

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Technology has become an integral part of our daily lives, revolutionizing the way businesses operate and transforming industry-based economies into knowledge-based societies. Governments worldwide are embracing digital transformation to improve public service delivery, interaction between citizens and their governments, and achieve positive effects at the individual and governmental levels. E-management has contributed to employee satisfaction and provided greater support to the administration by facilitating access to personal data, providing basic services, and managing individuals more effectively. Digital human resources management has the potential to change the function of human resources itself in organizations and provide innovative solutions continuously.

Technology has played a crucial role in the growth of several industries, including banking, education, entertainment, and agriculture. It has also led to the restructuring of many businesses. The impact of technology is immeasurable as it continues to transform the way we conduct everything we do (L Ramesh,2017).

Additionally, Technology has become an integral part of our daily lives, revolutionizing the way businesses operate and transforming industry-based economies into knowledge-based societies. Governments worldwide are embracing



ansformation to improve public service delivery, interaction between and their governments, and achieve positive effects at the individual and

governmental levels. E-management has contributed to employee satisfaction and provided greater support to the administration by facilitating access to personal data, providing basic services, and managing individuals more effectively. Digital human resources management has the potential to change the function of human resources itself in organizations and provide innovative solutions continuously.

Governments worldwide are embracing digital transformation to improve public service delivery, interaction between citizens and their governments, and achieve positive effects at the individual and governmental levels (Mergel et al, 2019). Using electronic management is a great way to improve performance. It can help boost the effectiveness and productivity of employees, develop their skills, and reduce their administrative workload.

Electronic methods are efficient, effective, and fast, and can help solve traditional management problems. (Alqudah and Muradkhanli,2021).

According to Stone et al (2019), New digital technologies can enhance communication and provide better opportunities for employees to understand performance feedback. One way to do this is by using high-definition cloud-based virtual conferencing tools for performance management meetings between supervisors and subordinates, even when they're in different locations.

Achieving their goals without human resources improves the job performance of employees, whereas Career performance is the result of real investment by the organization in capabilities, skills, and knowledge.



e level of performance of employees depends on what the organization offer. Training courses, workshops, symposia, and numerous actions that

help to improve performance in the staff of the organization. The better the performance of the staff, the closer the organization is to an investigation. This allows for a clearer understanding of the feedback. Another way is through the use of internal social platforms, like social media, to collect performance data and provide more frequent feedback and recognition. Technological advancements and the digital revolution have made it necessary for countries to keep pace with this movement, and Libya is no exception. As a result, many governmental and commercial banks have launched electronic services that help facilitate the procedures of workers and citizens alike (Lsac and Drigă,2014) note the banking industry is going through significant changes due to globalization, competition, innovation, and the evolving needs of customers. With the emergence of a knowledge-based economy and society, the progress in information and communication technology (ICT) has led to significant transformations in banking services over recent years. Nevertheless, it is yet to be determined whether these digital advancements have contributed to enhancing job performance for employees in the banking sector.

The development and operationalization of electronic management and human resources are essential to the achievement of the Organization's objectives, whatever its activity, and thus to improve the quality of the work .Improve the performance of the organization, continuously improve the organization's electronic management processes and development of the functioning of the

ion's human resources, conduct research to provide information on an



urgent basis that will help to identify and address recurring administrative problems and obstacles in improving the functioning of the Organization.

Information technology has invaded various aspects of the administrative work of workers' organizations, and we do not find an organization .Without databases for different administrative functions, Databases have become essential to the Organization .And without it, the organization cannot keep working, and with the advent of the Internet and the evolution of technology ,Information and modern communication methods, human resources functions, marketing, and accounting, And the different processes in electronics and the organizations became completely dependent on me, Technology in carrying out all their daily work, as there is an electronic link between the organization and its branches, Between the organization and government services, this has a positive impact on the organization's work. The digital transformation of Human Resource Management Systems cess help users to perform procedures, financial payments, and other services and to make use of marginal technologies to enhance and develop online banking services, as well as to provide easy access to user accounts and customers.

After Covid19 recent pandemic emerged, the phenomenon of digital banking services was further accelerated to become one of the main everyday habits of companies, customer's individuals, and the world at large, and was demonstrated by the creation of a digital platform for each bank. In recent years, the banking sector in Libya has encountered several challenges. Libyan commercial banks, both



d private, face significant obstacles in adopting E-Banking. These barriers tegorized as electronic, regulatory, and cultural (ALNaas,2022).

The implementation of digital technologies in the banking sector can enhance their services, leading to improved business performance and a competitive edge (Næss-Schmidt et al, cited in Mathapati, 2021). This study aims to examine the influence of the digital transformation of Human Resource Management Systems and their Impact on job performance within the Libyan banking sector, with particular.

For studying the digital transformation of human resources management systems and their Impact on Job performance, he has chosen Libya's banking sector, as represented by the banks, A perfect model for studying and keeping pace with changes in the environment because they contribute to the changes in the environment. Basically, in the service of society and the promotion of civilization, the researcher selected his study community from the Libyan banking sector as a case study of the Wahda Bank.

The digital transformation of Human Resource Management Systems has become a pivotal feature in contemporary business. Understanding the management practices associated with information technology can make you an instant commodity for innovative companies. In today's world, it is essential to manage the storage, transmission, and analysis of information. Studying the digital transformation of Human Resource Management systems allows you to understand the demands put on employees and the practical ethical challenges that may arise in the future (Ehow,2012).



There are many problems facing the administrative tasks in government is in the Arab world in general and Libya in particular, when they adopt

the traditional methods in task management. The digital transformation of Human Resource Management Systems is one of the systems that can find the solutions to the administrative problems in terms of collecting, processing, classification, and archiving the information and data that are needed by the decision makers for doing all administrative functions in terms of Planning, organizing, directing, monitoring, and all fields of work in the organization.

The public organizations showed a major shift in information systems in terms of using computers, databases, and networks, in addition as well as the technological means, which contributed to the existence of information systems that depend mainly on using computers. Most of administrative problems in – governmental organizations, including the of WAHDA bank Benghazi Branch, is in fact informatics problems were not previously existed when the papers and records are the only way to identify and telemetric, but today as a result of the emergence of information systems, it has become the dealing with these quantities of leaves form of an old tradition, and present the complexity of the administrative work and the senseless waste of precious time which should exploited in order and data communications, and decision – making at full speed, the success of the administration itself is certainly depends on the good use of information systems in the administrative work.

To another. Hence, here in this study, we would like to examine the to improve HR Systems by the Libyan government and local authorities and to

the influence of To Solutions on administrative problems in terms of  
t, processing, classification, and archiving of data and information needed



by decision makers for administrative functions. Also, the digital transformation of Human Resource Management Systems and their Impact on job Quality performance. (Aarev,2008)"The study well literature has well increased our understanding of specific aspects of digital transformation and aimed to identify the reality of the application of electronic human resources management in the banking sector to determine the impact of the application of electronic human resources management on the quality of working life. (Gregory,2019).

Among the theories, the socio-technical theory is the researcher's choice for application to this study because it is the appropriate theory for combining the human element with technology. In the same study. That explains that technology alone is not enough, but rather it must interact effectively with humans to achieve the result.

The choice of the research title (The Digital Transformation of Human Resource Management Systems and Their Impact on Job Performance) was motivated by several considerations: The rapid advancement of digital technologies has transformed the way organizations manage their human resources, making digital HRM systems a crucial factor for enhancing efficiency and employee performance. Therefore, it is crucial to understand how these changes influence job performance and provide practical insights for decision-makers. The banking sector in Libya is currently undertaking a significant transition, where the integration of digital tools in HRM remains relatively underexplored compared to worldwide



This creates an opportunity to provide valuable insights into how digital transformation can contribute to improving job performance in this vital sector. In addition, the study covers both academic and practical gaps. From an academic perspective, there is a shortage of empirical research in the Libyan context linking digital HRM transformation with job performance. From a practical perspective, the findings can guide bank managers and policymakers in designing effective strategies. Therefore, this research is not only timely and relevant but also contributes to advancing academic knowledge and providing practical recommendations for organizations undergoing digital transformation.

## 1.2 Research Questions

The organizations of many have problems with their development and success, which are important. Problems are the use of paperwork and the resulting high costs, and delays in the processing of transactions with many errors that reduce the quality of performance in the services and products provided, prevent information from being generated between different departments and administrative levels, and between employees themselves within the Organization, as these problems increase the cost of production and hinder the development of the Organizations, since the use Of traditional human resource management makes the level of services provided by the Organization inadequate to its goals, while the application of management is considered to be a matter of great efficiency.

Electronic human resources management is a competitive feature of the tion. The unit is one of the first Libyan banks to operate the administration departments, e.g., human resources management, marketing, accounting,



and this is a competitive advantage of the bank. And here, the problem of the study that is trying to solve in this study is the digitization of the electronic human resource management system and its impact on the functionality

The central issue that this study seeks to address is whether the impact of digital transformation is associated with the job performance of workers in the banking sector.

This inquiry stems from the challenges that digital transformation initiatives face, particularly in the domain of HRM, which is a persistent obstacle to the success of such initiatives.

The following sub-questions follow from this question:

RQ1. Does the digital transformation of Human Resource Management Systems (HRMS) have a significant positive impact on employees' job performance in the Libyan banking sector?

RQ2. Does the effective implementation of digital HRMS functions (such as e-recruitment, e-performance appraisal, e-training and development, and e-communication) significantly enhance employee productivity and efficiency?

RQ3. Does the adoption of digital HRMS improve decision-making and communication processes within banks, leading to higher overall job performance?

### 1.3 Research Objectives

By examining the study problem and hypotheses, it can be said that the objectives of this study are as follows:



1. To examine the overall influence of digital transformation of Human Resource Management Systems (HRMS) on employees' job performance in the Libyan banking sector.
2. To assess how the effective implementation of digital HRMS functions, particularly employment, **e-recruitment**, e-training and development, and **e-communication**, enhances employee productivity and efficiency at Al-Wahda Bank.
3. To evaluate how the adoption of digital HRMS contributes to improved **decision-making** and communication processes within banks, ultimately leading to higher overall job performance.

#### 1.4 Benefits of the research

The importance of this study derives from the fact that it deals with organizations that are a source of skills and competencies that meet the needs of society. This can be explained in points:

1. The importance of the current study lies in the fact that it is one of the few studies that dealt with the issue of digital transformation in the Libyan banking sector.
2. The study helped to contribute to the body of knowledge on digital transformation, specifically on the impact of digital transformation on job performance for workers in the banking sector.
3. The study will help banks identify the areas where digital transformation is the greatest impact on job performance, which will contribute to the development of strategies to improve job performance and customer



satisfaction. Additionally, the study will help policymakers and regulators design policies that support digital transformation in the banking sector

4. Theoretically, it is expected that this research will be useful as a proposal for applying science in the development of the world of banking and economics, in addition to providing empirical evidence on the relationship between the variables of digital transformation and its impact on human resources.
5. The study focuses on recent administrative methods for HRM-E and their use in organizations; they are seen as a model applicable to public and private institutions.

Keeping up with the latest developments and technology, harnessing them for the benefit of our community, and trying to generalize.

## 1.5 Research Gap

Based on the above, it can be said that digital transformation in the field of human resources provides great opportunities to improve human resources management and improve processes and results, and banks can benefit from these opportunities by applying best practices and using modern digital tools and technologies. Digital technology is an effective means of improving procedures related to human resources management. It helps analyze data, simplify processes, and reduce human errors. Digital programs and applications can be used to manage various human resources.



igital transformations and the continuous evolution of modern  
gies have led to fundamental developments in the world particularly in the

area of human resources management, which has become a fertile field for many researchers in However, the Libyan Foundations continues to rely on traditional methods in its management of its human resources, which has prompted us to carry out this study, Given the global trend towards relying on information technology, and the Libyan government's move towards digitizing the provision of public services, pressure has increased on many organizations towards rapid transformation in providing their services accurately and quickly in record time.

To study the practical importance because it deals with a vital topic, which is digital transformation, as the major technological changes have imposed a major challenge on developing countries, including Libya. This study will identify the extent to which the dimensions of digital transformation of human resources affect the quality of employee performance.

## **1.6 Research structure**

### **CHAPTER 1:**

INTRODUCTION STUDY INCLUDES:

INTRODUCTION

RESEARCH BACKGROUND

FORMULATING THE PROBLEM

OBJECTIVES OF THE STUDY

IMPORTANCE OF THE STUDY

REASONS FOR CHOOSING THE SUBJECT OF STUDY

STUDY HYPOTHESES

STUDY VARIABLES



ION OF STUDY TERMINOLOGY

OF STUDY

DESIGN

**CHAPTER 2:** LITERATURE REVIEW INCLUDED ON:

THE FIRST AXIS: THE DIGITAL TRANSFORMATION OF HUMAN RESOURCE MANAGEMENT.

THE SECOND AXIS: THE JOB PERFORMANCE.

**CHAPTER 3:** STUDY PROCEDURES INCLUDED:

INTRODUCTION

INFORMATION AL WAHDA BANK.

STUDY METHODOLOGY

DESCRIPTIVE METHOD:

STUDY POPULATION

STUDY SAMPLE

STUDY TOOLS:

VERIFICATION OF THE PSYCHOMETRIC PROPERTIES OF THE SCALE:

VALIDITY

RELIABILITY

**CHAPTER 4:** INCLUDED ON

RESULT AND DISCUSSION

**CHAPTER 5:**

INCLUDED ON

CONCLUSION AND RECOMMENDATIONS

**REFERENCES – APPENDICES**



## CHAPTER 2

# LITERATURE REVIEW

### 2.1 Theoretical Foundations and Key Concepts

Today, digital transformation has become a fundamental choice for organizations across a variety of service and commercial activities. It essentially goes beyond the concept of adopting technology within individual departments. Rather, it refers to a comprehensive system that affects the organization and its operating practices, both internally and externally. The digital revolution has had a significant impact on various organizations around the world, contributing to the emergence of e-HRM, which is considered one of the most important outcomes of technological developments in our current era and has become a significant source of excellence. Therefore, all organizations worldwide, including banks, are seeking to adopt e-HRM and abandon traditional management.

#### 2.1.1 The importance of digital Transformation:

Pereira et al. (2022) discuss the increasing importance of digital transformation in recent years. Their study focuses on the use of technological tools in international business and the challenges companies face when adopting these new technologies. They aim to develop a model that measures the factors improving Portuguese business internationalization and identifies common barriers in this process. The study provides guidelines for Portuguese companies interested in international business, which could also be useful for foreign companies. The study shows that digital transformation helps maintain relationships, expand into new markets with less investment, and improve communication with customers and



partners. The study also highlights the importance of tools like e-commerce, agile tools, business intelligence, cloud solutions, and big data in international business, although the significance of 3D printing differs from previous research due to the specific industries surveyed. The findings emphasize the relevance of digitalization in business practices and internationalization. Additionally, the study identifies obstacles faced by companies when implementing technological tools internationally, aligning with previous research on challenges in digital transformation.

Gerster (2017) discusses how digital technologies are changing the way businesses operate. The author mentions that digital transformation involves using tools like analytics, cloud computing, and social media to enhance customer satisfaction and create new business opportunities. This shift significantly impacts IT. Chief Information Officers (CIOs), who oversee IT, now have increased responsibilities and are performing different tasks than before. Despite this, there is limited research on how digital transformation is affecting IT and what the future holds for IT departments. Even though modern tech companies were the first to create the digital transformation, industrial-age industries such as health, electronics, machinery, energy, and automotive are following the path of digital transformation. The transformation can create new opportunities, such as data collection and exploitation with connectivity of products, customers, companies, and systems that can make decisions autonomously (Remane, Hanelt, Nickerson,

z Kolbe, 2017). This highlights the importance of studying these topics as information becomes more widespread in businesses.



Zaoui and Souissi (2020) examine how companies are evolving with new technologies through digital transformation. They explain that researchers and experts are studying these changes to understand their impact on social practices and work environments. Their aim is to identify the best strategies to make this transformation successful and efficient. The focus is on developing a roadmap for digital transformation to guide companies through the process. They also review insights from other researchers and consultants to learn from their experiences.

