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Option: Human Resources Management

**The digitalization of HRM practices and Organizational
Change Management within companies case of: Geant**

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Dedication

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HAUSA

List of Abbreviations

H.R.M: Human Resources Management.

C.M: Change Management.

O.C.M: Organizational Change Management.

H.R.I.S: Human Resources Information System.

E.R.P: Enterprise Resource Planning.

A.I: Artificial Intelligence.

D.C: Digital Change.

D-R.H: Digital Human Resources.

B.T.S: Brevet de Technicien Supérieur

T.M: Talent Management.

C.R.M: Customer Relationship Management.

A.P.I.s: Application Programming Interfaces.

C.G.E.D: General Control of State Commitments.

A.T.S: Applicants Tracking System.

E.S.S: Employee Self-Service.

SaaS: Software as a Service.

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GENERAL INTRODUCTION

Introduction

In recent decades, globalization has accelerated digitalization, transforming virtually every industry. These changes have had a major impact on how organizations are managed, making the adoption of modern technologies essential for improving efficiency and overall performance. In this context, digitalizing human resource management (HRM) has become increasingly important. Employees are a company's most valuable asset, and digital technologies can help support them by boosting productivity and streamlining HR processes. To stay competitive in today's fast-changing environment, companies need to embrace these new technologies.

The new digital tools can make the key HRM processes (recruitment, performance, development, talent management) in another high level of efficiency. They allow organizations to take better decisions and improve HR effectiveness, by managing the employee information more accurately. However, this change from a traditional to a digital HRM can bring some difficulties other than the technological ones, like organizational and human challenges which can appear in the form of: change in the company culture, required skills, job personalities. Which can make some employees uncomfortable and develop a kind of resistance to change.

To address these challenges, the role of change management becomes vital, through strategic communication, targeted training, and consistent managerial support, organization can facilitate the adaptation to digital transformations. It is within this conceptual framework that our study is positioned. In this context we seek to address the following research question:

Main question

Based on this, the research question guiding this study is: **How does digitalization transform HRM practices and how does it drive organizational change within companies?**

This main question is divided into the following set of **sub-questions**:

1. What digital HRM practices have been implemented at GEANT?
2. What are the main organizational and human challenges faced during the digitalization of HRM practices at GEANT?

3. How does change management influence employee acceptance of digital HRM practices?

In order to answer the sub-questions, we formulate the following hypotheses:

H1: The digital transformation of HRM at GEANT involves the adoption of digital practices and is accompanied by organizational and human challenges related to digital skills, workload, and resistance to change.

H2: Effective change management facilitates the acceptance and adoption of digital human resource management practices by GEANT employees.

This study addresses two key topics in management: digitalization and organizational change management. These two concepts are relatively new, and studying them together enables us to better understand how organizations adapt to technological transformations and manage the changes resulting from the digitalization of human resource management practices. This study helps identify the main challenges and opportunities associated with digital HRM, particularly in terms of employee adaptation and resistance to change. It also highlights how effective change management supports the successful implementation of digital HR tools and improves organizational performance.

In order to answer the research question, this final-year dissertation is organized into three chapters. The first chapter addresses the theoretical concepts of the digitalization of human resource management practices, focusing on its benefits, limitations, main tools, and their impact on HRM processes. The second chapter is dedicated to organizational change management, discussing its key concepts, stages, resistance to change, and the relationship between digital HRM practices and change management. The third chapter presents an empirical study based on a survey, including the company presentation, research methodology, and analysis of the collected data.

CHAPTER 01:

**THEORETICAL CONCEPTS OF THE
DIGITALIZATION OF HRM PRACTICES**

Intoduction:

The digital transformation has significantly changed the way organizations manage their human resources. Companies increasingly use digital technologies to improve HR activities such as recruitment, training, communication, and performance management. This evolution has led to the development of digital Human Resource Management (digital HRM), which aims to increase efficiency and organizational performance through the use of digital tools and HR Information Systems (HRIS). However, the digitalization of HRM also presents several challenges, including technological adaptation, resistance to change, and data security issues. Therefore, this chapter presents the theoretical concepts of HRM digitalization, the transition from traditional HRM to digital HRM, as well as the role of HRIS and modern digital HR practices in organizations.

Section1: Theoretical Element on Digital Transformation

1. The transforming to a digital HRM

The transformation to digital HRM refers to the shift from traditional human resource management methods to modern digital practices using technology and HR Information Systems (HRIS). This transformation helps organizations improve efficiency, automate HR tasks, enhance communication, and support better decision-making.

1.1 From a tradtional HRM to a digital HRM

1.1.1 Definition of digitalization

In fact the concept of digitalization in HRM can't be attributed to a single author; but it is the result of gradual development driven by advances in digital technologies and contributions from various researchers and institutions. Here are some authors and searchers definitions:

«Digital transformation is the change caused or affected by digital technology in all aspects of human life». (Birbich, 2021)

«Digitalization is the use of digital technologies to innovate a business model and provide new revenue and value-producing opportunities». (Iliya Vial, 2019). However according to George Westerman, 'Digitalization is the process of integrating digital technology into all aspects of a business, which leads to fundamental changes in the way the business operates and creates value for its customers.'

Digital transformation corresponds to the integration of digital technologies into all of a company's activities in order to improve performance and create value.(Ait ouhmmaou, 2019, p200). It describes the transformations driven by the rapid advancement of digital technologies, which are profoundly reshaping how value is generated, how individuals interact socially, how businesses operate, and more broadly, how people think. (Ferhane, 2019, p250)

So, Digitalization is the process which aims to transform an object, a tool, a process or a profession into computer code in order to replace it and make it more efficient. It has become a natural phenomenon that combines the appearance of the Internet and daily IT advances

1.1.2 History of HRM digitalization

The evolution of Informatics (Computer Science) is a saga of human ingenuity moving from basic mechanical calculations to "artificial minds" that drive modern enterprises. In the realm of HR, this journey has fundamentally shifted the profession from a paper-heavy administrative role to a data-driven strategic powerhouse.

- I. Theoretical Foundations and Logical Roots (Pre-Electronics):** Foundational contributions by figures such as Muhammad ibn Musa al-Khwarizmi, Charles Babbage, and Ada Lovelace established the algorithmic and symbolic premises that underpin modern computation; these theoretical advances framed computation as rule-based manipulation of symbols rather than mere numerical calculation, while human resource management in this pre-electronic era remained predominantly manual and paper-based, with employee records maintained in ledgers and data retrieval being slow and error-prone (Ceruzzi, 2003).
- II. The Era of Vacuum Tubes and Giants (1940s–1950s):** The wartime exigencies of the 1940s accelerated the development of first-generation electronic digital computers—exemplified by ENIAC—which relied on vacuum-tube switching to perform large-scale numerical and cryptanalytic computations; despite their technological significance, these machines were bulky, power-intensive, and difficult to program, and they produced little immediate automation in routine personnel administration, which continued as a bureaucratic, paper-based function (Ceruzzi, 2003).
- III. The Transistor Revolution and Mainframes (1960s–1970s):** The invention and commercialization of the transistor produced smaller, faster, and more reliable computing systems and enabled the proliferation of mainframes within large organizations; during

this period HR began to experience digitalization of back-office functions—most notably payroll—through batch processing on mainframes, reducing calculation errors and manual labor while increasing processing throughput (Ceruzzi, 2003; Campbell-Kelly, 2003).

- IV. The Microprocessor and Personal Computing (1980s–1990s):** Microprocessor advances and the spread of personal computers, together with graphical user interfaces and productivity applications such as spreadsheets, decentralized computing and lowered barriers for nontechnical users; in this environment Human Resource Information Systems (HRIS) emerged, supplanting paper archives with relational digital personnel records that supported searchable employee profiles, training histories, competency inventories, and timelier reporting (Campbell-Kelly & Aspray, 2004; Hendrickson, 2003; Bhuiyan et al., 2014).
- V. The Integration Era: Cloud Computing, Connectivity, and ERP (2000–2015):** The transition from on-premise software to service-oriented models (SaaS) and the adoption of enterprise resource planning systems (e.g., SAP, Oracle) integrated HR data with financial and operational modules into unified relational databases; concurrently, e-HR initiatives—especially Employee Self-Service portals and Applicant Tracking Systems—decentralized routine HR tasks, empowered employees to manage personal information, and formalized recruitment and onboarding workflows, thereby enabling more efficient and data-driven human capital decisions (Stone & Dulebohn, 2013; Bondarouk & Ruël, 2009).
- VI. The Cloud and Internet Era (2000–2015):** With mature internet connectivity and cloud hosting, HR systems became remotely accessible and scalable across distributed workforces; cloud-hosted HR platforms consolidated records and automated processes, supporting real-time updates, facilitating remote recruitment and onboarding, and reinforcing the shift toward employee-centric services and cross-functional data integration (Stone & Dulebohn, 2013; Bondarouk & Ruël, 2009).
- VII. The Modern Era: AI and Big Data (Present Day):** Contemporary HR practice increasingly leverages artificial intelligence, machine learning, and big data analytics to derive predictive insights—such as turnover risk modeling and talent potential assessment—and to personalize learning and development pathways; algorithmic resume screening, LMS recommendations, and conversational agents (LLM-based chatbots) augment human decision-making and administrative capacity, repositioning HR from

transactional record-keeping to a strategic, data-informed organizational function (Tambe, Cappelli, & Yakubovich, 2019; Marler & Boudreau, 2017; Cappelli & Tavis, 2018).

The history of technology is a trajectory of “shrinking in size but expanding in impact” shows that hardware has become smaller, but its impact has become much larger. For Human Resources, this evolution has turned the department from a "file room" into a Strategic Pillar. Instead of relying on gut feelings, HR now uses real-time data to help lead the company (Cappelli & Tavis, 2018).

1.1.2 Comparison between traditional and digital HRM

Table 1 : Comparison of traditional HRM and digital HRM

Characteristics of traditional HRM	Characteristics of digital HRM
Databas management for administrative support, essential staff records, and periodic reports	Democratized data and advanced HR analytics in real time
Manual processing of personnel documents.	Robotic process automation
Hirarchical organizational structure	Agile team networking
Explicit job description with emphasis on specific competencies required	Dynamic competence requirements
Detailed HR planing, job description	Changing nature and typology of work
The focus of recruiters is on self-service	HRs focus on helping employees and increasing their productivity
Thinkig focused on improving existing HR processes	Innovative thinking aimed at changing HR processes through DTs

Source: The Impact of the Digitalization on the Human Resource Management By Anastasiia Mazurchenko, 2025 page 56.

Computing has totally changed HRM, shifting it from old-school admin work to a smart, digital powerhouse. Traditionally HRM meant manual paperwork, rigid hierarchies, fixed job roles, and slow, step-by-step improvements. Recruiters handled basic self-service stuff-. Now, with digital tools like AI analytics and RPA, data's everywhere in real-time for better decisions. Automation frees up HR for strategy; teams are agile networks, not stiff pyramids, jobs adapt on the fly; planning's flexible. Recruiters boost employee productivity. It's all about innovating HR to match business changes -a real game- changer toward agility and people focus. In today's dynamic and highly competitive global economy, digitalization has emerged as a critical strategic priority for organizations aiming to sustain their competitive advantage and respond effectively to increasing customer expectations. It refers to the widespread integration of digital technologies into all organizational activities, including production, customer relationship management, and human resource management.

1.2 The stages and challenges of digital transformation

1.2.1 The stages of digital transformation

In a context marked by rapid technological change and increasing competition, organizations are required not only to adapt but also to anticipate major transformations in their environment. One of the most important approaches that has emerged in this context is the concept of disruption, which refers to the ability of companies to break with traditional models and introduce innovative ways of creating value. According to Frédéric Fréry (2015), adopting a disruptive strategy is not a random process, but rather a structured approach that allows organizations to rethink their positioning and remain competitive. To guide this transformation, Fréry proposes a six-step method that helps companies move from conventional thinking to a more innovative and dynamic logic.

Step 01: Identifying dominant industry assumptions: The first step consists of understanding the rules and beliefs that govern an industry. Every sector operates based on certain norms that are often taken for granted, such as pricing models, customer expectations, or ways of delivering services. However, these assumptions can become obstacles to innovation. By identifying them, organizations can become aware of the limitations imposed by traditional thinking and open the door to new possibilities.

Step 02: Challenging existing business models: Once these assumptions are identified, companies must question the effectiveness of current business models. This means analyzing

whether existing methods still respond to market needs or if they have become outdated. This step requires a critical mindset, as organizations must be willing to reconsider their own practices and accept that what worked in the past may no longer be relevant in a changing environment.

Step 03: Exploring new value propositions: At this stage, organizations focus on creating new ways to deliver value to customers. This often involves identifying unmet needs or targeting segments that are neglected by traditional competitors. The objective is not necessarily to offer a more sophisticated product, but rather to provide a solution that is more accessible, simpler, or better adapted to customer expectations. This shift in perspective is what often leads to truly disruptive innovation.

Step 04: Leveraging emerging technologies: Technology plays a central role in enabling disruption. Companies must identify which digital tools or innovations can support their new ideas and improve their performance. This may include automation, data analysis, digital platforms, or artificial intelligence. The key is not just to adopt technology, but to use it strategically in a way that transforms processes and creates a competitive advantage.

Step 05: Experimentation and agile implementation: Disruption involves a certain level of uncertainty, which is why experimentation is essential. Instead of implementing large-scale changes immediately, organizations should test their ideas on a smaller scale, evaluate the results, and make adjustments if necessary. This agile approach reduces risks and allows companies to learn from experience. It also encourages a culture of innovation where failure is seen as part of the learning process.

Step 06: Scaling and transforming the organization: The final step consists of expanding successful innovations and integrating them into the organization as a whole. This often requires significant changes in structure, culture, and management practices. Employees must be involved in the transformation, and leaders must ensure clear communication and strong support. At this stage, disruption is no longer just an idea but becomes a real and sustainable organizational change.

1.2.1.1 Requirements of Digitalization in Human Resource Management

Despite its transformative potential, the transition toward digitalization remains a complex process, often accompanied by significant challenges. Many organizations struggle to

successfully implement digital initiatives due to organizational, technological, and human-related constraints. According to a study by the Boston Consulting Group, nearly 80% of companies that successfully achieve digital transformation are those that effectively address six key factors: a well-defined strategy, strong leadership involvement, the development of digital competencies, continuous performance monitoring, the adoption of flexible and modular solutions, and efficient change management practices.

The requirements for the digital transformation of HRM have been highlighted by Doshi, Shukla, and Patel (2021, p. 432) and can be summarized as follows:

- 1. Digital Workforce:** Anticipating and adapting to change is essential in the context of digital transformation. Organizations engaged in the digitalization of HR processes must ensure that both employees and HR managers possess adequate digital skills and technological knowledge. A workforce that lacks digital competencies may hinder the transformation process and increase the risk of failure.
- 2. Digital Work and Tasks:** The integration of digital technologies into work processes is a key requirement for successful digitalization. This involves transforming traditional manual tasks into automated and digital workflows. However, employees may resist digital tools if they do not find them meaningful or engaging. Therefore, organizations should design digital work environments that enhance employee engagement and facilitate effective communication.
- 3. Digital Support Management:** Digital transformation also requires the implementation of digital systems to support various HR functions. These include recruitment, onboarding, payroll management, compensation and rewards, performance evaluation, as well as training and development. Effective digital support management contributes to a more efficient, integrated, and responsive HR system.
- 4. Updated HR Technology:** A strong technological infrastructure is fundamental to digital HRM. This includes hardware, software, networks, data systems, and digital applications. According to Alam et al. (2016) and Muhammad (2018), the availability and compatibility of IT infrastructure significantly influence the adoption of digital HR practices. Furthermore, emphasize that a robust technological foundation positively impacts the successful implementation of digital HRM systems.

