HEIDRICK & STRUGGLES

getting results in
China

how China's tech executives are molding
a new generation of leaders

contents

the project on leadership

in China's high tech companies

To understand how leaders of Chinese companies are attempting to meet their people- and skill-related challenges, Heidrick & Struggles, the premier global executive search and leadership consulting firm, and the Stanford Project on Regions of Innovation and Entrepreneurship (SPRIE) undertook the Project on Leadership in China's High Tech Companies.

Over the past year we have partnered to interview more than 100 top executives in China's knowledge-intensive industries:

- ☐ SEMICONDUCTOR DESIGN
- ☐ E-COMMERCE
- ☐ COMPUTER HARDWARE
- ☐ COMPUTER SOFTWARE
- ☐ MOBILE VALUE-ADDED SERVICES
- ☐ TELECOMMUNICATIONS

These executives were drawn from domestic Chinese companies, multinationals with extensive operations in China, and start-up companies that have arisen over the past seven years to serve Chinese and international markets.

China's tech sector is a crucible for developing the generation of leaders who will shape China's economy in the decades ahead. Where previous studies have attempted to explain the root causes of the human capital challenges or have prescribed solutions, we sought to find out what leaders of high tech companies were actually doing on the ground to address talent challenges, with profiles of representative companies and leading executives. These findings are intended to help Chinese executives, leaders of multinational companies operating in China, and investors in Chinese enterprises across all industry sectors understand the talent approaches that are getting results in a challenging environment.

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STANFORD PROJECT ON REGIONS OF INNOVATION AND ENTREPRENEURSHIP
THE WALTER H. SHORENSTEIN ASIA-PACIFIC RESEARCH CENTER
SPRIE

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Leaders of China's bellwether high tech industries face two urgent people-related challenges:

☐ They must develop the key leadership competencies required for succeeding in demanding domestic and global environments.

☐ They must make up a significant shortage of senior and mid-level executive talent to support the growth of their enterprises through careful approaches to recruitment, skill development, and retention.

Despite the best efforts of companies operating in China, they face significant and worsening talent gaps at every level. At the same time, large annual increases in employee compensation have forced them to pay more for less value and to face an uphill battle for retaining employees. With multinationals increasingly competing in China, these conditions will only worsen, affecting domestic and foreign companies alike and intensifying the challenges of human capital.

Attempts by multinationals to simply export foreign talent to China without assessing whether they have the necessary leadership competencies and leadership styles for the local market have often led to disappointing results. According to some estimates, fewer than half of expatriate executives succeed in their mission. Conversely, domestic Chinese companies that fail to adopt, at least partially, some of the competencies that dominate in the global marketplace may find themselves at a competitive disadvantage—not only globally, but also locally.

Meanwhile, the proportions of the talent challenge are massive. According to a McKinsey estimate, China had only 3,000 to 5,000 globally capable leaders in 2005, but needs some 75,000 over the next ten to fifteen years[1]. Moreover, the talent shortage includes professionals in marketing, sales, finance, human resources, and other disciplines.

Many observers have focused on China's impressive volume of technical graduates. The more than

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[1]   Diana Farrell and Andrew Grant, "China's Looming Talent Shortage," *McKinsey Quarterly*, 2005 Number 4.

100,000 computer science and engineering graduates every year is an unrivalled pool of low-cost talent, which is expected to increase to 160,000 graduates per year within three years. This is twice as many as India and four times as many as in the United States. However, the key talent bottleneck is not in sheer numbers with entry-level skills; rather, it is for professionals who have the leadership capability, expertise, and management experience to run global organizations.

high tech industries will be the crucible for developing a generation of business leaders who will shape China's future economy

To meet their dual challenge, the leaders of high tech companies must do nothing less than create a cadre of top leaders with the right competencies to succeed in one of the most complex and challenging business environments in the world. They must also mold a new generation of professionals to populate and propel high tech enterprises— today's twenty-somethings and thirty-somethings, the best of whom will one day rise to lead the industry themselves.

The stakes are high—and they exceed the bounds of the high tech sector. The sector is a leading indicator of what is to come in the Chinese economy and in society. Today, China's economic base is manufacturing; the factories of China's coastal provinces produce clothing, automobiles, electronics, household appliances, and plastics for much of the developed world. But to drive its economy in the decades ahead and continue to improve its standard of living, China will rely

increasingly on knowledge-intensive industries like high technology, a sector that is already expanding rapidly—some industry segments such as mobile value-added services by as much as 30% a year.

The Chinese government is aware of the centrality of high technology to the economy's future and has put these industries front and center in its current industrial policy. At China's 2006 National Science and Technology Conference, President Hu Jintao pledged to make China "an innovation-oriented society" in the 21st century. To achieve that goal, "indigenous innovation" will be at the core of China's plan from 2006 to 2020, with science and technology targeted as the "major driving force for economic and social development and main source of wealth."[2] Clearly, high tech industries will be the crucible for developing a generation of business leaders who will shape China's future economy.

To better understand how the leaders of China's rapidly evolving private sector are addressing these leadership challenges, we conducted in-depth interviews over a period of 18 months with more than 100 top high tech executives, encompassing three categories of businesses: domestic Chinese companies, multinationals with extensive operations in China, and start-up companies that have arisen over the past seven years to serve Chinese and international markets *(see Exhibit 1)*.[3] We chose the high tech sector because it is the most rapidly evolving industry sector in China. We found that while there are unique leadership challenges in the sector, the results strike a common chord among virtually all the companies served in China across the full range of industries. And where previous studies have attempted to explain the root causes of the human capital challenges or have prescribed solutions, we wanted to find out what leaders were

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[2] State Council and Central Committee Medium- to Long-Term Science and Technology Development Plan, released March 30, 2006.

[3] Given the fast-moving Chinese economy, these categories sometimes overlap. Most notably, China's best-known tech company is Lenovo, which acquired IBM's PC business in 2004. Today, the company has a Chinese chairman and an American CEO, and has offices in both New York and Beijing.

actually doing on the ground to address their leadership requirements and to develop a sorely needed new generation of professionals.

