage within buildings has seen growth opportunities in China and works closely with UKTI to penetrate large Chinese organisations difficult to access alone. picoChip has a joint lab with the Beijing University of Post and Telecoms, thereby strengthening the company's commitment to partnering and operating in China's growing communications market.

Convergent technologies are also an area of strength, as sponsors ARM and NDS provide world leading IPTV solutions utilising technology convergence to bring innovative solutions to market.

UK innovation is not only contributing to the invention of new technologies, it is also involved in the smart application of it. For example, companies such as ARM and Cambridge Silicon Radio, which focus on electronic design, apply their solutions to numerous different applications across many different sectors, including automotive, transport, security and healthcare.

During the Shanghai World Expo in 2010, Enabling Innovation took during a single mission over 40 companies to China focusing on mobile and wireless communications, consumer electronics and e-health and held a leadership forum in September focusing on responsible low energy design involving leading UK and Chinese companies in the sector.

Successes for UK companies have seen trials initiated for low energy mobile base stations, contracts won for design consultancy and growth in UK companies Chinese operations as well as IP licensing and strategic partnerships being established.

In December 2010 a delegation of over 70 Chinese executives attended Technology World (UKTI's flagship event) under the Enabling Innovation initiative, in London, where they met UK companies, universities and industry associations, held substantive one-2-one prequalified meetings and participated in the exhibition and conference sessions that formed part of the event.

Whether it is major companies such as BT, Vodafone and Sony Ericsson investing in their Chinese value chains, or companies such as ARM, and Soudrel underpinning and supporting Chinese organisations to bring innovative products or solutions faster to market, it is clear that there is plenty of opportunity for strong and successful partnership between UK and Chinese companies.

UKTI have a signed memorandum of understanding for collaboration in information and communications technology with both Hangzhou city authorities as well as with the wider Zhejiang provincial government providing a platform for continued collaboration in the coming years and placing UK companies at the forefront of their international partnering.

A memorandum of understanding between the UK government's Department for Business Innovation and Skills and Chinese government's Ministry of Industry and Information Technology includes a policy bilateral agreement, with a specific aim to take forward Enabling Innovation and continue to facilitate partnership and trading relations between UK and Chinese companies.

APPENDIX 1: Chinese Software Company Profiles

Neusoft Medical Systems

Neusoft Corporation is one of China's biggest software companies. To date, it has set up six software bases, eight regional headquarters, 16 software development and technical support centres, and a comprehensive marketing and service network in over 40 cities across China. In addition, it has set up three information institutes and a biomedical and information engineering school in, respectively, Dalian, Nanhai, Chengdu and Shenyang. It currently employs more than 15,000 employees around the world.

Neusoft Medical Systems offers comprehensive solutions for the informationisation of China's medical industry and personal healthcare network service, ranging from hardware to software and from technology to services.

It provides hospitals of all tiers with over 50 different models of digital medical imaging systems. Categorized in ten series they include CT- and MRI- scanners, digital X-ray as well as diagnosis ultrasound systems.

In addition, it has also delivered comprehensive, patient-centred e-hospital solutions, including HIS, CIS, LIS, EMR, PACS, RIS, CAD and remote diagnosis. Targeting at personal healthcare, it has helped many large hospitals build up "Xikang" health management systems and deliver remote medical services to patients.

It also provides public health services, medical security, new rural co-operative medical, regional medical, drug supply insurance, and other similar systems and solutions for government agencies.

It is now serving more than 5,000 customers and partners in the fields of medical systems and healthcare.

<http://medical.neusoft.com/en/index.asp>.

B-Soft Information Technology

B-Soft Information Technology Ltd (B-Soft), ranked among the top healthcare informatics providers in China, has focused on the healthcare informatics industry for ten years. B-Soft's Hospital Information System (HIS) has the most installations in China, with more than 1,400 hospitals using it, together with the company's Radiology Information Systems (RIS), Laboratory Information Management System (LIS) and B-Soft Healthcare Resource Management Platform.

www.bsoft.com.cn
(Chinese only)

Shanghai Kingstar Winning

Shanghai Kingstar Winning is a leading Healthcare IT solution provider in mainland China. According to IDC reports, Kingstar Winning is ranked at the top of the Chinese domestic healthcare IT industry. Kingstar Winning has extensive product lines covering almost every corner of the healthcare IT industry: from HIS, EMR, LIS and RIS/PACS solutions to insurance systems and community public health management systems.

The company's Registered Capital is RMB 40 million. Its 450 employees in mainland China served more than 800 hospitals all over the country and generated over RMB 100 million revenue in 2008.

www.winning.com.cn
(Chinese only)

Longtop Financial

Longtop Inc – the first Chinese software company listed on the New York Stock Exchange – is a leading software development and solutions provider targeting the rapidly growing financial services industry in China.

