

China may trump India in BPO

Our Corporate Bureau / New Delhi March 24, 2005

India's status as a dominant IT outsourcing destination is under attack from China. In the next 10 years, China would replace India as the number 1 technology outsourcing country, said the recent Global Outsourcing Report carried out by the Geneva-based strategic advisory firm Horasis and Going Global Ventures.

The silver lining for India, according to the report, is that it will remain the most popular and the most competitive outsourcing destination in 2005 and will remain on the list of the best five outsourcing countries in the world till 2015 alongside China, US, Brazil and Russia. At present, China, Costa Rica, Hungary, and Czech Republic are rated just below India.

India's IT outsourcing exports have registered a 27 per cent growth in 2003-04 to reach \$2.5 billion and the revenues from the IT enabled services are likely to touch \$3.6 billion. Nasscom and the IT research firm, Gartner, estimate that India's earnings from the ITES will go up to \$20 billion by 2008.

According to the Global Outsourcing Survey, which Horasis claimed was the first-of-its-kind to rank countries on the basis of opportunities, costs and risks they presented for IT outsourcing, nearly 75 per cent of the US companies outsourced their information technology activities in 2004.

The percentage of such companies is likely to increase this year. While few companies are outsourcing those activities offshore, half of them have cut full-time jobs.

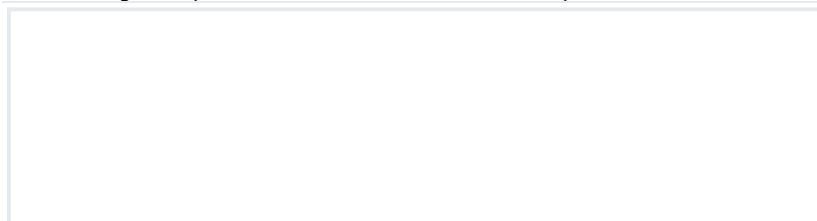
"Outsourcing has become a supercharged issue, thanks to the fears of job loss, but despite the political difficulties, the strategy can provide huge corporate benefits in terms of productivity, prices, profits and wages. But companies need to be able to assess the risks and benefits of each country they are considering as an outsourcing destination," said Frank-Jurgen Richter, president, Horasis.

"The report makes an important intellectual and practical contribution to addressing one of the most dramatic business trends in present history--outsourcing and offshoring--as we attempt to enact visions for a sustainable future," added Richter.

The report uses two different indices-- the global outsourcing index (GOI) and the future outsourcing rank (FOR) -- and it contains an analytical country profile for each of the 20 economies in the study.

The GOI is a weighted index made up of three separate ratings: the cost of doing business in each country; seven risk factors (including geopolitical, human capital, IT competency, economics, legal, cultural and IT infrastructure); and market opportunities.

The Future Outsourcing Index, which assesses long-term (10 years) competitiveness of the top 30 future outsourcing countries, is determined from GDP growth, population growth, the quality of the labour pool and the analysis from leading entrepreneurs, economists and other experts.



Hope springs eternal...

- India will remain the most popular outsourcing destination in 2005 and will be on the list of the best five outsourcing countries in the world till 2015
- **India's IT outsourcing exports have registered a 27 per cent growth in 2003-04 to reach \$2.5 billion and the revenues from IT enabled services may touch \$3.6 billion**
- Nasscom and IT research firm, Gartner, estimate that India's earnings from the ITES will go up to \$20 billion by 2008

March 5, 2005

Top Spots For Global Outsourcing

By Mark D. Minevich and Frank-Jürgen Richter

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Despite the supercharged politics surrounding the issue, outsourcing IT offshore has become a fact of life, and it's growing quickly. Why? Because despite the difficulties, offshoring can provide huge benefits in terms of productivity, prices, profits and wages—an irresistible combination in a highly competitive world. A natural evolution of how the global marketplace operates today, offshoring is on the way to becoming a mainstream business. And the future for outsourcing looks even brighter.

Still, offshore outsourcing brings with it a wide variation in costs from country to country, as well as significant risks—geopolitical, economic, legal, cultural, and IT infrastructure and competency—and companies making decisions about where to outsource must take these into account. The goal of this whiteboard is to provide a thorough country-by-country analysis of the current outsourcing market, and to point out where to find the best opportunities for a variety of services. The result is the Global Outsourcing Index, which rates each country on the basis of a combination of relative cost, risk, and market opportunity. And because the world is changing so fast, the whiteboard also looks at where offshoring opportunities can be found in the future.

The trend toward offshore outsourcing is a lot more complex than simply seeking skills and resources in the lowest-cost locations. The driving forces in the IT outsourcing market are quality and speed to market, not just cost of services. A new wave of outsourcing is allowing companies to acquire reliable IT quickly, in order to deploy specialized services, and ramp down easily when these services are no longer needed.

At the same time, offshoring is pushing the world beyond the information economy and toward a global knowledge-based economy. Technology enables knowledge to be shared quickly throughout the developed and developing world, allowing a variety of regional specializations to arise.

| The Top Three | |
|---------------|----------|
| 2005 | 2015 |
| 1 India | 1 China |
| 2 China | 2 India |
| 3 Costa Rica | 3 U.S.A. |

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These trends are conspiring to bring further changes to the global outsourcing market in the next decade or so. First of all, consumer demand and spending power in the emerging economies is growing more quickly than expected. And as they grow in strength and stability, the risks of outsourcing can be spread further as companies have a wider variety of geographic locations to choose from.

In the future, many companies will not outsource to a particular country at all. Instead, they will turn to large multinational corporations with access to a variety of resources and expertise across the globe and the ability to spread risk. As these one-stop shops grow in size and skills, they will gain a significant competitive advantage over even the strongest individual outsourcing markets.

[Click here to download a PDF of a map showing the flow of global outsourcing.](#)

[Click here to download the complete CIOInsight Global Outsourcing Report \(48 pp.\) whose results are summarized in the map and article.](#)

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Global Outsourcing Report 2005

Produced by
Mark Minevich, Going Global Ventures Inc.
and
Dr. Frank-Jürgen Richter, HORASIS

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INTRODUCTION

India is the most competitive and popular IT-outsourcing destination in the world and tops the ranking of **The Global Outsourcing Report 2005**, released today by Ziff Davis Media's *CIO Insight*, Horasis and Going Global Ventures. China is in second position, followed by Costa Rica and the Czech Republic, consecutively. The report examines the risk and costs profile of the world's leading outsourcing destinations by proposing two different indexes—the **Global Outsourcing Index (GOI)**, which describes the current competitiveness of doing outsourcing work in the top 20 countries, and the **Future Outsourcing Index (FOI)**, which assesses the long-term (10 years) competitiveness of the top 30 future outsourcing destinations. China takes the lead in the Future Outsourcing Index, followed by India, U.S., Brazil and Russia. In the future, the authors believe that China will most likely become the largest and most competitive outsourcing destination, assuming China makes significant progress in geopolitical and legal arenas and demonstrates reasonable results in all categories outlined in this report.

Global Outsourcing Index is a necessary and effective tool that offers the business community a baseline. It is the first milestone in a process that should give the business and corporate communities a road map to the right outsourcing process. International whiteboards offer all the relevant information about specific countries, their relative advantages and the specific resources capabilities.

The **Future Outsourcing Index** forecasts the competitiveness of outsourcing destinations for 2015. The index is determined by GDP growth, population growth, labor pool and extrapolated analysis from results of an executive opinion survey that captures the opinions of 50 leading entrepreneurs, economists and other thought leaders. Future assessment includes the interpretations, predictions and expert review of language risk, internal political risks, global image risk, changes in global competitiveness, and change in origin of the work or service to be outsourced or offshored. Furthermore, the global strategic enterprise demography is likely to change dramatically by 2020.

This report offers standardization in reducing outsourcing risk analytically and holistically. “It is making an important intellectual and practical contribution to addressing one of the most dramatic business trends in current history—outsourcing/offshoring—as we attempt to enact visions for a sustainable future,” noted **Frank-Jürgen Richter**, president of **Horasis, The Global Visions Community**.

“I believe the future belongs to those who don't know what they can't do. This report is an important and timely brain trust of global knowledge, representing IT visionaries and thought leaders from all over the world. This report is a catalyst for discovering and targeting the dynamic emerging markets for technological frontier outsourcing/offshoring and identifying the next wave of winners in technology outsourcing, even before trends and problems can emerge. We are creating answers for bringing the future to life, today,” added **Mark Minevich**, a globally recognized technology leader, International Strategic Advisor, is Principal at Going Global Ventures Incand chairman of the **Global Technology Leadership Council**.

The authors, Mark Minevich and Frank-Jürgen Richter, give presentations worldwide to major corporations and national governments keen to strengthen outsourcing opportunities. They worked with senior executives and leading thought leaders to ensure that the latest thinking and research on IT outsourcing are incorporated into this report.

The detailed ranking is as following:

GLOBAL OPPORTUNITY RANK—2005

| Rank | Country | Global Opportunity Rating |
|------|-----------------|---------------------------|
| 1 | India | 2.02 |
| 2 | China | 2.16 |
| 3 | Costa Rica | 2.24 |
| 4 | Czech Republic | 2.26 |
| 5 | Hungary | 2.28 |
| 6 | Canada | 2.40 |
| 6 | Latvia | 2.40 |
| 6 | Russia | 2.40 |
| 9 | Chile | 2.42 |
| 10 | Romania | 2.46 |
| 11 | Ireland | 2.50 |
| 11 | Singapore | 2.50 |
| 13 | The Philippines | 2.56 |
| 13 | Poland | 2.56 |
| 15 | Armenia | 2.58 |
| 15 | Brazil | 2.58 |
| 17 | Ukraine | 2.74 |
| 18 | Israel | 2.76 |
| 19 | Mexico | 2.78 |
| 20 | South Africa | 2.86 |

FUTURE OPPORTUNITY RANK—2015

| Future Rank | Country |
|-------------|--------------|
| 1 | China |
| 2 | India |
| 3 | USA |
| 4 | Brazil |
| 5 | Russia |
| 6 | Ukraine |
| 7 | Romania |
| 8 | Belarus |
| 9 | Philippines |
| 10 | Canada |
| 11 | Ireland |
| 12 | Malaysia |
| 13 | Armenia |
| 14 | Chile |
| 15 | South Africa |
| 16 | Thailand |
| 17 | Vietnam |
| 18 | Moldova |
| 19 | Mexico |
| 20 | Poland |
| 21 | Bulgaria |
| 22 | Israel |
| 23 | Pakistan |
| 24 | Kazakhstan |
| 25 | Albania |
| 26 | Hungary |
| 27 | Czech Rep |
| 28 | Latvia |
| 29 | Singapore |
| 30 | Costa Rica |

Competitiveness has been measured along seven dimensions: geopolitical risk, legal risk, cultural risk, economic risk, IT infrastructure risk, human capital risk and IT competency risk. An added dimension is the cost of outsourcing in the respective countries. Finally, this report measures the Market Opportunity according to market, expert opinion, global competitiveness and third-party sources. The report contains a country profile for most of the 20 economies featured in the study, providing a comprehensive summary of the overall opportunities, costs and risks, as well as a guide to what are considered to be the most prominent competitive advantages and competitive disadvantages of each.

METHODOLOGY

Global Outsourcing Index

Twenty countries are featured in the Global Outsourcing Index, while 30 countries are featured in the Future Outsourcing Index. Several additional countries have been added to the Future Outsourcing Index.

The goal of this report is to provide the reader with a country-by-country guide to the worldwide outsourcing market, its opportunities, costs and risks. It was compiled from surveys and interviews with outsourcing, economics and business experts.

The 20 countries we analyzed are ranked in their order of finish in the Global Outsourcing Index (GOI), which rates each country according to its competitiveness as an outsourcing destination. The index comprises three main factors:

- **Cost:** Few companies would outsource at all if doing so didn't save them money. The cost factor, which includes compensation and wages, infrastructure cost, and tax and regulatory cost, makes up 30 percent of the GOI.
- **Risk:** Every country possesses its own strengths and weaknesses, risks and rewards. The Overall Risk Rating, which makes up 54 percent of the GOI, aggregates a variety of risks every potential outsourcer must take into account:
 - **Geopolitical risk (10% of GOI)** Includes stability of government, corruption, geopolitics, security.
 - **Human capital risk (10%)** Includes quality of educational system, labor pool, number of new IT graduates.
 - **IT competency risk (10%)** Includes project management skills, high-end skills and competence (custom code writing, system writing, R&D, business process experience).
 - **Economic risk (6%)** Includes currency volatility, GDP growth.
 - **Legal risk (6%)** Includes overall legislation, tax, intellectual property.
 - **Cultural risk (6%)** Includes language compatibility, cultural affinities, innovation, adaptability.
 - **IT infrastructure risk (6%)** Includes IT expenditure, quality of key access infrastructure.
- **Market Opportunity Rating:** This number, which makes up 16 percent of the GOI, includes expert third-party analysis of each country, its global competitiveness and IT market share. The rating serves as a check on any imbalances elsewhere in the report.

Future Outsourcing Index

The Future Outsourcing Index compares each country by its competitive position in the overall outsourcing market as it will look in ten years, based on such factors as population growth, GDP growth, labor supply and IT expertise. In the Future Index, China will rise to No. 1, while India will drop to No. 2. The U.S. will enter the list at No. 3, thanks to competitively priced high-value offerings. Countries such as Israel and Singapore will become much less competitive because they won't be able to slow rising costs, while others, such as Costa Rica, will struggle to remain competitive because they'll be unable to maintain the population growth and skilled workforces necessary to remain attractive.

The Global Outsourcing Report only ranks countries active in outsourcing now and in the future. Among the major trends over the next ten years, however, is the growth of multinational outsourcers—large corporations with the capacity to go anywhere in the world for the skills their clients need. In ten years, they will actually become the second most attractive outsourcing option, after China, not just because of their wide-ranging outsourcing options, but because they will be better able to spread the costs and risks of outsourcing, relieving many corporations of the need to make country-by-country decisions.

AUTHORS OF THE REPORT



Mark D. Minevich, a globally recognized technology leader, International Strategic Advisor, and an author of *The CTO Handbook: The Indispensable Technology Leadership Resource*, recently published by Aspatore Books.

Mark Minevich is a Principal at Going Global Ventures Inc., a U.S.-based international consulting and venture advisory firm providing business transformation, globalization, innovation and strategic outsourcing services. Mr. Minevich is a Strategic advisor in Synecta, leadership and performance improvement firm based in London and Oslo. He is also a Chairman of The Technology Leadership Council, Global Innovation Network and a Member of CIO Collective. He serves on the Advisory Board of USC Globalization Institute, Ziff Davis/CIO Insight, Mirador Capital, Hypha Holdings(Singapore), and Gerson Lehrman Group's Council of Advisors. Mark Minevich acts as a Co-Chairperson and Strategic Advisor to Global Innovation High Tech and Life Science Symposium. Previously, he was CTO and Senior Strategist of the IBM Next Generation Group, where, among his many accomplishments, he formulated the strategy for IBM's Incubator Innovation and Going Global Programs. He has also advised the U.S. Government (Department of Commerce and Department of State) on innovation and bilateral relationships with emerging economies such as Russia, as well as acting as an Advisor to high growth companies, innovation centers, emerging incubators and the Venture Capital community.

Mark Minevich is a frequent speaker at internationally renowned global events, CEO/CTO/CIO Roundtables, Technology Conferences and Symposiums as well as leading Universities. Mark Minevich recently spoke on Global Innovation at PDMA conference. Mark Minevich hosted and organizes events such as Global Performance Theater (Moscow, London, Oslo, Budapest), and Global Innovation Summit with Who's Who in the world of Global Innovation.

Mr. Minevich holds a B.S. in Computer Science, Montclair State University, and an MBA in Information Management, Stevens Institute of Technology. He speaks Ukrainian and Russian in addition to English, and spends time living in both the United States and Eastern Europe.



Frank-Jürgen Richter is the president of Horasis, The Global Visions Community. Horasis is a strategic advisory that develops scenarios related to issues of globalization. Prior to founding Horasis, Dr. Richter was director of the World Economic Forum, in charge of Asian affairs. In this position, he developed extensive experience in and knowledge of the world's economic, business and political scene and its key players. Under his leadership, the forum's summits in Asia and the Asia part of Davos have evolved to facilitate the exchange of expertise between leaders in business, government and civil society.

CREDITS

This report was reviewed by experts from Singapore, China, India, Russia, Netherlands, Israel, Ukraine, Hungary, Africa, the United Kingdom, Armenia, Belgium, the United States and Switzerland.

It was reviewed by futurists, strategists, consultants CIOs, CTOs, entrepreneurs, thought leaders, outsourcing experts, attorneys associations and nongovernmental organizations.

