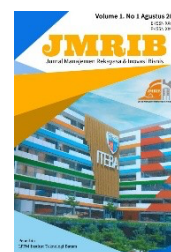




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## TRANSFORMATION OF HUMAN RESOURCE MANAGEMENT IN THE ERA OF REGIONAL DECENTRALIZATION AND DIGITAL REVOLUTION: A LITERATURE REVIEW AND ITS IMPLICATIONS

M. Irvanni Bahri<sup>1</sup>, Ayu Anggraini Tambunan<sup>2</sup>, Zulfikar<sup>3</sup>

[m.vanni.bahri-2021@feb.unair.ac.id](mailto:m.vanni.bahri-2021@feb.unair.ac.id)

Department of Management, Faculty of Economics and Business, Universitas Airlangga<sup>1</sup>

Universitas Amal Ilmiah Yapis Wamena<sup>2</sup>

IAIN Langsa<sup>3</sup>

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### Abstract

Local governments are shifting their views on human resource management (HRM) due to regional decentralization, which aims to strengthen the relationship between citizens and local governments through discussion forums. This change in perspective has implications for how local governments should integrate HRM into other operational tasks. A systematic review of the literature was conducted to understand change management and HRM in the context of regional decentralization and the impact of the digital revolution on organizations. The study screened 28,452 journals in the Web of Science (WoS) and 18 journals in Scopus, resulting in 306 journals. The study found significant differences between WoS and Scopus databases, with WoS having more journals despite using the same keywords and many discussing topics outside the context of title and keywords. The results conclude that the digital revolution impacts all organizations, both commercial and governmental, and that organizations must survive in the industrial age by laying a solid foundation through effective people management. Change requires embracing new cultures and being curious and creative to function effectively in an open-change environment.

### Abstrak

Pemerintah daerah mengubah pandangan mereka tentang manajemen sumber daya manusia (MSDM) karena desentralisasi regional, yang bertujuan untuk memperkuat hubungan antara warga dan pemerintah daerah melalui forum-forum diskusi. Perubahan cara pandang ini berimplikasi pada bagaimana pemerintah daerah harus mengintegrasikan MSDM ke dalam tugas-tugas operasional lainnya. Sebuah tinjauan sistematis terhadap literatur dilakukan untuk memahami manajemen perubahan dan MSDM dalam konteks desentralisasi regional dan

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*dampak revolusi digital terhadap organisasi. Penelitian ini menyaring 28.452 jurnal di Web of Science (WoS) dan 18 jurnal di Scopus, menghasilkan 306 jurnal. Penelitian ini menemukan perbedaan yang signifikan antara database WoS dan Scopus, dimana WoS memiliki lebih banyak jurnal meskipun menggunakan kata kunci yang sama dan banyak yang membahas topik di luar konteks judul dan kata kunci. Hasil penelitian menyimpulkan bahwa revolusi digital berdampak pada semua organisasi, baik komersial maupun pemerintahan, dan bahwa organisasi harus bertahan di era industri dengan meletakkan fondasi yang kuat melalui manajemen sumber daya manusia yang efektif. Perubahan membutuhkan penerimaan terhadap budaya baru dan rasa ingin tahu serta kreatif agar dapat berfungsi secara efektif dalam lingkungan yang terbuka.*

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## 1. INTRODUCTION

National development is essentially the development of the whole person and the development of all Indonesians (Dove et al., 1985; Santos, 1990). This is done in order to achieve the national goals that have been outlined in the Preamble of the 1945 Constitution, namely defending the entire nation and the entire Indonesian homeland, promoting general welfare, educating the nation's life, and participating in implementing a world order based on independence, lasting peace, and social justice. In order for the government to achieve these goals, it is working hard to make progress in every field, stating that the concept of regional decentralization is used to achieve the widest possible decentralization (Bodó et al., 2021; Fenwick & Bailey, 1998). This means that regions are authorized to regulate and manage all governmental affairs other than those of the central government. It is important that as many regions as possible are given regional decentralization in order to increase competitiveness while maintaining democracy, equity, and justice, uniqueness and specificity, and regional potential and diversity (Scott, 1996). Thus, the welfare of the people in the regions within the Unitary State of the Republic of Indonesia can be more quickly realized, and this will encourage the acceleration of the process. However, several studies have found that there is a decentralization gap between the broad policy-making authority given to leaders at the regional level (Chen & Groenewold, 2013; Guimón, 2018; Resosudarmo et al., 2009; Sumah & Baatiema, 2019). In Guimón (2018), differences in regional development in developing countries demand the adoption of decentralized and grassroots-oriented innovation policy strategies. However, developing countries have obstacles in the area of multilevel governance as a result of variations in regional characteristics, disparities in economic distribution,

and deficiencies in institutional frameworks (Chen & Groenewold, 2013; Guo et al., 2022). For example, research (Renko et al., 2022) explains that the issue of decentralization has received particular attention in the countries of Finland and Sweden as policymakers seek to redefine local-level functions. The Finnish and Swedish governments have established regional jurisdictions and delegated cultural policy authority to increase autonomy and institutional transformation capacity at the regional level (Bahri et al., 2021).

