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Bangladesh IT/ITeS Industry Development Strategy

Competitive Advantages and Identified
Niches. Templates and Methodology
for Data Collection.

15 November 2015

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Introduction

From the previous deliverables – *Global Demand Assessment, Competitive Landscape, and Industry Statistics and Competitive Advantage and Identified Competitive Niches & Templates and Methodology for Data Collection* – the Industry Development Strategy evaluated the current industry landscape of Bangladesh's IT/ITeS sector and generally deduced specific potential opportunities matched with ongoing global market trends. Belonging to similarly *emerging outsourcing destinations*, a comparison of the inherent qualities among existing competitors was included in order to determine the positioning of Bangladesh against its peer group. The country's inherent propositions, such as a large, untapped population and prevailing cost advantages, are significant in showing the service delivery capability and corresponding potential of the industry, as these are foundational components needed to build a robust and sustainable IT/ITeS sector.

As an emerging outsourcing destination, gradual progress in the sector can only be attainable if the persisting developmental barriers are improved and addressed in a timely and deliberate manner. To be completely competitive, the IT/ITeS sector must be capable of delivering outsourced services in a manner that is *in-line with global market requirements and standards* - the industry based requisites, quality standards and service levels that services outsourcing supply markets are all subject to. The ability of Bangladesh to keep pace and compete, and more importantly, position itself against the backdrop of established and emerging destinations, will be the key determinant to the success of its IT/ITeS sector.

Bangladesh's IT/ITeS sector can still be considered to be in the developmental phase, where more expansive market potential, particularly in the *service exports* space, is yet to be reached. The local BPO sector for example, remains largely focused on providing outsourced services to the domestic market, while enabling ICT policies, though in place, still require further refinements (reforms), implementation and enforcement. Moreover, while a large working population and cost arbitrage are the country's primary value propositions, improvements on critical growth factors such as infrastructure, quality of training and relevant ITeS skill sets, and overall business environment must be addressed. Without the proper and decisive interventions to these significant ecosystem considerations, the country will face difficulties in establishing itself as a viable services outsourcing destination, and consequently, near-term market opportunities in the export services market are likely to be jeopardized. The concise identification of current and specific strengths and future opportunities can lead to better alignment of current IT/ITeS capabilities towards the *relevant and addressable global services outsourcing market*.

While the previous deliverable dealt with pertinent findings of the nation's IT/ITeS industry, this deliverable will discuss the *competitive advantages of Bangladesh as a services outsourcing location* and an analyze the competitive niches that should be considered and focused on. Identification of *real-world delivery advantages* of the country will also assist local industry stakeholders in properly positioning the sector's competitiveness in target markets as well as against other emerging and established outsourcing destinations. Additionally, it is important to efficiently and accurately utilize these identified advantages in order to maximize the service capabilities and market identity of the country. For instance, the identification of the 'large country population' of 160 million people, can be misleading to both supply and demand perspectives, if

the percentage of services *outsourcing relevant talent* is in reality, a minute percentage of the total population.

Considering inherent location advantage and industry demand, a *Capability vs. Opportunity Profile* will be articulated upon, in order to identify *relevant global market opportunities* that the Bangladesh IT/ITeS industry can be matched with. Based on the analyzed data, the *Bangladesh proposition* as an IT/ITeS destination will then be conceptualized, founded on the cumulative analysis of the IT/ITeS industry, and proposed developmental path the industry should consider charting. The proposition will also aid the Strategy Framework, serving as a guide in actuating the plans and developmental goals of the IT/ITeS industry.

As included in the previous deliverable, respective institutions from where critical statistical information needed to monitor industry size and growth trajectories were identified and outlined, leading this report to include the different templates and methodology for data collection.   It must be noted that without *clean and updated industry data*, the strategy and plans on strengthening the industry could lag behind or worse, become altogether misguided. Thus, Tholons emphasizes the crucial role which *accurate and relevant industry statistics* will play in charting the developmental course of the country's IT/ITeS sector. Overall, this report will contain the identification, evaluation and analysis of IT/ITeS relevant data, culminating in the presentation of pragmatic developmental recommendations for local stakeholders to consider in establishing Bangladesh as a competitive and sustainable global destination for services outsourcing.

Bangladesh as a Viable IT/ITeS Destination

The Bangladesh IT/ITeS industry is considered to be in a nascent stage, wherein *significant ecosystem improvements* are necessary, for industry to take form and develop in a more progressive manner. In order to develop the notion of Bangladesh as a *viable services outsourcing destination*, current and potential location advantages of the country must be expounded upon. These factors will also aid in establishing the value propositions of the sector, then leading to the proper identification of the focus outsourcing niches that the IT/ITeS sector will have the likeliest probability to succeed in. Given the strengths and focus segments, the relationship between industry and global industry demand and service delivery standards will be deduced as well.

This proceeding section intends to specifically identify Bangladesh's location advantages as an emerging outsourcing destination, the segments that the IT/ITeS sector should focus on, particular niches that can be used as long-term target markets, the sector's capability to match with the global market demand and the ability to compete in the global outsourcing industry. A proposition on Bangladesh as an IT/ITeS destination will also be conceptualized in a preliminary Strategy Framework, showing the action items or steps, necessary to catalyze IT/ITeS industry development.

Location Advantages and Risks

Table 1: Bangladesh IT/ITeS Industry SWOT

| Strengths	Weaknesses
• Large population base of ~160 million people show potential for the establishment of a scalable IT/ITeS sector. • Produces approximately 460,000 tertiary graduates each year. • Average Talent Costs are lower than that of large, established service delivery locations in Asian - India and Philippines. • An improving, and enlarging English-literate talent base.	• Lack of established IT parks and Class A office spaces, necessary to host and sustain larger scale IT-BPM operations. • High rental costs for *limited Class A CBD office spaces*, due to the aforementioned undersupply of office spaces. • Business registration is made difficult through the lack of 'one-stop-shop' facilities and services. Procedural clarity can also be improved. • Lacking a transparent, clear and progressive financial incentives regime that can be an enabling platform to attract multinational IT/ITeS providers to establish delivery centers. • External perception of country being 'difficult or risky' to do business in. Socio-political, civil-security and internal risk incidents (natural and civil) continue to paint a *perception of risk* for the country, and consequently, the IT/ITeS sector. • Low level of awareness of services outsourcing opportunities within the local ecosystem. Limited perception of *'services outsourcing as a career'* from the populous. More so from talent pool outside of Dhaka City. • Access to funding and capital investments, makes establishment of IT/ITeS businesses prohibitive for many local investors. Limited access to funding also prohibits expansion and scale capabilities of existing service providers.

Opportunities	Threats
• Rising costs in India and the Philippines, may widen window of opportunity as service providers and buyers look for alternative locations with greater cost arbitrage. This applies particularly to the ITO sector, and to a certain degree, the BPO sector (particularly non-voice). • Existing geo-political relationships with non-traditional markets also have potential to become more prominent client markets (United Kingdom, India, Japan, and Middle East). • Domestic demand for IT/ITeS is expanding market opportunities for local providers growing especially from BFSI, Telco and Government sectors. • Improving skillsets and delivery capabilities of local IT/ITeS providers in (brought about by greater exposure to international markets). • Emerging freelancer community sustaining growth of IT-related work.	• Stakeholders must be more aggressive in addressing infrastructural concerns, particularly of establishing and maintaining the necessary physical infrastructure in Dhaka City. Inability to do so, will continue to fuel negative perceptions. • The growth of the *freelancer segment*, though positive in the sense that it exposes the youth to the global outsourcing industry and delivery model, also has the potential to increase industry fragmentation – *taking talent away from the traditional IT/ITES sector* – resulting in small-mid-sized local service providers facing greater difficulties to scale operations. • Prevailing state of talent migration can lead to further constriction of an already vulnerable talent pipeline. This is especially a grave threat to the ITO sector where local software developers are inclined to search for higher paying jobs abroad. • Bangladesh is *largely unknown* (or perceived) to the global IT/ITES market as a *proven* services outsourcing destination. • Unproven capabilities in completing proposed IT Parks and ITeS zones (e.g. Janata Tower).

Source: Tholons Research, 2015

Inherent qualities and advantages vary for each emerging and established services outsourcing destination. For Bangladesh, as it works towards improving and stabilizing its IT/ITeS industry, the country rests on scale and cost arbitrage as the primary key advantages of the sector.