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DETAILED VIEW OF COUNTRY RISK AND OVERALL GLOBAL OUTSOURCING RANK

| RANK | COUNTRY | GEO-POLITICAL RISK | HUMAN CAPITAL RISK | IT COMPETENCY RISK | ECONOMIC RISK | LEGAL RISK | CULTURAL RISK | IT INFRASTRUCTURE RISK | OVERALL RISK RATING | IT OUTMARKET | GLOBAL COMPETITIVENESS INDEX | BUSINESS EXTERNAL INDEX | EXPERT OPINION INDEX | MARKET OPPORTUNITY RATING | COST | GLOBAL OUTSOURCING INDEX |
|------|-----------------|--------------------|--------------------|--------------------|---------------|------------|---------------|------------------------|---------------------|--------------|------------------------------|-------------------------|----------------------|---------------------------|------|--------------------------|
| 1 | India | 3 | 1 | 2 | 1 | 3 | 1 | 4 | 2.1 | 1 | 3 | 1 | 1 | 1.8 | 2 | 2.02 |
| 2 | China | 3 | 1 | 4 | 1 | 5 | 4 | 3 | 2.9 | 1 | 3 | 1 | 1 | 1.8 | 1 | 2.16 |
| 3 | Costa Rica | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2.3 | 2 | 3 | 3 | 2 | 2.5 | 2 | 2.24 |
| 4 | Czech Republic | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 1.9 | 3 | 2 | 1 | 2 | 2.0 | 3 | 2.26 |
| 5 | Hungary | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 1.9 | 3 | 2 | 2 | 2 | 2.1 | 3 | 2.28 |
| 6 | Canada | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1.1 | 4 | 1 | 2 | 2 | 1.9 | 5 | 2.40 |
| 6 | Latvia | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2.1 | 3 | 2 | 3 | 2 | 2.3 | 3 | 2.40 |
| 6 | Russia | 3 | 1 | 2 | 2 | 5 | 3 | 2 | 2.4 | 3 | 4 | 3 | 2 | 3.0 | 2 | 2.40 |
| 9 | Chile | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2.4 | 1 | 1 | 2 | 2 | 1.5 | 3 | 2.42 |
| 10 | Romania | 2 | 2 | 2 | 3 | 5 | 2 | 3 | 2.6 | 2 | 4 | 4 | 2 | 3.0 | 2 | 2.46 |
| 11 | Ireland | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1.3 | 2 | 1 | 4 | 2 | 1.9 | 5 | 2.50 |
| 11 | Singapore | 1 | 2 | 1 | 3 | 1 | 1 | 1 | 1.4 | 2 | 1 | 1 | 2 | 1.5 | 5 | 2.50 |
| 13 | The Philippines | 3 | 1 | 4 | 3 | 4 | 1 | 3 | 2.7 | 2 | 4 | 2 | 3 | 3.1 | 2 | 2.56 |
| 13 | Poland | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2.2 | 3 | 4 | 2 | 2 | 2.9 | 3 | 2.56 |
| 15 | Armenia | 3 | 3 | 3 | 2 | 4 | 2 | 4 | 3.0 | 4 | 5 | 5 | 3 | 4.1 | 1 | 2.58 |
| 15 | Brazil | 2 | 2 | 2 | 2 | 4 | 3 | 3 | 2.4 | 1 | 3 | 2 | 2 | 2.3 | 3 | 2.58 |
| 17 | Ukraine | 3 | 2 | 3 | 2 | 5 | 3 | 2 | 2.8 | 3 | 5 | 4 | 3 | 3.9 | 2 | 2.74 |
| 18 | Israel | 3 | 2 | 1 | 3 | 1 | 1 | 1 | 1.8 | 2 | 1 | 4 | 2 | 1.9 | 5 | 2.76 |
| 19 | Mexico | 2 | 3 | 5 | 3 | 3 | 2 | 3 | 3.1 | 2 | 3 | 3 | 4 | 3.3 | 2 | 2.78 |
| 20 | South Africa | 3 | 3 | 2 | 2 | 2 | 1 | 3 | 2.4 | 1 | 2 | 3 | 3 | 2.4 | 4 | 2.86 |

DEFINITION: OUTSOURCING AND OFFSHORING

Outsourcing is contracting with outside consultants, software houses or service bureaus to perform IT operations.

Offshoring can be defined as moving business processes to a lower cost location, usually overseas. Offshoring can be seen in the context of either production offshoring or services offshoring. China has emerged as the preferred destination for production offshoring while India has emerged as the dominant player for services offshoring, particularly in the IT space. China, however, is becoming the future leader of offshoring services expertise.

In our report, offshoring and outsourcing are all related to **offshore outsourcing**, which implies that a third-party service provider takes over the business and IT process and runs them based on service-level agreements in various countries. These two terms are used interchangeably in this report.

Nearshoring is defined as moving business processes to lower cost locations that are in close geographical proximity (e.g. shifting U.S. or European Union bases business and IT processes to Canada or Mexico)

Inshoring, which means picking services within the U.S. or E.U.

Smartshoring means picking the “best shore” based on various criteria and dimensions

Business Process Outsourcing (BPO) refers to outsourcing arrangements when entire business functions (such as IT, call centers, payroll, human resources and customer service) are outsourced.

The growth of services in offshore outsourcing is linked to availability of reliable and affordable communication infrastructure with available resources. With this paradigm, it was possible to shift the actual delivery location of services to low-cost locations in a manner theoretically transparent to end users.

India benefited from the trend as it has a large pool of English-speaking and technically qualified workers. India's offshoring industry took root in IT functions in the 1990s and has since moved to BPO.

Other offshoring destinations that focus on high-end outsourcing discussed in our report are Israel, Costa Rica, Chile, the Philippines, Singapore, Ireland and Eastern European countries.

HIGHLIGHTS OF THE REPORT

Trends and visions for the global IT-outsourcing future

- IDC estimates the global BPO market will grow to \$1.2 trillion in 2006, up from \$300 billion in 2004, with both U.S. and European companies planning to outsource businesses, accounting for nearly 23% of their revenues versus 5% today.
- According to Gartner Inc. and IDC, the market for offshore IT services will more than double from about 3% of overall IT services spending in 2005 to between 6% and 7% of overall spending within the next three years. Gartner expects offshore IT services spending to reach \$50 billion by 2007. IDC analysis anticipates that the worldwide IT outsourcing market will grow to \$18 billion by 2008, at an annual compound growth rate of 20%.
- By 2008, nearly one-quarter of U.S. spending on application development, integration and management services will go to offshore providers, according to IDC.
- Outsourcing (and offshoring) is here to stay. Outsourcing IT services will dramatically accelerate in the years to come. Outsourcing leads to opportunities and benefits in terms of productivity, prices, profits and wages for various stakeholders. Outsourcing is a natural evolution of how the global marketplace operates today and follows successful waves of economic transformation in the past. Offshoring is taking off like a mainstream business. Many businesses will turn to offshoring as a way to boost profits.
- “Outsourcing, which epitomizes the quintessence of true globalization, with services being provided where they can most efficiently and economically be produced and delivered where they are most needed and valued, is a reality that is fast becoming a permanent feature of the global economic context. The opportunities that it offers to otherwise less advanced economies to deploy their intellectual and knowledge skills for profit and the collat-

eral anxiety that it has triggered in advanced economies where real competition from the developing world has never been a palpable reality, represents a fundamental challenge to the global village. This report provides a comprehensive picture of the true nature of this trend.” —**Dr. Joseph O. Okpaku**

- Expert **William Sanford** states, “There is a serious issue that the U.S. is not generating enough skilled engineers/technical students to meet internal business demand.”
- In the future, there will be a focus by moving to spread risks by choosing a number of geographic locations based on cost, quality and markets. Lower level outsourcing services will continue to be geared toward China and India. Higher level outsourcing services will focus on Eastern Europe, Israel and South America.
- Expert **William Sanford** states, “The massive outsourcing push occurred in the U.S. to lower costs of business in response to a poor economic environment, but in many ways has since receded due to outsourced operations not meeting expectations, political issues, the bad vibe of outsourcing, and most recently, the weak dollar increasing outsourced costs. For large companies, outsourcing seems to be an initial step in ‘testing the waters’ for an inevitable, eventual expansion.” As **Mark Minevich** said many times, “Business is now a global concern/organization and in time, corporations will have major operations spread throughout the world. It may take at least 20 years or more until businesses comfortably allocate core operations to non-Western European/non-North American geographies.”
- By 2008, the Global Insight report concludes, IT offshoring will account for roughly \$125 billion in additional U.S. gross domestic product annually, a \$9 billion jump in real U.S. exports, and, most important, net 317,000 new jobs in the United States. By 2015, the amount will be increased to \$250 billion.
- More than 80% of the major global multinational corporations will have an offshore presence by the end of 2005.
- The Foresight Exchange published the claim in Future of IT Jobs that if futures markets trade above \$0.50, then there will be more IT jobs in America in 2012 than there were in 2000.
- BPO outsourcing is on the rise. According to expert **Joel Plaut**, we are experiencing “higher growth in BPO outsourcing and huge potential growth in specific profession outsourcing that has only just begun [especially for the] legal and medical [professions].”
- Innovations such as e-business on demand, utility computing, autonomic computing, Web services, grid computing and Voice over Internet Protocol telephony can give corporations anywhere first-class IT capabilities. Customers do not have to shift everything to India or China. They could select from a menu of choices and geographies regarding the areas that could be the best fit for outsourcing.
- There will be an incubating and soft landing of the offshoring providers as India-based outsource providers establish facilities closer to key markets in the U.S. and Europe.
- Our expert **Pichappan Pethachi** points out an important trend in the growth of MNC outsourcing: “Multinationals—non service providers—are today setting up their own operations. Today, almost all the top ones, including Yahoo and Amazon.com, have set up their own operations. There are lots of advantages and the cost is cheaper. Also, these operations are growing very fast and they have subcontracted the work from India to these companies instead of doing it from U.S. at the local rates.” This report ranks multinational corporations as one of the most important elements of future growth in offshore outsourcing.
- As far as multinational corporations’ future growth in offshore outsourcing, our expert **Derek Stephens** states, “Another dimension that will come into play in the next ten years is the increase of corporate outsourcing to third parties, who then outsource offshore, versus companies outsourcing directly given lack of strong processes and skills to outsource themselves. The outsourcing industry will continue to consolidate to large players like IBM, that will most likely take economies of scale, historical performance and long-term partnerships/relationships into consideration. It will be harder and harder for individual companies to get the return and buying power of the majors. Companies need to focus on their core competencies; outsourcing is not a simple and effective process without experience, process and skill.”

- This report reviews the important aspect of work competency and skills. Explained by expert, **Joe Plaut**, “Eastern bloc countries have not automated projects to the same extent as India, and [as for] ‘creativity,’ a key factor for some skunkworks and exploratory research, India is way behind Russia’s capabilities.”
- We also see a major fundament shift in the world related to global economics. The relative importance of emerging economies as an engine of new demand growth and spending power may shift more dramatically and quickly than expected. It is important to realize that emerging economies have enhanced infrastructure to deliver services in any geography based on a concept of real value-based virtual organizations.
- In its Global Economics report, **Goldman Sachs** has created a scenario where over the next 50 years, Brazil, Russia, India and China could become much larger forces in the world economy. In fact, in less than 40 years, some emerging economies could become larger than the G6 in U.S. dollar terms. The report goes on to state that by 2025, they could be more than half the size of the G6. Of the current G6, only the U.S. and Japan may be among the six largest economies in U.S. dollar terms in 2050.
- According to **Goldman Sachs**, the annual increase in U.S. dollar spending from emerging economies could be greater than that of the G6 and more than twice as much in dollar terms as it is now as early as 2009. By 2025, the annual increase in U.S. dollar spending from the emerging economies could be twice that of the G6, and four times higher by 2050.
- The **Goldman Sachs** report also indicates a new shift of growth, investments and spending in emerging economies. Higher growth in these economies could offset the impact of growth in the advanced economies. Higher growth may lead to higher returns and increased demand for capital. The weight of the emerging economies in investment portfolios could rise sharply. Capital flows might move further in the favor of emerging economies, prompting major currency realignments. Rising incomes might also see these economies move through the “sweet spot” of growth for different kinds of products as local spending patterns change. This could be an important determinant of demand and pricing patterns for a range of commodities. As today’s advanced economies become a shrinking part of the world economy, the accompanying shifts in spending could provide significant opportunities for global companies.
- Investing and involvement in the right emerging markets might become an increasingly important strategic choice for companies and corporations in the United States. **Adam Smith** has accurately said, “Where the inferior ranks of people are chiefly maintained by the employment of capital, they are in general industrious, sober and thriving. And where the inferior ranks of people are chiefly maintained by spending of revenue, they are in general idle, dissolute and poor.”
- According to our expert, **William Sanford**: “The U.S. must be a primary player in these economies to not only achieve their potential economic growth/impact, but also to become legitimized.”
- The world is seeing some incredible success stories on offshore outsourcing due to quality vendors, degree of trust and openness factor, acceptance of virtual organizations, collaborative teamwork, and values-driven success and motivation.
- There is a clear recognition that the driving forces in IT outsourcing are speed to market and quality, not just cost of services. A new wave of outsourcing is allowing companies to quickly acquire reliable IT to deploy specialized services and to ramp down easily when those services are no longer needed.
- As companies improve their effectiveness, growth of on-demand and utility computing will challenge offshore outsourcing. In the future, “There may be ASP, utility computing and other methods that will start to play, which generate less demand for IT services, and therefore less demand for outsourcing,” according to expert **Derek Stephens**. Another expert, **Thierry Laurent** outlines the on-demand outsourcing model in greater detail. According to Laurent, the future model of outsourcing will have the Web as a virtual country. “The Web is an extraordinary source of talents that has the flexibility to respond to this type of needs. Therefore, the Web should be considered as a virtual country. Let’s look at the Linux business model. This virtual enterprise is the typical on-demand resource mechanism. People from all over the world contribute to the building effort with no distinction of risk assessment. Linux is pretty much a kind of exception and companies wouldn’t expect resources

to come to them and work for free for the pleasure of writing the best code. But we can consider adopting one of the most perfect models of production [Linux is becoming a real threat to Windows, due to multiple factors such as quality, scalability and price] to an economical model that can fit both parties [employees and employers] by putting together a kind of on-demand eBay for consulting across countries.”

- Moreover, outsourcing is enabling corporate transformations, so companies may have more agile and responsive business models. Big pools of cheaper, high-quality offshore talent have made it easier to strike a cost-efficient balance between the desired skill level, exemplified by the skill sets that salaried in-house workers have, and the flexibility of contractors, who can be retained on an as-needed basis.
- Another major issue that seems to be on everyone’s mind, especially decision-makers such as CIOs and technology executives, is how to stay competitive and obtain reliable up-to-date information and knowledge on emerging markets, and subsequently, establish innovation centers and IT-outsourcing areas around the world where costs are significantly less than in the U.S. Most of these global players are aggressively looking to grow their offshore outsourcing.
- Due to the emergence of a multitude of M&A activity in the industry, there will be acquisitions, such as Daksh by IBM, in various parts of the world such as India, Russia, Central Europe and South America.
- There is an emergence of diversified multicountry delivery models that focus on companies everywhere from India to China to South America and Central/Eastern Europe. According to expert, **Pichappan Pethachi**, “Infosys and other Indian companies are hiring U.S. resources in the U.S. to compete with ACS and IBM, so the trend is the plan of Indian and Asian companies to take over U.S. companies—and compete with them—even for services in the U.S.”
- Governments are focusing more efforts to promote their perspective countries as offshore service destinations and improving regulatory environment, IP, security, tax and legal issues.
- In Europe, according to **Gartner**, there was a 40% increase in offshore outsourcing during 2003. And, in the European financial services sector alone, Datamonitor forecasts growth of \$240 million in offshore outsourcing during the next 12 to 20 months. In fact, Gartner expects the rest of Europe to catch up quickly, and predicts that 75% of the medium-size to large companies across Europe will consider offshore services by 2005. The United Kingdom represents more than 35% of outsourcing business in Europe.
- Around the world, offshore outsourcing will continue to grow at a rate of more than 20% annually, according to **Meta Group**, becoming a \$10 billion market within two years. Gartner predicts that 40% of the Global 2000 enterprises will embrace offshore or near-shore IT outsourcing in 2005, and more than 80% of U.S. companies will seriously consider outsourcing critical IT services by the end of 2005. There are indications that approximately 8% of IT work is being outsourced. After surveying IT services vendors, IDC reported that the offshore component in delivery of U.S. IT services might rise as much as 23% by 2007, up dramatically from 5% in 2003.
- The reality is offshore outsourcing is a component of a new global paradigm and it is a lot more complex than simply moving entities and resources in various parts of the world. It already takes advantage of the high skill labor and enormous innovation in developing and emerging countries. This phenomenon started a while ago with the growth of developing markets and the linking of value chains for global economies.
- There is also a major reliance and trust factor that has been overcome in which MNC companies are forming mature and long-lasting links with R&D and IT groups and companies in emerging and developing countries.
- BPO will continue to expand and customers will favor offshoring companies with comprehensive multishore deliveries.
- Offshoring is pushing the world beyond the information economy toward a global, knowledge-based economy. In this case, knowledge is being shared and collaborated worldwide and it is becoming specialized into many segments and domains. The core components of IT and communications are necessary engines to facilitate the push into the new era of a collaborative and knowledge-based economy.

