

Trend Analysis

CHINA IT OUTSOURCING 2010

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The structural shortage of good, affordable and highly-skilled IT personnel, including software developers and testers, in Western Europe, makes outsourcing of IT probably inevitable as an operating strategy.

In 2010 the People's Republic of China becomes almost certainly the leader in global sourcing of digital technology. Not surprisingly since China delivers 400,000 IT experts on an academic level yearly.

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Market developments

According to a study by market researcher IDC in 2005 the European IT sector will lead in the period 2005-2009 to the creation of 1.5 million new jobs, of which sixty percent will be created in the software industry. The number of half million new jobs is indeed impressive, but does represent only half the story. Where do the necessary 900,000 software developers in Europe come from? In 2006 Europe showed a shortage of 160,000 network specialists, a number that has now probably risen to 500,000.

Meanwhile we have reached 2010 and both IT suppliers and service providers and user organizations in Western Europe are — in spite of economic headwinds — still struggling to find enough qualified staff. The number of computer engineers leaving Dutch universities and colleges every year is far from satisfying the demand. Every employer is fishing in the same pond. This makes IT projects more expensive and the ability to grow comes under pressure. Shortage in man power also leads to delayed delivery of the technology and that has an impact on the time-to-market too.

Sustainable solution

For almost forty years outsourcing of IT is regarded as a good way to save costs. Now we have identified a new, strong argument for IT outsourcing: the structural shortage of IT professionals in Western Europe. For this reason more and more user organizations and software providers are looking to outsource the development of computer programs and adjacent services such as testing of software code. Moreover, the flexibility of organizations and the scalability of their business processes are at stake.

Outsourcing does not explicitly mean job losses in Western Europe, but offers instead urgently needed support to entrepreneurship and innovation, and at lower cost. This is of great importance for the development of national societies and their economies.

According to the Innovation Platform — a public/private think tank in the Netherlands — companies that are 'working smarter' achieve a 9 percent point higher productivity growth than firms that still work more traditionally. This is the main result of a research report conducted by the EIM among 650 SME companies with 5 to 250 employees. By working smarter, we mean '*process and organizational* innovations which employers and employees together come to a better approach of the work or the production process'. Also, the study suggests that *technological and product innovations* are more effective when combined with smart working. The productivity of these firms is around 12 percent points higher than companies who only innovate technologically.

Currently, all kinds of IT-related work is outsourced to Eastern Europe and further away, to India. China is often a blind spot. Yet, the incredible talent pool of IT staff, the quality of education and the quality of IT service outsourcing, make the People's Republic of China as the new outsourcing destination extremely interesting.

China as IT producer for the world

Outsourcing of IT is not a novelty, and this applies also for Europe. Traditionally, work in this field is conducted by various outsourcing vendors in India. Remarkably, today the Indian suppliers turn to China to provide services such as software development. In other cases outsourcing vendors of India set up their own offices and productions centers in the People's Republic of China, with Chinese staff.

But there are more under-reported aspects of the IT sector in China. Each year approximately 400,000 students finish their technical education; an academic workforce which becomes larger by the year. We see fast-moving development and many well-renowned corporations such as Siemens, IBM, Hitachi, Microsoft and Volkswagen, have been outsourcing major and comprehensive digital technology projects to China for many years. Furthermore, we see that foreign hi-tech companies establish sourcing centers as well research & development centers. That trend is undeniably going through.

The stories of a possible lower quality of MADE IN CHINA products and services, together with the possible low innovative capacity of Chinese entrepreneurs are — at least in regard with the IT sector — obsolete. One of the first countries that saw the potential of the large Chinese workforce and the benefits of outsourcing digital technology to China was Japan. For years, the Chinese produce all types of computer programs - administrative, technical and telecommunication applications - for their Japanese clients, who sell their products worldwide.

