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BEYOND TECHNOLOGY: LEADERSHIP, SKILLS AND ECOSYSTEM CHALLENGES IN ROMANIA'S TRANSITION TO INDUSTRY 5.0

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Abstract: As global industry moves toward the human-centered paradigm of Industry 5.0, understanding how national manufacturing systems adapt has become a key research priority. This paper presents an empirical, cross-sectional study exploring the digital readiness and human-centered capabilities of Romanian manufacturing firms. A five-part questionnaire was administered to 22 operational and strategic leaders from firms of varying size and structure. The instrument explored organizational readiness in five areas: digital maturity, AI investment intentions, resource adequacy, perceived benefits and barriers to automation, and key competencies for sustainable transformation. The findings reveal limited familiarity with Industry 5.0 principles and uneven progress in digital integration, especially among SMEs. While AI is broadly recognized for its operational efficiency and informed decision-making, barriers such as lack of expertise, high implementation costs, and cultural resistance persist. Participants highlighted the importance of leadership, collaboration, and adaptability as essential complements to technical knowledge. This study supports the need for integrated strategies that align people, processes, and technology to support Romania's transition to Industry 5.0. These insights can contribute to policy formulation, workforce development, and strategic planning across emerging industrial contexts.

Key words: Industry 5.0, Leadership, Workforce Development, Human-Centered Competencies, AI Adoption, SMEs, Digital Readiness.

1. INTRODUCTION

Industry 5.0 represents an important shift in industrial development, emphasizing human-centered approaches, resilience, and sustainability in parallel with technological advancement [1], [2], [3]. The European Commission frames this model as a strategic response to the limits of automation-focused approaches and the need for socially responsive innovation [3], [4], [5].

This study examines how Romanian manufacturing firms understand and apply the principles of Industry 5.0, placing particular emphasis on the role of artificial intelligence (AI) in business operations. Beyond AI adoption, the analysis considers the adequacy of resources, the perceived benefits and barriers to digital transformation, and the leadership practices that shape organizational responses. At the same time, the research explores how organizational culture, workforce skills, and

participation in broader ecosystems contribute to firms' overall readiness for this transition.

National-level implementation varies widely. Romania illustrates a delayed and fragmented transition. Although 21.8% of its Recovery and Resilience Plan (EUR 5.8 billion) is dedicated to digitalization, key indicators remain below EU averages: AI adoption (1.5% vs. 8%), basic digital skills (27.7% vs. 55.6%), and 5G coverage (32.8% vs. 89.3%) [6]. Romania's digital progress remains behind that of neighboring countries. Just 26.8% of SMEs meet the minimum digital intensity level, compared to 53.2% in Hungary and 50% in Poland [7]. These gaps show why more localized research on digital readiness in Central and Eastern Europe is needed.

These gaps reflect more than infrastructure issues, they point to weak institutional coordination, limited workforce readiness, and insufficient strategic planning [8], [9], [10], [11].

While larger Romanian companies show progress, most SMEs face limited resources, low

digital competence, and restricted access to support networks [6], [7], [12], [13]. Public-private partnerships remain underdeveloped, and technology investments are rarely aligned with cultural or organizational development [14], [15].

Few empirical studies exist on how companies implement its principles, particularly in emerging economies like Romania. Mostly the current literature highlights technology, but often overlooks leadership, workforce skills, and ecosystem collaboration [8], [12], [16], [17], [18].

The purpose of this study is to understand how Romanian manufacturing firms interpret and apply the principles of Industry 5.0, with a focus on organizational practices and levels of preparedness.

While Gillich et al. [19] analyzed Romania's digital policy fragmentation at the national level, the present study examines how these systemic gaps are perceived and experienced within manufacturing firms, offering empirical, firm-level insights into Industry 5.0 organizational readiness.

Existing studies on Industry 5.0 primarily focus on technological frameworks or policy-level analyses, with limited empirical data from Eastern European manufacturing contexts. This study provides empirical evidence from Romanian manufacturing firms, drawing directly on the perspectives of operational and strategic leaders. It examines how leadership practices, organizational capacities, and external partnerships influence the concrete adoption of Industry 5.0 principles. This research provides a context-specific perspective from Romania, a country that is still underrepresented in empirical studies on Industry 5.0. It adds to the growing body of work focused on Central and Eastern Europe.