- **Thierry Laurent** outlined the need for improving communication systems: “Outsourcing is about collaboration, synonymous of communication. Outsourcing necessitates a huge amount of information exchange, therefore, Internet/ telephone main line are necessities. We can easily see the correlation between these two parameters. The quality of outsourcing can be appreciated by the population targeted to access information and research. It is essential in this process that resources become reachable by many ways. The difficulty of outsourcing is based on management, therefore reachability.” Factors to be taken in consideration:
- Outsourcing and offshoring will change the shape of global competition. MNCs will focus on brand development of their outsourcing/offshoring centers.
- According to expert **William Sanford**: “Core innovative research has remained in the U.S. Part of the reason for this is U.S. companies are reluctant to allocate control away from home. Outside countries [in much technology, especially IT] do not have the long-standing experience/expertise in the development and marketing of such technologies. The talent, in some countries [specifically India and China], is perceived as being very intelligent, but ‘by the book.’ There is a perceived lack in the culture/mind-set/environment necessary to develop technologies that are truly unique and innovative as well as marketable.
- **Oebele Bruinsma** says, “Based on the rise of outsourcing IT champions like Armenia, Ukraine, Russia and Brazil, countries with lots of constraints, the following scenario of the layered outsourcing IT services industry may develop over the years. The focus on high-end development and conceptual design will be done by cost-effective teams from the outlined IT champions. Those teams would supervise and guide the outsourcing enterprises, which would focus on the mainstream work [then still cost-effective] in India and China. Worldwide competition will emerge for access to [IT] knowledge teams from the champions outlined in the report.”
- **Dr. Ami Eyal** states that most people associate “outsourcing” with the following terms: cheap labor, services and manufacturing, and cost reduction. He believes that “In a global ecosystem, ‘outsourcing’ may be associated in very different ways.”

Different countries benefit from different qualities, capabilities and resources. Modern communication systems enable all of us to leverage our influence on one another. Financial resources are no longer the most relevant factor. Entrepreneurial spirit, the scientific community and services are no less relevant than finances in this modern age.

In the Netherlands, for example, one may find top research centers, facilities, supporting government grants, developed industry and multibillion dollar funds. Local science parks and incubators, however, are relatively empty.

On the other hand, Singapore’s main resources are financial capabilities that are strongly supported by the government. Dutch investors can transfer technologies from Russia, manufacture in Asia and use the international outsourcing network. Chinese entrepreneurs may “buy” Singaporean money, Indian manufacturing and European marketing. In essence, everything is “for sale.”

Outsourcing today is much more than cost reduction; it is a multilateral discipline that starts with science, ideas and entrepreneurial spirit, and ends with technological capabilities, financing, IP, regulation, manufacturing, marketing, business development and more. Customers are definitely looking for technologies and management teams outside of Western economies, which have a foothold for science and research at the original site, but which may proceed with development in Europe, manufacturing in India and, at the appropriate time, transfer the technology back to the U.S. or E.U.

- **Lionel Carrasco** states, “The future market of IT outsourcing will be dominated by companies that will master the art of client and scope management, a new kind of middleman capable of understanding requirements, estimating effort and coordinating delivery with the cheapest and most reliable resources in any part of the world. If this is true, we will observe a first and second- class of service providers, the content owners and dispatchers and resources providers.”
- **Dr. Ami Eyal** advises, “Modern high-tech society should be an encompassing global ecosystem that combines the different resources and capabilities of specific nations and countries—modern communication and trans-

portation systems enable us to explore mutual scientific business and commercial opportunities where they stand today.” According to Dr. Eyal, this report measures IT infrastructure risk criteria as a basis for local high-tech society with several elements such as:

- Entrepreneurs (or the entrepreneurial spirit)—the relative number of patents applications, the number of scientist per capita, etc.
 - Scientific work and centers—the number of publications
 - Local investment community (private, VCs, government)
 - Government support
 - Local industry
- The new global offshoring paradigm is based on the selection of appropriate and strategic technologies, skills and resources for offshoring, and the coordination of those individual initiatives into a strategic plan and portfolio for development, innovation, the location of specific global technology ecosystems with the strongest potential and the lowest cost structure to move technologies forward, and the funding of these initiatives through non-traditional and global sources. This model is in step with, and complements, the concept of globalization. It recognizes how tightly coupled the world’s economy is today and fuels additional markets, opportunities and funding sources. For instance, developers in Russia have the opportunity to market their products and services to European and U.S. companies. Unique technologies in South America or Central Asia could be leveraged in the biotechnology incubator of a large multinational corporation. Specialty software concepts could be modeled, developed and tested in emerging markets, etc.
 - This paradigm holds the promise of moving technology implementation and research and development offshore as well as for the commercialization of untapped assets by leveraging advantages that are possible only through a world view. The driving forces for this new paradigm include:
 - Availability of low-cost, high-quality sources in information technology and R&D and the specialization of various regions in specific technologies and skills (programming, bioresearch, etc.).
 - There is increased activity with open source community development (Linux) for example, which propels additional growth in emerging technologies.
 - MNCs, nongovernmental organizations (NGOs), local development organizations and governments around the world are stimulating information technology and funding economic outsourcing projects to start the growth of new industries in their countries. This provides additional and unique international/regional funding sources and regional economic development centers.
 - Investment by the global organizations and multinationals designed to expand and grow, and business outsourcing in various regions of the world.
 - Technology parks have begun to specialize in particular types of companies, technologies and industries.
 - Information technology outsourcing companies are beginning to spring up in terms of areas strength or weakness and/or regional growth.
 - Recent years have seen tremendous growth in the number of IT companies and technology parks in emerging markets.
 - The world of information technology is a perfect example of the progress that we are making as geographic locations evaporate and working locations become more flexible, adaptable and virtual.

We are living in a new world and need to effectively leverage skills, resources and technology in ways that increases their value. This paradigm helps to create win-win solutions and ensure that everyone in the world benefits from a more competitive and wealthier global economy.

COUNTRY ANALYSIS

- India is the clear market leader. Its position is bolstered by specific government policies. India has a 20-year head start in the outsourcing industry, and it has the main stake of the global outsourcing volume at present.
- India will continue to provide software technology excellence with its “India Software Advantage,” English-speaking personnel, lower costs, quality assurance, high-speed datacom links and 24-hour workday cycle. Indian technology clusters are moving from software to systems design to a complete on-demand solution. If political process and economic reform can be managed successfully, India’s “middle class” of more than 200 million people (bigger than that of the U.S. or the E.U.) presents an enormous market opportunity. India has good intellectual property protection and a strong engineering base.
- India’s period of competitive advantage may be changing rapidly. Local salaries in India are rising at 20% annually. It appears that outsourcing to India will be reduced dramatically within the next ten years as other countries mature and prepare to enter the global economy. Overall, there are rising costs, political risk favor and strategic prudence diversification of outsourcing locations. **Pichappan Pethachi** stated, “India is good for IT outsourcing, but for customers facing call centers, accent is still an issue.”
- India will be leveraging China for low-cost outsourcing. As noted by expert **Cyrill Eltschinger**, the trend is: “Indian firms that are currently rushing to set up outsourcing centers in China.” Eltschinger believes that in the future, India will be outsourcing to China.
- Expert **William Sanford** noted, “Many large U.S. companies pulled outsourcing of customer relations jobs from India and moved them back to the U.S. or Canada, because of language/accent barriers. Many customers have been very upset with their inability to communicate well with customer support representatives with strong accents, let alone the discomfort of speaking with someone who is not located in the same country. This prompted the large move of such operations back to local soil/Canada.”
- China will be India’s major challenger. China so far, has been mainly focusing on hardware development and manufacturing. But, this trend is changing. The government, clients and suppliers are currently discovering and developing China as next outsourcing heaven. Expert Cyrill Eltschinger says, “China’s rates can undercut India’s rates by 30% average, in many cases even higher. Most Asian-Pacific headquarters across industries are currently relocating to China from places like Singapore, Hong Kong and Australia.” This move will further spark the Chinese outsourcing industry. China has already started focusing on providing outsourcing services to markets in Asia and the Pacific, especially Japan.
- Chinese firms will be creating major new market opportunities in the next few years by strategically acquiring business outsourcing companies.
- Our expert, **Lionel Carrasco** notes, “China will definitely be a great provider of low-cost labor. Chinese government system can and will mandate thousands of any skills and produce trained brains as cookies. The challenge for China’s growth will be business domain expertise and huge language and cultural barriers. India has the British heritage and China has the Great Wall of China that remains conceptually.”
- In the next 10 to 20 years, China will continue to invest significantly in the development of world-class technology outsourcing centers with international satellite offices in Singapore, Russia and the U.S. If political transition matches economic performance, then China’s economy is poised to become the world’s largest in purchasing power parity.
- China is not without challenges. Major questions remain for the immediate and intermediate term in China. According to expert **Joel Plaut**, “IP, a potential increase the exchange rate and the inability to manage large projects [Western management skills], language skills and poor infrastructure will hamper China in the intermediate term. Time zone differences and travel distance will remain a challenge as well as the cost of doing business there.”
- Expert **William Sanford** explains, “China may soon experience a sharp withdrawal of outsourced product/service development and may merely be utilized as a market for the sale of foreign products. Political issues are quickly drawing China as a security concern and the country has been steadily proprietizing/developing internal substitute technologies.”

- Expert **Sanford** adds, “China is currently undergoing massive growth and development, but such a quick transition will undoubtedly yield much corruption along the way, and perhaps growth will fail to compensate for the enormous debt incurred, resulting in a depression that may create many negative issues for U.S. companies.”
- High-cost/high-quality outsourcing centers like Ireland, Canada and Singapore are increasingly focusing on high-end services like complex programming and R&D innovative initiatives. Their long-term competitiveness, however, is shrinking as the cost of doing outsourcing business becomes unattractive. Singapore and Chile are useful for companies that are looking for low-risk and maximum return. They are also facing competition from Eastern Europe. According to expert, **Joel Plaut**, “Their survival is based on perhaps outsourcing as well to lower cost areas, plus continuing to leverage niche areas, such as translation.” Furthermore, **Dr. Joseph Okpaku** noted, “developing countries continue to sharpen their already reliable high-end programming capacity.”
- Brazil has huge potential, due to its large population, the creativity of its engineers and government programs supporting the IT-outsourcing industry. Brazil already operates world-class innovation centers. In years to come, Brazil will continue to invest in innovation and research institutes to allow for commercialization of technology and value-added outsourcing in IT and biotech. It is also noted by **Tsvi Gal** that Brazil has major risks such as “major internal security issues that may disturb normal conduct. In addition, ‘populist’ movement is against the USA and may result in backlash if outsourcing gets out of the closed ‘innovation centers’ and into the main cities.”
- Other countries are getting closer as well—mainly from Eastern Europe—led by Russia, Hungary and the Czech Republic. Armenia, Romania and Ukraine will be among the future champions. Central and Eastern Europe will become an increasingly important offshoring destination for the E.U. and Nordic countries. Expert Joel Plaut says, “The Czech Republic, for example, has an edge in English and European languages over some Asian countries.”
- Russia and Eastern Europe will become more focused on high-end niche services.
- As noted by expert **Dr. Joseph Okpaku**, Africa, especially South Africa, Ghana and French-speaking Senegal are likely to emerge as outsourcing centers serving E.U. countries.
- Expert **Andre Spatz** has noted that in the future, there will a strong potential for the United States to become a major player in smart sourcing and near sourcing for higher value-added services, due to its proximity to customers, knowledge-based economy, and deep experience of managers and skilled professionals. It is further noted that the U.S. government and U.S. corporations have to address the innovation policy and high cost of doing business in that nation to become a hotbed of high value-added innovative outsourcing in the future. Another expert, Derek Stephens, noted that “The U.S. will make changes in the next 10 years to keep competitive or maybe determine tax liability for software developed and imported.”
- In Russia and Ukraine, fundamentals of skilled programmers and advanced scientific institutions will provide the basis for a high-tech/IT industry sector for the rest of the world. In fact, the 20th century Cold War conflict between the U.S. and the Soviet Union has been a strong impetus for Russia to be innovative with IT outsourcing. The offshoring capability will be visible through:
 - High-level research in fundamental science
 - Rigorous science and math education
 - Managerial experience with complex projects
 - Innovative problem-solving spirit developed in response to Soviet Union building during the Cold War
 - Descendants of Soviet military research and development facilities carrying on cutting edge, world-class scienceAccording to **Joel Plaut**, “Challenges include intellectual property, rule of law, corruption, and lower level processes.”
- Within the next 10 to 20 years, intellectual property will become the important revenue generator for Russia and stimulate idea creation for exports to the rest of the globe.
- There are outsourcing challenges with Russia. A promising future in Russia and Ukraine is possible only if Russia

is able to adopt a favorable market economy, attract more investments and experienced business management, and develop a rigorous approach to fight corruption. As noted by expert **Dr. Joseph Okpaku**, “Any global perception of a reversal in political reforms could hurt Russia’s growth as a major outsourcing hub.” **Konstantin Caploon, Esq.** states, “fundamental shifts have to occur in the laws, courts, policing and enforcement of IP rights and assets in countries such as Russia” to achieve reduction of legal risk IP and for those countries become an important revenue generators, and stimulate ideas for the rest of the globe. Furthermore, our expert, **Alistair Stobie** notes, “The ability to outsource research in fundamental science is an unproven business model.”

- Furthermore, as stated by our expert **Konstantin Caploon, Esq.**, “When IP protection is lacking, political history suggests that it would take many years before this is rectified by a fundamental shift in laws courts, and societal acceptance.
- Russia and other emerging countries are facing those IPR challenges, which must corrected before they move up the value chain and achieve dominant position in outsourcing space.
- **Oebele Bruinsma** believes the following have been demonstrated in this report:
 - 1) The main long-term driver of a nation’s destiny is its population dynamics
 - 2) The main drivers of technology/knowledge development are local constraints
 - 3) The interaction between 1 and 2 has an effect in time on the quality of education/R&D
 - 4) The effects of 1, 2 and 3 are already visible in the report highlights. China and India remain in the top spots of the future (10y) ranking. Given the rapid aging Chinese population, they will look for greener pastures such as Singapore. India, with a much younger population, will embrace as much outsourcing as possible within its own borders to sustain economic growth.

REGIONAL ANALYSIS

We would like to thank our expert Thierry Laurent for preparing the regional analysis. Laurent outlined the following observations regarding geopolitical considerations, based on his analysis “of the future domination of the offshore outsourcing in the two blocs, Eastern Europe and Asia.”

EASTERN COUNTRIES (CZECH REPUBLIC, UKRAINE, LATVIA, HUNGARY, ARMENIA, POLAND): The former Soviet bloc influence tends to move faster to Western habits/culture and economy. *Pereistoika* is definitively accepted, despite the wish of Russia to continue to “affiliate” them (Ukraine/Ushchenko crisis). The people of these countries found the way to their economic independence by fully integrating a European/American system. They have huge technical potential because of their level of Western world comprehension and their educational system. Their potential for innovation is definitively here. These people are hard and smart workers. Even Russia will make a slower move to the Western system to keep a role in the world economy and compete for integration and try to be as attractive as India or China. A problem for these countries would be the price of technologies, which is still very expensive compared with the buying power in place and a small language barrier that can be broken easily. In ten years, these countries will be absolutely ideal for high-core competency outsourcing and outstanding software innovation. The stimulation is definitively here.

ASIAN COUNTRIES (MALAYSIA, PHILIPPINES, SINGAPORE, INDIA, CHINA): India and China will definitively run the show in the next decade. Companies would be wise to choose their outsourcing strategy. It would be a trade-off between cost-effective way to run their business and strategic control over sensitive technologies/price control over time. Political instability and IP protection can be great concerns, but at the same time there is a great opportunity to open wide, new market and export product by increasing the buying capacity of these countries. After being colonized/revolutionized, these countries have the capacity to emerge and are showing economic strength.

