

## INDUSTRY 4.0: THE HR PERSPECTIVE

**Archana Kumar**

Chief Human Resources Officer, Ireo  
Private Limited

### Abstract:

Industry 4.0 refers to the fourth industrial revolution. Each revolution is characterized by its ability to transform economies, jobs and even society itself through the introduction of new technologies and processes. The impact of Industrial revolution ripples across industries, businesses and communities, affecting not just how we work but also how we live and relate to one another. In a short span of time, terms like robotics, artificial intelligence, nanotechnology, quantum computing, biotechnology, the Internet of Things, fifth-generation wireless technologies (5G), additive manufacturing/3D printing and fully autonomous vehicles have become common terms in the world of business and industry.

Industry 4.0 has the potential to create opportunities for new roles. While the lower order skills will be easily replaced by automation. However, the higher order skills which require intuitiveness, empathy and leadership navigational skills in face of adversities will be in high demand.

Instead of changing the curriculum, the need of the hour is a complete disruption in the approach to learning. It is no longer enough to have a formal education, but more important to inculcate the process of continually acquiring new skills and knowledge.

The future will be in the hands of the organizations that see opportunities and challenges in a changing world—a picture that conveys both hope and ambiguity.

**Keywords:** New roles, Opportunities, New Skills, etc.

### Introduction

After the 1st revolution in 18th century, 2nd in the 19th century and 3rd in the 20th century, the 21st century is witnessing the 4th industrial revolution characterized by the fusion of technologies and the blurring of lines between the physical, digital, and biological spheres. This time the revolution is advancing at extraordinary speed, driven by technologies developing at an exponential rate.

### Life 4.0

In this confluence of disruptive digital technologies, the change being brought around in the manufacturing sector is beyond recognition. The emergence of the human-machine interaction is a reality today. The human skills required to work alongside robots who have AI and ML inbuilt in them is absolutely without any parallel in human evolution. These Bots are now playing an increasing role in factories and manufacturing, the speed, accuracy computational power is increasingly

pushing human resources out of the industry compounds. The onslaught of machines has led to an astonishing rise in data volumes, leading to advanced analytics and business intelligence.

The human machine interface doesn't just end there. Internet-of-Things (IoT) where machines can communicate with machines through ML with no human interface has today reached our homes without our blinking the eyelid. Our smart phones can interact with our smart TVs; Alexa can understand our life pattern better than most of the family members; smart pad controlled smart homes already seem like an also-ran technology; augmented reality today is part of our entertainment system and games.

More and more people have adapted to Direct-to-home screening, Netflix and Amazon for entertainment. Internet sensations are challenging the Film industry. New norms for work, life, home, entertainment, games are

changing how we lived life before the digitalization of our lives and now.

### Jobs 4.0

It is not just in industrial set-ups and factories that the transformation is being brought around at an incredible pace. The office work space is also transforming. But this is not the first time that workplaces are transforming 360 degrees. The world moved from agrarian economy to the Industrial economy and the place of work transformed. However, it took over a century for that to happen. Then with the advent of computers, jobs were lost in large numbers and there was stiff resistance from Labour unions against their deployment. However, that also took almost 3 decades. The current transformation at workplace will be turbulent.

“A new report by the McKinsey Global Institute predicts that by 2030, as many as 800 million jobs could be lost worldwide to automation. Rote jobs

that involve physical labor (machinist, cooks) or data processing (payroll clerks, data entry) are most at risk of automation.” There are automated check-out counters, toll tax collections, railway ticket sales, airline booking, bank tellers, parking attendants and now even waiters at restaurants. The jobs which were low skill have all but disappeared from our lives and we have adjusted to it easily.

The effects of technology did not result in mass scale unemployment. Every industrial revolution led to switching of gears and large scale enhancement and change of vocational skills and knowledge. The level of educated workforce increased. They adapted to new technology and continued to be productive. However, the challenge is in managing the transition and often the current workforce is the one to be badly affected. The new generation that follows comes with requisite skills to find suitable jobs in the new workplace.

In the years to come, high-paying creative and cognitive jobs will be at a premium, while the demand for middle and low-skill occupations will decline. A concerted push is required to up skill the workforce through government intervention since private industry spends on training and upgrading workforce has seen a steady decline in investment over decades.

#### **Employee 4.0**

In all this technology overcast, what is the average human worker expected to adjust with? This may be projected as a doom and gloom scenario. However, a closer inspection reveals that the human employee has already adjusted to several every day automation and finds them extremely beneficial.

Today, there are no doormen or security guards at the office entrance. Advanced access and security devices do the job with much more speed and convenience. The attendance register has also been

replaced with a swipe or biometric device that allows an unobstructed entrance to a place of work. Use of paper stationery, keeping physical files, sending typed/written notes, standing in queues to take reimbursement, going to a bank to deposit salary cheques are some work habits which has become almost totally defunct with the use of computerization at workplace.

