## EXECUTIVE SUMMARY

### Strong growth opportunities
- The IT-BPM sector in India expanded at a CAGR of 13.7 per cent over 2010–16, which is 3–4 times higher than the global IT-BPM growth & is estimated to expand at a CAGR of 9.1 per cent to USD350 billion by 2025.

### Leading sourcing destination
- As of 2015, India is a prominent sourcing destination across the world, accounting for approximately 56 per cent market share in the global services sourcing business.
- India acquired a share of around 38 per cent in the overall Business Process Management (BPM) sourcing market.

### Largest pool of ready to hire talent
- India’s highly qualified talent pool of technical graduates is one of the largest in the world, facilitating its emergence as a preferred destination for outsourcing, computer science/information technology accounts for the biggest chunk of India’ fresh engineering talent pool, with more than 98 per cent of the colleges offering this stream.

### Most lucrative sector for investments
- The sector ranks 4\(^{th}\) in India’s total FDI share & accounts for approximately 37 per cent of total Private Equity & Venture investments in the country.

### Cash Cow
- In FY16, revenues of Indian IT-BPM market is estimated to touch USD160 billion.
- In 2015, Indian IT companies have helped clients to save USD200 billion in the last 5 years.
- India’s IT-BPM sector includes 670 offshore development centres around 78 countries.

Source: NASSCOM, TechSci Research
Notes: BPM – Business Process Management, USP – Unique Selling Proposition
IT & ITeS

ADVANTAGE INDIA
Growing demand
- Strong growth in demand for exports from new verticals
- Rapidly growing urban infrastructure has fostered several IT centres in the country
- Expanding economy to propel growth in local demand

Global footprints
- IT firms in India have delivery centres across the world; as of 2015, IT firms had a total of 670 centres in >78 countries
- India’s IT industry amounts to 12.3 per cent of the global market, largely due to exports
- IT & ITeS industry is well diversified across verticals such as BFSI, telecom & retail
- Increasing strategic alliance between domestic & international players to deliver solutions across the globe

Competitive advantage
- Cost savings of 60–70 per cent over source countries
- A preferred destination for IT & ITeS in the world; continues to be a leader in the global sourcing industry with 55 per cent market share
- The Indian IT industry has saved clients USD200 billion in the past 5 years

Policy support
- Tax holidays extended to the IT sector
- More liberal system for raising global capital, funding for seed capital and growth & ease of doing business, etc. have been addressed
- USD0.17 billion have been allocated for raising global capital, start ups
- Income Tax cut on royalty fee on tech services to 10 per cent
- Cumulative FDI inflow in computer software and hardware is USD22.83 billion from April 2000 to December 2016

Source: Nasscom, TechSci Research

Notes: SEZ stands for Special Economic Zone, BFSI stands for Banking, Financial Services and Insurance, E stands for Estimate, F stands for Forecast
MARKET OVERVIEW AND TRENDS
• By early 90s, US-based companies began to outsource work on low-cost & skilled talent pool in India

• IT industry started to mature
• Increased investment in R&D & infrastructure started
• India increasingly seen as a product development destination

• The number of firms in India grew in size & started offering complex services such as product management & go-to market strategies
• Western firms set up a number of captives in India

• Firms in India became multinational companies with delivery centres across the globe (670 centres in >78 countries, as of 2015)
• Indian IT-BPM revenue is likely to reach USD160 billion in FY16
• Employment in IT sector is expected to increase & reach 3.7 million people directly & over 10 million indirectly, as of FY16
• India’s IT sector is at an inflection point, moving from enterprise servicing to enterprise solutions
• The industry is 3rd largest start up base
• In FY16, the IT industry supported over 4,200 new start ups
SEGMENTS OF INDIA’S IT SECTOR

IT & ITeS sector

IT services
- Market Size: USD75 billion during FY16E
- Over 81 per cent of revenue comes from the export market
- BFSI continues to be the major vertical of the IT sector

Business Process Management (BPM)
- Market size: USD28 billion during FY16E
- Around 87 per cent of revenue comes from the export market
- Market size of BPM industry is estimated to rise from USD41 billion in FY20 to USD54 billion by FY25

Software products & engineering services
- Market size: USD27 billion during FY16E
- Over 83.9 per cent of revenue comes from exports

Hardware
- Market size: USD13.3 billion during FY16E
- The domestic market accounts for a significant share
- The domestic market is experiencing growth as the penetration of personal computers is rising in India

Source: Nasscom, TechSci Research
Notes: FY16E – Figures for FY16 are estimated
India’s technology & BPM sector (including hardware) is likely to generate revenues of USD160 billion during FY16 compared to USD146.5 billion in FY15, implying a growth rate of 9.5 per cent.

The contribution of the IT sector to India’s GDP rose to approximately 9.3 per cent in FY15.

TCS is the market leader, accounting for about 10.4 per cent of India’s total IT & ITeS sector revenue in FY16.

The top 5 IT firms contribute over 25 per cent to the total industry revenue, indicating the market is fairly competitive.