From our interviews and related research, it is clear that top leaders of high tech companies in China, and in other sectors, are pursuing a wide range of new tactics—in part based on the leaders' individual backgrounds, the size of their companies, and the unique requirements of operating in China—to address their human capital challenges. Just as clearly, however, despite a great diversity of leadership styles and human resources practices, the larger strategy remains the same for all of these companies: to develop an operating model that will enable them to compete in the global economy. Not one interviewee expressed an intention to adopt an organizational model that diverges significantly from the dominant global multinational model. Many specifically cited Silicon Valley based multinationals as their template. "Our earliest and best teacher was Hewlett-Packard," notes the founder of Lenovo, Liu Chuanzhi.[4]

While their practices differed, Chinese leaders stressed that some executive competencies matter much more than others in order to get results in Chinese companies with Chinese professional employees. And, pushed by the talent shortage to focus sharply on attracting, training, and retaining key employees, top executives in China's high tech companies have taken human resource practices that would be familiar to multinational managers and adapted them to the distinct requirements of their environment.

In the pages that follow, we explore those two intertwined stories—the competencies that drive results in China and what concrete steps high tech leaders are taking to address the severe shortage of talent. While it's too soon to call the experiments now under way "best practices"—few tech companies have amassed more than five years of business results—they represent the course on which industry leaders have embarked and toward which other companies operating in China are likely to look as they attempt to build successful enterprises of their own.

exhibit 1 │ partial list of companies interviewed

| CHINESE COMPANIES* (in order of year founded)		FOREIGN COMPANIES** (in alphabetical order)	
Lenovo (1984)	Vimicro (1999)	Accelergy (2003)	Intel
Neusoft (1991)	BCD Semiconductor (2001)	Achievo (2002)	Microsoft
AsiaInfo (1993)	Analogix (2002)	Agilent	Motorola
Mtone Wireless (1994)	Commit (2002)	Analogix Semiconductor (2002)	Spreadtrum (2001)
Venustech (1996)	Kongzhong (2002)	Augmentum (2003)	ST Microelectronics
Datang (1997)	Banian Tech (2003)	Autodesk	Symantec
Ctrip (1999)	T3G Technology (2003)	eBay China (Eachnet) (1999)	Texas Instruments
Linktone (1999)	Chipnuts (2004)	Fiberxon (2000)	Webex (1996)
Shanda (1999)	Tianji (2005)	Google	Yahoo! (1994)
		Hewlett-Packard	

Foreign vs. Chinese based on the location of corporate headquarters
*Chinese companies founded in the same year are listed alphabetically by name.
**For foreign companies, founding years are given for those with ethnic Chinese (co)founders.

4   "Legend in the Making," *The Economist*, September 15, 2001, p. 74.

competencies
that drive results in China
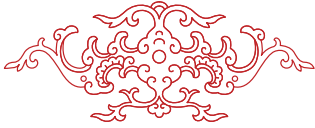
In China's high tech industries, most companies are relying on technologies, services, and business models pioneered elsewhere and are using China's cost advantage to serve global markets or are bringing new services to the domestic Chinese market.

In doing so, they face a chaotic and highly competitive domestic market and a mature, demanding global market. At the same time, these industries are regulated by a mosaic of state agencies and provincial and local authorities, sometimes with competing priorities. And although the legal system in China is evolving, both domestic and multinational companies cannot count on protecting their technologies and innovations through the patent or court systems.

High tech companies must also deal with the volatility associated with any nascent industry. Apart from the large state-owned enterprises and state-supported quasi-monopolies, there are only a handful of independent technology companies with US $1 billion or more in revenues. A growing list of firms has gone public on world stock exchanges—24 on NASDAQ in the last several years—and the list is rapidly expanding. However, the great majority of China's tech companies are start-ups with uncertain prospects.

In addition to those industry-specific challenges, high tech companies face a daunting set of economic, political, and cultural conditions. With an average of nine percent growth sustained over two decades, China is the most dynamic economy in the world. But it also presents problems common to other emerging economies: uneven development, gaps in infrastructure, and under-developed legal and financial systems. Culturally, the country's 23 provinces, five autonomous regions, 56 ethnic groups and more than 200 dialects create a patchwork of markets that often differ widely. Meanwhile, the talent shortage, partly the legacy of a planned economy and the brain drain of the Cultural Revolution, is exacerbated by a focus on theory and rote learning in the education system.

Many discussions of how best to acquire the competencies to meet this array of challenges have offered solutions based on the origins of employees—whether expatriates, Chinese in the Asian diaspora, local People's Republic of China (PRC) nationals, or PRC Chinese who have studied or worked abroad. These considerations are certainly important, and the leaders we interviewed represent the entire spectrum of cultural origins. Their backgrounds and their personal experiences influence the competencies and practices they promote in their companies. But the key issue for these leaders is not which cultural background offers the best "fit" for operating successfully in China, but instead what methods will best enable them to get results with the available pool of employees in China.

critical competencies at the top: what leaders say

To facilitate the discussion of leadership with China's high tech executives, we introduced them to the Heidrick & Struggles competency model, a proprietary tool validated by the firm's experience of assessing thousands of executives around the world against the requirements of senior-level positions.

This model typifies the competencies valued by global multinational companies, and in developed economies these competencies are of roughly equal importance in delivering results. In the emerging economy of China, the leaders we interviewed took a substantially different view of these competencies, their relative importance to one another, and the challenges of inculcating them in the rapidly evolving Chinese business environment (*see Exhibit 2*).

exhibit 2 | the most vital leadership competencies

harder to find	Best practice perspective	Driving results
	Team leadership	Customer orientation
	Creative thinking	Visionary leadership
	Openness of communication	Organizational buy-in
	Managing innovation	Modeling key values/Ethical
	External awareness	Delegating and empowering
	People development	
easier to find	Analytical thinking	Self-confidence/determination
	Conceptual thinking	Decisiveness
	Internal awareness	Relationship building
	less important	more important

With revenues of US $13 billion globally after its acquisition of IBM's PC and laptop business in 2004, Lenovo is by far the largest Chinese technology company and the third-largest computer maker globally after Dell and Hewlett-Packard.

