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By ✱ PeopleStrong

PRESENTS

DECODING JOBS 2019

SECTORAL DOSSIER
AUTOMOTIVE

IN COLLABORATION WITH

Wheebox
Measuring World's Talent

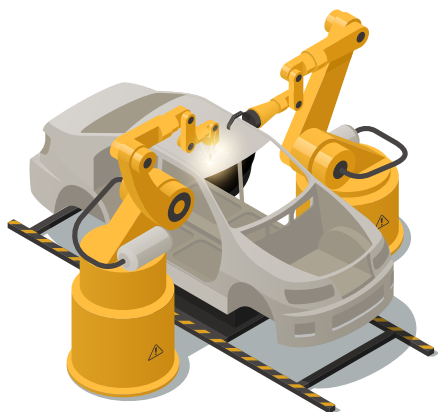




INTRODUCTION

After a near decade of high growth, this past year has been tough for the automobile industry in India: dwindling sales volumes, production cuts and piling inventory. Fueled by multiple reasons, from changing consumer preferences and a liquidity crunch to stringent compliances, this industry downturn will impact the overall Indian economy as the sector is closely integrated with large sections of the economy, upstream and downstream. These are the uncertainties that are making it challenging to predict evolving talent trends in the long term for this industry.

Accounting for 7.1% of the nation's GDP, the sector currently employs 37 million people directly and indirectly. According to the Automotive Mission Plan 2026 (a collective vision of the Government of India and the Indian Automotive Industry), by the mid 2020's, the sector is expected to generate an additional 65 million jobs and grow in value to over 12% of India's GDP.



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Most experts feel that the current slump may just be temporary (may last for 2-3 quarters at the max) with a higher impact on temporary / contractual workers from ancillary / parts manufacturing companies. A rapidly evolving consumer base (rise in the size of the middle-income group, a younger population and a digital savvy generation) alongside a dynamic regulatory framework, disruptive technologies and a changing mobility infrastructure (Electric Vehicles) are together shaping the industry's growth. This dossier intends to put forth the impact of this expected growth on the job market and preparedness of the industry on talent acquisition and workforce skilling.

POLICY INTERVENTIONS TO SETUP INDIA AS A GLOBAL AUTO-MANUFACTURING HUB

To keep the automotive industry motor revving, the Government of India is striving to setup a favorable ecosystem. The Government has set ambitious targets to develop India as a low-cost, global manufacturing center and an R&D hub. Besides investments in various plans and initiatives, it is also encouraging foreign investments by allowing 100% FDI under the automatic route.

GOVERNMENT INITIATIVES



MAKE IN INDIA



AUTOMOTIVE
MISSION PLAN
2026



NATIONAL MISSION FOR ELECTRIC MOBILITY 2020

Some of the recent key regulatory interventions to transform the automotive industry and safeguard consumers and environment are:

- Government investment on the automotive sector and its plans for infrastructure development (Pradhan Mantri Gram Parivahan Yojana, Bharatmala Pariyojana, etc.)
- Adoption of Emission Standard BSVI norms pan India by 2020 for all new four-wheeler vehicles sold
- Implementation of Corporate Average Fuel Efficiency norms under which manufacturers need to improve their fuel efficiency by 30% or more by 2022
- Adoption of EVs and alternative fuels through FAME-2

This industry needs to invest in acquiring talent and skilling their workforce in new age vehicular technologies to meet the stringent environment and safety standards being set by the regulatory authorities.

JOB MARKET TO EVOLVE, BUT AVAILABILITY OF TECH-ORIENTED TALENT REMAINS A CHALLENGE

Today, the Fourth Industrial Revolution speaks to another innovative worldview, where computerized frameworks, the Internet, and the traditional business will consolidate, prompting a change of the global organizations

DEMAND FOR TECH-TALENT ON THE RISE

Digital Technologies are increasingly playing an important role in all sectors of the automotive industry pivoting towards sustainability and digitization. Moving on from a traditional mechanical systems mindset, the industry needs talent that will create electric, connected and intelligent vehicles.

According to McKinsey and Cisco, nearly **250 million cars** will be connected to the internet by **2020**. **Vehicles** will be equipped with new capabilities including smart sensors, connectivity modules, and big-data enhanced geo-analytical capabilities.

People with knowledge around data science, software development and mathematical talent will be needed along with a mix of engineering and management skills. Several auto companies are trying to figure out how to create dynamic software development units to develop and release software upgrades once a vehicle is sold.

There is also a strong move towards "Talent Future Proofing" – being ready with talent for the future way of working which will include Connected Technologies, IoT, Hybrid Fuels, Infotainment, Robotics amongst others. Manufacturing – Engineering will not operate in silos and their way of working will significantly be disrupted by Technology. Talent will need to be adept at both traditional skills as well as future ways of Tech and Software enabled working.