Figure 1: Key Enablers for Bangladesh IT/ITeS Industry
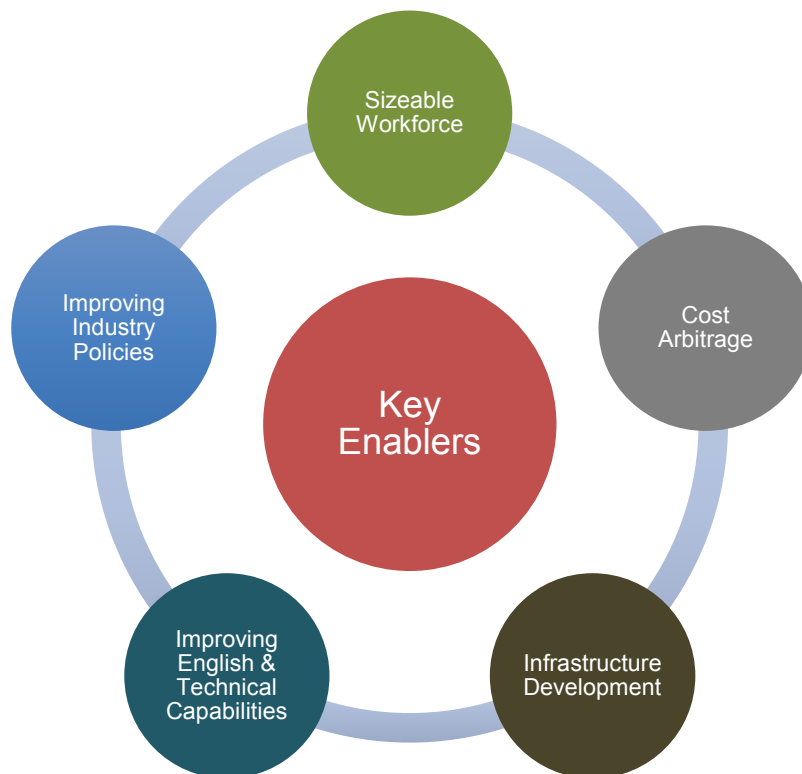
Many of the country's existing advantages can be further developed and pose as enablers for the IT/ITeS sector. As the above figure shows, the propositions of the country are the exact enablers the country requires in order to transcend the industry from its nascent stage.

Sizeable Workforce – The population of ~160 million is one of the key advantages for Bangladesh. The sizeable number (~500,000) of annual tertiary graduates also contributes to the industry's longer term potential. These inter-related propositions – *of scale potential and tertiary educated talent* - play a critical role in the decision making process of potential service providers and buyers. In similar emerging service delivery locations, service providers may balk at establishing operations despite a location having a highly skilled talent pool, if capacity to scale operations is deemed inhibitive because of a small population base. Conversely, service providers would also hesitate to establish in a location where a large labor force is present, but the talent base is *inadequate or misaligned with the skill requirements* of the service provider. The latter condition holds true for Bangladesh *if* its sizeable talent pools remains underutilized and unequipped - *its large labor force would merely project potential, but would not directly indicate capability or capacity to host a sustainable services outsourcing industry.*

Improving English & Technical Skill Capabilities – Beyond the scale potential of the country, IT/ITeS skillsets and English proficiency must also be enhanced in order to deliver sufficient and quality outsourced services. In this regard, greater exposure and orientation towards the requisite

quality and output standards of external service outsourcing markets is a paramount consideration. For instance, simply being able to process outsourced services in its domestic space, does not necessarily translate to capability in the external global market. Moreover, Bangladesh stakeholder and service providers must ensure that the quality of its outsourced services, and corresponding standards – meet, if not altogether exceed globally demanded benchmarks. As the Bangladesh services outsourcing sector is still a fledgling entity, it must consider that *it must do more to prove itself, and earn recognition of intended client markets.*

Further, while Bengali is used as the principal medium of instruction during the first 12 years of primary and secondary education, English classes and courses are also offered at these formative levels of education. However, it must be noted that English is often used as a medium of instruction at the University level, for both private and public institutions. At this higher level, proficiency levels show much room for improvement in terms of quality (e.g. accent, comprehension, and writing skills). This *'proficiency gap'* can be attributed to the minimal exposure to English that many students would have during primary and secondary levels, creating difficulties in adjusting to more stringent English proficiency requirements at the tertiary level.

Given that most of the addressable client markets for the local IT/ITeS industry are in fact, English speaking, industry stakeholders must ensure that the country's talent pipeline have the necessary *English language proficiencies*, that will be required for the effective delivery of outsourced services. This applies to all potential service lines, whether, ITO, KPO or BPO. In this regard, it must be noted that *basic levels of English comprehension*, will be inadequate to fulfill outsourced processes from both a scale and quality perspective, or at least the stringent levels required by international clients. Insights gathered by Tholons from interviews with numerous service providers in the country, found that in many instances, fundamental English-centered communication tasks of employees with client personnel (e.g. email, chat correspondence), often necessitated tedious processes of quality assurance and 'checks' by senior management personnel before such correspondence *could* be sent to the clients.

Cost Arbitrage – In a service delivery location, this is one of the primary considerations for potential service providers when setting up a delivery center. One of Bangladesh's fundamental draws is its cost arbitrage – with entry level salary wages for services outsourcing employees, amongst the lowest in the APAC. Data gathered from existing outsourcing companies in the country, indicate that entry level rates for fresh talents joining the industry; range from US$110 to US$250 /per month for BPO services and US$210 to US$350 /per month for ITO services. This cost advantage is further emphasized by the *generally affordable* real estate space in Bangladesh, though it must be noted, that Class A office space is largely centered in Dhaka City, and its scarcity has the propensity to drive up prices in the near-term. Despite this condition, Bangladesh's Class A office rents remain relatively cheaper, with ranges from US$0.4 to 1.4/Sq.ft/month compared to India with US$0.8 to 9.5/Sq.ft/month and Philippines with US$1.4 to 2.1/Sq.ft/month. As a nation that is starting to establish itself as an emerging outsourcing destination, the *relatively lower cost* of Class A Office rent may help draw investors and service providers alike, more seriously consider the country.

Table 2: Basic Service Delivery Cost Components

Country	Electricity Cost (US$ Cents/kWh)	Rental Costs (CBD, Class A, US$/Sq.ft./month)*	VAT (%)
Bangladesh	8	0.4 – 1.4	15
Philippines	26	1.4 – 2.1	12
India	9	0.8 – 9.5	12.5
Sri Lanka	2	0.7 – 1.1	12

Source: CBRE, 2015. Tholons Research, 2015

These seemingly pronounced advantages can be leveraged by industry stakeholders to develop Bangladesh as an emerging outsourcing destination, though care must be taken in ensuring that these favorable ecosystem components are carefully directed towards the developmental goals of the country's IT/ITeS sector. If English proficiencies are not improved, then industry fragmentation will persist, with the 'most proficient' talent either leaving the country for higher paying jobs abroad, and small providers being unable to scale because of a restricted talent pipeline.   Heavy industry concentration in/around Dhaka City will also induce saturation – where the majority of service providers are drawing from the same scarce and shallow pool of Class A office spaces – inducing the unwanted effect of restrictive (high) rental costs.

Improving Industry Policies – Additionally, Bangladesh must have clear and *encompassing industry development policies* that cover all facets if IT/ITeS development in the country (I.e. financial and tax policies, human capital development, intellectual property protection and investment promotion). These distinct policy implementations can contribute positively to building a more responsive business environment, attracting more investors that in return, can facilitate growth of the IT/ITeS sector progress. The government also needs to have active participation in promoting potential (alternative) outsourcing locations in the country, in the form of recruitment service offerings, business set-up assistance and development of international channels for investment facilitations services.

For as long as government and respective institutions build upon existing advantages and address salient ecosystem inhibitors, expansion of the industry into external client markets is entirely possible.

Infrastructure Development – The availability of an enabling operational platform from which to deliver IT/ITeS is also one of the keys in developing and sustaining the sector. Physical (i.e. road networks, buildings, support facilities & utilities) and telecommunication infrastructures are the

foundations necessary for the effective delivery of services of a location. According to the *World Economic Forum's 2014-2015 Global Competitiveness Report*, Bangladesh consistently registered low scores in the *Infrastructure Pillar*. This is highlighted by the underdeveloped and strained transportation infrastructure in the country, consisting of dated airports, roads networks and public transportation systems. Particular to the country's services outsourcing sector, an *inadequate public transportation systems* could hinder labor force mobility, a vital consideration for service providers who require the free-flowing movement of employees to and from their delivery centers. This is especially relevant for larger service providers who require hundreds or even thousands of services outsourcing professionals, or *agents*, to report to their respective facilities in a timely and predictable manner.