The concept of regional decentralization can be differentiated based on the aspects of what is decentralized and how it is decentralized. The conceptualization of decentralization in the governance framework includes three fundamental elements, namely monetary, administrative, and political (Kawashima, 2004; Schneider, 2003). Decentralization is conceptualized as the transfer of authority from central government bodies to lower levels within the public sector or to autonomous institutions (Rondinelli et al., 1983). This phenomenon certainly has a direct impact on how ready human resources are to deal with any problems that arise in society, anticipate a more astute and demanding society, and provide proper services to the community. According to Weiher & Smith (1987), decentralization helps achieve administrative, economic, and political goals by educating the public about policies, plans, and budgets in a democracy, improving the quality of national politicians, promoting social harmony and political stability through voting and party support, reducing consolidation of power, increasing accountability, and meeting local demands in an efficient and cost-effective manner. It also enables better decision-making and inter-organizational cooperation between central and local organizations, leading to increased economic efficiency and competition. These advantages can be categorized into political values, governance values, and efficiency values, which are major overlapping values that contribute to the benefits of decentralization (Kulipossa, 2004; Turner & Hulme, 1997; Wolman, 1990).

Indonesia has implemented decentralization policies, delegating tasks and financial resources to democratically elected local governments (Turner et al., 2009). However, attention to human resource management (HRM) has been lacking, maintaining a centralized and bureaucratic system with practices from the pre-decentralization era still in place. Reforms are essential, but a phased approach is recommended, with a focus on increasing local government accountability for expenditure and staff performance. One of the key requirements for responsible implementation of decentralization is the professionalism of the local government apparatus. In Olum (2014), there

are six prerequisites for successful implementation: democratic governance, local capacity development, institutional mechanisms, space for participation, political will, and community. These prerequisites must be met for decentralization to be successful. The focus transitions in the field of public administration from prioritizing procedural and regulatory compliance to emphasizing outcomes and effectiveness (Kuhon, 2020; Ranis & Stewart, 1994). The purpose of this research therefore involves an in-depth understanding of the changes in human resource management in the context of regional decentralization and the impact of the digital revolution on organizations, as well as how to deal with them effectively.

## **2. METHOD AND PROTOCOL REVIEW**

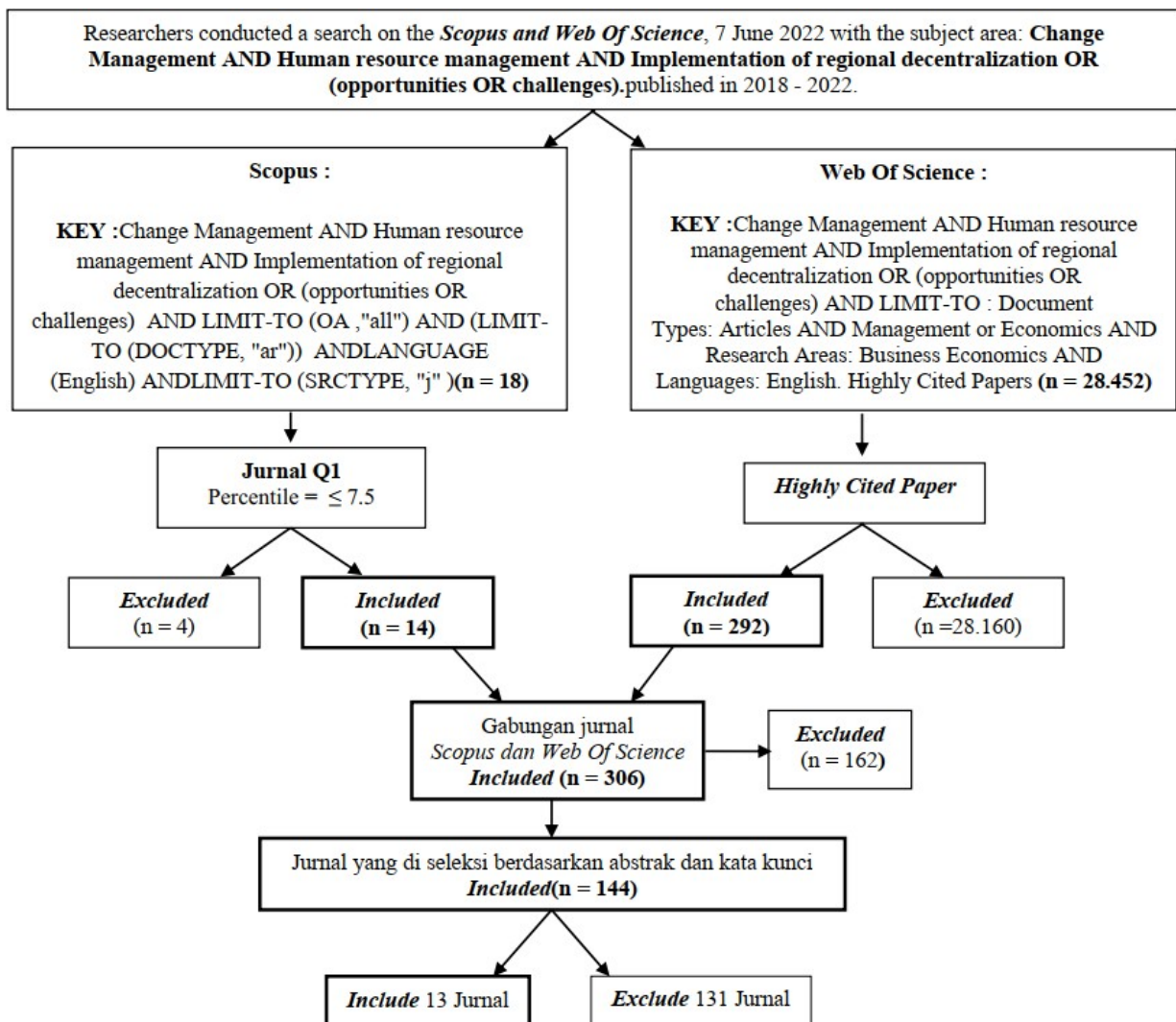
The researcher conducted a systematic review of the literature to examine what is currently known about change management and human resources. The search was conducted by accessing the two databases Web of Science and Scopus and filtering journals with the keywords "Change Management AND Human Resource Management AND Implementation of Regional Decentralization OR Opportunities OR Challenges." During the first screening (include and exclude), there were 28,452 journals in WoS and 18 journals in Scopus with Q1 grouping for Scopus, while for WoS it was grouped in Highly Cited Paper, so that the number of includes became 292 journals, so that the total was 306 journals. In the next screening stage, there were 144 journals that had been included based on the relationship in the abstract and title, until it ended up with 13 journals after conducting a full review that the author thought were most related to the research plan being carried out. There are interesting findings to be described in this article while searching for journals with these keywords.

