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ALIGNING HUMAN RESOURCE INFORMATION SYSTEMS (HRIS) WITH THE IMPERATIVES OF SOCIETY 5.0: A STRATEGIC FRAMEWORK FOR DIGITAL TALENT MANAGEMENT IN THE INDONESIAN BANKING SECTOR

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Abstract

The rapid acceleration of digital transformation, spurred by the global pandemic and new economic demands, has placed the Indonesian banking sector at a critical juncture. Amidst this disruption, the Society 5.0 paradigm has emerged as a human-centric vision, proposing a deep integration of technology and society to enhance the quality of life. However, the success of this transformation hinges on its most vital asset: digital talent. A significant gap currently exists between the strategic capabilities of modern Human Resource Information Systems (HRIS) and the imperative to effectively manage digital talent in alignment with Society 5.0. This research aims to bridge this gap by developing a comprehensive conceptual framework, titled "Strategic Talent Alignment for a Resilient Human-centric Information System" (STAR-HRIS). Employing a systematic literature review, this study synthesizes findings from diverse sources, including academic journals, industry reports, and policy documents from regulatory bodies such as the Indonesian Financial Services Authority (OJK). The results present the STAR-HRIS framework, which is composed of three layers: (1) The Foundation of Governance & Digital Infrastructure, encompassing the technology stack, data governance, and digital ethics; (2) The Pillars of Intelligent Talent Management, which include intelligent talent acquisition, adaptive talent development, and dynamic, AI-powered engagement and retention; and (3) The Organizational Enablers, which highlight the crucial roles of digital leadership, an innovative culture, and change management. The discussion interprets how the STAR-HRIS framework can serve as a roadmap for banking leaders and HR practitioners in Indonesia to evolve their HRIS from an administrative system into a dynamic talent ecosystem. This framework not only offers a practical solution to the digital talent gap but also emphasizes the importance of ethical considerations in AI implementation, consistent with the human-centric philosophy of Society 5.0. This research contributes an actionable strategic model for aligning technology, people, and strategy to navigate the future of the banking sector.

Keywords: *Human Resource Information Systems, HRIS, Society 5.0, Digital Talent Management, Digital Transformation, Indonesian Banking, Artificial Intelligence (AI), Strategic Framework*

A. INTRODUCTION

The contemporary business world, particularly the financial services sector, is in the

midst of a profound transformation driven by the convergence of three interconnected forces: the acceleration of digital transformation, the emergence of the Society 5.0 paradigm, and the strategic evolution of human resource information systems. Understanding the dynamics of these three forces is a prerequisite for formulating a relevant and competitive talent management strategy for the 21st century.

First, the acceleration of digital transformation in the banking sector is no longer an option but an imperative (Otoritas Jasa Keuangan, 2021; Otoritas Jasa Keuangan, 2022). Over the past several years, the demand for fast, efficient, secure, and accessible financial services has driven a fundamental shift from the "traditional bank" model to the "future bank" (Otoritas Jasa Keuangan, 2021; CNBC Indonesia, 2024). This change in public expectation, coupled with intensifying competition from agile financial technology (FinTech) players, has compelled conventional banks to prioritize digital transformation (Winasis et al., 2020). The COVID-19 pandemic acted as an extraordinary catalyst, compressing years of digital adoption into a very short period (Kochetkov et al., 2021; Wahyuni & Sari, 2021). In Indonesia, this urgency is recognized at the national level, where the Financial Services Authority (OJK) is proactively guiding the industry through its "Blueprint for Digital Transformation in Banking," a strategic document aimed at enhancing the resilience, competitiveness, and contribution of the national banking sector (Otoritas Jasa Keuangan, 2021).

Second, amidst this wave of digitalization, a new, more profound paradigm has emerged from Japan: Society 5.0. Unlike Industry 4.0, which focuses on industrial efficiency and automation, Society 5.0 promotes a "super-smart society" that is human-centric (Setiawan, 2022). This philosophy aims to leverage advanced technologies such as Artificial Intelligence (AI), Big Data, and the Internet of Things (IoT) not just for economic gain, but to solve complex social problems and holistically improve the quality of human life (Shanti et al., 2022). The core of Society 5.0 is the seamless integration of cyberspace and physical space, where technology becomes a tool to empower individuals and society, not the other way around (Wahyuni & Sari, 2021).

