



RESEARCH ARTICLE

EMERGENCE AND POTENTIAL OF KNOWLEDGE PROCESS OUTSOURCING IN INDIA

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Abstract

KPO (Knowledge Process Outsourcing) has been making a sharp break from the conventional types of work one would normally associate with outsourcing. Despite the factor that KPO sector being a comparative new comer on the outsourcing scene, it has been highly successful.The KPO sector is set to witness considerable growth in the years to come..The potential of KPO is undoubtedly phenomenal and it is certain that where outsourcing was previously reserved for call centers and programming. The present paper aims to study the scope of business opportunities and potential likely to be created in KPO sector in future. Efforts have been made to explain why India to be considered the most preferred destination to other countries in this outsourcing process, an effective sustainable process which includes knowledge, potential ,cost benefits and so on. Further, an attempt has been made to find out the challenges and strategies to KPO a success in India.

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Introduction

In the era of globalization, increasing competition and high pressure to innovate have substantially shortened the product and service life cycles. Industry life cycles have therefore become shorter and shorter -outsourcing is no exception.Over the past five years a new form of outsourcing i.e. Knowledge Process Outsourcing (KPO) has become popular and is the next step of BPO.While BPO provides extensive process expertise, KPO emphasizes on business expertise.

KPO indicates a major industry shift, away from execution of standardized processes to carrying out highly complex and customized processes that demand advanced analytical and technical skills as well as decisive judgment.The major strength of this approach is not the cost-saving aspect but it is more the value that these services provide.They offer a sustainable competitive advantage to its customers in all knowledge-intensive industries by providing market and industry research, data and statistical analysis, competitive analysis and support in legal and administration processes.This and similar forms of outsourcing have forced enterprises not only to adjust their organizational and operational structure to the global trend, but also to consider outsourcing in their overall business strategy.

Objectives of the Study

1. To study the scope of business opportunities and potential likely to be created in KPO sector in future.
2. To answer why India to be considered the most preferred destination to other countries.
3. To find out the challenges and strategies to KPO a success in India.

Research Methodology

The present study has incorporated the collection of both secondary and primary data for an in-depth investigation. All the information, data and opinion are collected which have a direct or indirect relevance to the information. An intensive desk research has been undertaken to collect published data from various organizations. Besides, NASSCOM and E valueserve etc were major sources for secondary data. For collecting primary data personal interview, structured as well as non-structured of the executives and directors of major KPO organizations have been made. No pilot survey was conducted because the study involved discussions with top executives.

The study places greater emphasis on qualitative rather than quantitative observations. In such situations the application of advanced statistical tools and techniques usually applied to quantitative analysis was not possible. To study the opportunities and future of KPO sector in India, trend analysis method has been used. A model has been developed for probable challenges faced by India. The study also develops certain strategies to face these challenges.

Scope of business, Opportunities and potential in KPO in India

KPO undoubtedly makes a sharp break from the conventional types of work one would normally associate with outsourcing. Nevertheless despite the KPO sector being a comparative new comer on the outsourcing scene, it has thus far been highly successful.

The KPO sector is set to witness considerable growth in the coming years. The potential of KPO is undoubtedly groundbreaking and it is certain that where outsourcing was previously reserved for call centres and programming, KPO is now commonly pursued and further in previously unthought of fields.

A broad idea about the amount of the scope of business opportunities and potential likely to be created in the KPO sector in the immediate and long term future can be had by analyzing the data published and prepared by various organizations.