1.2.2 The challenges of digital transformation of the HRM practices

In the context of rapid transformations driven by the Fourth Industrial Revolution, the digitalization of Human Resource Management (HRM) has become a strategic necessity for organizations seeking competitiveness and efficiency. However, this transformation is not limited to the adoption of modern technological tools; it also involves rethinking HR functions, management practices, and organizational culture. Consequently, organizations face a set of complex and interconnected challenges that require a comprehensive approach combining technological, human, and strategic dimensions.

- **Technical issues:** The technical challenges of digital transformation are both numerous and complex. To begin with, organizations must establish a robust and secure IT infrastructure capable of supporting digital operations, often requiring significant investment in new hardware and cloud services. At the same time, they face heightened security risks such as cyberattacks, data breaches, and fraud, which demand advanced protection measures. Another critical issue is data management: companies must be able to store, analyze, and safeguard the vast amounts of information generated by digital technologies. Finally, firms must remain agile, continuously adapting to rapid technological developments in order to sustain competitiveness. In short, the technical dimension of digital transformation revolves around three major concerns: infrastructure, security, and data management.
- **Economic issues:** The economic challenges of digital transformation for companies can be grouped into three key dimensions: innovation, cost optimization, and adaptation to evolving markets. Innovation enables the development of new products, services, and customer engagement models, thereby facilitating entry into emerging markets and strengthening competitiveness in existing ones. Cost optimization involves leveraging digital technologies such as cloud storage to reduce operational expenses, streamline production, and enhance productivity, with resultant savings supporting further innovation or improved profitability. Adaptation to a constantly evolving market: is equally important. Companies must remain agile in responding to shifts in customer expectations, technological advances, and competitive pressures. Those that adapt quickly are able to seize new opportunities and sustain their competitive advantage.
- **Human issues:** Digitalization in HRM brings efficiency and innovation, but it also creates human challenges. Strohmeier (2020) explains that employees often resist new

technologies because of fear, uncertainty, and lack of digital skills. Fernandez and Gallardo-Gallardo (2020) add that digitalization changes traditional employment relationships through remote work and digital management, raising concerns about fairness and employee engagement. Bondarouk and Brewster (2016) further highlight ethical issues such as bias and lack of transparency in AI-based HR systems, emphasizing the need to balance technology with human values and trust.

The digitalization of HRM is a deep transformation that brings both challenges and opportunities. While it can create obstacles at first, it also opens the door to more flexible and efficient systems. Success depends on how well organizations balance technological progress with human needs, ensuring sustainable performance and competitiveness in the digital era.

2. Digitalization of HRM practices

2.1 HRI System

2.1.1 What is an HRIS

According to Silva F. (2008), in **Être e-DRH**, a Human Resource Information System (HRIS) is «a software system that automates specific HR tasks and structures the flow of information across different human resource functions».

In a simpler way, the HRIS helps automate routine HR activities and makes communication and information sharing easier and more structured. This means that instead of handling tasks manually, the system transforms them into organized and useful information flows that can support decision-making. It also helps improve the efficiency of HR processes and strengthens the role of HR within the organization. In many organizations, the HRIS is often integrated into an Enterprise Resource Planning (ERP) system, which allows better coordination between HR and other departments.

A Human Resource Information System (HRIS) is an integrated set of software applications designed to centralize, organize, and process employee-related data within an organization. This system enables efficient management of various human resource functions by automating and streamlining key processes, including:

-Job Analysis and Design: HRIS supports job analysis and design by collecting and processing information from various stakeholders, helping organizations define roles, responsibilities, and job requirements more effectively.

Chapter 01: Theoretical Concepts of the Digitalization of HRM practices

-Payroll Management: HRIS helps organizations automate payroll activities, making salary calculations and payments more accurate while reducing the administrative workload of HR departments.

-Talent Management: HRIS supports talent management by assisting organizations in attracting, developing, engaging, and retaining employees, which contributes to improving workforce performance and reducing employee turnover.

-Time and Labor Management: HRIS simplifies the management of employee attendance, working hours, and leave requests by automating data collection and integrating it with payroll systems, thereby improving accuracy and efficiency.

-Skill Inventory: HRIS facilitates the management of attendance, working hours, and leave requests by automating these processes and integrating them with payroll systems, ensuring greater accuracy and efficiency.

-Performance Appraisal: HRIS allows organizations to store and track employee performance data, helping managers make informed decisions regarding training needs, promotions, and career development opportunities.

-Training Systems: HRIS supports employee learning and development by simplifying the administration of training programs and enabling organizations to monitor employees' progress effectively.

-Recruitment: HRIS improves the recruitment process by providing tools to manage job postings, applications, and candidate selection, making hiring activities more efficient and less time-consuming.

2.1.2 ERP vs HRIS

ERP and HRIS differ in terms of scope, purpose, and functionality. ERP is a comprehensive system designed to integrate and manage all organizational processes, including finance, sales, production, logistics, and HR, through a centralized database shared across departments. It is used by all functions within the organization, provides standardized processes, and is generally characterized by a complex, lengthy, and costly implementation. In contrast, HRIS is a specialized system dedicated exclusively to HRM. It focuses on HR related activities offering greater flexibility and adaptability to HR needs. Unlike ERP, its database is centered on employee information, its users are primarily HR professionals, and

its implementation is usually simpler and less disruptive. Therefore, while ERP aims to coordinate all business activities across the organization, HRIS provides more advanced and in-depth support for managing human resources effectively (Kenneth Laudon & Jane Laudon, 2020; Francis Silva, 2008).

2.2 THE Digitalization of HR practises

Digitalizing HR means changing traditional HR practices by integrating information and communication technologies into different HR functions. This transformation allows organizations to move from manual and traditional methods to more flexible and efficient digital approaches, which helps improve performance and achieve organizational goals more easily.

2.2.1 Digital recruitment: Digitalization has significantly reshaped recruitment practices, particularly through the adoption of digital platforms and professional social networks. These tools broaden recruiters' access to potential candidates while streamlining the selection process via automated resume screening. As Besson (2018, p. 78) highlights, the integration of artificial intelligence into recruitment enables more precise targeting of desired profiles, thereby reducing human bias and enhancing the quality of hires. It refers to the use of the internet across all stages of hiring, from attracting candidates to final appointments. Organizations advertise vacancies online, receive applications electronically, and then classify and filter them through digital systems. Global platforms such as LinkedIn, Indeed, and Bait.com, along with interactive professional sites that feature videos and contact forms, play a central role in this process. By digitizing recruitment, institutions save time and reduce costs, while making job opportunities more accessible and ensuring that the right candidates are matched to the right roles. Moreover, digital recruitment supports social, legal, and ethical responsibility by safeguarding applicants' rights, and it contributes to organizational stability by attracting competent talent and retaining valuable employees.

➤ **Comparison between digital and traditional recruitment:**

E-recruitment has significantly transformed the recruitment process by replacing many traditional practices with digital solutions that improve efficiency and accessibility. Unlike traditional recruitment, which mainly relies on newspaper advertisements, physical bulletin boards, and manual procedures, e-recruitment uses online job platforms, professional networks, and Applicant Tracking Systems (ATS) to advertise vacancies and manage applications. This digital approach enables organizations to reach a wider and more diverse

pool of candidates beyond geographical limitations. In addition, the screening process is facilitated through automated tools that help identify suitable candidates based on their skills and qualifications, reducing the time required to review applications. The use of video interviews also provides greater flexibility compared to traditional face-to-face interviews while reducing travel and administrative costs. Furthermore, e-recruitment contributes to faster hiring processes, improved record keeping, and better compliance with organizational and legal requirements. As a result, recruiters are able to dedicate less time to routine administrative tasks and focus more on strategic activities such as talent acquisition, workforce planning, and enhancing the overall candidate experience.

The comparison highlights how e-recruitment has transformed traditional hiring practices through the integration of digital technologies. By using online platforms, automated screening tools, and remote interviewing systems, organizations can reach a broader pool of candidates, reduce recruitment costs and processing time, and improve the overall efficiency of the hiring process. Moreover, these technologies support compliance and transparency while enabling recruiters to focus on more strategic activities related to talent acquisition and workforce planning. As a result, e-recruitment has become an essential component of modern HRM, helping organizations respond more effectively to the challenges of an increasingly digital and globalized labor market.

2.2.2 Digital compensation and payroll

According to Jerry D. (2025), digital technologies are transforming compensation management by enabling organizations to make more informed, efficient, and transparent pay decisions. The integration of artificial intelligence and machine learning supports data-driven compensation strategies through real-time analysis and predictive insights, helping organizations identify pay gaps and anticipate salary trends. In addition, automated payroll systems reduce administrative burdens, improve accuracy, and ensure compliance with labor regulations through seamless integration with HR and financial systems. Furthermore, digital compensation platforms enhance pay transparency by providing employees with clear access to salary and benefits information, thereby promoting fairness, trust, and employee engagement.

➤ **Comparison between digital and traditional compensation and payroll**

The shift from traditional to digital compensation and payroll systems illustrates the impact of digital transformation on HR practices. Traditional systems rely on manual data entry, spreadsheets, and paper-based records, which often lead to errors, delays, and high

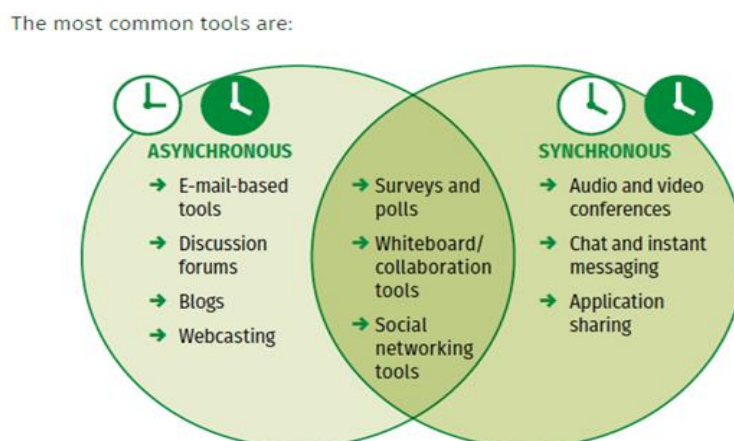
administrative costs. Salary processing and distribution are slow and less efficient, while compliance is managed manually, increasing the risk of mistakes. In contrast, digital systems use centralized cloud platforms and automation to ensure real-time data management, accurate payroll calculations, faster payments, and improved regulatory compliance. They also offer greater flexibility in payment methods and provide employees with self-service access to their compensation information, increasing transparency. Overall, this transformation reduces administrative workload and shifts HR roles from operational tasks to more strategic functions such as planning and pay equity analysis.

2.2.3 Digital training and development

Digital training refers to the use of technologies such as AI, databases, and electronic platforms to design, organize, and deliver training programs within organizations. It replaces traditional classroom-based learning with flexible solutions such as e-learning and simulations, allowing learners and trainers to access training from anywhere with an internet connection. This approach improves accessibility, reduces long-term costs, and enhances training effectiveness through reporting and analytics tools that track learner progress, evaluate performance, and measure training impact and return on investment (Hafidi N, 2026).

❖ **Communication Tools in E-Learning:** Communication tools are important in e-learning. They help learners and trainers interact and share information. These tools can be divided into two types, as shown in Figure 01.

Figure 01: Communication Tools in E-Learning



Source: Food and Agriculture Organization of the United Nations (FAO), E-learning methodologies and good practices (2021), p. 18.

The figure shows two types of communication tools used in e-learning: asynchronous and synchronous. Asynchronous tools, such as email, forums, blogs, and webcasting, do not require people to be online at the same time. They give learners more flexibility to study at their own pace. On the other hand, synchronous tools, like video calls, chat, and instant messaging, happen in real time and allow direct interaction between participants. Some tools, such as surveys and collaboration platforms, can be used in both ways. This shows that using both types together can improve communication and make learning more effective.

➤ **Comparison between digital training vs traditional training**

Traditional systems rely on manual data management using ledgers or spreadsheets, where errors are common and updates are slow, whereas digital systems use centralized HR software and cloud technologies that ensure secure storage and real-time updates with improved accuracy. In terms of processing, traditional payroll is calculated manually or with basic tools and requires significant HR time, while digital systems automate salary, deductions, and benefits calculations instantly, reducing workload and ensuring consistency. Regarding payment delivery, traditional methods depend on physical cash or checks with frequent delays, whereas digital systems use direct deposits and mobile or digital payments that are faster and more reliable. Cost and efficiency are higher in traditional systems due to manual work and paper records, while digital systems reduce costs through automation and streamlined transactions. Flexibility is limited in traditional systems with fixed pay cycles and slow adjustments, while digital systems offer flexible pay options, including on-demand pay, multiple currencies, and remote support. For compliance, traditional systems depend on manual monitoring of regulations with higher risk of errors, whereas digital systems use automated tools to track tax laws and generate audit-ready reports. In employee access, traditional systems require HR intervention for pay information, while digital systems provide self-service portals for accessing compensation data. Finally, HR roles shift from administrative tasks in traditional systems to more strategic functions in digital systems.

Conclusion

In conclusion, the digitalization of Human Resource Management has significantly transformed the way organizations manage their human capital and organizational activities. The transition from traditional HRM to digital HRM reflects the growing integration of digital

Chapter 01: Theoretical Concepts of the Digitalization of HRM practices

technologies into recruitment, training, communication, performance management, and decision-making processes. Digitalization has enabled organizations to improve efficiency, flexibility, data management, and employee experience through the use of digital platforms and Human Resource Information Systems (HRIS). However, despite its numerous advantages, the digitalization of HRM also presents several challenges and limitations. Organizations may face difficulties related to employee resistance, lack of digital competencies, cybersecurity risks, high implementation costs, and reduced human interaction in certain HR activities. These challenges demonstrate that digital transformation is not only a technological process but also a human and organizational change that requires effective management and continuous adaptation.

Furthermore, HRIS systems and digital HRM practices have become essential tools for modern organizations seeking to remain competitive in a rapidly evolving digital environment. These technologies support faster communication, better data analysis, improved administrative efficiency, and more strategic human resource management. Nevertheless, the success of digital HRM largely depends on employee acceptance, organizational readiness, continuous training, and effective change management strategies. Therefore, organizations must combine technological innovation with human-centered approaches to ensure successful and sustainable digital transformation in HRM practices.

CHAPTER 02:
THEORETICAL CONCEPTS OF
DIGITAL HRM AND ORGANIZATIONAL
CHANGE MANAGEMENT

Introduction

In an era where digital technologies are reshaping industries at an unprecedented pace, organizations are compelled not only to adopt new tools but also to rethink their structures, processes, and people strategies. This chapter explores the critical role of Organizational Change Management (OCM) as a foundational element for successful digital transformation.

The chapter's first section introduces Organizational Change Management (OCM) and explains its definitions, historical development, and major models as the theoretical basis for understanding organizational change.

The second section focuses on the link between digital transformation and OCM, showing how traditional change approaches must be adapted to digital initiatives, with attention to Industry 4.0/Operator 4.0 and the need to tailor strategies to different stakeholder groups.

The final section examines resistance to change as a major obstacle, describing its nature, sources, and forms, and showing why even well-designed transformations can fail if human factors are ignored.