## **3. RESULT**

### **a. Descriptive Research Results**

The articles that were scanned were published in the period 2018–2022. There is a significant difference between the Web of Science and Scopus databases, where WoS has more journals than Scopus, even though the authors use the same keywords, and there are also many journals that discuss outside the context of the title and keywords. Of course, this is an interesting

finding. The systematic literature review protocol can be seen in Figure 1, and the findings of the journal review have been presented in Table 1.



A total of 13 articles were finally cited in this study

**Figure 1.** SLR protocol

**Table 1.** Review Results

Author Name & Year	Title	Data Collection	Findings
(Aguinis & Solarino, 2019)	Transparency and replicability in qualitative research: The case of interviews with elite informants	Using interviews with elite informants as a case study to illustrate the need to broaden the discussion on transparency and replicability.	The results of this article have several implications for improving the transparency of qualitative research in the future. Increased replicability is likely to lead to improved quality as more transparent manuscripts allow for more reliable assessment of the study's contribution to theory and practice, particularly regarding managerial practice. Increased transparency means that if organizations implement policies and actions based on the detailed and open information available in the published research, they are more likely to produce results consistent with those reported in the article.
(Docherty et al., 2018)	The governance of smart mobility	Establish governance modes and methods that can be used to steer the transition and, through four thematic cases, explore how current mobility governance challenges will change.	The transition to a future with smarter mobility will have a significant impact on the role of mobility in organizations. Transition is a process that will require continuous adaptation, but it is one where governments will continue to have significant agency. As different countries and cities have very different starting points in terms of transport systems, goals, and modes of governance, one can anticipate a pluralistic approach to the transition. Maintaining a strong regulatory posture will be difficult, if not impossible, in many contexts. State power in the transport domain is weak in many places, especially in North American cities. At a time when governments around the world are seeking to shrink states and reduce administrative costs, it is difficult to be optimistic that governments will take the reins to regulate smart transitions.
(Grillitsch et al., 2019).	Innovation policy for system-wide transformation: The case of strategic innovation programmes (SIPs) in Sweden	Interviews, documentaries, and digital materials published by SIPs through various channels, such as websites and press releases, include information materials provided by Vinnova and by the SIPs program office.	Theoretical explanations and empirical evidence found in the literature on socio-technical system transitions and innovation systems are used to support an analytical approach that identifies different observable issues that might be expected. There is a dearth of ability to link innovation initiatives in the public and commercial sectors and between academia and business. A fundamental reason for this is "institutional mismatch," which includes the different timeframes of the players and the outcome expectations of separate groups. Since sometimes solving one particular