The next level of intelligent technology is also very prevalent today. Your HR bot is always available to you through any mobility device to seek answers to all your queries. Today, the pulse of the organization can be easily gauged through the use of Bots which through facial recognition, textual interpretation and artificial intelligence. The incidents of several CEOs replacing their EAs with these Bots are emerging especially in the new-age industries. These Bots provide them a real-time update on any HR input they need regarding their workforce.

These technologies enabled robotic employees, usually called bots since they have no physical form yet are named resources in the company, are now acting as our coach, mentors and advisors too. The smart technology and its connectivity helps in mining through gargantuan data in seconds to provide us with answers to our work related concerns. Mentors are available digitally where collective wisdom is churned through ML to give us the exact answer we need to face a work challenge. Similarly, emotionally intelligent bots are able to coach us in doing our work intelligently.

The physical HR and Admin department has today become virtual and yet the reach and connectivity across regions and territories is consistent. Virtual teams work on a common project across continents and the client gets the solution delivered in time and to the expectations.

#### **Skills 4.0**

In a short span of time, terms like robotics, artificial intelligence, nanotechnology, quantum computing, biotechnology, the Internet of Things, fifth-generation wireless technologies (5G), additive manufacturing/3D printing and fully autonomous vehicles have become common terms in the world of business and industry.

Despite the digital onslaught, today the need for human resources is more critical than ever. It is vital because of their intrinsic knowledge and ability to keep adapting to the continuously transforming technology. The amalgamation of the physical world with the digital allows for the creation of digital organizations which are not only interconnected, but also capable of more holistic, informed decision making. Not just that, human talent has to envision and prepare itself for more collaborative jobs between humans and robots.

It is not just ‘what’ the job would entail but also the ‘who’ and ‘how’ it will be done that is extremely important to bear in mind. Consequently, the 4th revolution will also revolutionize the workforce towards an increasing number of contractual, temporary and/ or ad hoc employees. Gig and temp workforce will constitute the majority share of the future employee base.

Industry 4.0 has the potential to create opportunities for new roles. While the lower order skills will be easily replaced by automation. However, the higher order skills which require intuitiveness, empathy and leadership navigational skills in face of adversities will be in high demand.

Instead of changing the curriculum, the need of the hour is a complete disruption in the approach to learning. It is no longer enough to have a formal education, but more important to

inculcate the process of continually acquiring new skills and knowledge.

#### Impact 4.0

The impact of the Industry 4.0 is not just on how we do work and our employment. It is evident that the impact is all pervasive and revolutionary. It permeates our personal life as much as it impacts our professional life. The obsolescence of old low skill jobs is set off by the emergence of new-age digital skill requiring high-tech jobs. Would we have understood what these jobs meant if we had heard of them in 2003?

- Virtual assistant
- Search Engine Optimisation specialist
- Social media manager
- Uber driver
- Wellbeing coach
- App developer
- Web analyst
- Blogger
- Genetic counsellor
- Sustainability director
- Drone operator

Today most of them have become commonplace. Technology does not scare us. We have learnt to make peace with it and include it seamlessly in our lives.

But the Technology revolution is a constant upward steep curve. The impact is only just being felt. The rapidly advancing technological frontier is demanding skills in digital technology & connectivity which concern with, communication, media, entertainment, retail sales, banking and finance, human resources, customer service and the list is never ending. Industry 4.0 will

create a complete transformation of human existence, and with so much to assimilate, the industrial players need to focus on:

- Focus on the next frontier of operational effectiveness using new age tools & technology.
- Make their business adapt to the changing values and work ethics of the emerging working class.
- 'Build foundations for the organization's digital transformation by developing digital capabilities, enabling collaboration in the ecosystem, managing data as a valuable asset, and coming to grips with cyber security'.

As the Digital Factory engines start to roll faster and faster, the Human resource factory has to ensure an agile workforce in a constant learning environment. The world of vertical and horizontal integration of business and its stakeholders has to find a parallel in the emergence of a matrix organization where skills are more powerful than designations. The nature of employee will transform from being a full time on-rolls to a gig worker providing professional services to multiple organisations and being rewarded on results and services.

Now is the time for moving from talks to action. And obviously the first movers shall outpace the competition. With digitization expected to result in a quantum jump in performance, the human resource has to keep pace with continuous performance appraisals and instant rewards. Globalisation, inclusion and diversity will not be values but a business imperative. The

entire eco-system has to be readied for the imminent onslaught of the digital tsunami. Data will be the final word. Data analytics and mining shall be the base for all policy decisions be it a political, macro-economic, financial, social or educational sphere.

The ever widening Human Resource skill gap has to be bridged. Building the digital-HR roadmap is critical to find the maximum return on investment. The capability-maturity model of the company has to be aligned with its digital strategy. The realistic assessment of where the organization is with the in-house people skill sets and what it needs to have concurrent to the digital ambition has to be charted. Any chasm between the two needs immediate attention at a micro level within the company and macro level in industry and economy.

The future will be in the hands of the organizations that see opportunities and challenges in a changing world—a picture that conveys both hope and ambiguity.

In Industry 4.0, the game is set to become Big now— Big data, big investments, big impacts!

#### References

- Industry 4.0 at McKinsey's model factories
- The Fourth Industrial Revolution – Deloitte