Third, in response to these business dynamics, Human Resource Information Systems (HRIS) have undergone a significant evolution. From their original function as administrative tools for managing large volumes of employee data such as payroll, attendance, and leave (Kovach et al., 2002) HRIS has now transformed into a crucial strategic asset. Modern systems enable the automation of routine tasks, improve access to information, and, most importantly, facilitate accurate, data-driven decision-making (Yuniarti & Hidayat, 2020; Nugroho, 2023).

This evolution, supported by cloud technology, advanced analytics, and AI, allows the HR function to shift from a transactional and reactive role to a proactive and strategic business partner, capable of shaping and directing human capital to achieve a competitive advantage (Suryanto & Syaifullah, 2021; Kovach et al., 2002;).

Table 1 below summarizes the evolution of HRIS, highlighting the fundamental shift from an administrative focus to the strategic capabilities that form the basis of the argument in this research.

Table 1. The Evolution of HRIS from an Administrative to a Strategic Role

Dimension	Administrative Era (Late 20th Century)	Strategic Era (21st Century / Society 5.0)
Primary Focus	Operational efficiency, cost reduction, compliance (Kovach et al., 2002; Yuniarti & Hidayat, 2020).	Value creation, competitive advantage, employee experience (Suryanto & Syaifullah, 2021; Medium, 2024).
Core Functions	Payroll, employee data recording, attendance management, compliance reporting (Ball, 2001).	Talent management, predictive analytics, strategic workforce planning, personalized learning, employee experience management (Gartner, 2024).
Underlying Technology	Mainframe or client-server, siloed databases, batch processing (Lengnick-Hall & Moritz, 2003; SAP, 2014; Kovach et al., 2002).	Cloud-based, integrated (ERP/HCM), mobile-first, AI and machine learning-enabled, real-time analytics.
HR Role	Administrator, policy gatekeeper, transactional support function (Yuniarti & Hidayat, 2020; Medium,	Strategic partner, talent architect, change agent, data analyst (Suryanto & Syaifullah, 2021; Kovach et al., 2002).

	2024).	
Nature of Data	Static, historical, used for retrospective reporting (Ball, 2001).	Dynamic, real-time, integrated, used for predictive and prescriptive insights (Yuniarti & Hidayat, 2020).

Problem Statement

Although these three forces—banking digital transformation, the Society 5.0 paradigm, and strategic HRIS—are converging, a critical gap hinders the potential synergy among them. Digital transformation strategies in the Indonesian banking sector, despite being guided by technical blueprints and regulations from the OJK often operate in a philosophical vacuum. The primary focus tends to be on implementing technology for operational efficiency and enhancing the customer experience (Otoritas Jasa Keuangan, 2021; PwC, 2023) while the human element is often viewed as a challenge—whether in the form of resistance to change, competency gaps, or the need for management—rather than as the ultimate goal of the transformation itself (PwC, 2023).

This is where Society 5.0 offers a powerful corrective lens, shifting the narrative from "managing human challenges" to "achieving human-centric goals" (Setiawan, 2022). However, to realize this vision, a bridge is needed to connect the 'why' (the human-centric imperative of Society 5.0) with the 'how' (the technological capabilities of HRIS). Currently, there is no cohesive and actionable framework for the Indonesian banking sector to systematically align their HRIS platforms with the principles of Society 5.0 to address the most pressing challenge: identifying, developing, and retaining much-needed digital talent (Shanti et al., 2022). Without this alignment, banks risk making substantial investments in technology without building commensurate human capabilities, which will ultimately lead to transformation failure, a widening talent gap (PwC, 2023) and an inability to compete effectively in this new era.

Research Purpose and Contribution

In response to this problem statement, this research aims to develop a comprehensive conceptual framework, named "STAR-HRIS: Strategic Talent Alignment for a Resilient Human-centric Information System." This framework is designed to provide structured and implementable guidance for leaders and HR practitioners in the Indonesian banking sector to

align their HRIS capabilities with the principles of Society 5.0.

The contribution of this research is threefold:

a. Theoretical:

It integrates three fields of study that are often discussed separately—HR information systems, the social-technological philosophy of Society 5.0, and strategic talent management—into a single, coherent conceptual model.

b. Practical:

It offers a concrete roadmap for the Indonesian banking sector to address the digital talent gap, from maturity assessment to phased implementation.

c. Strategic:

It repositions the HR function not merely as a support role but as a primary driver of human-centric digital transformation, in line with the vision of Society 5.0 and national strategic goals.

