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CONTENTS

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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 fourth in India's total FDI share and accounts for approximately 37 per cent of total Private Equity and 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 five 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

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ADVANTAGE INDIA

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ADVANTAGE INDIA

FY16E

Industry value: USD160 billion

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

FY25F

Industry value: USD350 billion

Advantage India

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 & 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 & hardware is USD22,831 million from April 2000 to December 2016
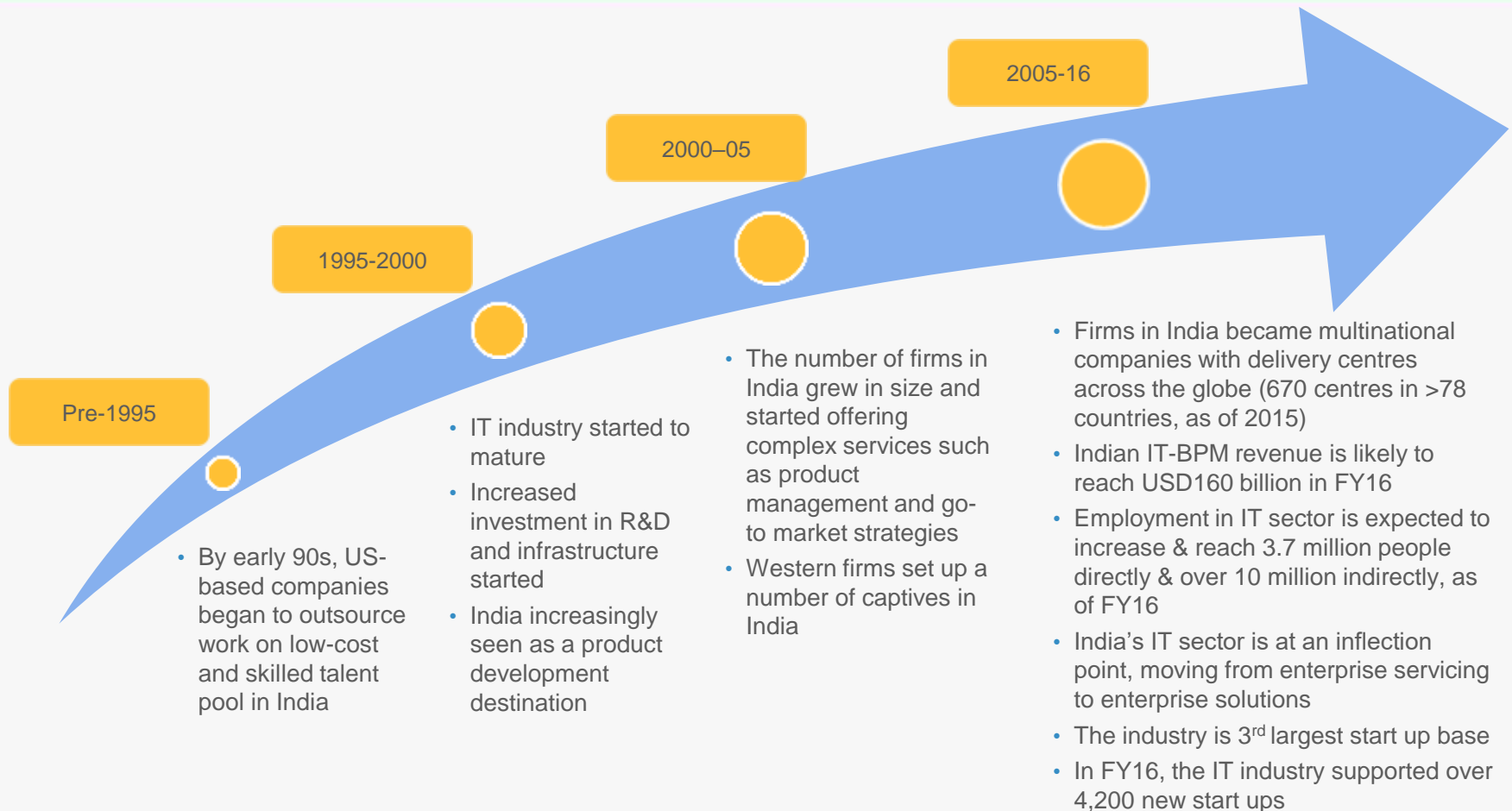
Source: Nasscom, TechSci Research

Notes: SEZ stands for Special Economic Zone, BFSI stands for Banking, Financial Services and Insurance, E stands for Estimate , F stands for Forecast
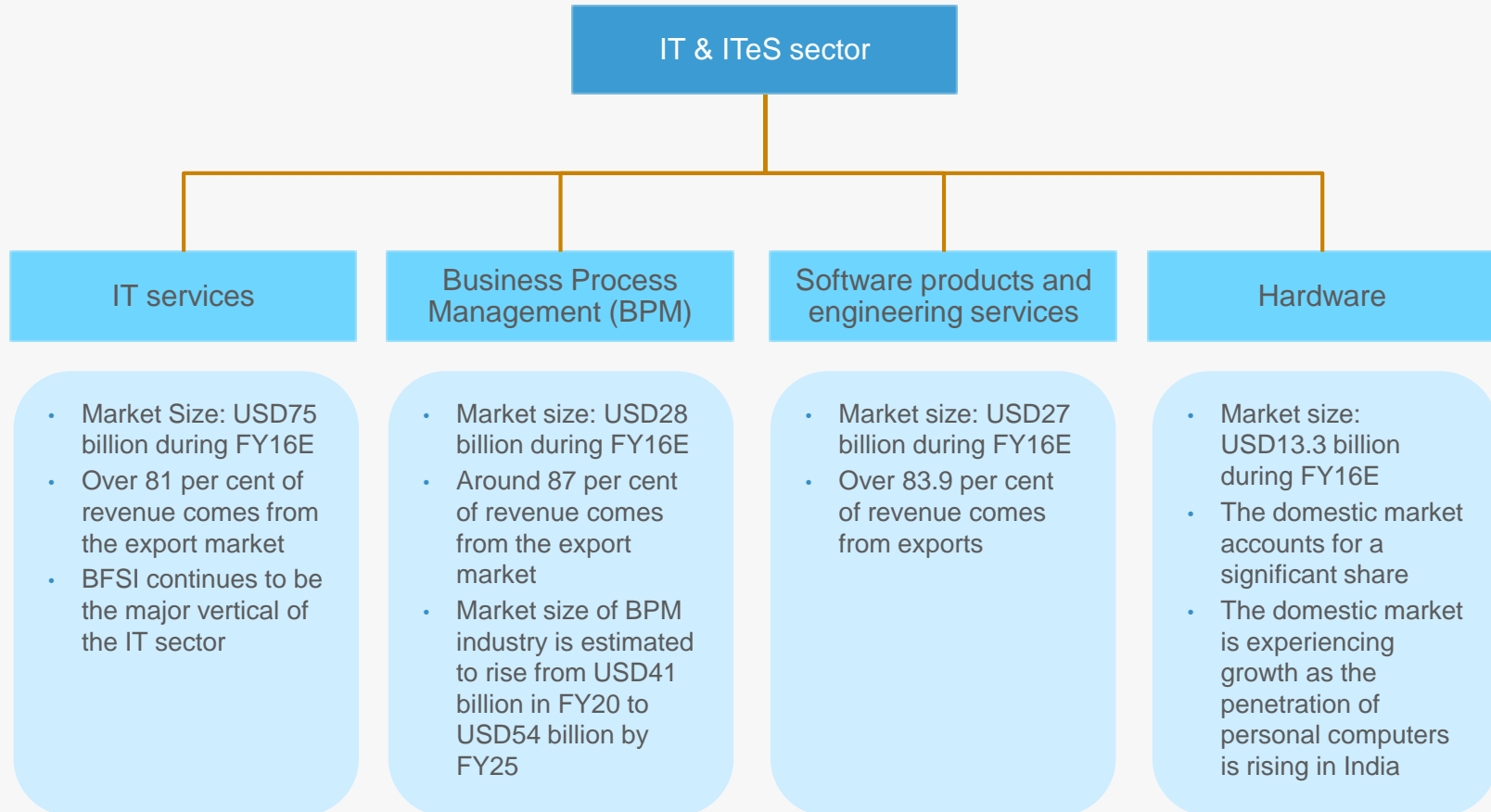
MARKET OVERVIEW AND TRENDS
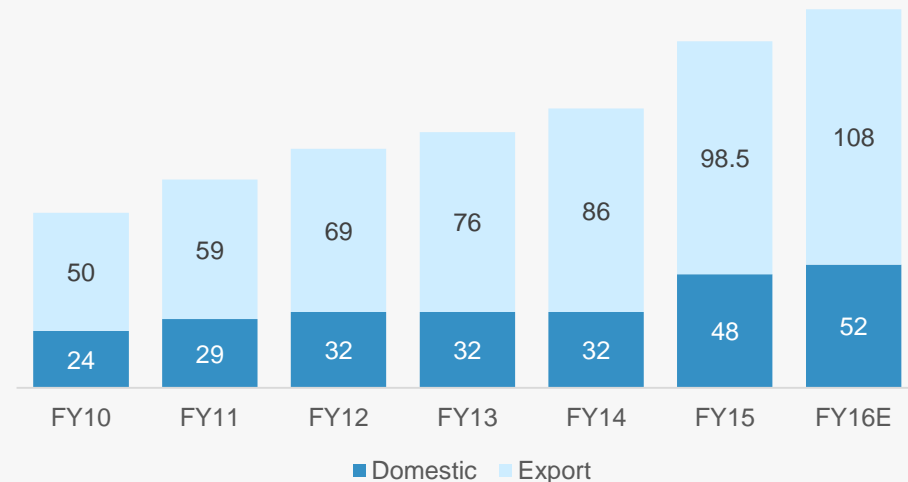
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EVOLUTION OF INDIA'S IT SECTOR