Liu Chuanzhi

Its founder and former chairman, Liu Chuanzhi started out as an entrepreneur in 1984. After 13 years as a government researcher, having grown frustrated with his inability to get his innovations into the market, he got the opportunity to launch a business with the sponsorship of his employer, the Chinese Academy of Sciences. After developing a popular card used inside PCs to allow Chinese language users to operate English language software programs, Lenovo (then known as Legend) won a contract to distribute HP printers in 1989.

The opportunity to get to know HP as a company was a pivotal experience. Recognizing that HP had

systematic work processes and a coherent performance culture based on deep respect for individual employees, Liu wanted to find ways to adapt the "HP Way" to suit his company. He began by communicating a set of values: fulfill your promises, no matter what; focus on the results, not the process; set challenging but realistic targets for employees and reward them richly for success. Initially, he had to be authoritarian to communicate and enforce those standards. To convey the importance of fulfilling commitments, anyone showing up late for a meeting was required to stand in shame before their colleagues. He fired several employees for unethical behavior. Once the values became the norm inside the company, he was able to adopt a less authoritarian manner.

Liu also devised a three-step approach, which he referred to as Lenovo's "bible," for any project: first, create the core team; then, set the strategy; finally, execute. This three-step process has become the "operating system" across the 20,000-employee organization. Employees apply it to local marketing initiatives to ensure that the right people are involved and the program's goals and tactics are clear to everyone.

Our interviewees told us that Chinese leaders tend to excel in three critical competencies—self-confidence/determination, decisiveness, and relationship building. There is no shortage of entrepreneurs in China, and a great strength of the Chinese economy is the readiness of Chinese executives to start their own businesses. And the careful cultivation of mutually beneficial relationships is a fundamental part of Chinese business conduct.

They also identified several competencies as both pivotal to their success and in relatively short supply—the "More Important/Harder to Find" competencies in Exhibit 2.

Faced with gaps in these competencies, the leaders of China's high tech companies are evolving variations on the global multinational competency model to address the unique needs of their business and the demands of the Chinese business environ-

ment. Lenovo's founder, Liu Chuanzhi, who stepped down as chairman in 2004, is perhaps the most prominent example (see sidebar "Adapting the 'HP Way' at Lenovo"). Along with Lenovo, other leaders of China's high tech companies are employing a variety of techniques to create and cascade critical, hard-to-find competencies throughout their organizations.

Ctrip's customer obsession

Ctrip, which sells hotel and airline bookings to individual travelers through its website and call centers, stood out among the companies we interviewed for its intense focus on understanding its customers.

Co-founder and chairman James (Jianzhang) Liang described a Six-Sigma approach that is used to measure a half-dozen key service metrics, such as website and call center reliability, speed of order fulfillment, and sales conversion rates for customers who visit the website or call in to talk to an agent. Data from operations are analyzed to identify problems and the most effective techniques, such as the best scripts for call center agents to use with callers. "I am constantly trying to find what is optimal. I don't want to leave anything as subjective that we can do objective analysis for. That is how we can improve quickly," says Liang, who books all his own travel on the site to stay in touch with the customer experience. Ctrip's approach to understanding customers is the result of its co-founders' extensive experience in U.S. companies. Liang was a manager at Oracle in the U.S. and China, and Neil Shen worked at Deutsche Bank, Chemical Bank, Lehman Brothers, and Citibank prior to co-founding Ctrip. The other founders, Fan Min and Ji Qi, had spent their careers in China, in hotel management and information technology respectively.

DRIVING RESULTS Because of China's long history as a planned economy, "there is a major gap in the talent market," says Steve Mullinjer, managing partner for Shanghai and Beijing at Heidrick & Struggles. Executives with experience inside and outside China noted that driving results there requires greater attention to establishing the "building blocks" of work culture, such as getting employees to follow through on commitments and focus on results rather than just following instructions; and establishing open and honest communication about tasks. Executives recognize that they need to teach these behaviors and set the example for employees. They also understand the importance of identifying the right metrics for performance and holding direct reports accountable for results.

At Lenovo, individual and group performance targets are set after considerable input from multiple sources and are adjusted as the year goes on to reflect changing conditions. Employees have a sizeable financial incentive to hit their targets—generally 100% of base salary. Neusoft, China's largest software outsourcing firm, took the unusual step in China of giving the great majority of employees stock ownership, creating some of the country's first high tech millionaires in the process.

Ensuring that a rigorous approach to performance is cascaded down through the organization is also vital. "This is the hardest thing," says Mtone Wireless CEO Victor Wang. "I haven't found the magic formula yet." T.Y. Chan, now CEO of BCD Semiconductor and until recently the CEO of Winbond Semiconductor in Taiwan, puts key employees through a rigorous experience that he learned by working directly with the legendary CEO of Cypress Semiconductor, T.J. Rogers. Rogers would work with each manager to hold them fully accountable for their projects with no excuses. Rogers would address any substandard work reports by managers on the spot. He ended every meeting with clear action steps,

"I could be the person to make this totally different."

timelines, and accountabilities. Chan has found his own version of this approach to be effective in Taiwan, and he is currently implementing it in China.

Yang Kewei, founder and CEO of Analogix Semiconductor, seeks to drive results by recognizing and praising meaningful behavior changes and intermediate results. He holds an annual banquet for employees at which he recognizes nearly half the company with one award or another for small successes and improvements in work-related behavior.

CUSTOMER ORIENTATION The shortage of deep marketing skill among Chinese executives is not surprising given China's short market history. But in any fast-changing technology market, companies need to be able to understand customer needs on an ongoing basis, at senior levels and across the organization. At the senior level, top leaders need to be able to develop a road map for where markets are going and apply modern marketing methods to customer insight. Executives described to us the challenge of getting staff to think beyond giving customers what they want to actually entering into a dialogue with them.