1. Definitions

1.1 Definition of change

From a psychological perspective, change refers to the process through which individuals modify their behaviors, attitudes, emotions, and ways of thinking in response to internal or external factors. Kurt Lewin (1947) considers change as a transition from one behavioral state to another through a dynamic process of adaptation. Similarly, Edgar Schein (1996) explains that psychological change involves learning new behaviors and abandoning old habits in order to adapt successfully to new situations.

1.2 The organizational change management

In this section, we define the main organizational change concepts relevant to this research. Accordingly, we will successively examine the concepts of change, resistance to change and paradox

According to Mr Tim Stobierski in Harverd Business School «Organizational change refers to the actions in which a company or business alters a major component of its organization, such as company culture, the underlying technologies or infrastructure it uses to operate, or its

Chapter 02: Theoretical concepts of digital HRM and Organizational Change Management

internal processes. Organizational change management is the process of guiding organizational change to a successful resolution, and it typically includes three major phases: preparation, implementation, and follow-through».

Steve Meese (2001, p. 7) defines change management as a comprehensive and systematic transformation process aimed at gradually moving from the current state to a desired future state. This transformation is achieved by developing new work methods and fostering organizational behaviors, supported by practical methodologies that facilitate the effective implementation of change.

Dr. Russell E. Johnson, a professor at Michigan State University, defines organizational change management as a planned, organization-wide effort aimed at improving both individual and organizational effectiveness by applying behavioral science principles. He distinguishes between incremental change, which is gradual and internally driven, and discontinuous change, which is radical and often externally driven. Johnson also emphasizes that change management operates at both micro and macro levels and involves more than simply implementing new tools or systems, as it requires supporting employees in adopting new behaviors and practices.

Based on the definitions, Change management can be understood as a structured, planned process led by managers to guide organizations through major transformations such as cultural, technological, or procedural changes. It focuses on both organizational systems and employees, ensuring that change is managed step by step to achieve smooth transitions. Change may be incremental or radical, but in both cases it requires a clear strategy, as effective change management goes beyond implementing new tools and also involves supporting employees in adopting new mindsets and behaviors.

1.2 .1Historical of the Organizational Change Management

First period: growth and progressive adaptation

According to Christiane Demers (1999), the understanding of organizational change has evolved through three main periods:

First Period: Growth and Progressive Adaptation (Post-World War II): During this period, change was perceived as a gradual and natural process of organizational development.

Chapter 02: Theoretical concepts of digital HRM and Organizational Change Management

Organizations operated in a stable economic environment and focused on growth, adaptation, and maintaining equilibrium through formal structures and systems.

Second Period: Radical Transformation (1970s): Economic crises, increased competition, and market-oriented reforms transformed the perception of change. Organizations underwent major restructurings and privatizations to improve competitiveness. Change became associated with crisis management and deep organizational transformation led by strategic leadership.

Third Period: Learning and Evolution (Since the 1980s): Change came to be viewed as a continuous process of learning, innovation, and adaptation. Organizations increasingly relied on the participation of all employees rather than solely on leaders. Innovation and the capacity to anticipate future challenges became key factors for organizational success.

1.3 Change management models

The literature identifies several change management models that are used by organizations. In light of the implementation and management of change, Kotter's model and Lewin's model are the most representative for our research.

1.3.1 Kotter's model

Kotter's model (1996) is one of the first change models to emphasize the role and importance of managers in the success of change projects. For Kotter, the manager is the primary vector of change. Thus, the manager must support the changes throughout their implementation phases. According to him, the manager must rely on levers that enable them to successfully carry out the change process. These levers are training, communication, and support. Kotter also proposes an eight (8) step model for the deployment of change by managers:

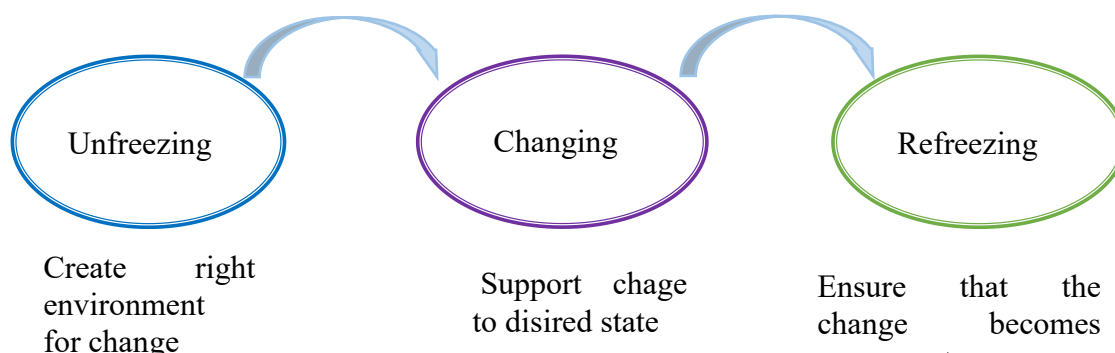
- ✓ **The first step** consists of creating a sense of urgency. It is specifically about proving the need to change (or the risks of doing nothing) (Simonet et al., 2002, p. 282). Thus, the manager must use arguments to give meaning to the change.
- ✓ **The second step** consists of building a coalition. For managers, this involves identifying the relay groups that will carry the change forward. Managers must be able to know the collaborators who are supposed to act as relays in order to understand their reactions and the appropriate levers (Autissier et al., 2018).

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- ✓ **The third step** consists of creating a vision of the future. For managers, this involves translating the change into planning terms so that collaborators buy into the process (Autissier et al., 2018).
- ✓ **The fourth step** consists of communicating the vision of the future. This involves explaining the steps of the process so that collaborators can understand the objective behind the various actions.
- ✓ **The fifth step** consists of encouraging action. This involves addressing anything that could hinder the changes (fear, opposition, apprehension) (Simonet et al., 2002, p. 282).
- ✓ **The sixth step** consists of generating quick wins. Managers must show that the change is producing results in order to encourage collaborators to invest themselves in the process (Autissier et al., 2018).
- ✓ **The seventh step** makes it possible to consolidate successes. For managers, this involves ensuring the skills and attitudes of the collaborators in order to amplify the change (Autissier et al., 2018).
- ✓ **Finally, the eighth step** consists of anchoring the change. This involves verifying the personal evolutions achieved following the change (Simonet et al., 2002, p. 282). This makes it possible to establish a link between the situation to be changed and the result obtained through the process.

1.3.2 Kurt Lewin's three stage modele Figure:

Kurt Lewin's three stage modele



It is commonly referred to as Unfreze, Change (Movement or Transition), Freeze or Refreeze. The model represents a very simple and practical ideal for understanding the change process on personal and organisational level (Burnes,2004):

Chapter 02: Theoretical concepts of digital HRM and Organizational Change Management

1- Unfreezing: In this stage, you want to ensure that everyone understands why the change is necessary and why the change needs to happen urgently. Change can be required for many reasons, including, in response to competitors, in response to new legal requirements, to save costs, and to boost profit or revenue. In this stage, you also want to ensure that everyone understands what the organization will look like once the change has been successfully made. Again, this can comprise many parts, including how the organization structure will change, what new ways of working will be in place, and how old ways of working will be adjusted.

2- Changing: Lewin understood that change is not just something that happens inside an organization, but also a personal experience that people go through emotionally and mentally. During the movement stage, individuals begin leaving behind old habits and adapting to new ways of working and thinking. This period can be difficult because people often feel uncertain, anxious, or afraid of the unknown. For this reason, change takes time and requires support, patience, and understanding. According to Wetzel and Buch (2000), successful interventions should fit both the organizations structure and culture. On a human level, employees also need encouragement, mentoring, and positive role models. Training, coaching, and clear communication can help people feel supported during the transition, making the change process easier and less stressful.

3- Refreezing: The final stage in Kurt Lewin's change model is called «freezing» or more commonly «refreezing». This stage focuses on creating stability after the change has been successfully implemented. At this point, employees begin to accept the new changes, adapt to new routines, and build new working relationships. The new methods gradually become the normal way of working inside the organization. According to Lewin, organizations must reinforce and stabilize these changes to make sure they continue over time. John Kotter (1995) also explains that institutionalizing change is important because it helps organizations sustain the new system and avoid returning to old habits.

Today, many researchers believe that organizations should not become completely «frozen» or rigid after change. Instead, they should remain flexible and ready for future changes. However, the main purpose of refreezing is still to ensure that employees maintain the new behaviors and do not go back to previous ways of working. Edgar Schein (1996) explains that new behaviors must fit with employees' personalities, work environment, and organizational culture; otherwise, the change may fail and employees may resist it again. And to make change successful in the long term, organizations need to support and reinforce the

Chapter 02: Theoretical concepts of digital HRM and Organizational Change Management

new practices continuously. Positive rewards, recognition, and appreciation of employees' efforts can help strengthen acceptance of change because people are more likely to repeat behaviors that are positively reinforced.

2. Digital transformation and organizational change management

2.1 Adapting Change Management to Digital Transformation and

Operator 4.0

Digital transformation has become a major organizational challenge due to the rapid evolution of technologies such as artificial intelligence, automation, robotics, digital platforms, and Virtual Reality. These technological developments are transforming organizational processes, communication systems, production methods, and business models. As organizations integrate digital technologies into their operations, they are also required to transform their organizational culture, management practices, and employee competencies in order to remain competitive and innovative. Digital transformation therefore represents not only a technological change but also a complex organizational and human transformation process. Successful digital transformation depends heavily on effective change management strategies. According to Lugonja (2020), organizations need communication maturity in several areas, including understanding, organizational preparation, competencies, practices, and functioning. Clear communication helps employees understand the objectives and benefits of digital transformation, which reduces uncertainty and resistance to change. In many organizations, employees may resist digital technologies because they feel insecure about their digital skills or fear that automation may threaten their jobs. Resistance may also result from attachment to traditional work methods and discomfort with learning new systems.

Employee involvement is considered one of the most important factors for successful digital transformation. Jerman and Cernetic (1997) argue that employees and stakeholders should participate actively in the planning and implementation of organizational change. Participation increases employee acceptance because workers feel more engaged and valued during the transformation process. The authors identify three important phases for successful digital adaptation: inspiration, implementation, and integration. During the inspiration phase, employees are informed about the reasons for change and motivated to support the transformation. During implementation, organizations encourage the daily use of digital tools while managers provide continuous support and guidance. Finally, the integration phase

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focuses on follow-ups and reinforcement to ensure that the new digital practices become stable and sustainable within the organization.

Modern industrial transformation is strongly connected to the concept of Operator 4.0, introduced by Romero et al. (2016). Operator 4.0 refers to smart and digitally assisted workers who collaborate with advanced technologies such as collaborative robots, wearable technologies, augmented reality, and intelligent systems. The purpose of Operator 4.0 is not to replace human workers but to improve employee productivity, safety, flexibility, and decision-making capabilities. This approach highlights the importance of human-centered digital transformation where technology supports employees instead of eliminating their role. Furthermore, employee acceptance of digital transformation is influenced by the quality of the work environment, organizational support, and opportunities for learning and participation. Kaasinen et al. (2020) emphasize that organizations must create supportive and flexible work environments that promote employee well-being and engagement. Empowering employees through participation, knowledge sharing, and continuous training helps organizations reduce resistance and improve adaptation to digital systems. Many organizations are increasingly adopting learning-oriented workplaces where employees continuously develop digital competencies and collaborate across different departments. Continuous training and reskilling have therefore become essential strategies for helping employees adapt to technological innovation and changing job requirements.

2.2 Stakeholder Persona Importance in Change Management

To ensure the success of organizational transitions, it is critical to identify and map the stakeholder personas of the target audience. This strategic process involves detailed profiling of various role titles, responsibilities, and attitudes to determine the specific communication, information, and support required for each unique group (Rapidbi, 2017). By integrating change-specific elements into these personas—such as assessing whether stakeholders are currently unaware, informed, or fully equipped—managers can significantly enhance the effectiveness of the change process by tailoring their approach to the specific needs of each group (Rapidbi, 2017). Furthermore, the application of stakeholder journey mapping provides a longitudinal overview of a user's experience with a specific tool or process, allowing for targeted improvements throughout the transition (Ortbal, Frazzette & Mehta, 2016). These mapping tools allow organizations to ask critical questions regarding the degree of impact a change has on individuals and their subsequent attitudes toward it (Rapidbi, 2017).

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Ultimately, by proactively addressing potential friction points and emotional barriers through these models, organizations can effectively lower costs and reduce implementation hurdles, as resistance is identified and mitigated before it can fully manifest during the execution phase (Ortbal, Frazzette & Mehta, 2017). This alignment between persona needs and the change strategy ensures that the "human factor" is managed as precisely as the technical aspects of the project.

3. Resistance to change

3.1 General information on resistance to change.

3.1.1 Definitions:

There are plenty of authors from different fields including psychology, HR and even physics that have been introducing resistance to change over years.

When we say resistance we usually refer to specific behaviors observed like when we say {shes refusing to go along with the changes}. such behaviors like these tell us that people are resisting change however they don't tell us why, and this because the behaviors are symptoms while mindest issues are cause. This lead us to a definition of resistance, that is a state of mind reflecting unwillingness or unreceptiveness to change in the ways we think we behave (Hultman, K, 2003).

According to Dent and Goldberg, resistance to change is a central concept in organizational behavior and change management literature. It is widely recognized as a complex and multidimensional phenomenon that reflects how individuals, groups and organizations respond to change initiatives. At its most basic level, resistance to change refers to any observable behavior that opposes, delays, or interferes with the implementation of organizational change. This includes both direct actions, such as refusal to comply, and indirect behaviors, such as reduced effort or intentional delays. In this sense, resistance is not limited to open opposition but also includes subtle forms of non-cooperation.

3.1.2 The Importance of Understanding Resistance to Change

Resistance to change has a long-standing history, particularly within the field of organizational development and change management. Over time, scholars and practitioners have increasingly recognized that understanding how resistance is perceived, analyzed, and managed is essential for the success of organizational transformations.

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In today's environment, change is no longer occasional but continuous, dynamic, and often unpredictable. Organizations are constantly required to adapt to technological advancements, market pressures, and evolving workforce expectations. However, such changes are frequently met with resistance from individuals and groups within the organization.

This resistance can take various forms. It may be rational, based on legitimate concerns such as fear of job loss, lack of skills, or uncertainty about outcomes. Alternatively, it can be irrational, stemming from habits, emotional reactions, or reluctance to leave one's comfort zone. Moreover, resistance can be either explicit (obvious and direct way) or implicit (hidden and indirect way). These reactions reflect resistance, as people try to protect themselves from uncertainty, fear, or perceived threats caused by the change.

Understanding resistance to change is therefore crucial because it directly impacts the success or failure of change initiatives. When resistance is ignored or poorly managed, it can slow down implementation, create conflict, and ultimately lead to the failure of organizational change efforts. On the other hand, when properly understood, resistance can provide valuable insights into employee concerns and organizational weaknesses, allowing managers to adjust strategies and improve communication.

In this sense, resistance should not be viewed solely as a barrier, but also as a potential source of feedback and learning. Effectively managing resistance requires clear communication, employee involvement, appropriate training, and strong leadership. By addressing the root causes of resistance, organizations can facilitate smoother transitions and enhance overall performance.

3.1.3 Sources of resistance to change (why workforce resist to change)

Resistance to change originates from multiple sources that can be broadly categorized into individual, organizational, and change-specific factors. Identifying these sources helps managers better understand employee reactions and implement effective change strategies.