			<p>transformative challenge can also have a positive impact on others, coordination of efforts to address specific transformational issues is essential.</p> <p>Initiatives for institutional reform require the assistance of Vinnova's leadership in cooperation with relevant state agencies and other regulatory bodies (e.g., the Swedish Energy Agency or the body responsible for public procurement legislation). The SIPs investigated showed a relatively low level of involvement by companies and industry players, as well as a lack of discussion on issues such as consumer attitudes and social acceptance of emerging technologies. In addition, this essay provides methodical techniques and a robust conceptual framework for assessing interdependencies across different transformation failures. Different actors in socio-technical systems theoretically generate and replicate dominant patterns of production and consumption.</p>
(Pangbourne et al., 2020)	<p>Questioning mobility as a service: Unanticipated implications for society and governance</p>	<p>Combining analysis with a high-level case study of Whim deployment and narrative synthesis using relevant material from the literature review Secondary data is drawn from documents and websites of MaaS actors.</p> <p>The document analysis uses a traditional understanding of the art of rhetoric overlaid onto a discourse analysis that skeptically interrogates the validity of key persuasive claims made by pro-MaaS actors.</p>	<p>In light of technological advances in the mobility industry, lessons learned may be applicable to broader efforts to study policy. While it seems inconceivable that the poor could obtain assistance through subsidies in MaaS systems, this requires significant public sector involvement if they are to prevent increased social isolation due to transport. The promise of freedom fails to recognize that the current problems with traffic congestion, urban air pollution, noise, and greenhouse gas emissions are emergent phenomena on a large scale. As a result, these broader practices have a highly detrimental effect on people now and in the years to come. Even if MaaS can be made to encourage more sustainable behavior, it needs to be made from the bottom up, as the bundling process will hide the true cost of individual journeys.</p>
(Rodríguez-Pose, 2018)	<p>The revenge of the places that don't matter (and what to do about it)</p>	<p>Analyze the literature and documentation published by each case study country by establishing governance modes and methods.</p>	<p>Across Europe, welfare policies are not only socially but also territorially progressive. Inadequate opportunities and a sense of neglect have created conditions of flux in places left behind and in decline. The populist insurgency is building along territorial fault lines and will especially impact those regions that push it forward. Less economic stability and more</p>

			<p>ineffective administration and policies are likely to result from rising populism. It is dangerous to place bets on big cities, but doing nothing is not an option. There are no rules that boost the vibrancy of big cities.</p> <p>Maintaining social and welfare policies can leave residents and regions permanently dependent, potentially stifling economic growth and increasing social and political tensions. The most practical and feasible alternative is to implement development strategies in underdeveloped and disadvantaged areas. This means better policies, not more policies. Rebellions emerge from unexpected places, in waves of political populism with strong territorial underpinnings as opposed to social ones. As economic dynamism has been advised to rely more on agglomeration economies, many of these "insignificant locations" have rebelled against the status quo due to poor development prospects. To be effective, place-sensitive development policies should avoid the welfare, income support, and large investment projects of previous development plans and instead concentrate on maximizing unrealized potential.</p>
<p>(Schot &amp; Steinmueller, 2018)</p>	<p>Three frames for innovation policy: R&amp;D, systems of innovation and transformative change.</p>	<p>Experimentation in practice with science, technology, and innovation policy frames that emphasize socio-technical system change Three framings related to science and technology policy can be described, two of which are available and systematically used in policy discourse and action.</p>	<p>Assuming that inventions would become reality through R&amp;D implemented by the private sector, a consensus developed in the 1950s and 1960s that the state could and should take an active role in subsidizing scientific research. Each includes a model of innovation that outlines responsibilities and potential actions to achieve goals. Discussions of contemporary science, technology, and innovation policy must prioritize research, experimentation, and reflection. Policymakers' definitions of mission-led and mission-funded research have been accepted by a number of countries, including the US, France, and the European Union. This framework accepts that adverse effects can occur, but they are attributed to gaps in scientific understanding that can be filled by more studies. For commercialization and diffusion to occur, countries must offer long-term patient financing. A competitiveness agenda based on commercial excellence rather than national prestige or military might complement national innovation system strategies. A Frame</p>



			2 viewpoint would emphasize system learning rather than supporting pre-competitive R&D. In their current form, innovation programs can drive economic expansion but often make inequality worse.
(Tambe et al., 2019)	Artificial intelligence in human resources management: Challenges and A path forward	Identify four challenges. in using data science techniques for HR tasks: the complexity of HR phenomena, the constraints caused by small data sets, and accountability. HR phenomena, the constraints caused by small data sets, and accountability related to fairness and other ethical and legal constraints, and the possibility of adverse employee reactions to management decisions through data-driven algorithms. adverse employee reactions to management decisions through data-driven algorithms	<p>There is a substantial gap between the expectations and reality of artificial intelligence in human resource management (HRM). The scope of possible performance indicators is broad and difficult to observe and measure precisely. Causal reasoning focuses our attention on relevant characteristics and behaviors, reduces data management costs, and meets the requirements of fairness and clarity. Algorithm designers should channel criticism and politics through an AI board that includes widely respected representatives from all stakeholders. Google's board lasted only a week due to controversy surrounding one of its members. Managers may want to maintain control over outcomes and, in turn, over their subordinates. To maintain the integrity of decision-making, human judgment must be exercised consistently and according to standardized rules. Formal channels for handling high-stakes decisions resulting from AI will help with the acceptability of these decisions. The most challenging HR task to tackle with data science techniques is likely to be recruitment.</p> <p>A good place to start might be with natural language processing analyses of data such as that generated by open-ended questions in employee surveys. Having an AI board "into the cloud" could be one way to allow clients to monitor vendor handling of their data. HR leaders need to understand and facilitate the data generation and machine learning stages of the AI lifecycle, and new competencies may be required. The use of data analytics will help HR integrate more closely with other parts of the business, especially finance and operations. There is a risk that if HR leaders do not utilize the possibilities of AI, some other function in the business will take control for them.</p>
(Urbinati et al., 2020)	The role of digital technologies in open innovation processes:	The first set of questions should be developed after data collection and evaluation. The	A number of case studies show that in order to promote their open innovation processes, businesses must implement management changes at the organizational and process levels.