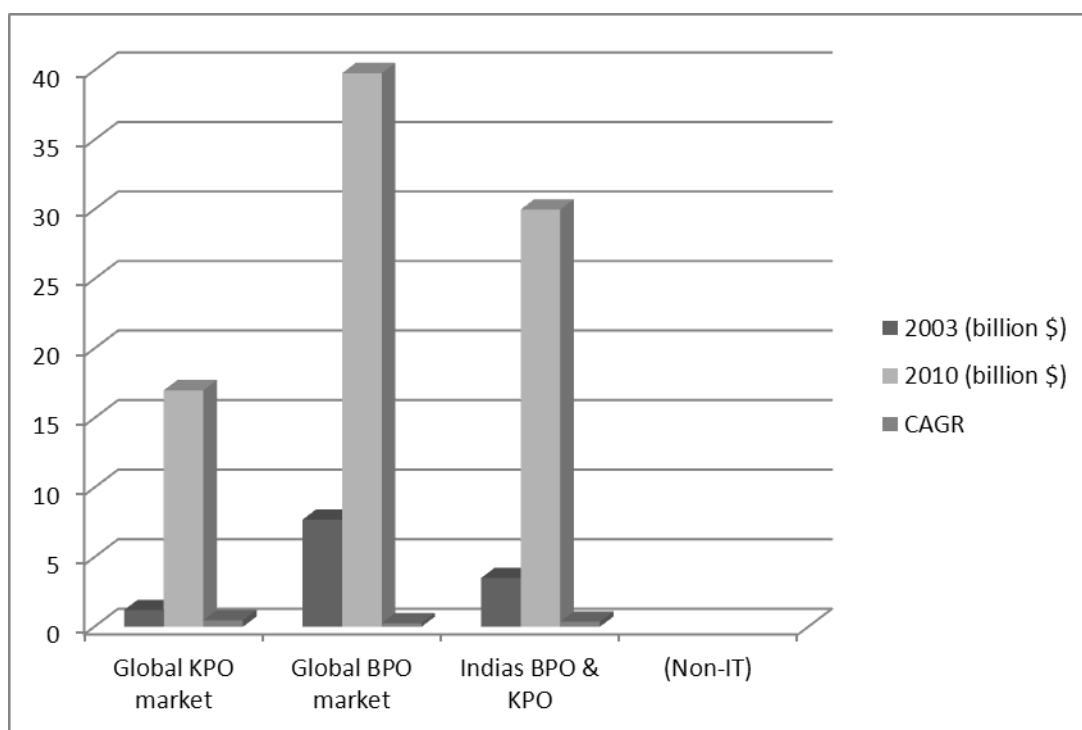
1. National Association of Software and Services Companies Study Report: According to a published report of NASSCOM, the premier trade body and the voice of the Indian IT industry, high - end activity of the BPO industry i.e. knowledge process outsourcing or KPO is expected to reach USD 17 billion by 2010, of which 70 percent will be captured by India i.e. USD 12 billion would be outsourced to India. Among other countries that are behind India are Russia, China, the Czech Republic, Ireland and Israel. Russia, with a huge army of engineers and doctors in the world, could capture the European KPO market. India, replicating the BPO sector could dominate the US market.

2. Evalueserve Study:

In a study by „Evalueserve, an outsourcing company having service chart for global world found that the global KPO market is expected to grow at a cumulative annual growth rate (CAGR) of 46 per cent, from \$1.2 billion in 2003 to \$ 17 billion in 2010. However, BPO or low end outsourcing services market is expected to have a CAGR of 26 per cent, from \$7.7 billion to \$39.8 billion in the same period.

Table 1 Expected Growth in Global BPO and KPO markets (2003-2010)

	2003 (billion \$)	2010 (billion \$)	CAGR
Global KPO market	1.2	17	46%
Global BPO market	7.7	39.8	26%
India's BPO & KPO (Non-IT)	3.5	30	36%

**Chart 1** Expected Growth in Global BPO and KPO markets (2003-2010)

(Source - Study by Evalueserve)

A white paper released by Evalueserve projects India provided \$ 3.5 billion of BPO and KPO (Non-IT) services in 2003 and is expected to grow at a CAGR of 36 per cent during 2004 to 2010, earning \$ 30 billion in 2010 by providing these services.

The paper cites reasons for a possible KPO boom. It says higher savings by outsourcing knowledge based activities combined with the scarcity of specialized talent in developed countries could lead to growth in the KPO sector. Billing rates for KPO are higher at \$30-45 per hour compared to just \$10-14 in the BPO business. Given below is an estimate of the growth of various segments within KPO in India.

Table 2 Estimate of Growth of Various Segments within KPO in India.