Lenovo's Liu Chuanzhi, despite his own lack of business experience when he first started his company, successfully argued for taking an approach to developing products based on market needs rather than one based on technologies. "We were mainly scientists and didn't understand the market," he says. "We just learned by trial-and-error, which was very interesting—but also very dangerous."[5]

Analogix Semiconductor CEO Yang noted the danger of merely meeting immediate customer needs and not determining where the market is going. "I find it necessary to form an agenda and stick to it, rather than just meeting the needs of customers," he says. Meanwhile, companies like Eachnet (now eBay China) and Ctrip, a travel e-commerce website, are putting in place world-class consumer marketing and service development strategies (see sidebar "Ctrip's Customer Obsession"). In the short term, many executives we interviewed have chosen to "outsource" sales and marketing to the U.S. through small staffs based there, while conducting all other operations in China.

VISIONARY LEADERSHIP As in any emerging market or industry, the ability to see a future outcome clearly and drive toward it is critical to success in China today. Wu Ping, founder of a leading mobile phone IC firm, Spreadtrum, visited IC design houses in China in 2000. There were reputedly 30 design houses in Shanghai, but many were small—one he visited had just a single workstation and most consisted of 2–3 people in one room. They were doing reverse engineering and copying. It was like "white paper" (*baizhi*)—nothing there. During this trip, he saw that this industry could be much larger and started Spreadtrum, in part because of this insight. He recalls thinking: "I could be the person to make this totally different."

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5   Naham, Anne, "The Scientist Who Could: State-Owned Enterprises Should Follow Us," *AsiaWeek*, June 13, 1997.

Ctrip achieved visionary leadership through strategic debate. The founding team was composed of James (Jianzhang) Liang, who held technical and managerial positions at Oracle; Neil Shen, who had Wall Street experience; Fan Min, who had spent his entire career in China's hospitality industry; and Ji Qi. When it came time to make the crucial decision of whether to focus first on hotel bookings or airline travel, for example, current CEO Fan credits their correct choice—hotel bookings—to intense discussions among these founders with their diverse backgrounds and points of view.

One of the founders of early telecommunications industry leader AsiaInfo, Michael Zhao, attributed its success in winning the business to build China's Internet backbone in the late 1990s to the founders' regular day-long retreats to explore the market conditions and discuss options. Through this process they were able to piece together the realization that while the U.S. telecommunications company Sprint appeared to have superior resources to build the Internet backbone, in reality their capabilities were no better than AsiaInfo's. AsiaInfo pursued the business and proved an important pioneer.

ORGANIZATIONAL BUY-IN To achieve organizational buy-in, say the leaders we interviewed, it is extremely important to communicate well with employees and to ensure that they have a full understanding of objectives and are sufficiently focused on them. In practice, this requires a great deal of attention to communication, through meetings and written messages as well as hallway conversations. "You need to say it at least ten different times in ten different mediums," says Bo Y. Shao, founder and chairman of Eachnet (sold to eBay in 2004). Shao was a relentless communicator, using a variety of formats and mediums to engage with employees and encourage them to ask questions about business direction. He worked hard to create a sense of openness, ensuring that employees with questions felt they

could ask anything. He held quarterly meetings in which senior managers openly critiqued each part of the organization's progress on goals without defensiveness or fear of retribution.

There is also a great amount of informal communication within any organization, and this is especially true in Chinese companies. "There are no secrets," as one leader puts it. Therefore, say these leaders, they must counteract any incorrect or counterproductive messages that circulate informally.

MODELING KEY VALUES/ETHICAL Most of the executives we spoke with emphasize how important it is to lead by example within their companies. China's tradition of clear hierarchies in organizations means that leaders' behaviors are imitated and their feedback to individuals carries great weight. Their preferred style of developing capabilities was via informal mentoring interactions with their people. The historic weakness of the legal system compared to Europe and the U.S. and the opacity of the financial system (reliable financial and governance information is difficult to obtain) make integrity and trustworthiness particularly powerful traits for Chinese leaders. One semiconductor executive, who had worked in the U.S. and Taiwan for many years, fired Chinese managers for the first time in his career because of ethics problems. In short, the kind of personal example set by executives in China can be a significant driver of business outcomes.

DELEGATING AND EMPOWERING Delegating is the key to developing mid-level talent in an organization. Without the ability to take responsibility and make mistakes, employees develop skills more slowly. Letting go of the reins is difficult for leaders everywhere, but the tradition of strong hierarchy in Chinese organizations has made this especially difficult for many Chinese managers, and top-down leadership that creates followers instead of mid-level leaders is the norm. As Analogix Semi-

conductor CEO Yang puts it, "There has not been a culture of setting an organizational structure and setting responsibilities, then empowering team members to make it happen. This is a human tendency to see a problem and then fix the problem yourself. I am trying to teach my people that you put a guy in charge and then learn to let it go. This is critical to scale the company." AsiaInfo's Michael Zhao notes, "This is the key to replicating yourself and getting results." Mary Ma, CFO of computer maker Lenovo, puts effective delegation at the head of the firm's well-regarded performance culture. Mid-level leaders are given carefully defined performance targets, but how they achieve them is entirely up to them.

Interestingly, although the hard-to-find competency "managing innovation" is not yet regarded as having the highest importance, it gained more prominence in our 2006 interviews over the first wave of interviews conducted in 2005. While semiconductor, e-commerce, telecom, and hardware/software industries in China have relied on existing technologies and business models to sustain growth, many recognize that new products and innovations must fuel future growth (*see sidebar "John Deng: Emphasizing Innovation at Vimicro"*). However, according to several of our interviewees, developing new product ideas and managing the innovation process are still scarce capabilities in the Chinese talent pool.

John Deng: emphasizing innovation at Vimicro

Unlike other Chinese high tech firms, which started with trading, moved to manufacturing, and then on to technology development, Vimicro focused on innovation from the beginning.

