



What does future of work look like?

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Will travel behaviour change for good ?

Recovery of air traffic

- ❖ Domestic air traffic in India could close-in on pre-covid annual numbers as early as next fiscal
- ❖ Jan & Feb 2021 numbers are encouraging

International travel

- ❖ International travel may be muted now, however, demand should come back

Impact of WFH

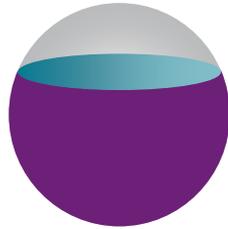
- ❖ As world is getting used to WFH, need for corporate travel & commercial real estate could change for good but demand may come back in other forms

Emerging trends

- ❖ Terminal spaces & aviation jobs require reorientation – Digital as an enabler
- ❖ Personalised travel & GA might get a boost
- ❖ Air cargo could have exponential growth

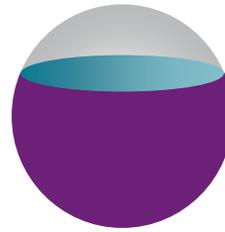
Technology will change how we look at jobs today...

...and this holds true for aviation as well



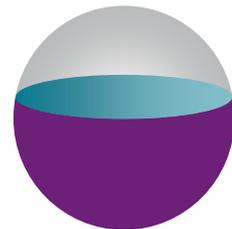
70%

of CHROs expect **investments in AI and Industry 4.0 technologies to replace jobs in their organisation** within the next three years.



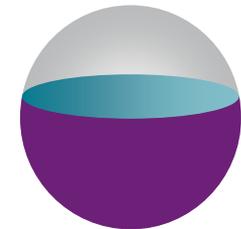
73%

of CHROs reporting that **building critical skills and competencies of workforce are top priorities.**



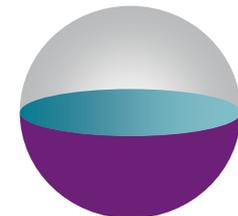
69%

of what a **manager currently does will be automated by 2024.** Technology is fundamentally changing what it means to be a manager



66%

of job postings had **more than 25% of their required skills change** compared to 5 years ago.



47%

of **on-the-job learning opportunities are at risk of being automated and eliminated by AI.** On-the-job training is the primary method being used to develop employees' digital skills.

Source:

1. '5 Imperatives for HR leaders to Tackle the Future of Work', Gartner, Mary Baker, Oct 2019
2. '7 Ways Artificial Intelligence Is Reinventing Human Resources', CMS Wire, Dom Nicoistro, May 2020
3. '14 Jobs That Could Be Automated Within The Next Decade', Forbes. Authored by: Expert panel, Forbes Technology Council, Feb 2020

Emerging employment scenario under Industry 4.0

Focus to shift to customised services, customer-focused & human-centric jobs

Existing (Industrial) Model	I 4.0	Emerging Model 2035
60% (jobs related to mass production)		10 – 15% (high skilled jobs – mass production related)
5 – 10% (agriculture related activities)		25 – 30% (personalised manufacturing & urban related)
10% (urban related activities)		50 – 60% (explosive growth of jobs in human centered services, as they are least susceptible to automation)
20 – 25% (human to human services – education, healthcare etc.)		

Some of 'Affected' Sectors and Job Roles –



Elimination of over 0.7 million jobs in voice based roles (**IT-ITeS Sector**)



Cashier, Inventory Associate, Stock Boy are under threat (**Automobile and Manufacturing**)



Packer, Checker, Folder, Helper, Material Handler jobs may be eliminated (**Retail**)



Data Entry operator, Data verification personnel

Source:

1. 'Automation to alter jobs landscape in five years: study', Indian Express, ENS Economic Bureau, Mar 2018
2. 'Understanding the future of skills', Skills Next 2020 report, Michael Crawford Urban & Sunil Johal, Jan 2020
3. The Future of Skills: Employment in 2030. London: Pearson and Nesta, Bakhshi, H., Downing, J., Osborne, M. and Schneider, P. (2017)
4. KPMG Analysis

Covid-19 has fast-tracked technology adoption in Aviation sector, driving need for upskilling of aviation workforce