HISPANIC COUNTRIES (BRAZIL, MEXICO, COSTA RICA, CHILE): These nations still have educational and infrastructure problems. They can be attractive for specific types of jobs, but there are language limitations and an unmotivated workforce. Countries like Costa Rica tend to develop tourism as a greater source of revenue. In place like Tamarindo, for example, American companies like ReMax and Century 21 are buying land to build golf and

resorts, and Delta and American Airlines have increased their flights to Liberia by five during the last 12 months. This area is becoming the backyard of the American traveler who needs to relax without being stressed by going abroad (terrorism risk is minimum). Another important fact for American companies is that Costa Rica tax system is very friendly with foreign investors.

WESTERN EUROPEAN COUNTRIES (IRELAND, SCOTLAND, FRANCE) tend to be marginal players in the offshore outsourcing arena. Despite their high level of education and cultural integration that brings talented people to the table, the cost of labor and a labor ruling system that is anti-economical development limit outsourcing here. In fact, these talented populations tend to move away from their own countries (France has 10% of its population living in Canada and the United States). They are also starting outsourcing processes for the same reasons that make them unattractive.

MIDDLE EAST: We would note the complete absence of Middle Eastern countries, except Israel. World disparities on that level are creating major clashes of cultures.



India

RISK DIMENSIONS

POLITICAL RISK: The world's largest largest democracy; high political risk and ongoing dispute with Pakistan over Kashmir, rivalry with China, not clear if newly elected government will stick to open-door policies; corruption is a big issue, religious diversity, natural disasters, disease, some violence, political/social instability, government is supportive of IT programs, massive overpopulation, extensive poverty, and ethnic and religious strife, environment degradation.

LEGAL RISK: Overloaded legislation, intellectual property rights: situation is improving (especially with respect to the potential bid to become a member of the WTO), good legal system due to the nature of India's democracy and contract enforcement; a lot of red tape; favorable tax policies and tax exemption based on English common law; limited judicial review of legislative acts; accepts compulsory international jurisdiction, IPR weak, but improving; piracy is a problem; weak data protection regulations.

CULTURAL RISK: English is the most important language for national, political and commercial communication; English language is a major asset, proficiency in all major key areas; disadvantages such as accent; language neutralization is a must; Indian culture is geared up for innovation, high ability to understand Western practices; high people skills; good work ethic and productivity; some areas/regions are not exposed to Western culture; focusing on culture training.

According to our expert Joel Plaut, "More subtly, it includes divisions/conflict between internal castes, mutual professional respect between the sexes and ability to contribute ideas across reporting lines. These issues frequently interfere with project success by impacting the individual knowledge workers."

ECONOMIC RISK (currency volatility, GDP growth)

GDP—Purchasing power parity: \$3.003 trillion
GDP Growth: 8%

Investors confidence rising as FDI continues to grow. Financial structure is high and developed, there is no major currency risk (as rupee is not fully convertible). India's economy encompasses traditional village farming, modern agriculture, handicrafts, a wide range of modern industries, and a multitude of IT and support services. Government controls have been reduced on foreign trade and investment, and privatization of domestic output has proceeded slowly. The economy has posted an excellent average growth rate of 6% to 8% since 1990.

Our expert, Pichappan Pethachi says, "The currency exchange rate difference is reducing; India rate was 46 rupees to a dollar, but now it is 43, .and the salaries of the employees is going up."

Furthermore, expert Joel Plaut adds, "Increase in rupee and a decrease in the dollar has had a significant impact already on the benefit of outsourcing."

IT INFRASTRUCTURE RISK:

Telephone: 48.917 million
Internet users: 18.481 million

Good IT infrastructure, but needs improvement; key cities and states (Bangalore, Hyderabad) invest heavily in IT. Depends on the region. Risk: power shortages, public utility not dependable. Telecom infrastructure improving, and telecom bandwidth issues have been addressed, private ISPs entered the market and telecom costs have dropped dramatically in recent years, special IT developed zones offer independent telecom/power infrastructure, high-speed digital communication.

Recent deregulation and liberalization of telecommunications laws and policies have prompted rapid change; local and long-distance service provided throughout all regions of the country, with services primarily concentrated in the urban areas; telephone density remains low at about 7 for each 100 persons nationwide, but only 1 per 100 persons in rural areas and a national waiting list of over 1.7 million; fastest growth is in cellular service with modest growth in fixed lines.

IT COMPETENCY RISK:

IT CMM level 5 certification = 48; Quality project management; BPO specialties in application maintenance, enterprise application, developing call centers

Custom Code Writing (body shopping): Strong
System Writing Project R&D: CMM Level): Average to poor
Another expert, Derek Stephens, says that he "found success moving testing to India, but not core application, given core application architects on EST time."

HUMAN CAPITAL RISK: More than 2 million IT graduates per year. Large pool; very good education system (Indian Institutes of Technology, etc); many good universities and institutes. Cons: increasing attrition rates for service providers; labor force is familiar with Western expectations and requirements; availability of human resources is very high; IT pool is expected to touch 2 million over next 10 years.

Labor force: 472 million

COST

Favourable cost structure, but driving up labour costs as India prepares to become a superpower; low-cost telecom and infrastructure services; employee cost is \$5,880.

India *continued*



MARKET OPPORTUNITY

MARKET:

2005: 35%

2006: 32%

2007: 38% compounded growth

2005–2009: 27%

(source: Forrester Research)

—Population growth: 1.44%

—Market size: \$6,200 million

GLOBAL COMPETITIVENESS: Average

OVERALL ASSESSMENT: Most popular outsourcing location worldwide, early mover advantage; experience as it has been an offshore destination for more than a decade; ahead in the BPO curve; excellent education; huge experienced labor, acquiring management expertise; familiarity with global customers; government supportive.

COMPANIES: Cognizant, Infosys, Polaris, Satyam, Tata Consultancy and Wipro

FUTURE

Multilocation strategy companies are moving and expanding in parts around the world, Hungary for EE Canada, etc. for Americas to establish cultural assimilation; losing cost advantage; trying to compete for multinational corporation status.

China



RISK DIMENSIONS

POLITICAL RISK: Communist government; tight political control. Relatively stable government, potential risk: conflict with Taiwan; strong government support to develop outsourcing industry, corruption is rampant, especially in provinces far away from Beijing.

According to our expert, Joel Plaut, “Political tension with Taiwan is probably higher than is realized, due to lack of an actual recent military incident.”

According to our expert William Sanford: “There is a fear of instability and many companies will not make investments for core/R&D operations in China due to the U.S. government advising against or denying such operations and the fear that the Chinese government may seize their business.”

LEGAL RISK: This is China’s weak point; bad IPR protection, lack of enforcement, copy-cat mentality. Taxes are relatively low, but tax grace periods for investors are expiring; there are special economic zones; regulations, censorship; decision-making is improving and becoming quicker; state enforces the law (pushed by the WTO), continuing efforts are being made to improve civil, administrative, criminal and commercial law; lack of transparency; poor trademark protection.

CULTURAL RISK: Chinese culture is relatively difficult for Westerners to understand; management is based on *guanxi* (connections); English language proficiency is still an issue; young IT graduates, however, speak English well. Language skills/understanding of Western culture are good thanks to aggressive programs. Other Asian nations with similar cultures (especially nearby Japan) are using China as a major outsourcing center. People skills are average; bureaucracy levels; isolation; censorship

According to expert Tsvi Gal, there is a possibility that “Japan may revolt as the deficit continues to grow and may turn to ‘anywhere but China’ policy.”

Furthermore, Gal says, “It is not only the language. Chinese culture is much further from Western culture than India.”

According to our expert Cyrill Eltschinger, “The government, overseas investments, the Olympics and the society in general all contribute to this massive English push.”

ECONOMIC RISK:

GDP—purchasing power parity: \$6.449 trillion

GDP growth: 9.1%

The world’s most dynamic (in terms of overall GDP growth) economy. About 6 trillion dollars—huge economy; huge domestic base. Economic prospects are good. China will be the

world’s new growth engine. Chinese renminbi (RMB) is still pegged to the U.S. dollar; we expect that to remain that way for the next two years. Even after the start of a more liberal currency policy, we do not expect a major currency risk as the RMB will not freely float. Financial structures are solid and growing; China entered the WTO; services sector is growing.

The result has been a quadrupling of GDP since 1978. Measured on a purchasing power parity (PPP) basis, China stands as the second-largest economy in the world after the United States, although in per capita terms the country is still poor.

Economic influence of nonstate organizations and individual citizens has been rising steadily. Increase of the authority of local officials and plant managers in industry has permitted the start up of a variety of small-scale services and light manufacturing enterprises and opened the economy to more foreign trade and investment.

IT INFRASTRUCTURE RISK:

Telephones: 263 million

Internet users: 74 million

In major cities there’s good infrastructure and it’s improving; national software and technology parks/incubators. Cons: There are power ruptures in big cities due to China’s ever-rising energy demand; many R&D facilities set up by Western companies.

Domestic and international telephone services are increasingly available for private use; unevenly distributed domestic system serves principal cities, industrial centers and many towns.

IT COMPETENCY RISK: Quality project management lacking; lack of technical and business management experience

Custom Code Writing (body shopping): Strong

BPO: Poor to average

System Writing Project R&D: Average

Core competencies: Basic functionality, applications development application maintenance; embedded systems; data processing services; application maintenance

HUMAN CAPITAL RISK: Universities graduate very competent people; large pool of IT workers, 50,000 new IT graduates per year and more than 200,000 work in IT.

Labor force: 778 million

COST

Low salaries, but higher in bigger cities, outsourcing centers move westward to benefit from lower costs; labor costs are low; lowest real estate; lowest power cost.

China *continued*



MARKET OPPORTUNITY

MARKET:

2005: 30%

2006: 29%

2007: 26%

Compounded growth 2005-2009: 25%

(source: Forrester Research)

—Population growth: 0.57%

—Market size: According to McKinsey, the annual revenue in software and IT services have risen 42% on average since 1997, reaching \$6.8 billion in 2003

GLOBAL COMPETITIVENESS: Average

OVERALL ASSESSMENT: China is still aligned to hardware manufacturing and development. Software/offshoring services still in their infancy. Indian companies (Infosys, Wipro) have started software development centers in China to gain a cost

edge and take advantage of the local Chinese market.

China's labor pool, government support and low cost puts it in second place. It currently lags behind India in experience, country risk, experience, project management. China offers incredible market opportunities.

MAJOR PLAYERS: Asainfo, Datacraft, Digital China, Eastcom Group, Electronics Global Services, Huawei, I.T. United, NeuSoft, Sichuan Yin Hai, ZTE Corp

FUTURE

Destination for Asian economies, such as Japan for offshoring; will become attractive over the next 5 to 10 years in IT; will become India's major competitor for outsourcing services. China will spur new growth and investment future high-tech labor force. Its market opportunities will continue to grow. China will continue to expand R&D and focus on high-end offshoring.

Costa Rica



RISK DIMENSIONS

POLITICAL RISK: Political stability; relatively stable government; called the “Switzerland of Central America”; corruption has been an issue recently (three former presidents are under investigation). Costa Rica is a Central American success story.

LEGAL RISK: The government is investing in the IT industry; digital agenda strategy by government; “punto.com” initiative with free Internet at post offices; Banco Nacional computer financing for IT computer loans. Inability to enforce IP laws, lack of venture financing; based on Spanish civil law system; steps to advance intellectual property protection through a government strategy for improving the enforcement of intellectual property rights.

CULTURAL RISK: Good English skills; primary language is Spanish; geographic and cultural proximity to the U.S.

ECONOMIC RISK:

GDP—purchasing power parity: \$35.34 billion
GDP growth: 5.6%

Difficult to continue the success story of the past, competition from India and China; good economic freedom; expanded its economy to include strong technology; the standard of living is relatively high; Costa Rica’s basically stable economy depends on tourism, agriculture and electronics exports. Poverty has been substantially reduced over the past 15 years.

The government continues to grapple with its large deficit and massive internal debt.

IT INFRASTRUCTURE RISK:

Telephones: 1.132 million
Internet users: 800,000

Good to fair infrastructure and telecommunication industry; over-reliance on hydroelectric energy production; good domestic telephone service.

IT COMPETENCY RISK:

Some skilled project management

Custom Code Writing (body shopping): Very good mainframe
BPO: Average
System Writing Project R&D: Poor

HUMAN CAPITAL RISK: Well-educated workforce, but small labor supply; country of 4 million people; MNCs are setting base operations in Costa Rica; labor force of 1.758 million.

COST

Low cost, wage structure lower than India.

MARKET OPPORTUNITY

MARKET:

2005: 33%
2006: 31%
2007: 27%

Compounded growth 2005–2009: 26%
(source: Forrester Research)

—Population growth: 1.52%

GLOBAL COMPETITIVENESS: Average

OVERALL ASSESSMENT: Ideal for outsourcing from the U.S.; low-cost, good infrastructure; it has geographic and cultural proximity to the U.S.; only few hours flying time; government supports technology offshoring.

FUTURE

Costa Rica will remain a major outsourcing center. Further growth, however, will be restricted due to size of its economy/labor supply; some companies may be acquired by bigger players in the U.S. and South America.

Czech Republic



RISK DIMENSIONS

POLITICAL RISK: Stable government; least corruption in Eastern Europe, part of EU; one of the most stable and prosperous of the post-Communist states.

LEGAL RISK: Strong government support; excellent tax incentives; intellectual property getting better; major base of intellectual property.

CULTURAL RISK: Proximity to European companies allows for constant interaction; cultural affinity with Western Europe, good relationship with the U.S. Skills improving, good German skills; English-language proficiency growing; high productivity; multilingual workforce; similar cultural background.

ECONOMIC RISK:

GDP—purchasing power parity: \$161.1 billion
GDP growth: 2.9%

Modest economic growth, stable economy (mainly profiting from EU enlargement); economy slowing down a bit. Financial structures are becoming more stable and growing; government is promoting IT services; excellent support for investments, technology-driven economy. Czech Republic is one of the most developed economies in Eastern Europe.

High current account deficits, which have averaged around 5% of GDP in the past several years, could be a persistent problem.

IT INFRASTRUCTURE RISK: Modernization of the Czech telecommunication system is advancing steadily; good telecom system; good real estate; well-developed and stable infrastructure; infrastructure cost are competitive.

IT COMPETENCY RISK: Some skilled project management; solid technical skills; strong base of programmers; skilled cost-effective workforce

Custom Code Writing (body shopping): Good
BPO: Average to good
System Writing Project R&D: Excellent

HUMAN CAPITAL RISK:

Telephones: 3.626 million
Internet users: 2.7 million

Highly educated engineers and IT specialists and growing; many R&D centers; strong, fully developed education system; high availability of talent, but small country. Czech universities have a history of turning out highly skilled technical graduates, a legacy of the Communist era.

Labor force: 5.25 million

COSTS

Costs are low now, but they will rapidly go up; not as low as in Asia ; wages are getting to be high; rising property prices, with monthly rents for businesses on the upswing; on a par with any other Western city.

MARKET OPPORTUNITY

MARKET:

2005: 20%
2006: 24%
2007: 23%

Compounded growth 2005–2009: 21%
(source: Forrester Research)

—Population growth: 0.05%

—Market size: 26 million in Czech Republic 2003

GLOBAL COMPETITIVENESS: Very good

OVERALL ASSESSMENT: Ideal for MNCs from continental Europe and E.U., well-positioned for nearshoring from EU; wages are getting higher with EU; cultural compatibility; stable political system and a competitive infrastructure; English proficiency; limited labor pool.

MAJOR PLAYERS: AXA Assistance, Fractal, ICON Communication Center, Internet Info, Lion Tele Services, Logos, Telia Call and Unicorn and Systinet Brain Systems

FUTURE

Czech Republic is becoming a good solid outsourcing center, but a limited labor pool and rising costs might not make it a top 20 of future offshoring player; might lose wage advantage.

Hungary



RISK DIMENSIONS

POLITICAL RISK: Stable political environment and government; smooth transition from former Communist rule, government support of IT.

LEGAL RISK: A rule-based economy, good IP protection; data exclusivity protection.

CULTURAL RISK: Very friendly. Some English spoken; cultural affinity to Western Europe. Hungary is aligned to the German, Austrian and Swiss markets.

ECONOMIC RISK:

GDP—purchasing power parity: \$139.8 billion

GDP growth: 2.9%

Hungary has made the transition from a centrally planned economy to a market economy, with a per capita income one-half that of the Big Four European nations. Hungary continues to demonstrate strong economic growth and joined the European Union.

The private sector accounts for more than 80% of GDP. Foreign ownership of and investment in Hungarian firms are widespread.

Economy is flat; inflation declining; growing deficit, EU-accession might provide opportunities for growth.

IT INFRASTRUCTURE RISK:

Telephones: 3.7 million

Internet users: 1.6 million

The telephone system has been modernized and is capable of satisfying all requests for telecommunication service.