**Market size of IT industry in India (USD billion)**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Domestic</th>
<th>Export</th>
</tr>
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<tbody>
<tr>
<td>FY10</td>
<td>24</td>
<td>50</td>
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<td>FY11</td>
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<td>FY14</td>
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<td>86</td>
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<tr>
<td>FY15</td>
<td>48</td>
<td>98.5</td>
</tr>
<tr>
<td>FY16E</td>
<td>52</td>
<td>108</td>
</tr>
</tbody>
</table>

*Source: Nasscom, TechSci Research*

*Note: E - Estimates*
IT AND BPM ACCOUNT FOR 79.7 PER CENT OF INDIA’S IT & ITES EXPORTS

- Total exports from the IT-BPM sector (including hardware) were estimated to have been USD108 billion during FY16; exports rose at a CAGR of 61.68 per cent during FY09–16
- Export of IT services has been the major contributor, accounting for 56.59 per cent of total IT exports (including hardware) during FY16
- BPM accounted for 22.63 per cent of total IT exports during FY16
- In India, Personal Computer (PC) and Laptop shipments registered a YoY growth of 8.54 per cent to reach 2.16 million in the March quarter. PC shipments in the country declined by 7.8 per cent to 1.99 million during the same quarter last year owing to slowdown in consumer demand and the effects of the note ban in the last two months of 2016.

Growth in export revenue (USD billion)

Sector-wise breakup of export revenue FY16

Source: Nasscom, Make in India, TechSci Research
Note: E – Estimated
BFSI - A KEY BUSINESS VERTICAL FOR IT-BPM INDUSTRY

* BFSI is a key business vertical for the IT-BPM industry. It is expected to generate export revenue of around USD58.32 billion by the end of 2016, accounting for 54 per cent of total IT-BPM exports from India

* Approximately 79 per cent of total IT-BPM exports from India is across 4 sectors: BFSI, telecom, manufacturing & retail. The hitherto smaller sectors are expected to grow

* With introduction of new policies for healthcare & retail, these sectors are expected to grow at a faster pace in coming years, thus accelerating revenue of IT enabled services for the sectors

Distribution of export revenue across verticals (FY16)

- BFSI: 54%
- Hi-Tech/Telecom: 11%
- Manufacturing: 6%
- Healthcare: 4%
- Retail: 4%
- Construction & Utilities: 3%
- Travel & Transportation: 2%
- Others: 2%

Source: MoRTH, TechSci Research, Department of Electronics and IT Annual Report
Notes: BFSI - Banking, Financial Services and Insurance, *Emerging* - Retail, Utilities & Construction, Retail, Healthcare, Services, Transportation
The figures mentioned are for IT and BPM only and do not include engineering services and hardware exports
WITH OVER 62 PER CENT SHARE, US IS MAJOR IMPORTER OF IT SERVICES

* US has traditionally been the biggest importer of Indian IT exports; over 62 per cent of Indian IT-BPM exports were absorbed by the US during FY16

* Non US-UK countries accounted for just 21.0 per cent of total Indian IT-BPM exports during FY16

* Europe, one of the fast growing IT markets in 2015, is expected to emerge as a potential market as higher inclination towards offshoring firms would increase demand for IT services

* Being the low cost exporter of IT services, India is going to attract more markets in other regions in the same manner it tapped US markets

Source: Nasscom, TechSci Research, Department of Electronics and IT Annual Report
Note: ROW is Rest Of the World, APAC is Asia Pacific

For updated information, please visit www.ibef.org
IT-BPM SECTOR DOMINATED BY LARGE PLAYERS

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of players</th>
<th>Percentage of total export revenue</th>
<th>Percentage of total employees</th>
<th>Work focus</th>
</tr>
</thead>
</table>
| Large      | 11                | 47-50%                            | ~35-38%                       | • Fully integrated players offering complete range of services  
• Large scale operations & infrastructure  
• Presence in over 60 countries                                                                                                                                                                           |
| Medium     | 120-150           | 32-35%                            | ~28-30%                       | • Mid tier Indian and MNC firms offering services in multiple verticals  
• Dedicated captive centres  
• Near shore & offshore presence in more than 30-35 countries                                                                                                                                           |
| Emerging   | ~1,000-1,200      | 9-10%                             | ~15-20%                       | • Players offering niche IT-BPM services  
• Dedicated captives offering niche services  
• Expanding focus towards sub Fortune 500/1,000 firms                                                                                                                                                 |
| Small      | ~15,000           | 9-10%                             | ~15-18%                       | • Small players focusing on specific niches in either services or verticals  
• Includes Indian providers & small niche captives                                                                                                                                                     |

Source: Nasscom, TechSci Research
NOTABLE TRENDS IN INDIA’S IT & IITES SECTOR … (1/3)

Global delivery model

- Indian software product industry is expected to reach the mark of USD100 billion by 2025. In India, the number of global delivery centres in the IT-BPM sector reached 670, spreading out across 78 countries, as of 2015.
- New business models, technologies & addition of new markets is pushing growth; Infosys has opened a shop in Shanghai; TCS already has a big set-up in Uruguay.

Global sourcing hub

- India continues to maintain a leading position in the global sourcing market. Its market share increased to 55 per cent in 2015. India’s IT industry amounts to 7 per cent of the global market.

Engineering offshoring

- In 2015, India continued to be the most preferred location for global R&D outsourcing, with a share of 56 per cent.
- The sector includes 670 Offshore Development Centres (ODCs) around 78 countries.

Most lucrative sector for investments

- Increased focus on R&D by IT firms in India resulted in rising number of patents filed by them. In 2016, Indian IT-BPM sector is expected to grow 9.2 per cent since last year & reach USD160 billion.
- In May 2017, the government approved the proposal of Twin Star Technologies with an FDI investment of USD1.34 billion, through a combination of equity, compulsory convertible preference shares and debentures. The investment is likely to generate indirect and direct employment for around 30,000 people.