Gertzen et al. (2022) explain that digital transformation (DT) represents a significant shift in how businesses operate. It involves using advanced digital technologies to create new business models, enhance operational efficiency, and improve customer experiences. DT projects utilize these technologies to fundamentally reshape how a company functions, simplifying processes such as data management and decision-making. The authors emphasize that DT projects differ from traditional IT projects because they aim to transform a company's identity and strategy, rather than merely supporting existing operations. This makes DT significantly more disruptive than regular projects.

Al-Radi also highlights the importance of digital transformation in the following ways:

1. It promotes a culture of learning and self-training in society.
2. It spreads technical knowledge, contributing to the creation of a knowledge-based society.
- . It increases learners' effectiveness and achievement by stimulating their motivation to learn.



4. It supports development by facilitating access to knowledge, enhancing capabilities, and developing skills across various fields of knowledge production. (Al-Radi, 2010, pp. 74-92).

Digital transformation brings fundamental changes to how we live, think, and act, posing many societal challenges. The profound social implications of the digital revolution have led to the restructuring of the entire fabric of everyday life. This revolution is characterized by the seamless integration of digital technology into all aspects of society, affecting how people interact, how companies operate, and how governments function. It should be noted that it has significantly improved communication and access to information, thereby promoting innovation and economic growth.

Social sustainability encompasses all strategic initiatives undertaken by organizations to enhance their ability to achieve sustainable development for their human resources and ensure their satisfaction and stability. It also involves the extent of stakeholder participation and involvement in these initiatives. Organizations aim to improve education levels in communities and reduce unemployment through job creation. Additionally, they develop specialized strategic social programs directed at communities in a way that guarantees sustainability and ensures the continuity of their objectives (Inigo & Albareda; Moldavanova& Goerdel, 2018).

The researcher sees that the importance lies in the ease of transferring information and data quickly and accurately, as well as streamlining administrative processes and optimizing the use of organizational resources, which reduces costs.



However, there are also negatives, the most significant of which are the risks of system breaches and the lack of data security and confidentiality, as well as the reduction in the number of jobs within the organization, consequently limiting job opportunities.

So, People increasingly choose their banks depending on their impressions of the organization. A financial institution's internet presence has an impact on how customers perceive it. Social media platforms, websites, and marketing all have an impact on people. Banks will be able to win over the public's trust if they can effectively market themselves online. There are various methods to build a relationship with a consumer, but one strategy in particular has had great success: online reputation management.

Customers need banks just as much as banks need customers. As a result, financial institutions can no longer be indifferent to how they draw in customers for their financial services. The good news is that you can draw these clients to you more affordably and easily. The Internet offers excellent

opportunities for communicating with these potential customers directly and on their devices. This makes it simpler to influence them, which in turn increases the likelihood that they will approach you. The new word of mouth is known as content marketing. It increases interaction and fosters trust with both potential clients and customers (MUKAYIRANGA 2022)

### **2.1.2 Characteristics of Digital Transformation:**



Will and Woerner (cited in Lazarević et al., 2019) discuss the benefits that technology brings to companies. These include new business models,

increased productivity, enhanced efficiency, and expanded options. Digital technology also enables automation, replacing manual processes. Additionally, it transforms collaboration and decision-making, making these processes more mobile and effective (Foerster-Metz et al., 2018). Every organization aims to leverage digital technology to improve efficiency, enhance customer satisfaction, and reduce costs (Weill & Woerner, 2018).

In their study, McCarthy and colleagues (2021) highlighted eight key qualities for leading digital transformation in organizations. These include skills in planning digital strategies, understanding technology usage, designing digital systems, and focusing on customer needs. They also emphasize adaptability to change, effective data utilization, optimization of business processes, and creating a productive digital workplace. These qualities are essential for guiding organizations through the challenges and opportunities of digital transformation.

#### A. Digital Strategist:

Based on their study of digital strategists, several concepts inform the role of a digital strategist: making digital transformation a strategic priority, advising the top management team on digital transformation, creating and communicating a digital vision, changing the organizational mindset, and adapting the approach to digital transformation. Strategy, mindset, and achieving top management support are central to digital transformation.

This involves prioritizing digital transformation as a strategic objective by influencing top management to place it at the top of their agenda. Creating and communicating a digital vision and mindset in a top-down fashion,



along with developing, communicating, and executing a digital strategy throughout the organization, are key elements of the digital strategist's role. Thus, the digital strategist leads in establishing a digital vision and mindset.

Building on previous definitions of digital transformation, Digital HRM strategy can be defined as the HRM strategy developed and implemented to create value for the organization by harnessing digital potential (Bharadwaj et al., 2013). It can be interpreted as the convergence of HRM and technological resources, and also implies the development and implementation of HRM strategies that are grounded in digital potential and generate corporate advantages to create value for the organization (Jie & Chen, 2024). also emphasized the importance of the human element in the success of any organization, regardless of its size or nature of activity. The Human Resources Department plays a critical role in manpower planning and selecting suitable individuals for work. Investing in effective ways to develop and motivate employees is key to achieving the best results. It is also important to strengthen cooperation among employees to ensure that organizational goals are achieved (2023 Ali Emran& Elhony).

#### B. Digital Culturalism

Based on their study, some of the concepts that inform the role of a digital culturalist include: advocating and cultivating a passion for digital transformation, using an ambidextrous approach to foster a digital organizational culture, and developing skills and competencies in the workforce. As presented in Table 5, having a culture within an organization



that is predisposed to digital transformation is key. This involves advocating for and cultivating a passion for digital transformation, as well as fostering an ambidextrous approach to creating a digital culture that can be embraced both top-down and bottom-up, where management and employees are receptive to it. Changing the culture requires buy-in from all sections and includes the philosophy of empowering employees to develop skills and competencies related to digital transformation. This necessitates a digital evangelist to illustrate the benefits and challenges of digital transformation, which can ultimately improve the organization. This suggests that the digital culturalist leads in adopting an ambidextrous approach to digitalization and instilling a digital culture.

### C. Digital\_Architect:

Based on their study, some of the concepts that inform the role of a digital architect include: defining and architecting a digital services platform, thinking digitally and innovating digitally enabled operations, and exploring and exploiting digital technologies to achieve operational excellence. Creating a digital platform and leveraging innovation and digital technologies to drive digital transformation is crucial. This involves designing and implementing a digital platform through innovation and utilizing the most relevant digital technologies to establish a resilient digital architecture. This suggests that the digital architect leads in the architecture of digital platforms using both current and emerging digital technologies.



#### D. Customer Centrist:

Based on their study, some of the concepts that inform the role of a customer-centric centric are as follows: creating and strengthening customer collaboration, developing a “360-degree” customer experience, improving business services, optimizing and delivering digital services, and generating value for customers. Customer centricity will advance by enhancing collaboration and improving the customer experience through digital transformation. This suggests that the customer-centric approach leads to enhancing the customer value proposition. On the other hand, Customer service representatives are not responsible for customer experience-focused digital transformation, and it doesn't stop at the front end. All points of contact, including the back end of the business process, are involved. To enhance and deliver a seamless digital customer experience, the entire business and each of its departments must contribute.

- 1 Customers share their concern or feedback about a product with the customer service, believing that their feedback will reach the product teams.
- 2 Clients want you to share information with other departments as well, so you won't have to repeat it every time. Get rid of the silos in the environment. (MUKAYIRANGA 2022).

#### F. Organizational Agilest



Based on their study, some of the concepts that inform the role of an organizational agilest include: embracing the need for positive

organizational change, developing ambidexterity in the exploitation and exploration of resources for digital transformation, and identifying and hiring suitably skilled individuals to implement digital transformation. The organizational agilest team will develop the approach for the organization to implement digital transformation by exploring and exploiting the necessary resources and ensuring that organizational change is effectively governed. This suggests that the organizational agilest leads in fostering cross-functional connectedness and simplifying operations.

#### F. Data Advocate:

Based on their study, some of the concepts that inform the data advocate category are as follows: creating a data-driven culture and mindset, developing a data strategy for data exploitation, and designing a data architecture using digital technologies. Data and its exploitation are central to digital transformation. This involves building a successful data strategy, fostering a data culture, and designing an effective data architecture so that enterprise data can be analysed and used to make informed decisions and create value. This suggests that the data advocate leads in leveraging data for strategic enhancement.

#### G. Business Process Optimiser:

Based on their study, some of the concepts that inform the role of a business process optimizer are as follows: reengineering and optimizing business processes, and ensuring business-driven process change. The business process optimizer involves reengineering and improving business



processes with a focus on how digitalization will align with and optimize these processes. This suggests that the business process optimizer leads in cross-functional business process optimization.

On the other hand, improving business process management can be used for achieving corporate objectives. This can be made with investments in technology, fact-based decision making, simplification, and innovation to optimize the processes. The characteristics of a business process are “they have customers (internal or external), it has defined outcomes, there are users for those outcomes, and it can cross organizational boundaries. (Nissar2022)

Business process modelling can be used for an analysis of the process flow. The current trend of modelling is to use diagrammatic modelling, which only visualises the business processes. Process analysis has little value unless it helps the company to improve its processes. Three steps need to be undertaken to improve the business processes:

- 1 Specify the system
- 2 Identify the performance bottlenecks
- 3 Choose among the possible modifications to resolve the performance bottlenecks. (Erik 2022)

#### H. Digital Workplace Landscaper:

Based on the study, some of the concepts that inform the role of a digital workplace landscaper are as follows: creating, managing, and pioneering a digital workplace, and improving employee experience



through innovative digital solutions. The digital workplace landscaper will concentrate on developing a digital workplace for employees, identifying innovative and technical solutions that transform the work environment, and creating greater flexibility for organizations. This suggests that the digital workplace landscaper leads in resource evolution and overcoming barriers to change. The term “digital workforce” represents a group of individuals influenced by new digital technologies that affect their attitudes, competencies, and actions. Professionals (e.g., HR practitioners) are required to make significant strategic and operational changes in response to these developments (Jie & Chen, 2024).

Smuts and Antonizzi (2020) used Dynamic Capabilities Theory to understand how organizations adapt in fast-changing environments. This theory focuses on three main capabilities: sensing and responding to opportunities and threats, seizing opportunities, and maintaining a competitive edge by improving, combining, and modifying the organization's assets when needed. Cho and Kim (2023) found that factors such as digital skills, types of business models, and management task performance affect how well companies in the semiconductor industry adapt to digital changes. These findings are relevant for companies in other industries as well. Companies with innovative business models and strong digital skills tend to perform better in non-financial areas. However, a company's financial performance depends on factors such as the market, customer base, and competition, not solely on its digital skills or business



model. Different industries may prioritize different business models based on their specific needs. Further research is needed to understand how these factors impact various companies.

In addition to that, to integrate business processes with other companies in the business ecosystem for the automation of a process, each part must communicate different aspects of the company's architecture.

1. Business architecture – describes the business strategy, organization, and key business processes.
2. Data architecture – describes the structure of an organization's physical and logical data assets and its management capabilities.
3. Technology architecture – the logical software and hardware needed to support the deployment of business services, applications, and data, including IT infrastructure, networks, communications, standards, processing, and middleware (Nissar2022).

### **2.1.3 Digital Transformation Requirements**

Digital transformation is applied across a spectrum that includes technologies, data, processes, and human resources in the public and private sectors as follows:

#### **A. Digital technologies**

Digital transformation represents a fundamental change driven by the development of new technologies. The literature highlights that key technologies in the digital transformation of institutions include analytical internet technology and complementary technologies, which have



particularly advanced in recent years due to cloud computing (Emily, 2016, p. 3). Technology is closely related to the process of digital transformation, encompassing mobile devices, cloud computing, the Internet of Things, big data, and social media (Vardarlier & Ozsahin, 2021). As organizations strive to enhance their flexibility, improve their responsiveness to environmental changes, and reduce human errors in their customer-oriented operations, they aim to achieve better service satisfaction through digitalization (Amladi, 2017).

### **B. Data:**

Data is now one of the key raw materials of human activities. It contributes to monitoring and measuring activity, supports decision-making and public debate, facilitates modelling and exploration of future scenarios, and helps to develop new services. Individual data generally has little value: it is its combination with other data that makes it valuable, hence the importance of fostering the circulation of data to maximise its utility. The potential for the reuse of data beyond its original production context underpins open public data policies, as well as the development of big data. It also explains why it is necessary to protect personal data against any (re)use to which individuals have not consented. (Francou& Pontal et al)

Institutions are expected to manage and analyse data regularly and effectively to provide reliable and comprehensive qualitative information and procedures. This includes developing and using appropriate tools for



statistical analysis and continuously searching for data to ensure its ongoing flow and alignment with the institution's goals and expectations (Makhramsh& Salmi, 2023, p. 7). According to IBM, there are many advanced analytics capabilities that come from predictive analytics, for example, ad hoc statistical analysis, real-time scoring, predictive modelling, text analytics, and data mining, to name only a few. With these tools, patterns can be found in data to help businesses predict the future. The field of "big data" has also expanded to include activities around data mining, machine learning, and artificial intelligence to better optimize the "10,000-foot view" of a company's business. The term "predictive analytics" can be thought of as a catch-all for disciplines, which includes regression analysis: a technique that looks at values of correlated variables to prove or disprove a specific set of assumptions (Marvin, 2016).

Business organizations should systematically and effectively manage and analyse data to provide high-quality, reliable information. This includes developing and using appropriate tools for statistical analysis and forecasting future data to ensure its continuous flow and utilization in line with E-HRM practices (Yasser Abdel Rahman, 2019, p. 214).

### **C. Data Security and Transparency:**

Technologies can determine whether specific instances of corruption, bribery, or other potential misconduct are likely to occur. Tools such as Big data and in-memory technology enable companies to analyse massive amounts of unstructured data (e.g., emails, texts, scanned invoices) and



investigate for significant clues to unnecessary and potentially illegal activities. For example, Ernst & Young, the accounting firm, is already using such tools (Trivedi & Pillai, 2020, p. 265).

#### **D. Operations:**

A process is a group of interconnected activities or tasks that produce a specific service or product for beneficiaries. Institutions must establish an effective technical structure that supports the development of processes at both internal and external levels to ensure the optimal application of digital transformation. This structure ensures internal and external harmonisation in achieving operations with control over their completion, which is considered one of the key factors for managing the organization's inputs and outputs (Al-Bar, 2018, p. 4).

This type of e-HRM is concerned with administrative functions such as salary management, payroll, and employee personal data (Girisha, 2019).

#### **E. Human Resources:**

The human resources responsible for implementing and managing the digital transformation are one of the most important requirements, and they are all the individuals who work in the organization as heads and subordinates, and who have been employed in it to perform all its functions and work, as it constitutes a vital aspect and it is difficult for institutions to implement the digital transformation without them. Appropriate training



and development must be provided to raise the level of knowledge and technical skills necessary. (Al-Shadeed, 2021, p. 205).

HR transformation is the evolution of the HR function such that service delivery, talent, and technology are seamlessly integrated and aligned with HR strategy to create greater business value for internal and external stakeholders. Besides, we are now in a world where digital HRM becomes a prominent function of management compared to traditional HRM, because the survival of an organization depends on the quality of human resources available to it and/or its use. Human resources departments need to embrace the digital transformation and put good practices at the heart of their HR policy. However, there are a number of challenges faced by human resource management around the world. In order to succeed in the modern world, it is necessary for business concerns to try expanding into the global market. For the HR function, this is the most challenging opportunity, trying to manage the complexities of change and transformation. HR today is playing a lead role, along with business functions, in creating the necessary momentum and internal capabilities for organizations. According to Indermun (2014), E-HRM is on the advancement of the tools it uses, in comparison with traditional HR. This distinction has been expressed in three generations of e-HRM

1st Generation of e-HRM: It involves initial attempts to exploit e-HRM. Those are predominantly transactional, using intranet or electronic means to speed up service delivery or to reduce costs. Examples of this are



payroll processing and providing of training info so that people can satisfy their skill development needs on a real time basis.

2nd Generation of e-HRM: It involves qualitative changes and improvements in the way HRM services are offered. For example, when 360o feedback is performed online, new possibilities for multiple appraisals open up. Another example is e-recruitment and the potential for Intranet-assisted open job markets. Such tools allow one to undertake things that were not feasible previously, such as benchmarking the functional competencies of the firm.