Initiatives to augment the IT infrastructure, e-governance, Internet penetration, etc.; real estate structures are good; excellent conditions of telecom infrastructure.

According to our expert Steven Carlson, “Hungary was the first in the region to privatize and begin rebuilding the national network.” Furthermore, Carlson noted, “I know of two VoIP companies based here serving subscribers in North America and around the world. Even a home user can get an ADSL connection set up in as little as week to ten days. One cable company, UPC, now bundles cable TV, phone and Internet service. In this respect, Hungary is still ahead of her neighbors.”

IT COMPETENCY RISK: Good project management; highly skilled employees

Custom Code Writing (Body shopping): Good

BPO: Good

System Writing Project R&D: Good to excellent

HUMAN CAPITAL RISK: High level of education, but labor pool is limited; good university education.

Labor force: 4.164 million

COSTS

Costs are low now, but they won't stay that way.

MARKET OPPORTUNITY

MARKET:

2005: 20%

2006: 24%

2007: 23%

Compounded growth 2005–2009: 21%
(source: Forrester Research)

—Population growth: 0.25%

—Market size: \$20 million in 2003

COMPETITIVENESS: Good

OVERALL ASSESSMENT: A good nearshoring destination in Europe. Very skillful and good base to other destinations in Western Europe. Excellent education and highly qualified IT workforce; proximity and access to EU; good infrastructure.

FUTURE: A major destination for nearshoring in Eastern Europe and a central hub for offshoring in Europe.

MAJOR PLAYERS: Eurotrend, FreeSoft, Graphisoft, ICON, Kurt Computers, Lursoft IT, Marketlink, Montana, Revelation Software, Synergon and Sysdata

FUTURE

Becoming a hub of U.S., Asian and Indian companies for Central and Western Europe. Low supply of resources and rising costs will continue to climb and may drop Hungary from the Future Growth Index.

Canada



RISK DIMENSIONS

POLITICAL RISK: Very stable democratic government; solid political system, one of the most efficient administrations worldwide; Quebec government referendum and a continuing constitutional impasse between English- and French-speaking areas have raised the specter of a split in the federation.

LEGAL RISK: Tax breaks for IT-related exports, and NAFTA enables a free-trade market in IT services; based on English common law, except in Quebec, where civil law system based on French law prevails.

Strong IP protection and privacy rules; favorable laws. NAFTA provides for free trade market in IT services; the government grants favorable tax treatment for software development and maintenance companies.

CULTURAL RISK: Similar culture to the U.S.; English and French spoken; high level of customer satisfaction; proximity to U.S. and similar time zones; understands U.S. mentality and cultures are compatible; no culture training is necessary.

ECONOMIC RISK:

GDP—purchasing power parity: \$958.7 billion
GDP growth: 1.7%

Stable economy with a favorable exchange rate; high-tech economy; high living standards; GDP growth.

As an affluent, high-tech industrial society, Canada today closely resembles the U.S. in its market-oriented economic system, pattern of production and high living standards, given its great natural resources, skilled labor force and modern capital plant. Canada enjoys solid economic prospects.

A key strength of the country's economy is its substantial trade surplus.

IT INFRASTRUCTURE RISK:

Telephones: 19.95 million
Internet users: 16.11 million

Excellent infrastructure and communications system; well developed; similar to or better than the U.S.; excellent service provided by modern technology.

IT COMPETENCY RISK: Good project management; highly skilled employees; good business skills; good technical talent; high-quality workers; technically skilled labor pool capable of handling high-end work; skill set comparable to that in U.S. and Europe

Custom Code Writing (body shopping): Average
BPO: Excellent

System Writing Project R&D: Very good to excellent

HUMAN CAPITAL RISK: Superior education; actively promoting job creation; strong university and academia pool; flow of

professionals lured south to the U.S. by higher pay, lower taxes and the immense high-tech infrastructure.

Labor force: 16 million to 17 million

COSTS

High cost, lower cost than U.S., but still higher than in most other outsourcing centers. Labor costs work out to be quite high: \$28,174; employees average \$22 to \$37 an hour.

MARKET OPPORTUNITY

MARKET:

2005: 12%

2006: 20%

2007: 21%

Compounded growth 2005–2009: 18%
(source: Forrester Research)

—Population growth: 0.92%

GLOBAL COMPETITIVENESS: Excellent

OVERALL ASSESSMENT: Canada is a world leader in IT outsourcing, specializing in call centers, BPO and infrastructure.

Low risk, high quality, similar time zones and compatible cultures. Considered to be a safe and stable nearshoring destination, mainly for U.S. firms. High cost. It is a good way to start offshoring processing in a safe and avoid major risks.

MAJOR PLAYERS: AICOM Solutions, CGI, Fujitsu, IBM, Keane Canada, March Networks, OAO Technology Solutions and Unisys Canada

ASSOCIATIONS: Information Technology Association of Canada

FUTURE

Will remain a competitive player with specialized high-level services with competitive R&D and BPO. Excellent regional destination for Asian companies competing for business in the U.S., Canada will specialize in high-end services. Will have to work hard on lowering cost structures.

Latvia



RISK DIMENSIONS

POLITICAL RISK: Latvia has been able to engineer a smooth transition from Communist rule; stable government. Russian minority is a concern.

LEGAL RISK: One of the most efficient tax systems in Europe; rule-based economy; liberal economy modeled after Anglo-Saxon economies; IPR protection is still an issue, but Latvia has improved its intellectual property rights.

Cultural risk: It is extremely hard for a Slav to get rid of Slavic accent when speaking English, however, it is rather easy for Latvians or Lithuanians, whose language is much more similar to English. Great affinity with Nordics.

ECONOMIC RISK:

GDP—purchasing power parity: \$23.9 billion
GDP growth: 7.4%

Continuing economic growth; accession to the EU offers great opportunities.

The majority of companies, banks, and real estate firms have been privatized, although the state still holds sizable stakes in a few large enterprises.

IT INFRASTRUCTURE RISK:

Telephones: 653,900
Internet users: 936,000

Very good infrastructure; government is making more improvements with the help of Nordics and the EU; telecom is inadequate, but is being modernized to provide an international capability.

IT COMPETENCY RISK:

Good project management; excellent regarding software development

Custom Code Writing (body shopping): Average to good
BPO: Average to good
System Writing Project R&D: Excellent

HUMAN CAPITAL RISK: Much better educated workforce technically. There is a larger percentage of IT students and students of technical sciences in the Baltic States than in the rest of Eastern Europe, especially for software development; good universities; limited supply.

Labor force: 1.18 million

COSTS

Costs are low now, but they won't stay that way. Proximity to Scandinavian companies. The average salary in Latvia and Lithuania is higher than other parts of Eastern Europe and Russia. To our knowledge, telecommunication costs from the ten new Eastern European EU member countries are the highest in Latvia.

MARKET OPPORTUNITY

MARKET:

2005: 20%
2006: 24%
2007: 23%

Compounded growth 2005–2009: 21%
(source: Forrester Research)

—Population growth: 0.71%

COMPETITIVENESS: Very good

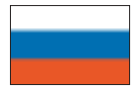
OVERALL ASSESSMENT: Excellent destination for outsourcing, proximity to Nordics and the EU, good infrastructure and skills; limited labor pool and an aging population; wages and costs are getting higher due to EU integration.

MAJOR PLAYERS: Exigen Group, Runway and Transcom Worldwide

FUTURE

Together with its neighbours Estonia and Lithuania, Latvia is a major outsourcing center for Northern/continental Europe. It may lose its status as a top 20 player due to an aging population that's getting smaller as well; limited labor pool; cost would increase dramatically

Russia



RISK DIMENSIONS

POLITICAL RISK: Highly censored and controlled; stable and “strong” government of President Vladimir Putin; corruption is an issue, mafia is still all-around but less of an issue in IT/software outsourcing. While some progress has been made on the economic front, recent years have seen a recentralization of power by President Putin and an erosion in nascent democratic institutions.

LEGAL RISK: Old-fashioned tax/legal system, law not fully enforced and IPR not really respected. Weak protection of intellectual property rights; considerable progress in revising several of its intellectual property recently; progress toward alleviating red tape and bureaucracy; strict labor laws; government only recently supporting IT growth; piracy of works on optical media is a significant and growing problem.

CULTURAL RISK: European culture, but still early stage of capitalism; close to Nordics; cities like St. Petersburg are full of European culture; creative and innovative people; affinity toward Europe; limited understanding of foreign markets, customer service and culture; ability to work in undefined environment and succeed. English is being practiced at top levels and people are gaining proficiency, but most programmers still have difficulty with the English language. Russia is proving a convenient location for Nordic companies looking for inexpensive, highly skilled labor.

ECONOMIC RISK:

GDP—purchasing power parity: \$1.282 trillion

GDP growth: 7.3%

Constant growth, averaging 6.5% annually; high oil prices and a relatively cheap ruble are important drivers of this economic rebound; high-growth perspectives, but high volatility as well, firm economic policy; high inflationary trends; tight currency controls.

Real fixed capital investments have averaged gains greater than 10% over the past four years and real personal incomes have averaged increases of more than 12%.

Russia has also improved its international financial position since the 1998 financial crisis, with its foreign debt declining from 90% of GDP to around 28%. Strong oil export earnings have allowed Russia to increase its foreign reserves to some \$80 billion. These achievements, along with a renewed government effort to advance structural reforms, have raised business and investor confidence in Russia's economic prospects.

Problems include a weak banking system, a poor business climate that discourages both domestic and foreign investors, corruption, local and regional government intervention in the courts, and widespread lack of trust in institutions.

President Putin is granting more influence to forces within

his government that desire to reassert state control over the economy.

IT INFRASTRUCTURE RISK:

Telephones: 35.5 million

Internet users: 6 million

Improving infrastructure, but still inexperienced in managing large scale offshore development centers; communication costs are getting higher in St. Petersburg and Moscow. Communication costs are even higher outside large cities. many R&D labs and institutes; government is only starting to spend capital on improving connectivity and infrastructure; growth of specialized software companies; government is fostering programs such as Electronic Russia and others. Cost of bandwidth is expensive and infrastructure is poor in cities other than Moscow and St. Petersburg.

Telephone system underwent significant changes in the 1990s; there are more than 1,000 companies licensed to offer communication services; access to digital lines has improved, particularly in urban centers; Internet and e-mail services are getting better; Russia has made progress toward building the telecommunications infrastructure necessary for a market economy; a large demand for main line service, however, remains unsatisfied.

In the beginning of 2005, President Putin, announced the beginning a special program to set up, develop and support IT technoparks in four regions of Russia. This could signal the beginning of a shift from state support to the industry of the raw materials to the free development of high technologies and (ICT) information communication in the first place.

Putin noted that technoparks, with new zones with special economic conditions will be created to benefit information technologies companies. The benefits will include:

- Significantly reduced corporate and income taxes (up to 75%);
- No more than one tax audit in three-year period;
- Simplified custom conditions for the import of equipment and export of software products; no custom duties;
- Construction of affordable housing for young programmers, kindergartens, etc.

IT COMPETENCY RISK:

Quality project management; excellent technical and management experience lacking, but growing; highly skilled IT workers

Custom Code Writing (body shopping): Average

BPO: Average, but growing

System Writing Project R&D: Excellent

Preferred country for R&D and innovation expansion. R&D creative experience; growth of specialized software companies;

Russia *continued*



excellent research; extremely skilled programming workforce; expertise in large complex engineering and algorithms; project managing is lacking, but developing.

Programming, software/hardware reengineering, telephony-based solutions, wireless, radio technology, security, hardware technologies such as laser, substrate growing, molecular chemistry.

HUMAN CAPITAL RISK: Large pool of engineers, scientists, lot of young talent; stable workforce; small group of MBAs and managers; Russia has more than 20,000 professional IT Personnel and growing in IT field; Most Russian programmers have a formal science degree and have worked in complex defense programs. Programming is a secondary skill; major expansion in deep Russia/Siberia; leading universities focus on technology, engineering and IT.

With a significant R&D heritage, it is one of the world's best educational systems and the largest pool of highly qualified software engineers and researchers.

Labor force: 71.68 million

The World Bank estimates that Russia has the third-highest number of scientists and engineers per capita in the world

COSTS

Labor costs are moderate but starting to grow in major cities; Moderate costs; cost advantage in remote areas of Russia.

MARKET OPPORTUNITY

OUTSOURCING MARKET:

2005: 20%

2006: 24%

2007: 23%

Compounded growth 2005–2009: 21%

(source: Forrester Research)

—Population growth: 0.45%

—Market Size: Region could exceed \$1 billion USD in outsourcing revenue by 2005. In 2003 exported IT services totalled \$475 million.

According to Ernst & Young, the Russian IT and telecommunications sectors are experiencing an average growth of 45% and are expected to reach \$20 billion in 2005.

Russia is planning to increase the current (U.S.) \$500 million software exports market to (U.S.) \$1.3 billion by 2008.

GLOBAL COMPETITIVENESS: Average to poor

OVERALL ASSESSMENT: Focusing on niche software companies; Russian companies tend to focus on building personal relationships; pay close attention to small projects; flat organizations; highly skilled, creative talent; Russian IT offshoring is expanding; economy has been growing to assist IT offshoring, government has to be more committed for IT outsourcing and lessen bureaucracy and restrictions; poor enforcement of IP; needs to bolster management.

INDEPENDENT RATING: Recently achieved investment grade status by independent Moody's Investment Services. Made the list of the world's ten most attractive countries for direct foreign investments.

MAJOR PLAYERS: Auriga, DataArt, Diasoft, EPAM, Estyle, Exigen and IBS/Luxoft

FUTURE

Russia will become a major outsourcing center and the focus will be on creative solutions and R&D services; Russia has a large technical labor pool, but declining population growth; may become a center of intellectual growth and innovation.

Chile



RISK DIMENSIONS

POLITICAL RISK: Geopolitical risk is moderate and it may be the most stable country in South America; followed the advice of international organizations and opened up its economy and installed a fully democratic system in the post-Pinochet area.

Chile has assumed more of a regional and international leadership role befitting its status as a stable, democratic nation. Its sound economic policies have contributed to steady growth and have helped secure the country's commitment to democratic and representative government.

LEGAL RISK: Rule-based economy, fair and simplified tax system; government is promoting IP and secrecy rights; U.S.–Chile Free Trade Agreement provides high levels of protection appropriate for the Digital Age, including U.S. software, music, text and motion pictures. Protections for U.S. patents, trademarks and undisclosed information exceed past trade agreements (e.g. NAFTA and the U.S.–Jordan FTA), and obligate Chile to make its IP laws and enforcement practices conform to the most advanced standards.

CULTURAL RISK: Affinity for Spanish outsourcing services; thousands of young IT people are being trained to speak English; geographic and time zone proximity to the U.S.; English proficiency, however, is poor. It is the most European community in South America. Chile might lack the entrepreneurial zeal it needs to become a real offshore player.

ECONOMIC RISK:

GDP—purchasing power parity: \$154.7 billion
GDP growth: 3.3%

Chile has a market-oriented economy characterized by a high level of foreign trade and a solid business environment; free-trade agreements with the U.S. and other countries; overall business ratings are high and consistent. Chile is developing into a preferred trading partners of Asia, especially Japan and China.

GDP growth is set to accelerate to more than 4% as copper prices rise, export earnings grow, and foreign direct investment picks up.

IT INFRASTRUCTURE RISK:

Telephones: 3.467 million
Internet users: 3.575 million

Modern system based on extensive microwave radio relay facilities; growing infrastructure; robust connectivity and satellite services; infrastructure/communications are good. State-of-the-art infrastructure, including network digitalization, fiber optics and satellite equipment.

IT COMPETENCE RISK: Good project management; highly skilled employees

Custom Code Writing (body shopping): Average to good
BPO (Spanish) Very good
System Writing Project R&D: Average

HUMAN CAPITAL RISK: The government is training for offshoring services; lacks top universities; scarcity of labor and educated workers; high level of education; small size; 6 million workers in the labor force.

COST

Higher cost than other nations in Latin America; Chile is a little more expensive than Brazil, but relatively competitive in other ways.

MARKET OPPORTUNITY

MARKET:

2005: 33%

2006: 31%

2007: 27%

Compounded growth 2005–2009: 28%
(source: Forrester Research)

—Population growth: 1.01%

GLOBAL COMPETITIVENESS: Excellent

OVERALL ASSESSMENT: Spanish-speaking offshoring services; ranks high in competitiveness; report of world economic forum; one of the least expensive cities; call centers are growing and MNCs are settling in South American centers. Pros include the high level of education, low costs, high-tech infrastructure and availability of great scientific minds.

Good infrastructure, high level of education; small size.