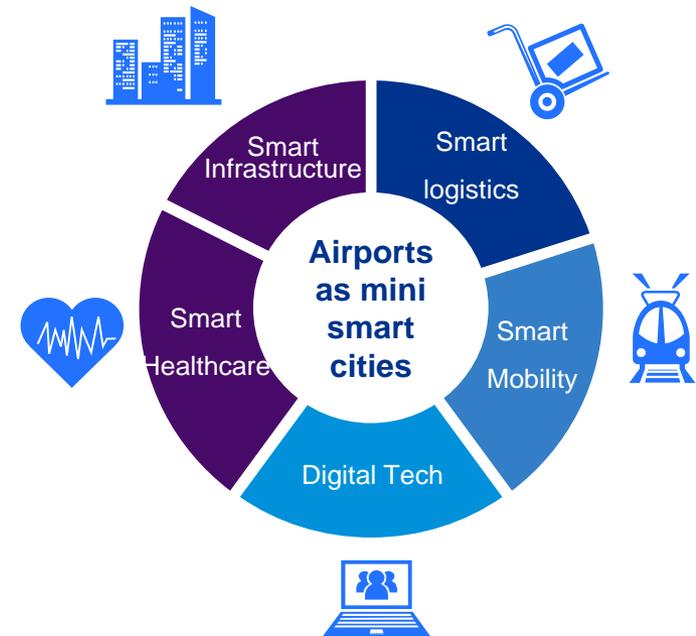


Upskilling is no longer an option but a necessity

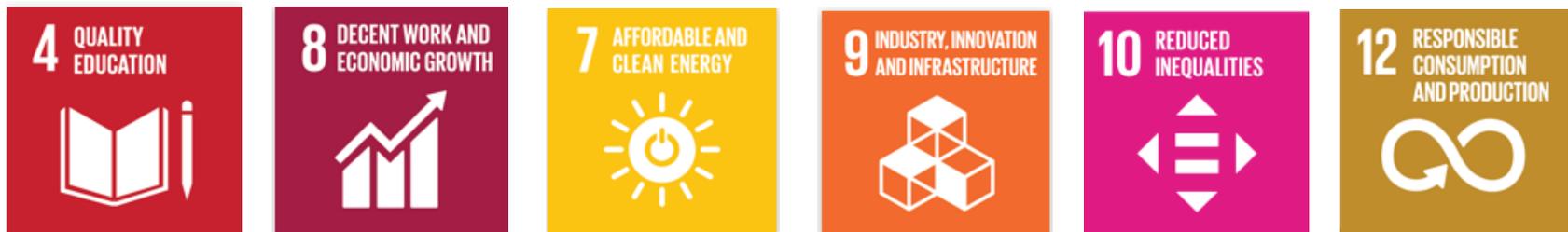
Smart living will have technology & sustainability as key pillars

Airports are becoming mini smart cities in themselves

- Technology will be widely used to address infrastructure gaps
- Many sustainability outcomes will depend on ability to mine data & report compliance in real time, which will be enabled by digital skills
- Digital upskilling would be key theme for future jobs



Closing the skills gaps emerging out of technology adoption will be required for achieving SDGs



Industry 4.0 will widen the skill gap, needing realignment to keep future workforce relevant

1 India and Industry 4.0

- **Robot density** in manufacturing in India has been rising at a CAGR of 24%²
- India expected to command 20% of the global IoT market³
- **Big data analytics** market in India expected to be 32% of global share⁴

2 Impact on Jobs

Key sectors impacted: Automotive, Textiles, Packaging, Healthcare, Energy and Power, Machinery, Electronics, etc.

Key Skills required:

- **Ability to work with data** (IoT, AR/VR, ML, big data and analytics, Cyber Security)
- **Cross functional skills** (skills such as collaboration, emotional intelligence, decision making, cross functional processes, working in ambiguous environments)

3 Skill Gap

- More than 54% of employees in 12 sectors will need reskilling by 2022¹ owing to integration of Industry 4.0
- There is a need for **additional capacity creation and realignment of training/ curriculum**

4 Models adopted for skilling of future workforce & their Integration with Industry 4.0

Requirement to invest in Digital infrastructure, and changing organisational needs

Tapping Digital Learning: Virtual laboratories, video-based learning

Focus on Leadership Skills for 4.0 (Agility, Digital Leadership, Focus on people)

Channel investments through PPPs

Establish open innovation relationships between global MNCs and startups

Finance Technological Clusters and new-age startups

Source: 1. The Future of Jobs, World Economic Forum, 2018; 2 Robot density rises globally, International Federation of Robotics, 7 February 2018; Executive Summary World Robotics 2017 Industrial Robots, International Federation of Robotics, 3. Top 5 Internet of Things (IoT) initiatives by Government of India, IOT India Magazine, 2016 4.. Big Data Analytics Market- Future scope in India

Innovative economies will focus on competencies and active learning opportunities

What to focus on?