	<p>an exploratory multiple case study analysis</p>	<p>final interview process was sent to senior managers in the sample of companies responsible for innovation in order to obtain complete responses to all questions. Twelve innovation managers were the subject of at least two interviews. To offer some initial key information on the sample companies, 36 hours of interviews were conducted, with each interview lasting an average of one and a half hours. Additional resources included company websites, reports, and project papers. The report concludes with a brief assessment of each company's profile, including data on their revenue, open-entry innovation activities, R&amp;D expenditure, workforce, industrial operations, and use of digital technologies.</p>	<p>Companies can handle open innovation procedures and open-door innovation activities differently thanks to the management of R&amp;D units and activities. Empirical research, in particular, shows how sample companies were reformed in response to the use of digital technologies in their open innovation processes. The establishment of an IoT department for the development of a digital infrastructure that collects all the data generated by machine interactions was made possible by the exploratory discoveries collected and mapped to the dimensions of the theoretical framework at Company C. The use of digital technologies at Company D necessitated the restructuring of the R&amp;D department into the most focused "Digital Entity".</p> <p>The task of developing new methodological approaches to innovation activities fell to the newly appointed Head of Digital Entity (from the Italian branch). Knowledge management and the use of digital technologies at Company F are closely intertwined. Big data in particular is used to assist Company F's SMI system. The financial services sector alone has at least 4,000 innovative digital solutions. This sharing practice will be further extended to other sectors, including energy, transport, and agriculture. A business school called Company G is managing the transition from conventional to online learning environments by creating a multi-year "Flex EMBA" initiative. Company H's "Digital Factory" division was established in 2014 with the aim of overseeing the digitalization of the company's industrial processes. Similar to Company B, Company G approved a budget of more than 10% of annual revenue for investment in new digital technologies and digital learning. Company I has had a "Digital Direction" section that reports directly to the CEO since January 2014. The company's digital transformation aims to address two main areas: (i) digitalization activities aimed at end customers (marketing and commercialization), and (ii) digitalization of sales operations managed by sales agents.</p>
<p>(Wang et al., 2018)</p>	<p>Government's green grip: Multifaceted state</p>	<p>This article develops a longitudinal dataset of</p>	<p>Administrative hierarchical distance has an inverted U-shaped influence on environmental initiatives, according to</p>

	<p>influence on corporate environmental actions in China</p>	<p>companies listed in China in the period between 2008 and 2012. It then excluded companies that received the "Special Treatment" (ST) tag from the stock exchange and conducted 56 in-depth interviews over 60 hours of conversation with key informants in 2013 and 2014. Interviewees included representatives from 15 major Chinese companies, three different levels of government, and two environmental NGOs.</p>	<p>our research. At first, more extensive measures were taken as a result of the increased pressure caused by the involvement of multiple government entities. However, the growing impact of decentralization eventually outweighed this accumulation effect. Significant environmental issues such as increasing natural resource depletion, environmental degradation, and greenhouse gas emissions have been brought about by the growing importance of emerging economies. Since 2015, the Chinese government has restricted independent and loose monitoring by lower levels of government by returning the authority to oversee local environmental issues to the central state level. Interviewees explained that Chinese businesses believe they have limited control over the central government's environmental policies.</p>
<p>(Wedin, 2021)</p>	<p>Getting adaptation right—challenges and ethical issues facing planners adapting to sea level rise in southern Sweden</p>	<p>This study takes a bottom-up ethical approach, departing from practical issues rather than normative theories when investigating the ethical dimensions of public policy. Data for this study was collected through eight semi-structured interviews conducted in person in five municipalities, two district administrative boards, and one local heritage organization. Interviewees were selected from a group of 12 organizations that agreed to take part in Sea-rims, a five-year research program focusing on sustainable and ethical adaptation to mean sea level rise. Interviews lasted an average of 80 minutes and were recorded and transcribed. The material was analyzed using NVivo qualitative and mixed-methods data analysis software.</p>	<p>The study deepened understanding of the situation, often resulting in theoretical insights. The study also shows that the lack of expertise and human resources, lack of integration and coordination, extremely long timeframes, inadequate or insufficient responsibility frameworks for implementation and financing, and competing objectives present challenges for planners working with adaptation in southern Sweden. The ethical issues underlying these difficulties have been examined, and it has been found that adapting to SLR actualizes ethical issues on three basic levels: input-oriented, process-oriented, and outcome-oriented ethical considerations. Interviewees argued that extending this responsibility for an additional 20–30 years would persuade municipalities to re-evaluate issuing permits to sites prone to future erosion and flooding. The SLR results suggest that governments that have the ability to address climate change should be responsible for taking action because of the existing legal system, which places excessive responsibility on individuals. Focusing on focal points in strategy and adaptation makes sense from an ethical and practical point of view. In line with the structure of the new law, many of these issues can be addressed at the national level. In general, "soft value" is reserved for economic development but also for aesthetic and cultural value.</p>