Segment	Revenue (2006-07)	Expected Revenue (2010-11)*
Banking, Securities and Insurance Research	\$175	\$600
Data Management Search & Analytics	\$590	\$2500
Business and Consulting Research	\$125	\$450
Human Resources - Research & Analytics	\$25	\$120
Market Research & Comp. Intelligence	\$175	\$460
Eng.Design & Architecture, CAD	\$315	\$950
Game-design & Animation Services	\$245	\$900
Legal, Paralegal and Intellectual Property	\$95	\$500
Scientific & Medical Content Publishing	\$165	\$100
Remote Education, Publishing, Tech. Writing	\$300	\$1,000
Contract Res.Orgs, Biotech Services	\$580	\$2,500
Translation and Localization	\$75	\$360
Marketing & Sales Support. Answering RFPs	\$20	\$150
Remote Logistic Services & Recruitment	\$40	\$160
Network Optimization and Analytics	\$125	\$450
TOTAL	\$3,060	\$11,200
* In millions		
Source: Evalueserve		

The segment Data Management Search and Analytics is observed as major source of revenue followed by contract research organizations and biotech services and is expected to earn \$ 2500 million each in the year 2010-2011. Almost 4 times growth is expected in revenue in KPO from 2006 to 2010.

3. Rocsearch, UK- based Research Services Company study

Another study on KPO sector done by Rocsearch, a UK-based research services company, shows a huge supply gap that threatens its growth. The company on the basis of evidence suggests that the KPO market may just reach a size of \$5 billion by 2010, manned by 1,00,000 people instead of projections of a \$12 billion market supported by 2,50,000 employees.

This accentuates Nasscom's projections of a shortfall of 500,000 workers in ITES (Information Technology Enabled Services) and BPO sectors by 2010. Assuming an average revenue per person of \$55,000 over the next four years, 1,00,000 knowledge workers point to a \$5 billion market.

This size, though based on a CAGR of 32%, is still 60% less than the \$12 billion potential projected by big KPOs like Evalueserve, last year. Rocsearch CEO, Ashish Sinha points out the sector is restricted by low employability despite high graduate turnout, and competing demand from other sectors as jobs grow faster than the workforce. The study sees only 500,000 of the over 3 million workers added to the labour pool in 2005 as employable in global firms and of these, just 2 in every 100 are likely to opt for work in knowledge space.

4. Outsource 2 India - Report on KPO

“Over the past year or two, the outsourcing industry has been throwing up jobs for Doctors, Engineers, CAs, and Architects. Unlike the first wave which was more about entering data and answering phone calls, these jobs involve skill and expertise”, says Jacob William of the Bangalore-based Outsource2India, which employs 500 people and offers services in the big -buzz, big bucks area of knowledge process outsourcing.

High-end KPO opportunities for Indian firms can be observed immense by looking at some of the figures pertaining to intellectual property research. Drafting and filing of patent applications in the US is quite expensive. A typical application costs about \$10,000 to \$15,000 to draft and file with the United States Patent and Trademark Office. Cost savings from offshoring even a portion of the patent drafting process can easily save up to 50 per cent of the cost for the end client, according to Alok Aggarwal, Chairman of Evalueserve. According to Pangea3, the cost of 10 patents in USA is approximately \$30,000 whereas around 50 patents can be got filed by outsourcing the said activity at a cost of less than \$10,000.

Also, of course, the talent is much more affordable. “Law firms in the US charge an average of \$400-450 per hour, and we do the same work for \$75 to \$100 an hour” says Kamrani who is an outsourcing provider in the same area. Almost law business firms such as Patent Metrix, Cantor-Colburn and Schwegman, Lundberg, and Woessner & Kluth, technology companies like Motorola, Intel, IBM, Cisco, Texas Instruments, Nokia and Phillip and Pharma companies like Astra Zeneca and GlaxoSmithkline have already established their offices in India. There are a few others who are associating with Indian companies to encash the emerging opportunity.

5. Smart Cube

Sameer Walia, director, Smartcube, one of the earliest Indian companies in the business, managing international research for some Fortune 500 companies explained that with BPO revolution reaching its limits, it is time for KPOs that promises to be the next big thing in the outsourcing sector and provides long term jobs for intellectual, analytical and knowledgeable people with a pay scale much higher than BPO sector.