1 - conducted by Nasscom
Changing business dynamics

- India’s IT market is experiencing a significant shift from a few large-size deals to multiple small-size ones
- The number of start-ups in technology is expected to reach 50000, adding to around 2 per cent of GDP
- Delivery models are being altered, as the business is moving to capital expenditure (capex) based models from operational expenditure (opex), from a vendor’s frame of reference

Large players gaining advantage

- Large players with a wide range of capabilities are gaining ground as they move from being simple maintenance providers to full service players, offering infrastructure, system integration & consulting services
- Of the total revenue, about 80 per cent is contributed by 200 large & medium players

New technologies

- Disruptive technologies, such as cloud computing, social media & data analytics, are offering new avenues of growth across verticals for IT companies
- The SMAC (social, mobility, analytics, cloud) market is expected to grow to USD225 billion by 2020

Growth in non-linear models

- India’s IT sector is gradually moving from linear models (rising headcount to increase revenue) to non-linear ones
- In line with this, IT companies in India are focusing on new models such as platform-based BPM services and creation of intellectual property
NOTABLE TRENDS IN INDIA’S IT & ITES SECTOR … (3/3)

Consumerisation of IT
- Global outsourcing is being used to drive fundamental re-engineering of end-to-end processes
- Increased emphasis on beyond cost benefits
- IT firms in the current phase have moved up the value chain, providing innovation-led growth to clients from SLA satisfaction & RoI calculations

Emergence of Tier II cities
- Tier II & III cities are increasingly gaining traction among IT companies, aiming to establish business in India
- Cheap labour, affordable real estate, favourable government regulations, tax breaks & SEZ schemes facilitating their emergence as a new IT destination
- Giving rise to the domestic hub & spoke model, with Tier I cities acting as hubs & Tier II, III & IV as network of spokes

SMAC technologies, an inflection point for Indian IT
- Social, Mobility, Analytics & Cloud (SMAC), a paradigm shift in IT-BPM approaches experienced until now, is leading to digitisation of the entire business model

Rural Development
- The National Optical Fibre Network (NOFN) is being laid down in phases to connect all the 250,000 gram panchayats in the country

Make in India
- In May 2017, the central government announced to launch a policy named as Phased Manufacturing Programme (PMP), which was developed by the Ministry of Electronics & Information Technology (MeitY) with an aim to boost the manufacturing of cell phones in the country. In 2016-17, the total value of cell phones to be produced in India is expected to reach USD13.39 billion as compared to USD 8.03 billion in 2015-16.

Notes: SLA - Service Level Agreement; RoI - Return on Investment
IT & ITeS

PORTER FIVE FORCES ANALYSIS
Competitive Rivalry
- Intense competitive rivalry exists due to low switching costs
- Most of the bigger Indian firms offer same services and there is little product differentiation

Threat of New Entrants
- Easy entry as the capital required is low
- Large players, however, toughen prospects of small and medium players to win large deals

Substitute Products
- Threat is medium as new centres, such as Philippines and China, are fast gaining ground among investors due to their low cost advantages

Bargaining Power of Suppliers
- Bargaining power of suppliers is less as most of their businesses come from the same geographies
- Price taker rather than price maker

Bargaining Power of Customers
- Bargaining power is high as many IT firms fight for a similar project
- Firms are mostly dependent on same geography, which increases customer power
IT & ITeS

STRATEGIES ADOPTED
Expanding in Tier II & III cities and externally

- Companies are expanding their business to Tier II & III cities to have low cost advantage
- In 2016, Infosys bought 2 office space in Pune & Bengaluru India. TCS is planning to expand in Mumbai
- Companies are expanding their business towards emerging economies of East Europe & Latin American countries

Movement to SMAC & digital space

- Social Computing, Mobility, Analytics & Cloud (SMAC) is taking significant leaps
- Companies are getting into this field by offering big data services, which provides clients better insights for future cases

Product and Pricing differentiation

- Most of the IT companies have been offering similar products & services to their clients
- The companies are working towards product differentiation through various other services by branding themselves, e.g. Building Tomorrow’s Enterprise by Infosys
- Indian IT firms have started to adopt pricing strategies to compete with Global firms like IBM & Accenture

Promotion of R&D

- Companies are now investing a lot in R&D and training employees to create an efficient workforce, enhancing productivity & quality
- R&D forms a significant portion of companies’ expenses, which is critical when margins are in pressure, to promote innovations in the changing landscape

Fast-growing sectors within the BPM domain

- Knowledge services, data analytics, legal services, Business Process as a Service (BPaaS), cloud-based services

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IT & ITeS

IT SECTOR TO BE DRIVEN BY STRONG DEMAND AND INDIAN EXPERTISE

- 6 million graduates are estimated to have been added to India’s talent pool in FY16, wherein, IT-BPM employees are estimated to reach 3.7 million.
- Strong mix of young & experienced professionals
- Global BPM spending estimated to rise & reach to USD233 billion by 2020
- Computer penetration expected to increase
- Increasing adoption of technology & telecom by consumers & focused government initiatives leading to increased ICT adoption
- Robust IT infrastructure across various cities in India such as Bengaluru
- Technology mission for services in villages & schools, training in IT skills & E-Kranti for government service delivery & governance scheme

Source: Nasscom, TechSci Research

Notes: STPI stands for Software Technology Park of India, SEZ stands for Special Economic Zone, ICT - Information and communications technology, IT-BPM – Information Technology Business Process Management

JUNE 2017
Indian IT companies like TCS, Tech Mahindra Ltd., Mphasis, HCL Technologies Ltd., L & T Infotech Ltd., Wipro Technologies Ltd., Oracle Financial, Infosys Technologies Ltd. are expanding their footprint in order to meet client’s requirements globally.

