Emerging Trends in Digital Transformation
Volume-2, Issue-1, January-March 2026 ISSN: **3107- 4308** *Paper ID:* ***ETDT-V2-I1-35***

HR'S ROLE IN INDUSTRY 5.0 TRANSFORMATIONS AT ASHOK LEYLAND

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ABSTRACT: The strategic integration of human–machine collaboration, employee empowerment, and technical innovation is the primary focus of this research, which examines the ways in which HR is propelling Industry 5.0 changes at Ashok Leyland. It demonstrates the significance of HR in integrating the workforce's capabilities with state-of-the-art intelligent technologies to enhance resilience and productivity. The paper discusses the ways in which HR can assist in the establishment of a culture that prioritizes safety, creativity, and well-being, while also accommodating digital advancements. It examines initiatives such as agile talent development, reskilling programs, and change-readiness frameworks that are intended to meet the requirements of Industry 5.0. The discussion also includes HR's involvement in the promotion of cross-functional innovation, data-driven decision-making, and the use of collaborative robotics. The research also examines the critical aspects of transformation, including the establishment of processes for continuous learning, the modification of policies, and the training of leaders. It discusses the role of HR in assisting industrial companies in the implementation of environmentally favorable and ethical technology. The research ultimately demonstrates that HR at Ashok Leyland is essential for the development of a workforce that is future-ready, inclusive, and resilient by balancing human potential with technological innovation.

Keywords: *Industry 5.0, Human-Centric Approach, HR Transformation, Workforce Transformation, Human–Machine Collaboration, Employee Well-being, Digital HR*

I. INTRODUCTION

Human Resources (HR) must reskill workers, build a people-centric workplace, and incorporate sustainability into corporate culture to enable human-machine collaboration throughout Industry 5.0 changes. In order to maximize productivity with AI and other cutting-edge technologies, HR must prioritize employee happiness, engagement, and a unique work experience that values empathy, creativity, and human-centered decision-making.

In the most recent stage of industrialization, known as "industry 5.0," humans collaborate with state-of-the-art technology and robots driven by artificial intelligence to boost workplace productivity. An emphasis on sustainability and enhanced resilience characterize this innovation, which places an emphasis on a human-centered approach.

The advent of Industry 5.0 is having far-reaching effects on the manufacturing sector, suggesting a shift in focus toward a paradigm of industrial production that is more collaborative and centered around humans. This innovation, which expands upon the technical principles of Industry 4.0, highlights the importance of human-machine collaboration. Industry 5.0 differs from its forerunner in that it places more emphasis on

DOI: https://doi.org/10.5281/zenodo.19398045

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enhancing human capacities through technology than on relying on automation and digitization to raise productivity. Workers and robots alike can benefit from this method's emphasis on mutual learning and collaborative output.

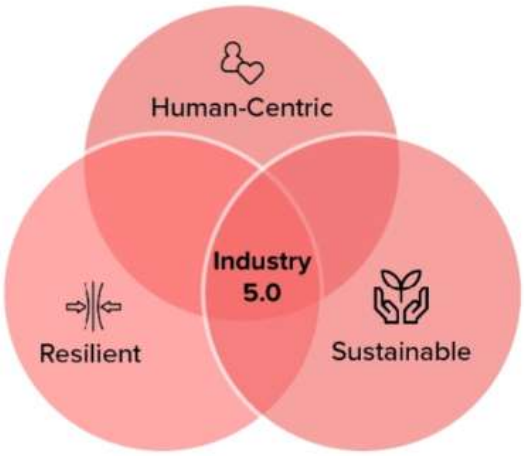
The industrial industry is profoundly and extensively impacted by this transformation. It optimizes and controls industrial activities intelligently by making workers' interactions with related equipment more intuitive. Exceptional operational efficiency and innovation are the outcomes of the frictionless information interchange made possible by this level of connectivity.

Rapid technological innovation, shifting shareholder expectations, and an ever-increasing need for fast, economical, and personalized products are just a few of the big problems that Industry 5.0 aims to solve. Because of this change, businesses in the utility and related sectors have a fantastic opportunity to meet customers' evolving demands in an environmentally and socially responsible way, all while boosting their efficiency and effectiveness.

An intelligent, sustainable, and people-centered workplace is what Industry 5.0 is all about. This kind of workplace combines human creativity and judgment with cutting-edge technology like AI, robotics, the IoT, and predictive systems. Industry 5.0 aims to provide more personalized, adaptive, and resilient operations by merging human knowledge with machine intelligence, in contrast to Industry 4.0's emphasis on efficiency and automation. This change necessitates that businesses rethink their approach to staffing, acquire new abilities, and foster work environments that value and reward creativity, adaptability, and lifelong learning.