6. A Joint Study conducted by Booz Allen Hamilton - A Management Consulting Firm and Nasscom A management consulting firm Booz Allen Hamilton and Nasscom, the Chamber that serves as an interface to the Indian software industry, in a joint study “Globalization and Engineering Services - the Next Frontier for India” found that India comprises 28% of suitable global talent pool for off-shoring services; 12% of the total engineering workforce is currently in India. India is well-positioned to increase its market share of engineering offshoring from 12% to 30% by 2020. The potential engineering market in India could exceed \$40 billion by 2020. Capabilities built through ES offshoring will enhance India's strategic position, benefiting key sectors such as defence and aerospace and will not only create opportunities for workers in major metro areas, but also those in rural areas. Mr. Kiran Karnik, President NASSCOM said, “The Indian IT and software Industry is continuously renewing itself and seeking to grow by addressing newer service lines; the latest one being engineering services. Companies in India have developed capabilities and skill sets and invested in technology platforms to leverage this opportunity.” “Companies will increasingly create competitive advantage by accessing and building core innovation capabilities in a world-class global network”, said Kevin Dehoff, Vice President at Booz Allen. Vikas Sehgal, Executive Director, Booz Allen Hamilton said “For India, Engineering Services Offshoring presents a tremendous opportunity - it is not only a significant revenue generator, but will also place India on the global innovation map.” Commenting on the findings of the report, Mr. BVR Mohan Reddy, Founder, Chairman & Managing Director, Infotech Enterprises and Chair, NASSCOM Engineering Services Forum said, “Spending on engineering services was US\$750 billion in 2004 and is projected to increase to US\$1.1 trillion by 2020”.

In the future, it is envisaged that KPO has a high potential as it is not restricted only to Information Technology (IT) or Information Technology Enabled Services (ITES) sectors and includes other sectors like

Intellectual Property related services, Business and consulting research, human resources research, market research etc.

India – The most preferred KPO destination

India is expected to corner a big pie of the overall KPO market. By 2010 India is expected to account for almost 70 per cent of global market. India's dominance - though imminent in the near future - could be severely tested by some of the emerging destinations such as the Philippines, Russia, Ukraine, Poland, China, South Africa, Singapore, Ireland, Australia and Canada

The myth that Indian companies can only provide "software workers" is soon changing to the reality of Indian companies being capable of almost anything, even rocket science. India has a large pool of knowledge workers in various sectors ranging from Pharmacy, Medicine, Law, Biotechnology, Development, Paralegal Content and even Intelligence services. India offers a unique set of attributes that will translate into a sustainable position as an off-shoring destination and can give the organization a competitive edge.

Universality of Knowledge Process Fields in India

India's existing knowledge process institutions are much like those in the US and Europe. Many knowledge process fields are universal i.e. their principles and the way in which they are taught are the same throughout the world e.g. engineering, medicine, biotechnology and knowledge process outsourcing institutions have generously drawn from Western models. Moreover, India was a part of the British empire until 1947 which subsequently had an influence on knowledge process outsourcing fields such as law.

Cost Effective Services

More and more companies are turning to India for offshoring KPO work as quality work gets done at cheaper rates. India also offers significant cost advantages as much as 40 to 50 per cent in the areas of research and clinical trials. According to NASSCOM study, the cost differential between Ph.Ds/engineers in the US and India is almost \$60,000 to \$80,000.

India's Intellectual Potential

India has proved that it is technically superior when compared to other countries that provide outsourcing solutions. So, when you outsource your work to India, you can be assured that the best technology and software would be used for your services. India has the largest English-speaking audience after the U.S.

India also has a highly educated manpower that is talented, educated, experienced, technically - skilled and computer literate.

Time Zone Advantages

The time zone advantages between India and countries like U.S. and U.K. has proved to be another important factor why companies outsource to India. Organizations who wish to provide their customers with 24 x 365 days customer support or helpdesk services, can outsource to India.