B. METHOD

Research Design

This study employs a qualitative research design using a Systematic Literature Review (SLR) approach. This methodology was chosen for its robustness in synthesizing existing knowledge from diverse sources to construct a new conceptual model, a common practice in management and information systems research (Nugroho, 2023; Wahyuni & Sari, 2021). The SLR approach allows for a comprehensive, transparent, and replicable analysis of the current state of knowledge on HRIS, Society 5.0, and digital talent management, thereby providing a strong evidence base for the proposed framework.

Data Collection Process

The data collection process was conducted systematically to ensure a broad and relevant scope of the existing literature. Data were collected from various secondary sources to ensure a holistic and balanced perspective. These sources included:

Peer-Reviewed Academic Journals:

Articles accessed from international databases such as Google Scholar, Scopus, ResearchGate, and Emerald Insight, which form the theoretical foundation of the research (Nugroho, 2023; Otoritas Jasa Keuangan, 2021).

Industry Reports and White Papers:

Publications from leading consulting firms (e.g., Gartner, PwC, Deloitte, McKinsey, BCG)

and global technology vendors (e.g., Microsoft, SAP, Oracle) that provide practical insights and current trends (Gartner, n.d.; PwC, n.d.; Deloitte, 2025; PwC, 2023; Microsoft, 2016; Boston Consulting Group, n.d.).

Government and Regulatory Publications:

Official documents, blueprints, and press releases from the Indonesian Financial Services Authority (OJK) and the Monetary Authority of Singapore (MAS) to understand the policy and regulatory context (Otoritas Jasa Keuangan, 2021; Otoritas Jasa Keuangan, 2021; Otoritas Jasa Keuangan, 2021; Monetary Authority of Singapore, n.d.; Monetary Authority of Singapore, 2022; Monetary Authority of Singapore, 2017).

Inclusion and Exclusion Criteria

To ensure the relevance and quality of the data, strict inclusion and exclusion criteria were applied during the literature selection process.

Inclusion Criteria:

Articles and reports published between 2017 and 2025 were prioritized to capture the latest developments in the rapidly changing digital landscape (Otoritas Jasa Keuangan, 2021; World Scientific, 2024). The content had to have direct relevance to at least one of the core research pillars: HRIS, Society 5.0, digital transformation in banking, or digital talent management. Studies from other sectors were considered only if they offered a transferable fundamental model (e.g., a general HR transformation roadmap).

Exclusion Criteria:

Sources that were purely promotional without substantive data, opinion articles without an evidence base, and studies from irrelevant industries were eliminated. Outdated materials or those no longer reflecting current technological practices were also excluded.

Data Analysis

Data analysis was conducted using a thematic analysis approach to systematically identify, code, and categorize key patterns and themes within the collected literature (Wahyuni & Sari, 2021). This process involved three main steps:

Deconstruction:

Breaking down the literature into smaller units of information, such as key concepts, challenges, strategies, and success factors identified in each source.

Synthesis:

Grouping interrelated concepts to form the foundational pillars of the framework. For example, all findings regarding the use of AI for recruitment, selection, and candidate

identification were grouped under the theme "Intelligent Talent Acquisition."

Model Construction:

Arranging the synthesized themes into a coherent, layered conceptual framework (the STAR-HRIS model), which illustrates the logical and hierarchical relationships between the different components.

C. RESULT AND DISCUSSIONS

This section presents the synthesized findings from the systematic literature review. These findings are organized into two main parts: first, an in-depth conceptual analysis of the three pillars that form the basis of the research, and second, the presentation of the STAR-HRIS framework, which is the final outcome of this synthesis.

Conceptual Analysis: Deconstructing the Pillars of Transformation

The Society 5.0 Imperative for Human Capital in the Banking Sector

The literature analysis reveals that Society 5.0 is not merely a technological evolution but a philosophical revolution that places humanity at its center. This has profound implications for how organizations, particularly in the banking sector, view and manage their human resources.