Strategic change is driven by the human resources sector, which coordinates people, technology, and culture. In order to reskill employees, create frameworks for human-machine collaboration, increase employee well-being, and implement ethical technological practices in the workplace, human resources play a crucial role. As more and more companies embrace Industry 5.0, human resources must focus on building a workforce that is diverse, inclusive, and prepared to use cutting-edge technology in a way that respects and upholds human values such as empathy, creativity, and meaningful work. This solidifies HR's position as an integral cog in the wheel of creating long-term, human-centric Industry 5.0 ecosystems.

II. PILLARS OF INDUSTRY 5.0



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Human-Centric

Industry 5.0 innovations should prioritize people over machines to make sure technology improves people's skills instead of taking them away. It stresses the significance of establishing protocols that encourage workers' health, innovation, and critical thinking. The emphasis is on human-machine collaboration, with humans handling routine jobs and robots performing value-added activities. Ergonomic design, safe working conditions, and individualization are all promoted by this approach. Ultimately, putting people first ensures that technology serves people rather than the other way around.

Resilient

The primary aim of the resilience pillar is to construct industrial systems that are resilient to disturbances, such as problems in the supply chain, cyberthreats, and market volatility. It advocates for adaptable processes, rapid recovery methods, and strong risk-management systems. Resilient systems are able to anticipate problems before they happen because they use real-time data and predictive analytics. Businesses are better equipped to adapt to changing conditions thanks to the increased organizational agility fostered by this pillar. So, businesses adapt to be more stable, trustworthy, and future-proof.

Sustainable

Industry 5.0's sustainability framework places a premium on producing and utilizing resources in an environmentally sensitive manner. It promotes lowering carbon footprints in manufacturing, using green technology, and using principles from the circular economy. The objectives of environmentally friendly systems include preserving natural ecosystems, making better use of energy, and decreasing waste. By following this plan, businesses can grow in a way that doesn't harm society or the environment in the long run. In conclusion, the sustainability pillar aids companies in meeting global climate goals without sacrificing their ability to compete economically.

III. REVIEW OF LITERATURE

Dr. Kavita Raman 2021 Early Industry 5.0 HR activities were transformed by human-machine interaction and customized automation. This article describes how HR professionals strategically deployed cobots. The article describes how HR reevaluated job duties to create hybrid workplaces that combined intuition with cutting-edge technology. HR competency mapping methods for skill forecasting and digital, interpersonal, and cognitive skill training are examined. Change management frameworks in HR helped employees accept robots and reduce opposition. Discussed are employee data privacy, automated decision transparency, and computer psychological safety. According to research, AI training, tech-friendly performance measurements, and team adaption workshops require human resources.

Prof. Manish Verma 2022 Cognitive automation is forcing HR departments to reskill and upskill Industry 5.0 workers. Workforce dashboards and predictive analytics help HR executives identify job profiles and skill gaps. The research found that AI-enabled learning systems adapted instruction for different ability levels. An examination shows how HR departments linked technical skill development to EQ, creativity, and decision-making. Digital literacy gaps, digital learning resistance, and generational technological adoption in

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large-scale reskilling initiatives are investigated. HR is credited with providing new internal career mobility pathways and hybrid jobs combining computer intelligence and human judgment. Human resources supported diversity and inclusion by giving all employees equal training opportunities, regardless of technical expertise.

Dr. Reena Subramaniam 2023 HR can create people-focused leadership models in Industry 5.0. This article examines the shift from command-and-control to bottom-up decision-making, teamwork, empathy, and flexibility at work. HR established digital workplace leadership training for C-suite executives. Focusing on "human-tech stewardship," it teaches leaders how to integrate robotic technology without sacrificing employee trust or well-being. Human resources handles digital ethics, cross-functional leadership, and emotional intelligence. Innovation coaching, mentorship, and leadership evaluations fuel human-centric leadership pipelines. HR helped CEOs cope with emotional repercussions of automation like performance monitoring and job termination, IT finds.

Arvind S. Nair 2024 HR's expanding role in these areas is the subject of this essay, which is intended to preserve employee trust and ethical AI adoption in Industry 5.0 firms. This article says employee appraisals, workforce planning, and AI-driven recruiting improve HR ethics. The research assesses HR automated decision-making transparency, accountability, and fairness. HR established governance structures to prevent algorithmic biases and protect employee rights. This essay examines HR communication tactics to ease workers' automation fears and explain AI. Workshops on AI, digital literacy, and HR feedback boost user confidence. The research also discusses HR's role in cross-functional digital ethics committees for legal and ethical compliance. researching AI-based dispute resolution biases and data abuse. HR promotes responsible and open AI use in tech-savvy companies to defend dignity. According to the research, HR's ethical leadership maintained workers' trust in Industry 5.0 by ensuring technology strengthened human capacities.

