NASSCOM VISION AND PRIORITIES

OUR VISION

To help technology products and services industry in India to be trustworthy and innovative industry across the globe

CATALYSE INDUSTRY TRANSFORMATION AND GROWTH

Nurture India’s Innovation Quotient

Build Tech Capability and Ecosystem

Grow New Opportunities for Business
WE ARE ENTERING A TIME OF GREAT PROMISE AND PERIL

DIGITAL TRANSFORMATION – $369.22 Bn. by 2020 – at a CAGR of 19.6%.

DIGITAL TRANSFORMATION TO CONTRIBUTE USD 154 Bn. TO INDIA’S GDP BY 2021.

Source: IDC - Microsoft Report on Unlocking the Economic Impact of Digital Transformation in Asia Pacific- 2018
Technology industry is increasing investments in digital

Revenue share in Digital

FY2018 against FY2016

- TATA Consultancy Services: 21.2% (↑ 700+ bps)
- Wipro: 27.3% (↑ 900+ bps)
- LTI: 31.5% (↑ 500+ bps)
- Mindtree: 38.7% (↑ 600+ bps)

Digital Infrastructure

- 110+ CoEs in India focusing on IoT, AI & cognitive, mobility, data science, etc.
- 20+ industry labs/innovation centers driving innovation for specific clients
- 30+ design studios & CX centers driving collaboration with clients on innovative technology solutions

Source: Everest Research, NASSCOM

Digital Platforms

- AI & cognitive
  - Infosys Nia platform
  - HCL DRYICE™
  - TATA Consultancy Services ingio™
- IoT
  - wipro Looking Glass
  - Mindtree Asset+ solution
  - LTI Mosaic
- Interactive & design
  - Zoho Online web applications
capillary Customer engagement platform
- Blockchain
  - TATA Consultancy Services Quartz platform
  - ZensmartBlox
Global shortage of tech talent – A new paradigm for skilling

Skills Shortage
- Capgemini study revealed that 55% of organizations acknowledged that not only was there a huge gap for STEM skills but it is widening
- Gartner estimates that even by 2020 - 30% of tech jobs will be unfulfilled owing to unavailability of relevant talent in digital.
- 40% of employers report difficulties in finding skilled talent as per survey by leading agency
- 1.4 million person gap in 2020 between software development jobs and qualified U.S. applicants

Niche Skills in Demand
- Demand for 181k people globally with deep analytical skills in 2018
- 77% of IT decision-makers lack required skills for IoT; 47% of IT leaders said their firm had no IoT skills
- 3 million cybersecurity professionals over next 3 years

Source: IDC, IBM, Niti Aayog, Inmarsat, Manpower Group, WEF

Can India be the technology skills hub for the world?
The only skill that will be important in the 21st century is the skill of learning new skills. Everything else will become obsolete over time.

— Peter Drucker —
Reskilling: Our Topmost Priority

• Industry is in the **middle of a massive disruption**. Of the 4 million jobs in the industry today, the nature of 60-65% is likely to change over the next 5 years. Jobs will change and **new jobs will emerge**

• Demand is increasing rapidly for emerging technologies like **Big Data Analytics, AI/ML, Cybersecurity, IoT** and **Robotics**. **Our Goal is to Position India as the talent hub for the new emerging technologies.** For that, we need to build a talent pipeline for the future and enable existing workforce to get reskilled.

• **Every company will need to navigate this change** - Need a collaborative industry level response. **This industry driven learning eco-system is “FutureSkills”.**
FutureSkills: An Industry Response

- **FutureSkills**: an industry utility for skills development. Accessible both on web and mobile. Industry is both a consumer and a contributor to the platform.

- **Goal**: Discovery → Continuous Learning → Deep Skilling

- **Objective**: Re-skill/ up-skill a total of about 2 million employees over a period of 5 years

- **9 – 66 – 155**: 9 emerging technologies, 66+ Job Roles, 155+ Skills

  - Big Data Analytics
  - Artificial Intelligence
  - Cyber Security
  - Robotic Process Automation
  - Internet of Things
  - Social & Media
  - Cloud Computing
  - Virtual Reality
  - 3D Printing

*BlockChain to be added by October 2018*

- **Emerging Job Roles**: Some sample new job roles
  - Big Data Analytics – Data Scientist; Data Architect; Data Administrator; Analyst BI
  - Artificial Intelligence – Data Architect; Applied Scientist; ML Speech Vision; Analyst BI; DevOps Engineer
  - Cyber Security – Analyst Application Security; Consultant Networking Security
Where are we now?

- **Pioneer Companies**: Futureskills launched with a mix of different types of member firms to solve for different kinds of use cases. Some of the ‘The Pioneers’ include:
  - Wipro and Tech Mahindra (IT Services) | Cyient (Engineering Services) | Genpact & WNS (BPM) | CGI (Global Capability Center) | Purpletalk (Products) | Dev-IT and Kellton (SMEs).

- **User Base**: 200,000+ committed users from signed up member firms

- **Partner Ecosystem**: 30+ partners have signed up, including best in class product firms (Microsoft) the best MOOC companies (EdX); Innovative smaller companies (VideoKen). **Over 30,000 content pieces fuelling the platform**

- **Subject Matter Experts**: A key differentiator. Industry experts contribute relevant and current learning content. On-boarding in progress

- **Technologies Enabled**:
  - Goal 1 (Discovery) - enabled for all 9 Technologies.
  - Goal 2 & 3 (Continuous Learning & Deep Skilling) enabled for AI, Big Data, RPA. Rest by Sep ’18.
Most companies today generate and use huge amount of data. Therefore Big Data Analytics and Artificial Intelligence will have propensity to impact many sectors.
**Demand Analysis:** The total demand for AI & Big Data / Analytics roles for 2018 is ~510,000

<table>
<thead>
<tr>
<th>Source</th>
<th>2018</th>
<th>CAGR</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCC</td>
<td>~510,000</td>
<td>~16%</td>
<td>~800,000</td>
</tr>
<tr>
<td>Service Providers</td>
<td>~370,000</td>
<td>~15%</td>
<td>~570,000</td>
</tr>
<tr>
<td>Start-Ups &amp; Small Enterprises</td>
<td>~90,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others (includes Indian enterprises across – BFSI, Retail, Oil and Gas, Pharma, Telecommunications, Industrial, etc.)</td>
<td>~230,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Job Openings (Un-Met Demand)</td>
<td>~140,000</td>
<td>~18%</td>
<td>~230,000</td>
</tr>
</tbody>
</table>

Sources: Job portals/platforms include Indeed, LinkedIn, Naukri, Monster, Kaggle & HackerEarth
The Road Ahead

• **Continued Focus on Phase 1 in 2018-19 – B2B**
  – Continue to Roll out to NASSCOM member companies in 2018-19. Industry has a huge priority on reskill their employees in the new emerging technologies.

• **Prepare for Phase 2 – Launch B2C in 2019**
  – Make futureskills available to Universities and Colleges in next year.
  – MOU with MeitY focused on extending the Futureskills platform to individuals

• **Goals for next 5 years**: 1 million professionals to be reskilled and 1 million potential employees and students to be skilled in the new emerging technologies!

Fantastic opportunity for India to become talent hub for emerging technologies.. Requires a team India effort!
THANK YOU