2. METHODOLOGY

This quantitative, cross-sectional study addresses digital preparedness, leadership orientation, and strategic alignment, with particular attention to human-centered capabilities. Organizational characteristics including firm size, industry sector, and location, were examined to explore their

influence on readiness levels. This study provides exploratory insights from professionals directly involved in production and strategic decision-making.

2.1 Participants

The study involved 22 professionals engaged in production, innovation, or digitalization. Of these, 13 served in operational roles, such as plant managers or technical directors, while 9 held strategic positions, including CEOs, CIOs, and HR managers. This mix provided insights from both operational and executive levels within the organizations.

The participants represented both medium and large firms, 10 worked in companies with over 1,000 employees, while 12 came from firms with fewer than 500 staff. Sectoral representation mirrored Romania's industrial landscape: automotive (38%), metallurgy (18%), logistics (14%), and textiles (9%).

Geographically, respondents came from eight counties across four key regions, with the North-West most represented due to its industrial concentration. Data was collected anonymously via Microsoft Forms, with informed consent, ensuring confidentiality and enabling both descriptive and inferential analysis of Industry 5.0 readiness.

2.2 Research Questions

The research questions were selected based on EU strategic priorities [3], [5], [6] and empirical research on organizational adaptability [8], [15], [20].

- RQ1: How do managers in Romanian manufacturing firms perceive the usefulness and applicability of AI in operational processes?
- RQ2: To what extent is the concept of Industry 5.0 known and understood by industrial leaders?
- RQ3: What competencies are considered essential for digital transformation and sustainability in production?
- RQ4: What organizational barriers are perceived in integrating advanced digital technologies?

- RQ5: How do perceptions of digitalization, competencies, and preparedness vary across regions, sectors, and company sizes?

2.3 Research Hypotheses

To address these research questions, the study formulated and tested several hypotheses:

- H1: Larger companies exhibit more favorable perceptions of AI applicability in production contexts.
- H2: Organizations with stronger human capital perceive themselves as more prepared for Industry 5.0.
- H3: Lower perceived digital maturity correlates with stronger perceptions of a lack of skilled human resources.
- H4: Companies engaged in external collaboration with industry and academia perceive themselves as better prepared for Industry 5.0.
- H5: Higher digital maturity is associated with increased familiarity with Industry 5.0.
- H6: Familiarity with Industry 4.0 correlates positively with awareness of Industry 5.0.
- H7: Managers who emphasize digital leadership competencies are more likely to perceive Industry 5.0 as a strategic organizational priority.

The hypotheses draw on existing research on digital transformation in manufacturing, as well as on recent Industry 5.0 frameworks. [1], [2], [9], [16].

2.4 Data Collection Instrument

The questionnaire focused on five key areas designed to assess how Romanian manufacturing companies engage with Industry 5.0 readiness.

First, it examined respondents' awareness of Industry 4.0 and 5.0 concepts, the existence of a formal digital strategy, and whether specialized teams were assigned to lead implementation. Responses were gathered using Likert scales and perception ratings, adjusted to item specificity.

Next, the study assessed internal capabilities by exploring infrastructure adequacy, employees' digital competencies, and plans for AI investment. To capture meaningful feedback,

both ordinal and categorical items were used, depending on the context.

The third section of the survey focused on how participants view AI, what they expect from it and what worries them. Many highlighted potential benefits, such as better efficiency and informed decisions, but also pointed to challenges like skill shortages, high costs, and resistance within their organizations. Responses were collected through a mix of single- and multiple-choice questions.

The fourth section focused on essential skills, asking participants to identify key technical, human, and leadership competencies needed for Industry 5.0. It also explored perceived barriers, whether cultural or structural, that could slow down adoption.

In the final section, participants provided basic information about their company, such as size, industry, and location as well as their role within the organization. The survey ran online for three weeks in Spring 2025 and targeted professionals in Romanian manufacturing. Its structure followed EU digital KPIs [8], [7], [15] and insights from recent studies on leadership and workforce adaptability in the Industry 5.0 context [4], [21], [22].

Descriptive statistics and correlation analyses were applied to examine trends and associations in the data.