Prof. Lakshmi Narayanan 2025 HR plays a critical role in creating sustainable talent ecosystems for Industry 5.0 companies that emphasize human empowerment and environmental responsibility. It investigates how HR integrated social, technological, and ecological elements into talent initiatives by integrating sustainability goals to workforce planning. Researchers research green skill development and sustainable competency frameworks to prepare people for eco-creative jobs. HR's digital sustainability curriculum links with schools and training facilities are examined in this research. It analyzes how ESG impacts talent management, leadership development, performance reviews, and hiring. Green innovation teams and other environmental engagement activities help engage employees in the company's objective.

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IV. ADVANTAGES OF INDUSTRY 5.0 TRANSFORMATIONS

Increased Efficiency & Productivity

The goal of Industry 5.0 is to improve manufacturing processes by integrating human ingenuity with cutting-edge technology. So that humans may focus on value-adding activities, collaborative robots, or cobots, handle repetitive chores. Because of this synergy, both production and the reduction of errors are greatly enhanced. Reduced production schedules and improved resource efficiency are two outcomes that benefit businesses.

Enhanced Quality Control

Intelligent sensors and real-time data analytics are key components of Industry 5.0, which ensures continuous quality control in manufacturing. Quick defect detection by machines reduces waste and rework. Expert humans then use the AI-generated insights to refine and oversee quality assessments. Products of exceptional quality and remarkable consistency are thus manufactured.

Improved Safety

The use of intelligent systems and collaborative robotics is crucial for making manufacturing settings safer. To ensure the safety of human workers, robots do physically demanding or hazardous tasks. Using predictive analytics, possible dangers can be foreseen and mitigated. Security is heightened and employee well-being is often prioritized in the workplace.

Sustainable Manufacturing

Industry 5.0 promotes eco-friendly manufacturing by enhancing material efficiency and decreasing energy usage. Businesses can cut down on waste with the help of smart technologies by implementing circular manufacturing practices and making accurate predictions. It encourages people to act sustainably and make use of renewable resources. As a result, we can save money and keep the environment safe.

Cost Reduction

Efficiency in resource management, predictive maintenance, and automation all contribute to lower production costs. Fewer machine problems mean less downtime, which means less money spent on repairs. Better procedures also cut down on energy, labor, and inventory costs. Ultimately, these upgrades result in higher profits and more competitive prices.

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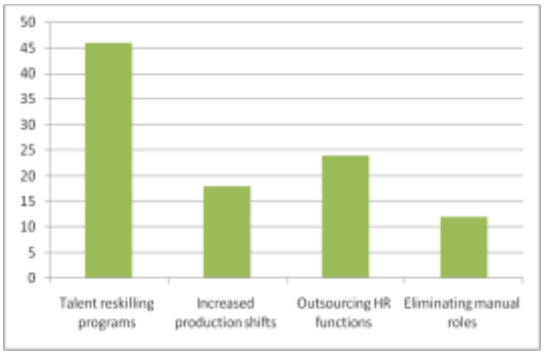
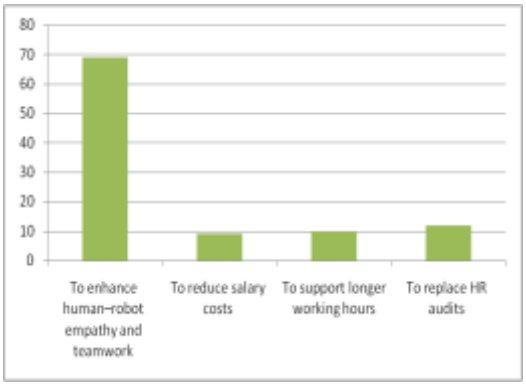
V. DATA EXAMINATION AND INTERPRETATION

1. Which human resources competency is crucial for Ashok Leyland to integrate human-machine collaboration into Industry 5.0?