3rd Generation of e-HRM: It means using technology to do things that could not be done before. An example would be the possibility to measure, regularly, the energy that people put into their work. Eleanna, & Panayotopoulou (2011)

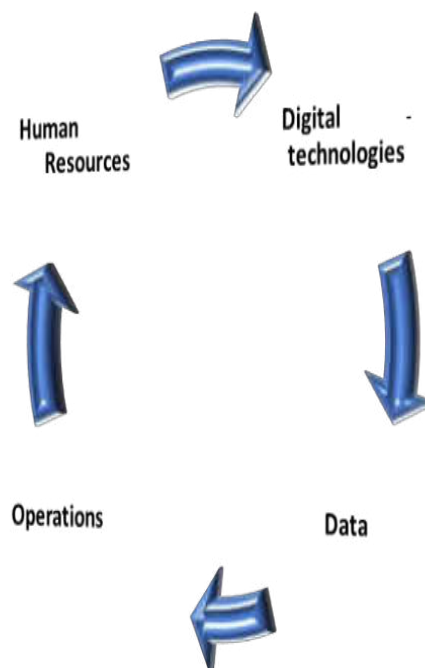


Figure 2. 1Digital transformation requirements.

Another framework by Gimpel, Hosseini, Huber, Probst, Röglinger & Faisst (2018) demonstrates six action fields to master for the digitalization of the organization.

- A. Operations
- B. Value proposition
- C. Transformation management
- D. Data
- E. Customer
- F. Organization

Operations put importance on integrated IT, flexible operations, digital supply networks, and digital manufacturing. Value proposition puts importance on smart products, smart services, individualization, and digital ecosystems. Customer highlights the need for customer experience management, customer insights, multi/omnichannel management, and hybrid customer interaction. Data considers the data integration, analytics, security, and ownership & privacy that develop in digital transformation. The organization has needs of organizational agility, a workplace of the future, a digital skillset, and a digital mindset. Last, transformation management highlights the need for digital strategy, transformation leadership, change management, and digital value assurance (Erik Nissar2022)

#### 2.1.4 Digital Transformation Goals:



tzen et al. (2022) discuss how digital transformation often leads to the of new business models. They cite Osterwalder et al. (2011), who describe nsions of business models in their well-known "Business Model Canvas."

Gertzen et al. also reference Henriette et al. (2015), who argue that the core goals of transforming a business model include extending the existing market, enhancing customer value propositions, or adapting the business model in response to industry changes. Additionally, Gertzen et al. refer to Kotarba (2018), who reviews significant shifts in business models across several "waves" of innovation, such as transitioning from analogue to digital resources and incorporating user-generated content like public data from social media. Moreover, Gertzen et al. note the evolution of revenue models from traditional sales and subscriptions to new models such as software-as-a-service (SaaS) and the "freemium" model, where products generate revenue through advertisements.

Suzanna ElMassah and Mahmoud Mohieldin (2020) note that digital transformation can support the Sustainable Development Goals (SDGs). By analyzing collected information with computational techniques, it can reveal trends and patterns, turning them into actionable insights about human behaviors, the environment, and experiences. This data helps policymakers create effective development programs, monitor progress, and make improvements, thereby reducing transaction costs. Digital transformation aids local governments in building sustainable and resilient communities through inclusive data collection. E-government and big data highlight key dimensions of SDG 16: effectiveness, inclusion, openness, trustworthiness, and accountability. Several best practice digital transformation cases can serve as benchmarks for local governments



e.

Fischer et al. (2020) note that digital transformation is driven by the convergence of social, mobile, cloud, and smart technologies, along with the increasing need for automation and integration. While this creates opportunities for innovation in products and services, many businesses view it as a threat to their traditional ways of operating. As a result, they are prioritizing digital transformation efforts. However, understanding and implementing digital transformation strategies can be challenging for companies, particularly for small and medium-sized enterprises (SMEs), which may struggle to keep up with larger companies in adopting digital technologies. In 2017, many European SMEs were still not actively pursuing digital transformation initiatives. SMEs often find it overwhelming to navigate the vast array of opportunities and challenges presented by digital technology and may struggle to scale the implications to their specific needs. This difficulty in translating digital transformation into practical actions hampers their ability to derive meaningful benefits from these technologies.

Digital transformation seeks to achieve many goals, which can be summarized in the following points:

- 1- Providing a huge amount of information on digital media.
- 2- Preserving the original information source from damage.
- 3- Facilitating the process of searching digital collections and retrieving information through many means and methods.
- 4- Reducing the cost that relies on traditional methods.



ng information services using new technologies, such as digital reference and machine translation.

6-Making information available to the largest number of beneficiaries and customers through digital platforms and archiving it as digital resources that can be accessed remotely.

7-Reducing the time period from when information is taken from its primary source to recipients and users.

8-Implementing new and innovative business models based on the use of electronic means and systems.

9- Enhancing digital data protection, transparency, independence, and trust.

10-Continuously updating digital information and making original digitized information available.

11-Raising the level of scientific research by improving advanced information services.

12-Promoting the development of a more innovative and collaborative culture at the industry and community levels.

13-Quality of service and affordability. (Farhat, 2020, p. 66)

### **2.1.5 Initial Insights on The Different Phases of Digital Transformation**

These categories provide initial insights into the different phases of digital transformation.



Table 2. 1 Categories of phases of a digital transformation process

<b>Semantic-based categorization</b>	<b>Categories of phases</b>
<b>Evaluation, Assessment, Problem Identification, Existing, ...</b>	Pre-digitalization assessment / Digital maturity assessment / post-digitalization assessment
<b>Strategy, Vision, ...</b>	Defining Strategic guidelines/directions for the company's digital transformation
<b>Roadmap</b>	Defining the implementation strategy milestones for the company's digital transformation
<b>Customer Experience, ...</b>	Digital transformation of the customer experience
<b>Operations, Operational Transformation,</b>	Operational digital transformation
<b>Design, Create, ...</b>	Designing the digital transformation
<b>Process &amp; Procedures</b>	Digital transformation of business processes
<b>Objectives, Vision, Initiate, Opportunities</b>	Converting the strategic directions into objectives
<b>Implement, Transform, ...</b>	Field implementation of digital transformation
<b>Organization, Structural, ...</b>	Organizational digital transformation
<b>Product &amp; Services</b>	Digital transformation of the product and service offer
<b>Culture, Awareness, Competition,</b>	Building the digital culture of the company/clients/context
<b>Proposition. ...</b>	Digital transformation of value creation



<b>Business Model, Digital Business, ...</b>	Adjust/rebuild the business model
<b>Technological Adaptation,</b>	ICT Integration
<b>Skills,</b>	Building skills
<b>Finance, ...</b>	Financial support/budget/benefits

(Fadwa& Souissi2020)

## 2.2 The concept of electronic HRM (E-HRM)

E-HRM is a relatively new term referring to information technology-supported HRM across various sectors, particularly through the use of web technology. The expectation is that HR departments using IT can be "liberated from administrative shackles" and focus more on developing intellectual capital, social capital, and managing knowledge to improve organizational competitive advantage. E-HRM represents a fully integrated, organization-wide electronic network of HR-related data, information services, databases, tools, applications, and transactions, which are generally accessible at any time by employees, managers, and HR professionals (Shoeb Ahmad, 2015). On the other hand, it is needed to clarify the definition of digital HRM.

Digital HRM is described as “using computer systems, telecommunication networks, and interactive electronic media” to perform HRM functions. (Zhang& Chen 2024)

- 1- Using technology with human resources management functions.
- 2- Communication through technology directed through networks between the organization and its employees, including those related to human resources management.



- 3- .A way to implement strategies, procedures, and policies for HRM in the organization by supporting Direct and conscious managers based on web technologies.
- 4- It is the application of any technology that enables managers and workers to have direct access to human resources management and other organizational services for communication, performance evaluation, team management, knowledge management, and education for administrative purposes.
- 5- Practical application of the organization's strategies, policies, and practices in human resources through directed support and full exploitation of internal, external and international information network channels Method for performing E-HRM functions from the above, we see that E-HRM includes in its definition the same elements that make up management.

Electronic technology involves integrating management functions with information and communications technology (ICT), thereby streamlining HRM activities using ICT tools. This integration relies on networks such as the Internet, intranet, or extranet to effectively respond to changes in both the business and external environments.

The organization's shift to electronic management results in its activities and functions being transformed into integrated electronic systems. This transformation can be either complete or gradual, depending on the availability and state of the

ion's existing information systems—whether they require updating, ion, or replacement. The success of this transition also hinges on the



availability of the necessary components and elements for electronic management. Ultimately, the extent of this transformation is guided by the organization's strategic direction.

In the context of E-HRM, this shift implies the presence of a Human Resources Management Information System (HRMIS), which distinguishes E-HRM from traditional HR management. HR information systems emerged, along with other systems like accounting and inventory management, as a consequence of the computer technology revolution during the 1970s and 1980s.

Financial systems and the advancement of databases have significantly contributed to the development and availability of these systems. The Human Resources Information System (HRIS) has been defined as a set of integrated elements designed to collect, analyze, store, and retrieve information related to human resources management. This system supports critical functions such as employment decisions, performance measurement, control, and planning (Parry et al., 2011).

Human resources management is undergoing a radical transformation as it plays a crucial role in organizations. As the primary source of human capital, HR is a vital component in the digital transformation journey that many organizations are currently undertaking. Studies have shown that digital transformation leads to changes in three key areas of human resources management, marking a significant shift in how HR functions are executed.



**ization of the Workforce:** This refers to how an organization introduces ministrative procedures, often referred to as the “Digital DNA” of the

organization. This process involves embedding a culture of creativity, encouraging participation, and fostering innovative practices that create new work networks within the organization.

## **2. Digitizing the Workplace:**

This concept focuses on how an organization can establish a new work environment that boosts productivity by leveraging modern communication tools. It aims to cultivate a spirit of initiative, encourage participation, and instill a sense of purpose among employees.

## **3. Digitization of Human Resources:**

This involves transforming traditional human resource functions into digital processes. By utilizing digital tools and encouraging continuous innovation, organizations can effectively practice HR functions in a more efficient and streamlined digital manner. HRM is now required to reformulate its practices, from recruitment to leadership and performance management. This involves leveraging digital applications and enhancing employee experiences, all with a focus on re-engineering the organization based on a culture of teamwork and reliance on data analysis technology, particularly in decision-making. Additionally, there is an emphasis on cultural diversity, continuous learning, and diverse career paths. The digitization of human resource management practices builds on the experience of seasoned employees while harnessing the creativity of younger, modern talent.

Trust in the organization is essential, especially given that the workforce is a mix of individuals and older employees with substantial experience in the field. Therefore, such approaches are necessary in nearly all companies.



Furthermore, digital human resources management requires expertise in digital technologies. While HRM practices based on cloud computing have provided significant value to organizations, this alone is no longer sufficient. Experts now advocate for the creation of work teams dedicated to digital design within the HR department, with the cloud serving as the foundational base for these initiatives (Deloitte, 2018).

The functions of human resource management can also be identified:

- 1 Attracting and employing human resources.
- 2 Development and growth of human resources.
- 3 Taking care of human resources.
- 4 Maintaining human resources. (Mahmoud 2023, p 561)

On the other hand, an umbrella term covering all possible integration mechanisms, contents between HRM, Information Technologies aiming at creating value within, across organizations for targeted employees, management. Electronic Human Resource Management (E-HRM) is assumed to be a driving force behind HRM value creation (Ruël & van der Kaap, 2012).

### **2.2.1 Objectives of E-HRM**

Human resource management practices changing style of execution by integration of advanced technology.

The main intention of integration of technology in HRM practices is to bring new dimension to the organization and to synchronize with global demand and supply.



design is to achieve the organizational goals with strategic way. The ; are the main objectives of E-HRM.

E-HRM offers an adequate, comprehensive, detailed on-going system about people and specific jobs.

E-HRM supports the management for future planning and policy formulations.

E-HRM facilitates and monitors the human resource demand and supply imbalances.

E-HRM provides as automated information about employees.

E-HRM enables the faster response to employees' related services and faster HR decisions.

E-HRM offers data security and personal privacy. (Girisha M. C2019)

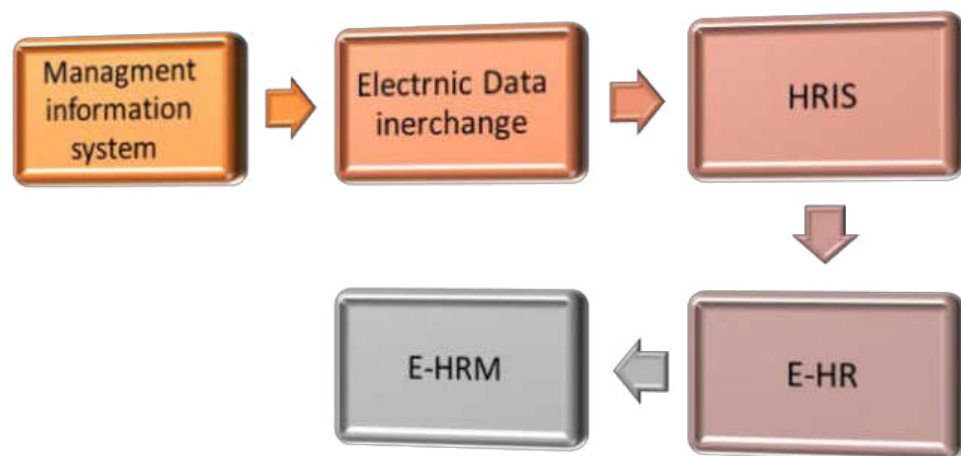


Figure 2. 2Evolution of E-HRM

With the expanding advancements in technology in recent years, it is now possible to create a continuous, data-driven, self-service, and interactive workplace.



Information Systems have evolved from basic digital record-keeping in the past to more sophisticated reporting and decision-making frameworks. Recent studies have examined the emergence of E-HRM and its impact on the

business world. In the 1990s, industries began integrating technology under the umbrella of Management Information Systems (MIS). These systems are computerized databases that manage information related to business operations and are programmed to generate regular reports for all levels of management. This represents one of the early stages of technology implementation within organizations.

### **2.2.2 E-HRM Practices**

In the early stages of electronic integration in human resource management, it can be observed that HRM practices transitioned from traditional management to E-HR systems. This shift marked the beginning of integrating web technology into HR practices, often referred to as "Virtual HR." In this framework, companies used E-HR systems to monitor employees and manage HR practices. However, the E-HR system was primarily one-sided, managed by HR executives, with no feedback or information flow from employees. E-HR systems were initially used mainly for attendance and payroll functions. The figure above illustrates the flow of HRM practices through E-HR. Challenges arose with the E-HR framework, as employees were dissatisfied with the system. Issues included the dominance of HR executives in database management, favoritism in the appraisal system, and difficulties arising from strategic HR policies.