The statistical analysis employed the Pearson correlation coefficient (r) to assess the strength and direction of linear associations between continuous variables, and the Kruskal–Wallis H test, a non-parametric procedure suitable for comparing groups when the assumption of normality cannot be maintained. Statistical significance was determined using p-values, with results considered relevant at $p < 0.05$. Mean values are reported as M. The statistical analysis was conducted using Jamovi, with the methodological approach guided by the principles described in Field [23].

3. RESULTS

This section shares key findings about digital readiness, the use of AI, and how organizations are adapting to Industry 5.0. To analyze the data, both descriptive and inferential methods were

used, aiming to reveal patterns and test the main ideas of the study.

3.1 Perceptions of AI and Digital Readiness

Participants reported a moderate understanding of Industry 4.0 (mean score: 3.68 on a 5-point scale), but were less familiar with Industry 5.0, which scored lower at 2.73. This suggests a limited awareness of the human-centered dimensions emphasized by the newer paradigm. Even so, 73% of the respondents viewed artificial intelligence as either relevant or highly relevant to their production processes.

Larger companies tend to show greater strategic clarity and intent for AI adoption ($r = 0.648$, r denotes Pearson's correlation coefficient; $p = 0.001$, indicating statistical significance), whereas SMEs report hesitancy due to resource constraints [13].

Digital readiness was also evaluated through the presence of digital strategies and dedicated implementation teams. Only 36% of firms had a clearly defined strategy, and 32% reported having a digitalization team in place. The results indicate a notable gap between the perceived relevance of artificial intelligence (AI) and the degree to which it is embedded operationally. While most respondents view AI positively, structured implementation appears limited.

Among the expected advantages, participants most frequently rated overall improvement ($M = 4.27$), cost reduction ($M = 4.00$), and error minimization ($M = 3.91$) as highly relevant. Participants also rated operational efficiency, decision-making, flexibility, and sustainability positively, with average scores between 3.73 and 3.82.

The analysis showed strong links between several benefits perceived by respondents. Cost reduction was closely tied to operational efficiency ($r = 0.87$), while overall improvement correlated strongly with better decision-making ($r = 0.84$). A significant association was also found between production flexibility and cost savings ($r = 0.83$). These results indicate that respondents see AI not just as a tool for specific tasks, but as a driver of broader performance improvements across the system.

When asked about barriers, respondents most frequently mentioned a lack of in-house

expertise and resistance to change (15 mentions each). High implementation costs were also a concern (13 mentions), along with cybersecurity risks (9) and doubts about return on investment (7). In general, respondents pointed more often to organizational and human challenges than to technical issues.

Although many see AI as central to Industry 5.0, its impact largely depends on how well organizations can manage both technical demands and workforce capabilities.

3.2 Core Competencies and Organizational Culture

Adaptability emerged as the most important competency for Industry 5.0, noted by 82% of participants. Digital leadership (73%) and critical thinking (64%) were also widely recognized. The data analysis revealed a statistically significant negative correlation between perceived human-related challenges and respondents declared competency levels ($r = -0.454$, $p = 0.034$). This suggests that organizations with higher levels of internal skills perceive fewer barriers to digital transformation.

The role of organizational culture also emerged as influential. Firms characterized by participatory structures and an emphasis on continuous learning indicated higher confidence in managing AI-related transitions. Correlation analysis supports this finding, revealing a strong positive link between open cultural traits and both the perceived usefulness of AI ($r = 0.711$, $p < 0.001$) and digital maturity ($r = 0.604$, $p = 0.003$).

3.3 Strategic Leadership and Ecosystem Engagement

Leadership style stood out as a key influence on organizational readiness. Notably, digital leadership was positively linked to both AI investment plans ($r = 0.615$, $p = 0.002$) and readiness for Industry 5.0 ($r = 0.562$, $p = 0.007$). Additionally, managers who recognize the strategic importance of human-centered leadership are more likely to declare Industry 5.0 as a priority area (H7: confirmed).

Firms involved in external collaborations—particularly with universities or innovation hubs, reported significantly higher levels of preparedness for Industry 5.0 ($r = 0.696$, $p <$

0.001). However, such partnerships were reported by less than 40% of respondents, pointing to untapped potential at the ecosystem level.

3.4 Hypothesis Testing

Hypotheses were tested using Pearson correlations and Kruskal–Wallis non-parametric tests.

Table 1
Overview of Tested Hypotheses, Statistical Methods, and Interpretations.