Indian firms have started adopting the global delivery model to cater to local market & for taking advantage of low cost.

In April 2017, Google has launched an app “Areo” to aggregate food delivery & home services start-ups in India. The app is operational in Bangalore & Mumbai only. It has partnered with Faasos, Box8, Freshmenu, Zimmber & Urbanclap.

Dentsu Aegis Network acquired SVG Media Pvt. Ltd. in April 2017.

Subscriber base of local language users in smartphones in India has increased over the past few years, with 90 per cent of new internet users are opting for non-English language. As per the Google, the number of non-English users will surpass those using English by 2021.

Tech Mahindra has entered into a strategic alliance with Metric Stream, a US-based firm, with an aim to provide governance, risk & compliance solutions across the world.
Introduction of large e-Governance projects to provide better services through IT & focus on the formation of the cyber policy led to higher demand for IT & hardware from the government.

The Central Government & State/UT Government allocated 0.9–1.2 per cent & 2.8–3 per cent, respectively, of total budget for IT spend under the 12th Five Year Plan.

Strong consumer demand for IT service & products:

- Advent of smartphones, tablets & iPads
- Industry leaders are stressing the need for promoting support start-ups
- Rising computer literate population
- Enhanced internet & mobile penetration
- Growing disposable income strengthening consumer purchasing power
- Emerging verticals (retail, healthcare, utilities) are driving growth above 14 per cent

Domestic revenue from IT and BPM (USD billion)

<table>
<thead>
<tr>
<th></th>
<th>FY15</th>
<th>FY16E</th>
<th>FY20F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>48</td>
<td>52</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Nasscom, TechSci Research
Notes: UT - Union Territory, E:Estimated F - Forecasts
In FY16 the estimated revenue from exports of IT & BPM sector was USD108 billion. Global IT-BPM spending (excluding hardware) has grown 0.4 per cent over 2015 to nearly USD1.2 trillion.

India’s IT industry amounts to 4.26 per cent of the global market, largely due to exports as of 2015. In 2015 India comprised of around 500 BPM players generating a revenue of USD23 billion, which is expected to reach 50 billion in 2020.

During FY17 the country’s revenue growth in IT exports is expected at 10 per cent.

Emergence of SMAC would provide USD1 trillion market by 2020.

Emerging economies are likely to be a major contributor to IT spend growth.

- IT spend in emerging economies to grow 3-4 times faster than advanced economies.
- The BRIC IT market is estimated at USD380–420 billion by 2020.

Stable tax regime, reducing litigation related to tax & providing conducive environment for start-ups will improve the business environment.

Export revenue from IT and BPM (USD billion)

<table>
<thead>
<tr>
<th></th>
<th>FY14</th>
<th>FY15</th>
<th>FY16E</th>
</tr>
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<tbody>
<tr>
<td>Value</td>
<td>86</td>
<td>99</td>
<td>108</td>
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Core and non core segment’s growth prospects

<table>
<thead>
<tr>
<th></th>
<th>FY13E</th>
<th>FY16F</th>
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<tbody>
<tr>
<td>CADM</td>
<td>22</td>
<td>35</td>
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<tr>
<td>ER&amp;D</td>
<td>11</td>
<td>15</td>
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<tr>
<td>IT consulting</td>
<td>1.2</td>
<td>2</td>
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<tr>
<td>IS-sourcing</td>
<td>7.6</td>
<td>13</td>
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<tr>
<td>Knowledge services</td>
<td>3.2</td>
<td>5.5</td>
</tr>
<tr>
<td>Software testing</td>
<td>3.1</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Source: Nasscom, TechSci Research, Budget 2015-16
Notes: UT- Union Territory, E - Estimated

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Availability of skilled English speaking workforce has been a major reason behind India’s emergence as a global outsourcing hub.

During FY10-16, number of graduates addition to talent pool in India grew at a CAGR of 8.39 per cent.

India added more than 6 million graduates to the talent pool during FY16.

Growing talent pool of India has the ability to drive the R&D & innovation business in the IT-BPM space.

According to India Hiring Intent Survey 2017, 5 to 10 per cent increase in hiring by BPO/KPO & ITES companies in Karnataka, is anticipated in the coming year.

The office space absorption by the information technology (IT) and IT-enabled services (ITeS) companies increased by 10 per cent to 16.81 million square feet (sq. ft.) in 2016 over the previous year, with Bengaluru and Hyderabad together accounting for more than 50% of this space.
INDIAN TALENT POOL READY TO TAKE IT SECTOR TO THE NEXT LEVEL … (2/2)

- About 2 per cent of the industry revenue is spent on training employees in the IT-BPM sector.
- USD1.6 billion is spent annually on training workforce and growing R&D spend.
- Forty per cent of total spend on training is spent on training new employees.
- Numerous firms have forged alliances with leading education institutions to train employees.
NASSCOM’S PLAN TO INCREASE EMPLOYABILITY OF INDIA’S TALENT POOL

Objectives

- Enhance overall yield of employees
- Improve employability
- Expand to Tier II cities to reduce operating costs
- Low skill dependence

Initiatives

- Industry to enhance investment in training
- Use NAC & NAC – Tech to assess employability of talent pool
- Identified new tier II locations

Short term

- Reduce investment on training
- Develop specialist & project management expertise
- Develop a robust & credible information repository

Medium term

- Expand education capacity
- Promote reforms in education

Long term

Source: Nasscom, TechSci Research
Notes: NAC – Nasscom Assessment of Competence, IIIT - Indian Institutes of Information Technology
SEZ’S TO DRIVE IT SECTOR; TIER II CITIES EMERGE AS NEW CENTERS … (1/2)

* IT-SEZs have been initiated with an aim to create zones that lead to infrastructural development, exports & employment

* As on 31st March 2017, there were over 218 operational SEZs across the country

* Telangana government is planning to set up more IT hubs beyond Hyderabad. The state government has sanctioned USD3.7 million to develop IT incubation centres in Khammam and Karimnagar districts and decentralise the IT sector.