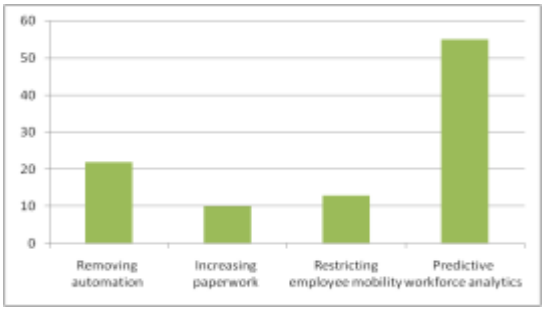
INTERPRETATION: Talent reskilling programs top HR interventions (46%), indicating a high focus on Industry 5.0 training. Moderately popular efficiency-boosting approaches include extending production schedules (18%) and outsourcing HR (24%). Despite automation's progress, a 12% drop in manual work shows that firms are still wary of losing human involvement.

2. Why is Ashok Leyland placing such a focus on emotional intelligence training, considering the Industry 5.0 Transformation?



INTERPRETATION: According to the results, enhancing human-robot cooperation and empathy is the primary objective (69%), which is consistent with Industry 5.0's focus on people. Supporting extended workdays (at 10%) and replacing HR audits (at 12%) are given less weight, indicating that they are not significant considerations. Companies' primary motivation in this situation is not cost reduction, as compensation expense cuts are the least chosen option (9%).

3. How can Ashok Leyland's HR approach help them train employees to be ready for Industry 5.0?



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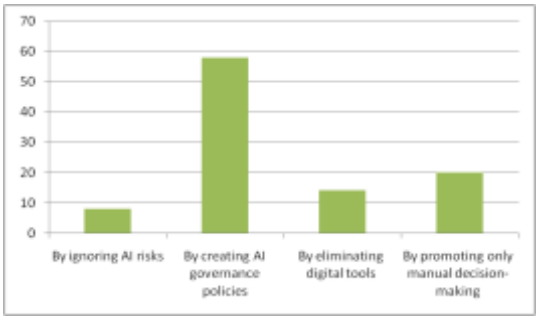
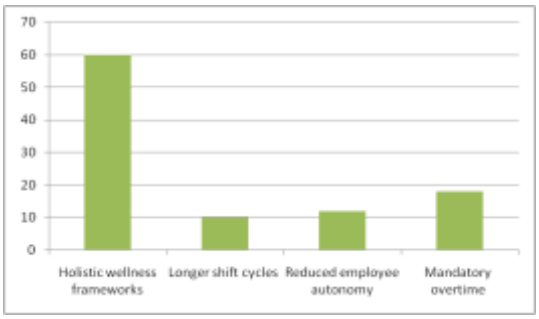
INTERPRETATION: Data shows that predictive workforce analytics is the most popular option, with 55% of respondents choosing it. This suggests that HR approaches are becoming more analytical and forward-thinking. Restricting employee mobility (13% support), increasing paperwork (10%), and removing automation (22% support) all show that conventional or limited techniques have modest support.

4. What steps does Ashok Leyland's HR department take to promote the ethical application of AI in the 5.0 industry?



INTERPRETATION: According to the statistics, 58 percent of people are in favor of establishing AI governance policies, which highlights the importance of AI used ethically and responsibly. There is little support for restrictive or risky ways, as seen by the lower percentages for solely manual decision-making (20%), excluding digital technologies (14%), and disregarding AI hazards 8%). There is a resounding dedication to accountable and structured AI governance in the responses.

5. Which HR procedure ensures the safety of Ashok Leyland personnel when Industry 5.0 changes are implemented?



INTERPRETATION: Data shows that modern companies care a lot about their employees' health and happiness; in fact, 60% of people surveyed preferred comprehensive wellness frameworks. Employees aren't interested in things that could make them more stressed out or less flexible, as shown by the much lower support for obligatory overtime (18%), less employee autonomy (12%), and longer shift cycles 10%. The data clearly indicates a movement in HR practices that place a premium on health and happiness.

VI. CONCLUSION

Human resources must play an integral role in Industry 5.0 if we are to build a future where advanced technology and human intellect may live in harmony. Human resources must transcend conventional roles and adopt an innovation-focused, people-centric strategy to help with the transition. Human resources ensures that employees stay up with the fast-paced evolution of technology by promoting digital readiness, collaborative work environments,

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and ongoing education. Human resources manages the maintenance of inclusive policies, employee welfare, and moral standards all at once to build trust in new systems.

Human resources must provide a smooth handoff when companies implement intelligent automation and human-machine interaction by developing effective change management strategies. Improving one's emotional intelligence, creative capacities, and ability to reskill boosts self-assurance when taking on new responsibilities. When it comes to integrating varied talent and encouraging collaboration between generations, human resources also plays a strategic role. It enables long-term workforce planning in dynamic environments through data-driven decision-making.

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