Chart 1: Global Competitiveness Report - Infrastructure Pillar Score (2014 – 2015)
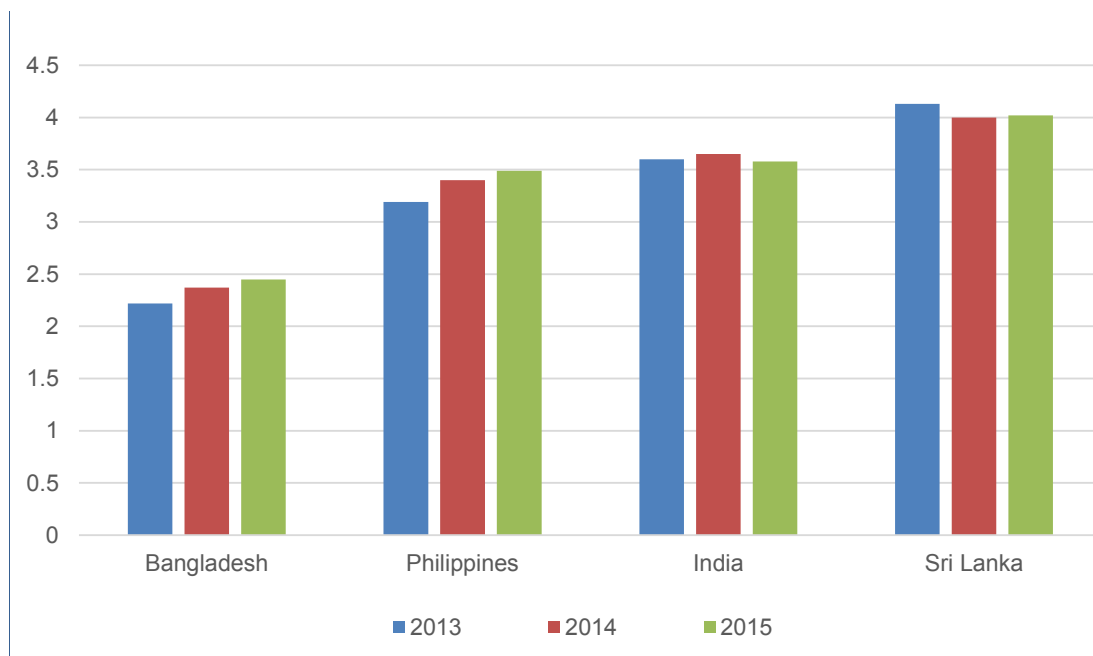
Source: World Economic Forum Global Competitiveness Report, 2014-2015

Moreover, the insufficient number of Free Trade Zones and IT Parks could *misrepresent* the country's commitment to the IT/ITeS industry. Simply put, potential service buyers/providers and investors, will not be easily convinced to consider Bangladesh, if all that is provided to them regarding IT Parks are 'plans to develop' or 'currently under development.' These business entities must be convinced in a more definitive manner, by *seeing completely built IT parks and properly fitted service delivery facilities*. Further, an essential cog of the service delivery ecosystem – Internet Leased Lines (ILL) – must be in place to properly connect delivery centers and IT Parks with external clients.   A reliable, redundant fiber and high bandwidth network must also support the proposed IT Park and delivery center locations. Though Bangladesh has made tremendous progress in recent years in improving and expanding Internet connectivity across the country, Tholons has gathered from interviews with service providers in Dhaka City, that the 99% uptime

reliability that is often required by foreign clients, is still not prevalent in the country, at least not currently. Reliable power generation and distribution is also an ongoing concern, with many service providers needing to purchase power generators to negate the ill-effects of power disruption. This stop-gap measure has the tendency to raise both capital and operation costs for a service provider.

These pain points debilitate infrastructure as a whole, which can then create cascading and detrimental effects to a service provider's productivity and output levels. Thus, without the proper and capable infrastructure, the *seemingly pronounced* advantages of scale and cost of the country, could be *effectively negated*.

Focus Niches

Though there may seem a wide array of market opportunities for the Bangladesh IT/ITeS sector, the practical reality is, there is in fact a logical limit of feasible opportunities. A more focused approach when approaching both export and domestic services outsourcing markets is also more advantageous, as it allows for better utilization of limited marketing and promotion resources, and encourages a more efficient manner for the local industry to identify service niche areas. Further, this focused approach can help build a more defined identity for the sector. A product (service) for all, is in fact, a product for now one – the same holds true for the services outsourcing sector of Bangladesh. The sector cannot, and should not merely ambition to be a 'provider of outsourced services,' it must have a more refined position. And this more refined position, is what will allow the country to establish its footprint, and place, in the global services outsourcing market.

The *practical limitations* of the country's IT/ITeS sector has been brought about by the ecosystem hindrances which have been identified in previous sections of this strategy project. In particular, the salient barriers have been identified as deficiencies in the following areas:

- Physical & Utilities Infrastructure
- Talent Pipeline and Proficiencies
- Low-level of awareness of 'Bangladesh Outsourcing'
- Institutional Barriers
- Access to Investment Capital

As such, it is also presumed that if these developmental barriers are addressed, then greater market potential and opportunities, can in fact be realized. Tholons must articulate that although the following proposed niche areas are considered to be the most feasible market areas for the local sector to consider – *where they will likely have the greatest changes of succeeding in the near-term* – Tholons does not discount that focus niches may in fact expand or altogether shift to difference market direction, if the identified ecosystem deficiencies are properly resolved.

Upon analysis of the country's current IT/ITeS landscape, the service outsourcing sector of the country appears to have the greatest opportunities, evidenced by past and current capabilities, to provide ITO services, and particularly in the Customized Software Development subsector. Moreover, the Customized Software Development subsector has the *realistic opportunity t*o expand market share in both domestic and export fronts.

Interview and consultation with industry stakeholders and players have also substantiated this assumption, with many key players indicating that the BFSI, Telco and Government sectors, being the low-hanging fruits in the domestic market for customized applications. These domestic industry sectors are also likely to have sustained (long-term) requirements for software solutions.

The export front is less visible given the current state of the local industry. However, and as previously implied, existing trade and diplomatic relations with relevant software export markets such as Japan, the Scandinavian countries and Middle-East markets, could all be considered landing spots for Bangladesh-developed applications.

The large, North American market, though attractive at first glance, should be approached with caution. Though it is a lucrative revenue market, it is also a relatively crowded market, with large incumbent providers well entrenched. Likewise, it is a highly visible market where service buyers are 'less forgiving' of service delivery deficiencies or mistakes. This is a particular consideration for Bangladesh service providers and stakeholders alike, as many of its young companies are still developing and will likely continue to experience the 'growing pains' associated with the maturation process. It would be detrimental to the developmental goals of the Bangladesh IT/ITeS industry, if such growing pains are experienced and exposed in a cutthroat market like North America, where it could suffer serious blows to its image and identity. *As such, North America should be viewed as a mid-to-long term target market, where Bangladesh service providers will only approach, once they are fully capable of servicing properly.*

Chart 2: BASIS Member Companies Business Specialization 2014
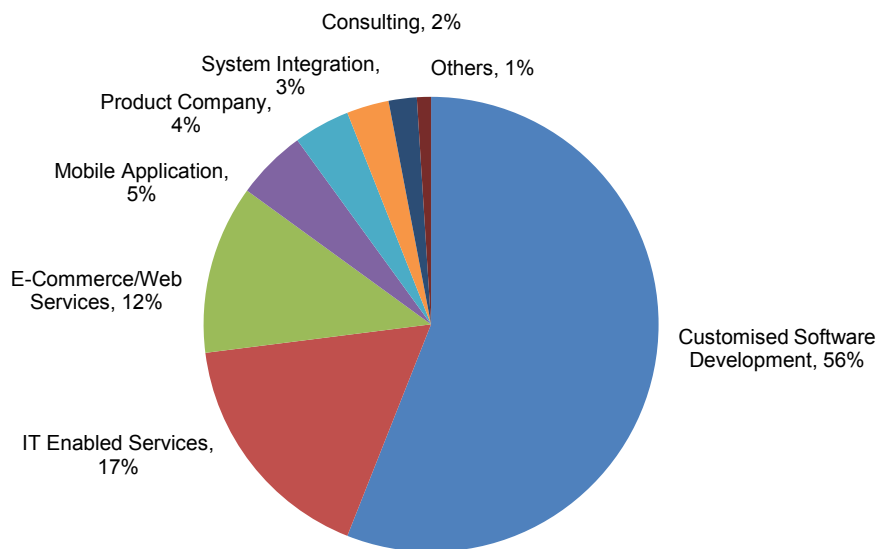
Source: BASIS Software & IT Services Catalog, 2014

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As shown in the second deliverable of this Strategy Roadmap, there are three current segments in the Bangladesh IT/ITeS sector that are clearly leading the industry (see Chart 2). Customized Software Development, ITeS, and E-Commerce/Web Services were also mentioned by industry providers as the areas showing the most growth over 2013, and consequently, were also the subsectors which stakeholders were most optimistic of when viewing future industry trajectory. Further, there *already exists* in the country a healthily growing provider ecosystem in these three core segments. Current BASIS statistics for instance, shows that a vast majority of its 963 members[1] are already engaged in Software Development, and specifically, Customized Software Development. IT enabled Services on the other hand, has been sustained by robust domestic demand for contact support services (contact centers), back-office, finance and accounting services.

Tholons must note that although there have been significant developments in the country's Telco and mobile sector in recent years - *consequently raising the potential for Mobile Application Development* – this remains and extremely fluid service subsector which much be viewed with prudence when considering. In the context of Bangladesh Mobile Applications, development will be highly localized in nature, due to language and profile of its user base. Likewise, there is already a high degree of commoditization of mobile applications in the external (global) markets, thereby narrowing the windows of opportunity for aspiring local mobile application providers.