John (Zhonghan) Deng

Founded by John (Zhonghan) Deng, the company explicitly followed what he calls a more "American model of creating new technology and then manufacturing and trading with a global strategy."

Vimicro now owns more than 600 patents and is working with Microsoft to extend its seven-year alliance for next-generation video products, such as Xbox and set-top boxes. Vimicro is expanding quickly, recruiting the best talent from both sides of the Pacific, with more than 70 returnees, as well as developing from within.

Awarded Man of the Year for China's economy in 2005, Deng epitomizes high tech leaders in the spotlight. Born in Beijing in 1968, Deng received a PhD at

Berkeley, became a researcher at IBM's TJ Watson Research Center, then went on to co-found Pixim, a digital imaging firm in Silicon Valley. Attracted by the opportunities to build a global technology company using Chinese talent, Deng returned to China to co-found Vimicro in 1999 with US $1.2 million of venture funding.

With a focus on digital multimedia chips for cameras, PCs and mobile phones, Vimicro's innovative chip designs have captured 60% share of the global computer image input market for customers who include Microsoft, Samsung, Logitech, Siemens, Sony, Fujitsu, and Lenovo. Pioneering what is considered China's first successful chip, Vimicro was the first fabless chip company from China listed on NASDAQ, where the firm raised US $87 million in its IPO in November 2005.

None of these leaders' approaches to creating critical, hard-to-find competencies will look surprising to seasoned multinational managers. They are not fundamentally new. Yet each one has also been adapted to fit the specific human capital challenges of each company's stage of development in the context of China's emerging economy. No single company or set of practices provides the infallible blueprint for other companies wishing to enter China's high tech sector, but taken together the approaches of these pioneering companies offer a range of possibilities that should stimulate the thinking of new entrants as well as less advanced existing companies.

competencies for middle managers and individual contributors

Chinese professionals in their twenties and thirties, from whom high tech leaders must develop the next generation of leaders, are the first generation to grow up after Deng Xiaoping's free-market reforms. As first- and second-tier managers in China, these young professionals are facing unknown territory in terms of roles and tasks. In order to succeed in global markets, they need to be able to communicate with colleagues in English in Europe and North America. They need to get results from their teams. They need to manage large and complex projects, sometimes without prior experience. In larger organizations, they may need to function in a matrixed environment—in order to optimize resources in fast-changing markets.

Individuals at this level are in very short supply, and are being promoted before they have mastered all aspects of their roles. Zhang Daijun, CTO of T3G Technology, prefers to put returnees who have experience with global multinational companies in key project manager roles; other leaders mentioned returnees as a key source of middle-management talent.

According to the leaders we interviewed, the Chinese higher education system, although it has recently improved dramatically, is unlikely in the near term to fill this talent gap. The system's emphasis on rote learning and theoretical understanding over practical applications of ideas, say these leaders, accounts for the competency deficits among entry-level employees. "They come [to me] with this limited view of the world," says Peter Liou, former R&D chief of Intel in China. The education system "does not promote creativity," says John Yu, the COO of Chipnuts, a semiconductor firm. John Thornton, former president of Goldman Sachs and now director of global leadership at elite Tsinghua University, notes that the MBA students he teaches still have a ways to go: "They have raw talent that you've got to work at making into the kind of talent that's effective."[6] English language became a mandatory subject in primary school in 2001, and the supply of engineering and business graduates is growing rapidly. Still, say China's high tech leaders, more practical experience needs to be integrated into higher education.

Nevertheless, the brisk labor market for those with good work experience means that many employees leave before they become truly productive in their roles. This group of mid-level leaders and professionals will be the source of top executive talent over the next decade, and how well they develop as leaders and general managers will largely determine the success of China's tech sector. Current top executives therefore have to make attracting, developing, and retaining them a top organizational priority.

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6   Jack Sweeney, "As Management Skills Trump Knowledge in the World's Hottest Economy, the Profession Embraces a Grand New Mission," *Consulting Magazine*, October 2005.

addressing the
talent shortage

The acute talent shortage in China's high tech industries is not a shortage of people, but a shortage of employees who have the key competencies and subsets of those skills to fill positions at every level in China's high tech companies (*see Exhibit 3*). As a result of this shortage, China's high tech companies face acute challenges in all three of the critical human resources staffing functions: recruiting, development, and retention. As with their approach to developing appropriate competency models, high tech leaders are adopting familiar human resources strategies and adapting them to the requirements of the business environment and their specific companies.

exhibit 3 | China's talent ladder

	Performance Challenges	Experience and Skill Gaps
SENIOR EXECUTIVES (CEOs, COOs, GMs, functional heads)	Handling rapid growth and market transformation	Exposure to multiple functions
	Weathering a competitive domestic market	Managing growth over US $50 million in revenues
	Managing regulatory risk	
	Developing and retaining talent	
MANAGERS AND TEAM LEADERS	Understanding and analyzing market needs	Exposure to best practices
	Developing and retaining talent	Proficiency in English
	Collaborating with overseas colleagues or customers	
	Balancing competing organizational demands—e.g., technical constraints, market needs	
INDIVIDUAL CONTRIBUTORS	Delivering results	Working knowledge of English
	Surfacing problems, asking questions, challenging others' ideas, providing feedback	Familiarity with the global economy

Headquartered in the northeastern city of Shenyang, Neusoft has made employment at the company more than just a job for its enthusiastic employees. It is a source of professional challenge, to be sure, but also a provider of housing, entertainment, and long-term economic security.

The intense enthusiasm and drive of Neusoft's 8,000 young employees (the average age is under 30; the senior management team averages 36) is indicative of the potential that China has to reshape technology industries globally in the decades ahead.

Dr. Liu Jiren, Neusoft's founder, has built a string of corporate campuses that are regarded as great places to work for the nation's brightest young software engineers. And with US $305 million in 2005 revenues, Neusoft has emerged as a formidable competitor to software firms in the U.S. and India.