Business and HR leaders have also started experimenting with "Gig" or project based and fixed terms contract workforce.

The sectors which were earlier employing Gig and Project based talent in junior level Manufacturing / shop floor roles, are now experimenting with these in "core" functions like sales, marketing etc. We expect this trend to strengthen.

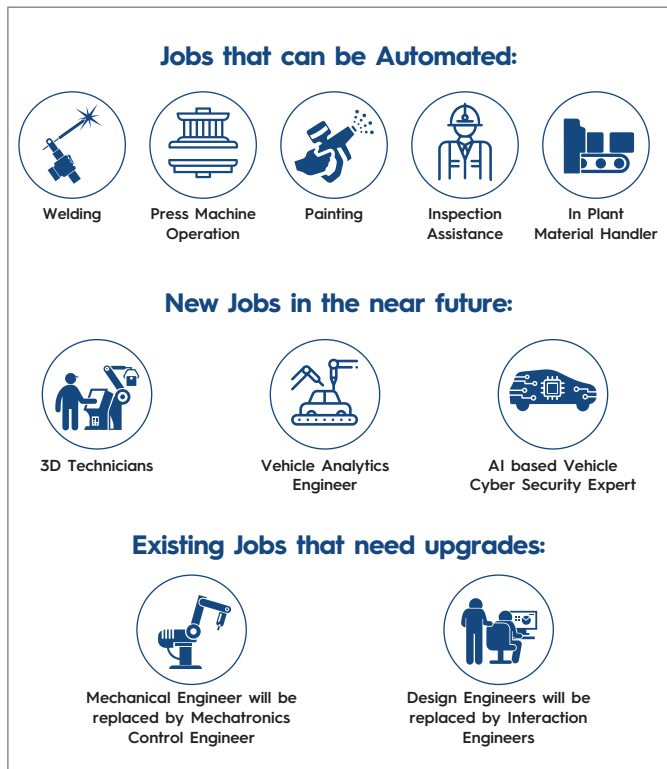
Automation is increasingly making inroads on the shop floor with employers wanting to automate repetitive tasks. Computer Numerical Control (CNC) Machines will be replaced with Programmable Logic Controllers (PLC) that

will define how and when duties are controlled and performed by robots. This will greatly impact current jobs, associated skills and workforce composition, creating whole new jobs that will require new skills and capabilities.



NEW-AGE AND NON-TRADITIONAL SKILLS ON RISE

New age skill-sets will change. Some of them will be easily automated to bring down cost and improve efficiency. Some newer jobs will come up while other existing ones will need upgrades.



For example, according to one of the senior leaders of an automobile company, it has been found that quite often, welders lack the ability to select appropriate welding techniques, thus not being able to produce the required strength and finish in joints. Big data analytics on the other hand can be used to set up required temperatures as per different welding needs, therefore, making the traditional welding process obsolete.



THE GREEN RIDE I EVOLVING EV SECTOR

In an "As Is" scenario, the increase in vehicle numbers has led to a sharp rise in demand for fossil fuels which has an abominable impact on our environment causing an inescapable need to shift to alternative fuels. Given this scenario, the Electric Vehicle looks to be the most apt option going forward. It is environmentally friendly and reduces foreign fossil fuel supply dependency significantly.

Two-wheelers; three-wheelers; and Intracity buses are expected to be the first segments to adapt the paradigm shift whereas, passenger cars and commercial vehicles are likely to take some time.

Non-availability of top-tech EV talent is forcing organizations to venture outside India- mostly in China, Japan, France and Germany. Furthermore, from a mobility infrastructure point of view, the government's thrust on Electric Vehicles (EVs) is having manufacturers demand a completely renewed skillset from the market.

SHIFT FROM “MECHANICAL” TO “ELECTRIC” MINDSET

With evolution of automation features in automobiles, the value that once existed in mechanical systems is decreasing. Due to this, the need for mechanical engineers is declining in the automotive space and the search for electric and electronic engineers is on the rise.

The shift from mechanical to electric will heighten if the EV revolution kicks in. An electric vehicle will have 80 per cent fewer moving parts - 24 compared to 149 in an internal combustion engine car. The shift in the skill sets that will be required to manage this change is self-evident.