ASSOCIATION: Information Technology Association of Chile

FUTURE

Good outsourcing location, but growth might be limited by scarcity of labor and rising costs; will continue to be a major player in the Future Growth Index of South America.

Romania



RISK DIMENSIONS

POLITICAL RISK: Rampant corruption; Hungary amended status law extending special social and cultural benefits to ethnic Hungarians in Romania, who had objected to the law.

Romania has good relations with the former Soviet Union states (from the point of view of political doctrine and economic relations) and the Middle East (it has always had very good links to the countries from that region). Romania is in the privileged position in which it can serve as a bridge between the nations and companies from this area.

LEGAL RISK: Red tape hinders foreign investment; ongoing piracy issues; lack of IPR protection; lack of enforcement, but piracy rate has decreased more than 20% in the past few years.

The government is committed to attracting and retaining IT talent by exempting IT professionals from income tax payment. There's a lack of legislation, but the important laws are already being prepared for approval, including copyright, electronic signature, electronic commerce laws and a ruling concerning personal character data processing.

CULTURAL RISK: Attractive for European outsourcing; same time zone for EU; very little time overlap; understand Western European culture.

The business culture and Romanian attitude is European and a very high percentage of the workforce speak English, French, German or Italian.

ECONOMIC RISK:

GDP—purchasing power parity: \$155 billion
GDP growth: 4.9%

Romania has successfully concluded an IMF agreement; has to achieve a lot to enter the EU. An effective public-private partnership in the IT sector will ensure a competitive and consistent rules-based business environment; inflows of foreign direct investment (FDI).

Romania's future integration in the European Union, most likely in 2007, offers investors an established presence in the Common Market.

IT INFRASTRUCTURE RISK:

Telephones: 4.3 million
Internet users: 4 million

Poor domestic telco infrastructure, but improving; ranks sixth in the world in the number of certified IT professionals. The government's IT "Vision for Romania" is summed up in the following mission statement "Romania should aspire to become the 'Internet hub' for the Black Sea region.

The Romanians have implemented almost all the international standards of mobile telecommunications, and the country has registered one of the largest growths of mobile communication

in Europe during the last five years.

The extension of the e-Procurement system to a national level has become a key component in the process of modernization of the government in Romania. With electronic procurement, the Romanian government can lower the cost and encourage the private sector to move to B2B. It also creates the premise for lowering corruption, reducing bureaucracy and ensuring transparency.

Companies investing in R&D centers in Romania include IBM, Oracle, Siemens, Alvarion and Alcatel.

IT COMPETENCY RISK: Highly skilled workforce, focus on specialized software; excellent R&D and creative skills

Custom Code Writing (body shopping): Very good

BPO: Poor

System Writing Project R&D: Excellent

The Romanian IT industry will become a leading regional supplier of Internet-based services, specialized software and contract manufacturing by 2010 by leveraging national competitive advantages; Romania has a history of scientific achievement and technical expertise.

HUMAN CAPITAL RISK: It has an abundance of well-educated and highly skilled worker; 20,000 IT certifications; surpasses almost all Europe in its IT resource pool creation.

Labor force: 9.28 million

COST

Wages are low. It will take seven to eight years for wages in Romania to catch up with the rest of the EU; IT costs are \$2,360; very top MCSE annual cost is \$12,000.

MARKET OPPORTUNITY

MARKET:

Annual rate of growth of the Romanian IT companies exceeded on average 25% for the last few years, and that of export 60%; IT spending is the lowest in the region.

—Population growth: 0.11%

GLOBAL COMPETITIVENESS: Poor

OVERALL ASSESSMENT: Romania has an abundance of well-educated and highly skilled workers

Being located in the heart of Europe, Romania is the best choice when targeting both the massive EU market and the emerging CIS region with its unsurpassed labor costs and IT expertise.

Highly-skilled, relatively cheap labor. A very high percentage of the work force speak English, French, German or Italian

Major players: More than 5,000 software-producing compa-

Romania *continued*



nies are located in Romania, mainly at the great university centers in Brasov, Bucharest, Cluj, Iasi and Timisoara

ASSOCIATIONS: ANIS (dealing mainly with software), ATIC (covering different IT sectors), ANISP (an association of Romanian Internet service providers), and ARIES (the largest and most active Romanian IT association with member companies from all areas.)

FUTURE

Romania will be a promising player in the Future Growth Index with quality and abundant IT resources in Central Europe. Costs might rise a bit in the future, but on the whole, remain competitive.

Ireland



RISK DIMENSIONS

POLITICAL RISK: No risk. The only point could be conflicts from Northern Ireland spilling over. The Irish government has set up huge incentives to software companies to produce software in Ireland. Most companies use this to their advantage and have set up software production for distribution in Europe.

LEGAL RISK: European (high-class) standard; based on English common law; very promising tax incentive of 12.5% for companies and maximum taxation of about 40%.

CULTURAL RISK: English is national language.

ECONOMIC RISK:

GDP—purchasing power parity: \$116.2 billion
GDP growth: 1.4%

Ireland is a small, modern, trade-dependent economy with growth averaging a robust 8% in 1995–2002. The global slowdown, especially in the information technology sector, pressed growth down to 2.1% in 2003.

“Celtic tiger,” enjoyed an influx of foreign investment throughout the 90s as a result of low corporate tax rates and a flexible workforce. Stellar economic performance, high growth will continue for a few years. Ireland’s overall economic competitiveness has already surpassed Germany and France.

Per capita GDP is 10% above that of the four big European economies. Over the past decade, the Irish government has implemented a series of national economic programs designed to curb inflation, reduce government spending, increase labor force skills and promote foreign investment. There’s a positive attitude toward foreign investors and no specific conflict between labor and capital sources.

As noted by expert, Dr. Ami Eyal, “The real income is similar to that of Switzerland, the U.S.A. and Norway, despite the fact that 30 years ago Ireland was the poorest country in the region.”

IT INFRASTRUCTURE RISK:

Telephones: 1.955 million
Internet users: 1.26 million

World-class infrastructure, infrastructure development was major endeavor of Irish government, private sector actively participated; private-public partnerships; large development centers for IBM, Microsoft and others.

IT COMPETENCY RISK: Quality project management; excellent technical and business management experience; highly skilled IT workers

Custom Code Writing (body shopping): Good software development

BPO: Excellent

System writing and R&D Project: Average

HUMAN CAPITAL RISK: Top educational system; Irish government recognized the need for a world-class education system. Universities attract students from around the world in big numbers. Programmers are very skilled in latest technologies; the number of new graduates is rather low, however, despite government initiatives to increase this.

Labor force: 1.871 million

COST

Relatively high, ideal for nearshoring from continental Europe, Europe-based U.S. clients; cost will soon approach those of Europe’s most expensive countries (France, Germany), challenging the long-term attractiveness of Ireland as an outsourcing destination; employee cost is \$28,000.

MARKET OPPORTUNITY

OUTSOURCING MARKET:

2005: 26%

2006: 27%

2007: 25%

Compounded growth 2005–2009: 24%
(source: Forrester Research)

—Population growth: 1.16%

—Market size: \$6.7 billions

GLOBAL COMPETITIVENESS: Excellent

OVERALL ASSESSMENT: Dr. Ami Eyal summarizes that Ireland shows tremendous potential in outsourcing destination, “despite the fact that it does not have a relative advantage in any field—no heavy financial background, relatively small community, no oil or other natural resources, no banking system.”

A high performer of IT experts today. Currently a top player. Excellent BPO and IT services capability. Excellent workforce and education. Has been able to keep costs under control for many years. A stable environment and very popular destination.

MAJOR PLAYERS: Fyntel, Vision Consulting, other players are mainly subsidiaries of multinationals (IBM, EDS, etc.)

FUTURE

Ireland will have difficulty surviving as major outsourcing center. In the future, it will continue to be in the top 20. With the recent rise of outsourcing to India, China, and EE, Ireland is emphasizing the intelligence of its workforce and their understanding of Western customer service in an attempt to remain an attractive outsourcing center.

Singapore



RISK DIMENSIONS

POLITICAL RISK: Politically stable. Singapore is a strong government, not a democracy in a Western sense, due to the quasi one-party rule. Low corruption listed in many international reports; administration is known for its efficiency; disputes with Malaysia over deliveries of fresh water to Singapore; one of the world's most prosperous countries with strong international trading links and a per capita GDP equal to that of the leading nations of Western Europe.

LEGAL RISK: Pro business tax and regulations; excellent IP and security protection.

CULTURAL RISK: English spoken; excellent language skills; Western values.

ECONOMIC RISK:

GDP—purchasing power parity: \$109.4 billion

GDP growth: 1.1%

Highly developed and successful free market economy; enjoys a remarkably open and corruption-free environment; stable prices and a high per capita GDP. The economy depends heavily on exports, particularly in electronics and manufacturing; economic stability; growth is modest and there's strong competition from China. Singapore is giving up more traditional sectors of industry and focusing on high-value added industries (especially biotech), helping to establish it as Southeast Asia's financial and high-tech hub. Fiscal stimulus, low interest rates, and global economic recovery should lead to much improved growth.

IT INFRASTRUCTURE RISK:

Telephones: 1.9 million

Internet users: 2.31 million

Singapore's modern infrastructure is excellent. It has a number of high-profile technology and bio parks; high-quality telecommunications and available real estate.

IT COMPETENCY RISK:

IT CMM level 5 certification = 0; good project management; highly skilled employees; good business skills; good technical talent

Custom Code Writing (body shopping): Average

BPO: Very good

System Writing Project R&D: Average to very good

HUMAN CAPITAL RISK: Excellent; high-quality education; limited labor supply; small city country island, in terms of geography.

Labor force: 2.2 million, most from outside of Singapore

COSTS

High and growing

MARKET OPPORTUNITY

MARKET:

2005: 29%

2006: 29%

2007: 26%

Compounded growth 2005–2009: 25%
(source: Forrester Research)

—Population growth: 1.71%

GLOBAL COMPETITIVENESS: One of the best in the world.

OVERALL ASSESSMENT: Singapore is a high-end niche player and a major international and regional hub for international business in Southeast Asia; excellent infrastructure, good technical talent, excellent education; pro business; expensive.

MAJOR PLAYERS: Business Technovise Echnovise International, HoneyComb, Jayasoft Solutions, MNCs (IBM, Sun, Oracle, EDS, PWC) and Systech Software Consultant

FUTURE

Leading location for Asian offshoring headquarters, labor-intensive IT development no longer favorable; will focus on global investments and specialized offshore outsourcing in microtechnology and biotechnology.

Malaysia



RISK DIMENSIONS

POLITICAL RISK: Unfriendly toward the U.S.; insurgency near borders with Thailand; disputes with Singapore; but there's been a recent reemphasis on "globalization" and free trade.

LEGAL RISK: IP piracy issues; favorable government investments. The Malaysian government intensified its efforts to eliminate the use, sale and production of pirated products over the past few years; lack of prosecution of IPR.

CULTURAL RISK: English widely spoken; some fundamentalist movements; good global integration; former British colony.

ECONOMIC RISK:

GDP—purchasing power parity: \$207.8 billion
GDP growth: 5.2%

The economy grew 4.9% in 2003, stable financial structures; attractive business environment; high level of global integration and linkages. Economic growth will continue in sync with its Asian neighbors.

Malaysia's economy remains vulnerable to a more protracted slowdown in Japan and the U.S. The Malaysian ringgit is pegged to the U.S. dollar.

IT INFRASTRUCTURE RISK:

Telephones: 4.5 million
Internet users: 8.7 million

Modern infrastructure system; international service; excellent government support for infrastructure; good connectivity. development of cyber cities and CyberJava; many corporate regional centers in CyberJava and Putrajaya as "intelligent cities"; multimedia supercorridor project with MNCs; strong government support.

IT COMPETENCY RISK: Good project management; good business knowledge and understanding; lack of pool of programmers

Custom Code Writing (body shopping): Average to poor
BPO: Very good
System Writing Project R&D: Poor to average

HUMAN CAPITAL RISK: Relatively small labor pool; country of 22 million; university system is average.

Labor force: 10.2 million

COST

Low cost; low wage structure; employee cost is \$7,200.

MARKET OPPORTUNITY

MARKET:

2005: 29%
2006: 29%
2007: 26%

Compounded growth 2005–2009: 25%
(source: Forrester Research)

—Population growth: 1.83%

GLOBAL COMPETITIVENESS: Good

OVERALL ASSESSMENT: Excellent BPO capabilities in the region, proximity to Asia and South East Asia; lower cost and strong business environment; good infrastructure and investments from MNCs; good location for smaller operations.

MAJOR PLAYERS: MayBan, SciCo and Vsource Asia

FUTURE

Remains a major player and its standing is improving, yet Malaysia is being challenged by outsourcing opportunities in China, mainly due to geographical proximity. The market will keep improving; MNCs will continue to set up their regional operations.

Philippines



RISK DIMENSIONS

POLITICAL RISK: Stable government. Under President Gloria Macapagal-Arroyo, the Philippine government faces threats from both Muslim separatist groups and Communist insurgents. Major reforms are under way, but there's frequent political insurgence. Corruption still an issue; needs to improve image.

The government has begun to explore and promote itself as an ideal outsourcing center, modeled after India.

LEGAL RISK: Good legal system, IPR protection increasing; designation of special economic zones; attractive tax policies and exemptions.

Flexible labor rules, deregulated telecom policy are supported by the government. The Philippines has taken some steps recently to strengthen IPR legislation and enforcement, including providing patent protection to plant varieties, enhancing the ability of the Customs Bureau to stop IPR violations at ports of entry, and increasing the number of raids on suspected counterfeiters. Overall, it is still safe haven for piracy and counterfeiting.

CULTURAL RISK: English is widely spoken (de facto national language); third-largest English speaking nation in the world, former U.S. colony; friendly; customer service skills need improvement; great compatibility with Western culture.

ECONOMIC RISK:

GDP—purchasing power parity: \$390.7 billion
GDP growth: 4.5%

Economic growth stable, but below Asian neighbors; divide between the poor and the rich. GDP growth of 4.5% is driven by services business; peso, the Filipino currency, is unstable. Good financial structures.

GDP growth accelerated to 4.4% in 2002 and 4.2% in 2003, reflecting the continued resilience of the service sector, gains in industrial output and improved exports. Needs a good plan for higher, sustained growth path to make appreciable progress in alleviating poverty, especially given the Philippines' high annual population growth rate and unequal distribution of income.

Reforms by the government help the Philippines match the pace of development in the newly industrialized countries of East Asia. The strategy includes improving the infrastructure, strengthening tax collection to bolster government revenues, furthering deregulation and privatization of the economy, enhancing the viability of the financial system, and increasing trade integration with the region.

IT INFRASTRUCTURE RISK:

Telephones: 3.3 million
Internet users: 3.5 million

The Philippines has good infrastructure; U.S. military bases left behind a solid telecom infrastructure. Good international radio, telephone and submarine cable services; domestic and interisland service is adequate.

IT COMPETENCY RISK:

Low availability of skilled project management; deficiencies in project management; ideal for voice-based services, call centers, BPO, high-tech nursing services

Custom Code Writing (body shopping): Average to good
BPO: Excellent

System Writing Project R&D: Poor

HUMAN CAPITAL RISK: Good educational system, ample human resources; more students enrolled in universities than in Europe; one of the highest number of graduate rates in the world; university system is quite good and more than 380,000 graduate each year, with more than 15,000 focused on technology.

Labor force: 34.56 million

COST

Low costs, relatively low-cost structure to perform a variety of business processes; lower travel costs from North America; IT cost is \$6,500 per person.

MARKET OPPORTUNITY

MARKET:

2005: 29%

2006: 29%

2007: 26%

Compounded growth 2005–2009: 25%
(source: Forrester Research)

—Population growth: 1.88%

—Market size: \$1 billion

GLOBAL COMPETITIVENESS: Fair to poor

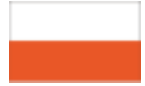
OVERALL ASSESSMENT: The Philippines offers strong education and low-risk offshoring, strong BPO success and excellent language compatibility.

MAJOR PLAYERS: AJK Consulting, AmberGrenis, SVI, Sykes, CCC, Converges, Headstrong, Radix Systems Services Corp., SPI

FUTURE

Future outsourcing attractiveness will grow with a focus on BPO and low cost.

Poland



RISK DIMENSIONS

POLITICAL RISK: Strong government is relatively stable, but corruption is an issue. There's growing support for the IT industry; continuing to work with foreign governments; political stability; EU member.

LEGAL RISK: An inferior and sometimes nonexistent IP and legal system; growing set of incentives, but not as high as other countries; mixture of continental (Napoleonic) civil law and holdover communist legal theory. Changes are gradually being introduced as part of a broader democratization process; limited judicial review of legislative acts; lack of political will by the Polish government to shut down the open air market for selling copyrighted materials, plus a lack of enforcement; lack of legislature to enforce; improvements are slowly made.