From Automation to Humanization:

Society 5.0 marks a paradigm shift from the Industry 4.0 focus on automation and production efficiency to a human-centric model, where advanced technology is utilized to enhance human well-being and solve social problems (Setiawan, 2022). This concept aims to dissolve the boundaries between the virtual and physical worlds for human benefit (Wahyuni & Sari, 2021). For the banking sector, this implies a dual focus: not only creating a seamless and hyper-personalized customer experience (Otoritas Jasa Keuangan, 2021; Winasis et al., 2020) but also simultaneously building a supportive, engaging, and development-oriented employee experience. The goal is to create value for all stakeholders, not just efficiency for the organization.

Talent Competencies for the 5.0 Era:

The skills required in this era extend beyond mere technical abilities. While digital literacy is a foundational competency, Society 5.0 emphasizes the importance of high-level cognitive and socio-behavioral skills. These include critical thinking, creativity, complex problem-solving, adaptability, and cross-functional collaboration (Universitas Tasikmalaya, 2024). Consequently, the role of HR transforms from a mere recruiter to a talent incubator.

The primary responsibility of HR is to identify these crucial skill gaps and dynamically implement lifelong learning, reskilling, and upskilling programs to ensure the workforce remains relevant (SkyHive, 2023).

The Integrated Work Environment:

The blurring of lines between the physical and digital worlds demands a new approach to work design (Wahyuni & Sari, 2021). Banking organizations must be able to support flexible and remote work models, leverage collaborative technologies to maintain productivity, and proactively manage employee well-being in a hyper-connected environment (Yuniarti & Hidayat, 2020).

The Indonesian Banking Digital Transformation Landscape: Challenges and Policy Directions

The Indonesian context presents a unique set of challenges and opportunities that shape the specific needs for digital talent management.

Unique Indonesian Context:

The digital transformation journey of Indonesian banking has its own characteristics. The process started relatively later compared to neighboring countries like Singapore and Malaysia, partly due to archipelagic geography and uneven digital literacy rates (Winasis et al., 2020; World Economic Forum, 2022). However, the growth potential is immense, driven by a large population, high mobile penetration, and a significant unbanked and underbanked population segment ready to be served by digital financial solutions (EOS, 2024; ISEAS, 2023).

Critical Challenges:

- Digital Talent Gap: This is the most significant obstacle facing the banking sector. A PwC survey of banks in Southeast Asia identified major skill gaps in data analytics/data science (67%), business analysis (48%), and enterprise architecture (37%) (PwC, 2023). This talent shortage is a recurring theme across the region (ABeam Consulting, 2024; Singapore Fintech Association & Accenture, 2022; Frontier Enterprise, 2024; ZDNet, 2023) and directly hampers the execution of designed digital strategies.
- Organizational Hurdles: Many banks in Indonesia still struggle with a legacy culture that is hierarchical, bureaucratic, and resistant to change. This culture is in direct conflict with the agile, experimental, and collaborative culture that is a prerequisite for digital success (Shanti et al., 2022). Furthermore, a lack of strong digital leadership and visible management commitment can cause transformation initiatives to.

OJK's Regulatory Framework:

The "Blueprint for Digital Transformation in Banking" from the OJK is a crucial policy document. It outlines five key elements for the transformation process: Data, Technology, Risk Management, Collaboration, and Institutional Order (Otoritas Jasa Keuangan, 2021). Critically, the OJK adopts a principle-based and technology-neutral regulatory approach. This approach provides banks with the space to innovate and experiment with new technologies while maintaining prudential aspects (Otoritas Jasa Keuangan, 2021). This creates an environment that is both supportive and demanding for banks to transform seriously.

To provide sharper context, Table 2 presents a comparison of digital talent management challenges and strategies in Indonesia and Singapore.

Table 2. Comparison of Digital Talent Management Challenges and Strategies in the Banking Sectors of Indonesia and Singapore

Aspect	Indonesia	Singapore
Key Skill Gaps	Significant gaps in data analytics, data science, business analysis, and enterprise architecture (PwC, 2023). Uneven digital literacy across the population (World Economic Forum, 2022).	Similar gaps exist, especially in AI and cybersecurity, but are proactively addressed through structured initiatives (Singapore Fintech Association & Accenture, 2022; Frontier Enterprise, 2024; ZDNet, 2023).
Role of Government/ Regulator	OJK provides a "Blueprint" as a strategic guide and regulatory framework to encourage transformation (Otoritas Jasa Keuangan, 2021). The role is more of a regulator and facilitator.	MAS acts as an active catalyst by providing substantial funding (e.g., S400millionfortalent,S100 million for AI) and building an ecosystem through grants and strategic partnerships (Monetary Authority of Singapore, 2022; Allen & Gledhill, 2024; Tech in Asia, 2022).