Jobs Related to Battery Segments



Battery Management System Engineers (BMS):
This specialist will work around battery management for a fully electric vehicle



Battery Algorithms Engineer:
This specialist will be responsible for modeling, developing, implementing control and estimation algorithms for high voltage batteries



Battery Safety Engineer:
This specialist will be responsible for multiple safety checks around batteries

Electric Vehicle Related Jobs



Power Train Engineers:
This Specialist will be responsible for new electric Power Trains Systems as existing IC Engine driveline will be replaced by battery systems



Telematics/Data Analytics Engineer:
This specialist will be responsible to collect real time scenarios through wireless technologies observing battery behavior

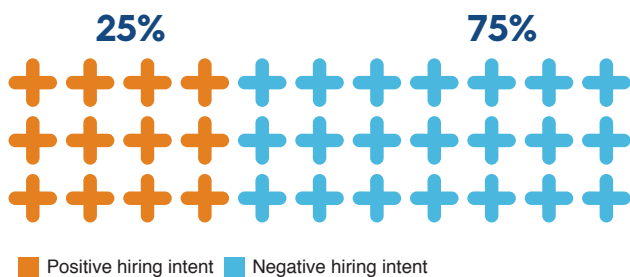
Apart from above, there are many other new job opportunities that will emerge in the e-vehicle supply chain, like development of charging stations, assemble of battery packs, Software Side (Embedded Technologies). E-mobility organizations like Sun Mobility are already planning for ambitious hiring on the e-mobility supply chain segment, both upstream and downstream.



AUTOMOTIVE HIRING INTENT & TRENDS 2020



The hiring intent survey of the India Skills Report 2020 was taken by over 150 leading employers, out of which 7% constituted leaders from the Automotive industry. Sentiments are weak in this sector and this reflects in the hiring outlook for 2020 with 75% respondents showing the negative intent of hiring.

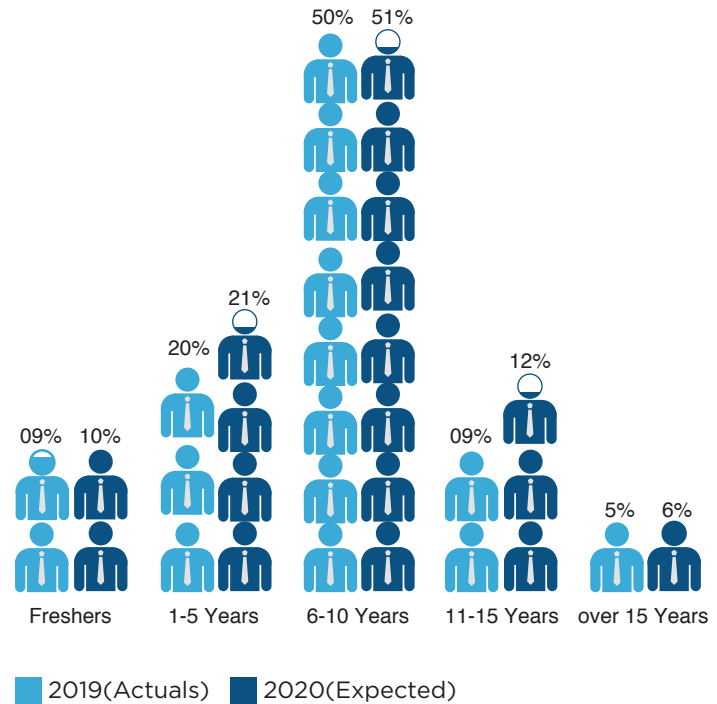


75% of employers expressed a negative hiring intent for 2020

HIRING INTENT BY WORK EXPERIENCE

It is an unchanging story so far as hiring levels are concerned. More than 70% of its work force will be laterals and 10-12% from campuses.

10% SAY THEY WOULD LIKE FRESHERS TO JOIN THEIR TEAM



HIRING INTENT BY GENDER DIVERSITY

The sector has had a strong male dominance historically. Almost all organizations have a very strong gender diversity agenda, but we expect marginal improvement in gender diversity in the immediate next year. With more steam gathering around the gender diversity agenda, we expect the number of women in this sector to improve strongly 2021 and ahead.