Small project

The People's Republic of China appears to be an attractive location for IT services outsourcing. The potential of highly skilled programmers and other technicians is high, while labor costs are low. In addition, the Chinese high-tech companies are keen to serve the European market and Chinese staff does work hard. However, at doing business in China one should take language and cultural aspects into account. And also the legal framework of outsourcing projects requires attention. Gaining experience through a small and transparent off shoring project, seems the appropriate way to a successful and sustainable international partnership. Moreover, even a modest project is often worthwhile, as follows from the entry-level model.

Considerations

Please note that special circumstances call for attention. Some Chinese technology companies face a rather high staff turnover, because software engineers move when they no longer find their work challenging. Also, a possible lack of skill of the English language may result in communication problems. And the prevention of software piracy requires the implementation of both legal and factual measures. For example, USB ports of PCs can be closed down and the development team may only work on an internal network that has no connection to the Internet.

Entry level model

Outsourcing of digital technology is clearly not limited to large projects for multinationals. Already in respect to small projects, the outsourcer may achieve strategic and financial advantages. Having said that, it is wise to follow a number of pragmatic house rules. One reads: do careful and accurate budgeting and forecasting. This provides insight and creates clarity. But it is not just about understanding the entire process itself, also an insight into each individual step – from research feasibility to completion of the project – is of great importance to every outsourcer.

Budgeting & forecasting

The best insight and thus the proper budgeting can only be obtained through the application of a forecasting model for the integrated process (i.e. from the start of feasibility until the final delivery of the software), where real cost estimates and – when necessary – the forecasted sales are visualized. After that we know which costs are to be expected, and in which phase of the project. On this basis, we also analyze when the break-even point is reached. Our definition differs slightly from the usual definition. We compare the costs (of outsourcing in China) with the costs in the country where the outsourcer (i.e. the Netherlands) is located. When we reach the level of a positive cost saving compared to situation in the country of the outsourcer, the break even point is surpassed. If one considers to outsource digital technology, it is well advised to divide the process in different stages, to which certain costs relates. In the example below we calculate the cost; the financial benefits are not included in this model.

Phase	Costs	Activity	Costs
Feasibility	Initial costs	Formulating requirements, preselection, advice concerning suppliers en legal issues	Euro 20.000, non recurring costs)
Startup	Start up costs	Negotiations	Euro 10.000 Non recurring costs)
Project execution	Project & development costs	Development, project management, check on legal issues, delivery functional specs, software code etc.	Euro 6.400 proj. mgt monthly, recurring costs Euro 2.000 for sw developer/month, recurring costs
Follow up after project	Costs after projects	Handling and finalizing last issues	If applicable

Table 1. The phases and costs of an IT outsourcing project

The initial cost are at the deployment of 4 FTEs are already earned back within a period of one or two months. At the current price-level for project management also this cost is covered within the very short payback period of two to three months. Below a numerical example is displayed.

Phases and costs	wk0	wk4	wk8	wk12	wk16	wk20	wk24
Feasibility							
<i>Initial costs</i>	20,0						
Start up							
<i>Start up</i>	10,0						
Development							
<i>Projectmgt</i>		25,6	51,2	76,8	102,4	128,0	153,6
<i>China</i>		32,0	64,0	96,0	128,0	160,0	192,0
<i>Netherlands</i>		68,8	137,6	206,4	275,2	344,0	412,8
Difference (cumulative)		36,8	73,6	110,4	147,2	184,0	220,8

Table 2. Numerical example of the costs of software development (x1000)

With this spreadsheet it is simply illustrated that, thanks to price differences between for example the Netherlands and the People's Republic of China, appealing advantages are possible when producing software offshore. A cost-saving of 50% to 60% is realistic and achievable, provided the outsourcer executed negotiations in a good way. For the outsourcer the initial costs and costs for project management are payed back in a remarkably short time.

Software products and services

Often outsourcing starts with the production of software code. Consider in this respect the development of embedded software, process management software, all types of telecommunications software, software for planning traffic and public transport systems. But do not forget that in addition other (software-related) services could be outsourced as well. Examples are testing of software code in various gradings, the supervision of operational software, building a complete business unit and more.