Characteristics of STPI and SEZ in India

<table>
<thead>
<tr>
<th>Parameters</th>
<th>STPI</th>
<th>SEZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
<td>• 10 years</td>
<td>• 15 years</td>
</tr>
<tr>
<td>Fiscal benefits</td>
<td>• 100 per cent tax holiday on export profits</td>
<td>• 100 per cent tax holiday on exports for 1st 5 years</td>
</tr>
<tr>
<td></td>
<td>• Exemption from excise duties &amp; customs</td>
<td>• Exemption from excise duties and customs</td>
</tr>
<tr>
<td>Location &amp; size restrictions</td>
<td>• No location constraints</td>
<td>• Restricted to prescribed zones with a minimum area of 25 acres</td>
</tr>
<tr>
<td></td>
<td>• 23 per cent STPI units in tier II &amp; III cities</td>
<td></td>
</tr>
</tbody>
</table>

Source: Nasscom, TechSci Research, STPI (Software Technology Parks of India)
Cost in newer cities is expected to be 28 per cent lower than that in leading cities.

Lower cost & attrition, affordable real estate & support from local government, such as tax breaks, STPI & SEZ schemes, are facilitating this shift of focus.

Over 50 cities already have basic infrastructure & human resource to support the global sourcing & business services industry.

Some cities are expected to emerge as regional hubs supporting domestic companies.

In December 2016, vocational education programme was introduced in Odisha’s 208 secondary schools. The programme includes 4 vocational streams, including IT & ITeS, Travel, Retail & Tourism, Banking, Financial Services & Insurance.

Odisha Government signed a MoU with Software Technology Parks of India (STPI) for setting up 4 software technology centres.

To encourage cash less economy, the government to distribute free Wi-fi service to more than 1000 gram panchayats in remote areas.

In February 2017, Persistent Systems, a Pune-based company, secured development rights to a number of patented innovations for enhancing security of financial services from The United Services Automobile Association (USAA).
TREMENDOUS GROWTH OF GLOBAL IN–HOUSE CENTRES

Key highlights

* Global In-House Centres (GIC), also known as captive centres, are one of the major growth drivers of the IT-BPM sector in India. They also operate in engineering services & software product development.

* In March 2016, there were over 1050 GICs operating out of India, contributing almost 20 per cent share in exports. The total GICs in the country generated a revenue of almost USD22 billion & employed a total of more than 0.79 million manpower.

* The impact of the segment goes beyond revenue & employment, as it helped in developing India as a R&D hub & create an innovation ecosystem in the country.

* Within the captive landscape, Engineering Research & Development/Software Product Development (ER&D/SPD) is the largest sub-segment.

* Companies from North America & Europe are major investors in the captive segment in India, accounting for over 90 per cent of captives in the country.

Number of GIC’s in India

Source: Zinnov, Nasscom, TechSci Research
IMPRESSIVE GROWTH PROSPECTS SUSTAIN PE AND VC INTEREST

* Total P/E investments in FY16 were observed to be USD5 billion, which increased at a CAGR of 25.7 per cent from USD0.8 billion in FY08

* Total number of P/E investment deals increased from 235 in FY15 to 294 in FY16

Source: Venture Intelligence, Nasscom, TechSci Research
Notes: CAGR – Compound Annual Growth Rate

For updated information, please visit [www.ibef.org](http://www.ibef.org)
NEWER GEOGRAPHIES AND VERTICALS PROVIDE HUGE OPPORTUNITIES

- BRIC nations, continental Europe, Canada & Japan have IT spending of approximately USD380–420 billion
- Adoption of technology & outsourcing is expected to make Asia the 2nd largest IT market

- SMBs have IT spend of approximately USD230–250 billion, but contribute just 25 per cent to India’s IT revenue
- The emergence of new service offerings and business models would aid in tapping market profitably & efficiently

- Government, healthcare, media & utilities together have IT spend of approximately USD190 billion, but account just 8 per cent of India’s IT revenue
- Non-linear growth due to platforms, products & automation
- Emerging verticals (retail, healthcare, utilities) are driving growth

Source: All the figures are taken from International Data Corporation (IDC) and Nasscom and are FY10 estimates
Note: SMB - Small and Medium Businesses
EXPANSION OF FOCUS AREA TO AID FUTURE GROWTH … (1/4)

* Traditional verticals, i.e. BFSI, telecommunication & manufacturing, continue to remain the largest in terms of IT adoption & are expected to grow at an average of 15 per cent
* Implementation of cloud environment & mobility is the way forward for traditional verticals
* Emphasis on other emerging verticals (e.g. education, healthcare & retail) to aid growth in IT firms in India
* Shift from IT adoption infrastructure, automation & digitisation to smart IT marks future trend of services in emerging verticals
* Other untapped sectors like Education & utilities has a huge potential for IT & ITes to grow into