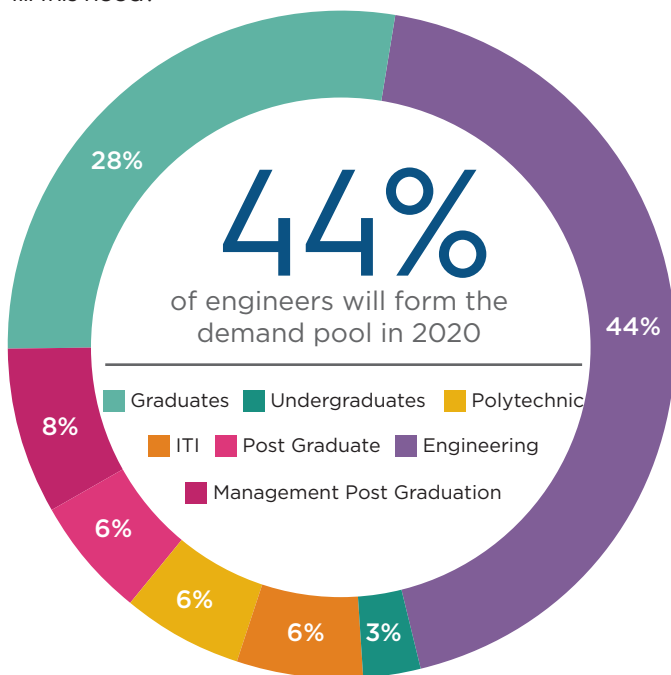
Gender parity remains a big concern at

90:10
(M:F ratio)



HIRING INTENT BY EDUCATION DOMAIN

Auto Industry will see a strong move towards "Talent Future Proofing" or being ready with talent for the way of working in the future like Connected Technologies, Design, Hybrid Fuels, Infotainment, Robotics etc. Tomorrow's cars and vehicles will be intelligent with Internet connectivity, connected and autonomous. Environment related regulation like BA - VI now and E-cars in the near future will need talent that is upskilled, adept and future ready. Like the rest of the manufacturing sector, the automotive industry will also face a challenge in the sector's ability to attract top notch Tech-Software talent. It would be interesting to see how organizations attract and retain top notch Tech-Software talent in the next few years. Will GIG talent fill this need?



HIRING INTENT BY SKILLS

The most sought-after skills in the Auto sector today as per HR leaders include



Numerical and Logical ability, (IQ)



Domain Expertise (Domain Understanding)



Positive Attitude



Adaptability and Ability to work well with others

HIRING INTENT BY JOBS

With the production assembly line becoming mostly automated, the need for expertise in the field of robotics has become a big ask in pharma companies. While research and development remains a top ask in their R&D labs, Artificial Intelligence is a key ask for conducting of clinical trials and seeking patients who would want to participate in them. With the focus of pharma operations on increasing agility, safety, and cost-efficiency, recent years have seen a growing demand of talent with IoT (internet of things) as a niche skill. The Internet of Things connects the environment, people, equipment and supply chains into a single work-flow system.

