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Skilling for Digital Relevance

20 July 2017

The world is changing.......and we are preparing for it

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Technological shifts

- Disruptive technologies and the pace of exponential change
- Data is the new oil
- AI as the disruptor
- The Internet of everything

Changing geopolitics

- Protectionist sentiments and reversal of Globalization
- BREXIT, Middle East Crisis
- Increased regulatory environment, new laws for digital economy

Economic volatility

- Currency fluctuations
- Lower GDP growth, rising inflation
- Sector uncertainties – BFSI, Retail

Tech Shifts are the most profound and are reshaping businesses, and how we live.

Source: NASSCOM

Companies are making big bets on digital business

Shell (and Others):
The Digital Oil Field

Driving to Transform an Industry:
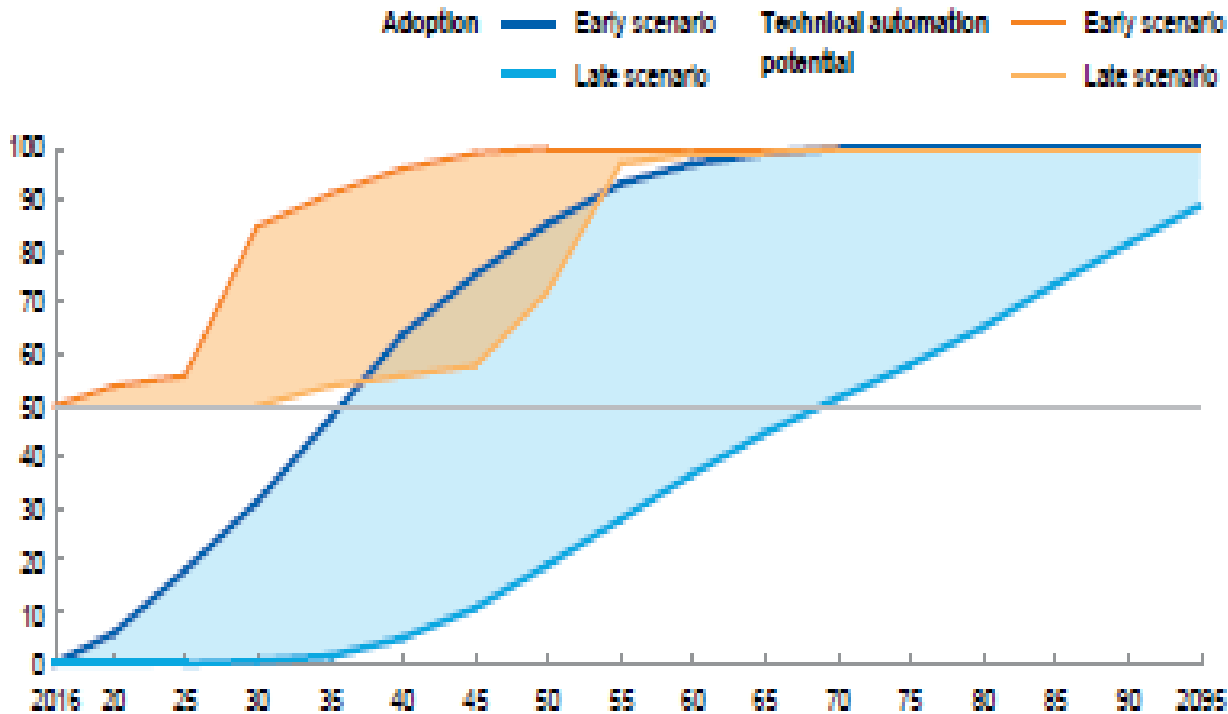**The Fully Autonomous Mine**

Boeing Digital Services

This change is occurring across every sector. IT industry is not only driving these changes, but is itself impacted by it – the move to `As a Service Economy' is a key shift transforming business models.

Automation is a global force but adoption will take time

Time spent on current work activities[1]
%

Adoption — Early scenario — **Technical automation potential** — Early scenario
— Late scenario — Late scenario

1 Forty-six countries used in this calculation, representing about 80% of global labour force.

SOURCE: McKinsey Global Institute analysis

Technology is eliminating jobs but also creating jobs.