**IT-BPM Exports Revenue (USD Billion)**

<table>
<thead>
<tr>
<th>Year</th>
<th>IT services</th>
<th>BPM</th>
<th>Packaged software, ER&amp;D and product development</th>
<th>Hardware</th>
<th>eCommerce</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY13</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY14</td>
<td>86</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY15</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY16E</td>
<td>108</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY17P</td>
<td>119-121</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Indian IT-BPM (Domestic and Export) Revenues (2015)**

<table>
<thead>
<tr>
<th>Service</th>
<th>Domestic</th>
<th>Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT services</td>
<td>13.0</td>
<td>0.5</td>
</tr>
<tr>
<td>BPM</td>
<td>20.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Packaged software, ER&amp;D and product development</td>
<td>0.5</td>
<td>13.0</td>
</tr>
<tr>
<td>eCommerce</td>
<td>4.0</td>
<td>14.0</td>
</tr>
</tbody>
</table>

*Source: Nasscom, TechSci Research*

*Note: E – Estimated, P – Projected*

For updated information, please visit [www.ibef.org](http://www.ibef.org)
Govt. sectors have a huge potential for IT enabled services, as IT penetration is low in the sector. Increasing digitalisation will lead to growth in revenues for IT sector in coming years

IT sophistication in the utilities segment & the need for standardisation of the process are expected to drive demand

Digitisation of content & increased connectivity is leading to a rise in IT adoption by media

RBI is executing a plan to reduce online transaction costs to encourage digital banking in India

In March 2017, the government set a target of achieving 25 billion digital transactions for banks with the help of PoS machines, transactions enabled & merchants, which have been added in firms.

In March 2017, Samsung launched a mobile payment service, through which it facilitates the customers to make payments at numerous retail locations instead of using mobile wallets, credit or debit cards.

In 2017, ICICI Bank announced plans to create 600 digital villages in India by the year end, to motivate use of digital transactions in remote areas. Also, the government launched Bharat Interface for Money app which helps customers to transact through mobile phones.

Market size of other progressing verticals by 2020 (USD billion)

- Media: 17
- Utilities: 25
- Healthcare: 58
- Government: 90
- SMB: 250

Source: Nasscom, TechSci Research
Note: Small and Medium Business
Emerging technologies present an entire new gamut of opportunities for IT firms in India.

- SMAC provide USD1 trillion opportunity
- Cloud represents the largest opportunity under SMAC, increasing at a CAGR of approximately 30 per cent to around USD650–700 billion by 2020
- Social media is the 2nd most lucrative segment for IT firms, offering a USD250 billion market opportunity by 2020

Source: Nasscom, TechSci Research
Note: Size of bubble indicates market size, *CAGR and market size for Big data/analytics is till 2015
Emerging geographies would drive the next growth phase for IT firms in India

BRIC would provide USD380–420 billion opportunity by 2020

Focus on building local credible presence, high degree of domain expertise at competitive costs & attaining operational excellence hold key to success in new geographies

Emphasis on export of IT services to current importers of other products & services

Countries offering growth potential to IT firms

<table>
<thead>
<tr>
<th>Country</th>
<th>IT spend</th>
<th>India’s penetration</th>
<th>Key segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>USD63 billion</td>
<td>~1.5 per cent</td>
<td>Enterprise applications, cyber security, healthcare IT</td>
</tr>
<tr>
<td>Europe</td>
<td>USD230 billion</td>
<td>&lt;1.5 per cent</td>
<td>IT sourcing, BPM, IS outsourcing, CAD</td>
</tr>
<tr>
<td>Japan</td>
<td>USD235 billion</td>
<td>&lt;1 per cent</td>
<td>CRM, ERP, Salesforce automation, SI</td>
</tr>
<tr>
<td>Spain</td>
<td>USD26 billion</td>
<td>&lt;1.5 per cent</td>
<td>IT sourcing, SI</td>
</tr>
<tr>
<td>Mexico</td>
<td>USD29 billion</td>
<td>~4 per cent</td>
<td>IT sourcing, BPM</td>
</tr>
<tr>
<td>Brazil</td>
<td>USD47 billion</td>
<td>~2 per cent</td>
<td>Low level application management, artificial intelligence, R&amp;D</td>
</tr>
<tr>
<td>China</td>
<td>USD105 billion</td>
<td>&lt;1 per cent</td>
<td>Software outsourcing, R&amp;D</td>
</tr>
<tr>
<td>Australia</td>
<td>USD48 billion</td>
<td>~4 per cent</td>
<td>Procurement outsourcing, infrastructure software &amp; CAD</td>
</tr>
</tbody>
</table>

Source: Nasscom, TechSci Research
SUCCESS STORIES
Established in 1968, Tata Consultancy Services (TCS) is an Information Technology (IT) services, consulting & business solution company. The company provides end-to-end technology & technology-related services to global enterprises. The company’s business is spread across the Americas, Europe, Asia-Pacific & Middle East & Africa (MEA).

In April 2017, TCS has approved a buyback plan for US$2.38 billion. The shares represent 2.85 per cent in the buyback of the total equity capital at US$42.39 per share.

Achievements:

- 2016: Won 3 Silver Stevies at 14th Annual American Business Awards
- 2015: Gold, Silver & Bronze Stevie® Winner at the American Business Awards
- 2014: Gold & Silver Stevie® Winner at the American Business Awards
- 2013: Won Best Performing Consultancy Brand Award in Europe
- 2013: Received Red Hat North America Awards for System Integrator Partner of the Year

Source: TCS website and Annual Report, TechSci Research
TCS: AN EMERGING GLOBAL IT MAMMOTH … (2/3)

- TCS accounts for nearly half of the Indian IT industry’s combined market capitalisation.
- During the FY 2016-17, the company reported a net profit of USD 3.91 billion.