PROJECTED TECHNOLOGICAL ADVANCEMENT WILL GIVE RISE TO NEW JOBS

THEREBY REQUIRING NEW JOB AREAS IN NEXT 5 YEARS



Data Analyst and scientist



Social media marketing

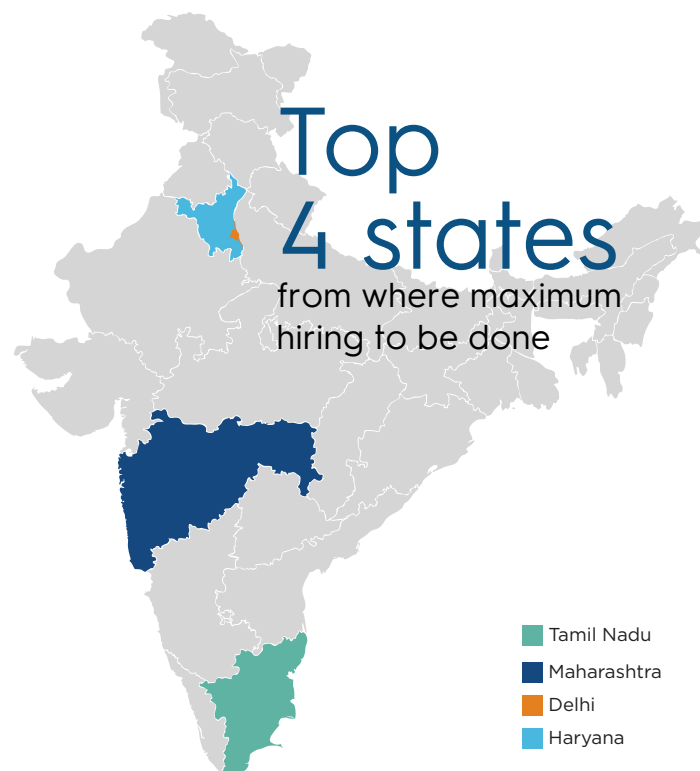


Compliance



Soft Skills

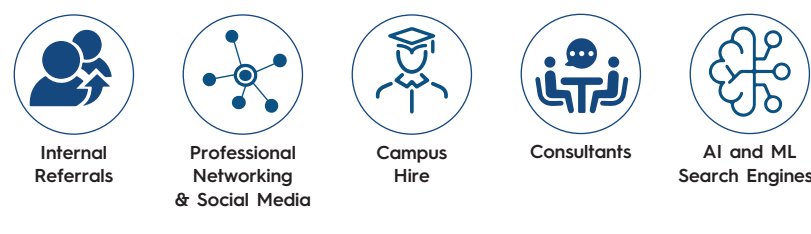
HIRING INTENT BY GEOGRAPHY



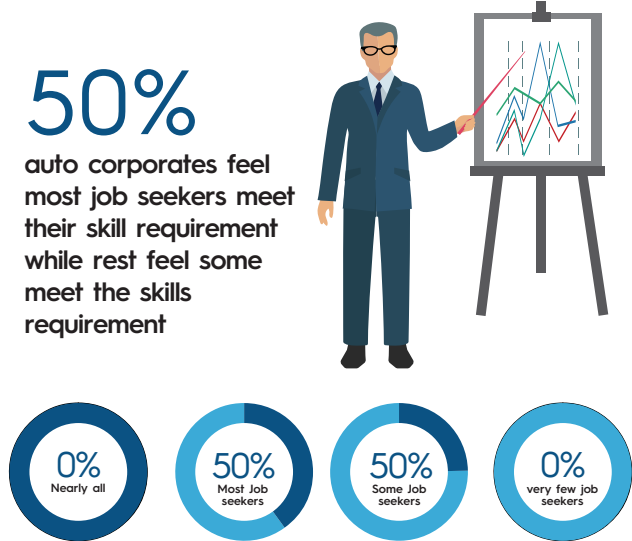
HIRING INTENT BY SOURCING CHANNEL

Hiring through professional networks is observed to be the most used hiring channel by the Automotive sector recruiters. The Auto sector will in overall have about 40 to 45% of their hiring via Internals Referrals, 45 to 50% via external laterals and the rest via campuses.

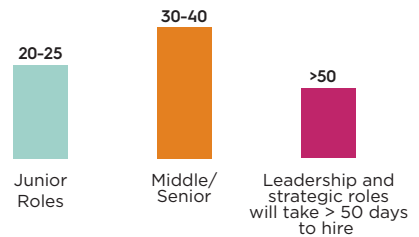
Top 5 Sourcing Channels



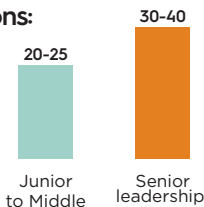
SOME KEY HIRING METRICS OBSERVED IN INDIA’S AUTOMOTIVE SECTOR



Business and HR leaders are giving a strong focus on talent pipelining in sales with “talent on demand” or “real time talent / zero days seat vacant” kind of talent being asked for.

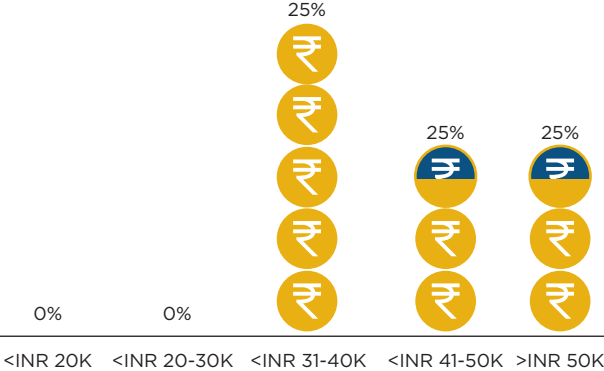


Sales hiring tends to be faster than other functions:



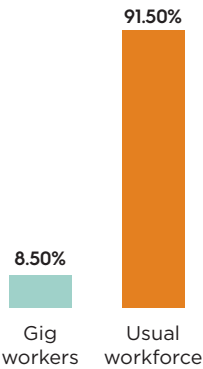
Average Hiring cost per hire may vary between
**This does not include senior leadership and or strategic hiring*