Hypothesis	Test Used	Result	Interpretation
H1	Kruskal–Wallis	H = 5.92, p < 0.05	Confirmed: Larger firms perceive AI as more useful
H2	Pearson correlation	r = 0.533, p = 0.009	Confirmed: Skilled workforce associated with higher Industry 5.0 readiness
H3	Pearson correlation	r = -0.512, p = 0.012	Confirmed: Low digitalization links with high perceived workforce-related challenges
H4	Pearson correlation	r = 0.696, p < 0.001	Confirmed: Ecosystem engagement correlates with better Industry 5.0 readiness
H5	Pearson correlation	r = 0.586, p = 0.005	Confirmed: High digitalization familiarity correlates with Industry 5.0 awareness
H6	Pearson correlation	r = 0.642, p = 0.002	Confirmed: Familiarity with I4.0 correlates with familiarity with I5.0
H7	Pearson correlation	r = 0.562, p = 0.007	Confirmed: Value of digital leadership predicts strategic prioritization of I5.0

These results validate the conceptual assumptions of the study and reinforce the importance of integrating leadership, culture, and ecosystem collaboration in digital transformation strategies.

3.5 Other Additional Correlations

Further correlations help clarify how organizations are preparing for Industry 5.0.

The analysis found a moderate positive link between how relevant leaders perceive AI to be

and their adaptability (r = 0.509, p = 0.013). In other words, leaders open to change tend to see greater strategic value in AI, even in less digitally advanced firms.

There was a significant negative correlation between efforts to develop employee skills and cultural resistance (r = -0.434, p = 0.045). Companies that invest in upskilling their workforce tend to face fewer internal obstacles during digital transformation, suggesting that strengthening competencies helps lower resistance.

Firms involved in ecosystem collaborations were significantly more likely to have dedicated digital teams (r = 0.497, p = 0.015). This implies that firms involved in external networks are more likely to institutionalize internal structures that support digital initiatives.

Together, these findings underline that cultural and leadership factors play a critical role in digital transition, complementing technical investment.

3.6 Insights from Open-Ended Responses: Leadership Evolution Toward Industry 5.0

The final section of the survey asked participants to describe how leadership should evolve to support Industry 5.0 and AI integration. The qualitative analysis revealed seven connected themes, as shown in Table 2.

Table 2
Synthesized Themes from Open-ended Responses on Leadership Evolution

Main Theme	Theme Detail	Sample Comments
Openness and Flexibility	Willingness to embrace change, avoid rigid thinking	“Open minded”, “no preconceived ideas”, “flexible thinking”
Adaptability and Learning	Continuous self-learning and support for team development	“Encourage continuous learning”, “managers to support training”
Empathy and Human-Centeredness	Emotional intelligence and care for employees’ concerns	“People-oriented”, “emotional intelligence”, “understanding employee fears”
Collaborative Leadership	Participative decision-making, co-creation,	“collaborative”, “co-creation”, “less top-down decisions”

	decentralized authority	
Digital Competence	Basic understanding of AI and strategic integration of technology	“Digital literacy”, “understand technologies”, “AI integration”
Responsibility and Ethics	Attention to ethical use of AI and data-driven decisions	“Ethical use”, “transparency”, “impact-based efficiency”
Organizational Constraints	Limited autonomy of local leaders in multinational contexts	“Focus driven from Headquarters”, “limited local influence”

Respondents highlighted the relevance of fostering psychological safety, supporting continuous learning, and promoting decision-making autonomy. In addition, a basic understanding of artificial intelligence (AI) was considered essential for effective leadership:

- Openness and flexibility: Effective leaders stay open to change and adapt their thinking to handle complexity.
- Adaptability and lifelong learning: Leaders are expected to encourage ongoing skill development and help teams stay agile in a changing environment.
- Empathy and human focus: Effective leadership involves emotional intelligence, creating psychological safety, and showing real care for people’s well-being.
- Collaborative leadership: Respondents highlighted the value of shared decision-making, co-creation, and involving teams in meaningful ways.
- Digital competence: Leaders are expected to understand AI and digital tools well enough to steer strategic decisions effectively.
- Ethical Awareness: Transparency, critical evaluation, and alignment with ethical standards were cited as key responsibilities in tech-driven change.
 - Organizational constraints: Several respondents, particularly from multinational firms, noted that limited local autonomy makes it important for middle managers to adapt global strategies to their specific context.