Like many of the leaders we spoke with, Liu Jiren had his formative business experience in the U.S. When Liu, then the youngest-ever full professor at Shenyang's Northeastern University (NEU), spent two years at the U.S. National Bureau of Standards (NBS, now known as the National Institute for Standards and Technology), he was impressed with the NBS organizational model where knowledge was developed by the best academic minds and then shared for the benefit of industry. His vision of creating a model in China very much like what he saw and experienced at the NBS became his all-consuming passion.

Dr. Liu Jiren

He started his company by creating an entrepreneurial business within Shenyang's NEU, offering top students intensive training and opportunities to do real-world work. When he discovered what his students could do with the right training and direction and received a significant order from a Japanese business, Liu took his company out of the university and named it Neusoft after its alma mater. The company began literally by taking over a classroom; soon it grew to a floor and later to a separate campus of its own. Liu continued his strategy of hiring students and investing intensively in their capabilities.

Since these early days fifteen years ago, Liu has built the company consciously around the premise that if you hire the right type of employees, give them sufficient challenge, and take care of their most important needs, long-term success is assured. Liu's company became a real estate developer, for example, providing upscale housing to employees when he discovered that this approach would keep his high performers at work to pay their larger mortgages, and would enable them to spend as little time as possible commuting to work since the housing was part of the corporate campus.

The results have been impressive. Neusoft is now the market leader in software outsourcing. With over 8,000 employees, it is among the largest independent Chinese companies in China, created independently from the country's system of state-owned enterprises (SOEs).

Neusoft's talent strategy emphasizes financial rewards, company culture, and the opportunity for growth and learning to hold on to its key employees (*see Exhibit 4*):

Rewards. When Neusoft went public in 1996, it created through stock options some of China's first millionaires. The company has continued to find innovative ways of holding on to employees by delivering excellent compensation.

Company culture. Neusoft has a Department of Branding and Culture, responsible for providing social events and entertainment, organizing sports teams,

and providing a comprehensive employee website for the company's geographically dispersed workforce. As a result, Neusoft employees have a strong bond with the company. Neusoft's stated values of transparency, directness, and trust reinforce the way that software engineers work together to develop superior products.

Opportunities for growth. Neusoft's extraordinary growth over fifteen years has meant unique career opportunities for young Chinese. Liu has consistently tried to give employees work that is as challenging as they can possibly handle. In 1993 for example, Liu started to build a countrywide sales force in secondary cities. He would find ambitious, young sales people and give them a cash incentive of RMB 4,000 to move to a different city. Young people in their twenties and thirties would take the money, go to a new city, set up offices, buy a bicycle, and start calling on customers. This group of smart, ambitious people had the autonomy and support to go to different cities and build the effective methodology by themselves for tackling the market opportunities.

As a result of the company's talent strategy, most key employees have stayed at Neusoft. Turnover has always been very low: 2–3% during the early years; now it is 9%, compared to an average of 25% in the regions where Neusoft operates. Even with multinationals paying 15–100% more in compensation, Neusoft is able to attract talented people and retain them.

exhibit 4 | Neusoft's talent strategy

Elements of the Talent Strategy	How Neusoft Does It
Recruitment & Selection	Former employees are welcome to return to Neusoft if they choose Clear selection standards: character, degree of fit with corporate culture, technical capability
Training & Development	Training and development has become an "export" of the company, with Neusoft University serving over 20,000 students annually.
Company Culture	Department of Branding and Culture provides comprehensive employment experience Clear values espoused by leadership
Rewards	Company is 25% owned by employees through stock grants
Opportunities for Growth for Top Talent	Intense development for top 10 leaders Top 500 employees are assessed in-depth and development plans are put in place to support their growth
Top Leadership Support	Founder Liu Jiren has made his talent strategy the center of his corporate strategy

But there is one significant difference in the area of human resources between these companies and their Western counterparts. China's high tech companies and their top executives devote an unusually large amount of time and attention to talent issues. Some leading companies, like Neusoft, have developed a comprehensive approach to all aspects of the talent issue (see sidebar "Neusoft: Developing a Comprehensive Talent Strategy"). Thus, from a distance, what may appear to be familiar human resources practices are, when viewed more closely, well adapted to the Chinese talent base.

the strongest companies have communicated their "employment brands" to ensure a large pool of interested applicants

tapping into the talent pool

The cornerstone of a successful talent strategy is having a very clear picture of the kind of talent and the kind of people that an organization needs to be successful in its market. Bo Y. Shao, founder of Eachnet, notes that "we recruit for honesty and openness first and foremost." This culture, in turn, was part of Eachnet's strategic advantage in building China's dominant online auction service. Zhang Daijun, CTO of wireless firm T3G Technology says, "We are in urgent need of people who have successful work experience." He relies on hiring seasoned employees from other firms rather than new graduates.

The strongest companies have articulated the capabilities they need and have created rigorous processes to ensure that they find them. They've also communicated their "employment brands" to ensure a large pool of interested applicants.

For example, the core engineering leadership of software developer Autodesk has gone through a process since 2003 to determine what skills and capabilities matter most to success. The initial set of hires did not do well; only about 25% have stayed with the company. Three years later, Autodesk has established clear criteria for hires: strong technical skills, an aptitude for management, and communication skills, especially English. No one is hired without strength in each of these areas. Approximately 100 candidates are now screened for each position in a multi-tiered process that includes a paper test, a phone interview, and two rounds of in-person interviews. Importantly, Autodesk is looking for leadership capability at the outset, ensuring a deeper leadership talent pool. Kai-fu Lee, now a China general manager for Google but previously a key Microsoft executive, has helped swell the ranks of applicants for each

of his China employers by communicating an "employment brand." Since the late 1990s he has been speaking to standing-room-only audiences of Chinese students about the Internet and the capabilities needed to succeed in the technology field, inspiring many of them to pursue careers there.

Other companies, like Shanghai software firm Augmentum, ensure that they acquire the right talent by putting new hires through what CEO Leonard Liu calls a "stress test." It consists of additional training that is designed to teach new hires what they need to know to be successful, and to weed out as much as a third of the group to ensure that those who remain are ready and able to perform.