Corporate Strategy	Strategies are often reactive, focusing on catching up. Faces internal challenges of legacy culture and resistance to change.	Strategies are proactive and globally oriented. Banks like DBS are recognized as world digital leaders, setting industry standards in innovation and cultural transformation (IMD, 2017)
Innovation Ecosystem	The FinTech ecosystem is rapidly growing but still fragmented. Collaboration between banks and FinTechs is beginning to grow (EOS, 2024; Otoritas Jasa Keuangan, 2021).	The ecosystem is highly mature, integrated, and fully supported by government, industry, and academia. Collaboration is the norm (Monetary Authority of Singapore, n.d.; ABeam Consulting, 2024).

The Evolution and Strategic Capabilities of Modern HRIS

Modern HRIS has evolved far beyond its administrative functions, now serving as a sophisticated and strategic technology platform.

Core Capabilities:

The foundation of an effective HRIS consists of three main pillars: a robust Database to ensure data integrity and accuracy; intuitive and user-friendly Software to enhance the employee experience; and strict adherence to Regulations to maintain data security and trust (Nugroho, 2023). The ability to seamlessly integrate with other enterprise systems (such as finance, CRM, and production systems) is crucial for providing the 360-degree view necessary for strategic workforce planning (Lengnick-Hall & Moritz, 2003; Nugroho, 2023; Binus University, 2017).

Artificial Intelligence (AI) as a Game-Changer:

The integration of AI and predictive analytics is the factor that truly elevates HRIS into a strategic weapon.

Talent Acquisition & Management:

AI-powered tools can automate the screening of thousands of CVs, predict candidate

success based on historical data, identify High-Potential Employees (HiPos), and forecast future leadership gaps. Gartner reports highlight vendors like Cornerstone, SAP Success Factors, and Workday that offer these advanced capabilities (Gartner, n.d.).

Employee Retention & Engagement:

Predictive models can analyze various data points—such as engagement survey results, performance data, absenteeism rates, and even sentiment from internal communications—to identify employees at risk of resigning. This allows HR teams to intervene proactively with targeted retention strategies, transforming the HR function from a firefighter to a strategic planner (Basnet, 2024.).

Development & Learning:

AI enables hyper-personalized learning. Learning Experience Platforms (LXPs) can recommend the most relevant courses, articles, videos, and even mentors based on an employee's role, performance gaps, and career aspirations (SkyHive, 2023; Pupuk Indonesia, n.d.). On the other hand, immersive technologies like Virtual Reality (VR) and Augmented Reality (AR) are beginning to be used for risk-free practical training, such as customer service simulations or complex product introductions, which have been shown to result in higher levels of engagement and confidence.

An analysis of this evolution reveals a deeper understanding: HRIS is no longer just a system for managing people, but has become a platform that actively shapes the employee experience and, consequently, the organizational culture. Every touchpoint in the HRIS ecosystem—from a seamless onboarding process, a continuous performance feedback system, to an empowering self-service portal—is an opportunity to reinforce the desired digital, agile, and human-centric culture. If an HRIS feels rigid, bureaucratic, and impersonal, it will inherently reinforce a traditional culture, regardless of what leaders say. Conversely, if the HRIS is designed to be intuitive, personal, transparent, and empowering, it becomes an active agent in building and maintaining a modern digital culture. Therefore, HRIS implementation is not just a technical project; it is a fundamental culture-shaping initiative.

The STAR-HRIS Framework: Strategic Talent Alignment for a Resilient Human-centric Information System

Based on the conceptual analysis above, this research proposes a new framework called STAR-HRIS. This framework is designed as a holistic, integrated, and actionable model for the Indonesian banking sector.

Philosophy and Purpose:

The STAR-HRIS framework is built on three core principles: human-centric in its philosophy, data-driven in its execution, and strategically adaptive to business needs. Its purpose is to transform HRIS from a passive record-keeping system into a dynamic talent ecosystem that actively cultivates the digital workforce required by the Indonesian banking sector to succeed in the Society 5.0 era.

Framework Structure:

The framework is visualized as an interdependent, layered model, where each layer builds upon the previous one.