The results indicate a necessary shift from directive to adaptive leadership. Respondents pointed to psychological safety, lifelong learning, and autonomy as key needs, along with basic AI literacy. As Industry 5.0 takes shape, effective leadership will depend not only on using technology, but on fostering a mindset that values people while embracing digital tools.

4. DISCUSSIONS

Romania’s path to Industry 5.0 shows clear gaps between large companies and SMEs. Bigger firms tend to have structured strategies and more resources, while smaller businesses often struggle with limited training, weak ecosystem support, and uneven leadership involvement. These challenges are not unique to Romania; similar constraints have been documented in other emerging economies, where small and medium-sized firms often struggle with resource shortages and difficulties in adopting AI-based solutions [13]. These findings reflect earlier observations that digital transformation in Eastern Europe is constrained by structural and capability gaps, particularly among SMEs [24], [25].

Our results reinforce the centrality of leadership, internal capability, and ecosystem engagement, confirming arguments advanced by Cyfert et al. [26] and Olsson et al. [27]. For example, digital leadership strongly correlates with AI investment intentions ($r = 0.615$, $p = 0.002$), yet weak internal capabilities are associated with lagging progress in skills development ($r = -0.534$, $p = 0.010$), a dynamic that illustrates the disconnect between declared digital ambition and operational capacity [26].

Ecosystem participation supports digital readiness ($r = 0.696$, $p < 0.001$), but remains inconsistent, especially in terms of public-private collaboration. This fragmentation confirms critiques by Tutak and Brodny [25], who highlight the lack of coordinated infrastructure and strategic alignment in Romania’s digital ecosystem.

Firms more familiar with Industry 5.0 also report higher strategic prioritization ($r = 0.531$, $p = 0.011$) and stronger digital integration ($r = 0.555$, $p = 0.007$), confirming that awareness

influences strategic behavior. Still, sustained progress is more closely associated with formal strategies ($r = 0.717$, $p < 0.001$) and clear responsibility structures ($r = 0.731$, $p < 0.001$), aligning with the maturity framework proposed by Senna et al. [28], which emphasizes the interdependence of strategic, organizational, and technological layers.

Human capital remains a key factor. Higher employee digital competence is associated with reduced resistance to change ($r = -0.454$, $p = 0.034$), supporting arguments by Olsson et al. [27] on the importance of inclusive leadership and continuous learning. Moreover, organizations emphasizing adaptive, participatory leadership demonstrate better alignment between intentions and capacity—a finding that echoes recent empirical work on leadership's transformative role [26], [27].

Although our sample ($n = 22$) limits generalizability, its targeted focus on operational and strategic leaders offers valuable insights from a national context that remains underrepresented in Industry 5.0 research [24], [28]. Unlike many prior works that rely on conceptual analysis or policy reviews, this study provides grounded, empirical evidence from Romanian manufacturing, capturing real-world dynamics at firm level.

The main contribution to Industry 5.0 theory is the empirical investigation of how leadership, internal capabilities, and ecosystem participation interact in a national context that has received limited scholarly attention. The analysis points to three main conclusions:

- Leaders who involve their teams and adapt to change help ensure better strategic focus and smoother digital adoption—this is especially true in smaller firms.
- Skills like adaptability, critical thinking, and teamwork help bridge the gap between investing in technology and being ready to use it effectively.
- When firms actively participate in industrial clusters and collaborative networks, they are better equipped to manage change and drive transformation.

These findings add to current Industry 5.0 models by bringing in human and organizational

aspects, providing a fresh perspective beyond the usual focus on technology or policy.

5. CONCLUSIONS

Romania's progress toward Industry 5.0 shows clear differences across the manufacturing sector. While larger firms benefit from formalized strategies and stronger resource allocation, SMEs continue to face tangible obstacles such as limited skills development, fragmented ecosystem support, and inconsistent leadership engagement.

These results align with earlier studies that highlight how leadership focus, internal skill development, and coordinated ecosystems support progress toward Industry 5.0 readiness [24]–[28]. In addition, sustainability goals are rarely embedded in day-to-day operations, and there is often a gap between strategic plans and actual practices. Combined with skill shortages in the workforce, this points to a disconnect between policy ambitions and what is happening in practice.