In 2010, IDC named Longtop Financial as the leader in China's Banking IT solution market, with market share increasing from 5.7 per cent in 2008 to 8.2 per cent in 2009.

The company enjoys strong relationships with three of the big four Chinese Banks: China Construction Bank (CCB), Agricultural Bank of China, and Bank of China. Recently, it was selected as Agricultural Bank's preferred strategic IT services partner. Major banks are expected to continue to look to external IT providers and help fuel Longtop's growth.

Other notable statistics from the IDC report include:

- Second in China's Insurance IT solution market for the second consecutive year, with market share increasing to 13.0 per cent in 2009 from 10.7 per cent in 2008.
- Within the banking sector: Longtop maintained first ranking for management-related solutions, with market share increasing to 17.0 per cent in 2009 from 11.4 per cent in 2008.
- Within the banking sector, Longtop remained first for business intelligence (BI) solutions, with market share increasing to 44.0 per cent in 2009 from 30.5 per cent in 2008.

- Longtop is the leading domestic provider in the field of customer relationship management systems (CRM) and holds the second position in risk management solutions with a market share of more than 8 per cent in 2009.

Founded in 1996 and headquartered in Beijing, Longtop today has six solution delivery centres, three research and development centres and 84 ATM service centres located in 27 provinces and regions in China. The company has about 3,000 employees.

<http://en.longtop.com/>

UFIDA

UFIDA is a strong local vendor in the Chinese software market, drawing its strength from a huge installed base in the SME segment. The company recorded strong growth of 32.6 per cent this year (2010) and next year 28.3 per cent is anticipated.

UFIDA's customer base includes approximately 700,000 enterprises. Its 2,000-channel partner network has allowed it to penetrate regional markets across China. This broad footprint has given UFIDA detailed knowledge of local business practices and helped bolster its strong brand and reputation within China.

Large customers include major private companies, state-owned enterprises, and government agencies such as China Netcom, the China Three Gorges Project Corporation, Bank of Communications, China Overseas Land & Investment, Jiangling Motors and the People's Bank of China.

www.ufida.com/about.aspx

Kingdee

Kingdee International Software Group Company Limited is a listed company on the Main Board of the Hong Kong Stock Exchange. It is a leading supplier of enterprise management software and middleware in the Greater China and Asia-Pacific regions and also specialises in online management and e-business application solution services. There are more than 4,800 employees in the group.

www.kingdee.com

Digital China

Digital China is reported to be the second-largest software firm specialising in software for the financial services markets. Digital China Financial Software is a dedicated IT service company and is part of Digital China Holdings Limited, a holding company listed in Hong Kong.

Headquartered in Beijing, Digital China Financial Software has more than 700 employees located in its Shanghai, Guangzhou, Shenzhen and Xi'an business centres.

<http://dcfs.digitalchina.com/eindex.jsp>

Yucheng Technologies

Yucheng Technologies Limited (YTEC) is a leading IT and outsourced service provider to the Chinese banking industry. Headquartered in Beijing, Yucheng has more than 1,200 employees and has established an extensive footprint to serve its banking clients nationwide with nine subsidiaries and representatives across the country.

Yucheng provides a comprehensive suite of IT solutions and services to Chinese banks including (i) system integration and IT consulting, (ii) solutions and software platform, and (iii) outsourced operations. Yucheng counts 13 out of the 15 top banks in China as its customers, and is especially strong in banking channel management, IT solutions and services – such as web banking and call centres – and risk/performance management solution consulting and implementation services. It is also rapidly becoming one of the leading third-party providers of POS merchants acquiring services.

www.yuchengtech.com/english

APPENDIX 2: Industry Events

CEBIT Asia

(International Trade Fair for Information Technology, Software & Services, Telecommunications and Consumer Electronics)
Every year
www.cebit.de

PT/EXPO COMM CHINA

Every two years.
www.ptexpo.com.cn

ICT EXPO CHINA

Every two years
www.expocomm.cn

China International Software & Information Service Fair

Every year
www.cisis.com.cn

International Soft China

Every year
www.csia.org.cn

China (Nanjing) International Software Products Expo

Every year
www.cis-expo.com

International Conference on E-Business and E-Government

Every year
www.icee-meeting.org

China International Medical Device Summit

Every year
www.duxes-events.com/ADV/MD2_ADV/index.html

APPENDIX 3: Useful Contacts

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APPENDIX 4: Useful Chinese Organisations

Ministry of Information
& Industry Technology
www.miit.gov.cn

China Software Industry Association
www.csia.org.cn

China Hospital Information
Management Association
www.chima.org.cn

Nanjing Municipal Government
www.nanjing.gov.cn

Hangzhou Municipal Government
www.hangzhou.gov.cn/main/zpd/
English

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