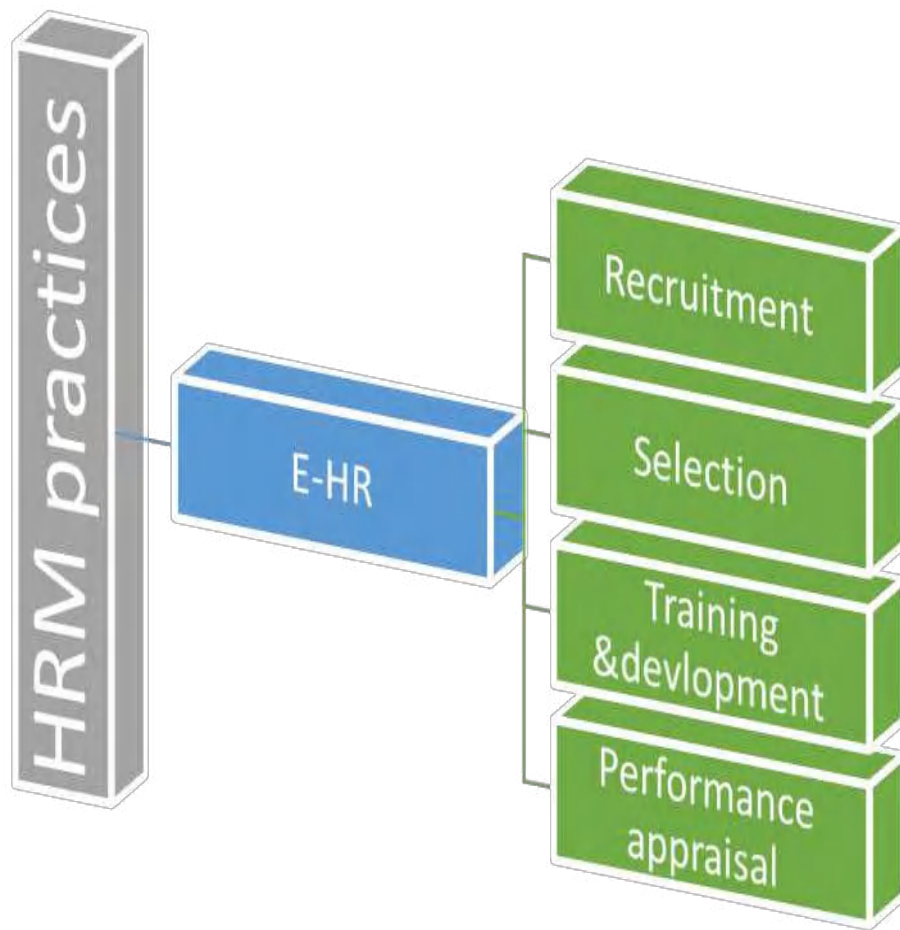


Figure 2. 3E-MHR PRACTICES

**1. E-Recruitment:**

E-recruiting is the use of electronic resources to fill vacant positions within an organization, ensuring fair hiring procedures and allowing applicants to access job applications without human Procedure. This allows organizations to develop electronic recruitment systems, allowing applicants to apply for jobs from anywhere in the world. E-recruiting saves applicants time and money and has been proven to have a significant impact on employee satisfaction This helps the sector in need of quality employees.



## **2. E-Selection**

E-Selection utilizes modern IT tools like online testing, resume evaluation, and interviews to evaluate candidates' skill set and suitability for a position. It favors one set of qualifications over another, serving organizational interests and positively impacting banks' performance and employee satisfaction.

## **3. E- Training and development**

The electronic human resources management system enhances training, development, productivity, and job performance by encouraging interaction between units, companies, and employees. The system also encourages e-learning and training, thus establishing a culture of online learning. This not only improves job performance and trainee happiness but also contributes to building a more effective workforce. This helps develop human resources.

## **4. E-Performance Appraisal**

E-Performance Appraisal is a method used to track employee performance within a company, ensuring data security and fairness. It promotes alignment with corporate goals and enhances employee satisfaction. Studies show that E-Performance Appraisal positively impacts working engagement and satisfaction among employees, particularly in Pakistan's banks. This method enhances organizational and financial success. (Rawat& K. C, 2024)



The use of services and applications for automation by HR specialists is gaining momentum:

- 1- Internal document flow.
- 2- Recruiting: search and selection of candidates for vacancies.
- 3- Assessment and certification of personnel;
- 4- Personnel training.
- 5- Assessing staff loyalty and involvement.
- 6- Monitoring the HR brand of the company.
- 7- HR analysts. (Bannikov& Abzeldinova2020)

### **2.2.3 impact of the Use of Digital transformation HRM:**

Papaevangelou et al. (2024) discuss how new technologies are adopted and used, noting that actually trying out a technology is often more important than merely discussing its benefits. They mention that the availability of certain features in a network influences how likely a company is to use HR management information systems (HRMIS). The new technology must align with what the company already has. Testing new technology before fully implementing it is common, especially for companies aiming to stay ahead of the curve. The value of new technology is often assessed based on its usefulness compared to its cost. Using HRMIS software can be considered a beneficial practice because it helps streamline company operations.

(Fenech et al., 2019) Discuss how digital transformation is changing the way human resource management (HRM) works. They say that HRM is becoming more people-focused, with a focus on creating interesting jobs to p employees engaged. Digital technology is shaking up traditional HR ctices, according to Palmer et al (2017).



Bell et al. (2006) add that this shift affects the skills and abilities needed in HR. Larkin (2017) argues that digital tech will transform HR departments across all types of companies. Hays & Kearney (2001) note that HR managers now spend more time dealing with information and using software to manage data. Overall, technology is not just making HR tasks easier; it's changing the very nature of HR work to align with the needs of the digital age.

(Chen and Zhang, 2023) talk about using computer systems and electronic media to handle HR tasks, which they call digital HRM. Ketolainen (2018) sees digital transformation as a process where HR management becomes more data-driven and automated. Digital HRM strategy, according to Bharadwaj et al. (2013), means using digital technology to create value for the organization. Strohmeier (2020) adds that it's about combining HR management with technology to gain advantages for the company.

(Pelin Vardarlier and Mehtap Ozsahin, 2021) Discuss how technology and globalization have changed how companies compete. In this competitive environment, innovation is key, leading companies to rethink how they manage their employees. They note that a company's success often depends on how well it uses its people. Social media has become a popular tool for finding talented employees, with platforms like LinkedIn, Facebook, and Twitter being commonly used. The study focuses on how companies in Turkey use social media for hiring and managing employees, particularly

king at how this affects the company's overall performance.



The findings show that companies often use social media for recruiting and branding, with LinkedIn being the most popular choice. Additionally, the study suggests that how well a company manages its employees through social media can impact its overall success. This research adds to the limited knowledge on the topic of social media in human resources, providing valuable insights for companies looking to improve their hiring and management practices.

The impact of digital technology on processes and activities .Adopting digital technology as one of the effective management methods leads to several important outcomes, including :

- 1 -Reducing complex routine procedures and bureaucratic rigidity.
- 2 -The speed of processing transactions and their volume .
- 3 -The limited number of management levels contained within organizational structures .

1- Achieving accuracy and objectivity in the activities carried out by all departments of the organization, including human resources management.

(Mahmoud2023.p592)

#### **2.2.4 Benefits of Digital Transformation To HRM:**

New approaches are needed to build the future workforce by addressing the shortage of skilled talent and shifting demographics to meet digital needs.

HR must develop local talent, assess risks, and understand their capabilities,

h a clear digital HR strategy to achieve this goal. Institutions are evolving,



and there is a need to turn promises into purpose, compelling them to integrate digital transformation into human resources to provide innovative solutions.

The digital world is changing how we live, work, and how business is organized and conducted. E-HR can have an impact on every area of HRM. First, digital HRM can help business leaders and employees shift to a digital mindset, a digital way of managing, organizing, and leading change. Highlights that digitalization changes the way employees communicate and interact in the workplace, what they expect from their employer and careers, where work location is, and when work is conducted. Since the evolution of digitalization impacts organizations at many levels, thus it needs development and adaptation of new knowledge and new ways of working (Halid & Mohd Yusoff et al 2020)

(Stefan Strohmeier, 2020) explains that the concept of digital HRM is observed in HRM due to digitalization processes. This means that both small changes and big transformations in HRM can be considered digital HRM. It covers a wide range of activities, from simple tasks like HR payroll accounting to more complex approaches like Human Resource Analytics (HRA).

(Demir et al., 2023) found that digital transformation (Digital) and innovations affect how HR planning works in hotels. They discovered that Digital innovations have an impact on both the quality and quantity of HR planning. They also found that innovations play a role in how Digital affects planning. This study is important because it fills in gaps in what we know



about how Digital innovation affects HR planning. So, it's valuable information for anyone working in HR in the industry (Shehadeh et al., 2023). In addition to that, technology mediates the relationship between individuals and organizations, and subordinates and supervisors. Hence, it has also reduced the distance in organizations so that employees can work from home and interact with others across geographical areas. also emphasizes the importance of investing in the development of required new skills, especially if the change involves new technology and new roles. Therefore, digital technology will continuously change how organizations hire, manage, and support people

(Halid & Yusoff all et 2020) As HR is proceeding towards the digital transformation and the prospect is determined mobile, artificial intelligence, social media, and cloud computing, the skill required for organizations to cope up their workforce to flourish more flexible, active and modified. Social, mobile, analytics, cloud and internet completely make a mesh of technology which is called as SMACI. This technology mesh authorizing initiatives crossways critical digital measurement containing products and services, customer experience, operations, and workforce. The combined play of SMACI benefits in bringing content, commerce, and teamwork to customers anytime and anywhere in an inclusive, personalized, linked and cost-effective manner.



(TRIVEDI& PILLAI 2020 p 264) conducted research in service companies in Jordan, using data gathered through AMOS for analysis. They

found that digital transformation impacts both competitive advantage and entrepreneurial orientation. Additionally, they discovered that entrepreneurial orientation plays a significant role in mediating the relationship between digital transformation and competitive advantage. Furthermore, innovation capabilities were found to moderate the relationships between digital transformation, competitive advantage, and entrepreneurial orientation. The practical implication of their findings is that managers and owners of service companies can use this research to inform policy-making aimed at developing a competitive advantage. (Al-Alawi et al., 2022)

(Al-Alawi et al., 2022) developed a model for adopting digital transformation (DT) in HR practices based on seven factors identified from existing literature. They surveyed to collect accurate data and analyzed it using a logit model. The results showed that all variables had a positive effect on DT adoption. The study underscores the increasing importance of technology in HR practices, especially due to the COVID-19 pandemic. Unlike European countries, the HR sector in Bahrain is not well-prepared for e-HRM adoption. Therefore, the paper proposes a model to help the HR sector in Bahrain transition to digital technologies effectively. This model is based on key factors that facilitate digitalization in the HR sector (e-HRM). The authors suggest that future research should explore these factors further, particularly their impact on HR digital transformation during COVID-19 in

er countries.



## 2.2.5 Elements of Digital HRM

In today's digital-driven world, human resource management has undergone a radical transformation to keep pace with a rapidly evolving competitive business environment. This transformation has seen a marked evolution from traditional practices to more digital approaches. For this transformation to succeed, several elements must be in place.

### 1. Digital workforce:

In the millennial era, current generations are considered the digital workforce; they have internet-connected devices, and web-based applications and services have always fascinated their everyday lives. By having these employees, the organization needs to be digital to engage with digital employees. Therefore, the digital HRM is embedded with mobile apps, design thinking, video, behavioral economics, and the use of system analytics.

### 2. Digital support management:

This involves planning, implementing, and using digital technologies to support HRM activities such as payroll processing, reward and compensation, performance management, training and development and etc. addition to updated HR technology. There is a tremendous shift away from traditional HR software, moving toward modern such as cloud-based systems. Recently, HR applications have moved to mobile. Digital HRM has become a necessity in today's business world. Organizations have to go for digital transformation

order to gain a competitive advantage and relevance in the industry.

igital work and task:



With digital work and tasks, the contents of work become digital through the use of technology in work activity and management functions. Organizations need to integrate digital elements into work processes and change routine manual work into digital work. Organizations also need to use digital tools and media to connect and communicate with employees. Work and tasks in an organization also need to be organized digitally. (Halid & Mohd Yusoff et al, 2020)



Figure 2. 4Elements of Digital HRM

### 2.3 Detailed Analysis

At Atos, an IT and consulting firm, a disconnect existed between the data in the company's core HR system and that in its employee document management function. To bridge this gap, the organization wanted a tool that would facilitate seamless end-to-end HR service delivery for employees, managers, and HR personnel alike.



Atos chose a cloud-based solution that was rolled out simultaneously in 70 countries. This software integrated the organization's Employee File Management system with the recruiting module of its HRIS, allowing for streamlined HR operations and automation of the offer letter process. As a result, managers can now access the HRIS directly and generate an offer letter with the push of a button, eliminating the need to email HR for approval of new hires.

### **2.3.1 Benefits a Risk of Digital Transformation:**

(Căpușneanu et al., 2021) discuss how Industry 4.0 is just beginning to be implemented in Romania. The country has funding available for innovative technologies such as Industry 4.0, 3D printing, and open innovation, overseen by the Ministry of Economy. Major companies like Deloitte, DHL, and Microsoft in Romania are investing in systems for managing warehouses and transportation, along with applications for order tracking and supply chain transparency. They are also adopting IoT solutions, augmented reality, and improving network technologies like 4G and 5G. These advancements offer significant opportunities for Romania. The study emphasizes the importance of digitalization for companies' success, suggesting that transitioning to Industry 4.0 will provide benefits and help managers make better decisions.

(Isik et al., 2024) Discuss why organizations pursue digital information and the benefits they hope to achieve. These benefits range from making processes more efficient through automation to improving the



quality of services and products, and even transforming how the organization operates. Digital transformation can lead to significant changes, not just minor improvements; it can fundamentally alter how the organization perceives itself. The success of digital transformation depends on how well these changes translate into tangible benefits for the organization. However, despite substantial investment in digital transformation, many projects fail to deliver the expected benefits. This is often due to the difficulty of turning ambitious goals into practical actions that yield real benefits. Despite a strong focus on managing these benefits, projects frequently struggle to achieve their objectives. This highlights the ongoing challenge of ensuring that organizations realize their intended outcomes from digital transformation.

(Frendiana and Soediantono, 2022) Highlight the importance and benefits of digital transformation for agencies and organizations, especially in the context of activity restriction policies such as shift distribution and work-from-home (WFH) rules. They emphasize that digital transformation facilitates communication, coordination, and collaboration among team members, regardless of their physical locations. This is crucial for effectively achieving work targets, as digital tools enable activities to be conducted anytime and anywhere. Additionally, based on their literature review, the authors recommend applying digital transformation in the defense industry, suggesting its potential to enhance operations and capabilities within this

tor. another was Change of Management is Another major risk to the implementation of the e-HRM system. Change of management or change of



personnel refers to changes of people or personnel at the top or apex of the organization. Change of management often affects employees in an organization because of requirements that may be introduced by the new management. Most of the respondents agreed that whenever management change in the organization.

(Rahman & Erhan 2019) that change management is responsible for organizational failure, where the change of personnel is not managed properly. Similarly, submitted that the management of change of personnel is crucial to organizational goals and objectives. New personnel often come with new ideas, and when such ideas conflict with what the employees expect or are used to, it may lead to conflict and failure in the organization (Rahman & Erhan, 2019)

### 2.3.2 Improved Efficiency in Hr. Processes:

(Gadzali et al., 2023) emphasize the significance of HRM strategies in the digital transformation of organizations. They highlight that enhancing employees' digital skills, fostering cultural and leadership changes, restructuring the organization effectively, managing talent, measuring performance, facilitating effective communication, ensuring flexibility, and implementing robust risk management practices are essential. These strategies can help organizations maximize the benefits of digital technology, gain a competitive edge, enhance business performance, and deliver added

ie to customers.



(Tripathi and Kushwaha, 2017) aimed to explore how technology and innovative practices are shaping HR in the digital era. In today's competitive environment, it is crucial for businesses to continuously develop and innovate their HR practices to stay ahead. The study highlights that innovative HR practices are essential for retaining employees and improving their performance. To achieve this, businesses need efficient and well-planned HR strategies. The authors noted that traditional HRM is gradually being replaced by more advanced, technology-driven methods. They reviewed various research articles, conceptual studies, and relevant content from databases like Proquest, EBSCO host, and Google Scholar to support their findings. The study contributes to the existing literature by detailing the role of technology and innovative practices in HR, emphasizing the importance of these advancements in the digital age. Additionally, the authors discussed several implications for promoting sustainable development in the digital era and suggested directions for future research.

(Nageeb and Saad, 2022) Examine how digital changes in HR impact talent development in Egypt. They investigated whether support from supervisors and HR skills play a significant role. Surveying 331 HR managers from Egyptian companies using digital HR systems, the study found that digital changes positively affect talent development, but HR skills and supervisory support had a limited impact. The authors recommend that

companies adopt digital tools for HR and provide training for their HR staff,



emphasizing the importance of supervisory support for successful digital transformation.

### **2.3.3 Streamline and onboarding:**

(Singh & Sahoo, 2023) explore how technology enhances the hiring and onboarding processes. Improved tools enable companies to identify suitable candidates more quickly through online platforms and artificial intelligence. Software aids in efficiently reviewing resumes and matching skills with job requirements. Additionally, technology supports tracking the progress of new hires and providing appropriate training. Video interviews reduce time and costs, while chatbots assist with questions during the hiring process, thus enhancing the applicant experience.