LAYER 1: THE FOUNDATION - Governance & Digital Infrastructure

This layer is the non-negotiable foundation. Without a solid foundation, the strategic pillars above it will collapse. Its components include:

- HR Tech Stack: Selecting and implementing a modern, cloud-based HRIS/Human Capital Management (HCM) suite (e.g., SAP SuccessFactors, Workday, Oracle HCM). This system must be scalable, flexible, and, most importantly, have open Application Programming Interfaces (APIs) that allow for easy integration with other systems (Ken Research, 2024; Binus University, 2017).
- Integrated Data Governance: Establishing a "single source of truth" for all human-related data. This involves rigorous processes for data migration from legacy systems, data cleaning, and continuous validation to ensure accuracy and integrity, which is an absolute prerequisite for trustworthy analytics (Nugroho, 2023).
- Compliance & Digital Ethics: Embedding compliance with OJK regulations (Otoritas Jasa Keuangan, 2021; Makur et al., 2023) and international data privacy standards (like GDPR) into the system architecture. This also includes establishing a clear governance framework for the ethical use of AI, ensuring fairness, transparency, and accountability in every algorithm used (Forbes Human Resources Council, 2024).

LAYER 2: THE PILLARS - Dimensions of Intelligent Talent Management

These are the core talent management functions, redesigned through the lens of AI and the imperatives of Society 5.0.

Pillar 1: Intelligent Talent Acquisition:

- Using AI not only to automate CV screening and sorting (Binus University, 2025) but, more importantly, using predictive analytics to assess cultural fit, learning potential, and agility—key Society 5.0 traits that are traditionally difficult to measure.
- Implementing systems to actively monitor and mitigate algorithmic bias to ensure

diverse and inclusive hiring outcomes, which is the core of fairness (TMI, n.d.; Senior Executive, n.d.).

Pillar 2: Adaptive Talent Development:

- Transitioning from traditional Learning Management Systems (LMS) to Learning Experience Platforms (LXP) that provide a hyper-personalized, consumer-grade learning experience (Pupuk Indonesia, n.d).
- Using AI to identify individual and organizational skill gaps in real-time and recommend customized learning paths to close those gaps (SkyHive, 2023).
- Integrating immersive learning technologies like VR/AR for high-impact training in scenarios such as difficult customer interaction simulations or complex compliance training (Ignite HCM, n.d).

Pillar 3: Dynamic Engagement & Retention:

- Applying predictive analytics to identify flight risk based on patterns in performance data, engagement surveys, and system usage data, enabling proactive intervention before top talent leaves (Basnet, 2024)
- Shifting from rigid annual appraisals to a continuous performance management system that facilitates real-time feedback and coaching via the platform (MIT Sloan Management Review, 2021).
- Using HRIS to map and facilitate internal mobility, creating transparent career paths that show employees there is a future for them within the organization, which is a powerful retention driver (Workday, 2024).

LAYER 3: THE ENABLERS - Drivers of Organizational Transformation

These are the crucial human and organizational elements that activate and bring the technology framework to life. Without this layer, even the best technology will fail to be adopted.

- Digital Leadership: Requires active and visible sponsorship from the C-suite. Leaders must not only fund the transformation but also model digital behaviors, use data for decision-making, and have a mindset open to change (Shanti et al., 2022).
- Agile & Innovative Organizational Culture: A culture that encourages experimentation, provides psychological safety for taking calculated risks, and promotes continuous learning is essential for users to adopt new systems and for digital talent to thrive (Shanti et al., 2022; PwC, 2022). The HRIS design itself must reflect and encourage this culture.

- Strategic Change Management: A structured Organizational Change Management (OCM) plan is vital. This includes a comprehensive and transparent communication plan, stakeholder involvement from the outset, and robust training programs to address resistance and ensure maximum user adoption.

Discussion

This section interprets the proposed STAR-HRIS framework, discusses its managerial and ethical implications, and outlines the limitations of the research and directions for future inquiry. The framework serves not only as a theoretical model but also as a practical guide for navigating the complexities of HR transformation in the digital age.

Interpretation and Managerial Implications

The STAR-HRIS framework offers a solution to one of the main paradoxes of digital transformation: the necessity to adopt disruptive technologies (like AI and automation) while simultaneously becoming more human-centric. The model demonstrates how technology can be used not to replace humans, but to enhance human capabilities, insights, and experiences, which aligns directly with the core principles of Society 5.0 (Setiawan, 2022). Thus, an investment in advanced HRIS becomes an investment in human empowerment, not just process efficiency.