Competencies



- Emotional intelligence, leadership and social influence as well as service orientation
- Research capability and temperament
- Digital Orientation

Skills



- **4Cs**: Complex problem Solving, Critical Thinking, Creativity/ Design Thinking, Communication
- **STEM** will form the basis for fastest growing jobs category
- **data analysts and scientists; AI and machine learning specialists**

How to focus?

Active/ Personalised learning



- Personal leadership and Problem Solving Skills based on new "Outcome Framework"
- Lifelong Learning
- Leverage Online and Digital Platforms. Creating recognition for such courses

Policy focus



- Innovation Policy- Research and Development Tax Credits, Incentives for Commercialising University Knowledge
- STEM workforce training and development
- Immigration reform for national innovation and economic competitiveness
- Creating Regional clusters for growth and innovation

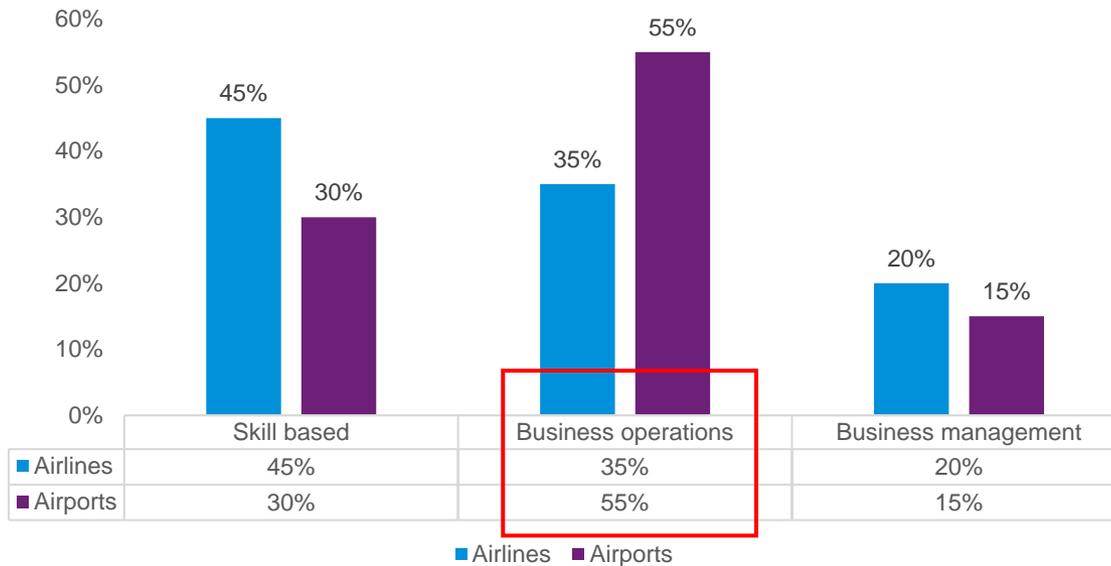


Sources: 1. Future of Jobs, World Economic Forum, 2018; Beyond STEM: Why AI Demands Higher-Level Skills, Forbes 2018, Lost and Found: Pathways from disruption to employment, Brookfield Institute, Skills Innovations For An Ever Changing World, Forbes, 2019

Jobs at airports & airlines today may not be relevant in future

Significant percent of the overall manpower is 'operational' staff - this trend could change

Functional distribution of manpower for airlines and airports sub segments



- ~2.5 lakh people currently employed at airports in India
- ~80,000 people employed across various airlines
- Number of airports in India expected to increase to 200 by 2040 and scheduled aircrafts to 2400 by 2040
- With this increase, requirement of manpower having specialised skills is expected to rise

Key takeaways

- Core operational and semi-skilled jobs are likely to get replaced by automation, robots
- 'business operations' segment forms the majority of jobs at an airport; need to re-profile aviation skillsets

Trends in airports that are leading the change:

- Check-in staff getting replaced by robots (Incheon)
- Autonomous cleaning pods at terminals (Changi)
- Airside management using drones (Schiphol)
- Autonomous valet parking using robots (Gatwick)
- Digital passports & self-operated kiosks replacing Security & immigration checks

Source:

- 2 lakh jobs at private airports on the axe; industry seeks intervention, company websites, Mint, IANS, Apr 2020,
- KPMG analysis and primary interactions



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