2005-16

2000–05

1995-2000

Pre-1995

- By early 90s, US-based companies began to outsource work on low-cost and skilled talent pool in India

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

- The number of firms in India grew in size and started offering complex services such as product management and 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

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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 and 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

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INDIA'S IT MARKET SIZE GROWING; TCS THE MARKET LEADER

* India's technology and 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 from 1.2 per cent in FY98

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

* The top five IT firms contribute over 25 per cent to the total industry revenue, indicating the market is fairly competitive
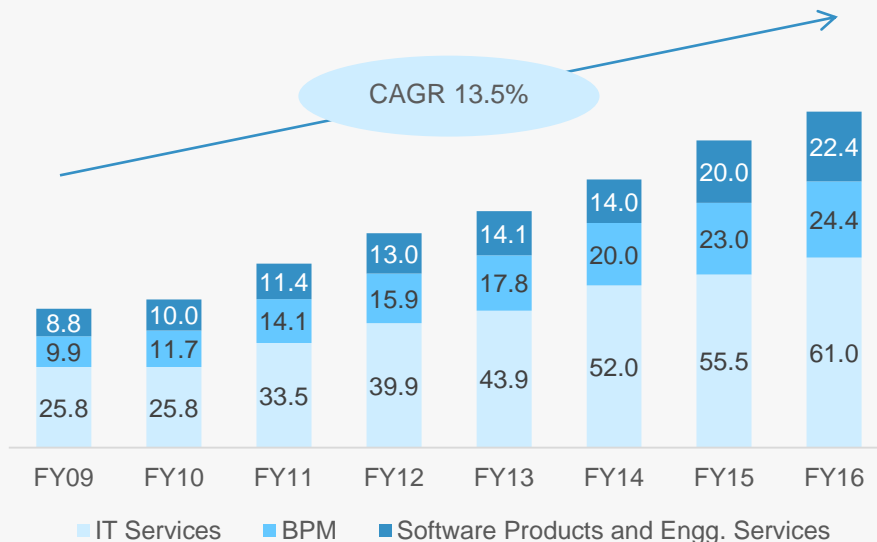
Market size of IT industry in India (USD billion)

	FY10	FY11	FY12	FY13	FY14	FY15	FY16E
Export	50	59	69	76	86	98.5	108
Domestic	24	29	32	32	32	48	52

■ Domestic ■ Export

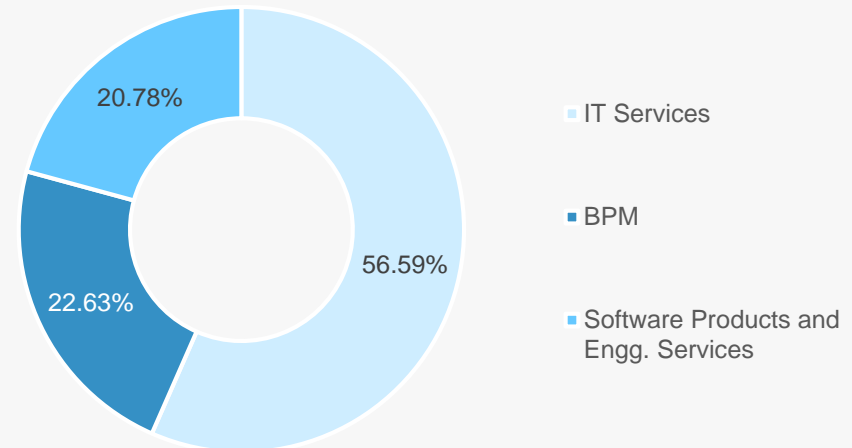*Source*: Nasscom, TechSci Research
Note: E - Estimates

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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 13.5 per cent during FY09–16 despite of weak global economic growth scenario

* 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

Growth in export revenue (USD billion)

CAGR 13.5%

	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Software Products and Engg. Services	8.8	10.0	11.4	13.0	14.1	14.0	20.0	22.4
BPM	9.9	11.7	14.1	15.9	17.8	20.0	23.0	24.4
IT Services	25.8	25.8	33.5	39.9	43.9	52.0	55.5	61.0

■ IT Services ■ BPM ■ Software Products and Engg. Services

Sector-wise breakup of export revenue FY16

20.78%
56.59%
22.63%

■ IT Services
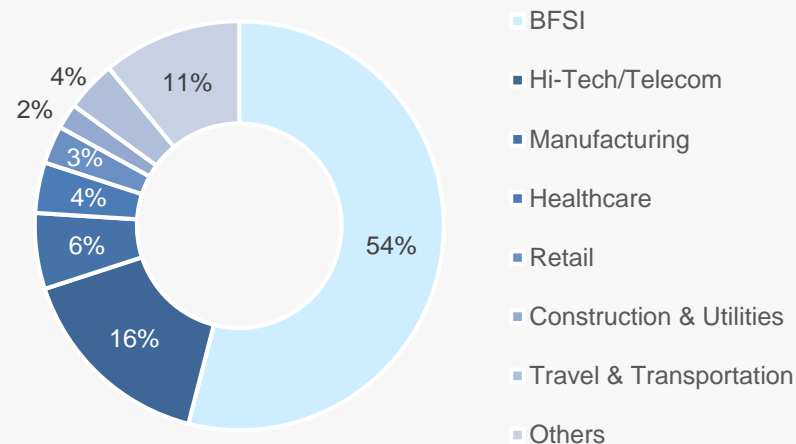
■ BPM

■ Software Products and Engg. Services

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

* With introduction of new policies for healthcare and 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)

Legend:
- BFSI
- Hi-Tech/Telecom
- Manufacturing
- Healthcare
- Retail
- Construction & Utilities
- Travel & Transportation
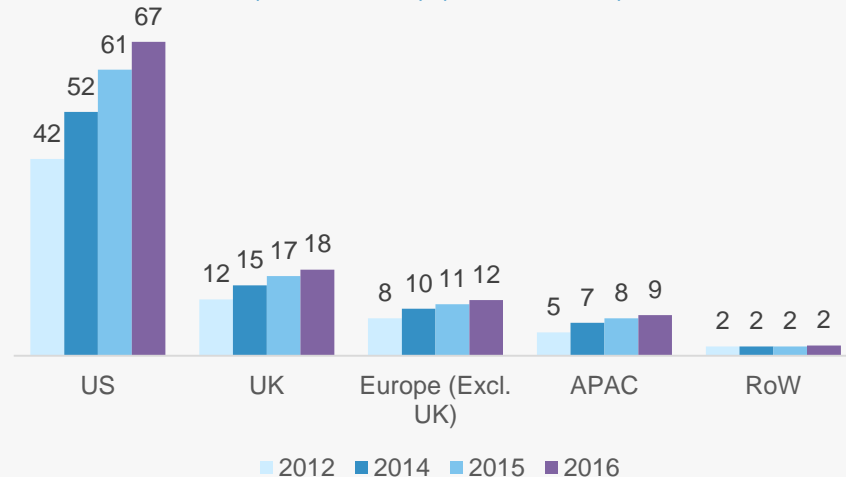- Others

Chart values: 54%, 11%, 4%, 2%, 3%, 4%, 6%, 16%

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
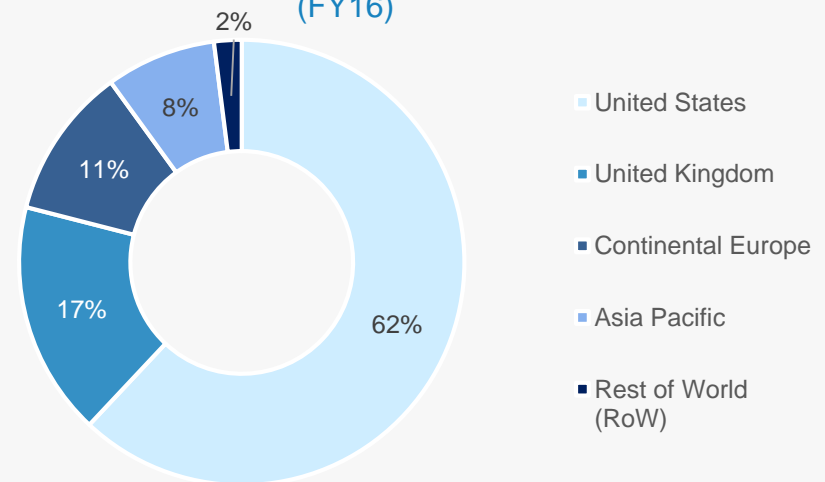
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WITH OVER 62 PER CENT SHARE, US IS MAJOR IMPORTER OF IT SERVICES