- **Individual Sources:** At the individual level, resistance to change is mainly influenced by fear of uncertainty, attachment to established routines, perceived lack of skills, and negative experiences with previous change initiatives. These factors can create anxiety, skepticism, and reluctance to adopt new ways of working (Kotter, 1996; Oreg, 2006; Piderit, 2000; Robbins & Judge, 2017).

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- **Organizational Sources:** Resistance may also originate from organizational factors such as rigid structures, strong organizational cultures, threats to power and status, and insufficient resources. These elements can limit employees' willingness and ability to support change initiatives (Burnes, 2004; Kotter & Schlesinger, 2008; Robbins & Judge, 2017).
- **Change-Related Sources:** Factors directly related to the change process, including poor communication, lack of employee participation, rapid implementation, and perceived threats to job security or career prospects, can increase resistance and reduce employee commitment to change (Burnes, 2004; Kotter, 1996; Kotter & Schlesinger, 2008; Robbins & Judge, 2017).
- **Resistance as Feedback:** Resistance should not always be viewed negatively, as it can provide valuable feedback regarding weaknesses in communication, planning, or organizational support. Understanding these concerns enables managers to make adjustments that improve the effectiveness and success of change initiatives (Piderit, 2000).

3.2 Types of resistance to change

Resistance to change manifests in various forms depending on its source, intensity, and mode of expression. Understanding these types is essential for effectively managing and reducing resistance.

-Individual Resistance: Arises from personal concerns such as fear of the unknown, attachment to routines, lack of confidence, or perceived threats to job security and status.

-Group Resistance: Occurs when teams or departments collectively oppose change to protect established norms, values, and group cohesion.

-Organizational Resistance: Results from structural and cultural factors such as bureaucracy, rigid procedures, hierarchical systems, and resistance to innovation.

-Active Resistance: A visible form of opposition expressed through complaints, protests, refusal to cooperate, or attempts to obstruct change initiatives.

-Passive Resistance: A hidden form of resistance characterized by procrastination, reduced commitment, low productivity, or silent non-compliance.

-Cognitive Resistance: Relates to negative beliefs, doubts, or skepticism regarding the necessity, fairness, or effectiveness of the change.

-Emotional Resistance: Involves feelings such as fear, anxiety, frustration, or anger that arise in response to change.

3.2.1 How to avoid resistance to change

Effective Communication: Clear and transparent communication helps employees understand the purpose, benefits, and impact of change, reducing uncertainty, misinformation, and resistance while maintaining trust in leadership (Kotter, 1996).

Employee Participation and Involvement: Involving employees in the change process increases their sense of ownership and commitment, making them more likely to support change initiatives and contribute positively to their implementation (Lewin, 1951).

Training and Skill Development: Providing training and development opportunities helps employees acquire the skills needed to adapt to change, reducing fear and increasing confidence in managing new systems and processes (Robbins & Judge, 2017).

Strong Leadership and Vision: Effective leaders support change by communicating a clear vision, motivating employees, and providing guidance throughout the transition process, thereby reducing uncertainty and resistance (Kotter, 1996).

Building Trust and Organizational Support: Trust is strengthened through transparency, consistency, and honest communication, encouraging employees to accept and engage with organizational change initiatives (Lewin, 1951).

Gradual Implementation of Change: Implementing change progressively allows employees to adapt more easily, reduces stress, and provides opportunities to identify and address challenges during the transition (Burnes, 2004).

Addressing Emotional and Psychological Factors: Organizations can reduce resistance by recognizing employees' emotional concerns and providing appropriate support to help them cope with uncertainty and anxiety associated with change (Oreg, 2006).

Incentives and Motivation: Recognition, rewards, and incentives encourage employees to adopt new practices and reinforce positive attitudes toward organizational change (Robbins & Judge, 2017).

Creating a Change-Oriented Culture: Developing a culture that promotes flexibility, innovation, and continuous improvement helps organizations reduce resistance and encourages employees to embrace change more readily (Burnes, 2004).

Conclusion

Organizational change management, whether examined through its definitions, history, or classic models, can no longer be seen as a linear and predictable process. In the context of digital transformation, traditional change management approaches reveal their limits. The emergence of Operator 4.0 and the growing importance of stakeholder personas remind us that the human dimension remains at the heart of any technological transformation. Adapting change management to the digital era means, above all, accepting the complexity and individuality of people's reactions to new technologies.

Resistance to change, far from being a simple obstacle to eliminate, must be understood as a useful signal. It reveals legitimate fears, particularly the fear of losing one's bearings or one's relevance in a digitalized environment. Effective change management must therefore integrate active listening, personalized support, and digital skills development. Without this attention to employees' feelings, no digital transformation can succeed in the long term.

In the end, this chapter shows that the key to a successful digital transformation lies not only in technological tools, but in the organization's ability to rethink its change management. This means moving beyond classic models, adopting a stakeholder persona-centered approach, and turning resistance into a lever for continuous improvement. Organizational change in the digital age is, above all, a human challenge.

CHAPTER 03
ANALYSIS AND
INTERPRETATION OF
SURVEY RESULTS.

Introduction

In the current context, organizations are increasingly required to adapt to ongoing changes by adopting new methods and tools in order to meet emerging challenges and improve their overall performance. Although many organizations have already initiated this process, questions remain regarding the effectiveness of the approaches implemented and their actual impact on performance. Some organizations are still hesitant to engage fully in such transformations, as they seek to preserve stability while improving their practices.

The previous chapters have provided the theoretical foundations necessary to better understand the main concepts related to our subject. In this chapter, we will move from theory to practice through the analysis of a case study, with the aim of examining the reality of the phenomenon under study and highlighting the results obtained. To this end, this chapter is structured into three sections:

- First section** presents the company and its general context.
- Second section** is devoted to the survey methodology and the techniques used for data collection.
- Third section** focuses on data analysis and the discussion of the results.

Section 01: Company presentation

1. Presentation of the company

SARL Lotfi Electronics is an Algerian company established in 2005 that specializes in the production and commercialization of electronic and household appliances under the GEANT brand. The company has strengthened its position in the national market through the integration of advanced technologies, continuous development of human resources, and modernization of its industrial equipment. Committed to sustainable development, SARL Lotfi Electronics focuses on improving operational efficiency, reducing environmental impact, and ensuring high product quality while complying with environmental and industrial standards to maintain customer satisfaction and competitiveness.

1.1 Technical Profile of the Company

Corporate Name: SARL Lotfi Electronics

Legal Form: Limited Liability Company (SARL)

Year of Establishment: 2005

Core Activity: Manufacturing and assembly of household appliances, electronic, and information technology equipment

Head Office Address: Industrial Zone No. 94, Lot 161, Bordj Bou Arreridj, Algeria

Telephone: +213 (0) 39 26 00 00

Official Website: www.geant-dz.com

- Key Figures and Organizational Structure

SARL Lotfi Electronics is characterized by significant financial and human resources, reflecting its industrial capacity and organizational scale:

Share Capital: 3,640,000,000 DZD

Annual Turnover: 9,130,328,199.00 DZD

Total Workforce: 2,016 employees (30 employee in D-HR)

1.2 Breakdown of Human Resources:

Senior Management: 1 executive director

Senior Executives: 26

Executives: 166

Middle Management (Supervisors): 396

Operational Staff: 1,530

Apprentices: 91

1.3 Manufactured Products

The company produces a diversified range of products, including:

- Air conditioning products (various ranges)
- White goods (refrigerators and freezers)
- Cooking appliances, microwaves, and washing machines (various ranges)
- Televisions (Plasma, LED, Smart TVs), as well as satellite receivers and decoders (various ranges)
- Agro- food industry (biscostar)

1.4 Objectives

Overall Objectives

The main strategic objectives of the company are as follows:

- Increase its market share by attracting new customers
- Strengthen customer loyalty

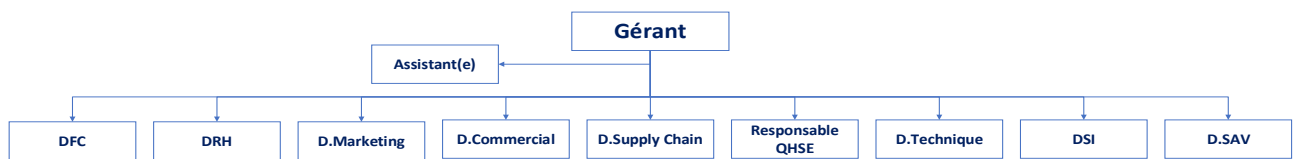
In addition, the company aims to:

- Ensure a good quality–price ratio
- Enhance the professionalism of its workforce
- Strengthen the GEANT brand in the Algerian market
- Promote continuous innovation and creativity

HRM Objectives in GEANT

- Ensure effective workforce planning
- Recruit qualified and skilled employees
- Improve employee performance
- Promote internal communication and involvement
- Ensure compliance with labor laws and regulations
- Support digitalization (ERP / HRIS systems)

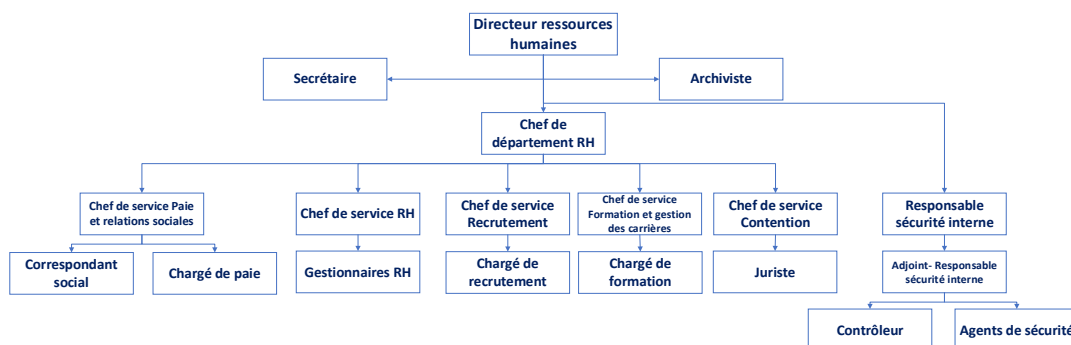
Figure 2: company organization annexe



Source: Geant internal Document

2. Presentation of the HR Department

Figure 3: HRM Department annexe



Source: Geant internal Document

The Human Resources Department plays a central role in ensuring the effective management of employees and administrative activities within the organization. Its organizational structure is designed to distribute responsibilities among specialized services in order to improve coordination, efficiency, and communication. The following organizational chart presents the different positions and services that compose the HR department, as well as the specific role of each unit in supporting the company's human resource management objectives.

Human Resources Director: Responsible for overseeing all HR activities, implementing HR strategies and policies, and ensuring alignment with organizational objectives and labor regulations.

Secretary: Provides administrative support by managing correspondence, preparing documents, scheduling meetings, and facilitating communication within the department.

Archivist: Manages the organization, storage, and maintenance of HR records and administrative documents to ensure easy access to information.

Head of HR Department: Coordinates daily HR operations and ensures effective collaboration and communication between the different HR services.

Payroll and Social Relations Service: Manages payroll activities and employee social relations while ensuring compliance with labor and social security regulations.

Social Relations Correspondent: Handles social and administrative relations and facilitates communication regarding labor-related matters.

Payroll Officer: Prepares and manages employee salaries, benefits, and payroll documentation.

HR Service: Responsible for personnel administration, employee records, attendance monitoring, and general HR procedures.

HR Managers: Manage daily HR activities and provide administrative support to employees.

Recruitment Service: Oversees the recruitment process to attract, select, and hire qualified employees according to organizational needs.

Recruitment Officer: Conducts recruitment activities, including job postings, candidate selection, interviews, and hiring procedures.

Training and Career Management Service: Focuses on employee development through training programs and career planning initiatives.

Training Officer: Organizes and supervises employee training and development activities.

Litigation Service: Manages legal disputes, disciplinary issues, and labor-related conflicts to ensure compliance with labor laws.

Jurist: Provides legal advice and handles legal and labor-related matters within the organization.

Internal Security Department: Ensures workplace safety and the protection of employees, facilities, and company assets.

Assistant Internal Security Manager: Supports the supervision and coordination of internal security activities.

Controller: Monitors security procedures and ensures compliance with internal safety regulations.

Security Agents: Responsible for maintaining the physical security of the organization by monitoring facilities, protecting company assets, and ensuring the safety of employees and visitors.

3. Study Setting and Target Population

This study took place at GEANT Electronic in Bordj Bou Arréridj during a one-month internship, from March 29 to April 29, 2026. Being on the ground gave us a real chance to see firsthand how HR digitalization works in practice and how the company handles organizational change. We focused on three groups of employees: execution agents, supervisory agents, and managers. These are people with different ages, backgrounds, years of experience, and responsibilities.

To gather employee opinions, a questionnaire was distributed directly at the workplace. In total, 30 employees fully completed the questionnaire. Although the sample size remains limited, particularly due to the relatively short duration of the internship (one month), it presents a relatively balanced distribution among the different job categories. This diversity allows for a relevant overview, without claiming absolute generalization, of the perception of GEANT Electronic employees regarding the digitalization of human resources and change management.

Section 02: Survey Methodology and techniques

After presenting the theoretical foundations of our study, this second section is dedicated to the empirical approach conducted within GEANT Electronics – BBA. Its objective is to explain the methodology adopted for data collection and to analyze the results obtained in order to answer our central research problem concerning the impact of digitalization on HRM practices and organizational change management.

First, we present the research methodology, specifying the data collection tools used. On one hand, a quantitative approach was adopted through a questionnaire distributed to employees. On the other hand, a qualitative approach was conducted through a semi-structured interview with a Human Resources manager.

Secondly, we proceed to the analysis and interpretation of the collected data. Through statistical processing of the questionnaire and thematic analysis of the interview, we highlight the reality of digital HR practices within GEANT Electronics, as well as their impact on organizational change and employee adaptation.

1. Research Methodology

Within the framework of this research focusing on the digitalization of HRM practices and its role in organizational change management, our study aims primarily to analyze the digital tools used in HR processes and to determine their influence on employees and organizational transformation. The specific objectives of this research are as follows:

- ✓ Identify the digital HRM practices implemented within the organization;
- ✓ Evaluate employees' perceptions regarding the use of digital tools (HRIS, ERP, etc.);
- ✓ Analyze the role of digitalization in facilitating organizational change;
- ✓ Examine the impact of digital HR practices on employee performance, motivation, and adaptability;
- ✓ Determine how digital transformation contributes to change management within the company.

To achieve these objectives, we adopted a mixed methodological approach combining both quantitative and qualitative methods.

The quantitative approach enabled us to collect numerical data through a questionnaire distributed to employees of GEANT Electronics. This allowed us to measure perceptions, behaviors, and attitudes toward digital HR practices.

As for the qualitative approach, it is based on a semi-structured interview conducted with an HR manager. This provided deeper insights into the company's digital transformation strategy and change management practices.

This methodological combination allows for a more comprehensive and accurate understanding of the relationship between digitalization, HRM practices, and organizational change.

2. Analysis of Questionnaire and Interview Results

2.1 Analysis of Questionnaire Results

The questionnaire represents the main tool for collecting quantitative data. It was designed to gather employees' perceptions regarding digital HR practices and their role in organizational change. The questionnaire is composed of three main sections:

- ❖ General information about respondents (gender, age, seniority, education level, job category, etc.);
- ❖ Questions related to digital HRM practices (use of HRIS, digital tools, automation of HR processes, communication systems, etc.);
- ❖ Questions related to organizational change, employee adaptation, motivation, and satisfaction.