Implications for Banking Executives:

- Investment Paradigm Shift: C-suite leaders must view HR technology investment as a core component of business strategy, not as an isolated cost center in the IT or HR department. The Return on Investment (ROI) is no longer measured solely by cost savings or efficiency, but by strategic metrics such as increased retention of key talent, innovation capacity, and long-term organizational resilience (Deloitte, 2025; People Managing People, 2023).
- Culture Ownership: Cultural transformation, which is the core of the "Enablers" layer, must be owned and led directly by the executive team. Technology will fail if not supported by the right leadership and a culture conducive to change (PwC, 2022).

Implications for HR Leaders:

- Role Evolution: The Chief Human Resources Officer (CHRO) and their team must evolve into strategic talent architects, data analysts, and change leaders (Yuniarti & Hidayat, 2020). They need to build their own digital and data literacy to effectively lead this transformation. This means recruiting or training HR professionals with expertise in analytics, technology product management, and employee experience design.

- Focus on Experience: The HR team becomes the primary designer of the digital employee experience. Every interaction with the HRIS ecosystem—from a job application to a leave request—must be designed to be seamless, empowering, and reinforcing of the desired culture (PwC, 2022; People Managing People, 2023).

Maturity-Based Implementation Roadmap:

The implementation of the STAR-HRIS framework cannot be done all at once. A realistic approach is through a phased implementation tailored to the organization's current digital maturity level. Organizations are advised to first conduct a digital HR maturity assessment (Moss Adams, 2025) to understand their position, then follow this roadmap:

- Stage 1: Foundational: Focus on implementing Layer 1 (The Foundation). The priority is to clean data, establish strong governance, automate core administrative processes, and launch self-service portals. The goal at this stage is to achieve operational efficiency and build a trustworthy data source.
- Stage 2: Strategic: Begin implementing Layer 2 (The Pillars). Adopt advanced talent modules (recruiting, performance, learning) and introduce analytical dashboards for managers. The goal is to start using data for better, more strategic decision-making.
- Stage 3: Predictive & Adaptive: Fully leverage AI and predictive analytics capabilities for retention, succession planning, and personalized development. Deeper integration with other business systems becomes key (People Managing People, 2023). The goal is to transform the HR function into a proactive and agile one.
- Stage 4: Transformative: The framework is fully embedded in the organization's DNA. HR functions as a true strategic partner, using the talent ecosystem to drive innovation and business strategy. HR data is combined with business data (e.g., financial data, customer data) to generate holistic insights. The goal is to achieve sustainable competitive advantage through human capital.

Ethical Considerations and Risk Mitigation

The application of advanced technology, especially AI, in human management carries significant ethical responsibilities. The STAR-HRIS framework inherently demands careful attention to these aspects.

Human-Centric Principle as a Safeguard:

The human-centric philosophy of Society 5.0 must serve as the primary filter for all AI applications within this framework (Setiawan, 2022). The key question that must always be asked is: "Does this technology empower our employees and make their work more

meaningful, or does it merely serve to monitor and control?". Technology should be used to augment, not replace, human judgment and interaction.

Addressing Algorithmic Bias:

One of the greatest risks of AI is its ability to perpetuate or even amplify existing biases in historical data, whether related to gender, age, race, or educational background (Forbes Human Resources Council, 2024).

Mitigation:

Banks must demand transparency from technology vendors regarding how their algorithms work. Additionally, conducting regular third-party audits to detect bias is a necessity (Senior Executive, n.d.). Most importantly, there must always be human oversight in all critical decisions such as hiring, promotions, and terminations, allowing humans to reject or override flawed or unfair AI recommendations (Forbes Human Resources Council, 2024).

Protecting Privacy and Employee Trust:

The use of predictive analytics requires access to sensitive employee data. Without trust, employees will refuse to participate, and system adoption will fail.

Mitigation:

Organizations must practice radical transparency. Employees must be clearly informed about what data is collected, for what purpose, and how it is used and protected (TMI, n.d.; Engagedly, n.d.; Applaud, n.d.). Explicit consent must be obtained, data should be anonymized where possible, and robust cybersecurity protocols must be built to prevent data breaches (Forbes Human Resources Council, 2024; CakeResume, n.d.).