The companies we interviewed differed in their focus on actively recruiting Chinese "returnees" working overseas. Some companies found it an absolute necessity, and returnees occupy the top positions at many Chinese high tech companies. Other executives preferred, when possible, to hire almost strictly from the local talent pool to avoid tensions between local employees and returnees, who often must be compensated at higher levels. Many companies have found that Chinese returnees bring an essential "local plus global" perspective which is otherwise lacking in their organizations. Chinese returnees often bring deep expertise in their fields (especially finance, marketing, sales, and technology) in addition to their language and cultural skills. However, former Datang Telecom Technology CEO and returnee executive, Wei Shaojun, estimates that 50% of returnees have not been successfully integrated by their employers into their new jobs, in part because the new hires didn't have the skills needed for their new roles. This highlights the necessity of evaluating not only demographic traits, but also the specific leadership competencies and skills needed in any position.

developing talent inside the organization

Given the skills deficits even among some of the best recruits to China's high tech companies, development and training take on added importance for the leaders we interviewed. Here, Chinese leaders have the long-standing Chinese respect for learning and personal development on their side. They have been able to put robust approaches to training that might not work elsewhere, while borrowing from approaches used by multinationals as well:

☐ Peter Liou, former director of R&D for Intel, found that the most productive approach to developing critical soft skills was to send key employees to the U.S. for three to six months. There, they could learn how to influence people at the U.S. headquarters, sell their ideas, and latch on to corporate initiatives. However, because this rotational approach is expensive it will be difficult for smaller domestic Chinese companies to adopt it.

according to one estimate, 50% of returnees have not been successfully integrated by their employers into their new jobs

- Autodesk provides a comprehensive set of training experiences to software engineers to bring them up to speed with the way the firm does software development. These learning experiences are for groups of employees. "We intended to make our site exactly the same as in the U.S.," says Wang Xiong, the executive who launched the software development organization.

- Many leaders described informal apprentice-ship approaches. The former CEO of Datang Telecom Technology, Wei Shaojun, stayed up many nights with engineering staff members to solve problems and teach engineers how to do so in the future. Veteran mobile telecommunications executive Nathan Wang notes that in a past position, "I trained everybody as if he or she were a general manager."

- At travel marketing website Ctrip, the senior executives serve as faculty members for key courses on marketing (taught by the CEO), sales, quality and other topics. Career advancement is dependent on having completed required courses for new roles.

> "I trained everybody as if he or she were a general manager."

What these brief descriptions of these efforts don't convey, of course, is the intensity and dedication with which the leaders we interviewed pursue development of the new generation of professionals. Grappling daily with the acute shortage of skills, these leaders passionately believe in intensive development, a passion that other companies will need if they are to succeed in this environment.

holding onto high potentials in a competitive market for talent

The talent shortage is exacerbated by the challenges of managing and retaining young, high-potential employees in a competitive talent market. Because employees who have been promoted into first- or second-level management positions become sought after in the talent marketplace, leaders must make extra efforts to retain them.

At the same time, these high-potentials can have an unrealistic sense of their own effectiveness and capabilities. "They haven't experienced failure and are overconfident. They have a feeling of entitlement. But they will get themselves into situations that will haunt them later," noted one CEO. Retaining these employees is both critical to feeding the talent pipeline and potentially time-consuming and expensive for top executives, raising the stakes considerably.

To ensure that there is talent to lead the company in the future, any approach to retention needs to address employees both as a group and as individuals who show the most promise as leaders.

Successful approaches to retaining employees cited by other executives we interviewed included:

- USING TALENT REVIEWS TO TRACK THE CAREER GOALS AND DEVELOPMENT OF HIGH-POTENTIAL LEADERS. Mary Ma, CFO of Lenovo, estimated that she spends 30% of her time on talent reviews and career guidance to strong performers. Steve Zhang, CEO of AsiaInfo, described a formal process for identifying the most valuable mid-level employees to ensure that these employees were aware of their value to the

company and that leaders were familiar with high-potentials' career desires. AsiaInfo's top management conducts these talent reviews twice annually.

☐ OFFERING UNIQUE CAREER DEVELOPMENT EXPERIENCES Some companies are providing powerful learning experiences to top employees; others are offering rapid career advancement through growth and success. Jack Gao, Autodesk China's leader, has created what he calls the "Guru Program," which brings prominent Chinese leaders to Autodesk to speak to top employees. Recent speakers have included China's chief negotiator on the WTO entry negotiations.

☐ ALLOWING TOP TECHNICAL TALENT TO REMAIN ON A TECHNICAL PATH Leaders at several companies, including Autodesk, Analogix Semiconductor, and software outsourcer Neusoft, noted the importance of having separate management paths for technical and managerial talent, so that top engineers do not feel compelled to become managers simply in order to advance. "When young Chinese engineers become about 30, they want to become managers," noted Analogix CEO Yang. "We need to offer other alternatives to keep them doing what they do best."

☐ PROVIDING A FAMILIAL, ALL-ENCOMPASSING EMPLOYMENT EXPERIENCE Chinese employees expect employers to meet more of their needs because employers in the state-controlled economy have done this for decades. The rapid rate of social change has also disrupted traditional social structures like families, as young people move more frequently to take new jobs, increasing the expectation that employers will meet their needs. Analogix CEO Yang provides housing and two meals a day to his young engineers. Will Chen, CEO of Accelergy, described an intense community bond shared by his employees.

☐ REINFORCING THE MEANINGFULNESS AND SOCIAL UTILITY OF THE COMPANY'S WORK Leaders look for ways to show the alignment of company success with social progress, such as contributions to needy parts of society, because Chinese employees highly value social responsibility. Neusoft and Autodesk, for example, both promote the paid volunteer service of employees in schools in rural parts of China.