Throughout history, it has created many more jobs than it has eliminated.

Pace of change, has accelerated significantly. (As an example, the US loses 21 million jobs every year due to tech and business changes, but creates over 23 million jobs).

Despite aggressive adoption of technology in the US and UK, unemployment levels today are at the lowest levels in recent times.

Implications for stakeholders

❑ Automation means less jobs for the same output.

❑ Growth creates more jobs.

❑ As long as pace of growth is higher than the rate of reduction of jobs due to automation, net employment will continue to grow.

❑ The jobs that are lost and the jobs that are created are different, require different and mostly higher, skills.

❑ Workforce reskilling is an urgent and massive imperative across sectors

❑ Workforce realignment, performance based appraisal and reskilling at scale continue as industry practices consistent with the pace of change

❑ Sensitivity, transparency and agility are critical for handling the HR challenges thrown up by the new trends

Source: NASSCOM

Dealing with a changing world..

FIRMS

❑ Growth has to outpace impact of automation for a net hirer firm. May not happen at every company level, but will happen at an industry level.

❑ Re-skilling & Up-skilling top most priority for employee retention and professional growth.

❑ Rigorous performance appraisal and Workforce Realignment a necessity. . Failure to do so places all jobs at risk
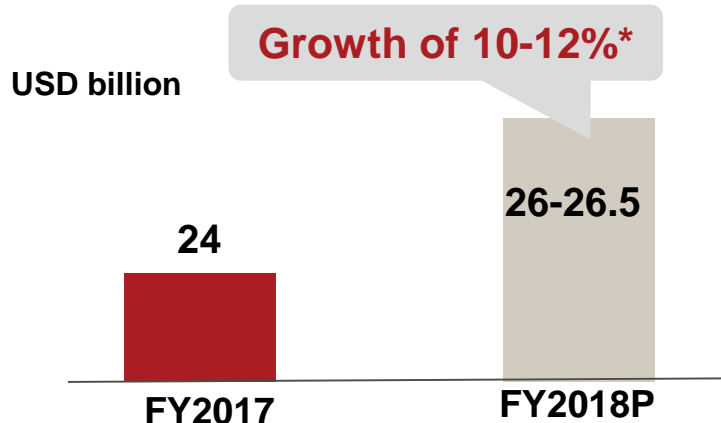
WORKFORCE

❑ Continuous acquisition of new skills. Failure to do so at any level creates risk of job loss.

❑ Increasingly, opportunities for technically skilled talent is needed across sectors, where a combination of technology skills and domain (BFSI, Healthcare, etc.) knowledge is needed. This combination is increasingly important even in the IT sector itself.

Source: NASSCOM

Industry Growth Drivers: Technology + Skills + Market

India IT-BPM Export Revenues*

USD billion

Growth of 7-8%*

116	124-125
FY2017	**FY2018P**
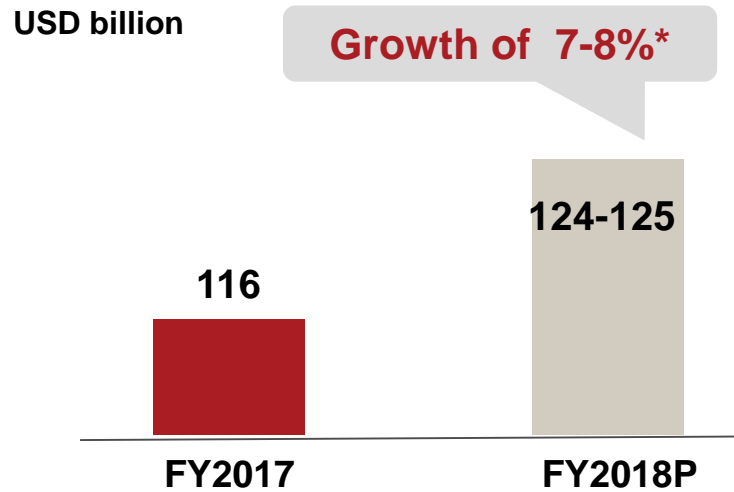
India IT-BPM Domestic Revenues*