India's Stable Government

India has celebrated 63 years of democracy and has one of the world's most stable governments. Building up the IT sector has been a top priority for the Indian government. India has a ministry of Information technology that quickly approves the implementation of IT projects and streamlines regulatory processes. The Indian government has even released a bill termed as the "IT Act 2000".

With ample support from the government, Indians have been able to build high-tech IT parks which has the best in technology and infrastructure. The Indian government has even permitted 100% foreign equity.

Best of Breed Infrastructure

In India with redundant telecom and utility infrastructure, there is very good reliability within India's special IT parks. More than 20 Indian software companies have achieved the prestigious SEI-CMM level.

India also has the highest number of ISO-9000 software organizations.

So, competitive advantage can be given to organization by outsourcing to India.

Security of your Confidential Information

The increasing sensitivity towards data security and confidentiality make captive centre to be the most preferred choice. In the recent past several fortune 500 already have established their captive centers in India.

The trend is to further accelerate keeping in mind the changing forces and dynamics of the industry.

Acquisition and Mergers

Acquisition and merger activity has reached new heights and is expected to be much higher in the coming years as a mode of expansion. However, besides mega deals, large number of small deals shall also become fruitful. Indian IT companies have been entering the both BPO and knowledge process outsourcing (KPO) industry in a big way, and Systems Integrators and IT companies formed the maximum percentage of acquirers.

The acquisitions are found to be an easy way to acquire domain specific capabilities. Cognizant, KPIT and Patni were among the larger IT companies are examples in the category of BPO.

High Quality Services

According to Sameer Walia, Director, Smart Cubes, Chennai and Bangalore have a strong advantage of being the main KPO centers in the country. Both cities are near education hubs. They have large number of graduates with specialized analytical skills, superior English and IT acumen. They also have a natural flair for mathematics, science and research.

Global Organizations' Most Preferred Choice

India is being chosen as preferred country becomes evident as many companies such as Patent Metrix, Cantor Colburn and Schwegman, Lundberg, and Woessner & Kluth have already set up offices in India. Off shoring R&D in pharmaceuticals and biotechnology also has enormous potential for KPO. Pharma majors Astra Zeneca and GlaxoSmithKline have set up drug discovery centres at low cost destinations to boost their research and development activities. Even for R&D in software and chip design, major telecom and IT companies- Motorola, Intel, IBM, Cisco, Texas Instruments, Nokia and Philips have set up offshore design centres in India. India is the most attractive destination for KPO activities, says a study by independent research company Asset Management in collaboration with Kelly Services.

The study shows India will have a higher growth rate in KPO segment of 45% compared with 25% in the BPO segment.

Challenges of KPO

Using the Internal and External Environment Scanning Model, the key challenges have been divided into two categories:-

Internal or Organisational Challenges

External or Environmental Challenges.

Organisational Challenges:

(a) Skill acquisition and retention: Access to a large, high quality skill pool is a precondition for successful KPO operations. But the requisite pool is not easy to get because of incorrect perception of the KPO profession as low grade and attracting better people by successful players.

(b) In fact UK based research firm RocSearch has tempered the optimism with its findings that the Indian KPO market may only grow up to \$10 billion by 2010 as opposed to the industry estimates of \$12 billion. The corresponding number of professionals employed in this sector will be only 1,00,000 as opposed to the predicted 2,50,000 due to inability to attract skilled people

(c) Shortage of Analytical and Specialized skill will also be a great challenge.

India has proved time and again that it is a pool of intellectually and creative brilliant individuals. “But even erudite people face a number of obstacles to get a well paid, decent job of their interest and caliber”, says Sameer Walia, director, Smart Cube. Though being capable of much more because of this they move to the BPO sector, which seems to be an easier and safer choice.

(d) Feeling of unstable career

People consider it as unstable career as they prefer to work for one company.

(e) Training and Development.

Moreover special training and development will be required. In addition to the required educational degree, professionals also need to be abreast of the laws of methodologies governing the process in the client destination be it legal process, pharma outsourcing or financial services outsourcing, any knowledge process requires familiarity with the concerned domain as it exists in the client country.