Accountability and Human Involvement:

AI should be positioned as a "co-pilot" for HR professionals and managers, not as an "autopilot."

Mitigation:

This framework emphasizes human accountability. The final, high-impact decisions on an individual's career must remain in human hands, which can apply context, empathy, and judgment—qualities that are currently beyond AI's reach (Forbes Human Resources Council, 2024). This ensures that processes remain fair, humane, and accountable.

To ground this framework in operational practice, Table 3 presents example Key Performance Indicators (KPIs) that can be used to measure the success of its implementation in each component.

Table 3. Key Performance Indicators (KPIs) to Measure the Success of STAR-HRIS Framework

Implementation

Framework Component	Key Performance Indicators (KPIs)
Intelligent Talent Acquisition	• Quality of Hire • Time-to-Productivity • Digital Talent Acquisition Cost • Diversity in Tech Hires (AIHR, n.d.; Workday, 2024; Medium, 2024)
Adaptive Talent Development	• Skills Gap Reduction % • Internal Promotion Rate • Training Effectiveness Index • Digital Tool Adoption Rate (AIHR, n.d.; Workday, 2024; Pendo, n.d.; Beqom, n.d.)
Dynamic Engagement & Retention	• Regrettable Turnover Rate (for digital roles) • Employee Net Promoter Score (eNPS) • Internal Mobility Rate • Manager Effectiveness Score (HiBob, n.d.; Medium, 2024; 15Five, n.d.)
Foundation (Governance & Infrastructure)	• Employee Self-Service (ESS) Adoption Rate • HR Process Efficiency (e.g., time saved, TAT reduction) • Data Accuracy Percentage • Number of Compliance Violations (HR-ONe, n.d.; Pendo, n.d.; AIHR, n.d.)

Limitations and Future Research Directions

It is important to acknowledge the limitations of this study and to identify opportunities for future research.

Limitations:

This study presents a conceptual framework developed from a literature review. Its practical effectiveness has not been empirically tested in the field. The implementation of this

framework will undoubtedly vary depending on the size of the bank, available resources, and existing digital maturity level. Its primary focus is on the Indonesian context; although its general principles are transferable, specific cultural and regulatory nuances may limit direct application in other countries without careful adaptation.

Future Research Directions:

Validation Case Studies:

Conduct in-depth longitudinal case studies at Indonesian banks (e.g., state-owned banks like Mandiri and BSI; private banks like BCA; or digital banks like Jago) that are undergoing digital HR transformation. Such research would test the validity and practicality of the STAR-HRIS framework components in a real-world context.

Quantitative Impact Analysis:

Design quantitative studies to measure the impact of implementing specific framework pillars on the KPIs identified in Table 3. For example, does the adoption of AI-based retention tools correlate with a statistically significant decrease in the turnover rate of digital talent?

Exploration of New Technologies:

Investigate the feasibility, ROI, and ethical implications of integrating newer technologies such as blockchain for secure and portable employee credentials, or the metaverse for highly immersive collaborative training and onboarding in the Indonesian banking context.

Role of Regulators as Accelerators:

Examine how the role of OJK and Bank Indonesia could evolve from mere regulators to accelerators of the digital talent ecosystem. This could include research on potential co-investment models or partnerships with industry and academia, similar to the proactive model run by MAS in Singapore.

D. CONCLUSION

The accelerated digital transformation in the Indonesian banking sector, occurring within the evolving paradigm of Society 5.0, presents both formidable challenges and unique opportunities. To successfully navigate this era, more than just technology adoption is required; a fundamental rethinking of how organizations manage their most crucial asset—people—is needed. This research argues that traditional, administration-focused HRIS is no longer adequate for this task.

By synthesizing insights from digital transformation, human-centric technology philosophy, and strategic human resource management, this study has proposed the STAR-HRIS framework. This framework provides a strategic and human-centric model for aligning HRIS capabilities with the imperatives of Society 5.0. By building on a strong foundation of data governance and ethics, implementing pillars of AI-powered intelligent talent management, and fostering a supportive culture through digital leadership, banks in Indonesia can transform their HR function.

They can shift from a reactive support role to a proactive strategic driver in creating a resilient, adaptive, and innovative digital workforce. Ultimately, this alignment is not just about efficiency or technology, but about building a sustainable competitive advantage and securing the relevance of the national banking sector in a human-centric financial future.

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