USD billion

Growth of 10-12%*

24	26-26.5
FY2017	**FY2018P**

* Excludes hardware
Source: NASSCOM

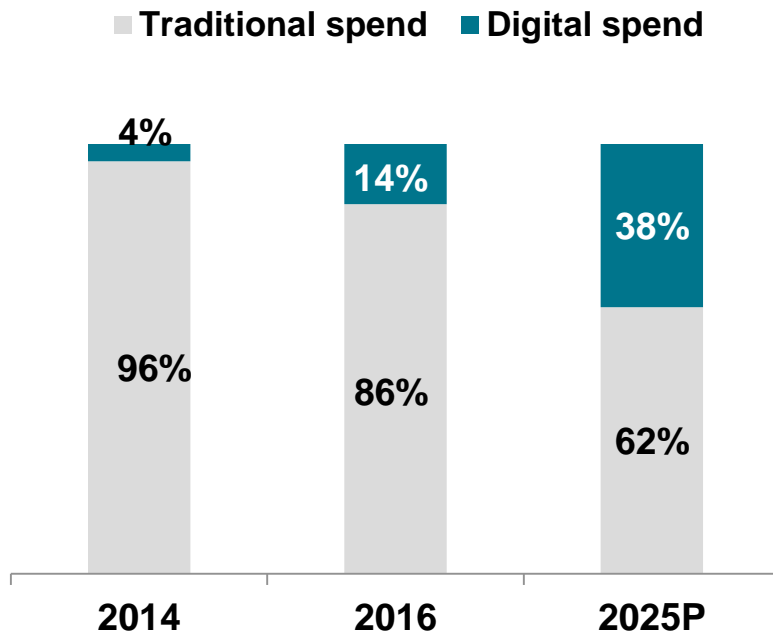*** In constant currency**

The Skills Imperative

- Net hirer adding 1.3 - 1.5 lakh jobs

- Decoupling of revenue and headcount growth - non linear growth

- Technology skills demand in other sectors to grow at a higher rate

- Focus on reskilling and academic partnerships

Digital skills: Bringing in a new technology order

India IT-BPM share increasingly 'Going Digital' ……

■ Traditional spend   ■ Digital spend

Year	Traditional spend	Digital spend
2014	96%	4%
2016	86%	14%
2025P	62%	38%

……leading to new war for talent

- **New talent addition around emerging job roles:** Subject matter experts and hybrid professionals (domain + tech + soft skills)

- **New job roles:** Cybersecurity, mobile app development, new user interfaces, social media, data scientists, platform engineering

- **New skills:** Big data analytics, cloud & cybersecurity services, IoT, service delivery automation, robotics, AI/machine learning/NLP, etc

- **Subject matter experts**: Graphic designers, humanities, sociology, security, finance, payments

Re-skilling the workforce: An industry imperative

Top focus Areas

Current reskilling focus

Investing in Emerging skills

#	Current reskilling focus	Investing in Emerging skills
1	Big Data/Analytics	ML/NLP
2	Cloud	DevOps
3	IoT	AI
4	Mobility	RPA
5	Design Thinking	Cybersecurity

ML: Machine Learning, NLP: Natural Language Processing, IoT, Internet of Things, AI: Artificial Intelligence, RPA, Robotic Process Automation

Source: NASSCOM

Structured Digital Skilling programs

DIGITAL SKILLING TRAINING LEVELS

LEVEL-4
EXPERT — Develop SMEs (Architect, specialist, consultants, trainers etc)

LEVEL-3
ADVANCED — Digital modules with hands on experience and external certifications