INR 30-40K



GIG WORKFORCE

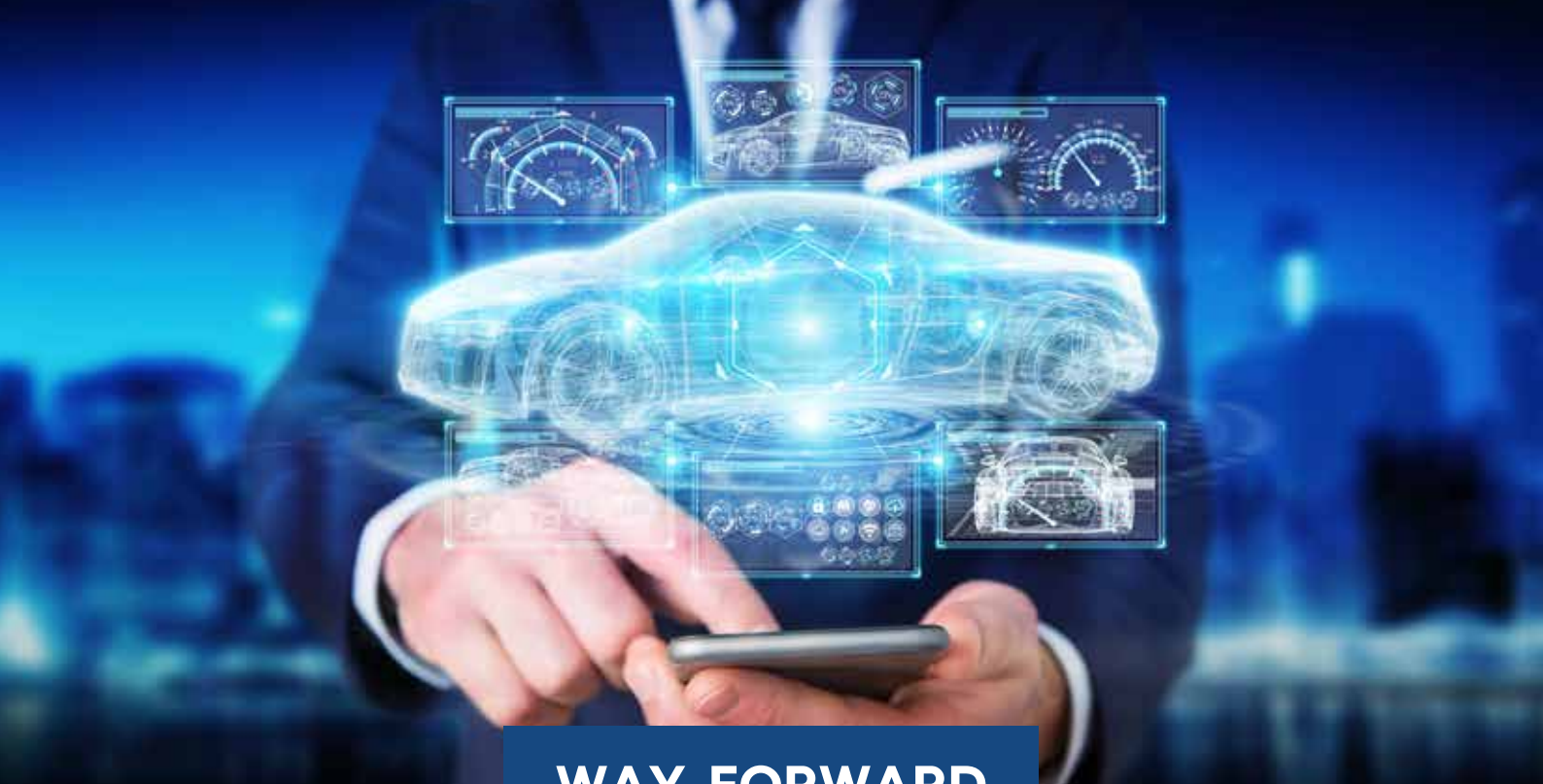
Automotive industry leaders have also started experimenting with “Gig” or project based and fixed terms contract workforce. This sector, which earlier employed Gig and Project based talent in junior level Manufacturing / shop floor roles, is now experimenting with Gig workforce in “core” functions like sales, marketing too. We expect this trend to strengthen. Major players like Mahindra and Tata Motors have seen a significant shift in their hiring numbers in favour of Gig - Project based, fixed term contract employment.



Attrition Rate in the Auto Industry is

14-16%





WAY FORWARD



BRIDGING THE GAP BETWEEN EMPLOYMENT AND EMPLOYABILITY

To fulfill the talent demands of the future and to bridge the wide skill gap for the Automotive industry, the government, academia and corporates – all major industry stakeholders, will need to take concerted steps together. This particularly involves exchanging inputs for renewing industry specific curriculum as per market relevance, co-creating skill development infrastructure and setting of skilling centers.



RE-SKILLING WORKFORCE FOR NEW-AGE SKILLS

While corporates need to take charge of formal training through partnerships with educational institutions and training centres (including online training sites – that have already created new training modules for the skills of the future), they will also have to set up in-house certification training programs to train workforce around the skill-sets such as IoT, 3D printing, Mechatronics and Robotics, etc., so that much of the training can take place on the job. Also, they will need to develop re-training programs across organizational levels to reskill and upskill their workforce. Further, increasing internships and apprenticeship opportunities for students can be a big step towards bridging the gap.



