Skilling for Digital Relevance

20 July 2017
The world is changing.......and we are preparing for it

**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

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

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 the 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 realignment, performance based appraisal and reskilling at scale continue as industry practices consistent with the pace of change.
- Workforce reskilling is an urgent and massive imperative across sectors.

- 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*

<table>
<thead>
<tr>
<th>Year</th>
<th>USD billion</th>
<th>Growth of 7-8%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2017</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>FY2018P</td>
<td>124-125</td>
<td></td>
</tr>
</tbody>
</table>

India IT-BPM Domestic Revenues*

<table>
<thead>
<tr>
<th>Year</th>
<th>USD billion</th>
<th>Growth of 10-12%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2017</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>FY2018P</td>
<td>26-26.5</td>
<td></td>
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</tbody>
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* Excludes hardware
Source: NASSCOM

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

* In constant currency

* FY2017, FY2018P: Fiscal Year 2017, 2018 projections

* In constant currency
Digital skills: Bringing in a new technology order

India IT-BPM share increasingly ‘Going Digital’ ……

<table>
<thead>
<tr>
<th>Year</th>
<th>Traditional spend</th>
<th>Digital spend</th>
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<tbody>
<tr>
<td>2014</td>
<td>96%</td>
<td>4%</td>
</tr>
<tr>
<td>2016</td>
<td>86%</td>
<td>14%</td>
</tr>
<tr>
<td>2025P</td>
<td>62%</td>
<td>38%</td>
</tr>
</tbody>
</table>

……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

Source: NASSCOM
Re-skilling the workforce: An industry imperative

Top focus Areas

1. Big Data/Analytics
2. Cloud
3. IoT
4. Mobility
5. Design Thinking

Current reskilling focus

Investing in Emerging skills

- ML/NLP
- DevOps
- AI
- RPA
- Cybersecurity


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
INTERMEDIATE
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%

Source: Industry & NASSCOM
## Disrupting learning with investment in digital platforms

### Traditional platforms
- Physical classroom training
- Text-book based
- Instruction-led
- Internal certifications
- Seminars, conferences, workshops

### New-age platforms
- Virtual classrooms, e-learning, self-learning
- Cloud-based & app-based platforms
- Mentoring, CoEs
- MOOC Courses, Tie-ups with Global Universities
- 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**

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
NASSCOM DIGITAL SKILLS AWARD 2017: WINNERS

Reimagine Digital Career Progression Framework

Learning and Innovation @HSC

Embracing a Digital Culture: People + Process + Platform

Digital Academy

Project Unity: Transformation Program for Digital Re-skilling

Digital Engineer of Tomorrow

Digital Skills Development Program

Source: NASSCOM
Thank you