There is also a dynamic variable in the Bangladesh context that is gaining prominence and catalyzing industry growth and awareness, the Freelance sector. Industry stakeholders may be able to take advantage of the vast (and growing) freelance talent pool - now numbering nearly 30,000 – and provide additional training and access to investment capital, allowing them greater opportunities to build more *'formal'* and larger business units. Viewing the Freelance segment, and identifying focus niches for the country is not without discrepancies. The freelance market, by nature, is in fact highly fragmented, and its underlying strength as a delivery platform is precisely that it can provide a great variety of services, across any given market. This underlying principle of freelancing, a seeming contrast to the 'focused nature' of identifying niche services. As mentioned in the previous deliverable, this fragmented nature can also be attributed to the fact that most freelancers in the country lack the necessary skills to commit to high process, large volume tasks. Most freelancers in the country are working students that are simply aiming to support their family and educational needs. Analyzing the composition of freelancers in the country also validates this 'scattered focus,' as freelancers are said to serve *over 10 countries*, with a highly diverse services portfolio including industry verticals from *Software and ITeS companies, Media outlets, Training and educational institutions,* with the top processes being procured; *Web development, web design, data entry, technical writing, SEO and e-Commerce.*

There also exist potential for the country to develop BPO services and establish market niches for the sector. Accordingly, Customer Support Services represent the largest revenue source among services delivered by Contact Support providers in the country, followed by Virtual Receptionist Services and Telemarketing. Similar to the ITO sector, and though there is opportunity to capture and expand market share in Western Markets, Tholons believes that the near-term market focus for the BPO sector should in fact be the domestic market. Only when scale capabilities and

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[1] BASIS, as of October 26, 2015.

language/process proficiencies can be provided (and sustained) by *multiple large BPO providers in the country*, should the large Western BPO markets then be considered.

With regard to alternative export markets, the country has maintained healthy bilateral relations with Japan, a key service buyer market in the APAC region. Japan's IT services market was pegged at US$211.4 billion in 2014, driven by the BFSI and Manufacturing sectors.[2] Japan is also Bangladesh's 11th-largest export market, with Bangladesh exports comprising 26% of all Japanese imports from least developed countries. These incentives significantly boost the investment relationship between the countries, and should be viewed by industry stakeholders as a jump-off point to increase traction in the services outsourcing space. Further, Japan has also begun to explore alternative (and cheaper) services outsourcing destinations, beyond its traditional provider China (Dalian City), and Bangladesh could become a potential destination.

Capability & Opportunity Profile

In this section, Table 3 below illustrates the select IT/ITeS sector capabilities, which the country should emphasize to externals markets and focus on locally to improve scale capabilities and service delivery proficiencies. The opportunity side shows the inherent propositions of the sector that can provide *truly competitive advantages* and opportunities to the country's IT/ITeS industry.

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[2] NASSCOM Newsletter, 2014

Table 3: Bangladesh IT/ITeS Capability & Opportunity Profile

Capability	Opportunity
ITO Sector	
Application Development, IT Product Development	a. Labor Pool Matching the Capability • Cost advantage: Bangladesh has one of the cheapest operational costs in Asia. Entry-level salary costs can be 50% cheaper than India and the Philippines. • Local market demand for ITO services is large and varied enough to sustain growth of local providers, and *prepare them for entry into larger export* • Population scale: Availability of technically skilled and educated talent pool is growing. Local talent pipeline is largely untapped. • Government is more aggressively promoting the IT/ITeS sector as a means to diversify export sector and to increase FDI (talent development & training programs, scholarships, etc.) b. Cost Component: Range of salaries in Bangladesh is BDT15,000 - 60,000 per month with average of BDT40,000. Entry level is around BDT20,000/month. c. Global IT Sourcing Market: ~US$88-91 billion in 2014 (NASSCOM). Bangladesh IT/ITeS sector is targeting *only* US$1 billion in exports by 2021. The current and future market will remain large, and addressable, even for new entrants. d. Headcount: Average employee size of ITO providers in Bangladesh is 26. There is opportunity at this early stage of the industry for consolidation, and create mid-sized companies from the many small, fragmented companies that currently exists. These mid-sized companies can then pool resources and become more competitive service providers, increasing opportunities in the external, export markets.

BPO & ITeS Sector	
F&A BPO 16% active service groups	a. Stabilizing domestic growth • Service providers have noted that improving economic conditions have pushed local industry sectors to increase procurement of F&A BPO services. b. Cost Component: Average salary in Bangladesh is BDT50,000 /month for FA practitioners. c. Headcount: According to the e-Gen Survey of 2014, the average employee size of F&A BPO providers in Bangladesh is around 52, consisting of ~40 F&A practitioners.
Freelancing (*From Elance-oDesk*): total of 435,249 jobs were allocated to Bangladeshi freelancers (2010 to Q12014)	a. Labor Pool Matching the Capability • More than 80% of freelancers have advanced university degrees. • Bangladeshi freelancers working for clients in more than 10 countries – with USA and UK as top destinations. b. Cost Component – Average hourly rate of Bangladesh freelancers is ~US$8.0 c. Supply and Cost d. Total revenue estimated at a mere US$53 million from 2010 to 2014. There is a tremendous up-side for the segment. e. There is opportunity to expand Freelancer footprint across the country as Telco and Internet network improves and expands. As of Q1 2014, the total number of Freelancers in the country registered ~390,000.

Source: NASSCOM Strategic Review 2015, Elance-oDesk, Inc. 2015, Tholons Research, 2015

The ITO sector, particularly customized application development, in the country is dominated by relatively young firms, with Dhaka possessing the highest density of application development providers. Further, project based delivery is the highest revenue source for the sector, contributing nearly 50% of total industry revenue, followed by software implementation and software project development and management services. In software application specialization, Banking applications, Accounting and financial software and integrated business applications are the foremost revenue sources.

It is also worth noting that despite the recent emergence and surge in adoption of mobile telecommunications in the country, that mobile application development remains an under-utilized (under-performing) sector in terms of revenue contribution. This indicates vast opportunities in the space. Government also remains a potentially viable client for the ITO sector, though potentially large procurements may take longer to materialize, as integration of software solutions may ultimately hinge on the rate of ICT adoption across the entirety of the large Government platform. This may transpire only at a tepid and protracted pace.

Average headcount for software firms in Bangladesh is 26 employees, with programmers having the highest density followed by software engineers and web developers. Most providers have strict standards when hiring, preferring to hire those with relevant academic or professional qualifications. This is done to minimize often lengthy and costly training periods. Though there are stringent hiring measures in place, there in fact, exists a prevailing difficulty to hire qualified talent in this sector. Respondents reported *lack of technical skills* and *lack of English-based communications skills, as the most evident issues when evaluating prospective applicants.*

Among the requirements, prior experience in the field substantially raises the salary bracket of an employee, with three years of experience doubling the base salary. However, and according to the e-Gen Survey of 2014, the salary tends to saturate over time, starting from 5 years of experience. A BDT40,000 salary can stagnate to only BDT50,000 with 5 years of experience. *This trend directly impacts attrition rates and discourage long-term employment in the sector.*

Industry players have also noted a steady uptake for outsourced F&A services in the country, and Tholons believes that is one of the emerging services outsourcing sectors in Bangladesh, where industry capability is directly in-line with local capability. Local providers saw increases in demand from pharmaceutical and garments companies, while a handful were able to land contracts from multinationals, in practice areas such as general accounting, project accounting and financial and operational reporting. The domestic market remains the major source of revenue for this process group, with local F&A providers reporting a positive revenue trajectory of up to US$1.2 million, sourced from domestic demand by 2016. As for target markets, the US has been cited as the primary source for export revenues, at least in the near-term.

With regard to the talent pool capability of the IT/ITeS labor force, a great number of *providers expressed dissatisfaction with the general quality of raw talent available in the country*. Workplace inhibitors included: *absenteeism, high attrition rate, low motivation, job security over high process tasks.* These issues along with the already tight supply of quality, *production–ready talent*, continues to impede sector potential. However, despite HR limitations, providers noted considerable headcount growth across the sector. In 2011, only 34 employees were counted for each company, while in 2014, this average nearly doubled at 64 employees per company.

The Freelance sector has been one of the more visible segments in recent years, with industry stakeholders and government acknowledging the positive opportunity the segment provides the nation's young professionals. Foreign companies often choose Bangladeshi workers, primarily because of their *lower costs in providing similar types quality services and processes*. Consequently, this also poses adverse consequences for the sector's *formalized players*. That is, as the billing rates for freelancers are typically lower than their 'formal counterparts,' as freelancers have less overheads and operating expenses to cover, allowing freelances to receive a greater share of payments, then established service providers are forced to compete by increasing their salary offers, needing to keep and attract talent, while at the same time, cover the higher operating expenses of their more established delivery facilities.