(Alharbi & Abbott, 2024) Discuss how digital technologies are transforming employee interactions with organizations. In today's competitive job market, employers must leverage various methods to recruit and retain talent. They highlight the use of technologies such as artificial intelligence (AI), gamification, virtual reality (VR), QR codes, and machine learning (ML) in onboarding processes. Digital tools, including apps, portals, chatbots, and VR functions, help welcome new hires, facilitate their integration into the company, keep them engaged, and support their learning and development.

#### **1. Case Study on Digital Human Resource:**



RBC (Royal Bank of Canada) is working to reinvent the employee experience through digitalization. They have established a new digital human

resource management team, integrating information technology for security and infrastructure purposes. They developed an application called Embard, which allows employees to learn more about their work, understand the organization's culture, and connect with their team through an online platform. RBC also plans to develop an application for Compelling Careers via a digital platform, as well as a digital system for career development, learning, and job transitions (Varadaraj & Al Wadi, 2021, p. 48).

## **2.4 Digital Transformation and Technology:**

### **2.4.1 Digital Transformation and the Internet:**

The number of devices connected to the Internet around the world is witnessing significant growth and has reached approximately 8.4 billion devices, with this number expected to reach hundreds of billions. According to the expectations of the Cisco Visual Networking Index, more than 500 billion devices will be connected to the Internet by the year 2030, which means that the current and ongoing stage of digital transformation is more impactful and more difficult than previous stages of technical transformation. Hence, digital transformation requires organizations to take advantage of the Internet to be more aware and capable. Forecasting and flexibility in work, which are the characteristics that will enable them to innovate faster to achieve the desired results of their work, and to achieve success, organizations must apply the digital framework, including technologies, data,

ple, and processes (Mohamed Fathi, 2015).



At this stage, many companies began seeking to embrace HR technology. The advantages of automation became widely known to HR and other areas of the business. The focus shifted to making more transactions automated to achieve effectiveness and efficiencies. In addition, call centers began to use voice response systems on a large scale. To use applications that enable the user to access the database from anywhere and at any time (Bin Abbou Al-Jilali, 2021).

## 2. Empirical Studies

### a. Case Study

Anchor Group, a leading non-profit housing organization based in the United Kingdom, aimed to improve its recruitment process to attract the best candidates. Their main goal was to enhance the efficiency and effectiveness of hiring. To achieve this, they utilized a chatbot embedded in Facebook Messenger, which included a series of questions that allowed management to engage directly with candidates by sharing their device screens. Additionally, they created clear social media campaigns to guide participants through the recruitment process and instruct them on using the chatbot.

FB analysis helped the organization identify which questions would be suitable for most of the target participants for recruitment. By developing and launching a chatbot, Anchor Trust improved the recruitment process in all aspects. The traditional recruitment process, which required participants to

only on the organization's website, had a conversion rate of just 2 percent. However, with the chatbot, the conversion rate increased to about 25 percent.



The cost of the social media campaign for recruitment through the traditional method was 50 GBP, but this was reduced to approximately 18 times lower. Additionally, the number of applicants per month increased by about 80 percent. (Varadaraj & Al Wadi, 2021, p. 47).

## **B. Case Study**

International Journal of Science and Research Archive, 2024, 11(01), 1452–1459 1455 By aligning talent development strategies with the specific skills and competencies in high demand, collaborating with business units, developing a compelling employer branding strategy, and implementing innovative hiring and retention practices, organizations can effectively drive digital transformation and secure the necessary digital talent for sustainable organizational performance. A supportive and inclusive work environment is crucial for retaining digital talent. This involves fostering a culture of innovation, providing opportunities for cross-functional collaboration, and promoting diversity and inclusion within the digital teams.

By creating a supportive and inclusive work environment, organizations can enhance employee engagement, foster creativity and collaboration, and cultivate a sense of belonging among digital professionals. In conclusion, cultivating digital talent requires a strategic approach that encompasses the identification of digital skills, the attraction and recruitment of digital-savvy talents, and the retention and development of digital

professionals. By analyzing the digital landscape, collaborating with business units, creating a competency framework, developing compelling employer



branding, leveraging digital channels for recruitment, implementing innovative hiring practices, designing competitive compensation and benefits packages, providing continuous learning opportunities, and creating a supportive work environment, organizations can effectively cultivate a pool of skilled and motivated digital talent to drive their digital transformation initiatives.

### **C. Case Studies**

Digital transformation in the banking sector has become a critical area of focus, with a particular emphasis on human resources (HR) strategies. Successful digital transformation in banking has been linked to the development of digital banking solutions to meet customer demands, such as interest rate liberalization, big data utilization, mobile finance, risk management, and customer relationship management. Furthermore, the interlocking process between digital transformation and business digitalization strategy has led to the emergence of an inductive model of HR reengineering, encompassing talent planning, acquisition, adjustment, and development in addition to that, the implementation of digital approaches in the financial industry is associated with obstacles that hinder smooth digital transformation, particularly in the banking sector also despite these challenges, digital transformation in banking has been recognized as an important phenomenon, providing a competitive advantage by enhancing

customer-company interactions through information and communication technology. Nevertheless, the widespread use of digital technologies and



the current pandemic have fueled the need for digital transformation in the banking sector, emphasizing the risks on customer satisfaction in the context of digital banking in Northern India (Nifise et al., 2024).

In summary, successful digital transformation in banking with a focus on HR strategies involves addressing customer demands for physical movement digital banking solutions, while also overcoming obstacles and risks to ensure customer satisfaction and competitive benefit.

#### **4. Internet Usage Statistics in Libya:**

As of early 2024, Libya had 6.13 million internet users, representing an internet penetration rate of 88.4 percent. Kepios analysis indicates that the number of internet users in Libya increased by 68 thousand (+1.1 percent) from January 2023 to January 2024. In January 2024, Libya had 5.90 million social media users, which equates to 85.2 percent of the total population. Early 2024 saw 12.40 million active cellular mobile connections in Libya, amounting to 179.1 percent of the total population.

##### **2.4.2 Areas of digital transformation:**

Digital transformation is not merely an exercise in observation; it is both an offensive and defensive practice of information. Its goal is to connect various areas to support the strategic and tactical objectives of the organization. It aims to align the organization's behavior with its knowledge to enhance work coordination. This transformation reduces effort and the cost

human resources, improves and organizes operational efficiency, and provides opportunities for delivering innovative and creative services beyond



traditional methods. Libyan banks, like international organizations, are also embracing digital transformation strategies. The classification of digital transformation areas can be estimated into the following three categories:

Areas related to the necessities of citizens and companies to government services: Examples include payroll services, submitting complaints, information, customer care, elections, and others. Areas related to management and services within institutions: These include research, communications, planning, policy formation and implementation, human resources management, and support and financing services.

Areas of inter-institutional services: These include the following up on projects, general matters, information services, human resources management, education and training, budgeting, integrated storage management, accounts, etc. (Taaima and Al-Bandari, 2004, p. 18).

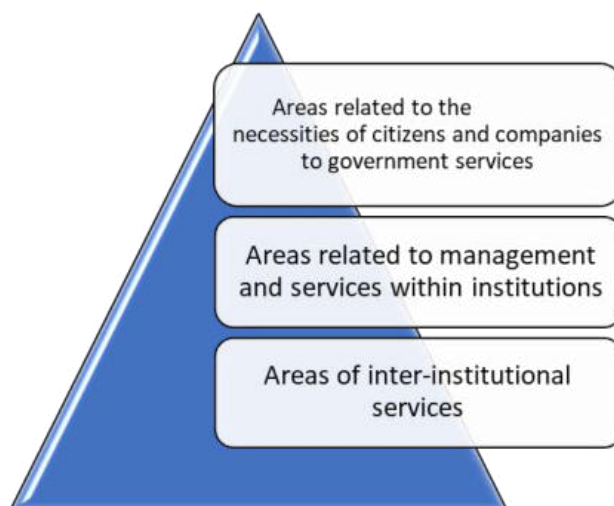


Figure 2. 5Areas of digital transformation



### 2.4.3 Digital HRM Processes:

Modern organizations need to redefine the value of HRM operations by creating end-to-end, closed-loop HRM processes through digital technology and digital operations thinking. Digital transformation positively impacts HRM and leads to noticeable improvements in selection, training, and development, performance, and service quality (Betchoo, 2016).

As information technology continuously replaces the way traditional HR activities are conducted, HR professionals need to develop new technology competencies to successfully deliver their services to employees (Bell et al., 2006, P 295).

Moreover, if HR professionals know how to use digital tools to collect data, it allows them to turn it into strategically valuable information (Lawler & Mohrman, 2003, p. 26).

#### a) Talent Selection

Employment and staffing have become the primary focus of digital technology adoption in HRM organizations. The application of digital HRM practices has reduced the workload involved in selecting candidates, analyzing skill requirements for vacant positions, and making recruitment decisions. As the Internet has become widely used, the HRM recruitment process in companies has also evolved (Vardarlier, 2020).

The selection process ensures that candidates are evaluated through a systematic organizational procedure. This process involves collecting information about applicants for vacant positions. The information serves as a guide for the organization's human resources in selecting individuals with



the necessary qualifications. The process is conducted according to specific and objective criteria to fill positions within the organization (Al-Taie et al., 2006).

Before the advent of the Internet, talent recruitment was primarily conducted through traditional methods such as job postings in newspapers. Recently, recruitment initiatives have evolved into the online environment, particularly through professional networking and employment websites. Social media platforms now allow access to qualified talent quickly and at a lower cost. Compared to traditional recruitment methods, using social networking sites for recruiting and selection is more cost-effective. Many companies use digital technology to leverage platforms like Facebook, Glassdoor, and LinkedIn as recruiting tools, making them essential mechanisms for both employers and job seekers (Tripathi & Kushwaha, 2017). These social media strategies enable recruiters to reach a larger pool of potential candidates, thereby increasing the likelihood of identifying suitable candidates.

b) Training and Development:

The advent of the Internet and the rapid growth of personalized training became commonplace in the 1990s, and by the 2000s, companies began to recognize the momentum of digital education. Technological advances in the global workplace now profoundly influence the role of human

source development (HRD) specialists.



(Zhang & Chen, 2023) observe that HRD technologies were initially used primarily in educational settings to support training (Benson et al., 2002). However, the advent of modern digital technologies has introduced greater flexibility and integration. These technologies are fundamentally redefining the future of training and development functions.

The development of digital systems has brought the concept of e-learning to the forefront. E-learning today is primarily conducted through electronic media, especially using computers for learning (Vardarlier, 2020). A key future trend in digital learning is adaptive learning, powered by artificial intelligence (AI). The standout feature of AI-driven learning is personalized training, which tailors individual learning trajectories and introduces personalized development programs. This approach fosters a development environment that nurtures creativity and supports high achievement (Evseeva et al., 2019).

Corporate digital training activities encompass a collection of systems (Vardarlier, 2020). By establishing such a system within a company, it becomes possible to create a diverse training pool. Employees can choose their own training, allocate training time flexibly, and access training materials and programs from any location. HRM professionals can train new staff more effectively (Nawaz, 2017). Remote access to company information and training programs means that trainers don't need to work directly with

employees for all training sessions.



In regard to the training of the employees, a needs assessment exercise is carried out on an annual basis, where important training needs are identified. Following the identification of the needs, a capacity-building training plan is developed with the required budget for training, and the selected employees are sent for training. On the return of the trainees, a follow-up exercise is undertaken by the district resource team to ensure that there is applicability of the knowledge gained by the respective employees. Further still, a mentoring exercise is undertaken quarterly by the district resource team, which is mainly composed of the heads of departments and some section heads. This mentoring exercise is mainly intended to build (Stella 2008)

c) -Evaluative Functions:

Regarding talent inventory, assessment, and motivation, these aspects are collectively referred to as evaluative functions. Today, these evaluations are becoming increasingly accurate as employee behavior is increasingly recorded on data platforms. This means that employee behavior and performance are now fully data-driven and meticulously documented (Yu &Jinajun, 2020). All information must be generated and executed based on data, making it easier to integrate operational information into the digital context (Vardarlier, 2020). Data related to employees forms a personal data account, including job behavior, attendance, attitude inventory, and competency evaluation (Yu &Jinajun, 2020).



Companies can develop a database where they can access data on employee performance levels, employee turnover, absenteeism, organizational financial opportunities, etc. (Vardarlier, 2020).

The concept of “big data” in which we live has significant opportunities for HRM (Vardarlier, 2020). Big data transforms information into meaningful and workable formats. When integrating digitally, there is a need to clarify what kind of information will be available for big data objectives and to determine the appropriate information gathering and analysis instruments. Capturing and tabulating information by comparing the daily growing volume of data with past information is particularly useful for achieving outcomes that will be valuable in the policymaking process of the HRM function. Around the world, HRM professionals and company CEOs are increasingly focused on analyzing and gathering data about their workers. The application of big data and data mining in the domain of HRM and transforming human resource data into profitable operational solutions allows us to leverage fact-based information, forecast analysis, and obtain a greater return on HR investment (Evseeva et al., 2019).

d) -Digital Employee Services:

The experience of employees has been greatly influenced by digital transformation (Kamalakannan, 2024, p. 4). The main goal of HRM is to ensure that employees contribute to the business’s success by extending HRM and mere administrative functions (Thite, 2020). In an era of digital innovation, HRM worldwide is using digital apps, artificial intelligence, and



bots to create “employee experience platforms” that support ongoing employee needs.

The effective use of digital technology across all HRM functions allows organizations to meet the needs of employees by offering speed, quality, and cost advantages (Ladkin&Buhalis, 2016). Digital service centers provide efficient, high-quality, and diverse employee services, helping to achieve cost reduction, high efficiency, and better employee experiences, thereby increasing employee commitment.

Through digital technology, organizations can provide a full lifecycle and comprehensive employee service content. They may build an intelligent digital service system that covers the entire career cycle of employees, from accepting an offer to leaving the company. This system not only automates HRM activities but also processes input and output data faster and more accurately than employees can (Yu &Jinajun, 2020). As the boundary between work and life blurs, advanced companies have started to offer employee services that extend beyond regular personnel services to aspects of employees’ lives, such as travel, housing, and marriage.

This involves planning, implementing, and using digital technologies to support HRM activities such as payroll processing, reward and compensation, performance management, training and development and etc.

Updated HR technology. There is a tremendous shift away from traditional

software, moving toward modern ones, such as cloud-based ones.

Recently, HR applications have moved to mobile devices and may shift to



mobile platforms in the future. Mobile and social functionality are both standard requirements in technology vendor selection. The decision enabling analytics, measuring, and predicting employee performance, mobile apps, is facilitating the real-time employee across borders and in remote geography (Halid& Yusoff et all 2020)

Using digital technology, omnichannel and intelligent service methods can enhance the ultimate digital experience. Considering various employee service scenarios, more companies are providing Web portals, mobile apps, WeChat public numbers, self-service terminals, and call lines, making employee services available anytime and anywhere (Zhang & Chen, 2023). Digital Human Resource Management (DHRM) is crucial for business organizations to maintain strong relationships with employees and improve organizational performance through strategic planning. This study emphasizes the significance of DHRM in organizations and highlights its role in enhancing the recruitment process.

#### **2.4.4 View on Digital HR from the Perspective of Some Other Countries:**

- 1- Digitalization takes place in Human Resource management since the traditional HR pushed themselves to be part of this digital world.
- 2- 56 % of companies worldwide have restructured their human resource program to bring digital technology and mobile phones.
- 3- 51% of companies worldwide have implemented digital technology in the organization.



- 4- From the survey report, it showed that almost 33% of organizations are using AI to deliver better Human Resource Solutions, and 40% of them have developed mobile applications to deliver significant human resource solutions for business organizations.

The Human Resource Department has undergone a massive evolution in the past 5 years. Especially in the past 3 years, many companies have been implementing or collaborating with cloud-based systems in the HR platform. The Human Resource department necessarily needs a new revolution on the whole structure, by restructuring the field with skilled HR professionals, implementing analytics, etc., but in the present scenario, digital management practice has gained more importance among organizations. Now the present Human Resource management has changed to a digital form, which tries to focus on people, organization, employees, and work, etc. Now the resulting Human Resource Practice will be termed as Digital Human Resource. (Varadaraj&Al Wadi 2021p. 49)

## **2.5 challenges and obstacles:**

### **2.5.1 Challenges of Digital Transformation in HRMS:**

AMDA De Silva (2023) examines why the Human Resource Information System (HRIS) is underused in the Sri Lanka Navy and suggests ways to enhance its effectiveness. Despite its great potential, HRIS is primarily used as a reference tool rather than being fully integrated into personnel management. The study identifies obstacles to its full utilization and provides practical steps to improve the connection between technology



and efficient management. Key challenges include user satisfaction, IT infrastructure, management support, staff capability, cost-effectiveness, system acceptance, and competence. Issues such as limited access, data reliability, network constraints, and usability impact the effective use of HRIS. Recommendations from the study include improving intranet access, enhancing network speed, increasing IT literacy, and refining user interfaces. This research underscores the untapped potential of HRIS in the Sri Lanka Navy and offers actionable advice to fully leverage its benefits, supported by various sources for these findings and recommendations.