Most of the questions are closed-ended in order to facilitate statistical analysis, while some open-ended questions allow respondents to freely express their opinions and experiences.

The questionnaire was distributed to an initial sample of employees. After data collection, a number of 30 completed questionnaires were retained, representing a satisfactory response rate. This rate reflects employee engagement and ensures the reliability of the collected data.

2.2 Analysis of Interview Results

As part of this empirical study, a semi-structured interview was conducted with an HR manager at GEANT Electronics.

This interview made it possible to collect qualitative data regarding:

- ✓ The digital transformation strategy of HRM within the company;
- ✓ The tools and systems implemented (HRIS, ERP, digital platforms);
- ✓ The challenges faced during organizational change;
- ✓ The role of HR in supporting employees during digital transformation.

The interview was conducted in a professional and open environment, encouraging constructive discussion. It was structured around two main parts:

The first part focused on digital HR practices and their implementation within the organization;The second part addressed organizational change management, employee resistance, and adaptation strategies. The responses obtained helped to better understand the company's internal dynamics and provided valuable insights into how digitalization supports organizational change.

Section 03: Data analytics and discussion of results.

1.Data analytics

1.1 Questionnaire Data Processing

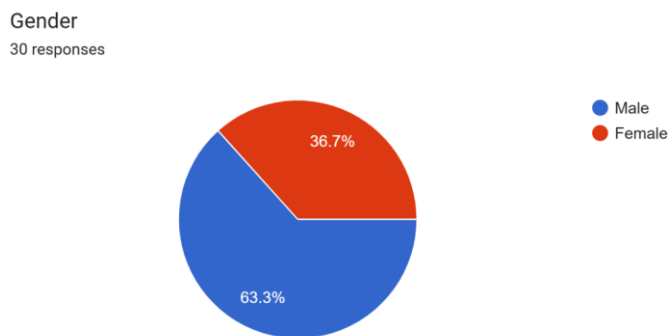
For data analysis, we used a descriptive statistical method based on frequency distribution and percentages. Each question was analyzed individually, and the results were presented in the form of tables and graphs to facilitate interpretation.

This approach allows us to clearly identify trends, patterns, and relationships between digital HR practices and organizational change within GEANT Electronics.

AXE 01: identifications of the study sample:

1. Gender:

Figure 4: GEANT employees gender

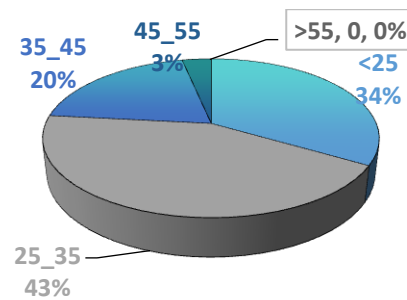


Source: Developed by the author based on questionnaire results..

The results show a clear majority of female respondents, with 63.3% women and 36.7% men. This indicates a higher level of female participation in the survey. Such a distribution can provide valuable insights into the perspectives of female employees regarding organizational change, while still including a substantial minority of male voices. It may also reflect the overall gender composition of the company's workforce, which could be useful for analyzing diversity, inclusion, and gender-specific needs in human resources management.

2. Age:

Figure 5: Age of GEANT employees

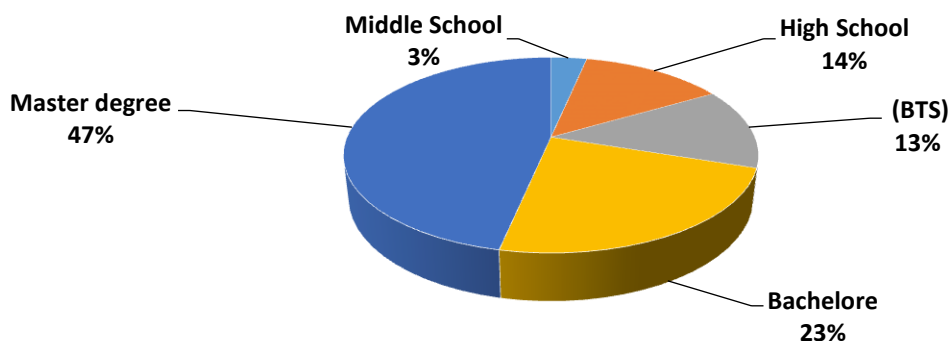


Source: developed by the author based on questionnaire results

This distribution shows a strong concentration of young employees, with the majority being under 35 years old. Older age groups are significantly less represented, and no respondents are above 55 years old. These results suggest that the workforce is predominantly young, which may contribute to dynamism, adaptability, and openness to change within the organization.

3. Level of education

Figure 6: Level of education of GEANT employees



Source: Developed by the author based on questionnaire results.

This distribution indicates a high concentration of highly educated employees, with the majority holding advanced academic qualifications, particularly Master's degrees. Lower educational levels are less represented among respondents. These results may reflect the organization's preference for skilled and qualified personnel, which can positively influence performance, innovation, and strategic development within the company.

4. Position in the company

The sample analysis shows that all participants in the survey work within the Human Resources department. The respondents hold various and complementary roles within this

division, covering both strategic and operational tasks. This includes leadership positions such as the HR Director and HRIS Manager, as well as specialists in personnel management like payroll managers and training officers.

Focusing exclusively on HR staff provides a precise look at the internal processes of the department. The inclusion of HR administrative assistants, archivists, and interns within the sample offers a full view of the different missions of the service. This representation across all human resources functions ensures that the data collected accurately reflects the current practices and challenges of this specific department.

5. Experience

Table 2: Level of experience in GEANT employees

Experience	Frequency	Percentage
<5 years	21	70.00%
>15 years	1	3.33%
10_15 years	2	6.67%
5_10 years	6	20.00%
Total	30	100.00%

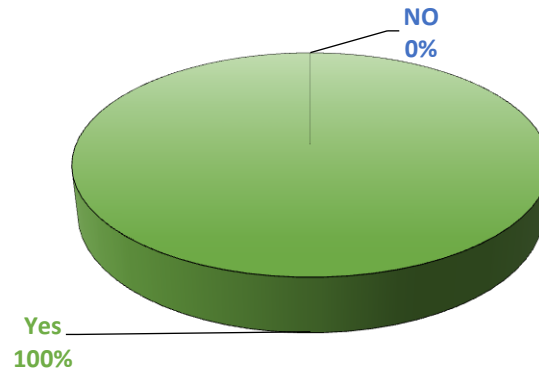
Source: Developed by the author based on questionnaire results.

The table shows that most GEANT employees have less than 5 years of experience, representing 70% of the respondents. This indicates that the company has a relatively young and dynamic workforce. Such an organizational culture may encourage flexibility, innovation, and openness to change. However, the low percentage of highly experienced employees may also suggest challenges in employee retention and the transfer of experience within the organization.

AXE02: Digitalization

1. Does your company use digital HRM tools

Figure 1: The use of D-HRM

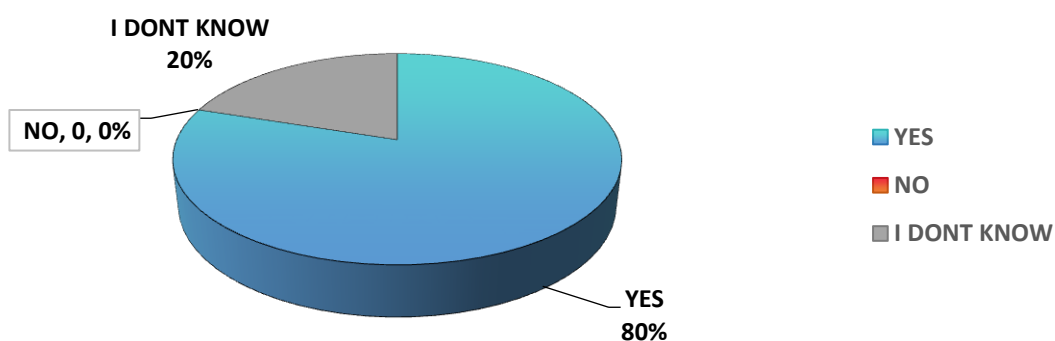


Source: Developed by the author based on questionnaire results.

The data indicates a very high rate of digital tool adoption within the surveyed organizations for HRM. Out of a total of 30 respondents. All of the 30 respondents confirmed that their company utilizes digital tools, while only one respondent indicated otherwise. This represents 100% of the sample, suggesting that digitalization is a universal practice among the surveyed entities. Such a high percentage reflects a strong shift toward modernizing HR processes and integrating technology into daily administrative and strategic functions.

2. Does your company use HRIS

Figure 8: The use of HRIS

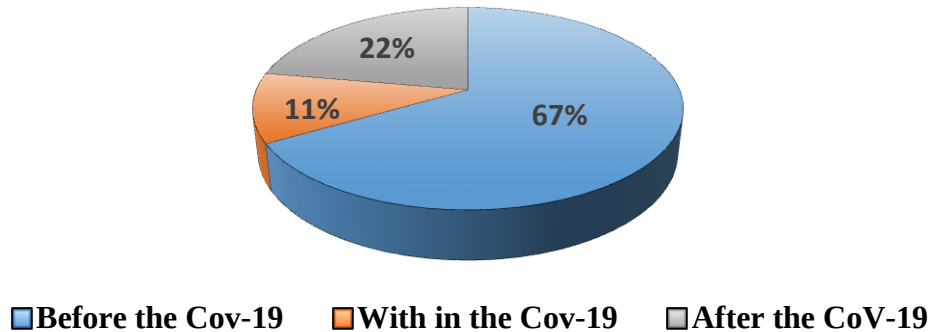


Source: Developed by the author based on questionnaire results.

The chart shows that 80 of respondents reported their company uses HRIS, while 20 were unsure and 0 reported non use. This indicates high adoption of HRIS within the surveyed entities. However, the presence of the 20 «I don't Know» category warrants further investigation into internal communication practices and employee awareness of HR systems.

3. If yes, when did it start to use it

Figure 9: when did the company started to use HRIS



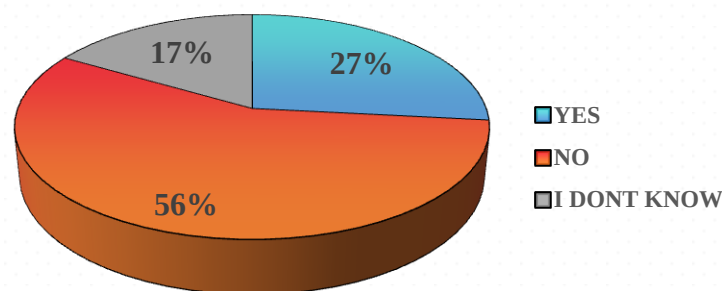
Source: Developed by the author based on questionnaire results.

The chart shows the timing of HRIS adoption among respondents who answered yes to using HRIS. 67 %adopted it before COVID-19, which indicate that digitalization of HR functions was already well-established in GEANT organization prior to 2020.

11% said that it was adopted during COVID-19, suggesting that the organizations made limited adjustments or expansions to its system in response to the crisis. Meanwhile, 22 % indicates that the system was implemented after COVID-19, highlighting a phase of post pandemic reinforcement or further digital development.

4. Do you think the CoV-19 was the main reason to transform to a digital HR

Figure 2: Was the CoV-19 the main reason



Source: Developed by the author based on questionnaire results.

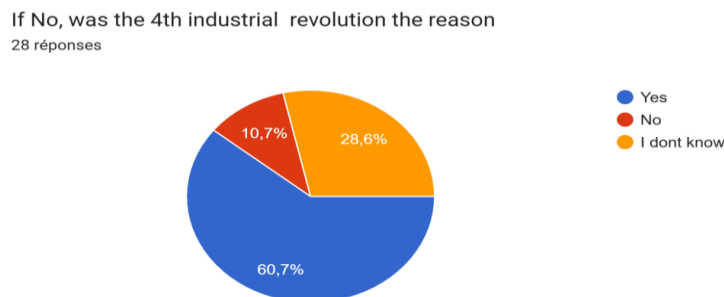
These results show that the dominant perception within GEANT is that COVID-19 was not the primary reason for the shift toward digital HR. This suggests that the company's digital transformation was likely strategically planned and initiated independently of the pandemic

context. However, the fact that 27% of respondents consider COVID-19 as the main driver indicates that the crisis still had a notable influence, possibly accelerating or reinforcing existing digital initiatives. Additionally, the presence of 16% uncertain responses reflects a lack of full awareness or communication among employees regarding the underlying motivations behind digital transformation.

The results indicate that, within GEANT, digital HR transformation is primarily viewed as a strategic initiative independent of COVID-19, although the pandemic contributed to accelerating its implementation and highlighting its importance.

5. If No, was the 4th industrial revolution the reason

Figure 11: Was it the 4th industrial revolution



Source: Developed by the author based on questionnaire results.

The pie chart evaluates whether the Fourth Industrial Revolution (Industry 4.0) was the primary driver for digital HR transformation among the 57% of respondents who discounted COVID-19 as the main cause (N = 28)

✓ **60.7% Yes:**

A clear majority attributes the transformation to Industry 4.0. This indicates that for most respondents, digital HR is viewed not as an emergency reaction to a health crisis, but as a proactive, long-term alignment with macro-technological (e.g., automation, AI, and big data).

✓ **28.6 % I Don't Know:**

Over a quarter of respondents expressed uncertainty. In an academic context, this highlights the difficulty practitioners face in separating the baseline advancements of Industry 4.0 from the sudden acceleration caused by the pandemic.

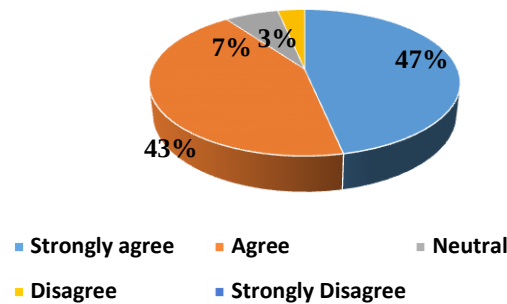
✓ **10.7% No:**

Only a small minority rejects both COVID-19 and Industry 4.0, suggesting that alternative institutional or localized drivers are negligible.

The data demonstrates that when looking beyond the immediate disruption of COVID-19, professionals heavily recognize Industry 4.0 as the true foundational architecture driving the evolution into digital HR.

6. Does the HRIS improve the efficiency of HR processes

Figure 12: HRIS and the efficiency of HR processes



Source: Developed by the author based on questionnaire results.

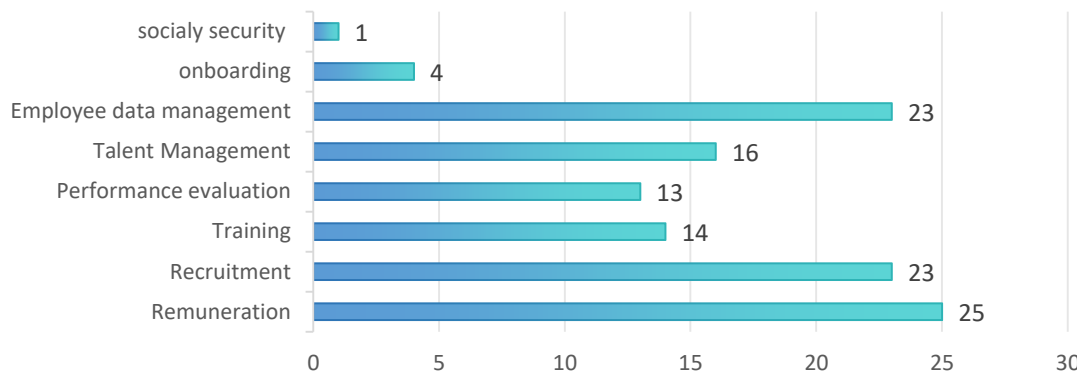
The graph highlights the participants' perceptions regarding the effectiveness of the Human Resource Information System (HRIS) in improving HR processes.