Finally, there are ecosystem dynamics which can significantly affect the performance of the Freelancer segment. Erratic power supply and data connectivity for example, can both lead to substantial hits in productivity and output, much more telling for the freelancers, who would typically not have access to power generators or redundant connectivity.
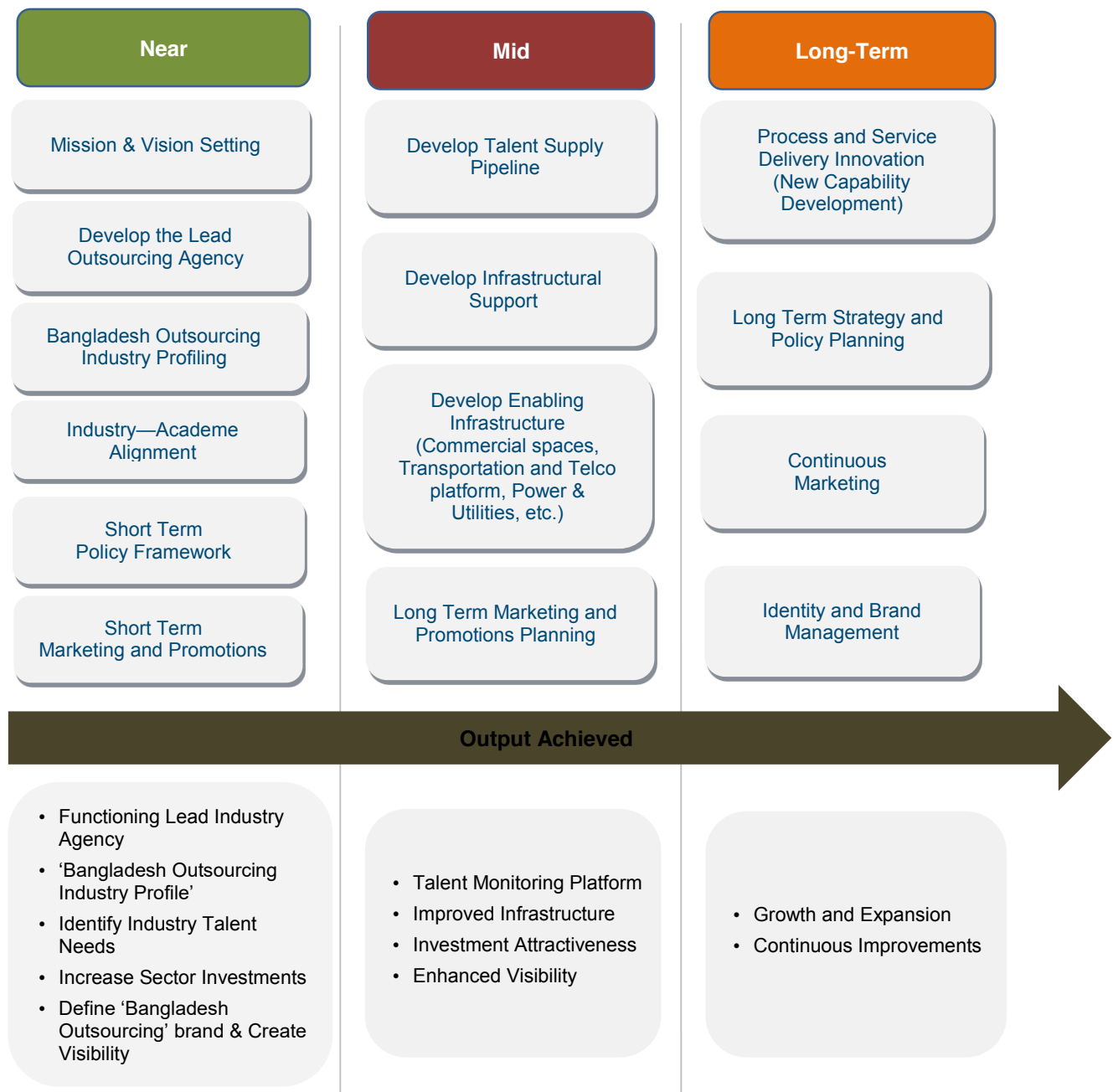
Strategy Framework

In order for IT/ITeS industry development be sustained in Bangladesh, the initial phase, or approach, towards development must be both pragmatic in nature and rigorously scrutinized. That is, the most important developmental first-steps must be properly identified, and nuanced with the *practical characteristics (drivers and inhibitors)* of the Bangladesh ecosystem.

This includes proper identification and utilization of the resources (i.e. financial and personnel) available from both the public sector and industry. Also, the establishment of a *pragmatic industry development roadmap can provide great assistance to stakeholders, by serving as an implementation and milestones guide for implementing bodies and relevant monitoring bodies* (i.e. Government). Further, this will allow the implementing bodies to maintain the same level of focus throughout the implementation stages, reminding stakeholders of the milestone parameters for each activity and how each milestone contributes to the overall development of the country's IT/ITeS industry.

As such, Tholons has developed specific developmental action items, segmented according to three distinct phases - *Near, Mid, and Long-term*. These action items aim to provide the Government of Bangladesh and corresponding IT/ITeS stakeholders, a *pragmatic guide* that aims to enhance the current position of the country's services outsourcing industry, while laying the foundation longer-term sustainability and growth.

Figure 2: Bangladesh IT/ITeS Industry Action Items

Near	Mid	Long-Term
Mission & Vision Setting	Develop Talent Supply Pipeline	Process and Service Delivery Innovation (New Capability Development)
Develop the Lead Outsourcing Agency	Develop Infrastructural Support	Long Term Strategy and Policy Planning
Bangladesh Outsourcing Industry Profiling	Develop Enabling Infrastructure (Commercial spaces, Transportation and Telco platform, Power & Utilities, etc.)	Continuous Marketing
Industry—Academe Alignment		
Short Term Policy Framework	Long Term Marketing and Promotions Planning	Identity and Brand Management
Short Term Marketing and Promotions		

Output Achieved →

• Functioning Lead Industry Agency • 'Bangladesh Outsourcing Industry Profile' • Identify Industry Talent Needs • Increase Sector Investments • Define 'Bangladesh Outsourcing' brand & Create Visibility	• Talent Monitoring Platform • Improved Infrastructure • Investment Attractiveness • Enhanced Visibility	• Growth and Expansion • Continuous Improvements

- Industry Development Theme -

Accelerate local industry development by optimizing current capabilities. Build long-term foundation for growth and sustainability, through the exploration of niche sector opportunities and by leveraging on inherent strengths of Bangladesh – namely, its vast talent resources and favorable cost arbitrage.

The first action item group *(Near)* sets the initial steps required to chart the developmental path and strategy for the services outsourcing sector of Bangladesh. In analyzing this group, Tholons has called to attention, various industry building programs and initiatives that *appear to be serving their functions but not reaching full potential*. Examples such as the initiatives to develop a Lead Industry Agency and the comprehensive profiling of the industry – both of which have been attempted in the past in varying degrees, but have not resulted in any tangible outputs. These efforts are seen to be essential in building the foundation of a more structured outsourcing sector that can be much more responsive to global market opportunities. It is also essential to activate the action items in this first group, as these will pave the way for the succeeding action items and strategies in the mid and long-term groups. It is important to note that actions under the *Near group,* simply aim to systematize and organize the developmental plans and consequently, the existing industry sector. Thus, Tholons notes that there could be in fact, existing systems and initiatives in place, which fulfill the various roles and responsibilities identified in this action item group. In such cases, there is no need to replicate these existing systems or initiatives.

The **Mid** action item group involves mid and long-term planning initiatives and implementations. Findings and results from the *Near* group will be the foundation for this group. The initiatives of this group are aimed at *catalyzing a progressive and sustainable pace of industry development.* Reforms in this stage call for greater mobilization of resources from key industry stakeholders. Sustained educational efforts in the form of improved technical skills education and continuous development of basic abilities will ensure talent pipeline for the IT/ITeS industry. Likewise, this group will be the venue for infrastructure development in Bangladesh, while allowing for government to more effectively utilize available resources (i.e. land, capital, human, etc.) and improve on key ecosystem areas such as transport systems, which would facilitate greater labor force mobility. *The proper implementation of these strategies is again dependent on the effective mobilization of resources from the most relevant industry and local government stakeholders.*

Finally, the **Long-Term** action group is intended to ensure the continuity and growth of the services outsourcing industry in the country. This group is essential in preparing the industry for longer-term sustainability and eventual maturity. This phase should also consider and expect conditions which are normal for a maturing services outsourcing sector (e.g. plateauing of growth rates, saturation of primary delivery centers, higher industry attrition, etc.). In this group, additional niches will need to be identified to ensure long-term sustainability. This highlights the importance of *Process and Service Delivery Innovation* and continuous effort to improve Bangladesh's delivery capabilities in the long term.