* 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

Geographic breakup of export revenue (USD billion) (March 2016)

Region	2012	2014	2015	2016
US	42	52	61	67
UK	12	15	17	18
Europe (Excl. UK)	8	10	11	12
APAC	5	7	8	9
RoW	2	2	2	2

Distribution of export revenue across geographies (FY16)

- United States — 62%
- United Kingdom — 17%
- Continental Europe — 11%
- Asia Pacific — 8%
- Rest of World (RoW) — 2%

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

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IT-BPM SECTOR DOMINATED BY LARGE PLAYERS

Category	Number of players	Percentage of total export revenue	Percentage of total employees	Work focus
Large	11	47-50%	~35-38%	• Fully integrated players offering complete range of services • Large scale operations and 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 and 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 focussing on specific niches in either services or verticals • Includes Indian providers and small niche captives

Source: Nasscom, TechSci Research

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NOTABLE TRENDS IN INDIA'S IT & ITES 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 and 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 and reach USD160 billion

[1] - conducted by Nasscom

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NOTABLE TRENDS IN INDIA'S IT & ITES SECTOR … (2/3)

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 50,000, 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 and 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

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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 and RoI calculations

Emergence of Tier II cities

- Tier II and 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 and SEZ schemes facilitating their emergence as a new IT destination
- Giving rise to the domestic hub and spoke model, with Tier I cities acting as hubs and Tier II, III and IV as network of spokes

SMAC technologies, an inflection point for Indian IT

- Social, Mobility, Analytics and 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

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

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PORTER FIVE FORCES ANALYSIS

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PORTERS 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

Threat of New Entrants (Medium)

Bargaining Power of Customers (High)

Competitive Rivalry (High)

Substitute Products (Medium)

Bargaining Power of Suppliers (Low)

STRATEGIES ADOPTED

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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 two office space in Pune & Bengaluru India. TCS is planning to expand in Mumbai
- Companies are expanding their business towards emerging economies of East Europe and Latin American countries

Movement to SMAC & digital space

- Social Computing, Mobility, Analytics and 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 and 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 and Accenture

Promotion of R&D

- Companies are now investing a lot in R&D and training employees to create an efficient workforce, enhancing productivity and 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

GROWTH DRIVERS

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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 and experienced professionals

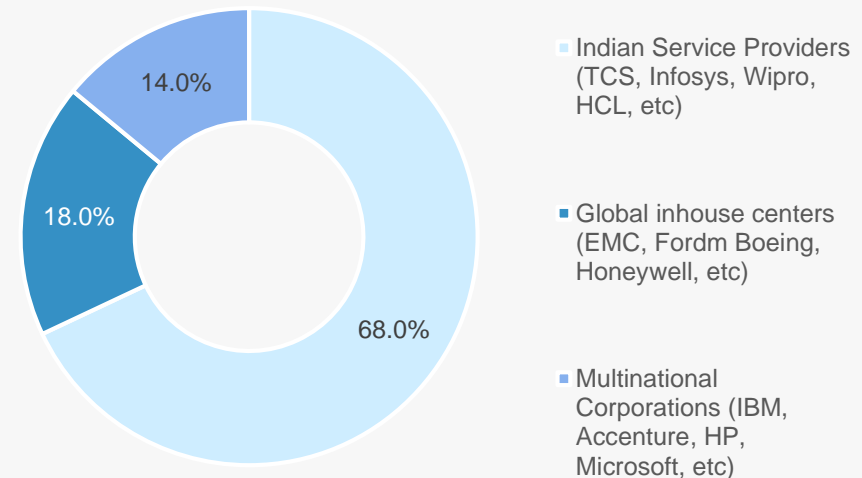- Global BPM spending estimated to rise by 4.4 per cent and reach USD2.7 billion in 2015

- Computer penetration expected to increase

- Increasing adoption of technology and telecom by consumers and focused government initiatives leading to increased ICT adoption

- Tax holidays for STPI and SEZs

- More liberal system for raising capital, seed money and ease of doing business.

- As a part of Union Budget 2016-17, the government has made changes in custom & excise duty of IT hardware products

- Robust IT infrastructure across various cities in India such as Bengaluru

- Technology mission for services in villages and schools, training in IT skills and E-Kranti for government service delivery and governance scheme

Growth drivers (central hub) with connected nodes: Talent pool, Domestic growth, Infrastructure, Policy support, Global demand

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

TECHNOLOGY – A KEY INFLUENCER FOR DOMESTIC IT SERVICES … (1/2)

* Indian IT companies like TCS, Tech Mahindra Limited, Mphasis, HCL Technologies Limited, Larsen & Toubro Infotech Limited, Wipro Technologies Limited, Oracle Financial, Infosys Technologies Limited are expanding their footprint in order to meet client's requirements globally

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

* Tech Mahindra has entered into a strategic alliance with Metric Stream, a US-based firm, with an aim to provide governance, risk and compliance (GRC) solutions across the world

* Reliance IoT unit – Unlimit, partnered with US based – Cumulocity, to deliver IoT solutions in India. Partnership between the firms will facilitate customers to benefit from sensor & device integration & data collection, rapid machine & real-time analytics for condition monitoring.

### IT Sector Segmental Breakup - By Companies (FY15)

- 14.0%
- 18.0%
- 68.0%

- Indian Service Providers (TCS, Infosys, Wipro, HCL, etc)
- Global inhouse centers (EMC, Fordm Boeing, Honeywell, etc)
- Multinational Corporations (IBM, Accenture, HP, Microsoft, etc)

Source: Nasscom, Assorted News Articles, TechSci Research

TECHNOLOGY – A KEY INFLUENCER FOR DOMESTIC IT SERVICES … (2/2)

* Introduction of large e-Governance projects to provide better services through IT and focus on the formation of the cyber policy led to higher demand for IT and hardware from the government

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

* Strong consumer demand for IT service and products:

    * Advent of smartphones, tablets and iPads

    * Industry leaders are stressing the need for promoting support start-ups

    * Rising computer literate population

    * Enhanced internet and mobile penetration

    * Growing disposable income strengthening consumer purchasing power

    * Emerging verticals (retail, healthcare, utilities) are driving growth above 14 per cent
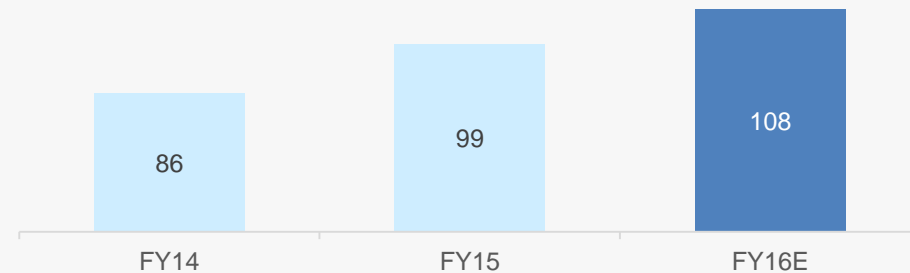
Domestic revenue from IT and BPM (USD billion)

FY15	FY16E	FY20F
48	52	100
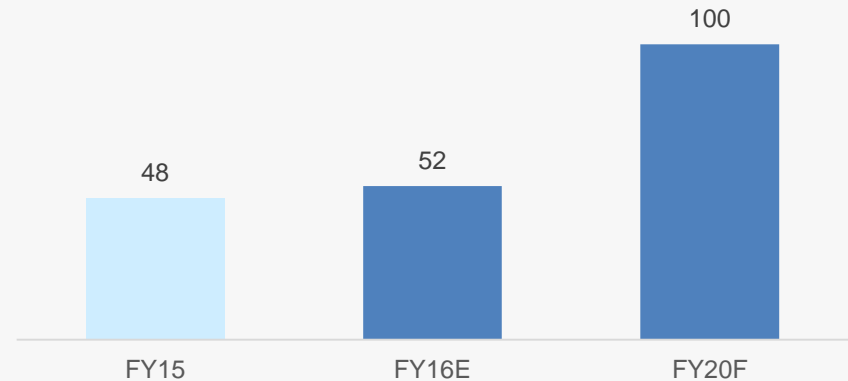
Source: Nasscom, TechSci Research
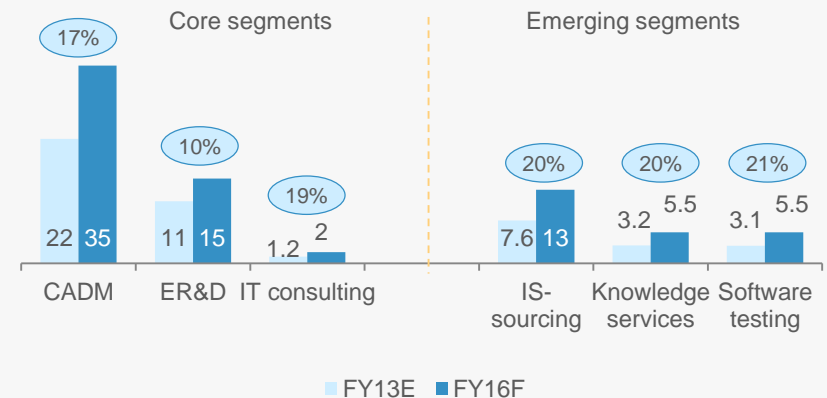Notes: UT - Union Territory, E:Estimated F - Forecasts