(f) Unawareness of Potential of this sector.

Still there is unawareness among masses about the potential of this sector and the scope of future prospects.

Main Environment challenges may be :-

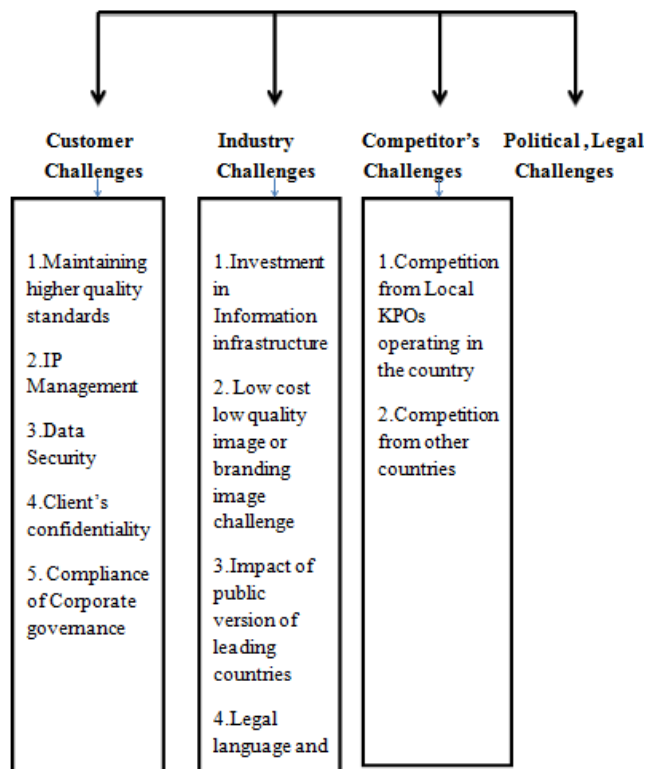
- 1. Customer Challenges.
- 2. Competitor Challenges
- 3. Industrial Challenges
- 4. Political & Legal Challenges

Challenges of KPO

Organisational Challenge

- 1. Skill Acquisition & Attrition
- 2. Shortage of Analytical & Specialised Skill
- 3. Feeling of unstable Career
- 4. Training and Development

Environmental Challenge



Main environmental challenges may be :

A. Customer challenges

B. Industry challenges

C. Competitor challenges

D. Political and legal challenges.

A. Customer challenges

A1. Maintaining higher quality standards:- Maintaining higher quality standards is of great concern. KPOs require keen understanding of how a client works and what his exact needs are for each assignment. No pre-defined process can be created and replicated each time there is an assignment since every project is unique. As a result of this, defining an ideal metrics to measure the quality of work can be quite a difficult task.

A2. IP Management & Data Security:- Outsourcing high-end functions to an offshore location involves the exchange of confidential information, especially in segments such as financial services and biotech. In such a situation, vendors need to have stringent internal measures to prevent any misuse or trading of sensitive information. In an opinion poll conducted by NASSCOM and the Information Technology Association of America (ITAA) in 2004, greater than 75 per cent of respondents agreed that offering sophisticated information security provisions and practices provide a competitive advantage because security has become a critical selling point.

A3. Clients Confidentiality:- A big challenge is to convince clients that their confidential data will be treated with extreme caution and will not fall into the hands of unscrupulous or unauthorized individuals. To keep up with the increasing demand from clients to maintain information security, KPOs will need to balance the escalating costs of maintaining global security standards while staying competitive in a cost - driven market.

A4 Compliance of Corporate Governance:- A greater emphasis on governance and greater direct control of finance processes is acting as a barrier in the way of a decision to outsource finance functions. The client concern is that outsourcing might lead to a loss of control, which might in turn lead to a weakening of corporate governance and subsequent breaches of compliance with regulatory requirements.