CULTURAL RISK: English not widely spoken, but gaining; German is the major foreign language, affinity and respect for the U.K., U.S. and Germany; lack of customer service.

ECONOMIC RISK:

GDP—purchasing power parity: \$427.1 billion
GDP growth: 3.7%

Small and medium-size state-owned companies and a liberal law on establishing new firms have encouraged the development of the private business sector. Poland has steadfastly pursued a policy of economic liberalization throughout the 1990s and today stands out as a success story among CE/EE economies; strong economic growth during past year. Poland is now facing a rather flat growth. EU-membership may provide new impetus; strong foreign investment; fiscal problems; economic reforms under way; losing out at FDI inflows. Poland currently suffers low GDP growth and high unemployment.

IT INFRASTRUCTURE RISK:

Telephones: 12.13 million
Internet users: 9 million

Good infrastructure, but some areas need improvement, liberalized telecom policy, strong telecom infrastructure; well-developed public infrastructure; good transportation system.

IT COMPETENCY RISK:

Quality project management lacking; excellent technical experience; highly skilled IT workers

Custom Code Writing (body shopping): Average
BPO: Growing, but average
System Writing Project R&D: Excellent

HUMAN CAPITAL RISK: 40,000 graduates per year; biggest Eastern European country; larger labor pool than other EE countries; highest number of universities, excellent education system; labor force of 16.92 million.

COSTS

Still low, but growing. Wages are growing.

MARKET OPPORTUNITY

MARKET:

2005: 20%
2006: 24%
2007: 23%

Compounded growth 2005–2009: 21%
(source: Forrester Research)

—Population growth: 0.02%

—Market size: \$22 million in Poland in 2003

GLOBAL COMPETITIVENESS: Fair to average

OVERALL ASSESSMENT: Interesting for continental European countries especially. Germany. Good for nearshoring from continental Europe. Major outsourcing for Western defense manufacturers; excellent relationship with the U.K.; pool of educated IT workforce; growth is slowing down; a player in EE/CE market; political stability; losing out on foreign investments; good telecom infrastructure; proximity to Western Europe.

COMPANIES: ComputerLand, DRQ, Prokom, PolSoft, Spin and Winuel

FUTURE

Poland's outsourcing industry will build on the enthusiasm with regard to the EU-accession; cost will get higher, but due to a larger pool of it workers, Poland will remain a future favorite destination; larger than the Czech Republic or Hungary.

Armenia



RISK DIMENSIONS

POLITICAL RISK: Corruption; geo instability in the areas of Azerbaijan and Georgia.

LEGAL RISK: Armenian government recognizes IT; excessive government interference; improving IP and copyrights, corruption is still an issue.

CULTURAL RISK: People in IT and scientific centers speak English; has developed alliances with Germany; English is improving; strong and supportive Diaspora in the U.S.

ECONOMIC RISK:

GDP—purchasing power parity: \$11.79 billion
GDP growth: 9.9%

Armenia had developed a modern industrial sector, supplying machine tools, textiles and other manufactured goods to sister republics in exchange for raw materials and energy.

The country also has managed to slash inflation, stabilize the local currency (the dram) and privatize most small- and medium-size enterprises. Economic stability; will benefit from the general growth trends in Eastern Europe. Minimal impact of trade embargos and blockades; support by the World Bank. Future high-growth GDP.

Armenia's severe trade imbalance has been offset somewhat by international aid and foreign direct investment. Economic ties with Russia remain close, especially in the energy sector.

IT INFRASTRUCTURE RISK:

Telephones: 562,600
Internet users: 150,000

Telco system is inadequate; now 90% privately owned and undergoing modernization and expansion; lack of international networking; expensive and poor infrastructure; low-speed, but improving.

IT COMPETENCE RISK: Poor project and IT management; excellent R&D and creative skills

Custom Code Writing (body shopping): Average
BPO: Poor
System Writing Project R&D: Excellent

HUMAN CAPITAL RISK: Includes a number of new IT graduates, quality of educational system. During the days of the former Soviet Union, Armenia was a hub of IT/software development.

Educational institutions can support the need for IT training; Heavy investments in incubation centers; brain drain, many people emigrate from Armenia.

Labor force: 1.4 million

COST

Low cost. A recent study concluded that Armenia represented the best value location in the world for IT products, with a quality-price ratio even better than India's.

MARKET OPPORTUNITY

MARKET:

—Population growth: 15,958,700

GLOBAL COMPETITIVENESS: Poor

OVERALL ASSESSMENT: Highly skilled IT workforce with scientific institutions; good affinity to the U.S. and EU; low cost; limited labor supply; focus on custom applications and R&D; high economic and IT growth.

MAJOR PLAYERS: CIT, LANS, Manes Yev Vallex JS, MIGMA, MSHAK, Tire Ltd. and Unicomp

FUTURE

Armenia is one of the world's most promising future outsourcing centers; Future Growth Index; costs will continue to remain low; high IT talent; the challenges are declining; experiencing a slow population growth.

Brazil



RISK DIMENSIONS

POLITICAL RISK: President Luiz Inacio Lula da Silva's government proved to be relatively pro-business, but there's still a major divide between the rich and the poor; good national IT policy in place. Brazil is the largest and most populous country in South America; instability within its political system; some violence and kidnappings have been reported. Difficult climate.

LEGAL RISK: IPR still a big issue; overall government laws are fair; most cases of piracy in the world; largest losses by copy-right industry; inadequate enforcement.

Cultural risk: Modest English skills; very innovative society. Development of top innovation parks. Language is a major barrier, and English proficiency on the whole is poor. Close physically and timewise to the U.S.

ECONOMIC RISK:

GDP—purchasing power parity: \$1.375 trillion
GDP growth: 0.2%

Brazil is today South America's leading economic power and a regional leader. Highly unequal income distribution remains a pressing problem. The country has large, well-developed agricultural, mining, manufacturing and service sectors. Its economy outweighs that of all other South American countries and Brazil is expanding its presence in world markets.

Three areas of its economic program include a floating exchange rate, an inflation-targeting regime and a tight fiscal policy, all of which have been reinforced by a series of IMF programs.

Brazil has been recovering recently, but there's still uncertainty about Lula's future course; modest financial structures, but growing. Brazil's economy is expanding its presence in world market partially due to outsourcing. The challenge is to maintain economic growth over a period of time to generate employment and make the government debt burden more manageable.

IT INFRASTRUCTURE RISK:

Telephones: 38.8 million
Internet users: 14 million

Major companies, including GE, Goodyear and Xerox, have partnered with Brazilian outsourcing companies.

IT COMPETENCY RISK:

Good project management; excellent technical and management experience; highly skilled IT workers; growing sophistication of expertise in software and new technologies

Custom Code Writing (body shopping): Application development and maintenance is the specialty of Brazilian IT programmers very good

BPO: Excellent

System Writing Project R&D: Average

HUMAN CAPITAL RISK: Big country with high turnout of IT-graduates; huge labor; overall education needs to be improved. The total workforce is estimated to be around 80 million; the availability of educated workers is very high labor force of 83 million.

COSTS

Lower costs; strong cost advantage. The average IT programmer's salary in Brazil is higher only than that of workers in India and Russia, thus making it the "cheapest" country in the region.

MARKET OPPORTUNITY

—Population growth: 1.11%

GLOBAL COMPETITIVENESS: Average

OVERALL ASSESSMENT: Brazil has a huge labor pool, good people skills and availability; quality human capital; good player in offshore outsourcing in South America; the country must focus on controlling its overall economy.

MAJOR PLAYERS: CPM Systemas, G&P Projectos e Systemas, Proceda and Vetta Technologies

ASSOCIATIONS: The National IT organization is the Sociedade de Usuários de Informática e Telecomunicações

FUTURE

Brazil will become a major outsourcing center for U.S. industry, especially with the further integration of North and South America. Brazil has a larger IT-capable labor pool with a growing consumer market.

Ukraine



RISK DIMENSIONS

POLITICAL RISK: Recent elections have shown that the country is still very unstable. The new government gives hope that the country might at last attain true freedom and prosperity.

Ukraine is a young state, possessing both the material resources and the political will to enter into the world market as a valuable emerging partner. Our expert Serhiy Loboyko states there “is a great hope that Ukraine would adhere to democratic values and accelerate integration into the EU”

LEGAL RISK: Mafia still dictates daily life; no rule of law; piracy, specifically identified USTR foreign IP protection; sanctions imposed; hidden costs of outsourcing. Expert Loboyko believes that the “new government will set the rule of law and fight with the ‘shadow economy’.”

CULTURAL RISK: English skills still not very advanced; affinity toward the U.S. and the EU;

Ukraine is the largest neighbor of the EU

ECONOMIC RISK:

GDP—purchasing power parity: \$260.4 billion
GDP growth: 9.4% 2003 and 12.4 in 2005

Ukraine has the highest economic growth in Europe. It has largest economy market and credit rating is growing; country is hungry to catch up with its neighbors. Ukraine depends on imports of energy, especially natural gas, to meet some 85% of its annual energy requirements.

Growth has been undergirded by strong domestic demand, low inflation, and solid consumer and investor confidence. Growth was a sturdy 8.2% in 2003.

The middle class plays an important role in the economic and social life. A sufficiently large middle class (certain estimates claim more than 30%) is laying the foundations of social stability and economic development in any country. This middle-class group is reported to include middle and lower-ranked management, skilled workers, craftspeople and people who run their own business. Lack of investments in the IT sector.

IT INFRASTRUCTURE RISK:

Telephones: 11 million
Internet users: 900,000

Good IT infrastructure; however a lot of country wide infrastructure under development; country improving telco trunks and mobile connections. A lack of investments hinders development of IT infrastructure.

Ukraine has taken important steps in recent years to improve basic telecommunications infrastructure and to introduce modern operating standards. The best IT infrastructure is in largest cities, where large universities and IT resources are concentrated.

The Government has Launched “Innovations Springboard.” Leveraging information and communications technologies for Ukraine’s future. It is aimed at strengthening the process of balanced national development and alleviating poverty through the appropriate and innovative use of information and communications technologies.

There are numerous scientific and technological institutes, universities and R&D companies.

Expert Loboyko notes, “Ukraine has launched more satellites than NASA.”

IT COMPETENCY RISK: No project management; many top programmers specialized in various areas

Custom Code Writing (body shopping): Average

BPO: Poor

System Writing Project R&D: Excellent

High technological level of development. The country is producing complex systems such as carrier rockets, satellites and space research equipment. Ukraine is a considerable producer of military equipment, including tanks, military transport aircrafts, SAM complexes and optical equipment.

Expert Loboyko notes: “The well-known Glushkov Cybernetics Institute in Kyiv produced many talented specialists. Ukrainian scientists have achieved world-class results in mathematics, physics, computer sciences, biology, electric welding, new materials and space sciences.”

Loboyko adds, “Ukrainian software engineers have deep knowledge of mathematics, physics and applied sciences. They have the ability to analyze and understand large-scale, complex applications, using all available information. This makes it possible for them to add value to the outsourcing and provide solutions and to offer IT consulting services rather than pure outsourcing. Ukraine also has many experts in legacy application services, reengineering and renovation of IT technologies developed in 1960–1990s.”

HUMAN CAPITAL RISK: Good pool of IT-workers (legacy of the Soviet Union), with strong knowledge of mathematics and natural science; good education system (especially hard sciences); good technical universities. The country provided many top computer programmers to the former Soviet Union’s space and military efforts, and much of that expertise has spilled over to the country’s private sector.

Ukraine has approximately 1% of the world’s population, but 6% of the world’s physicists, chemists, mathematicians, biologists, computer programmers and other highly trained professionals.

Technical schools provide specialized education in many fields and higher education is gained at numerous universities, granting bachelor’s, master’s and doctorate degrees.

Ukraine *continued*



Labor force: 21.29 million

Ukraine is considered a country with one of the highest levels of education in Eastern Europe.

Expert Loboyko says there “are more students per 10,000 people in Ukraine than in Japan or the U.K. Educational institutions produce about 15,000 graduates in IT and related disciplines annually, but few of them work in the IT sector because of its small size. Ukraine continues to possess considerable intellectual potential, even though the educational system is now suffering from underfunding. Many of our IT specialists have advanced degrees in computer science, aviation, electronic engineering, physics and mathematics, including doctorate degrees.”

COSTS

Costs are low now, but they won't stay that way (especially when Ukraine starts negotiations to become a member of the EU). Serhiy Loboyko says, “The cost gap with new EU countries will grow and Ukraine will integrate into the EU in no sooner than 10 years.”

Rates charged for programming in Ukraine are more expensive those in India, but they are 25% cheaper than in Russia.

MARKET OPPORTUNITY

MARKET:

2005: 20%

2406: 2%

2007: 23%

Compounded growth 2005–2009: 21%
(source: Forrester Research)

—Population growth; 0.66%

The Ukrainian IT market has demonstrated a steady 30%-40% annual growth for the past three years.

Expert Loboyko explains: “According to the research completed by TEHINVEST and Market Visio, Ukrainian IT services and products export industry is growing very quickly. In 2004, the industry exceeded \$100 million, and expected growth is 40%-50%.”

COMPETITIVENESS: Poor

OVERALL ASSESSMENT: Ukraine's big resource pool of qualified IT specialists and the low cost of labor make it a competitive location for offshore programming firms. Currently, popularity is low, but growing. The country is making a lot of progress to establish its position as a competitive location in Europe; costs will remain low compared with other countries.

MAJOR PLAYERS: The largest players (more than 300 IT specialists), Miratech, Softline, SoftServe, USC (formerly Tessart)

ASSOCIATIONS: The Ukrainian Association of Software Developers (UASWD) is an international nonprofit, non-government organization.

FUTURE

Good future. The new government is fighting favoritism and corruption and willing to transform the country into a rule-based economy; Ukraine has the potential to unleash even more capacity to become a vibrant player in the global economy due to a large, highly educated labor force. The challenge is political and economic risks.

Israel



RISK DIMENSIONS

POLITICAL RISK: Unstable; multiple party changing coalition government; both parties in the coalition and opposition support technology. Israel is a democratic country, however; Peace road map to be implemented; regional turmoil.

LEGAL RISK: European standards; mixture of English common law and British mandate regulations.

CULTURAL RISK: English is widely spoken, culture embraces innovation.

ECONOMIC RISK:

GDP—purchasing power parity: \$120.9 billion

GDP growth: 1.3%

Limited growth prospects are linked to the geopolitical risk; Israel has a technologically advanced market economy with substantial government participation. It depends on imports of crude oil, grains, raw materials and military equipment. Despite limited natural resources, Israel has intensively developed its agricultural and industrial sectors over the past 20 years. There are difficulties in the construction and tourism sectors; fiscal austerity in the face of growing inflation led to small declines in GDP in 2001 and 2002. The economy grew at 1% in 2003.

In 2004, rising business and consumer confidence, as well as higher demand for Israeli exports, boosted GDP by 2.7%.

IT INFRASTRUCTURE RISK:

Telephones: 3.006 million

Internet users: 2 million

Very good, world-class infrastructure; excellent research facility; the country enjoys the patronage of large multinationals such as IBM, Microsoft, Motorola, Compaq, HP and Intel.

Telco is the most highly developed system in the Middle East, although not the largest.

IT COMPETENCY RISK:

IT CMM level 5 certification = 0; quality project management; excellent technical and business management experience; highly skilled IT workers; shrink-wrapped software production; excellent research; extremely skilled programming workforce

Custom Code Writing (body shopping): Average to good

BPO: Average

System Writing Project R&D: Excellent

HUMAN CAPITAL RISK: Highly qualified graduates, immigrants (scientists) from the former USSR; but limited labor pool. There are 2.61 million in the labor force.

COST

High cost of labor; employee cost is (\$25,000), according to expert Tsvi Gal, certain changes in cost structures are occurring “with the emergence of companies based on the recent Russian immigration, the costs are within range of Indian prices. In addition, Israeli and Jordanian companies are emerging with Israeli technology genius and Jordanian cheap labor (Jordan still fancies British-like culture).”

MARKET OPPORTUNITY

OUTSOURCING MARKET:

—Population growth: 1.29%

—Market size: \$2.6 billion

GLOBAL COMPETITIVENESS: Excellent

OVERALL ASSESSMENT: Highly skilled in R&D and product outsourcing; cost is relatively high; excellent quality and reputation for innovation; currently a major player.

MAJOR PLAYERS: Adgal, Logon, Matrix, MiddleTier and Ness

FUTURE

With the ongoing peace process, Israel’s attractiveness as an outsourcing center will rise, mainly as a developer of licensed intellectual property and with specific niche areas of telecommunications, security and life sciences; Israel may combine its offerings with Arab countries like Jordan and Egypt. Israel will continue to be an expensive destination.