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EXPORTS TO REMAIN ROBUST AS GLOBAL IT INDUSTRY MAINTAINS GROWTH

* In FY16 the estimated revenue from exports of IT and 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 the year 2015 India comprised of around 500 BPM players generating a revenue of USD23 billion, which is expected to rise and 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 and providing conducive environment for start-ups will improve the business environment

Export revenue from IT and BPM (USD billion)

FY14	FY15	FY16E
86	99	108

Core and non core segment's growth prospects

Core segments — Emerging segments

| CADM	ER&D	IT consulting	IS-sourcing	Knowledge services	Software testing
17%	10%	19%	20%	20%	21%
22 / 35	11 / 15	1.2 / 2	7.6 / 13	3.2 / 5.5	3.1 / 5.5

■ FY13E ■ FY16F

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

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INDIAN TALENT POOL READY TO TAKE IT SECTOR TO THE NEXT LEVEL … (1/2)

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

* During FY10-16, no of graduates addition to talent pool in India grew at a CAGR of 8.4 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 and 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 and ITES companies in Karnataka, is anticipated in the coming years

Graduates addition to talent pool in India (in millions)

FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
3.7	4.0	4.4	4.7	5.3	5.8	6.0
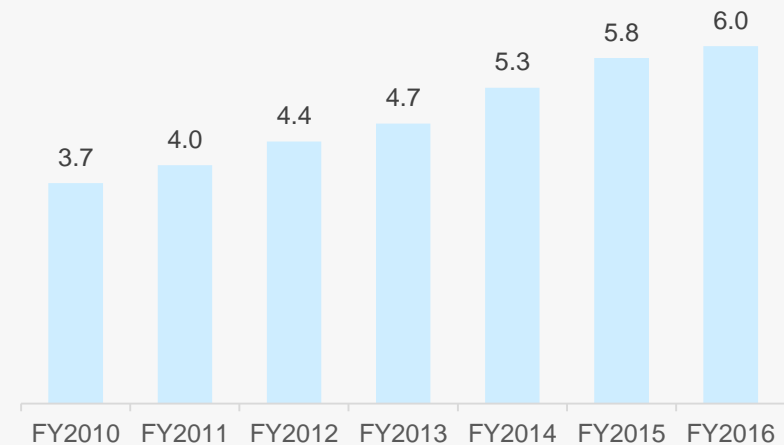
Source: Nasscom, TechSci Research
Note: Graduates includes both graduates and post graduates

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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

Source: TechSci Research

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NASSCOM'S PLAN TO INCREASE EMPLOYABILITY OF INDIA'S TALENT POOL

Objectives	Initiatives

Short term

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

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

Medium term

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

- Launched the National Faculty Development Programme to increase suitability of faculty
- Aiding industry access to specialist programmes offered by independent agencies
- NASSCOM, in partnership with the industry, has developed a unique initiative 'National Skills Registry' a national database of registered and verified knowledge workers in the industry

Long term

- Expand education capacity
- Promote reforms in education

- Expansion of higher education infrastructure; 20 new IIITs to be set up by the government
- Programme to increase PhDs in technology

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 and employment

* As on 2nd September 2016, there are over 186 operational SEZs across the country

Characteristics of STPI and SEZ in India

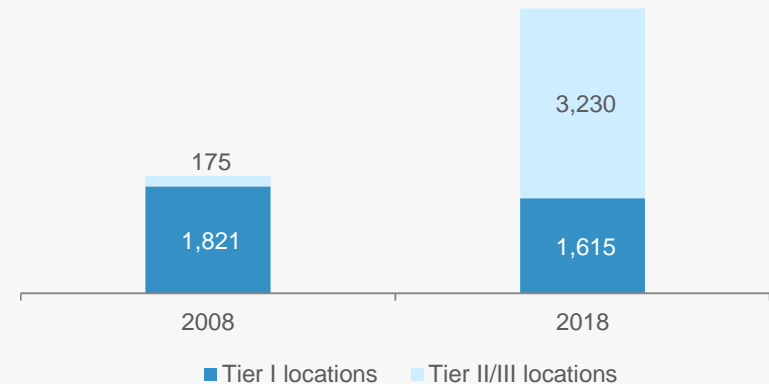| Parameters	STPI	SEZ
Term	• 10 years	• 15 years
Fiscal benefits	• 100 per cent tax holiday on export profits • Exemption from excise duties and customs	• 100 per cent tax holiday on exports for first five years • Exemption from excise duties and customs
Location and size restrictions	• No location constraints • 23 per cent STPI units in tier II and III cities	• Restricted to prescribed zones with a minimum area of 25 acres

Source: Nasscom, TechSci Research, STPI (Software Technology Parks of India)

SEZ'S TO DRIVE IT SECTOR; TIER II CITIES EMERGE AS NEW CENTERS … (2/2)

Trends in tier II and III cities

* 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 and human resource to support the global sourcing and 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 (BFSI). The initiative was taken to educate students & to enhance growth in these sectors.

* 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

* Persistent Systems based in Pune, secured development rights from The United Services Automobile Association (USAA), to develop a few patented innovations for enhancing security of financial services.

### IT sector employment distribution in Tier I and Tier II/III cities

	2008	2018
Tier II/III locations	175	3,230
Tier I locations	1,821	1,615

■ Tier I locations   ■ Tier II/III locations

Source: Nasscom, E&Y, TechSci Research

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 and 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 and employed a total of more than 0.79 million manpower

* The impact of the segment goes beyond revenue and employment, as it helped in developing India as a R&D hub and 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 and 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

Year	Number
2000	180
2005	460
2010	710
2012	760
2013	790
2014	825
2015	1025
2016	1050
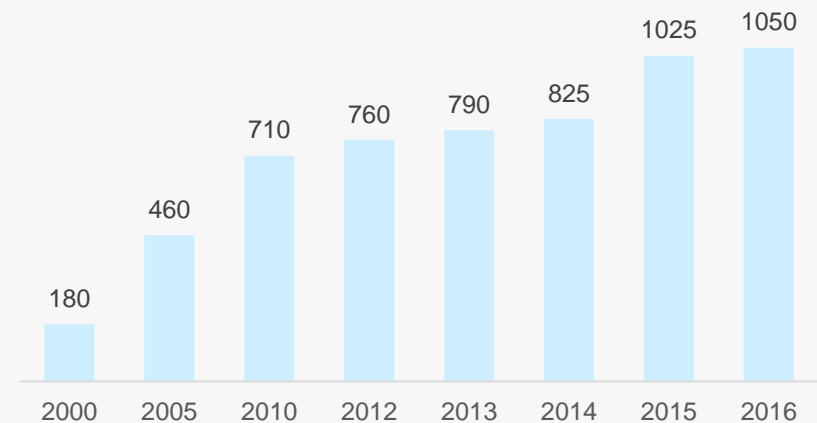
Source: Zinnov, Nasscom, TechSci Research

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

PE-VC investments in IT & BPM (USD billion)

Year	Value
2008	0.8
2011	1.9
2012	3.2
2013	2.2
2014	5
2015	9
2016	5
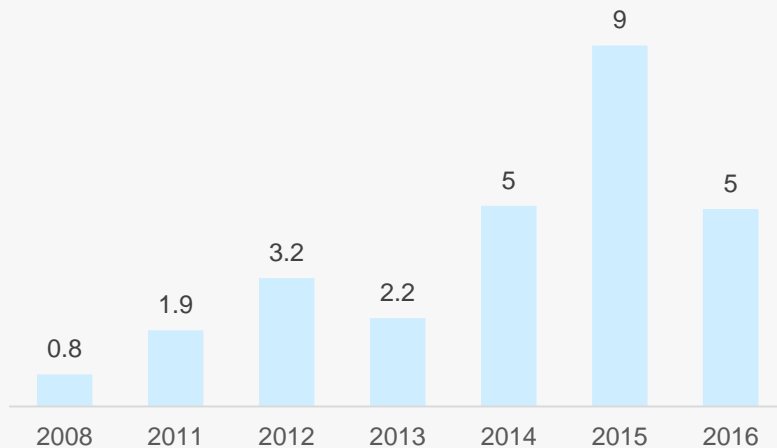
Share of IT-BPM in PE-VC investments