<p>(Wendling et al., 2018)</p>	<p>Benchmarking nature-based solution and smart city assessment schemes against the sustainable development goal indicator framework</p>	<p>A global indicator framework looking at 76 city indicators and 101 project indicators for SDG sub-goals 11, SDG 1.4, and SDG 6.3 was critically examined in relation to the MAES, EKLIPSE, and CITY key impact assessment frameworks. Regardless of the level of methodological progress or the amount of data available, the SDG11+ indicators and goals were considered benchmarks or reference points for comparison. The MAES, EKLIPSE, and CITY key indicator frameworks were further critically examined and statistically compared with the suggested indicators to assess the success of NBS for climate change adaptation, mitigation, and co-benefits. In the CITYkeys smart city indicator framework.</p>	<p>To solve the food-water-energy-climate nexus, NBS can provide urban areas with ways to optimally manage natural resources for the provision of ecosystem services. While instructive, the combined score obtained from comparing the MAES, EKLIPSE, and CITYkeys frameworks against the SDG11 goal "Sustainable cities and communities +" is not sufficient to demonstrate how the three evaluation frameworks can function together effectively. Ecological diversity is essential for promoting ecosystem regeneration and recovery after significant disturbance. The complex nature of social-ecological interactions makes it difficult to integrate ecosystem services-based goals into city planning and policy. The potential of NBS and blue-green infrastructure to supply important ecosystem services is demonstrated by their increasing use in urban environments.</p> <p>To map and value ecosystem services in the SDGs, defined objectives and methodologies must be included. Trials in more than 20 cities, conducted by project consortiums, industry stakeholders, and academic networks, have validated the CITYkeys indicator system. In a comprehensive examination of five European cities, the availability of 116 required quantitative city statistics averaged 72%. The 101 project indicators and qualitative city indicators can all be used as they are based on simple Likert scale evaluations (Huovila et al., 2017). To further clarify sustainable urban development indicators and related techniques and standards, MAES, EKLIPSE, and CITYkeys can be used.</p> <p>The CityKeys framework is particularly suitable for monitoring and evaluating the transferability of NBS. The CITYkeys indicator framework addresses significant social issues related to urban density and the EU's 20/20/20 energy and climate goals, although it is not designed primarily to monitor NBS performance. Amidst a complex hierarchy of statutory duties, regulations, and other stakeholders, cities face a number of difficulties. Operational efficiency can be maximized by carefully selecting NBS evaluation methods that closely correlate with one or more of the SDG11+ goals</p>
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			"Sustainable cities and communities". The study presented here shows that social and governance factors of urban sustainability relate well to the CITYkeys indicator framework in particular.
(Choi & Luo, 2019)	Data quality challenges for sustainable fashion supply chain operations in emerging markets: Roles of blockchain, government sponsors and environment taxes.	Survey-based quantitative methods and two case studies focusing on analytical investigations into data quality issues frequently encountered in emerging markets	<p>The commonly known problem of poor data quality exists in emerging markets, as does the importance of having sustainable fashion operations in these markets. We have explored how blockchain can be used to address this issue. A poorer level of data quality will lead to a decrease in social welfare and supply chain profits under a decentralized supply chain arrangement. However, there are cases where it can improve social welfare but lead to a loss of profits. This creates a dilemma.</p> <p>To achieve a "win-win," it suggests mathematically that the government can provide sponsorship to fashion retailers for blockchain implementation. The government may also consider implementing an environmental tax exemption scheme. The marginal negative impact of poorer data quality on social welfare is greater under a centralized supply chain than a decentralized supply chain. Fashion retailers may consider using blockchain for more products, which will reduce the fixed cost per product. Direct government sponsorship, as well as environmental tax exemption schemes, can help.</p> <p>The marginal negative impact brought by poor data quality on social welfare will be smaller for the centralized case if the environmental costs associated with the remaining products are small enough. Data quality issues mainly affect the volatility of demand but can also affect the average estimated demand.</p>
(D'Adamo et al., 2020)	The post COVID-19 green recovery in practice: Assessing the profitability of a policy proposal on residential photovoltaic plants.	Discounted cash flow (DCF) analysis is often used in academic and professional environments to assess the viability of green recovery, but for this study, the model was altered in response to	A survey on solar policy shows that the lack of subsidies is an obstacle to the installation of solar power plants (Setyawati, 2020). In this way, new energy policy incentives can be considered as supporting the ambitious program of the new European Green Deal. A tax deduction of 110% for 5 years can reduce or completely prevent the cost of energy bills and generate an additional 17–38 € (or 9–29 €) of profit every 2