A very large majority of respondents express a positive opinion: 47% completely agree and 43% agree that the HRIS improves process efficiency. This shows strong support for the idea that HR digitalization allows for the simplification and automation of administrative tasks, reduces errors, and saves time in handling HR activities. Conversely, a minority remains more reserved: 7% declare themselves neutral and only 3% disagree, while no respondent completely rejects this idea. This low resistance can be explained by certain usage barriers or differences in the appropriation of the tool, without questioning its overall usefulness.

Overall, these results confirm that the HRIS is widely perceived as an effective tool for modernizing HR practices and improving organizational performance.

7. Which HR activities are digitalized in your organization?

Figure 13: Digital HR activities in GEANT

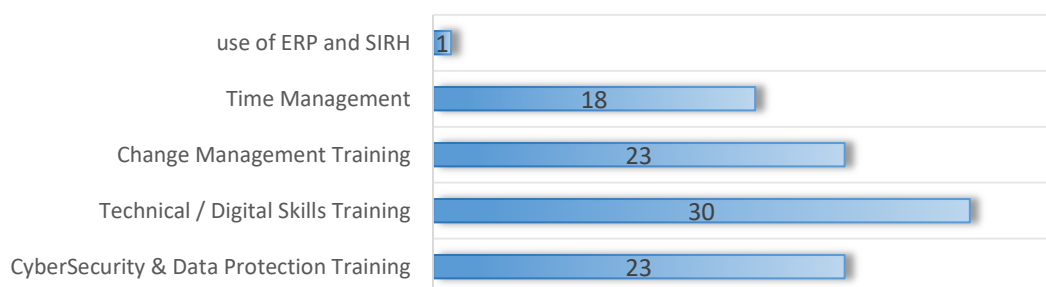


Source: Developed by the author based on questionnaire results.

The results indicate that the digitalization of HR activities at GEANT is unevenly distributed across different functions. The most digitalized activities are **salary management (25 responses), recruitment (23 responses), and employee data management (23 responses). These functions are primarily administrative and process-oriented, making them more suitable for digitalization and automation. In contrast, talent management (16 responses), training (14 responses), and performance evaluation (13 responses) show moderate levels of digitalization, suggesting that while digital tools are used, these activities continue to require a significant degree of human involvement and managerial judgment. The lowest levels of digitalization are observed in onboarding (4 responses) and social security management (1 response), indicating that these functions remain largely dependent on traditional procedures. Overall, the findings suggest that GEANT prioritizes the digitalization of administrative HR processes to improve operational efficiency while maintaining a more human-centered approach in activities that involve employee integration, development, and regulatory compliance.

8. Types of training that been offered to support D-HRM

Figure 14: Types of training

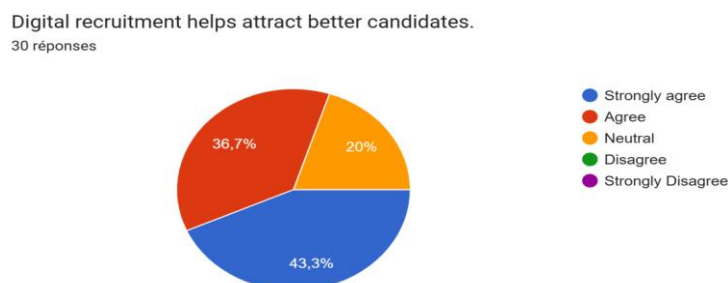


Source: Developed by the author based on questionnaire results.

The data presented in the figure indicate that GEANT has implemented a diversified training approach to support the digitalization of HR processes, with a strong emphasis on developing technical competencies. Technical and digital skills training records the highest score (30), highlighting the organization's priority in equipping employees with the necessary capabilities to operate digital systems effectively. This is followed by both change management training and cybersecurity and data protection training (23 each), reflecting an awareness of the organizational and security challenges associated with digital transformation. Time management training (18) appears moderately emphasized, suggesting its supportive role in improving individual efficiency within digital work environments. In contrast, training related to the use of ERP and HRIS systems shows a significantly low score (1), which may indicate either a lack of formal training in these tools or an assumption that employees acquire these skills informally. Overall, the results suggest that while GEANT invests substantially in building general digital and adaptive competencies, there may be a gap in system specific training, which could affect the optimal use of digital HR technologies.

9. Digital recruitment helps attract better candidates

Figure 3: Digital recruitment helps attract better candidates



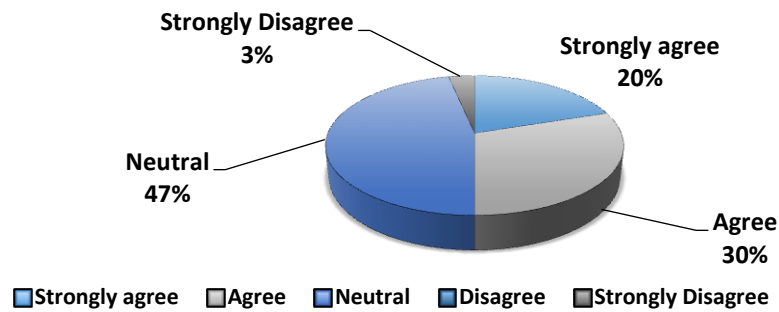
Source: Developed by the author based on questionnaire results.

The results presented in the figure indicate a strong positive perception of digital recruitment in attracting better candidates. A significant majority of respondents either strongly agree (43.3%) or agree (36.7%) with the statement, representing a combined total of 80% positive responses. This suggests that digital recruitment tools are widely viewed as effective in enhancing the quality of candidates by expanding reach, improving targeting, and streamlining the selection process. Meanwhile, 20% of respondents remain neutral, which may reflect uncertainty or limited direct experience with digital recruitment practices. Notably, no respondents expressed disagreement, further reinforcing the overall favorable

attitude toward digital recruitment. These findings highlight the perceived value of digitalization in recruitment processes and its contribution to improving talent acquisition outcomes within the organization.

10. Digital onboarding improves the efficiency of HR processes.

Figure 16: Digital onboarding improves the efficiency of HR processes

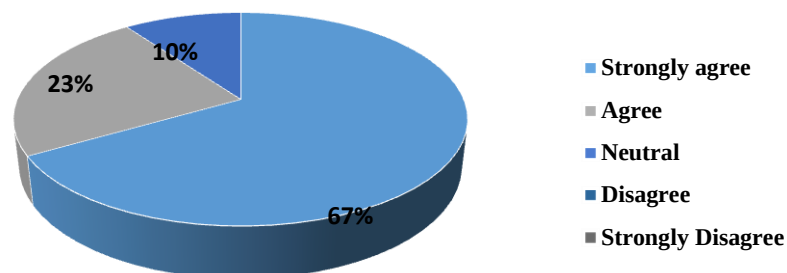


Source: Developed by the author based on questionnaire results.

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11. HRIS minimizes errors in payroll and attendance

Figure 17: HRIS minimizes errors in payroll and attendance

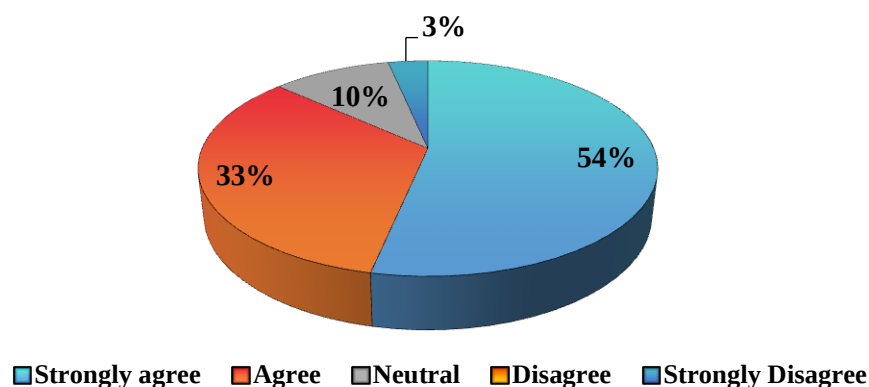


Source: Developed by the author based on questionnaire results.

The results of the questionnaire illustrated in Figure 17, demonstrate a strong consensus among respondents regarding the effectiveness of Human Resource Information Systems (HRIS) in minimizing payroll and attendance errors. A substantial majority of participants indicated positive perceptions, with 67% strongly agreeing and 23% agreeing that HRIS reduces such errors, while only 10% remained neutral. Notably, no respondents expressed disagreement, which underscores the reliability attributed to HRIS in this context. These findings are consistent with prior scholarship that highlights HRIS as a technological backbone for human resource functions, particularly in enhancing accuracy and efficiency in administrative processes. By reducing human error in payroll and attendance management, HRIS contributes not only to operational effectiveness but also to organizational trust, compliance, and competitiveness. The evidence from this survey therefore reinforces the argument that effective HRIS implementation plays a critical role in sustaining organizational performance.

12. HRIS contributes to fairness in compensation

Figure 18: HRIS contributes to fairness in compensation



Source: Developed by the author based on questionnaire results.

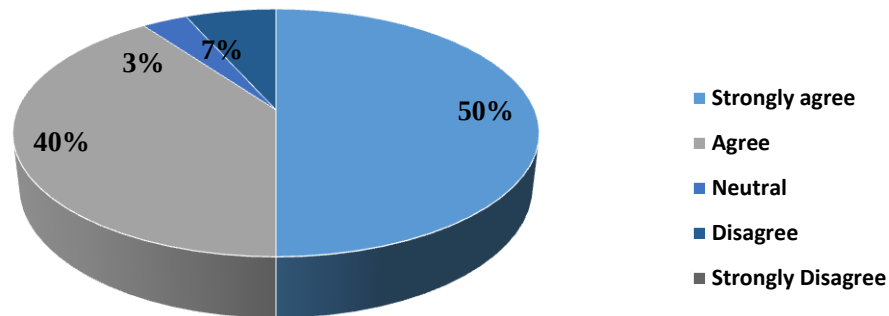
The chart demonstrates how respondents perceive the contribution of HRIS to fairness in compensation. A majority of participants expressed positive views, with 54% strongly agreeing and 33% agreeing, indicating that more than four fifths of the sample see HRIS as enhancing equity in pay practices. Meanwhile, 10% remained neutral, suggesting some respondents neither confirmed nor denied its impact. Only a very small proportion expressed disagreement, with 3% strongly disagreeing and none selecting “disagree”.

From an academic standpoint, these percentages highlight a strong consensus that HRIS plays a significant role in promoting fairness and transparency in compensation systems. The

dominance of agreement responses suggests that HRIS is widely regarded as a mechanism that reduces bias and ensures consistency in pay management. The minimal level of disagreement further reinforces the conclusion that HRIS is perceived as a valuable tool for strengthening organizational justice and employee confidence in compensation processes.

13. The HRIS reduces manual administrative tasks

Figure 19: The HRIS reduces manual administrative tasks:



Source: Developed by the author based on questionnaire results.

The chart highlights respondents' perceptions of the role of HRIS in reducing manual administrative tasks. The majority expressed positive views, with:

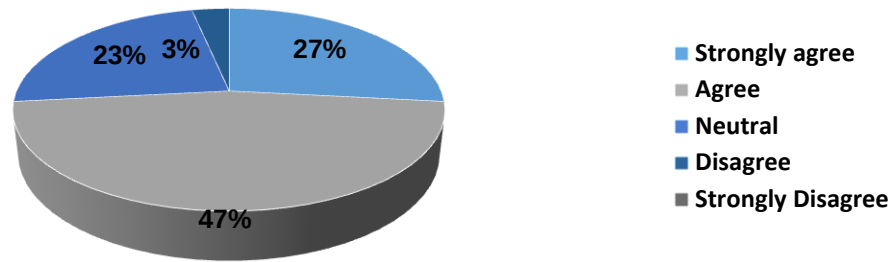
- ✓ 50% strongly agreeing
- ✓ 40% agreeing

Meaning that 90% of participants overall acknowledged the system's effectiveness in this area. A small proportion remained neutral (3%), while only 7% disagreed, and no respondents selected «strongly disagree».

From an academic standpoint, these percentages indicate a clear consensus that HRIS significantly contributes to streamlining administrative work. The dominance of agreement responses suggests that HRIS is widely recognized as a tool that automates routine processes, reduces reliance on manual input, and minimizes inefficiencies. The limited presence of neutral or negative responses further reinforces the conclusion that HRIS is perceived as an effective mechanism for enhancing productivity and allowing HR professionals to focus on more strategic functions.

14. Digital training platforms improve employee skills

Figure 20: Digital training platforms improve employee skills



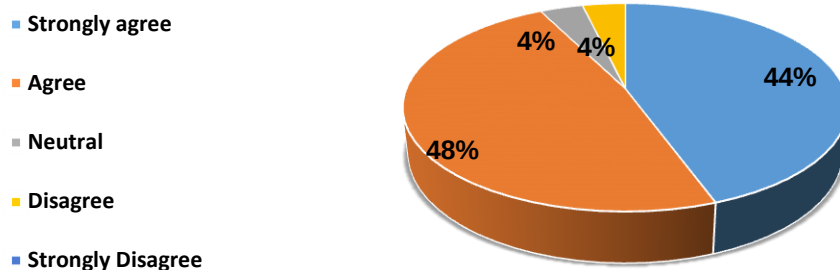
Source: Developed by the author based on questionnaire results.

The chart illustrates respondents' perceptions of the impact of digital training platforms on employee skill development. The majority expressed positive views, with 27% strongly agreeing and 47% agreeing, meaning that 74% overall acknowledged the effectiveness of such platforms. A notable proportion, 23%, remained neutral, while only 3% disagreed and none strongly disagreed.

From an academic standpoint, these percentages suggest that digital training platforms are widely regarded as effective tools for enhancing employee skills, though a significant minority remain undecided. The dominance of agreement responses highlights the perceived value of technology-based training in supporting workforce development, while the small share of disagreement indicates limited skepticism. Overall, the findings reinforce the conclusion that digital training platforms are seen as a beneficial mechanism for improving employee competencies and strengthening organizational learning capacity.

15. Digitization increases talent management in HR practices.

Figure 21: Digitalization and TM



Source: Developed by the author based on questionnaire results.

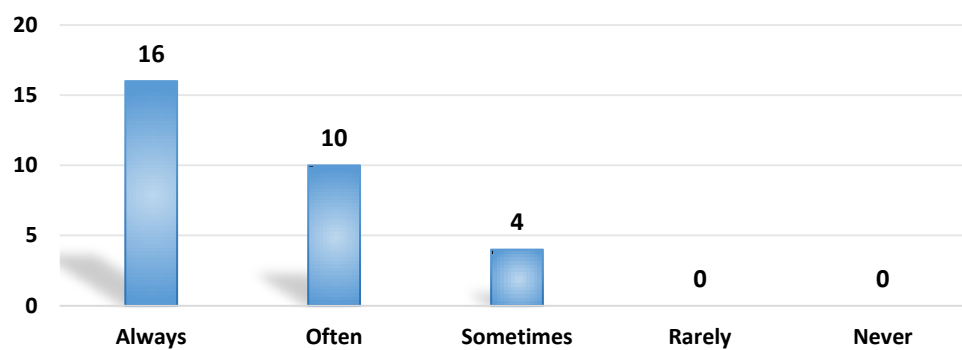
The figure shows that the majority of respondents perceive digitalization as having a positive impact on talent management in HR practices. Specifically, 48% of participants agreed and 44% strongly agreed that digitalization improves talent management, representing a combined total of 92% positive responses. This indicates a strong consensus among respondents

regarding the effectiveness of digital technologies in enhancing HR activities such as recruitment, employee development, performance management, and talent retention.