	FY11	FY12	FY13	FY14	FY15	FY16
Number of Deals	104	137	161	262	235	294
Share of IT-BPM	38.38	40.9	40.76	50.38	53	43.2

Number of Deals — Share of IT-BPM
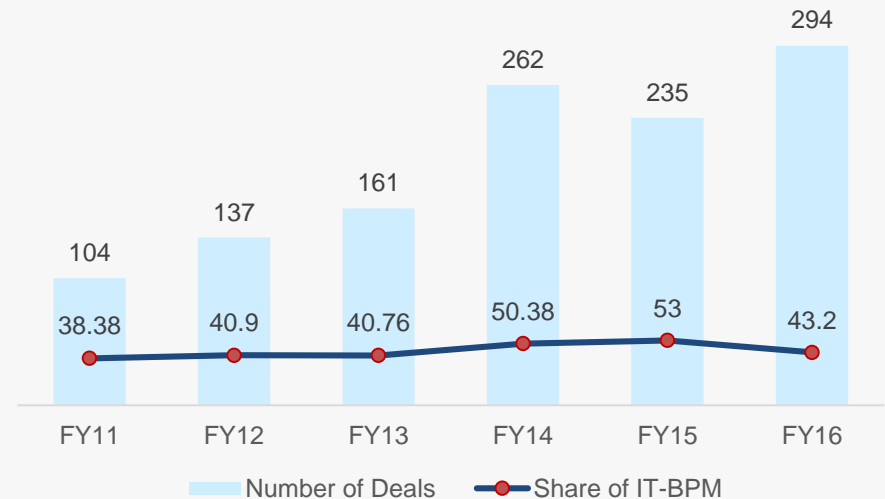
Source: Venture Intelligence, Nasscom, TechSci Research
Notes: CAGR – Compound Annual Growth Rate

OPPORTUNITIES

IT & ITeS

NEWER GEOGRAPHIES AND VERTICALS PROVIDE HUGE OPPORTUNITIES

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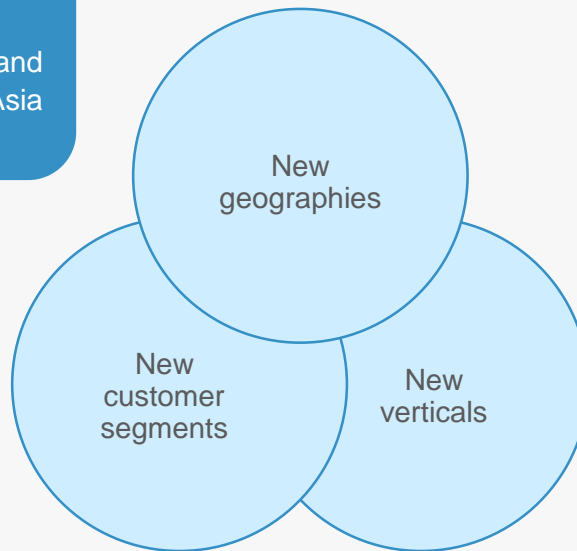
New geographies

New customer segments

New verticals

- 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 and efficiently

- Government, healthcare, media and 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 and 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

IT & ITeS

EXPANSION OF FOCUS AREA TO AID FUTURE GROWTH … (1/4)

* Traditional verticals, i.e. BFSI, telecommunication and manufacturing, continue to remain the largest in terms of IT adoption and are expected to grow at an average of 15 per cent

* Implementation of cloud environment and mobility is the way forward for traditional verticals

* Emphasis on other emerging verticals (e.g. education, healthcare and retail) to aid growth in IT firms in India

* Shift from IT adoption infrastructure, automation and digitisation to smart IT marks future trend of services in emerging verticals

* Other untapped sectors like Education and utilities has a huge potential for IT & ITes to grow into

IT-BPM Exports Revenue (USD Billion)

FY13	FY14	FY15	FY16E	FY17P
76	86	99	108	119-121
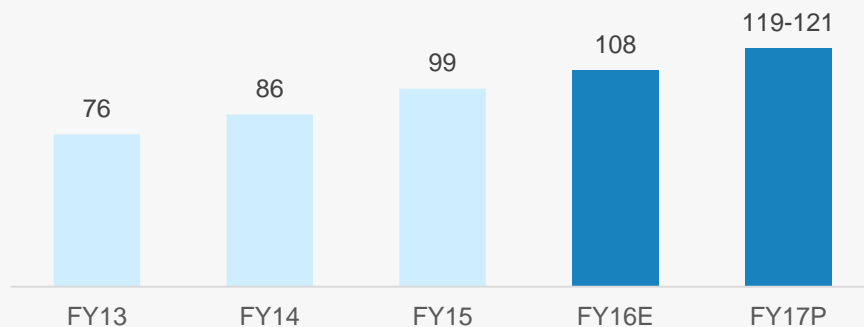
Indian IT-BPM (Domestic and Export) Revenues (2015)

Legend: Domestic, Exports

	IT services	BPM	Packaged software, ER&D and product development	Hardware	eCommerce
Exports	55.0	23.0	20.0	0.5	
Domestic	13.0	4.0	4.0	13.0	14.0
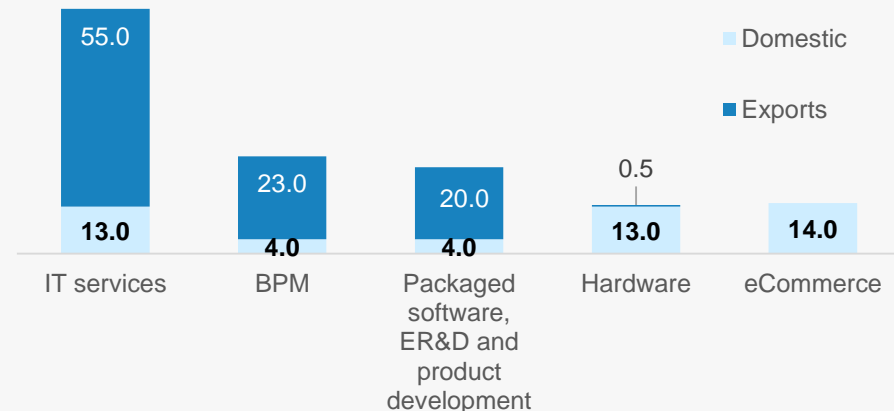
Source: Nasscom, TechSci Research
Note: E – Estimated, P – Projected

EXPANSION OF FOCUS AREA TO AID FUTURE GROWTH … (2/4)

* 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

* Technologies, such as telemedicine, health, remote monitoring solutions & clinical information systems, would continue to boost demand for IT service across the globe

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

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

* Companies to focus on local problems & find engineering solutions

* As on December 8, 2016, the Indian Government & Intel initiated development of online water and air quality monitoring system. Funds worth USD5.04 million have been allocated for the implementation of the project.

* 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 (Point of Sale) machines, transactions enabled & merchants, which have been added in firms.

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

Vertical	Value
Media	17
Utilities	25
Healthcare	58
Government	90
SMB	250
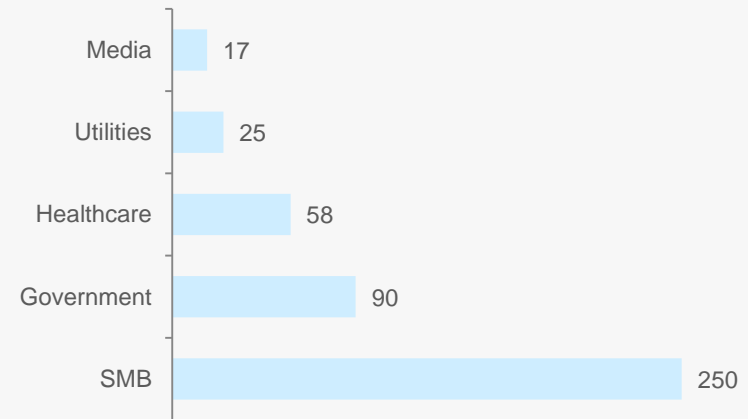
Source: Nasscom, TechSci Research
Note: Small and Medium Business

EXPANSION OF FOCUS AREA TO AID FUTURE GROWTH … (3/4)

* 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 second most lucrative segment for IT firms, offering a USD250 billion market opportunity by 2020