Nowadays, technology has become an integral part of nearly every field, particularly in the business sector and the banking industry. The reliance on technology is so profound that managing an account segment is inconceivable without innovation. However, innovation has also introduced a range of challenges, including external threats such as cyber fraud and internal risks stemming from both intentional and inadvertent actions by employees (Benqdara et al., 2020, p. 12).

(Yagneshnath and Junare, 2019) Highlight that technology plays a crucial role in ensuring the efficiency of all business functions. One key area is Strategic HRM, which supports company growth. Strategic HRM serves three main roles: Employee Advocate, Change Agent, and HR Business Partner. Technology, such as HRMS, enhances these roles by offering

ures that support payroll, HR information management, and employee administration. This paper discusses how HRMS can enhance decision-



making and serve as a valuable partner in the company's financial success. Proper utilization of HRMS is crucial for improving various aspects such as employee skill tracking, absenteeism, turnover rates, job satisfaction, and workforce planning. The study aims to demonstrate the significance of leveraging advanced HRMS features for effective Strategic HRM. It also highlights how HRMS can boost productivity and employee satisfaction. While upgrading from traditional HR systems to HRMS is recommended, further research is needed to evaluate its effectiveness in real-world scenarios. Overall, HRMS offers benefits for both employees and employers. (Liu Lufa 2024) highlighted the challenges of digital human resource management.

Table 2. 2the challenges of digital human resource management.

Types	Potential challenges
HR digital transformation	<p>Data analysis and mining</p> <p>Information security and privacy protection</p> <p>User Experience Optimization</p> <p>Innovative technology application</p> <p>Integration and sharing platform construction</p>



	Staff training and development
System management challenge	Integration challenges  Data security issues  Employee boycott  Cost implications:
Different management modules and Systems	Technical limitations  Internal organizational process differences  Cultural diversity  Legal compliance
Employee resistance	Employee pressure to study  The employee's stress of unemployment  Information leakage caused by the improper operation of employees

And according to Rimon (2017), six main elements will characterize



## 2.6 The perspectives of digital transformation of HRM;

- 1.The consumerization of HR systems - employees will use HR processes as consumers, not just as employees.
- 2.Establishing a digital employee-manager dialogue.
- 3.The transformation of learning.
- 4.Influence on goal setting
- 5.Efficiency of feedback due to the application of digital transformations using analytical solutions
- 6.Analytics - in-depth analysis, presenting immediate insights into actions for managers and HR professionals (Rimon, 2017)

### 2.6.1 Innovative HR Practices:

Nowadays, the traditional method of HR functions like (Recruitment and selection, training and development, performance management, and compensation administration) has been revolutionized by the influence of the internet or by the digitalization with innovative HR practices. Hence in the last decade, the use of the internet has dramatically changed the face of HR functions and the ways organizations think about HR practices. (Tripathi & Pooja2017)

Recruitment and selection are two important functions of HR management. Technically, the function of recruitment precedes the selection function. Recruitment is the first stage in the process, which continues with selection and ends with the placement of the candidate. Today, digitalization is considered as the latest tool in hiring. It is a real revolution spreading over



the world of job hunting and hiring. Recruitment and selection through social networking websites is more cost-effective compared to traditional forms of hiring that include placement consultants, posting advertisements in different forms of media, and participation in job fairs. With the help of digitalization, many firms make use of social media platforms like Facebook, LinkedIn, Glassdoor, Skype (video conferencing), etc., as a recruiting tool, and it has become an essential mechanism for employers in the hiring process as well as job seekers. It is via all these social media maneuvers that recruiters can manifold the probability of identifying suitable recruits by reaching out to a bigger pool of potential applicants. Furthermore, the emergence of knowledge as the HR management's key resource will certainly necessitate radically new management theories and practices, including the area of information technology as a replacement of administrative tasks in organizations (Patra, Khatik, & Kodwani, 2002).

## **2.7 Obstacles to Digital Transformation:**

(Tage Bjärfors and Timothy Liljebrunn, 2019) Identify four obstacles that can hinder digital transformation within organizations. The first obstacle is inadequate consideration of communication when planning for digital changes, which is crucial for all organizations, particularly those in the communication or media industries. The second obstacle is the failure to train appropriate leaders on digital tools, a challenge that may be more relevant to organizations with specific structures. The third obstacle is the lack of clear delines for using digital tools with subcontractors, which can impact large



companies in industries such as construction. Lastly, the fourth obstacle is the failure to consider leaders from other industries when hiring for leadership roles, which could be crucial for organizations aiming to adopt innovative approaches.

(Cichosz et al., 2020) In their study, the authors investigate how digital technologies are reshaping the logistics service industry, a field traditionally not associated with innovation. They identify five main obstacles hindering digital transformation (DT), such as the complexity of logistics networks and resource limitations, while highlighting eight success factors, including visionary leadership and a supportive organizational culture. Their findings offer valuable insights for logistics companies seeking to navigate the challenges of DT, contributing to our understanding of this evolving landscape.

Alharbi (2019) describes how change is inevitable and emphasizes the importance of businesses being ready to adapt. This readiness for digital transformation is a complex process that involves many factors. To understand what prevents digital transformation, the study distributed a questionnaire to 200 Saudi nationals in Riyadh, Qassim, and Jeddah, as well as conducted interviews with security experts. The findings highlight cybersecurity, trustworthiness, usage experience, and awareness among Saudi nationals as key factors hindering digital transformation, particularly in

context of Vision 2030.



## 2.8 Strategy and Implementation:

### 2.8.1 Digital Transformation strategy

(Tekic and Koroteev, 2019) Recently highlighted that there is a growing academic interest in digital transformation, aiming to help managers tackle this crucial issue. However, as a new field, the scholarly literature on digital transformation is varied and covers many different topics. This makes it hard to get a clear understanding of the overall picture. Their paper addresses this by identifying different digital transformation strategies based on two key factors: how digital technologies are used and how ready a business model is for digital operations. They propose a typology of four main strategies. These strategies differ in motivation and goals, leadership style, the importance of skills like creativity and entrepreneurial spirit among employees, the risks and challenges faced, potential consequences of failure, and tactics for improvement. Tekic and Koroteev believe their framework will be helpful for both researchers and managers involved in digital transformation. It provides a structured way to compare different strategies and offers practical advice for improvement.

(Albukhitan, 2020) explains that the next step in a digital transformation strategy is to evaluate and select the right solutions to achieve the set goals, enhance the user experience, and upgrade current technologies. This involves thoroughly assessing various technology providers based on their capabilities, functionalities, track records, reputations, and quality of after-sales support. A comparison matrix of solutions and vendors is recommended as a useful tool to help organizations make informed decisions.



In a study prepared by Mark Huselid in 1991, he found that the human resources management strategy played an essential role in improving the performance of the companies he studied. (Al-Shakhanbeh 2015).

- 1- Improving the quality of employees' performance.
- 2- Reducing production costs.
- 3- Improve customer and customer service.
- 4- High customer satisfaction rate.

Nowadays, however, the concept of human resources management goes beyond the concept of personnel management in the sense that HRM strives to meet the resource requirements of an organization to best suit the requirements of the organizational strategy. (Brito & Mubarak (2004, p. 2).

Human resources management strategies vary depending on the organization's strategy. For example, if the organization's strategy is growth, then the human resources management strategy is to focus on selection and appointment, and if the organization practices the strategy of reducing the size of the organization, then the human resources management applies the strategy of employees leaving the organization voluntarily.

Libya is one of the Arab countries with a planned national digital strategy for digital transformation, according to the Ministry of Communications and Information Technology report (2022). Arab countries can be categorized into three groups: the third category shows the highest

interest in digital transformation, followed by the second category with moderate interest, and the first category with the least interest.



The development and integration of advanced information technology in Libya are central to its political, economic, and social reform agenda. This advancement is expected to positively impact citizens, investors, and companies interacting with government agencies, thereby enhancing public services. The goal is to provide standardized, efficient, and timely services at a global standard.

As the digital world rapidly evolves, countries worldwide are striving to leverage this progress by utilizing all available channels and tools to enhance services for all stakeholders. This effort aims to advance economic growth, social well-being, and foster more interactive relationships with individuals and enterprises. The high expectations of beneficiaries are met by offering more accessible services that can be obtained anytime and from anywhere (issued by the General Authority for Information - State of Libya, 2022).

Table 2. 3the Vision for the Digital Economy on Arab Banks

Countries that need revitalization have a modest level of readiness	Promising countries that have a medium level of readiness.	Digitally advanced countries with digital readiness	The digital transformation strategy is national and planned	Countries	The category
x	X	✓	✓	Saudi Arabia	The third category
X	X	✓	✓	Bahrain	
X	X	✓	✓	The UAE	
	X	✓	✓	Kuwait	
	X	✓	✓	Oman	
	X	✓	✓	Qatar	
	✓	X	✓	Egypt	



X	✓	X	✓	Jordan	The second category
X	✓	X	✓	Lebanon	
X	✓	X	✓	Morocco	
X	✓	X	✓	Tunisia	
✓	X	X	✓	Algeria	The first category
✓	X	X	X	Palestine	
✓	X	X	X	Sudan	
✓	X	X	X	Iraq	
✓	X	X		Libya	
✓	X	X	X	Syria	
✓	X	X	x	Yemen	

*Source: Report on the Arab Common Strategic Vision for the Digital Economy, Arab League 2019*

### 2.8.2 Digital Transformation Standards:

(Trisnawaty et al., 2021) Discuss how PT PNM Investment Management (PNMIM) faced challenges in implementing a digitalization strategy. They wanted to launch an online platform called SiJAGO for easier mutual fund transactions. However, they didn't achieve this in the first quarter of 2020. This affected their ability to compete in the digital era and hampered their investment. The researchers aimed to identify criteria and success factors for IT projects in the financial sector during digital transformation. They used methods like Systematic Literature Review (SLR) and expert judgment to find ten criteria and 18 success factors. This research helps PNMIM and other companies focus on what's important for successful digital projects like SiJAGO.



(Scott and Walsham, 2021) argue that digital transformation has caused significant changes in industries and companies. They suggest that,

in addition to the obvious changes brought by digitalization, there are subtler effects referred to as the "digital undertow." This undertow influences how firms operate by altering industry standards. Using a study of the book publishing industry, they demonstrate how digitalization has impacted these standards. They explain that as digitalization transforms core activities within companies, it also affects how industry standards align with new digital practices. This mismatch, which they term "digital displacement," challenges the effectiveness of standards in regulating industry operations in the digital age. SO, Nirmala pointed out in his study (2018), Role of Digitization in Banking Sector. Digitization is the process of converting data into a digital format. Digitization means the adoption of technology. Digitization is not an option for the banking industry; rather, it is predictable because each industry is being digitized, and the banking sector is no exception.

1. Mobile banking
2. Automated Teller Machine
3. Debit cards
4. Internet Banking

### **2.8.3 Digital Transformation Models:**

(Gray and Rumpe, 2017) Discuss how "digital transformation" has become a significant trend across various areas, including industry and ociety. They explain that the term is often used broadly and can have lifferent meanings for different people. It functions as a buzzword for



discussing changes in companies, governments, schools, and other services. They decompose the term into two components: "transformation" and "digital." Transformation refers to making changes, ideally for the better. In the context of digital transformation, these changes are continually evolving due to new technologies and ideas. The "digital" aspect pertains to using technology, such as computers and the internet, to process data rapidly and improve decision-making. This can lead to enhancements in business operations and product manufacturing. Overall, their paper explores the evolving nature of digital transformation and its impact on various sectors.

(Bellantuono et al., 2021) explain that any effort to embrace Industry 4.0 through digital transformation involves moving from how things are done now to how they'll be done in the future, with more use of digital technology. They use change management as a way to analyze different models for digital transformation found in research. They look at well-known change management models to figure out what activities are needed for these transformation projects. This approach helps organizations adapt to the changing needs of customers and the world around them.

There are many models for implementing digital transformation, including: (Al-Shaibani, 2023, pp. 248-249)

1- which focuses on the behavioral variables (individual, collective, organizational, and environmental) when transforming a traditional organization into a digital organization.



2-The social technical model: It takes into account the degrees of technical and organizational interaction during conversion processes, and focuses on the business strategy and software necessary to activate computers and the database.

3-The strategic transformation model, which depends on the institution's strategic planning, and considering information and communications technology as one of the institution's pillars (Qandil, 2021, p. 6).

4-Information partnership model: Digital transformation is based on subscribing to a local or international information network for a specific period until the transformation is completed, or relying on one of the information companies to provide the service in partnership.

5-Competitive forces analysis model: It is based on designing information systems to assist SWOT analysis, which aims to maximize organizational strengths and reduce weaknesses, in order to control environmental opportunities and meet global and local difficulties. This model is based on the organization's strategic planning and the design of complete information systems.

6-Digital assets and digital file management model: It focuses on several information and communications companies instead of one company in digital file management (storage, access to information, browsing, information exchange, and retrieval).



7-The gradual transformation model: It is based on the financial capabilities of institutions to transform from the paper model to the digital model, and then financing is done in stages in light of the financial position and volume of the organization's business. (Amin, 2018, p. 60).

8-Dynamic transformation model: This model of transformation is based on the rapid levels of interaction between the organization and the environmental variables between them, as well as on the continuous progress in information technology.

9-Organizational development model: This model is adopted to shift to learning, transformative training, and computer literacy in the organization, and then development takes place according to degrees of organic learning and not by imposing rigid mechanical solutions.

10-Optimization model: This model is based on searching for typical solutions for ICT applications through simulations, designing experiments, and prior practical examinations before transformation, while trying to reduce costs and search for the best results.

11-Cost-benefit model: This model is based on comparing the costs of transforming a digital organization with the possible gains from acquiring information technology.

12-Integrated transformation model: This model is based on the foundations of systems and the will for integrated transformation of all lepartments and organizational levels to design the digital organization.