RURAL INDIA MATTERS

There is need for Auto companies to increase focus on smaller towns i.e. Tier II and Tier III cities of the country. Out of total 121 crore Indians, 68% live in rural areas. Apart from Two-Wheeler companies, who have traced rural market to a reasonable extent, other automotive segments too need to eye the immense potential which can lead to increase in demand for talent in these locations with new concepts like virtual offices, travelling salesman, mobile workshops, smaller or non-fancy dealerships / service centers etc.



FOCUS ON INCREASING COLLABORATION

Another major stride in this direction can come through a unified data portal, set up in collaboration with academic institutions and industry leaders, to share consolidated data and insights on required skills, job postings, employment news, incentives, fund information, etc. upon a single forum. This will ensure that every stakeholder of the industry has a lucid view on the job market and its imminent trends.

“ The transition from a Sellers’ market to a Consumer centric market drew sharp focus of industry on the need to build a flexible and efficient supply chain for timely delivery of quality products and product variants. The importance of providing the customer with a high-quality service experience got recognized as a major differentiator for market growth and sustenance.

As manual interventions for strengthening the supply chain had limited impact, it became imperative to introduce new age technologies such as digitalization, AI, Machine Learning, Robotics, VR & AR, for adding value to different segments of the supply chain.

Large OEMs in the automotive space, particularly those having a close interface with global companies, have gradually enhanced the level of automation on the shop floor and adopted new age technologies like digitalization, machine learning, data analytics and even robotics in their workspace. Scores of smaller partners including vendors and dealers/retailers attached to these organizations have also had to make a headway in digitalization. A few MNC’s have recently set up R&D facilities with advanced new age technologies in India, to cater to larger global markets.

While the gradual increase in the application of new age technologies in the automotive industry is creating new avenues for employment, it is also posing a huge challenge. Industry is already grappling with the deficit in basic technical and functional skills. Unfortunately, ITI’s and the innumerable technical and management institutes that have mushroomed have not contributed to the pool of skilled manpower. Instead, they have only added to the number of unemployable youths in the country. Garnering higher level of skills for application of new age technologies in this scenario is going to require a lot of lateral thinking and strategizing.



It has become increasingly important for the industry to play a pro-active role in the eco-system by closely collaborating with government regulators of training and education and government and private vocational and academic institutions by sharing information on current skill deficit and future skills, participating in designing the curriculum, providing internship opportunity and overall supporting them to become a potential source for employable manpower.

As a parallel initiative, there is a growing trend to invest in in-house training facilities to meet the requirement of quality technical and non-technical skills and also skills for application of new age technology which in addition also creates a requirement for re-skilling for new roles caused by redundancy of certain jobs.

Interestingly, today there are a handful of new start-ups which engage in the business of upgrading skills for application of new age technologies. They are guaranteeing higher employability and compensation by linking their fees to the same. This could well emerge as another source for training and lateral hiring.

In the quest for acquiring the right skills, there are additional alternate sources to choose from, such as the apprenticeship route to hire potential talent, the pool of employable millennials who choose not to work from office, the gig workers, consultants for project based assignments, outsourcing routine jobs and providing tapping the employable female workforce.

One can expect the strategy for meeting skill requirements to increasingly assume centre stage in the overall business strategy of automotive industry. ”

AmarDeepika Kashyap, President – Group HR, Ashok Piramal Group

“

Jobs in future in India will be less permanent more semi-permanent. Unique skills will command a premium whereas low-skill jobs will cease to exist. Redundancy in skills will be rapid and unique skills will become industry agnostic. For example, retail selling skills may become relevant in auto parts sales and maybe in construction material going forward. Technology will overtake, but human connect will still be in demand. The need of the hour is to have a strong skill development framework in place, state sponsored or otherwise and the eco-system to invest and reward skills in the labour market. This is the new 'survival kit' for industry.



Balachandar NV, Executive Director – Human Resources, Ashok Leyland ”

“

One of the biggest shifts I see the future of skills and jobs in the automotive industry is that most of the jobs and even skills are fast becoming multi-disciplinary unlike in the past which were limited to one or two domain areas. New skills such as cognitive, digital, mechatronics, data sciences, analytics etc. will be required in higher numbers and complexity as well. Another big shift I am witnessing is the emphasis on application of multi-faceted knowledge getting into the job designs. These are not the same as traditionally understood skills.



The biggest challenge I see that should be addressed in the near term is that while the changes are inevitable and mostly not a matter of choice or control over pace, we do not seem to have mastered as a country the art of reskilling. This has to be a much more structured and planned process. The solution could lie in our ability to set up and leverage the institutional knowledge in the country and industry. The cost of reskilling human capital in this context needs to be considered as a part of the overall investment for change.”