In contrast, only 4% of respondents remained neutral, while another 4% disagreed with the statement. No respondents strongly disagreed, which further emphasizes the generally favorable perception of digitalization in HR practices. Overall, the results suggest that digital transformation is widely recognized as an important factor in improving talent management efficiency and effectiveness within organizations.

16. How often is HR data used to support managerial decision-making

Figure 22: HR data and decision- making

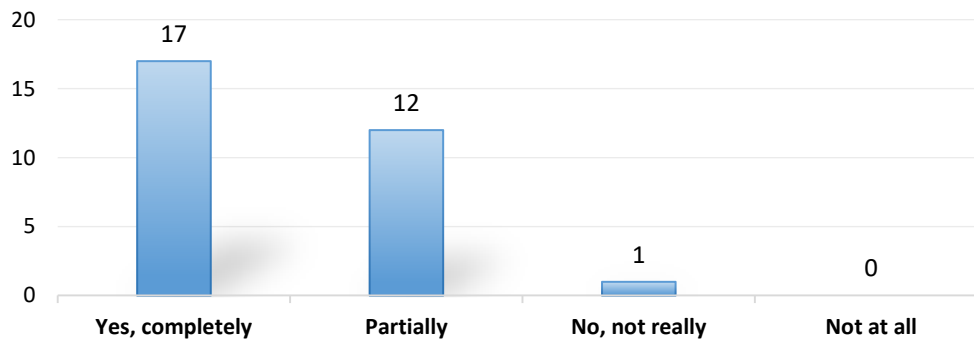


Source: Developed by the author based on questionnaire results.

The figure illustrates the frequency with which HR data is used to support managerial decision-making within the organization. The results indicate that the majority of respondents rely heavily on HR data in the decision-making process. Specifically, 16 respondents stated that HR data is «always» used, while 10 respondents indicated that it is «often» used. This demonstrates a strong integration of HR analytics and data-driven practices in managerial activities. In comparison, only 4 respondents reported that HR data is “sometimes” used, while no respondents selected “rarely” or “never.” These findings suggest that the organization recognizes the importance of HR data in improving the quality, accuracy, and effectiveness of managerial decisions. The results reflect a growing dependence on data-driven HR practices to support organizational performance and strategic management.

17. Are the HR digital tools used suitable for the users' needs

Figure 23:The suitability of D-HR tools



Source: Developed by the author based on questionnaire results.

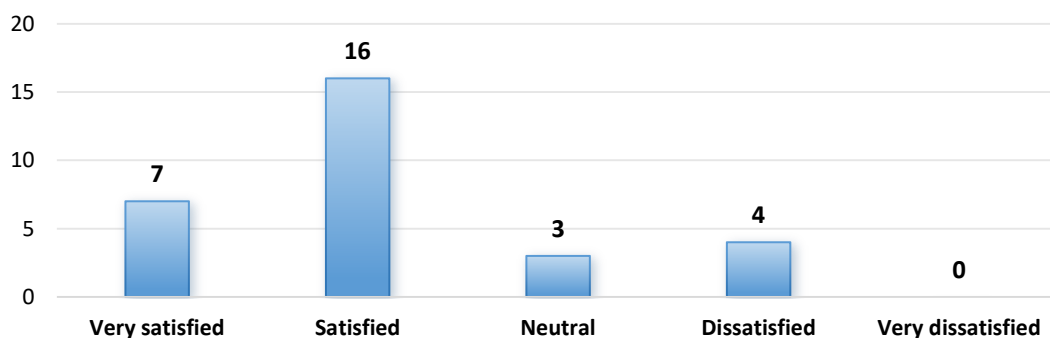
The figure presents the respondents' perceptions regarding the adequacy of digital HR tools with their needs. The results generally show a positive appreciation of these tools within the organization. Indeed, 17 respondents believe that the tools are "completely" suited to their needs, while 12 consider them "partially" suited. This suggests that the digital solutions implemented satisfactorily meet the users' expectations and facilitate both their daily tasks and their interactions with HR services.

Moreover, only one respondent considers the tools to be "not really" suitable, and none judge them to be "not at all" suitable. This very low level of dissatisfaction reflects a good overall acceptance of digital tools and a rather successful alignment between user needs and the proposed solutions.

Overall, these results indicate that HR digitalization is well perceived by employees and that it contributes to improving the efficiency of HR practices, as well as the user experience within the organization.

18. The satisfaction degree of the digitalization within the company

Figure 24: The satisfaction degree of the digitalization



Source: Developed by the author based on questionnaire results.

The bar chart shows how respondents evaluate their satisfaction with the level of digitalization in their organization. The largest group reported being satisfied (16 responses), followed by those who were very satisfied (7 responses). A smaller number expressed neutrality (3 responses), while 4 respondents indicated dissatisfaction, and none reported being very dissatisfied. This distribution suggests that overall satisfaction with digitalization is relatively high, with positive responses clearly outweighing negative ones. These results indicate that digitalization efforts are generally meeting employee expectations, though not without some reservations. The presence of neutral and dissatisfied responses highlights that while many participants recognize benefits, there remain areas where improvements are needed. Taken together with earlier survey findings on HRIS and digital platforms, the data suggest a consistent trend: «Digitalization is perceived as beneficial for organizational processes, but continuous refinement and responsiveness to employee concerns are necessary to sustain high levels of satisfaction».

19. Rate your satisfaction with HR digitalization within your company from 1 to 10

Table 3: The degree of satisfaction with D-HR

Score(x)	Frequency (f)	x^f
2	2	4
3	2	6
4	3	12
5	3	15
6	5	30
7	6	42
8	6	48
8.5	1	8.5
9	1	9
10	1	10
62.5	30	184.5

Source: Developed by the author based on questionnaire results.

The table summarizes the responses of 30 employees at GEANT regarding their satisfaction with the company's HR digitalization. It lists each satisfaction score alongside its frequency, which represents how many employees chose that specific rating. The table also includes a calculated column multiplying each score by its frequency, resulting in a total sum of 184.5. This structured summary serves as the foundation for our descriptive analysis, as it allows us to calculate the mean, variance, and standard deviation to uncover the true spread of employee opinions.

Table 4: Description statistics

MEAN	VARIANCE	STANDAR DEVIATION
6.15	4.330172414	2.080906633

Source: Developed by the author based on questionnaire results.

Comment:

- **The Mean (6.15 / 10):** Initial Acceptance and Digital Maturity Level:

The mean represents the central point of the data-set, scoring 6.15 out of 10 indicates that the digitalization of HR practices (such as e-recruitment, e-training, and e-payroll) within GEANT has moved past initial rejection and has achieved a baseline level of acceptance. However, this score reflects a moderate satisfaction level. It suggests that the newly implemented digital tools have not yet reached full organizational maturity, and employees still encounter technical or procedural obstacles that prevent them from fully adopting and embracing these systems.

- **The Variance (4.330):** The Organizational Gap and Perceptual Fragmentation

Variance measures the total dispersion by squaring the differences from the mean, which gives heavier mathematical weight to extreme responses (such as the very low scores of 2 and 3, or the perfect score of 10). A high variance of 4.330 is statistical proof that a unified organizational vision regarding digital change is missing within GEANT. This number translates into a severe split in perception among the workforce. The transition did not occur smoothly across the board; instead, it created a fragmented environment dividing those who successfully adopted the system from those left struggling behind.

- **The Standard Deviation (2.08):** Adaptation Dynamics and Resistance to Change

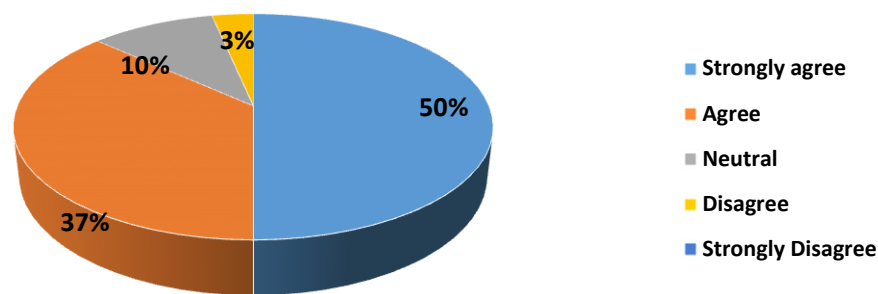
The standard deviation scales the variance back into the original 1to10 scoring unit. A standard deviation of 2.08 points means that most employee ratings fluctuate across a wide window, roughly between 4 and 8. In the context of Organizational Change Management, this metric serves as a direct indicator of resistance to change and varying individual adaptation speeds. The employees sitting at the lower tail of this distribution (scores 2 to 4) represent active or passive resistance pockets individuals experiencing digital anxiety or difficulty letting go of traditional, paper based HR habits.

When combined, these three indicators prove that successful HRM digitalization depends heavily on the quality of the accompanying Change Management strategy, rather than just the quality of the software itself.

The co-existence of a moderate mean (6.15) alongside a high variance and standard deviation (4.330 and 2.08) points to a common organizational pitfall: GEANT likely focused its efforts on the purely technical deployment of digital tools while overlooking the human and behavioral side of change. This lack of alignment reveals deficiencies in continuous training programs, communication channels, and psychological support, leaving a significant portion of the workforce without adequate guidance, which ultimately triggered resistance and fragmented employee satisfaction

20. Digitalization has introduced important changes in the organization

Figure 25: The digitalization changes in the company



Source: Developed by the author based on questionnaire results.

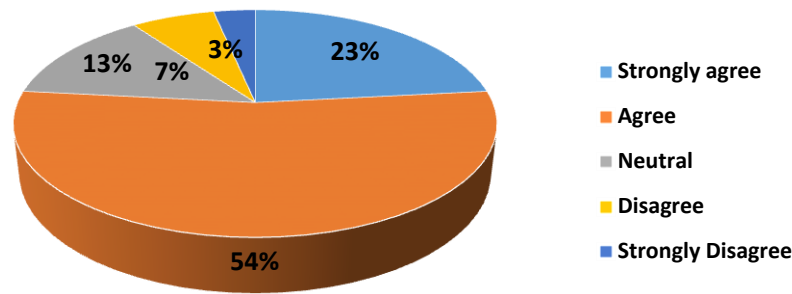
The figure indicate that digitalization has brought significant changes to the organization. A majority of respondents expressed positive perceptions toward this transformation, with 50% strongly agreeing and 37% agreeing that digitalization has introduced important organizational changes. Which indicates that most employees recognize the strong impact of digital technologies on organizational practices, processes, and methods of work.

In the other hand, only 10% of respondents remained neutral, while a very small percentage (3%) disagreed with the statement. No respondents strongly disagreed, which further confirms the positive perception of digital transformation within the GEANT company.

These findings indicate that digitalization is widely considered an important factor in organizational development and change. The positive responses may be associated with the introduction of modern digital systems, greater operational efficiency, and the evolution of managerial and HR practices.

21. Employees easily adapt to digital changes.

Figure 26: Employee adaption to DC

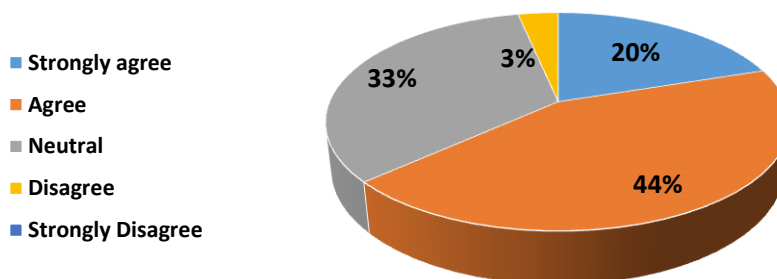


Source: Developed by the author based on questionnaire results.

The figure shows employees' perceptions regarding their ability to adapt to digital changes within the organization. The majority of respondents expressed positive opinions, as 53% agreed and 24% strongly agreed that employees easily adapt to digital transformation. These results indicate that most employees are capable of adjusting to new digital tools and technological changes introduced in the workplace. But, 13% of respondents remained neutral, while 7% disagreed and 3% strongly disagreed with the statement. Although these percentages are relatively low, they suggest that some employees may still face difficulties in adapting to digital changes, possibly due to limited digital skills or resistance to change. The findings suggest that employees generally demonstrate a good level of adaptability to digital transformation.

22. Employees perceptions of management support during organizational change

Figure 27: Management support during organizational change



Source: Developed by the author based on questionnaire results.

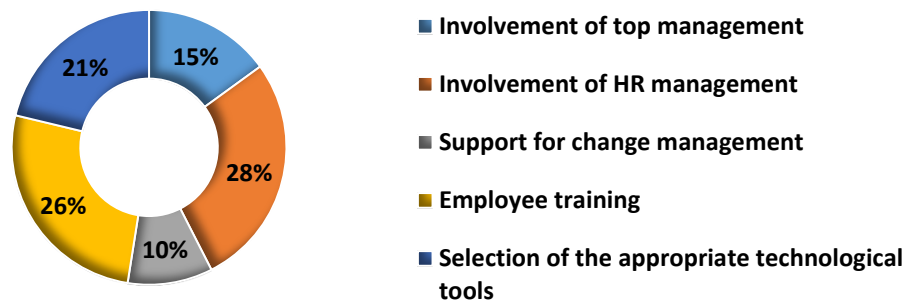
The figure presents employees' perceptions of management support during organizational change. The results reveal that the majority of respondents hold positive opinions, with 64% agreeing (44% agree, 20% strongly agree) that GEANT management provides support to

employees through the change process. These findings indicate that the organization's management plays an important role in facilitating adaptation and assisting employees during periods of transformation. At the same time, 33% of respondents expressed a neutral opinion, indicating that a considerable proportion of employees may not clearly perceive the level of support provided by management. In contrast, only 3% disagreed with the statement, while no respondents strongly disagreed.

The results indicate that management support during organizational change is generally viewed positively. This may reflect the organization's efforts to guide employees, encourage communication, and reduce difficulties associated with change and digital transformation.

23. The key success factors for an HR digitalization project:

Figure 28: The key success factors for an HR digitalization project



Source: developed by the author based on questionnaire result

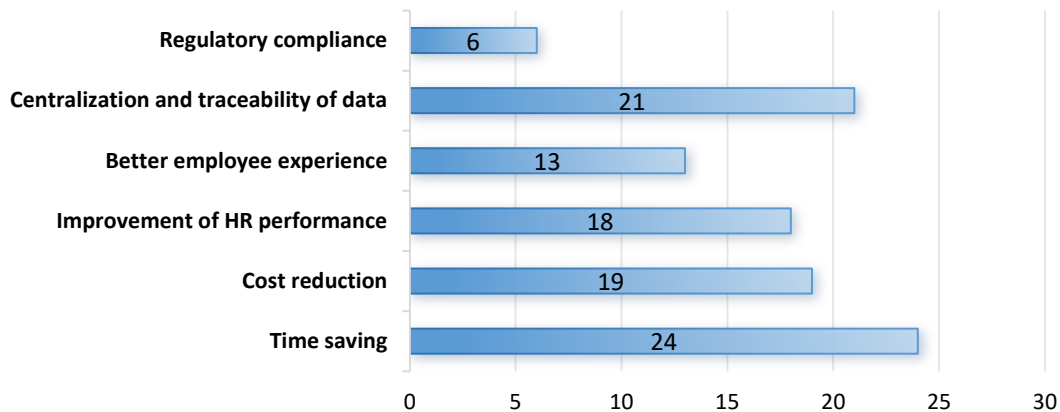
This figure highlights the factors perceived as most critical for the success of HR digitalization projects.