*Source: TCS website and Annual Report, TechSci Research*

**Leading IT players by revenue (FY16)**

<table>
<thead>
<tr>
<th>Company name</th>
<th>Revenue (USD billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCS</td>
<td>16.6</td>
</tr>
<tr>
<td>Infosys</td>
<td>9.5</td>
</tr>
<tr>
<td>Wipro</td>
<td>7.8</td>
</tr>
<tr>
<td>HCL Tech</td>
<td>4.7</td>
</tr>
<tr>
<td>Tech Mahindra</td>
<td>4.04</td>
</tr>
</tbody>
</table>

**Financial performance (USD Billion)**

<table>
<thead>
<tr>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
</tr>
<tr>
<td>1.4</td>
<td>1.7</td>
<td>2.3</td>
<td>2.8</td>
<td>3.1</td>
<td>3.9</td>
<td>4.1</td>
<td>4.4</td>
<td>4.8</td>
</tr>
</tbody>
</table>

**Number of Customers**

<table>
<thead>
<tr>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
</tr>
<tr>
<td>6714</td>
<td>791</td>
<td>829</td>
<td>16.6</td>
</tr>
<tr>
<td>290</td>
<td>354</td>
<td>429</td>
<td>381</td>
</tr>
<tr>
<td>211</td>
<td>231</td>
<td>281</td>
<td>428</td>
</tr>
<tr>
<td>121</td>
<td>136</td>
<td>162</td>
<td>173</td>
</tr>
<tr>
<td>53</td>
<td>68</td>
<td>73</td>
<td>37</td>
</tr>
</tbody>
</table>
TCS: AN EMERGING GLOBAL IT MAMMOTH … (3/3)

1968
India’s 1st software service company

2001
Consolidation of market position through CMC acquisition

2003
1968

2005
FY03
Became the 1st software company in India to cross USD1 billion revenue

2007
FY12
Acquired microDAT A GIS

2010
FY13
Active client base: 1,156
New clients: 153

2013
FY14
USD13.5 Billion revenue

2015
FY15
USD15.7 Billion revenue

2016
FY16
USD16.60 Billion revenue

Acquisition of IT service firm Alti in France in 2013

Expanded of geographic presence

Issued IPO in the market in India & raised USD1.2 billion in 2004

With a brand value of over USD1 billion, consolidated its position as one of the largest IT players

Source: TCS website and Annual Report, TechSci Research
Established in 1991, HCL Technologies Ltd is an IT services company providing enterprise & custom application, business transformation, infrastructure management, business process outsourcing & engineering services. The company’s network of 26 offices is spread across the US, Europe & Asia Pacific.

**Achievements:**

- **2015:** Won Golden Peacock Award for Occupational Health & Safety
- **2015:** Winner of CII - National Award for Excellence in Energy Management
- **2015:** Wins 2 CA Technologies Partner Awards
- **2014:** Received Best Governed Company Award from Asian Centre for Corporate Governance & Sustainability
- **2013:** Won IT Europa, European IT Excellence Awards & Asia Pacific Enterprise Leadership Award 2013

**Segment-wise revenue breakdown (March 16):**

- **Application Services:** 39.9%
- **Infrastructure Services:** 36.2%
- **Engineering and R&D Services:** 18.7%
- **Business Services:** 5.2%

*Source: HCL Technologies website and Investor Presentation, TechSci Research*
HCL: GROWING BY LEAPS AND BOUNDS … (2/3)

Financial performance (USD Million)

Number of customers

Source: HCL Technologies website, HCL Annual Report, HCL Investor Presentation, TechSci Research
HCL: GROWING BY LEAPS AND BOUNDS … (3/3)

1997
Established with spun-off HCL’s R&D business

1997
Organic growth through prudent strategies

FY15
HCL Technologies came in joint venture agreement with CSC

USD100 million+
clients reached 5

FY16
Revenue crossed USD5.5 Billion

FY15
Revenue reached USD4.7 Billion

FY17
Revenue reached USD5.95 Billion

Diversification of business & geography mix

Acquisition of Capitalstream & AXON Group

Adoption of non-linear strategy; formation of JVs and alliances

Source: HCL Technologies website and Annual Report, TechSci Research

For updated information, please visit www.ibef.org
Established in 1981, Infosys Ltd. is engaged in consulting, engineering, technology & outsourcing services. The company's end-to-end services include consulting & system integration. Infosys operates through 30 offices across India, the US, China, Australia, the UK, Canada & Japan.