The main challenge isn't just adopting new technologies but creating strategies that fit local needs, foster inclusive leadership, promote ongoing learning, and support collaboration within and across organizations. This matters especially for SMEs and companies in less-connected regions. Without these efforts, many organizations may not fully benefit from Industry 5.0. Its potential to drive real change could remain theoretical if key systems and support structures are missing. This challenge becomes more pronounced as the next wave of Industry 6.0 technologies begins to take shape [29].

6. RECOMMENDATIONS

Romania's shift toward Industry 5.0 relies not just on having advanced technologies, but also on strong leadership, skilled people, and collaboration between companies. Larger firms are making progress, but many SMEs still face challenges like limited resources, poor coordination, and gaps in leadership.

Technology on its own isn't enough, it needs to be guided by a clear vision and consistent

daily practices. In smaller firms, involving employees and encouraging flexible leadership are key to building collaboration and shared learning.

Knowing how to use AI, robotics, or data tools isn't sufficient, people also need skills like teamwork, adaptability, and problem-solving. These human abilities grow over time through continuous learning and working with others across different fields.

Firms involved in industrial clusters report higher levels of readiness. Such networks promote knowledge-sharing and provide practical models for implementation. Policy measures should therefore consider local conditions, not just national-level frameworks.

Advancing Industry 5.0 requires systemic support: targeted leadership development, learning-oriented systems, and stronger local partnerships. Without these basics in place, progress is likely to stay at the idea stage, without real impact.

7. LIMITATIONS AND FUTURE RESEARCH

This study provides early insights into how Romania is approaching Industry 5.0, but it has some clear limits. The small, industry-specific sample makes it hard to generalize the findings. A wider sample across different regions and sectors would offer a fuller picture of national readiness.

Because the study only looked at one point in time, it couldn't track how companies adjust to changes in technology or policy. A longer-term approach would give a clearer picture of how readiness evolves.

The use of self-reported data may have introduced bias, as respondents might have overstated strategic alignment. Future research should include external validation or mixed methods to improve accuracy.

Conceptual confusion was also observed. Some respondents reduced Industry 5.0 to automation, neglecting its human-centered and sustainability focus. This highlights the need for clearer frameworks and internal awareness-building.

External factors such as national regulation, economic context, and institutional support were not addressed, although they strongly influence readiness.

Based on current findings, the next step is to develop and validate the R.E.S.A. tool (Resources, Ecosystem, Strategy, Adaptability), designed to evaluate organizational preparedness through both human and technological dimensions and to support context-sensitive implementation of Industry 5.0 strategies.

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Dincolo de tehnologie: Leadership, competențe și provocări ecosistemice în tranziția României către Industria 5.0

Rezumat: Pe măsură ce industria globală se îndreaptă către paradigma centrată pe om a Industriei 5.0, înțelegerea modului în care sistemele naționale de producție se adaptează devine o prioritate majoră de cercetare. Acest articol prezintă un studiu empiric, de tip cross-secțional, care explorează gradul de pregătire digitală și capabilitățile uman-centrate ale firmelor de producție din România. Un chestionar structurat în cinci secțiuni a fost aplicat unui număr de 22 de lideri operaționali și strategici din companii de dimensiuni și structuri variate. Instrumentul a investigat pregătirea organizațională în cinci arii: maturitate digitală, intenții de investiții în AI, adecvarea resurselor, percepția beneficiilor și barierele automatizării, și competențele-cheie pentru o transformare sustenabilă. Rezultatele indică o familiaritate redusă cu principiile Industriei 5.0 și un progres inegal în integrarea digitală, în special în rândul IMM-urilor. Deși AI este recunoscută pe scară largă pentru eficiența operațională și sprijinul în luarea deciziilor, persistă obstacole precum lipsa expertizei, costurile ridicate de implementare și rezistența culturală. Participanții au subliniat importanța leadershipului, colaborării și adaptabilității ca elemente esențiale ce completează cunoștințele tehnice. Studiul susține nevoia unor strategii integrate care să alinieze oamenii, procesele și tehnologia pentru a sprijini tranziția României către Industria 5.0. Aceste perspective pot contribui la elaborarea de politici, dezvoltarea forței de muncă și planificarea strategică în contexte industriale emergente.

Cuvinte-cheie: Industria 5.0, Leadership, Dezvoltarea forței de muncă, Competențe centrate pe om, Adoptarea AI, IMM-uri, Pregătire digitală.

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