Rajeshwar Tripathi, Chief People Officer, Mahindra & Mahindra

“

Technical institutes (ITI, Diploma & Engineering) are still largely churning out the students with traditional skills like fitter, machinist, or degrees in mechanical, electrical engineers and with minimal exposure to ‘how’ of work. The need of the hour is to refresh the curriculum towards mechatronics, high voltage, vehicle communication etc. and equip them to participate in industry 4.0 and lean manufacturing by familiarizing them with skill for problem solving, working in mission-based teams etc.

We are seeing jobs migrating from and into the industry from outside but it's the redefinition of roles that is seeing bigger and faster change. We will need employees who can work in multiple teams with co-employees and partners, with a higher degree of ownership and accountability and lesser supervision, displaying entrepreneurial and problem solving like start-ups do, at every level.



The four mega trends shaping the auto industry are Autonomous, Connected, Electric and Shared. These will eventually reshape every role in Tata Motors. We are working to evaluate current capability, future needs and the roadmap to get there on one hand and to seed the culture of turnaround. Future talent will need to exhibit a growth mindset becoming more receptive to learning and change.

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Ravindra Kumar G.P., Chief Human Resources Officer, Tata Motors

ABOUT TEAM



By ✨ PeopleStrong

Taggd, a PeopleStrong recruitment solutions brand, is the largest Recruitment Process Outsourcing (RPO) provider from India with 100+ clients across 14+ sectors and is managing permanent recruitment for over half a million jobs. It combines the power of data and human knowledge to bring advanced talent acquisition and digital hiring solutions that change how businesses work and deliver. Over the last 13 years, Taggd has developed a deep industry understanding, digital recruitment expertise, talent network access, data intelligence and access to a robust tech stack to deliver business gains. Some of the leading enterprise customers of Taggd include Pfizer, Wipro, Honeywell, Mahindra, BirlaSoft, Tata Motors, Renault Nissan, Aditya Birla Health Insurance, Citi, IndiaMART, Swiggy, Oyo and Quikr, amongst other national and multinational brands. Nelson Hall, one of the leading global analyst firms, has rated Taggd amongst leaders in the RPO NEAT Matrix.

Taggd is the knowledge partner for the India Skills Report and conducts the "India Hiring Intent Survey (IHIS)" and the "Decoding Jobs : The Think Tank Series" across all major metros to take quantitative and qualitative insights from the academia and industry thought leaders on their views on the talent demand side.



Wheebox is India's leading online talent assessment company that partners with corporations for finding and retaining the best talent using validated, reliable and standardized tests for pre-hiring and learning needs. Wheebox benchmarks over 3 million users annually across the globe. In line with its vision to "Measure the World's Talent", Wheebox partners with many Fortune 500 corporations and hundreds of large and medium enterprises to power their hiring and competency development assessment needs. Wheebox also partners with thousands of higher and vocational educational institutions for conducting its proprietary "Wheebox National Employability Test (WNET)" for final year graduates and postgraduates to benchmark competencies that matter the most for being employable in corporations. Wheebox also powers the "India Skills Report" on the skill supply side and complements thousands of colleges across all Indian states and UTs to identify, benchmark and spot areas of competencies. It supplements institution wide candidate reports for developing competencies for employment by partnering with Confederation of Indian Industry, PeopleStrong, LinkedIn, Association of Indian Universities, United Nations Development Program and All India Council for Technical Education. Wheebox also partners with many Indian states to design and deploy State Skills Reports and with the Ministry of Labour and Employment with its proprietary BARO Career Interest Report by helping candidates make right career choices on the 'National Career Service' and across 'Model Career Centers' in India.



Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes. CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has more than 9100 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from 291 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues. Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

India is now set to become a US\$ 5 trillion economy in the next five years and Indian industry will remain the principal growth engine for achieving this target. With the theme for 2019-20 as 'Competitiveness of India Inc - India@75: Forging Ahead', CII will focus on five priority areas which would enable the country to stay on a solid growth track. These are - employment generation, rural-urban connect, energy security, environmental sustainability and governance. With 68 offices, including 9 Centres of Excellence, in India, and 11 overseas offices in Australia, China, Egypt, France, Germany, Indonesia, Singapore, South Africa, UAE, UK, and USA, as well as institutional partnerships with 394 counterpart organizations in 133 countries, CII serves as a reference point for Indian industry and the international business community.





taggd.

By ✨ PeopleStrong

Taggd Corporate Office

People Strong, A-10, Infocity-1
Sector-34, Gurugram, Haryana, India- 122001

Email: contact@taggd.in

Phone: **+91 9560998686**