13-Rental Transfer Model: Transferring is done by renting computers and doing the work for others. The transfer philosophy is based on the fact that the experience of companies specialized in information and communications technology, systems analysis, and programming is much greater than the experience of the user of that technology. (Al-Najjar, 2004, pp. 199-201)

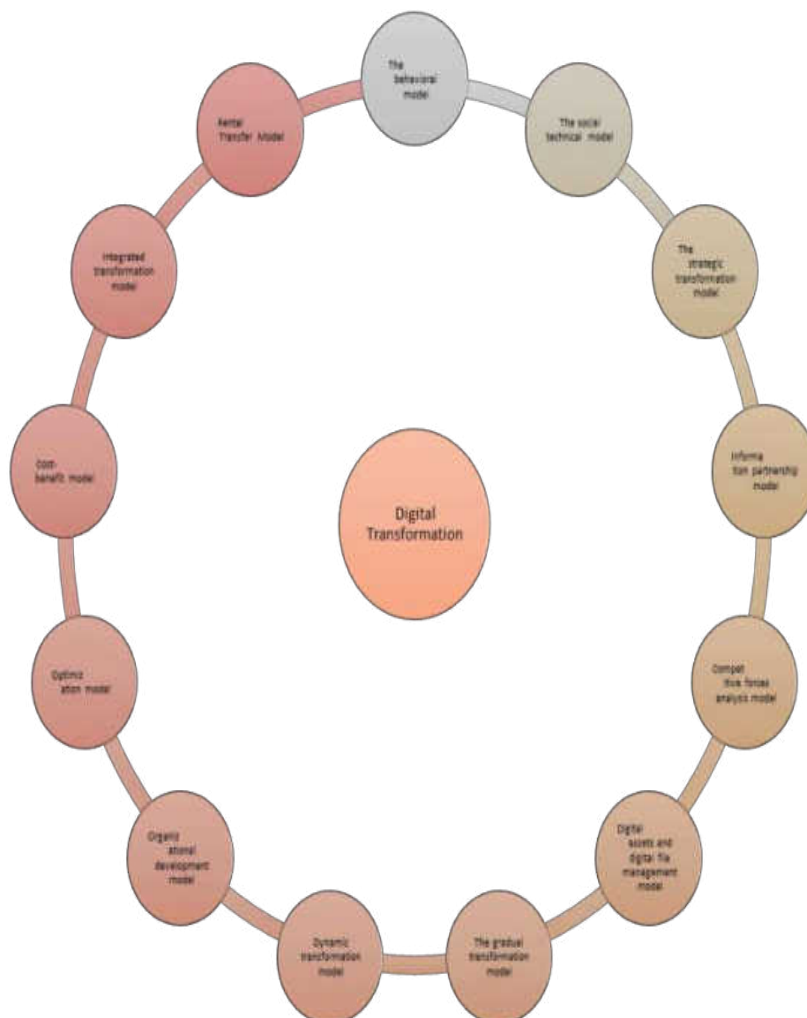


Figure 2. 6Digital Transformation Models



#### **2.8.4 The integration of digital transformation with human resource management has significant implications for organizations:**

- a. Organizations can optimize their HR processes by utilizing digital tools and technologies
- b. HR digital transformation automates tasks such as recruitment, onboarding, and performance management.
- c. This approach improves the efficiency and accuracy of HR processes, reduces errors, and increases productivity.
- d. Integrating digital transformation with HR enables data-driven decision-making through real-time analytics and insights.
- e. HR digital transformation promotes employee self-service, allowing individuals to access and update their personal information, benefits, and training materials.
- f. It enables remote work and flexible arrangements by providing digital platforms for communication, collaboration, and performance evaluation.
- g. The integration of digital transformation with HR fosters a culture of continuous learning and development through the use of online training programs and resources (Kamalakaran 2024)

#### **2.8.5 Dimensions of EHRM:**

##### **a) E-recruitment**

makes considerable use of digital and web-based technology to help in the hiring process. Today, practically every company uses a variety of internet sites to find new employees, either directly or via a third party. Job



openings are advertised on a variety of internet channels, and candidates can apply electronically and upload their resumes to save money and time. The systems then assign a numerical ranking to each applicant based on a variety of factors, such as education, work experience, GPA, and so on (Elsawy, Elbadawi & Ali, 2021)

AL WHADA is just one of the third-party e-recruitment services employed by in bank to find new employees.

**b) E-performance appraisal**

When employees are evaluated online for their ability to perform to expectations in their job descriptions, it is known as an E-Performance Appraisal (EPA). According to research, firms utilize e-Performance appraisal to assess employee performance and provide feedback (Elsawy, Elbadawi Ali, 2021). One of the HR activities is performance appraisal, which is frequently done on an ongoing basis. Organizations can drastically minimize the workload and time required to conduct a performance review by utilizing digital technology. Managers can also use IT systems to connect the organization's goals, plans, and practices with the performance management program. Top performers across the company can be identified with the help of E-Performance, which keeps and motivates top performers (Jarrar and Schiuma, 2007).

So, the banking sector in Libya is one of the sectors focused on leveling infrastructure and digital transformation to benefit from



modern technology in banking operations... One Bank is one of these banks that has enhanced its focus on digital transformation.

**c) E- training AND development:**

When it comes to e-learning and training, digital technology is used to provide access to knowledge at any time and from any location. It also requires sharing information on an ongoing basis without regard for time or resource constraints. Virtual classrooms, self-paced learning modules, web conferencing, and professional networking are some of the techniques employed in the training process. With huge corporations increasingly going global, e-learning has emerged as the best method for delivering training and education. It also improved the efficiency of organisations and the flexibility of their personnel while also decreasing both costs and time. Many aspects of e-training are similar to those of e-learning, such as the methods of delivery employed and the technology involved, but the time span for learning is significantly shorter, and it is frequently tailored to meet a specific learning target or skill set

**d) E-Communication**

**1. Customer problem reduction**

It would be an oversimplification to say that problem-solving is the most important activity that a manager performs. The job is more complex than that. Other activities, such as communications, are also important.

However, it is safe to say that problem-solving is a key activity – often



spelling the difference between a successful and unsuccessful management career.

Herbert A. Simon, a Nobel Prize–winning management scientist, is credited with defining four basic phases of problem solving that are universally recognized. According to Simon, problem solvers engage in:

- 1 Intelligence activity. Searching the environment for conditions calling for a solution.
- 2 Design activity. Inventing, developing, and analyzing possible courses of action.
- 3 Choice activity. Selecting a particular course of action from those available.
- 4 Review activity. Assessing past choices. In performing these activities, the problem solver must have information. (Figure 2.9) illustrates this support. An information system developed either by users or information specialists must provide this information. (EL GANZORI 20 13)



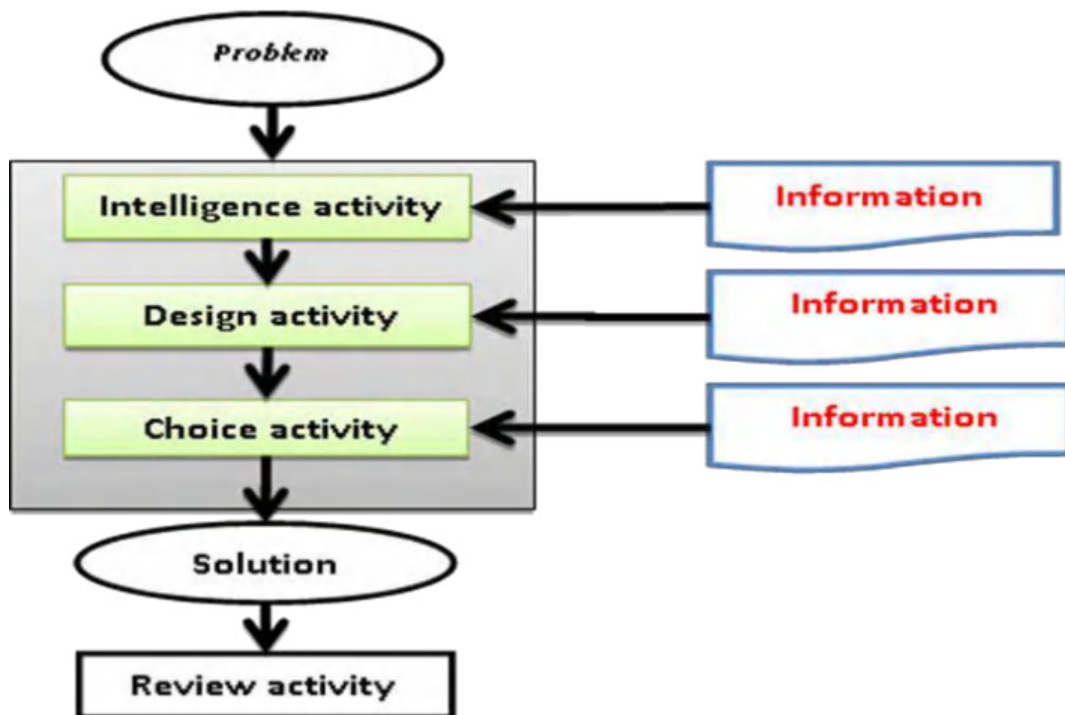


Figure 2. 7Customer Problem Resolution

As artificial intelligence (AI) continues to evolve, its role in customer service and dispute resolution is becoming increasingly significant. Emotionally intelligent AI has the potential to transform customer interactions by understanding, responding to, and managing customer emotions effectively. Unlike traditional AI, which relies on logic and predefined rules, emotionally intelligent AI incorporates sentiment analysis, natural language processing (NLP), and deep learning techniques to recognize and appropriately react to customer emotions.

Luna 2025 article explores the development of emotionally intelligent AI, its applications in customer service and dispute resolution, the methodologies involved in creating such systems, and the challenges faced in implementing them. Through the use of advanced machine



learning models and multimodal emotion recognition, businesses can enhance customer satisfaction, improve conflict resolution efficiency, and build stronger relationships with consumers. (Luna 2025)

### **2.8.6 CHALLENGES IN E-HRM PRACTICES IN THE BANKING SECTOR.**

The study explores the challenges banking organizations face in implementing effective Human resource management through electronic means, including data security concerns and cybersecurity threats. Technological advancements can render HRM systems Outdated without timely updates, posing paradoxical challenges.

- a. Data Security Concerns: Managing sensitive employee data electronically raises concerns about data security and privacy breaches, necessitating robust security measures to safeguard information.
- b. Technological Obsolescence: Rapid advancements in technology may lead to the obsolescence of e-HRM systems, requiring continuous updates to stay aligned with industry trends and maintain effectiveness.
- c. Employee Resistance: Some employees may resist the transition to electronic HR practices due to unfamiliarity or concerns about job security, requiring effective change management strategies.
- d. Integration Issues: Integrating e-HRM systems with existing organizational processes and legacy systems can be complex, requiring seamless tegration to avoid disruptions and ensure data consistency.



- e. **Training and Skill Gaps:** Employees and HR staff may need training to effectively use e-HRM tools, and skill gaps can arise, hindering the optimal utilization of electronic HR resources.
- f. **Legal and Compliance Challenges:** Adhering to diverse and evolving labor laws, data protection regulations, and industry-specific compliance requirements poses challenges in e-HRM implementation.
- g. **Costs of Implementation and Maintenance:** Initial setup costs and ongoing maintenance expenses of eHRM systems can be substantial, impacting the financial feasibility of some organizations.
- h. **Data Accuracy and Quality:** Maintaining accurate and high-quality data is crucial for effective decision-making. Inaccurate or incomplete data can lead to errors in HR processes.
- i. **User Experience Design:** Ensuring a user-friendly interface and experience in e-HRM systems is essential to encourage widespread adoption and effective use by employees and HR professionals (Ganeshan& Vethirajan, 2023)

### **2.8.7 Critical Success Factors Due to DIGITAL E-Technology in HRM.**

- a. E –Technology helps organizations to enhance productivity
  - b. E-tools are extremely useful for training and development
  - c. They enable effective performance management,
  - d. They facilitate effective knowledge management
  - . They facilitate effective compensation and benefits administration
- Useful for building the skills and competencies of the employees



- g. Most useful for recruitment and hiring online
- h. Facilitates effective interpersonal communication
- i. It's of significant help in the management and retention of talented employees
- j. Useful for career planning and succession planning.
- k. It gives effective tools for monitoring employees
- l. It is of significant help in payroll maintenance
- m. Facilitates all HR activities like employee monitoring through e-surveillance and others
- n. Organizations are moving towards an integrated Human Resource Management System rather than using standalone applications.
- o. E-recruitment has increased by more than 50% in the organizations.
- p. Provides effective tools for retaining and managing the talented workforce.

## **2.9 The job performance:**

### **2.9.1 The concept the job performance:**

With the increasing focus on performance and the effectiveness and efficiency of institutions and employees in achieving their goals, whether these institutions are educational, commercial, or industrial, there is a growing emphasis on managing them in a way that ensures they reach their objectives. This involves enhancing performance levels to ensure continuity, growth, and development. In today's competitive environment, where there is significant interest in performance, institutions must



concentrate on the human element to achieve their goals. This requires the effective use of resources, exploitation of available opportunities, and optimal use of available energies. Consequently, it is essential to improve human performance within institutions to deliver services quickly and with high quality, meeting the needs and expectations of workers (Al-Balawi, 2006).

In addition to that, job performance is a behavior that an individual deliver in order to leverage the value of an organization over a period of time. Any HR department aims to leverage and increase the job performance of its employees, which leads to increasing productivity to the highest possible level. Hence, many books and articles mentioned various factors that can be used to indicate and measure job performance, such as leadership style, organizational commitment, and self-efficacy (Shiqian 2018).

The performance evaluation process is a crucial function within HRM, applied across all levels of an organization, from senior management to employees in the lowest job positions and production lines. Performance evaluation is an effective administrative control tool used to compare actual performance with targeted goals. It encourages departments to work energetically and actively by means of continuous monitoring by supervisors. This process motivates employees to perform efficiently to demonstrate their productivity to their managers and achieve higher evaluation scores for potential incentives and bonuses. To ensure



that the evaluation process achieves its desired outcomes, it must be conducted systematically and accurately, with the involvement of all relevant parties who could benefit from the final results.

Interest in the performance effectiveness and efficiency of institutions is growing. This applies to various types of institutions, whether educational, commercial, or craft-based. Consequently, there is a focus on managing these institutions to ensure they achieve their goals by enhancing performance levels. This approach aims to ensure continuity, growth, and development. Given the current global emphasis on performance, institutions must prioritize the human element to achieve their objectives. This involves the effective use of resources and the optimal exploitation of available opportunities and energies.

These motives necessitate raising both human performance and institutional performance to provide services quickly and with high quality, thereby meeting the needs and expectations of employees (Al-Houni, 2023). Job performance refers to the actions and behaviors exhibited by individuals that contribute to achieving the goals of institutions. It is based on this performance that wages and salaries are determined, reflecting an individual's ability to meet institutional objectives.

The concept of performance is also recognized as one of the most important aspects in various functional fields. Outstanding performance in a work environment where justice prevails naturally elevates individuals to higher positions within the institution. This is especially true given the



significant and rapid developments occurring in institutions, which require them to maintain the highest levels of performance (Jihad, 2022).

Job performance is defined as the net effect of an individual's efforts, which begins with abilities and awareness of the role and tasks, and proceeds to the degree of achieving and completing the tasks of an individual's job. (Al-Lawzi, Al-Zahrani, 2012) It is also defined as the set of outputs and goals that the organization seeks to achieve through its employees.

Therefore, performance is a concept that connects aspects of activity with the goals that institutions aim to achieve through the division of tasks and duties (Jihad, 2022). Andrew defines it as 'the interaction of an employee's behavior, where that behavior is determined by the combination of their effort and ability.

Thomas Gilbert believes that the term 'performance' should not be confused with 'behavior' and 'achievement.' Behavior is the work that individuals perform in the organization where they are employed, while achievement is the impact or results that remain after individuals stop working—in other words, the outcome or product. Performance, according to Gilbert, is the interaction between behavior and achievement, encompassing both behavior and the results achieved together (Attabi, 2015).

F.W. Nicolas defined performance as 'the product of behavior.' Behavior is the activity carried out by individuals, while the products of



behavior are the results that stem from that behavior, which alter the environment or outcome (Ali, 2020).

Fred defined performance in terms of the results of the behavior that accompanied it, stating that performance is the result of behavior. Behavior is an individual's activity and effectiveness, while the results of behavior are the changes that occur in the environment surrounding the individual due to that behavior (Jihad, 2022).

P. Drucker views performance as the organization's ability to maintain a balance between shareholder and worker satisfaction (Marrakesh, 2012). Performance can also be described as the results achieved by an individual, influenced by various factors. Some of these factors are within the employee's control, while others may be beyond their control. The key elements of performance are:

The Employee: This includes the skills, interests, values, attitudes, and motivations that the individual possesses.

The Job: This refers to the requirements and challenges associated with the job, as well as the opportunities it offers. It also includes feedback as a component.

The Situation: This encompasses the characteristics of the organizational environment, including the work climate, supervision, availability of resources, administrative systems, and organizational structure. Based on the definitions mentioned earlier, the researcher



believes that job performance is a set of behaviors expressing the employee's performance of their duties and responsibilities.

### **2.9.2 The importance of job performance:**

One of the most important requirements of the concept of management is to achieve the greatest possible results and for the organization to reach its desired goals with the least resources, whether financial, human, technical, or others, and in the shortest time and the best ways. In other words, management means effectiveness and continuous improvement of performance. In order for this to be achieved, the official or manager must be able to possess a distinguished set of skills that qualify him and help him to make a good investment of resources and time, and to reach the best directions and best decisions, and thus improve the Job performance.

- 1- Performance is a measure of an individual's ability to perform their work in the present, as well as to perform other relatively different tasks in the future, and thus helps in making transfer and promotion decisions.
- 2- Incentives are often linked to the individual's performance, and this leads to the individual's interest in his work performance and his attempt to improve it.
- 3- The job performance of individuals who work hard to obtain skills and gain experience, and to benefit from it to provide work or performance without value, meaning that it gives or enables the person to obtain skill competence.