Legal aspects

Besides technical and management aspects of IT outsourcing to China also the focus on the legal framework benefits the outsourcer. We know that the law creates economic value, because it optimizes assets and manages business risks. International cooperation under the flag of offshoring of IT services is not just a collection of different activities - from developing software code to full business process outsourcing - but also a collection of different business relationships, each based on one's own legal framework.

There are four main types:

- Contractual outsourcing of IT services to an external service provider in China.
- The provision of IT services through an own local office in China by the outsourcer in Western Europe.
- The provision of IT services through a joint venture in China, in which the outsourcer and his local service provider participate.
- And the situation where the outsourcer hires Chinese employees, based on a labor contract of the country where the outsourcer is located.

It is obvious that any of the abovementioned types has its own specific tax-financial and specific legal issues. For instance in the last type our aliens and immigration law plays a role, while in case of local branches of Dutch companies abroad, they are subject to the rules of the local, national company laws, increasingly supplemented by international laws and regulations, such as information storage and liabilities under the Sarbanes-Oxley Act, the International Finance Reporting Standards (IFRS) and Basel II result.

Separately, our National Data Protection Act has a long arm and includes relevant security requirements which also apply when the processing of personal data is performed by a processor in a foreign place.

Quality and legislation

In any ICT outsourcing project the quality, continuity and security of the central services and outsourcing of ICT activities to an external service provider, abovementioned issues must be treated carefully and contractual arrangements should be workable.

This applies in case of programming to single project basis, and continuous ICT service that is sought in the context of managed services and business process outsourcing example. We also see that China is a member of the World Intellectual Property Organization (WIPO) and the government promotes and maintains today vigorously intellectual property. This is important for all digital technology developed in China or for example tested or serviced.

Critical success factors

Experience shows that a number of issues are important for the success of IT outsourcing.

- Identify the own requirements diligently, pay sufficient attention to a careful and thorough selection of potential outsourcing partners and look to the legal aspects of protecting their own status and the execution of the contract.
- A good price is feasible under the condition that proper attention is paid to the negotiation with the selected partners. This will result in a short pay-back period and with the additional consequence that the production costs decline.
- Choose a project approach to outsourcing projects and focus continuously. Attention from the beginning until the end of the project life cycle is essential.
- Start preferably with smaller projects so that parties on both sides — outsourcer and contractor — get used to each other.

In summary we can say that outsourcing of work in relation to digital technology to China deserves the attention of IT vendors and user organizations in the Netherlands. The advantage of outsourcing explicitly extends beyond the area of cost; even with small sized projects (from 2 to 4 FTE) cost benefit can be achieved. Other benefits of this outsourcing model are also the scalability of a project, fast delivery and time-to-market.

Five Chinese IT Sourcing Trends

- In 2010 China will probably become the market leader in global outsourcing of digital technology, including software.
- Foreign high-tech companies are establishing both their own sourcing productions centers in China *and* research & development facilities.
- There is more and more highly trained and qualified technical manpower available.
- Chinese outsourcing vendors pay increasingly attention to technical certifications in regards with digital technology, including ISO17000 and CMM4 en CMM5.
- China joined the World Intellectual Property Organization (WIPO) and the government promotes intellectual property rights strongly and executes enforcement programs.

Colophon

China IT Outsourcing 2010 is written by Pieter Tsao and Victor de Pous.

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Victor de Pous studied law and computer law and is an independent corporate lawyer and industry analyst, based in Amsterdam. Since 1983 he works in the innovative domain of business and legal aspect of digital technology and the information society. Since 1987 he publishes *NEWSWARE*, the one-and-only newsletter on law and IT in the Netherlands. In 2006 Victor de Pous took the initiative for the first Sino-Dutch IT Tour, which visited technology centres in Shanghai and Beijing in May 2006. His study *Open Source Software and Politics* (2004) has been translated also in Mandarin.

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