Growing technologies future growth

Big data/analytics*

Social Media

Cloud

Enterprise mobility
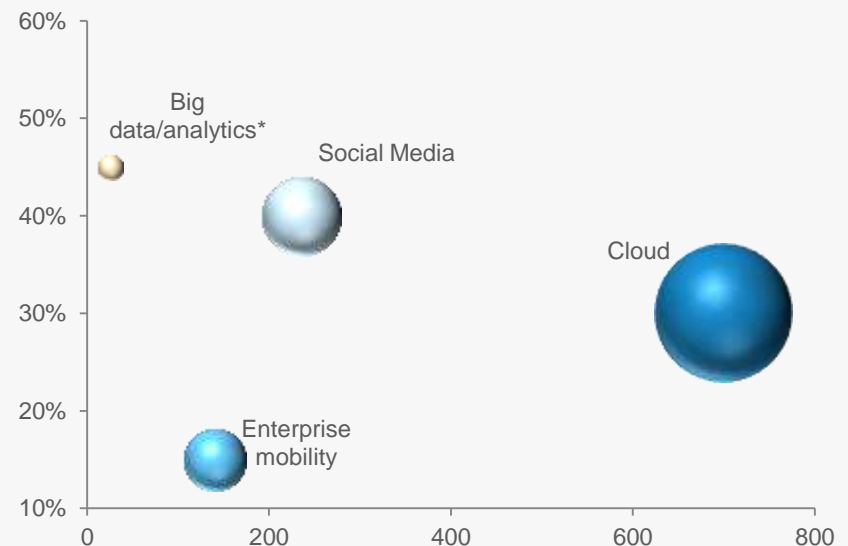
Source: Nasscom, TechSci Research
Note: Size of bubble indicates market size, *CAGR and market size for Big data/analytics is till 2015

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EXPANSION OF FOCUS AREA TO AID FUTURE GROWTH … (4/4)

* 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 and attaining operational excellence hold key to success in new geographies

* Emphasis on export of IT services to current importers of other products and services

Countries offering growth potential to IT firms

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

Source: Nasscom, TechSci Research

SUCCESS STORIES

TCS: AN EMERGING GLOBAL IT MAMMOTH … (1/3)

* 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)

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

Segment-wise revenue breakdown (FY16)

- Application development and maintenance (ADM) — 40%
- Enterprise solutions (ES) & consulting — 17%
- Infrastructure services (IS) — 15%
- Business process services (BPS) — 12%
- Assurance services — 9%
- Engineering and industrial services (EIS) — 5%
- Asset leveraged solutions — 3%

Source: TCS website and Annual Report, TechSci Research

IT & ITeS

TCS: AN EMERGING GLOBAL IT MAMMOTH … (2/3)

Financial performance (USD Billion)

FY	Revenue	Operating Profit
FY09	6	1.4
FY10	6.3	1.7
FY11	8.2	2.3
FY12	10	2.8
FY13	12	3.1
FY14	13	3.9
FY15	15	4.1
FY16	16.6	4.4

- Revenue
- Operating Profit

Number of Customers

	FY13	FY14	FY15	FY16
USD1 Mn+	638	714	791	829
USD5 Mn+	290	354	381	429
USD10 Mn+	211	231	261	298
USD20 Mn+	121	136	162	173
USD50 Mn+	52	53	68	73
USD100 Mn+	17	24	29	37

- FY13
- FY14
- FY15
- FY16

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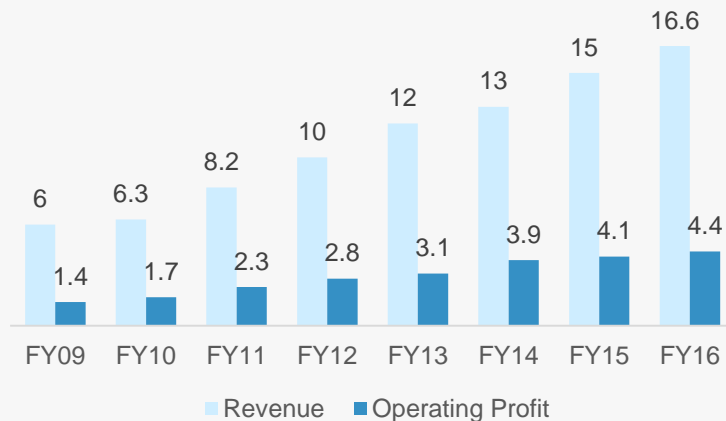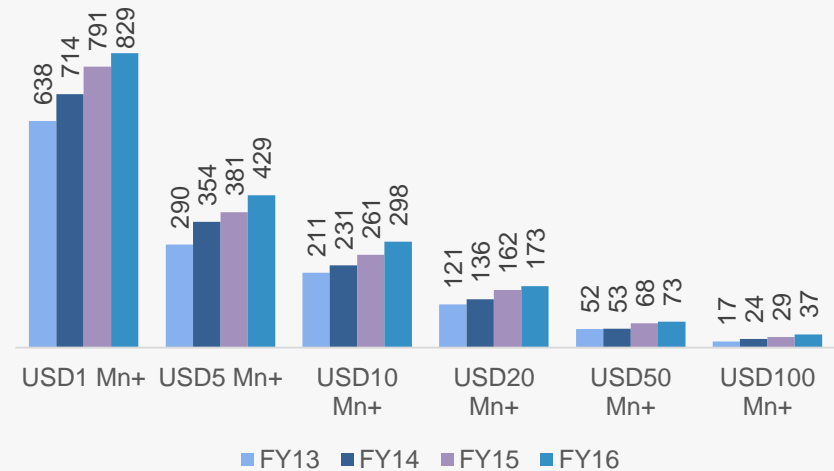
* TCS accounts for nearly half of the Indian IT industry's combined market capitalisation

* During the second quarter of FY 2016-17, the company reported a net profit of USD 989 million, showing a growth of 8.4 per cent.

Leading IT players by revenue (FY16)

Company name	Revenue (USD billion)
TCS	16.6
Infosys	9.5
Wipro	7.8
HCL Tech	4.7
Tech Mahindra	4.04

Source: TCS website and Annual Report, TechSci Research

TCS: AN EMERGING GLOBAL IT MAMMOTH … (3/3)

BFSI

Retail and consumer packaged goods

Media & entertainment

Manufacturing

Life sciences & healthcare

Energy resources & utilities

Acquisition of IT service firm Alti in France in 2013

Expanded of geographic presence

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

Consolidation of market position through CMC acquisition

FY16 USD16.60 Billion revenue

FY15 USD15.7 Billion revenue

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

FY14 USD13.5 Billion revenue

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

1968 India's first software service company

FY03 Became the first software company in India to cross USD1 billion revenue

FY12 Acquired microDAT A GIS

| 1968 | 2001 | 2003 | 2005 | 2007 | 2010 | 2013 | 2015 | 2016 |

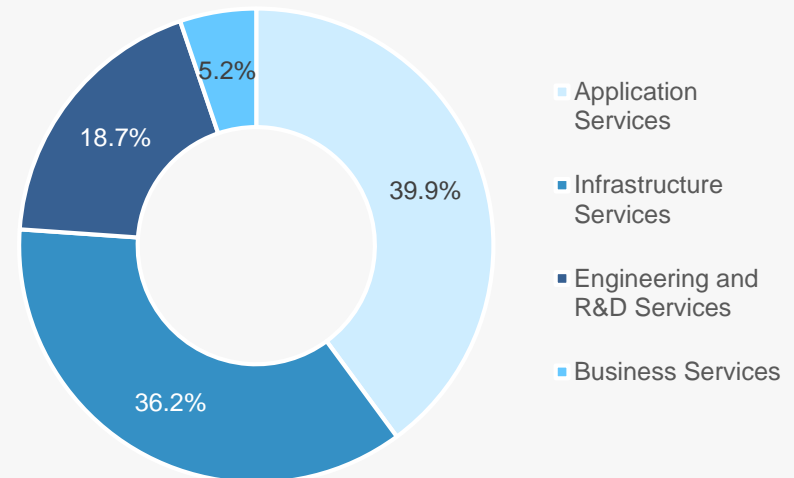*Source*: TCS website and Annual Report, TechSci Research

HCL: GROWING BY LEAPS AND BOUNDS … (1/3)

* Established in 1991, HCL Technologies Ltd is an IT services company providing enterprise and custom application, business transformation, infrastructure management, business process outsourcing and engineering services. The company's network of 26 offices is spread across the US, Europe and 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 and Asia Pacific Enterprise Leadership Award 2013

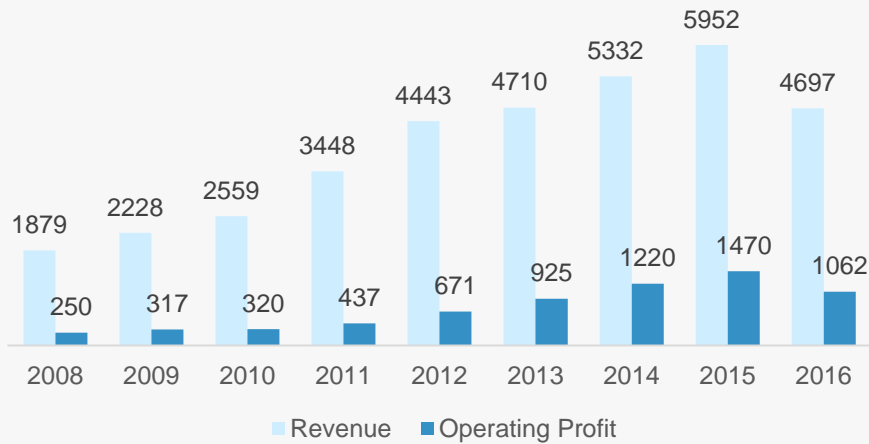**Segment-wise revenue breakdown (March 16)**