Conversely, the driving force determining the success of these action items will be derived from the consolidated efforts of relevant stakeholders and key institutions in Bangladesh. There has to be a process and general consensus that must be established prior to the execution and implementation of the Industry Strategy Roadmap. The continuous reinforcement of ideals and goals throughout the Roadmap, from pre-implementation to post-implementation, will also aid in ensuring successful implementation of action items.

Further, and in the present environment of the country, it was learned that consensus building may be better approached with a *trickle-up approach*, where consensus is generated form the grassroots, filtering upwards towards the higher industry and government authorities.

As explained, successful implementation can only happen through the concerted efforts all relevant stakeholders and key institutions.

Each of the distinct entities within each group, must perform their intended functions accordingly and without bias. All industry-building objectives and tasks, must be beneficial for the entire industry, and must support industry development, and not favor a particular sector or segment of the industry. This process is significant in *sharing industry-building responsibilities*, which often falls on only one entity. Thus, in this shared or *collaborative approach,* all stakeholders are aware of the systematic process of the implementation and will also be able provide meaningful input.

Figure 3: The Board of Directors and Executive Committee
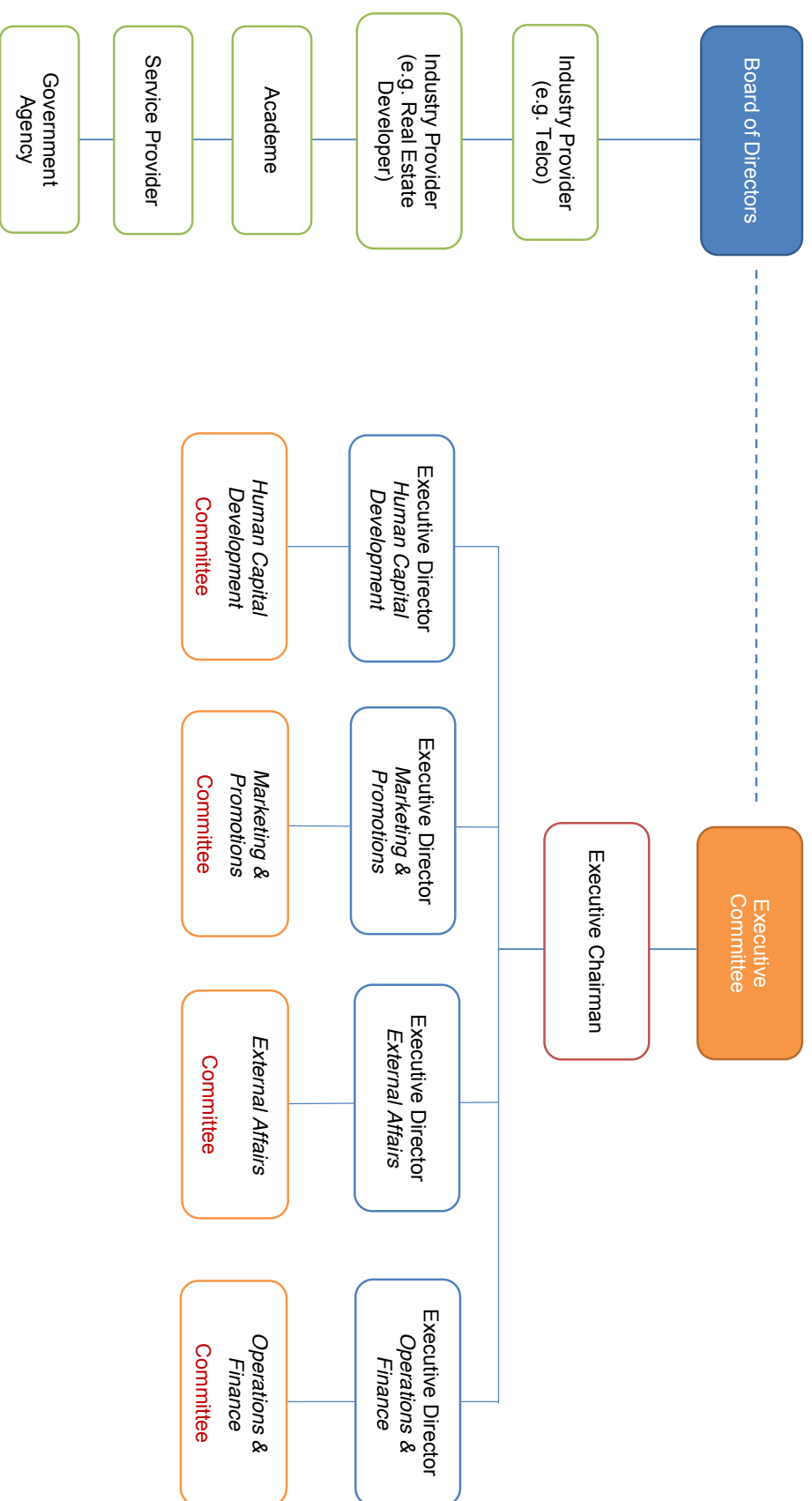
Figure 3 above shows an organizational hierarchy with certain components patterned after the IT and Business Process Association of the Philippines (IBPAP). In the context of Bangladesh, this *hybrid organizational structure* can be considered in developing the country's own *Lead Industry Agency*. The organizational structure is both simple, and pragmatic in the sense that each functional group (committee) is able to effectively cover the various ecosystem components composing the services outsourcing industry of the country.

Through the IBPAP, the Philippines has emerged as one of the most progressive services outsourcing destination in Southeast Asia, if not the world. The IBPAP has been instrumental in ensuring the development of the country's IT-BPM industry, through aggressive industry-building initiatives, sustained external marketing campaigns, and regular collaboration with academe and government institutions – all of which have enabled the sector to enhance capabilities and harness the potential of the country's IT/ITeS talent pool.

In the hybrid model above, the Executive Committee (EC), consisting of the Executive Chairman down to the individual Committee Heads, *performs a purely executory role as the Lead Industry Agency*. The committee must involve itself in regular, collaborative meetings that will discuss and act upon, the various issues and interventions, facing and required by the industry. Among the broad goals that the Executive Committee will be tasked to fulfill the following executory functions, among others:

- Develop and mandate industry development policies and bylaws
- Execute industry developmental plans and initiatives
- Advice and propose industry specific incentives and fiscal benefits (for service providers)
- Advice and propose industry specific incentives and bylaws for the protection of IT/ITeS workers
- Advice and execute human capital development initiatives intended to uplift the local IT/ITeS workforce

The Board of Directors (BOD) *acts in an advisory capacity,* working in the background, and parallel to the Executive Committee. While the EC is tasked the execution, the BOD will ensure that the executed agendas are relevant, substantial and directly benefit the industry. The BOD, because of their more specialized and technical understanding of their respective industry sector, can provide more pragmatic advice on industry issues, and can more effectively guide the EC in executing developmental actions as the Lead Industry Agency. The BOD, can be viewed as an *advisory body with relevant subject-matter-expertise*. Moreover, the BOD can also use its advisory capacity to guide the Lead Industry Agency in navigating through current industry issues, as many of these issues often require immediate action or intervention.

The significance of BOD members as technical experts, cannot be understated. The BOD member from the Academe for instance, can provide the *most relevant* and necessary insights for curriculum and upskilling initiatives, given that member's familiarity with students and the country's academic platform. The same principle applies for the Telco provider, the Government agency and the service provider members. Further, having a BOD member from Government can also allow for the pertinent Government agency to work more closely with the Lead Industry Agency. This can allow for a more *proactive relationship* where Government works hand-in-hand with industry, is better informed of marketing and promotion efforts, industry development plans and human capital

initiatives. This closer relationship, can facilitate for better interaction between the private and public sectors, and possibly lessen bureaucratic complications.

The organization hierarchy of this *proposed* Lead Industry Agency runs parallel from Executive Committee down to the Board of Directors. This hybrid model is one which industry stakeholders in Bangladesh may consider and base their decision upon, when creating an IT/ITeS industry body. With a dedicated agency (industry organization body) that is tasked to *focus exclusively on the unique needs of the IT/ITeS sector in Bangladesh, a more focused and efficient means of industry development can be achieved.*

However industry stakeholders must also bear in mind that the Philippines IBPAP model, or any other industry organization model for that matter, is and will always subject to local conditions and dynamics in Bangladesh. *That is, while this hybrid model is suitable and implementable, given the current state found in the Bangladesh environment, where there is a high degree of fragmentation across both public and private sectors, that despite the appropriateness of the proposed model, the capability of stakeholders to overcome or work-around local conditions will likely be the determining factor to success when creating this proposed Lead Industry Agency. The ultimate responsibility of creating a successful Industry Body, thus lies on the implementing stakeholders, and not in the form or type of the organizational model.*

In the following section, this study provides the Industry Strategy Framework which serves as a high-level implementation guide for the proposed Lead Industry Agency and relevant stakeholders. The Framework allows the implementation personnel to keep track of respective developmental goals through the near, mid and long-term horizons. The *underlying purpose* of this framework is to lay the course for the developmental foundation and necessary steps (action items), that the country and industry must take to arrive at its intended goals. These activities involve not only the efforts of the Lead Industry Agency, but also of the relevant public and private institutions, the academe, individual stakeholders, and private industry players.