LEVEL-2
INTER MEDIATE — Deep Dive on Digital Modules for Project Readiness

LEVEL-1
BASIC — Basics of Digital Skills
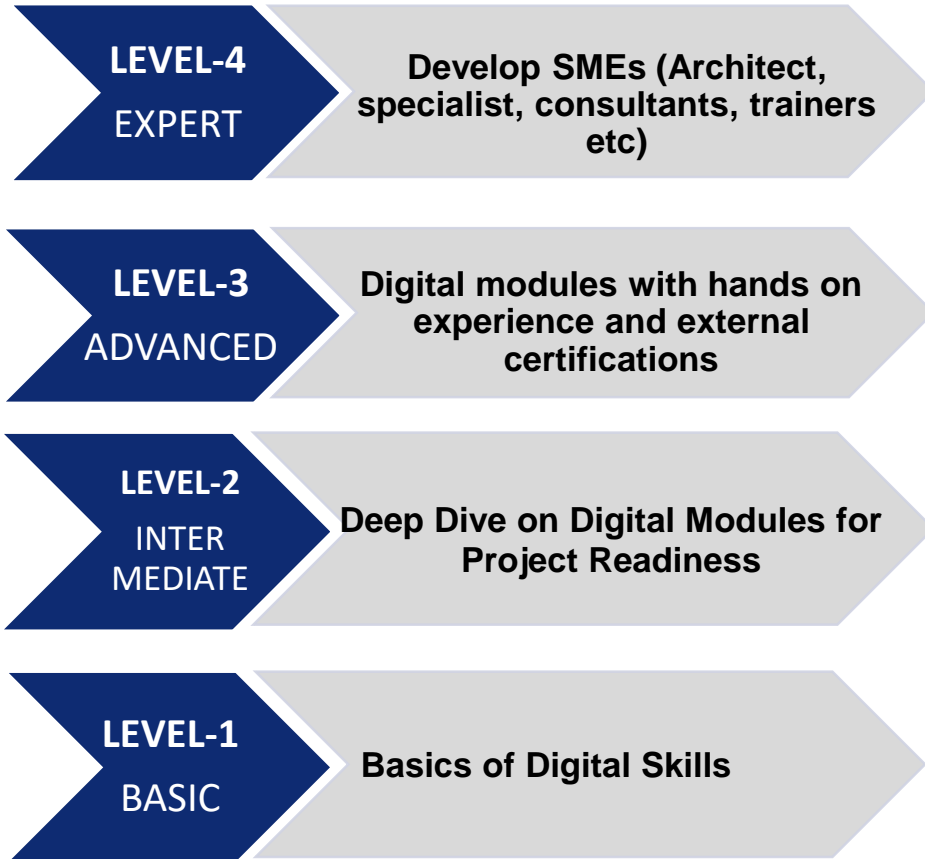
% OF WORKFORCE TRAINED

➢ **Large sized firms >50%**

➢ **Medium sized firms ~33-35%**

➢ **Small sized firms 38%**

Disrupting learning with investment in digital platforms

Traditional platforms	New-age platforms
Physical classroom training	Virtual classrooms, e-learning, self-learning
Text-book based	Cloud-based & app-based platforms
Instruction-led	Mentoring, CoEs
Internal certifications	MOOC Courses, Tie-ups with Global Universities
Seminars, conferences, workshops	Hackathons, Gamifications, Techtalks

- Need-based learning
- Employee's interest /priority dependent
- Time consuming

- Digital skilling platforms for the digital era
- Thrust on full stack professionals at all levels
- Institutionalized continuous learning

Source: NASSCOM

Re-skilling: Unfolding new opportunities and outcomes

EXTERNAL

Company examples*

2% increase in **average revenue per employee**

Diversified and added new offerings around AI/ML, microservices in existing areas

3 IPs developed from IoT labs, 80+ proactive digital propositions

20% increase in digital customers; 20+ solutions developed

INTERNAL

Bench duration down by 18% due to faster deployment

Increase in internal resource fulfilment from 50% to 62% in open positions

Increase in resource utilization by 5%

Positive career progression by training non-tech personnel to become data analysts

*: Company examples and not industry aggregate
Source: NASSCOM

Reimagine Digital Career Progression Framework

Project Unity: Transformation Program for Digital Re-skilling

Learning and Innovation @HSC

Digital Engineer of Tomorrow

Embracing a Digital Culture: People + Process + Platform

Digital Skills Development Program

Digital Academy

Source: NASSCOM

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Thank you