Autodesk, Neusoft, and many of the other companies we talked to have developed a deep understanding of the talent pool, and they are using that understanding to craft talent strategies that will enable

Rising middle managers "haven't experienced failure and are overconfident. They have a feeling of entitlement."

them to improve over time the quality of their employee base and lose as few of their successful employees as possible (see sidebar "Retaining Star Performers: Autodesk's Approach"). By necessity, even the top leaders of these companies devote an enormous amount of attention and time to human resources issues. Companies that overlook the management of talent in this environment are likely to find themselves at even more of a competitive disadvantage than they would in other countries.

toward the future

While talent shortages in China are acute, the picture is evolving rapidly. Overall, our findings suggest optimism about the potential of the Chinese tech and other sectors to excel globally.

☐ Increasing numbers of senior positions are being filled by local Chinese executives rather than returnees and expatriates, as Heidrick & Struggles found in a recent survey undertaken in cooperation with the Economist Intelligence Unit (EIU)[7].

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7 Heidrick & Struggles, *Executive Leadership in China*, May 2006.

Like Neusoft, Autodesk China, led by Jack Gao, has also pursued a comprehensive talent strategy (*see Exhibit 5*) that is helping to drive business success in China and is creating a sustainable competitive advantage.

A US $1.6 billion developer of software tools for architects, designers, and engineers, Autodesk is viewed in the U.S. as the market leader in a relatively small niche. But in China, it is one of China's best known and most admired software companies. The company has been especially successful at retaining potential stars, largely as a result of Gao's efforts.

Jack Gao

For Autodesk, the key element of its retention strategy is to provide significant opportunities for growth for the most successful employees. Gao offers challenging assignments for mid-level leaders, and talent reviews are conducted twice annually. In June, 2006, Autodesk's recently elevated CEO, Carl Bass, attended a talent review in person.

Gao has also used an executive assessment firm to give him a detailed picture of the strengths and weaknesses of his key sales managers. Talent is force ranked every six months, with no more than 15% in the top category. He also encourages middle managers to form support networks with their peers in other parts of the region so that they can solve problems outside the chain of command.

The company's approach to retention has generated significant results. Employee satisfaction surveys show higher scores at Autodesk China than the already strong levels in the company's U.S. parent. Turnover is among the lowest of any technology firm in China. And in Shanghai, where turnover in technology companies runs about 20% per year, Autodesk's turnover is currently 4.5% overall, including the sales organization.

- The Chinese government is responding energetically to talent challenges by, for example, greatly expanding the number of engineering and business schools in the past five years.

- An elite but growing number of Chinese tech executives are filling roles as mentors and teachers for China's young professionals, including Lenovo's Liu Chuanzhi and Yang Yuanqing, Google's Kai-fu Lee and Johnny Chou, Alibaba's Jack Ma, and Autodesk's Jack Gao.

multinational companies need to integrate Chinese talent aggressively into their global talent management processes

exhibit 5 | Autodesk's talent strategy

Elements of the Talent Strategy	How Autodesk Does It
Recruitment & Selection	100 employees screened for each new hire in the developer organization Multi-stage selection process evaluates technical skills, communication ability, leadership potential, and cultural fit (more team players than "eagles")
Training & Development	Autodesk's robust corporate-wide offerings Custom offerings created by China staff Special programs for senior leaders and high potentials 360 assessments for key leaders Exchange programs with other geographies to share best practices and learn from each other
Rewards	Above-market compensation, commensurate with desire to keep attrition low and get best talent in Shanghai market In-house full-time compensation analyst Excellent benefits, including free lunches, gyms
Corporate Reputation	Gao and Autodesk CEO Carol Bartz were interviewed on "Duihua," a national television program, November, 2005 "AutoLove Project"—Autodesk China runs a program encouraging employees to teach at an under-resourced rural school for a week at a time in rural Guiyang—a significant source of employee pride
Opportunities for Growth for Top Talent	"Guru Program" brings top national leaders to Autodesk employees Challenging assignments for mid-level leaders Careful talent evaluations Gao recently promoted to oversee expansion efforts in Brazil, Russia, and India as well as China
Top Leadership Support	CEO Carl Bass attended June talent reviews in China

- The value and importance of open, thoughtful dialogue based on facts is gaining ground, a common theme among the leaders we met who have been most successful in building new organizations. Jack Gao of Autodesk and Bo Y. Shao of Eachnet (now eBay China) both put this behavior front and center in their leadership style, and both have been extremely successful.

- Success in managing turnover rates among leading companies like Autodesk and the ability to maintain lower turnover rates than the norm where they operate by companies like Neusoft demonstrate that it's certainly possible to win the all-important struggle to retain talent.

- These improvements in turnover are being accomplished at a time when companies of all sizes, across all sectors, are hiring. For example, as we found in our EIU and Heidrick & Struggles study, over the past two years the percentage of companies with 500 to 1000 employees doubled, from 6% to 12%, while the percentage of firms with more than 5,000 workers tripled over the same period, from 2% to 6%.[8]

Despite these positive signs, much remains to be done. The number of business school graduates has increased, but it is still not adequate to meet the need for skilled mid-level managers, and as former Goldman Sachs executive John Thornton points out, these graduates are not ready to take key roles in global companies. Further, when we asked Jack Gao at Autodesk and Mary Ma of Lenovo about trends in the talent shortage they responded that it is worsening, not improving.

Multinational companies operating in China need to integrate Chinese talent aggressively into their global talent management processes to ensure that key Chinese employees are considered for global assignments that could help them develop the skills they will need. Leaders of domestic Chinese companies, as well as multinational companies, will need to focus even more attention on managing talent, adapting global practices for recruitment, development, and retention to changing economic and cultural conditions.

Above all, senior business leaders operating in China should ensure that they are accelerating the development of the rising generation of professionals—the mid-level managers and team leaders, who are mobile, scarce, and may lack the skills needed to drive results. The success of the high tech sector, and the economy as a whole, may ultimately lie in the outcome of this generational story.

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8   Heidrick & Struggles, *Executive Leadership in China*, May 2006.

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