Table 4: Bangladesh IT/ITeS Industry Strategy Framework

Preliminary Strategy Framework to Develop the IT/ITeS Industry of Bangladesh			
Near			
Objective	Action Items & Activities	Key Stakeholders & Responsibilities	Milestone & Achievement Parameters
Mission & Vision Setting	• Identify strategic goals and objectives to develop Bangladesh IT/ITeS Sector. • Identify developmental hindrances affecting growth & sustainability of IT/ITeS Sector.	• BCC and BASIS – Align strategic initiatives of diverse sectors and identify growth hindrances for each industry subsector.	• Stakeholder and Industry-approved Mission and Vision that will guide subsequent steps of Industry Development.
Develop Lead Industry Agency	• Continuous collaboration with relevant stakeholder (BACCO, ISPAB, BANBEIS etc.) to identify sector/sub-sector initiatives to develop IT/ITeS industry. • Highlight ICT Policy No. 158 which states the need to *establish an authority/body on ICT Industry Development.* • Specify roles of each aligned sector/ organization and stakeholders in carrying out the mandate of the Lead Industry Agency. • Collaborate with Academe to align industry talent requirements, with talent output of Academic sector.	• Develop interaction & feedback platform that will facilitate exchange of ideas that will better identify stakeholder responsibilities and tasks that will assist the Lead Industry Agency in executing its initiatives.	• Enhance presence of Lead Industry Agency across relevant institutions and sectors in the country. This will hasten sector development and allow for faster consensus building.

IT/ITeS Industry Profiling	• *Comprehensive Industry Census* of current service providers and headcount to properly establish industry benchmarks and forecast industry supply/capacity. • Market segmentation of current Industry (revenue & headcount) and projected revenue forecast (5-year horizon).	• Lead Industry Agency in collaboration with subsector groups – Establish a comprehensive and verifiable statistics database.	• Market size (revenue & headcount) and employee statistics with 5-year forecast.
Industry-Academe Alignment	• Establish partnerships and identify collaborative interventions between Academe and Industry (HEIs and Service Providers). • BCC can advise on specific training courses to be added to the curriculum, to better prepare students for IT/ITeS employment. • Analysis of industry talent needs and align academic platforms (and curriculums) to address these needs.	• Lead Industry Agency, BANBEIS, and BCC – Collaborate and create training programs to align the capabilities and skill of talent pool towards the specific industry needs.	• Create formal and working partnerships between IT/ITeS industry and academe.
Short Term Policy Framework	• Enhance Fiscal Incentives Policies (i.e. tax holidays, duty-free status on equipment, etc.) • Review tax/incentive policies and their efficacy. • Propose reform options for investment incentives and tax policies. • Benchmark existing tax incentives with those of other mature & emerging service provider nations, such as India, Philippines and Sri Lanka.	• Lead Industry Agency should collaborate with government to identify policies that directly affect industry and propose policies & incentives that can accelerate IT/ITeS development.	• Create a more conducive investment climate, with specific provisions and value-ads for IT/ITeS companies. This will lead to better operational performance of local players and attract more foreign providers to consider the country.

	• Improve legal framework & streamline processes for businesses, transparency in the regulatory systems, and establishment of clear and centralized requirements for business operations to give parity between local and foreign businesses. Simplify technical business procedures - licensing, business permits and tax filing, etc.		
Short Term Marketing and Promotions	• Develop and strengthen the 'Bangladesh Outsourcing' brand, so it can create an identity in external markets • Identify strategic geographies and industry verticals as targets for Marketing and Promotion efforts • Participate in select roadshows and trade events (local & international) • Partner with embassies and trade missions in specific countries where Bangladesh IT/ITeS sector has the *realistic potential* to penetrate as export targets.	• Lead Industry Agency • External Third Party Marketing & Promotion Groups • Industry Analyst Groups	• Identify and develop current Industry differentiators. • Identify and develop Value Proposition for investors. • Create Brand Visibility. • Promote 'Bangladesh Outsourcing' brand to external audience.
Mid			
Develop Talent Supply Pipeline	• Identify talent/skill needs of industry and align with talent pool. • Implement *skills monitoring platform* to ensure that quality of local skills are sufficient and capable of meeting international standards & requirements (mid/long-term).	• Lead Industry Agency with Academe and BANBEIS	• Talent Benchmark Index compared with leading service delivery locations • Internal (industry) Skill Monitoring Platform • Talent Assessment Platform

	• Diversify services portfolio, for country to better utilize large talent pool. Further develop other industry segments to expand revenue contribution.		
	• Increase English proficiencies to expand market share in lucrative North American services outsourcing market.		
	• Launch more relevant and more frequent industry job fairs and branding campaigns.		
	• Integrate technical skills development modules into curriculum of relevant course disciplines in country HEIs.		
Infrastructure Development	• Expand Internet penetration to increase ICT adoption and literacy. • Improve Telco & Utilities redundancy across alterative IT/ITeS locations. • Establishment of alternative service delivery locations - which could offset supply constraints of country's *only* delivery hub (Dhaka). • Improve Power generation & distribution system. • Improve inter/intra city transportation system for greater labor pool mobility.	• Lead Industry Agency - As an industry policy advocate to Government, and working with Private Sector (i.e. Property developers, Telco & Utility Providers, etc.)	• Expand Telco and Physical Infrastructure across country to allow IT/ITeS industry to spread beyond Dhaka. • Develop and complete construction of existing/planned IT Parks and buildings (e.g. Janata Tower).
Optimize Usage of Commercial Areas	• Build more Class A office spaces. Complete development of existing (unfinished) IT Parks and training facilities.	• Lead Industry Agency in collaboration Government and Private Sector (i.e. real estate developers).	• Develop commercial spaces specific for IT/ITeS operations, including IT Parks & training facilities.

Mid-Term Marketing and Promotions	• Promotion of Bangladesh IT/ITeS industry to key geographic markets. • Host and deploy roadshows to expand market reach. • Participate in international IT/ITeS conferences/forums. • Organize international conferences in-country, to showcase the capabilities local IT/ITeS sector.	• Lead Industry Agency in collaboration with Privates Sector and industry stakeholders – Arrange & host symposiums and international conferences to better highlight the service delivery capabilities of the sector.	• Reinforcement of present and future industry differentiators. • Reinforcement of the 'Bangladesh Outsourcing' Brand to both internal and external audiences • Maintain visibility across target markets.
Long-Term			
New Capabilities Development	• Identify new services outsourcing niche areas for growth source. • Identify specific service/process areas for long-term specialization (market focus).	• Lead Industry Agency in collaboration with external Industry Analyst Groups that will allow the Agency to identify and chart future market targets.	• Expansion (diversification) of service delivery capabilities and offerings.
Long Term Strategy and Policy Planning	• Assess current situation. • Set new targets and vision. • Devise long-term growth plan.	• Lead Industry Agency in collaboration with relevant stakeholders - Identify the growth and future capacity of the sector, its thresholds, and new propositions the country can leverage to promote the industry.	• Growth and Sustainability Strategy.

Continuous Marketing	• Re-orient marketing & promotion efforts to *re-introduce Bangladesh* and its 'New Capabilities' and value propositions to internal and external audiences.	• Lead Industry Agency with support of stakeholders to continually develop and promote sector to domestic and external audiences.	• Sustain and re-invent when necessary, *sector identity* in both local and external markets.
	• Design long-term marketing and promotion strategies that are more specialization-driven and niche-based.		

Source: Tholons Research, 2015

There are numerous ways to develop the Bangladesh's IT/ITeS industry, though a great many of these approaches may not be entirely feasible for the country. As such, the proposed Framework above takes into account the prevailing environment and industry dynamics in Bangladesh, and crafts action items that are most suitable and appropriate to the needs of the local IT/ITeS industry.

These action items are also predicated upon the ability of the responsible stakeholders, to effectively fulfill their respective tasks and appointed functions. Further, Tholons must reiterate, that the collaborative efforts of the entire industry - *relevant stakeholders and public institutions* – is absolutely critical for the success of the Framework.

A transparent execution environment must also be in place, while previous inefficiencies and developmental bureaucracies, from both public and private sectors, must be entirely discarded. In this proposed scenario, all developmental steps must be taken in order to reach a common end, with all stakeholders recognizing that the success of the industry cannot be achieved by shortcutting or skipping any one step. Each of the major components in the Framework likewise represents a foundation where the IT/ITeS industry is built upon, and one missed area can possibly collapse or lengthen the pace of industry development.