- 4- Investing time through disciplined working hours, where the worker realizes all his duties and responsibilities towards his work, and gives every effort to provide the best.
  - 5- Management indicators represent a type of incentive for a human organization within the organization if it is based on sound foundations.
  - 6- Develops the experience and competence of superiors.
  - 7- It helps raise the morale of employees.
  - 8- Exploiting the individual's apparent and latent abilities and potentials and making the best use of them. (emran and elhony, 2023).
3. Dimensions of job performance:

Perhaps the most important dimensions by which performance and productivity can be measured are efficiency and effectiveness. Efficiency is the attempt to reach the goal with the lowest financial cost, the least effort, and the fastest possible time, while effectiveness refers to the attempt to reach the best possible quality of performance and services provided. Productivity is measured by the criteria of efficiency and effectiveness. An effective employee has high productivity and good performance, which reduces work-related problems and achieves set goals (Al-Qaed 2023).

The division of job performance has undergone a different process, which only focused on results in the beginning, that is, task performance, and later not only focused on results, but also paid attention to processes, that is, contextual performance, as well as learning performance, which is



controversial to a certain extent. As the connotation and extension of job performance at different times and different organizational backgrounds are not the same, it is bound to involve the evolution of the dimensionality of job performance (Saidin and Wan it 2024)

**a) -Efficiency:**

The term efficiency, job performance, refers to the ability to accomplish what must be done. As such, it is an element of growth and progress for both individuals and organizations in order to be able to master their task. The two elements of ability and desire define efficiency. The word productivity can also be used to refer to the use of production elements. To provide goods and services with the least amount of effort, the lowest cost, and the shortest period of time. The issue of efficiency focuses on quantity and quality in the use of production elements.

**b) Effectiveness**

The organization's ability to achieve goals by increasing sales volume, achieving customer and employee satisfaction within the organization, developing human resources, and growing profitability (Bouzkia, 2010). Effectiveness can also be defined as the organization's ability to exploit available opportunities to achieve goals in the long term, meaning that achieving effectiveness requires accumulated successes. Success can be defined as the organization's ability to take advantage of the opportunities available to it in the environment to obtain valuable resources from rare sources to continue its activity (HALO 2023).



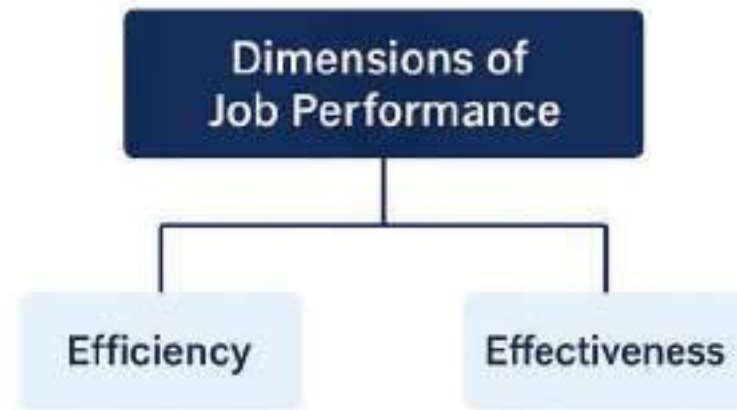


Figure 2. 8Dimensions of job performance

### 2.9.3 Technology and Job Performance:

#### 1. The relationship between technology and job performance.

Technology has become a motivating factor for all organizations that are looking for competition, excellence, efficiency, and effectiveness in performance. Therefore, Attia believes that the relationship between information technology and job performance is as follows:

- 1- Reducing the job burdens placed on managers, thus contributing to raising the efficiency of senior management.
- 2- Raising the morale of employees, which led to their loyalty and belonging to the organization.
- 3- Increasing the organization's achievement of its long-term goals.
- 4- Increasing the ability to use different resources.

Increasing the opportunities available to the organization in internal and external markets (Alija2024)



6- Enhancing strategic success (Emran and Elhony 2023).

## 2. **Impact of Digital Transformation on Job Performance:**

(Guzmán-Ortiz et al., 2020) Conducted a study to see how digital changes affect job performance in insurance companies in Peru. They used a scientific method to look at four insurance companies in different regions. They found that customer service experience and the skills of employees, when improved by digital changes, had a positive impact on how well tasks were done and how employees fit into their work environment. However, they didn't find a clear link between digital changes and bad behavior at work. The study also showed that the way companies' processes changed digitally influenced how well tasks were done and how employees fit into their work environment. But the overall business model changes didn't seem to have much effect on job performance. In conclusion, the study suggests that improving customer service, employee skills, and company processes through digital changes can make workers in insurance companies in Peru perform better.

(Yildiz et al., 2024) conducted a study to understand the impact of technological changes, specifically digital transformation, on job performance within family-owned fitness businesses in Turkey. Their research involved surveying 334 employees working in fitness centers to gather their perspectives on this topic. The study explores how technological changes, particularly digital transformation, affect job performance in fitness family businesses in Turkey. It analyzes the



perceptions of fitness center employees regarding digital transformation and its effects on their job performance. The study found that digital transformation perceived by family business employees significantly influences their competence and, consequently, their job performance. This implies that implementing appropriate digital transformation in products and services within family businesses can enhance employee performance and productivity.

(Ying-Yu Kerri Chen et al., 2016) studied how an industry-specific website affects small textile businesses. They looked at things like how easy the website was to use and what services it offered. They talked to business leaders and did surveys to find out how these websites affected the companies. They found that certain features, like maintenance and B2B functions, really helped companies perform better. They also found some surprises, like too much industry information actually hurting performance. This study helps businesses and website designers understand how to make better websites for small companies in the textile industry.

### **3. Performance Management and Performance Appraisal:**

Performance management refers to a process where managers and supervisors ensure that employees' performance and assigned work are conducted in alignment with organizational objectives. This process requires a meaningful insight into what these activities and outputs are, ensuring that been achieved, and feedback needs to be given to help employees meet expectations. Therefore, both managers and employees



need to identify possible performance problems and to come up with relevant best solution. (Deepa et. al., 2014). the essential purpose of PA from an organizational perspective is to help managers make right decisions on salaries, promotions, training, and encouraging employees through positive feedback. in addition, that employees perceived the training and development of their carrier based on PA which could be thought of as a reward and can motivate them to work harder. in included the positive impact of training on motivation and job performance. Purpose of PA is not only linked to training employees, but goes beyond by making administrative decisions. Promotion and financial rewards are among administrative decisions directly affected by PA. (Al-Jedaia & Mehrez 2020)

### **2.9.3 UNDERLYING THEORIES AND THEORETICAL FRAMEWORK JOB PERFORMANCE.**

Exploring the basic concepts and theoretical foundations that define the dimensions and dynamics of work performance is essential to developing a comprehensive understanding of the subject.

#### **a) Expectancy Theory (Victor Vroom, 1964)**

The Expectancy Theory, which Victor Vroom developed in 1964, is another theory that is frequently used to examine job performance. This idea, which is a cognitive motivational theory, describes how people choose their actions depending on what they hope to achieve. According to the theory, people are driven to engage in particular behaviors if they think that doing so would result in the performance levels and rewards, they



want. Three essential elements form the foundation of expectation theory: valence, instrumentality, and expectancy.

Expectancy theory, as proposed by Vroom (1964), offers a structured approach to understanding and predicting individual motivation in the workplace. The theory posits that motivation is influenced by three key factors: expectancy, instrumentality, and valence. Expectancy refers to an individual's belief that their effort will result in the desired level of performance, based on their perception of the likelihood that exerting a certain level of effort will lead to achieving the performance goal (Vroom, 1964). Essentially, if an employee perceives a high expectancy, they are more likely to be motivated to exert effort towards achieving their goals.

#### **b) Attribution Theory (Heider, 1958)**

Attribution theory is one of the social cognitive theories that explains the causes of people's behavior or performance. It explores what information is gathered and how it is combined to form a causal judgment. For example, if someone is angry, it is because he or she has a bad temper or because something bad happened.

Therefore, Attribution Theory suggests that job performance may be attributed to perceived organizational support and work engagement, highlighting the influence of both internal factors (such as vigor, dedication, and absorption) and external factors (such as working conditions and organizational support) on performance outcomes (Saidin and Wan 2024).



## 5. Motivation

Motivation is a mental attitude that propels an individual to work toward specific objectives. Filled with energy and enthusiasm, this drive translates into action. It is the key to more profit because motivated employees are more productive. The performance of any organization and its continuity depends on the employees, who are the key assets of the organization. The capacity and capability of the manager to create a motivating environment also play an important part. Motivation is described as the quality that pushes us to act or not act, a drive that establishes our behaviors, goals, and course. The inclination to respond a certain way to achieve a particular goal is also known as employee motivation. If an employee is provided the incentive to work more effectively in accordance with their demands, it can also encourage them to put in the effort for the success of the company. It is a psychological process that energizes and maintains human activity at work (Philomena Ify2024).

The achievements of individual and organizational goals are an independent process linked by employee motivation. It means that organizational goals are directly related to the personal goals of individuals, and motivational factors have an effect on the performance of employees. The employees' motivation, their enthusiastic and energetic behaviour towards task fulfillment, play a key role in the success of an organization to its benefit (Shah& Burgoyne .it 2017)

**Role of Electronic Technology in Job Performance HRM: An Analysis:**



The role of electronic technology in human resource management in organizations, with the help of data obtained from various sources. So, the model constructed below indicates the various Operational functions of HRM and the e-tool applications that support such functions (SHERIFF& RAVISHANKAR2011).

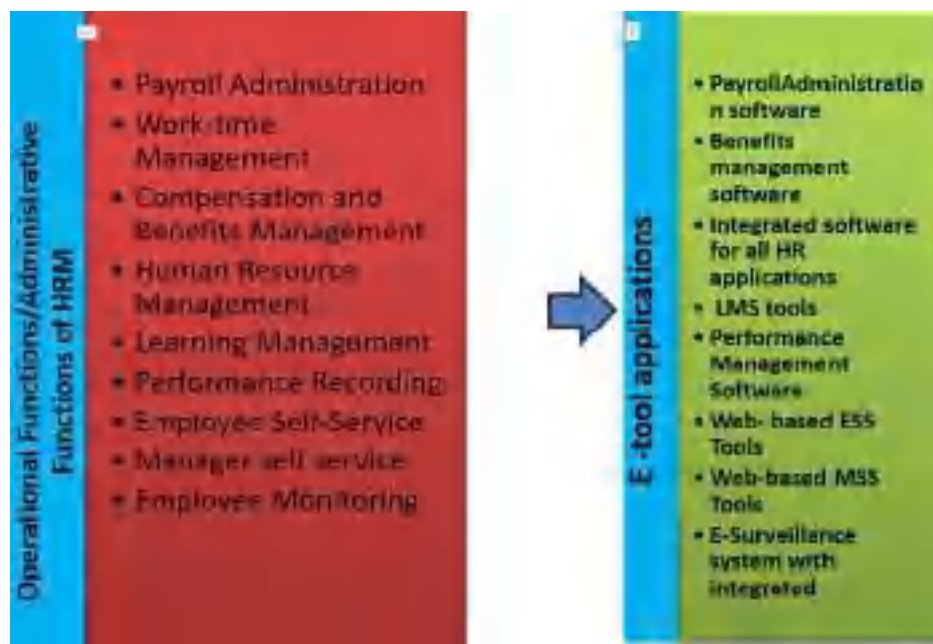


Figure 2. 9E-Tools Used for Operational Functions of HRM/Transactional Functions



## 2.10 The relationship between human resource management and digital transformation

Table 2. 4The relationship between human resource management and digital transformation.

Digital Transformation	Human Resources
<ul style="list-style-type: none"> <li>- Introducing New Technologies.</li> <li>-Digitization of Services.</li> <li>-Cultural Change.</li> <li>-Artificial Intelligence and Analytics.</li> <li>- Poor Environment</li> </ul>	<ul style="list-style-type: none"> <li>- Restructuring Competencies</li> <li>-Digital Training and Onboarding</li> <li>-Building a Supportive Digital Culture.</li> <li>-Intelligent Recruitment and Performance Analysis.</li> <li>- Improving Employee Experience and Retention</li> </ul>

Digital transformation in banks is not restricted to the introduction of technology; it requires strategic changes in people management, skills, and organizational culture. This is where human resources performs a pivotal role in the f this transformation. Digital transformation is revealed in the adoption of



E-HRM tools, such as digital recruitment, e-training, and automated evaluation. On the other hand, the Human Resources Department is responsible for identifying required digital skills and planning strategies to attract and develop digital talent.

### **2.11 Adopted Theory:**

sociotechnical Theory

Fred Emery and Eric Trist developed the concept of socio-ethical system in the 1950s. That period saw a dramatic increase in technology commercialization due to developments from World War 2. However, the introduction of new technology in existing organizations to improve efficiency and productivity did not meet expectations. Since the period, the social technical system theory has become prominent along with the evolution of information technology. The social technical theory acknowledges the interrelatedness of social and technical aspects for technology application in an organization. The interaction between Social and technical systems has linear, as well as non-linear, cause and effect relationships. These interactions may create the conditions for either successful or unsuccessful systems behavior; therefore, the sociotechnical approach focuses on the joint optimization of the social and technical subsystems (Miller 1998). The sociotechnical system is also an open system that exists within a complex environment, with which it interacts and is affected by (Cawker et al, 2008)

These cause the sociotechnical system to be a complex system, as these interactions cause nonlinearity, emergence, feedback, and self-organization. The

bsystem addresses the structures of the organization, encompassing the structures and organization with their knowledge, skills, attitudes, values,



and needs (Bostrom & Henen, 1977). people perform work using the available technology artefacts, with a choice and techniques that transform inputs into outputs. Trist and Bamforth (1951) highlighted the principles of sociotechnical systems as responsible autonomy, adaptability, and meaningfulness of tasks (Oosthuizen 2021).

The sociotechnical theory aims to promote knowledge sharing, learning, and innovation within the organizational context to enable collaboration and flexibility for competitive advantage. New communication and knowledge management technology affords new opportunities for information flow within the organization to achieve its goals. therefore, change in technology may affect how people interact, and it may cause changes in their values, cognitive structures, lifestyles, and habitats. it is therefore important to be formative in the system analysis and development approach.

The sociotechnical system must be designed to evolve in changing environments. Through interaction among social and technical elements (Dragoicea2015). The way that humans think, operate, and interact must be captured in the physical system design. the design of a sociotechnical system can be approached from the following perspectives.

#### 1- **Human-centered perspective:**

Technology should alleviate the workloads of Humans to achieve situation awareness in support of decision-making. Making automation may be useful during



situations, but it may be cumbersome during complex and unforeseen nces.

## **2- Team – Team-oriented perspective:**

A team is defined as two or more parties that interdependently work together towards a common goal. technology is also a team member; trust between team members is a major factor for success.

## **3- Work – Work-oriented perspective:**

The focus on the work in the sociotechnical system helps to delineate the work and tasks across the team. Which consists of machines and humans. work is seen as a purposeful activity acting upon and in response to a dynamic environment. (Oosthuizen 2021

- **Rationale for Selecting the Socio-Technical Theory as the Theoretical Framework:**

Sociotechnical theory was chosen because it provides the most appropriate framework for explaining the relationship between digital transformation in human resource management and job performance. The theory also focuses on the integration of technical factors (digital systems) and social factors (employee and their skill), making it a suitable and appropriate perspective for studying how digital transformation contributes to improving job performance.

The socio-technical theory provides a framework for explaining the relationship between digital HRM transformation (independent variable) and job performance (dependent variable). According to this theory, organizational performance results from the joint optimization of social factors (employees, skills, and motivation) and technical factors (digital



systems and tools). Thus, digital transformation in HRM, when effectively aligned with employee readiness and involvement, can significantly enhance job performance.

The social environment model is a useful explanatory framework for a variety of complex modern situations. It applies consistently at any social level, from small groups to societies of millions, and is relevant to anyone working with complex socio-technical or socio-physical systems. So, Banks in Libya are considered to be societies where employees rely on teamwork to perform their duties.