		<p>modifications made by the policy advice. To ensure that the findings are reproducible, all simulations were conducted using an Excel application. The percentage of self-consumed energy, ranging from 0% (all energy sold) to 100%, was taken into account when evaluating each scenario. For PV installations, a unitary investment cost of 1900 €/kW was estimated, and we also used a unitary tax deduction of 110 percent for the entire investment in the PV2400 scenario. The PV scenario was set at 20 years, and the opportunity cost of capital was calculated to be 5 percent.</p>	<p>months for 20 years in a PV2400 (or PV1600) scenario. Bonuses can also be applied to plants larger than 100 kW when realized without speculative effects and only oriented towards maximizing green production. In times of economic crisis, such sustainable measures are desirable. The adoption of bonuses requires legislative changes in which this additional policy tool is made compatible with the tax reductions granted by the Revival Decree.</p> <p>This article underlines how subsidies should not be seen as a perpetual favor but rather as a positive externality that reduces emission levels, translating environmental improvements into economic gains. The proposed policy can be replicated in other regions, and the values presented in this work can serve as a reference point. From an economic perspective, tax reductions reduce the impact of investment costs, while bonuses encourage an increase in the percentage of self-generated and consumed energy. In addition, eco-bonuses support the green transition of the electricity sector through the development of small local power plants.</p>
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**Source:** Research Results

**Figure 2.** Map of Literature Findings in Articles



**Source:** Research Results

Figure 2 explains that change management is in all keywords. From the findings of journal articles, it is evident that every article on change management contains topics related to HRM, regional decentralization, and public policy that have been described in Table 1 above. From the findings of the article, change management has a great influence on all forms of change in the organization, especially in the keywords of this article topic (regional decentralization, HRM, and public policy), which is also supported by Errida & Lotfi (2021; J. Phillips & Klein, 2023). Change management, of course, also has opportunities, so management strategies are needed to be used to overcome the negative impacts from both internal and external sources, especially after the organization's policies are implemented (Albach et al., 2015; Kulova, 2021). Dunphy & Stace (1993) identified four types of change based on their size: refinement, incremental adjustment,

modular transformation, and corporate transformation. Refinement involves the alignment of organizational strategies, processes, people, and structures, aiming to foster HR alignment with current strategies, build effective relationships across mechanisms, and improve policy fidelity (Dawson, 2005; Nelson, 2003). Therefore, organizations must make adjustments to maintain and even improve their competitiveness in a climate where competition is intensifying (Morsing, 1997).

#### **4. DISCUSSION**

##### **a. Change management and organizational transformation**

Organizational transformation is an absolute must in the world of business and government, and it is a culture shock for institutions that resist change. When evolution is needed, an institution digs in and clings to inefficient systems and outdated technology, which weakens their competitiveness, slows down their market entry opportunities, and can cause internal losses. (MacLachlan et al., 2018) The end result is that organizations, both government and for-profit, will remain stagnant. As Beer (1997) states, organizations must engage in sustainable human resource management as a result of environmental changes. A flat and open organization has replaced the hierarchical and bureaucratic organization. In addition, organizations must improve their competencies to remain competitive (Briody et al., 2012; Kulvinskien & Eimen, 2009). According to this statement, transformation, also known as organizational change, is the foundation for improving the quality of human resources in the face of waves of change. Improving the quality of organizations and enabling a more accurate evaluation of the contribution of theoretical and practical studies in organizations, especially regarding change management and organizational transformation, will produce the expected findings (Bahri et al., 2024).

(Aguinis & Solarino, 2019; Wedin, 2021); this is further fuelled by the lack of internal alignment and immaturity among employees who are not empowered to make decisions. Globalization, competition, and developments in knowledge, know-how, and technology have changed human behavior, impacting human interactions and fulfilling their wants and needs. The implication is that every business organization must adapt to environmental changes through organizational change and increase the capacity of human resources as important organizational assets (Madya, 2018; Nursiani, 2020; Setiono, 2019). In this situation, organizations must be able



to quickly respond to changes, which is one of the main components of successful business transformation in both profit and non-profit environments. According to Endrejat et al. (2021) that change is needed in organizations today.

According to several papers reviewed, the model did not survive in the era of technology adoption and disruption. Transitioning to a future with smarter management, mobility, and organizational transformation will have a significant impact on organizational mobility for members (Docherty et al., 2018). For organizations managing any form of policy on a decentralized basis today, implementers must be fast, flexible, and autonomous to make great decisions, focusing on alignment and championing decentralization (Aas, 1997; Keen, 1994). The challenge is that behavioral change is required for organizations that want to undergo transformation (Novak et al., 2020). The results of the review paper found that organizational performance becomes simpler, more intuitive, and more relevant when it meets the expectations of all stakeholders in an organization. Change is not only about embracing the new but also having to let go of some old cultures (By, 2005; Iles & Sutherland, 2001).