Achievements:

- FY17: Revenue crosses USD10.18 billion
- FY16: Revenue crosses USD9.5 billion
- 2016: Infosys was recognised with “Corporate Citizen of the Year” at 2015 Economic Times Award
- 2015: Infosys would offer software solutions on Verizon Cloud for the U.S. Bank
- 2015: Infosys completed the implementation of Smart Oilfield Services Solutions for FTS International
- 2014: Infosys secured the “Green Energy Award” & “Gold Award” at the International Ashden Awards Ceremony
- 2013: Ranked 1st in the annual Euromoney Best Managed Companies in Asia survey

Segment-wise revenue breakdown (FY17):

- Financial Services and Insurance (FSI): 27.09%
- Manufacturing (MFG): 16.39%
- Energy Utilities, Communication & Services (ECS): 12.32%
- Retail, Consumer, Packed Goods and Logistics (RCL): 10.96%
- Life Sciences and Healthcare (LSH): 7.48%
- Financial Services and Insurance (FSI): 3.23%

Source: Infosys website and Annual Report, TechSci Research

In November 2016, Infosys invested around USD4.89 million in a venture fund, Stellaris Venture Partners, so as to gain access to new & innovative technology offered by upcoming enterprises.
INFOSYS: EMERGENCE OF AN INDIA-BASED MNC … (2/3)

Financial Performance (USD Billion)

<table>
<thead>
<tr>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4.8</td>
<td>6</td>
<td>7</td>
<td>7.4</td>
<td>8.3</td>
<td>8.7</td>
<td>9.5</td>
<td>10.18</td>
</tr>
</tbody>
</table>

Operating Profit: 1.7, 2.6, 2.3, 2.6, 2.36

Number of Customers

<table>
<thead>
<tr>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD1 Mn+</td>
<td>USD5 Mn+</td>
<td>USD10 Mn+</td>
<td>USD20 Mn+</td>
</tr>
<tr>
<td>501</td>
<td>529</td>
<td>558</td>
<td>598</td>
</tr>
<tr>
<td>232</td>
<td>268</td>
<td>282</td>
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<tr>
<td>148</td>
<td>159</td>
<td>177</td>
<td>189</td>
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<td>78</td>
<td>83</td>
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<td>42</td>
<td>47</td>
<td>56</td>
<td>53</td>
</tr>
<tr>
<td>13</td>
<td>15</td>
<td>21</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Infosys website and Annual Report, TechSci Research
INFOSYS: EMERGENCE OF AN INDIA-BASED MNC … (3/3)

- Aerospace, defence & airlines
- Automotive
- Financial service
- Healthcare, pharmaceuticals & biotech
- Industrial manufacturing
- Logistics and distribution

1981
Founded in Pune with an initial capital of USD250

- Organic growth
- Expansion across the world and offshore business
- Large client acquisitions
- Acquisition of Lodestone Holding AG

FY15
USD8.7 Billion turnover

FY16
USD9.5 Billion turnover

FY17
USD10.81 Billion turnover

Strong diversified client base of 890 clients in FY14

Source: Infosys website and Annual Report, TechSci Research
National Association of Software and Services Companies (NASSCOM)
Address: International Youth Centre Teen Murti Marg,
Chanakyapuri, New Delhi – 110 021
Phone: 91 11 2301 0199
Fax: 91 11 2301 5452
E-mail: info@nasscom.in
GLOSSARY … (1/2)

* **APAC**: Asia Pacific
* **BFSI**: Banking, Financial Services and Insurance
* **BPM**: Business Process Outsourcing
* **CAGR**: Compounded Annual Growth Rate
* **C&U**: Construction & Utilities
* **FDI**: Foreign Direct Investment
* **GOI**: Government of India
* **INR**: Indian Rupee
* **IT & ITeS**: Information Technology-Information Technology Enabled Services
* **NAC**: Nasscom Assessment of Competence
* **RoI**: Return on Investment
* **ROW**: Rest of the World
* **SEZ**: Special Economic Zone
* **SLA**: Service Level Agreement

For updated information, please visit www.ibef.org
GLOSSARY … (2/2)

* **SMB**: Small and Medium Businesses
* **STPI**: Software Technology Parks of India
* **T&M**: Telecom & Media
* **T&T**: Travel and Transport
* **USD**: US Dollar
* **USP**: Unique Selling Proposition
* **UT**: Union Territory
* Wherever applicable, numbers have been rounded off to the nearest whole number
## Exchange Rates

### Exchange rates (Fiscal Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR equivalent of one USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004–05</td>
<td>44.81</td>
</tr>
<tr>
<td>2005–06</td>
<td>44.14</td>
</tr>
<tr>
<td>2006–07</td>
<td>45.14</td>
</tr>
<tr>
<td>2007–08</td>
<td>40.27</td>
</tr>
<tr>
<td>2008–09</td>
<td>46.14</td>
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<tr>
<td>2009–10</td>
<td>47.42</td>
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<tr>
<td>2010–11</td>
<td>45.62</td>
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<tr>
<td>2011–12</td>
<td>46.88</td>
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<td>2012–13</td>
<td>54.31</td>
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<td>2013–14</td>
<td>60.28</td>
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<td>2014–15</td>
<td>61.06</td>
</tr>
<tr>
<td>2015–16</td>
<td>65.46</td>
</tr>
<tr>
<td>2016–17 (E)</td>
<td>66.95</td>
</tr>
</tbody>
</table>

### Exchange rates (Calendar Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR equivalent of one USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>43.98</td>
</tr>
<tr>
<td>2006</td>
<td>45.18</td>
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<tr>
<td>2007</td>
<td>41.34</td>
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<td>2008</td>
<td>43.62</td>
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<tr>
<td>2009</td>
<td>48.42</td>
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<tr>
<td>2010</td>
<td>45.72</td>
</tr>
<tr>
<td>2011</td>
<td>46.85</td>
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<td>2012</td>
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<td>2013</td>
<td>58.44</td>
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<tr>
<td>2014</td>
<td>61.03</td>
</tr>
<tr>
<td>2015</td>
<td>64.15</td>
</tr>
<tr>
<td>2016 (Expected)</td>
<td>67.22</td>
</tr>
</tbody>
</table>

Source: Reserve Bank of India, Average for the year
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