B. Industry challenges

B1. Information Infrastructure:- According to the Telecom Regulatory Authority of India (TRAI) internet bandwidth prices account for almost 40 per cent of a KPOs total cost as internet connection is required 24x7 to collect data, perform secondary research and transmit data back and so on either within India or internationally, thus being a critical success factor for its survival. Although, major reforms have been undertaken by the government to spur the growth of IT infrastructure, there are a few significant hindrances, such as India's high international bandwidth prices and **high entry fee for Internet Service Providers (ISP) who provide Virtual Private Network Services (VPN)** are to be removed.

B2 Low cost - Low Quality Image or Branding Image - Foreign companies worry about the quality of work that a low wage country like India can deliver. Thus, more and more foreign companies contemplating outsourcing to India consider outsourcing only the non trivial back office operations in order to cut costs. Simply because, they do not know any better.

B3 Impact of Public Version of dealing countries - Public opinion in the developed countries can also be a tremendous downside. On the one hand, companies are perceived to be sending jobs overseas, and the perceived loss of high profile jobs can cause poor publicity so that the associated costs in public relations can increase the outsourcing costs, while boycotts and protests can directly affect the bottomline.

B4 Legal Language and Cultural Barriers - Additionally, legal language and cultural barriers can cause serious problems. Differences in dealing with problems and conflicts and a lack of communication between the outsourcing partners can cause friction and inefficiencies. Both companies need to respect each others corporate and national cultures and find mutually beneficial ways to develop successful cooperation

C.Competitor's challenges

C1 Competition from other Countries - Countries such as China, Philippines, Mexico, and Ireland are fast emerging as alternative KPO Services destinations. Although, according to McKinsey analysis, India is comfortably placed in the location/people attractive metrics, other countries like China, Philippines are fast catching up. A positive foreign investment climate favourable government policies and an educated, yet low cost workforce are encouraging foreign financial firms to offshore their KPO needs to these countries.

C2 Competition from Global KPO Units Operating in India - Thus far, MNCs like GE and Evalueserve, with their huge resources and large scale have been doing well in India. Many of the financial number crunching for firms like Fidelity, Reuters and are also done by captive units in India. These firms take advantage of the low cost Indian knowledge worker, simultaneously leveraging their specific domain expertise, huge scales of operation and higher employee remuneration .

D.Political and Legal challenges

Besides all, political and legal environment of both countries also have a great impact on KPO services.

Few ways of overcoming the several challenges ahead of the KPO industry would be:-

Operational Strategies & Competitive Strategies

1. Upgrading Skill
2. Retaining Staff
3. Lifting the organization technically
4. Straight forwardness in the dealings
5. Better control mechanisms
6. Specify the role of supplier and management
7. Accountability
8. Improve SLAs
(Service Level Agreement)
9. Providing post development support
10. Focus on Infrastructure creation

1. Professional certification based on recognized industry standards
2. Benchmarking system
3. Challenge the providers
4. Involving government to enlarge the pool
5. Creating more awareness about the nature of work KPO involves
6. Join hands with big service organizations
7. Form an effective industry association to lobby with the government
8. Multiyear Strategic relationships
9. Leverage local industry offsets
10. Build Brand India

Conclusion

As the Knowledge Process Outsourcing Industry is in its nascent stage it is very hard to predict how this new trend will evolve. But if this outsourcing discipline is to continue to grow over the next five to ten years, organizations need to produce better results with greater regularity and at lower costs.

To achieve this it will take a stronger consideration of knowledge outsourcing on the strategic level across the global community of outsourcing professionals, customers, providers and advisors alike. It becomes significant to overview and control the outsourcing process and to adequately communicate the outsourcing strategy internally to all employees and externally to the public and investors. The entire organization from the strategic decision-making unit, down to the operational level should be involved in the process. The issues necessitate the attention and full commitment of the senior management. In the coming years, we expect KPO to become a major target area for acquisitions. KPO acquisitions and mergers will form the growth strategy of already existing KPO companies which want to get benefited specific domain expertise and secondly for multiservice and multi directional BPO companies wishing to climb value chain by adding high end capabilities to their portfolios.

There is a need to lobby for and increase the value of Brand India as a potential high end KPO destination. Great support from the government is required to realize this opportunity. If addressed appropriately, Indian KPO industry can further consolidate its leadership position and build a significant skill-value advantage over the competition.

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