#### **b. Decentralisation Policy**

Decentralization policy has created a new paradigm that has begun to emerge, with some papers appearing more accountable and democratic than before. Institutions are becoming more responsive to the aspirations of local communities and stakeholders and are beginning to engage directly in clarifying and following up on individual complaints and demands by their local constituents (Jenkins et al., 2018). In addition, open public debate has begun to develop, allowing the authority under decentralization to exercise control over the performance of senior officials while becoming more critical of policies made by both sectors of government that are not transparent (Kristiansen & Santoso, 2006). This change is evidenced by the increasing level and frequency of debate on policies and laws in Indonesia. (Urbinati et al., 2020) It is difficult to link decentralized systems in terms of change management between the public and private sectors due to institutional mismatches, which include the diverse frameworks of each organization and the expected outcomes of each different group. Coordinating efforts to solve specific change problems is essential, given that solving one change management problem sometimes has a beneficial effect on others (Grillitsch et al., 2019). Therefore, the need for managerial professionals for

decentralization implementers consists of public policy formulators, planners, and supervisors (Cahyani & Bahri, 2022; Tambunan et al., 2024)

. At the same time, the most significant proportion of change management should be under the authority of decision-makers (Colman, 2020). Levels below the center need to be given greater authority over planning in the face of change management (Wendling et al., 2018). This division of management functions has the potential to form the basis of unity and strength so as to provide the greatest possible scope for the harmonious implementation of regional decentralization (Pangbourne et al., 2020; Rodriguez-Pose, 2018). Theoretical and empirical evidence found in the literature on change management systems and innovation systems is used to support an analytical approach that identifies issues that can be expected (Gonçalves et al., 2022).

### **c. Human Resource Management Change**

Change management in the field of HR is based on changing mindsets and archetypes of human behavior. Due to exponential increases in productivity, time efficiency, and cost reduction, the development of Industry 4.0 is a top priority today (Bonilla et al., 2022; da Silva et al., 2022; J. R. Phillips, 1983; Piwowar-SULE, 2020). Today, the management and strategic planning processes of organizations are much more closely linked to the role of human resource management (Hecklau et al., 2016). The authors argue that the human resource management function must still work well with the operations function if it is to succeed. While Mokhuty et al. (2022) argue that the development of Industry 4.0 is very slow, human resources continue to be at the core of Industry 4.0, and the government's main prerogative in promoting social responsibility through sustainable development goals is the responsibility component of sustainable development. The findings from the review of several journals lead to the conclusion that the operating environment of organizations is dynamic and becoming much more varied and complicated. The external environment has a significant impact on organizational performance, and policymakers continue to face challenges that did not exist in the past (Adeola, 2016; Jack & Punch, 2001). An organization's ability to adopt or adapt strategies to account for or benefit from these developments will determine its success and the likelihood of its continued existence. Poerwanto et al. (2013) argue that shifts in internal and external environments provide new problems for human resource management. These difficulties are the result of technological

advances, increased personnel diversity, changes in legislation, changes in organizational structure, and globalization (Nordhaus, 2019).

#### **d. Human Resource Management Opportunities and Challenges in the 4.0 Era**

All organizations, both private industry and government organizations, are impacted by the ongoing digital revolution. The government must support "meta-governance" as an "organization" given the openness of continuous transformation, the creation of new venues for the articulation and negotiation of problem viewpoints from many players, and the development of creativity and approaches to dealing with problems (Gjaltema et al., 2020). Everyone must be able to adapt in this digital era, even government entities. The result is a shift in patterns from previous models to new ones. Every organization must be able to compete, take advantage of opportunities, and meet needs. The main capital or asset of an organization is its human resources (Olsen & Tomlin, 2020). The importance of human resources to a business is not only measured by labor productivity but also by the caliber of its output. Indeed, the stronger human resources are, the higher the quality of human resources, and the competitiveness in improving quality will also be higher. With coordination in the form of cooperation in creating a framework of activities by anticipating and responding to the activities of others, government executives can act as well-coordinated agents of change who are reliable, impartial, and willing to open investment opportunities for anyone. Innovative sociotechnical "assemblies" must be exploratory and creative to be effective in open transformation environments (Kuhlmann & Rip, 2018). Depending on the situation, such a move might work for both conventional scientific institutions and somewhat autonomous conservation organizations. Therefore, organizations as well as human resource executives should work together to build competence in "navigating" diagnostic and prospective studies (strategic intelligence), as well as improving the means for consultation with other stakeholders by moderating forms of negotiation and the ability to package issues so that they do not drag on.

## **5. CONCLUSION**

This research highlights the importance of change management and organizational transformation in the business and government sectors, especially in the era of globalization, competition, and technology. Organizational transformation involves embracing new ideas and

practices, letting go of traditional cultural elements, and cultivating agility in response to environmental changes. This results in increased competitiveness, market relevance, and sustainable success. Human resource management is also critical as individuals gain proficiency and adaptability. Decentralization policies facilitate the involvement of local communities in decision-making, leading to higher accountability and transparency in governance structures. The research also highlights the transformation of human resource management in the context of Industry 4.0, which emphasizes the integration of human resource management with strategic planning to respond effectively to technological advancements and evolving regulatory frameworks. Human resource management is essential for labor adaptation and makes a valuable contribution in a dynamic context. Understanding the benefits and constraints of human resource management is essential for governments and companies to achieve sustainable success.

## **6. RESEARCH IMPLICATIONS**

The results of the study, the researcher recommends the need for private and government organizations to demonstrate readiness to embrace change, allocate resources for human resource development, and implement smart and adaptable management strategies to achieve success in an era characterized by continuous transformation. In this context, the establishment of change management, decentralization, and efficient human resource management will be the fundamental pillars to guarantee the success and survival of companies in the long run.

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