Ultimately, all relevant stakeholders must realize that successful industry building, regardless of location, regardless of nation, is always a shared responsibility.

Data Collection Framework

Beyond ensuring the continuous development of the industry through policy, infrastructure development, talent pipeline improvement, among others – industry stakeholders should also prioritize the regular collection and updating of industry-relevant data. The data gathered will prove useful in not only tracking growth milestones, but likewise can serve as a *gauge of the industry's readiness to expand*. Once gathered, this data should then be regularly updated, ensuring that accurate industry statistical information is readily available to all interested parties (i.e. external investors, local policy makers, industry providers, academic institutions, etc.)

As an emerging outsourcing destination, it is also imperative for Bangladesh to be aware of its inherent capabilities, and how best to leverage on these proficiencies. Having a robust data collection framework can assist with this task, as it allows stakeholders to *keep track and monitor* industry output and delivery performance, with the collection and analysis of industry growth metrics (i.e. revenue, headcount, sub-sector performance).

Data Collection Methodology

Table 5: Secondary Data Update Calendar

Secondary Data Gathering			
Data	Governing Body	Data for 2015	Data for 2016
IT Exports • IT/ITeS Export Revenues	Export Promotion Bureau, Lead Industry Agency	Q1 of 2016	Q1 of 2017
Higher Education Institution Metrics • Total HEI Enrollees & Graduates • Graduates Segmented by Course	BANBEIS		
Industry Metrics • Number of IT/ITeS Companies • New Industry Members • Information on New & Old Companies	Industry/Sub-Sector Associations		
Freelance Segment Data • Number of Freelancers in Bangladesh • Segmentation of Jobs by category • Segmentation of Freelancers by demographics	Elance-oDesk, Lead Industry Agency		

Source: Tholons Research, 2015

Table 4 above shows the secondary dataset that can be utilized to validate and support findings from primary data gathering exercises. Performance metrics of the previous calendar year for each IT/ITeS subsectors (i.e. ITO, KPO, and BPO) should be finalized and consolidated by the Lead Industry Agency during the first quarter of the succeeding year. The secondary data falls under category, and as seen in Table 4, data for year 2015 should be finalized during the first quarter of 2016, the same schedule holds true for succeeding years.

IT/ITeS Export Revenues is one of the crucial data points that provides true indication of sector growth. This data is the responsibility of the Export Promotion Bureau of Bangladesh, and should be updated annually and analyzed alongside Industry Metrics. Monitoring export revenue growth will help governing bodies and stakeholders better project supply and demand trends, while allowing them to track performance milestones and effectivity of development strategies.

As mentioned, increased revenues and sustained sectoral growth are only possible if there is a sufficient and qualified talent pool available for the industry. Thus, an updated inventory of HEI enrollees and graduates, under the responsibility of BANBEIS, is critical to monitor the talent pipeline that is intended to fuel the country's IT/ITeS sector. This inventory should likewise be segmented according to course disciplines, as identification of the current and future course trends, can allow stakeholders to properly plan for target industry niches. There is little use for instance, to focus on a niche service group, that the local talent pool does not provide the skillsets to process effectively. Further, understanding the HEI graduate profile also gives stakeholders visibility on which skill sets the industry is requiring and which courses they can provide additional or specialized training for, to meet those specific industry skill requirements.

With IT/ITeS Export Revenues and HEI Metrics in hand, the proposed Industry Database can begin to take form. The next dataset to be consolidated and merged should be the statistics derived from the Industry Metrics category. This dataset is based on and verified by each respective industry association or subsector group. Ideally, revenue figures collected by the subsectors can be reconciled with export revenue figures from the Export Bureau. The industry Metrics dataset should also monitor the number new and old (closed) IT/ITeS companies in Bangladesh, to properly measure growth. This is currently an issue in Bangladesh, where many small service providers are not part of any formal industry association, and go through their entire corporate life-cycle under the radar. The Headcount data point under this category will also be crucial in measuring sector performance and growth.

The underlying objective of developing a consolidated Industry Database, and updating the identified datasets is to measure and monitor IT/ITeS industry growth and performance. Specific policies and interventions can then be drafted, based on the analyzed data, allowing for a much more proactive management of the sector. Currently, this is not the case in the Bangladesh IT/ITeS industry – where different associations often have distinct (and varying) datasets, with public stakeholders forced to take a more reactionary stance, because of the uncertainty which the fragmented industry metrics creates.

Table 6: Primary Data Gathering Framework

Primary Data Gathering Framework		
Industry Survey		
Name of Company	Initial Starting Capital	Current Number of Employees
Estimated Annual Revenue (previous year)	Estimated Export Percentage of Revenue	Actual Export Revenue
Target or Expected Revenue from Exports for the Next Year	Revenue & Headcount Growth Projections	Estimated Headcount Splits across Operations
Revenue Split across Operations	Average Entry-level Salary Rates	Languages Provided in the Operations
Focus Areas of Operations	Primary Service Groups	Primary Verticals/Industries Serviced
Technical Skills Required	Soft Skills Required	Average Attrition Rate (annual)
Primary Countries/Geographical Markets Serviced	Perceived Difficulties when Hiring Employees	Perceived Strengths of Bangladesh (Talent Cost & Availability, Business Environment, Govt. Incentives and Regulations, Market Access, Industry Maturity, Infrastructure, etc.)
Perceived Risks of Operations (Crime & Violence, Natural Risks, Bureaucracy, Govt. Instability, Govt. Support, Attrition & Talent Costs Instability, High Recruitment & Training Costs, Inadequate Infrastructure, etc.)	Challenges in own operations and across Industry (Talent Acquisition & Retention, Long-Term Strategy, Leadership Development & Retention, Process Transition, Organizational Capacity for export markets, Regulatory Challenges, Expansion of Service Portfolio, Attraction of New Clients, Growth Strategies, etc.)	Perceived view of Government and Institutions to facilitate company and industry growth and development. (Tax incentives, training subsidies, marketing and promotions assistance, etc.)

Company Growth & Performance	Service Delivery Profile	Perceptions

Source: Tholons Research, 2015

Under the Primary Data Gathering Framework, a periodic (annual) industry survey should be conducted, across as many possible respondents, and across all IT/ITeS subsectors. The results of this survey, are intended to monitor overall industry performance, and identify any conditions or trends which may adversely affect the trajectory of the sector.

Table 5 above also segments the Industry Survey platform according to data fields that correspond to specific performance or operational aspects of an IT/ITeS provider. For instance, the data points highlighted in blue, provide indication of Company Growth & Performance. This is a straightforward measurement of revenue and headcount. The data points from this group, can then be correlated with the information from the next data group, highlighted in red, or the field which provides indication of the company's Service Delivery Profile (i.e. skills, proficiencies, capacities, etc.).

In the Service Delivery Profile group, focal points pertaining to company operations are identified (e.g. primary service groups and target industry verticals). Drastic shifts within these data fields can give valuable insight to not only the delivery capabilities of the provider, but likewise, to the positioning of the individual provider in its target markets. For example, a service provider who had a large staff the last several years, providing F&A services to a large British accounting firm, may find the number of its personnel abruptly reduced, because of changes in legislation in the UK, and the emergence of alterative FAO destinations such as Sri Lanka. These are all external considerations, which this data group can provide insights to, providing individual companies and industry leaders the quantitative data that can be used as a foundation for prudent judgment.

The Perceptions group is then intended to capture the qualitative insights of industry players, drawing relevance from their 'perceived insights.' This aspect is equally important in these type of industry surveys, as a purely quantitative approach to 'describe' the sector, often does not explain the entirety of the industry. This is especially valid in the case of Bangladesh, where the emerging IT/ITeS sector, will undoubtedly report moderate numbers in its current state, though the qualitative perceptions of providers may otherwise indicate a much brighter and dynamic future.

It must be noted that for the results of this type of survey to be *useful*, that both quantitative and qualitative findings must be updated on regular (annual) intervals. In particular, comparing and relating the findings of the previous years with the current, can provide and indicative representation of industry movement whether it be progressive or regressive.

Finally, the responsibility of gathering the necessary data, running the Industry Survey, consolidating results, and the distribution of findings and analysis, lies ultimately in the hands of the country's IT/ITeS industry governing body – the Lead Industry Agency. This is a procedural best practice that is followed by leading industry bodies such as NASSCOM, IBPAP, BPeSA, SLASSCOM, and many other established ITeS locations.

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About Tholons

Tholons is a Services Globalization and Investment Advisory firm that combines "Best of Breed" consulting experience with deep execution expertise and investment insights to deliver truly effective services to its clients. Tholons offers a detailed understanding of business processes and combines it with practical hands-on expertise in executing the strategy. Tholons draws upon the considerable experience of a hand-picked team, which has successfully formulated and executed globalization strategies to unlock value for Global Fortune 1000 companies. Service providers leverage Tholons expertise to optimize their global delivery model. Tholons advisors engage with government bodies to build compelling strategies for making countries attractive destination for outsourcing.

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