- 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)

Legend: Revenue ■ Operating Profit

Year	Revenue	Operating Profit
2008	1879	250
2009	2228	317
2010	2559	320
2011	3448	437
2012	4443	671
2013	4710	925
2014	5332	1220
2015	5952	1470
2016	4697	1062

Number of customers

Legend: ■ 2014 ■ 2015 ■ 2016

Category	2014	2015	2016
USD5 Mn+	183	206	233
USD10 Mn+	109	122	144
USD40 Mn+	18	22	29
USD50 Mn+	14	17	19
USD100 Mn+	6	7	8
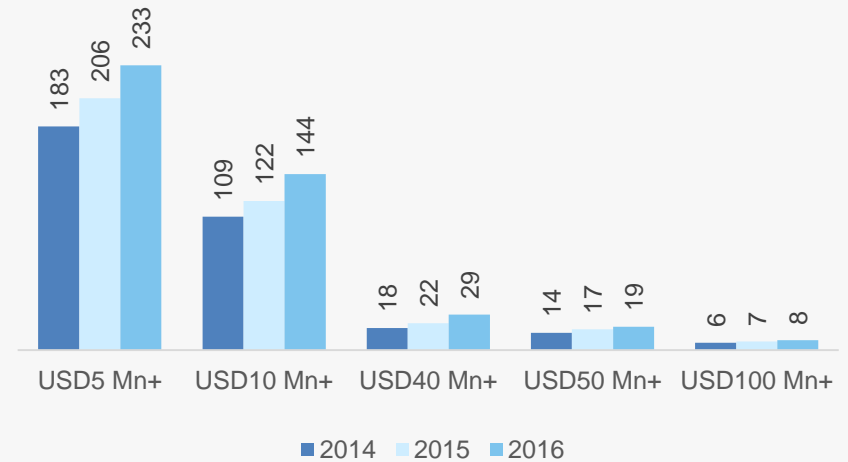
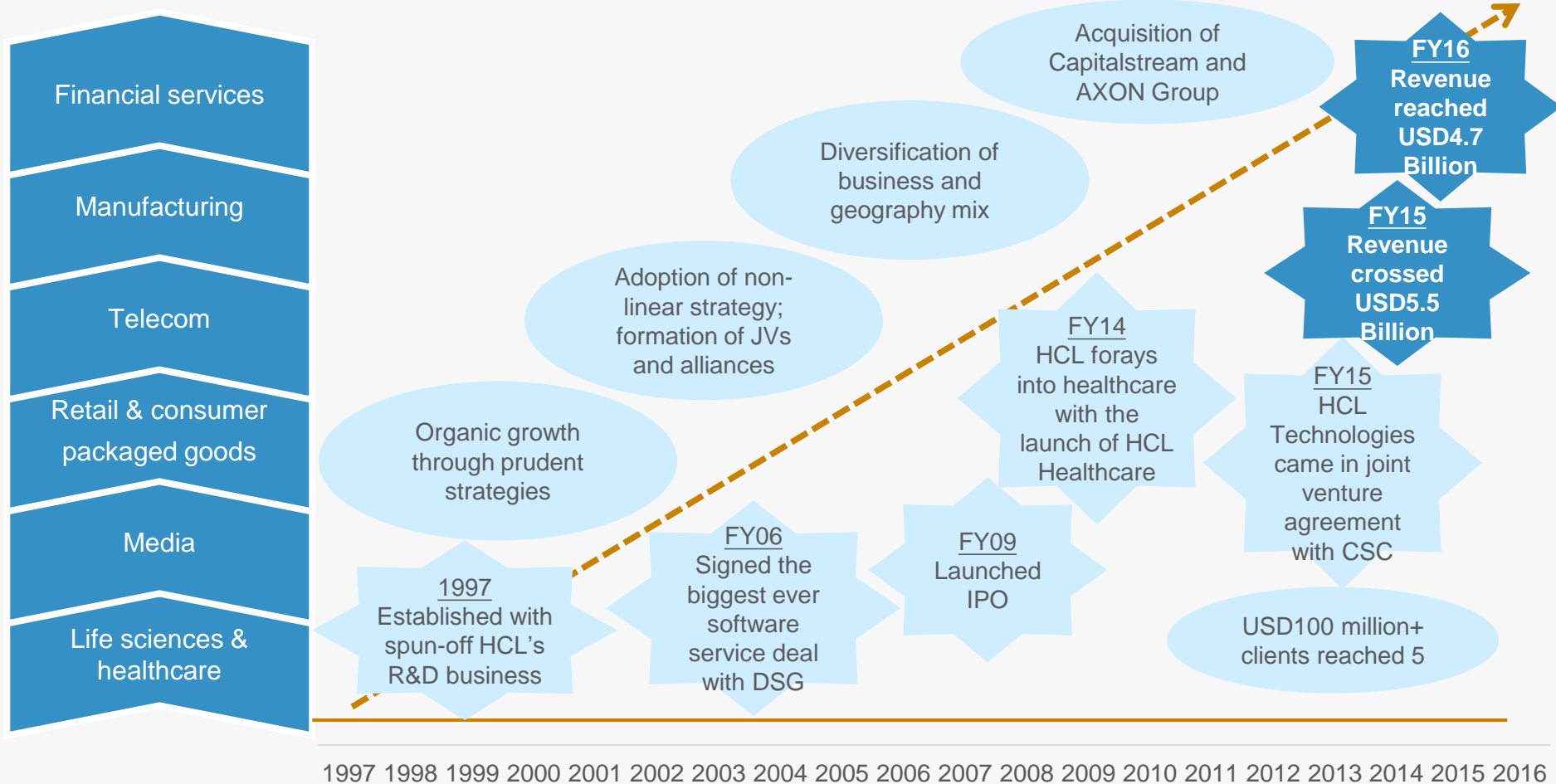*Source:* HCL Technologies website, HCL Annual Report, HCL Investor Presentation, TechSci Research

HCL: GROWING BY LEAPS AND BOUNDS … (3/3)

Financial services

Manufacturing

Telecom

Retail & consumer packaged goods

Media

Life sciences & healthcare

Acquisition of Capitalstream and AXON Group

FY16 Revenue reached USD4.7 Billion

Diversification of business and geography mix

FY15 Revenue crossed USD5.5 Billion

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

FY14 HCL forays into healthcare with the launch of HCL Healthcare

FY15 HCL Technologies came in joint venture agreement with CSC

Organic growth through prudent strategies

FY06 Signed the biggest ever software service deal with DSG

FY09 Launched IPO

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

USD100 million+ clients reached 5

1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

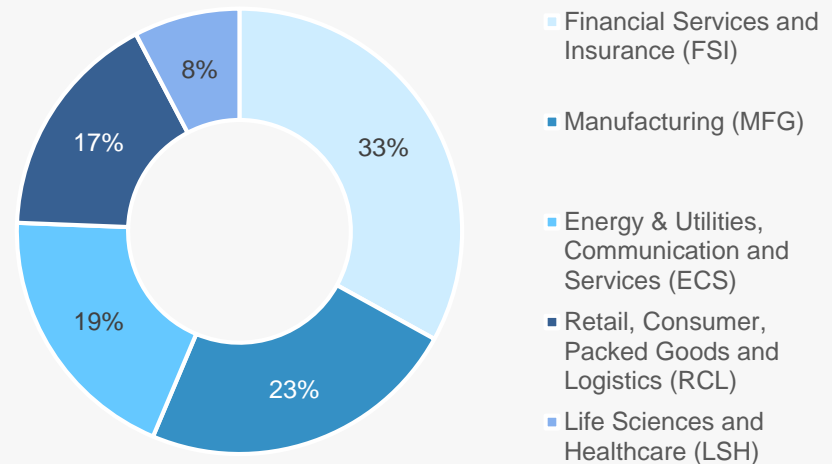*Source*: HCL Technologies website and Annual Report, TechSci Research

INFOSYS: EMERGENCE OF AN INDIA-BASED MNC … (1/3)

* Established in 1981, Infosys Limited is engaged in consulting, engineering, technology and outsourcing services. The company's end-to-end services include consulting and system integration. Infosys operates through 30 offices across India, the US, China, Australia, the UK, Canada and Japan

Achievements:

* FY16: Revenue crosses USD9.5 billion

* FY15: Revenue crosses USD8.7 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" and "Gold Award" at the International Ashden Awards Ceremony

* 2013: Ranked first in the annual Euromoney Best Managed Companies in Asia survey

Segment-wise revenue breakdown (FY16)