Mexico



RISK DIMENSIONS

POLITICAL RISK: Lower geopolitical risk than some other offshoring destinations; corruption; no major threats of violence; stable government but there are clashes between the rich and the poor. The nation continues to make an impressive recovery.

LEGAL RISK: Laws are good, copyright piracy and trademark counterfeiting exist; lack of enforcement of trademark rights; weak government support for IT; only recently starting various IT related programs. President Vicente Fox is leading a software development initiative to strengthen capabilities and promote them abroad. The government needs to modernize the tax system and labor laws and provide incentives to invest in the energy sector, but progress has been slow.

CULTURAL RISK: Mexico's geographic proximity and similar time zones mean close commercial ties and links to the U.S.; language is Spanish. English spoken widely in IT locations and universities; English proficiency is poor.

Language barrier can also be a problem (though some companies send their programmers to English boot camps).

ECONOMIC RISK:

GDP—purchasing power parity: \$941.2 billion
GDP growth: 1.3%

Ongoing economic and social concerns include low real wages, underemployment for a large segment of the population, inequitable income distribution, slow growth in economy. Real GDP growth has been weak; slowdown in the U.S. economy is affecting Mexico's economy.

Mexico experienced economic growth rates of 3.4% in the late 1990s, mostly as a result of U.S. outsourcing raising the price of Mexican exports; strong competition from China (especially in the manufacturing sector, threatening the existence of the maquiladoras).

Mexico has a free market economy with a mixture of modern and outmoded industry and agriculture, increasingly dominated by the private sector. Recent administrations have expanded competition in seaports, railroads, telecommunications, electricity generation, natural gas distribution and airports. Per capita income is one-fourth that of the U.S.; income distribution remains highly unequal. Trade with the U.S. and Canada has tripled since the implementation of NAFTA in 1994.

IT INFRASTRUCTURE RISK:

Telephones: 16 million
Internet users: 10 million

Telecommunication system infrastructure dominated by TelMex monopoly; quality of telecommunication equipment is average to good; key cities and resort areas are in average

shape. Infrastructure and communications are good and are strongest in the country's three technology parks. Mexico needs to upgrade infrastructure.

IT COMPETENCY RISK: Project management not developed; generalists; Mexican programmers are not focused on hard core engineering or R&D

Custom Code Writing (body shopping): Average
BPO: Very good
System Writing Project R&D: Poor

HUMAN CAPITAL RISK: Average labor pool; education system needs improvement.

Labor force: 34 million to 41 million

COST

Wage structure is low; average IT programmer salary is \$1,400 a year; costs are typically 25% to 45% less than in the U.S.

MARKET OPPORTUNITY

MARKET:

2005: 33%

2006: 31%

2007: 27%

Compounded growth 2005–2009: 26%
(source: Forrester Research)

—Population growth: 1.18%

GLOBAL COMPETITIVENESS: Average

OVERALL ASSESSMENT: Strong nearshoring destination for the U.S., Mexico may be suitable for low-level, high-volume projects; Spanish BPO capability.

ASSOCIATION: Asociación Mexicana de la Industria de Tecnologías de Información

MAJOR PLAYERS: Expert Sistemas Computacionales, Grupo, Hildebrando, IDS Commercial, North American Software and Softek,

FUTURE

Mexico will continue to be a player in the Future Growth Index due to its proximity to the U.S. and Spanish BPO market; needs to focus on IT education and improving work competency.

South Africa



RISK DIMENSIONS

POLITICAL RISK: Smooth transition from apartheid regime, African National Congress and Nelson Mandela are recognized as major political powers; major risk: health/AIDS. Plus, there are still clashes between minorities; high crime rate.

LEGAL RISK: Presidential task force is reviewing how to improve IT. The government is taking an active role in promoting offshoring and IT services; corruption and favoritism of the new political class is a major issue; well-developed financial and legal systems.

CULTURAL RISK: English language native; excellent customer services, because South Africa offers a better cultural fit than India.

ECONOMIC RISK:

GDP—purchasing power parity: \$456.7 billion
GDP growth: 1.9%

Stable economic growth, Africa's economic superpower and home of world-class companies.

Well-developed communications, energy and transportation sectors; its stock exchange ranks among the ten largest in the world and a modern infrastructure supports an efficient distribution of goods to major urban centers throughout the region. Growth, however, has not been strong enough to lower South Africa's high unemployment rate and daunting economic problems remain from the apartheid era.

South African economic policy is fiscally conservative, but pragmatic and focuses on targeting inflation and liberalizing trade as means to increase job growth and household income.

IT INFRASTRUCTURE RISK:

Telephones: 4.844 million
Internet users: 3.1 million

The system is the best developed and most modern in Africa with a 30-mile stretch between Johannesburg and Pretoria that is evolving into the country's first technology hub. Overall: good infrastructure.

IT COMPETENCY RISK:

Good project management; highly skilled employees in specialized areas like security

Custom Code Writing (body shopping): Poor to average
BPO: Excellent

System Writing Project R&D: Poor to average

HUMAN CAPITAL RISK: Limited supply; education needs improvement in poorer cities; employee cost is \$18,000.

Labor force: 16.35 million

COST

Competitive wage structure.

MARKET:

2005: 36%

2006: 33%

2007: 29%

Compounded growth 2005–2009: 28%
(source: Forrester Research)

—Population growth: 0.25%

South Africa is also an outsourcing destination to watch; its popularity is actually forecast to grow at a faster rate than India's over the next few years.

Low level of outsourcing penetration.

COMPETITIVENESS: Very good

OVERALL ASSESSMENT: Excellent language compatibility; strong IT market; competitive wages that are rising; needs to improve education and IT experience and skills.

MAJOR PLAYERS: mainly small and midsize firms, Dimension Data

FUTURE

Low levels of offshoring, but growing. South Africa needs more IT graduates; offshoring market is increasing, may become a more aggressive player in the future.



Bulgaria

RISK DIMENSIONS

POLITICAL RISK: Bulgaria is the 15th largest country in Europe. Situated on the crossroads between Europe and Asia; It benefits from busy flow of transportation.

Bulgaria's principal economic and foreign policy priority is to achieve the earliest feasible accession to the European Union. Political and economic stability; corruption; strategic geographic location and stable political and macroeconomic environment.

Reforms and democratization keep Bulgaria on a path toward eventual integration into the EU.

LEGAL RISK: Some major priorities are gradually lowering the corporate tax burden and reducing payroll taxes. IPR is an issue; complex legislation; recently allocated appropriate incentives for private sector investment and job creation.

CULTURAL RISK: Attractive for European outsourcing; same time zone for EU; very little time overlap; understands Western European culture. The business culture and attitude are European.

ECONOMIC RISK:

GDP—purchasing power parity: \$57.13 billion
GDP growth: 4.3%

Bulgaria has GDP growth prospects of about 5% per year; experienced macroeconomic stability and strong growth; sizable foreign investments. Job creation and higher incomes and improvement of the trade balance are among the key priorities of the Bulgarian government.

The country has had continual growth and stable development of the IT industry; government is committed to economic reform and responsible fiscal planning.

IT INFRASTRUCTURE RISK:

Telephones: 2.86 million
Internet users: 630,000

Extensive, but antiquated; national infrastructure being developed; there are considerable scientific potential, R&D institutes and production facilities.

IT COMPETENCY RISK: No project and IT management

Excellent R&D and creative skills
Custom Code Writing (body shopping): Good
BPO: Poor
System Writing Project R&D: Excellent

The development of science-based technologies in communications and high technologies are at the forefront of the Bulgarian IT industry. Bulgaria's workforce is known for its

high quality and competitive labor. There are many very talented programmers and developers; Particular strengths include computer programming and electronics.

HUMAN CAPITAL risk: Rather good education system. The advanced level of education ensured by science and technology facilities at Bulgarian universities has produced scientists with leading position worldwide Bulgaria ranks second in international IQ tests (MENSA International).

Young graduates in the Bulgarian workforce are intelligent and responsive. Their strengths, combined with the high standards of education and specialization they get, are a real treasure for the development of national IT business.

Many Bulgarian universities have R&D experience. They have created structures and favorable conditions for the development of scientific research, production and applied research implementation activities on contract basis with industry.

Bulgaria ranks third in world for certified IT professionals per capita and eight in the world in terms of absolute numbers of IT graduates

Labor force: 3.333 million

MARKET OPPORTUNITY

MARKET:

—Population growth: 0.92%

It has stable growth of around 30% per year.

GLOBAL COMPETITIVENESS: Poor

OVERALL ASSESSMENT: Good, cheap destination for nearshoring in Europe; supply of IT resource may be a problem, getting ready to become EU; costs are low but may rise, excellent infrastructure.

MAJOR PLAYERS: In Bulgaria, there are nearly 1,100 companies operating in the sphere of high technologies, more of which are small companies.

ASSOCIATION: Bulgarian Association of Software Companies (BASSCOM)

FUTURE

Similar to other EE/CE countries. Will continue to develop and be a player in the future due to lower costs and good infrastructure.

Belarus



Belarus is one of the most technologically advanced countries in Eastern Europe and its competitive advantages make it an attractive outsourcing area.

Three companies, EPAM, IBA and SAM, have well over 2,000 people currently employed in outsourcing. Belarus is involved with significant amount of outsourcing work, and in some cases more than other EE countries.

Belarus was an “assembly plant” of the former Soviet Union, which resulted in a skilled and well-qualified labor force, along with a number of technical universities, schools, labs and scientific institutions. The Belarusian education system goes back to the time of the former USSR. There are many universities, institutes and colleges that train high-quality programmers, QA specialists, designers, etc. Every year, about 2,000 highly qualified IT specialists come to the market.

One of the main advantages of outsourcing in Belarus is the low labor costs. Typically, the rates of Belarusian software houses are about seven times lower than those of the U.S. or Western Europe.

Belarus is situated in Eastern Europe and close to European destinations. The Belarusian government actively supports IT outsourcing. An offshore-programming zone provides a legislative basis for offshore software development. There are also preferential taxation policies.

Thailand



Thailand is an emerging offshore location similar to other Southeast Asian countries. It is not as mature as India or China. According to experts, some good software outsourcing development providers are located here. If software localization services need to be performed in Thai, then having Thai-speaking people will be key.

Vietnam



Vietnam today has a stable and secure environment, and is quickly emerging as a viable destination in Southeast Asia.

Vietnam has the fastest-growing economy in Southeast Asia and has fairly liberal foreign investment laws.

Following the implementation of key reforms, the country now offers investors a stable business environment. It's a relatively young country with half the population is under 30 years old. They are relatively energetic and intelligent.

The Vietnamese IT market has grown 45% since 1998, with sectors such as software and telecoms set to grow and twice that rate. Programmers in Vietnam are paid \$3,600 to \$6,000 annually.

Companies such as Anheuser-Busch, Bayer, Cisco, Harper Collins, McGraw Hill, Disney Interactive, IBM, NTT Nortel Networks and Sony are outsourcing software development projects to Vietnam. IBM is negotiating establishing its own development center there. In addition, the U.S. government has just signed its first deal to outsource software development to Vietnam.

Quality human resources is key to Vietnam. The country's education system is excellent, with a focus on mathematics and logic that creates a ready supply of raw talent for the IT industry. Professional skills are taught by Western training companies, which are training thousands of Vietnamese programmers in dedicated centers across Vietnam. The country has a vast pool of intellectual resources that remains largely untapped. The government set a goal of training 50,000 IT workers and reaching \$500 million in software exports by 2005.

Furthermore, the government charges zero tax for software exports and is fully supportive of IT outsourcing. The Communist party of Vietnam has emphasized that the software industry is a key area of national growth and in 2001, publicly recognized the importance of IT. Laws governing taxation, special zones, information and Internet use are now in place.

Service levels are much higher for smaller projects in Vietnam than other in countries. Understanding of technical specifications is very high. Vietnam is showing good team collaboration and skilled management.

On average, costs are half, sometimes even one-third or one-seventh, of those being charged by Indian software developers.

The benefit to IT companies outsourcing in Vietnam is they retain key staff and keep project teams together for months at a time. It experiences low levels of attrition.

Vietnam's most modern technopark, Quang Trang Software, can accommodate 10,000 developers. The Vietnamese IT force focuses on telecoms, GIS, CAD, finance, factory automation, health care and animation.

Vietnam's expatriate IT community has been working and living in developed IT markets worldwide and is forming a crucial link between overseas customers and Vietnam-based developers by helping to reduce cultural and language barriers.

In terms of issues, English-language skills pose a significant challenge to companies outsourcing to Vietnam. Most of the country is still focused on agriculture. Vietnam's IT infrastructure remains remarkably poor by Southeast Asian standards. Bandwidth is both limited and expensive, for example, as Internet access is owned and controlled by state-owned monopolies. International telephone lines are the most expensive in the world.

The country has no low-cost, high-speed international data system yet. Telecommunications, power and buildings need improvement. There is also uncertainty about the region's stability and problems with intellectual property and copyrights laws. Illegal copying and selling of consumer and business software in Vietnam is rampant. The culture of piracy has existed there for years with little enforcement. Also, there is lack of project management and administrative skills. Infrastructure is the single biggest barrier to the growth of IT in Vietnam. No IT companies in Vietnam have completed ISO and CMM assessment certificate programs.

English-language skills are improving due to various private language schools and corporate training program. The focus on project management and customer relationship management is also progressing, but at much slower pace. In the next few years, infrastructure will not be such a major issue.

Vietnam has to position itself as a place with skilled resources and as a safe business environment. The key elements to do so are in place and further improvement will rank Vietnam as a very favorable destination. Moves are being made to improve connectivity and lower the exorbitant cost of leased lines and broadband services.

Moldova



With a population 4.4 million, the poorest country in Europe but with highly educated IT resources available for IT offshore outsourcing. The education in Moldova are at the highest level, and there are many excellent IT professionals located in the area. The labor costs are much lower than in other eastern European countries. In the future, it is considered to be of the emerging area for software development.

Pakistan



Pakistan has a large, low-cost pool of English-speaking workers. Operating costs are low and similar to other parts of Southeast Asia. The Pakistani government is offering a 15-year tax exemption on software exports, and has eliminated duties on technology imports and streamlined the investment process.

Pakistan believe that if it is able to attract MNCs to outsource part of their services there, it could help its call centers and IT software house.

Pakistan also is expanding its call centers operations. About 20 to 25 call centers are operating commercially across the country. But overall, there is lack of democracy, regional instability and insurgency issues.

Kazakhstan



According to service providers, the market for computer services is estimated to mature in the near future, especially after taking into account the growing activity in the oil and gas sectors.

The market for computer services, which is described as predictable, stable and developing, is estimated to grow at least 7% annually over the next two to three years.

Kazakhstani companies are exploring business opportunities with foreign investors. An example of a recent project is an agreement to establish an Internet Data Center in Kazakhstan.

Major vendors have set up authorized service centers and big clients prefer to use them. Training and local regulations remain major issues. There is a significant potential for the growth due to rising oil and gas business activity in the regions.

Ghana



Ghana's low cost of living, stable democratic government, and literate, English-speaking population make it well-suited as an outsourcing location. According to experts, call-center outsourcing here is 25% to 30% less than what it would cost in India.

Ghana has attracted Affiliated Computer Services, a Dallas-based outsourcing company, which now employs 2,000 Ghanaians who process health forms for Aetna.

Workers' English accents and the government's crack-down on corruption are attracting more companies..

Companies sometimes are able to circumvent the country's limited telephone infrastructure by relying on Voice over Internet Protocol. One of the major players is Rising Data Solutions.

Kyrgyz Republic



Kyrgyz Republic has good potential for computer programming offshore outsourcing. Some experts say a critical mass of qualified programmers in the country could be employed by foreign software companies. Given the salary levels of IT specialists in developed

countries, programming services offered by local IT companies here are extremely price competitive. The long-term prospects for the IT sector will depend on the level of government support and the active participation of the private sector, as well as curbing the outflow of qualified computer specialists abroad.

Kyrgyz universities continue to produce well-trained IT specialists. The cost of software development in the Kyrgyz Republic is significantly lower than in markets such as Israel, Ireland and India.

The future of the IT industry of the Kyrgyz Republic looks encouraging. The industry's sales and the number of IT firms are growing steadily.

United Arab Emirates, Dubai



The United Arab Emirates is setting up the Dubai Outsourcing Zone in 2005 to lure outsourcing work. Luxury lifestyles, modern infrastructure, a multinational talent pool and low taxes will help to attract business-process outsourcing. Dubai might struggle to be competitively priced on "low-end" outsourcing such as call centers, but it could succeed as a niche operator in "high-end" outsourcing such as technical drawing and medical diagnostics.