- Financial Services and Insurance (FSI)
- Manufacturing (MFG)
- Energy & Utilities, Communication and Services (ECS)
- Retail, Consumer, Packed Goods and Logistics (RCL)
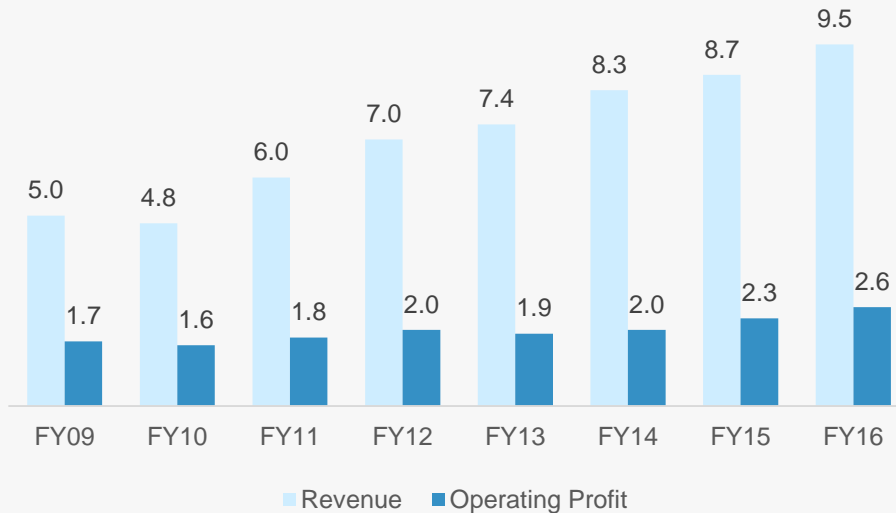- Life Sciences and Healthcare (LSH)

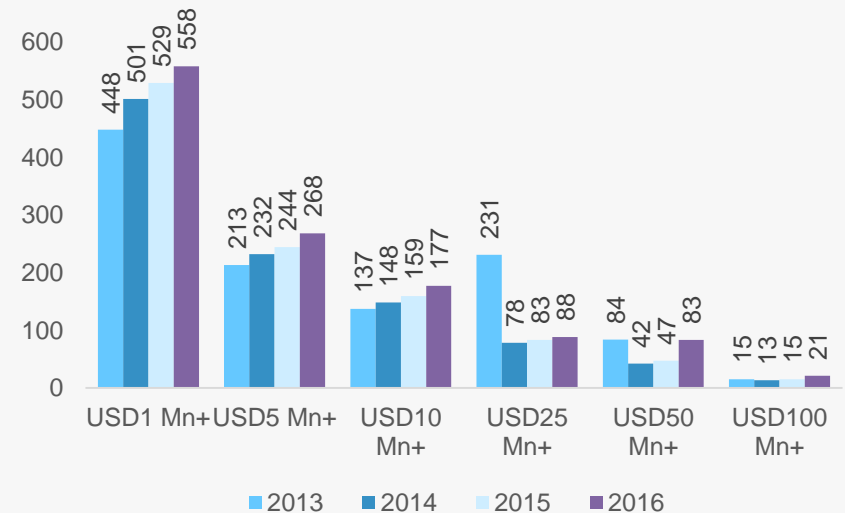*Source*: Infosys website and Annual Report, TechSci Research

* 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)
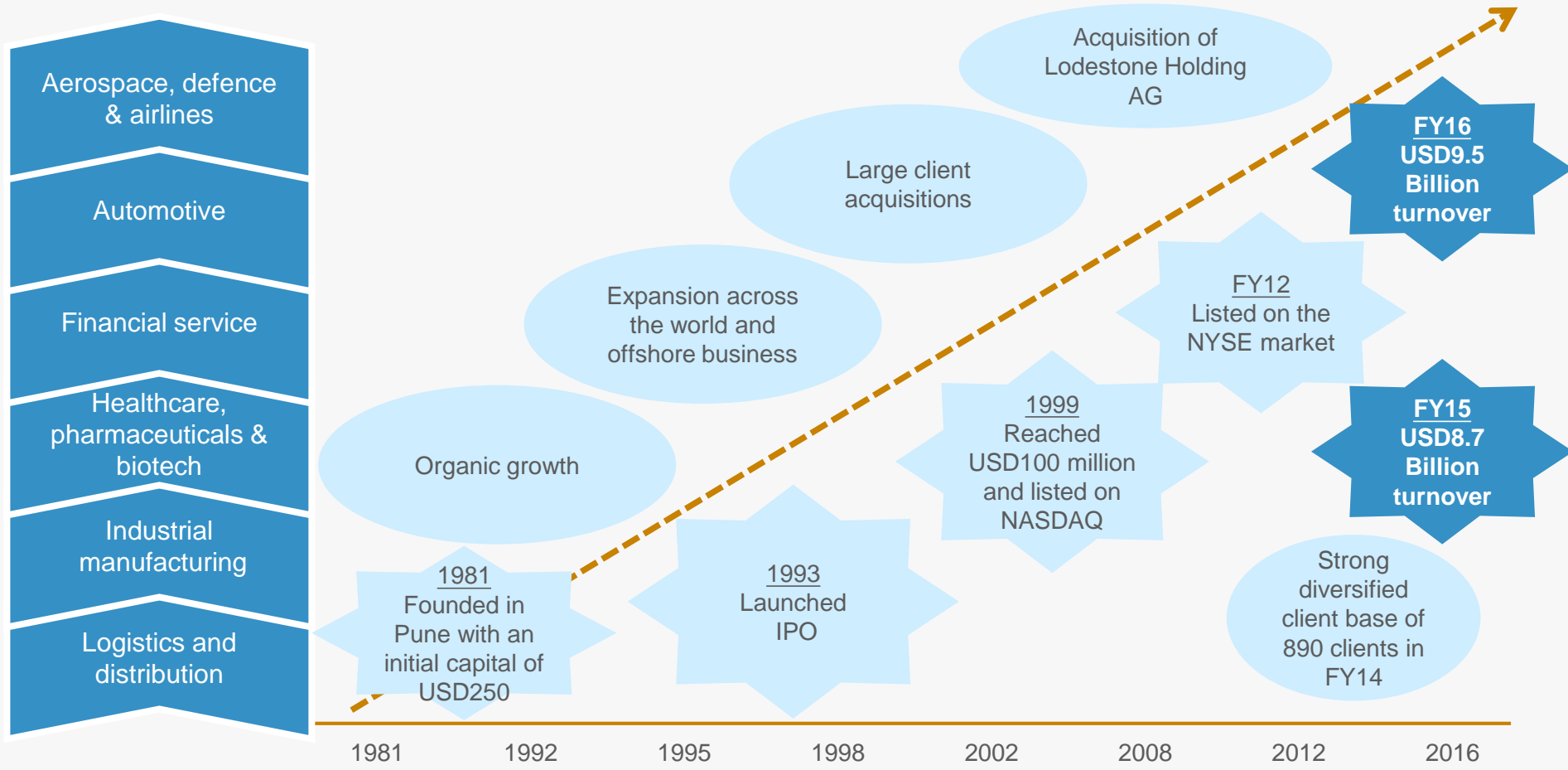
Financial Performance (USD Billion)

	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Revenue	5.0	4.8	6.0	7.0	7.4	8.3	8.7	9.5
Operating Profit	1.7	1.6	1.8	2.0	1.9	2.0	2.3	2.6

■ Revenue ■ Operating Profit

Number of Customers

	USD1 Mn+	USD5 Mn+	USD10 Mn+	USD25 Mn+	USD50 Mn+	USD100 Mn+
2013	448	213	137	231	84	15
2014	501	232	148	78	42	13
2015	529	244	159	83	47	15
2016	558	268	177	88	83	21

■ 2013 ■ 2014 ■ 2015 ■ 2016

Source: Infosys website and Annual Report, TechSci Research

IBEF
INDIA BRAND EQUITY FOUNDATION
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INFOSYS: EMERGENCE OF AN INDIA-BASED MNC … (3/3)

Aerospace, defence & airlines

Automotive

Financial service

Healthcare, pharmaceuticals & biotech

Industrial manufacturing

Logistics and distribution

Acquisition of Lodestone Holding AG

Large client acquisitions

FY16
USD9.5
Billion
turnover

Expansion across the world and offshore business

FY12
Listed on the NYSE market

Organic growth

1999
Reached USD100 million and listed on NASDAQ

FY15
USD8.7
Billion
turnover

1981
Founded in Pune with an initial capital of USD250

1993
Launched IPO

Strong diversified client base of 890 clients in FY14

| 1981 | 1992 | 1995 | 1998 | 2002 | 2008 | 2012 | 2016 |

Source: Infosys website and Annual Report, TechSci Research

USEFUL INFORMATION

INDUSTRY ASSOCIATIONS

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

IT & ITeS

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

* **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

IT & ITeS

EXCHANGE RATES

Exchange rates (Fiscal Year)

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

Exchange rates (Calendar Year)

Year	INR equivalent of one USD
2005	43.98
2006	45.18
2007	41.34
2008	43.62
2009	48.42
2010	45.72
2011	46.85
2012	53.46
2013	58.44
2014	61.03
2015	64.15
2016 (Expected)	67.22

Source: Reserve bank of India,
Average for the year

IT & ITeS

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