The most important factor identified by respondents is the involvement of HR management (28%), followed closely by employee training (26%). These two elements alone account for more than half of the responses, showing that the success of digital transformation is primarily seen as a human-centered process. This suggests that when HR teams are actively engaged and employees are properly trained, the adoption of digital tools becomes much smoother and more effective. Next, the selection of appropriate technological tools represents 21% of responses. This indicates that while technology is important, it is not perceived as the main driver of success on its own. Respondents seem to consider that even the best tools require proper human and organizational support to deliver value. Top management involvement accounts for 15%, highlighting the importance of strategic leadership in guiding and supporting the transformation process. Although less emphasized than operational HR involvement, it remains a key factor for ensuring alignment and resource allocation. Finally, support for change management represents 10%, showing that structured change processes,

communication, and accompaniment are still essential but perceived as less central compared to training and HR involvement.

24. In your opinion, what are the main objectives that your company seeks to achieve through HR digitalization

Figure 29: The main objectives of the company through D-HR



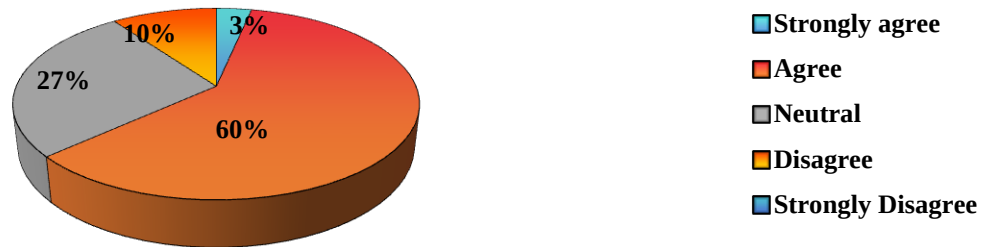
Source: Developed by the author based on questionnaire results.

This figure reflects the distribution of opinions among the thirty respondents regarding the organizational objectives associated with HR digitalization, with clear priorities emerging in their responses. The most frequently cited objective is time saving, mentioned by 24 respondents, highlighting the strong expectation that digitalization reduces administrative workload and improves efficiency. Closely following, 21 respondents emphasized the centralization and traceability of data, reflecting the importance given to reliable, accessible, and transparent information management.

Cost reduction was identified by 19 respondents, while 18 respondents pointed to the enhancement of HR performance, showing that digitalization is also perceived as a lever for improving both economic efficiency and overall organizational effectiveness. In comparison, improving employee experience was mentioned by 13 respondents, indicating that although it is recognized, it remains less central in respondents' priorities. Finally, regulatory compliance was cited by only 6 respondents, suggesting that it is perceived as a secondary objective in the context of digital transformation.

25. Employee resistance to digital transformation

Figure 30: Employee resistance to digital transformation



Source: Developed by the author based on questionnaire results.

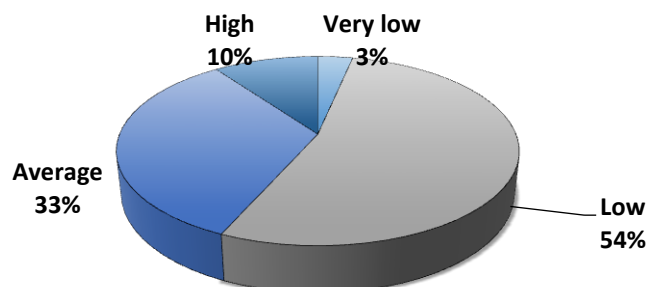
The figure presents employees opinions regarding resistance to digital transformation within the organization. The majority of respondents agreed (60% agreed and 3% strongly agreed) that some employees resist digital transformation, which suggests that resistance to change exists within the organization and is recognized by a large proportion of participants.

In addition, 27% of respondents remained neutral and only 10% disagreed with the statement, while no respondents strongly disagreed.

Overall, these findings show that resistance to digital transformation is perceived as a real challenge within the organization. This resistance may be related to factors such as fear of change, lack of digital skills, or difficulties adapting to new technologies. Therefore, organizations may need to strengthen communication, training, and employee support in order to facilitate acceptance of digital change.

26. The level of resistance to change in your company during the implementation of digitalization

Figure 31: The level of resistance to change



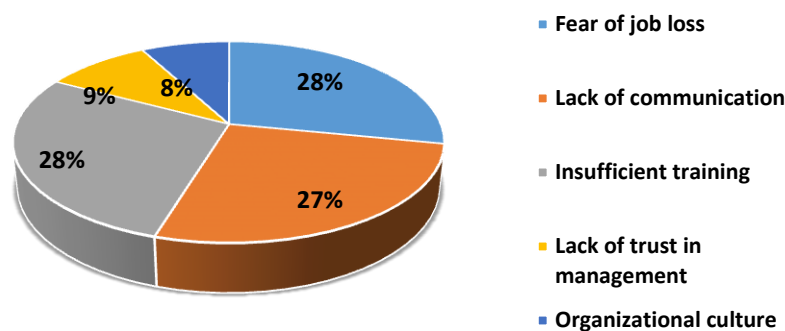
Source: Developed by the author based on questionnaire results.

The results show that resistance to change during digitalization is generally low. A majority of respondents indicated low resistance (53%), while another 33% described it as average. Only 10% reported high resistance, and a very small proportion (4%) considered it very low.

This distribution suggests that most employees are relatively receptive to digital transformation initiatives. The predominance of low and average levels of resistance indicates that while some challenges exist, they are not severe enough to hinder implementation. The limited proportion of high resistance responses highlights that opposition is present but not widespread. Overall, the findings imply that organizational readiness for digitalization is strong, with manageable levels of resistance that can be addressed through effective communication, training, and change management strategies.

27. The main causes of resistance to change in your organization

Figure 32: The causes of resistance to change in GEANT



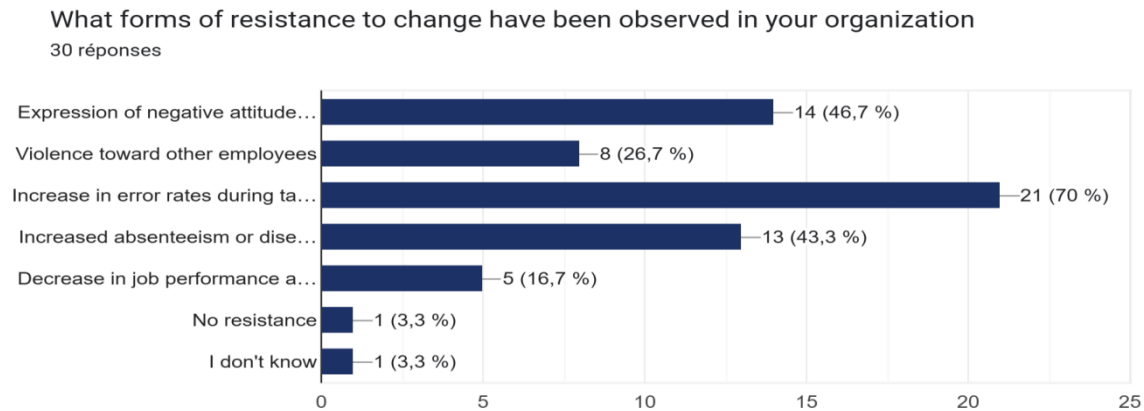
Source: Developed by the author based on questionnaire results.

The graph highlights the main causes of resistance to change within the organization.

The results show that three factors dominate and are almost equivalent: fear of losing one's job (28%), insufficient training (28%), and lack of communication (27%). Together, they explain the bulk of the observed resistance. This reflects a climate of uncertainty among employees, both regarding their professional future, their skill level in relation to the new tools, and the clarity of the information provided by management. Two other factors appear to a lesser extent: lack of trust in management (9%) and organizational culture (8%). Although less frequently mentioned, they also contribute to shaping attitudes toward change. Overall, the results show that resistance to change is mainly related to human and organizational issues: insecurity, lack of preparation, and insufficient communication. This underscores the importance of strengthening internal communication, supporting employees thru training, and reassuring them about the evolution of roles to facilitate the success of the transformation.

28. Forms of resistance to change that been observed in the organization

Figure 33: Forms of resistance to change with in the organization



Source: Developed by the author based on questionnaire results.

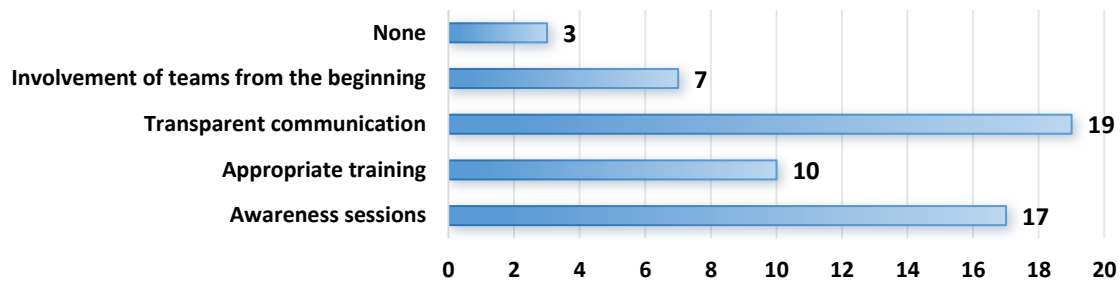
The data reveal several forms of resistance to organizational change, with percentages exceeding 100% because respondents could select multiple options. The most common form identified was an increase in error rates at work (70%), suggesting that change may generate confusion, stress, or difficulties in adapting to new procedures and technologies, thereby affecting accuracy and performance. Another notable form was the expression of negative attitudes toward change (46.7%), reflecting emotional or psychological reactions such as dissatisfaction, criticism, or reluctance. Similarly, absenteeism and disengagement (43.3%) were reported, indicating reduced motivation or discomfort during transformation.

Less frequently observed were violence toward colleagues (26.7%) and declines in job performance (16.7%), showing that resistance can also manifest in strained workplace relations and productivity losses, though to a lesser extent. Only a very small proportion indicated no resistance (3.3%) or reported uncertainty (3.3%).

The findings suggest that resistance is most often expressed through operational challenges, negative attitudes, and disengagement. This underscores the need for effective communication, employee support, and targeted training to mitigate resistance and facilitate smoother implementation of organizational change.

29. The measures that been put in place to overcome resistance to change

Figure 34: The measures that been put in place to overcome resistance to change



Source: Developed by the author based on questionnaire results.

This figure illustrates the strategies adopted to reduce resistance to change during digitalization. The most frequently applied measures are transparent communication (19 responses) and awareness sessions (17 responses), showing that organizations prioritize openness and employee engagement to ease transitions. Appropriate training (10 responses) also plays a notable role, highlighting the importance of equipping staff with the skills needed to adapt. A smaller number emphasized involving teams from the beginning (7 responses), which reflects the value of early participation in fostering acceptance. Only 3 responses indicated that no measures were implemented. These 3 responses highlight a potential weakness in organizational readiness. Failing to adopt measures such as communication, training, or awareness sessions may hinder the success of digital transformation, as resistance is left unmanaged. These results suggest that organizations recognize communication and awareness as the most effective tools for overcoming resistance. Training and early involvement complement these efforts by building competence and ownership among employees. The limited cases where no measures were taken underline the risks of neglecting change management practices. Overall, the findings emphasize that successful digital transformation depends not only on technology but also on proactive strategies that address human concerns and encourage participation.

1. The Interview Guide

The interview guide was utilized as the primary instrument for field data collection. This methodological document outlines the core themes and questions aligned with the study's objectives, while allowing for the systematic recording of responses as the dialogue progresses. Within the framework of this research, the guide was designed and directed exclusively toward the HR Director of "SARL LOTFI ELECTRONICS." As the key strategic actor responsible for driving digital transformation and leading organizational change within the enterprise, the HR Director provides the critical insights needed for this study.

Consequently, this guide aims to capture the management's vision regarding digitization and to evaluate how structural and behavioral changes resulting from this transition are being managed.

Question 1: What does digitalization of the company's information system mean to you operationally and strategically?

Operationally: digitalization means automating routine tasks like payroll calculation, attendance tracking, and leave management, which reduces human errors and saves time. It enables real-time access to employee data without paper files and improves information flow between departments through integration with accounting and recruitment systems.

Strategically: digitalization builds a clear digital vision aligned with the company's strategic goals, enables HR to become a strategic partner through data and analytics, and enhances the ability to adapt quickly to market challenges and organizational changes.

Question 2: How did digitalization contribute to the decision-making process?

Digitalization provides advanced reports and analytics that help understand trends in the workforce, such as turnover rates, employee performance, and training needs. This enables informed real-time decisions on hiring, promotions, salary setting, and bonuses. It also reduces reliance on intuition or inaccurate data, enhancing the accuracy and objectivity of managerial decisions by relying on reliable, up-to-date information.

Question 3: How does HRIS support HR practices and make them aligned with organizational goals?

HRIS automates recruitment by screening CVs, scheduling interviews, and tracking candidates. It identifies skill gaps, registers training programs, and tracks results to enhance training effectiveness. In performance management, HRIS continuously tracks KPIs and links them to organizational goals. It calculates payroll and benefits accurately while enabling employee self-service for updating information, requesting leave, and viewing paychecks. This support makes HR practices aligned with strategic goals by unifying data in a single source of truth, ensuring HR operations integrate with company strategy, and improving employee experience and satisfaction, which positively impacts productivity.

Question 4: Is the ERP system available to all employees or restricted by roles and responsibilities?

The ERP system is restricted by roles and responsibilities (Role-Based Access Control). All employees can access the self-service unit for leave requests, paycheck viewing, and updating personal information. Managers can access their team's reports, approve requests, and manage performance. The HR team has full access to all employee data and subsystems, while senior management receives comprehensive analytical dashboards for strategic decisions. This restriction ensures data security, compliance with data protection laws, and efficiency by granting each employee only the access necessary for their work.

Question 5: How is data security and confidentiality ensured?

We apply an integrated security strategy based on information security principles (CIA: Confidentiality, Integrity, Availability). For access security, we implement role-based access control, multi-factor authentication for sensitive systems, and strong passwords with periodic changes.

For encryption, we use encryption at rest and encryption in transit (TLS/SSL), with special protection for employee and payroll databases. Physically, we use surveillance cameras in server rooms, biometric/card access systems, and climate control in server rooms.

On the network level, we use firewalls, intrusion detection/prevention systems (IDS/IPS), and network segmentation. We perform automatic daily backups with off-site storage and regular restoration tests. We also conduct security awareness training, establish acceptable use policies, monitor and audit all operations through audit logs, and prepare periodic security reports for management.

Question 6: What are the different digital systems used to support company digitalization and their roles?

BIG is an Algerian accounting software widely used in Algeria for managing financial accounts, invoices, budgets, and issuing integrated financial reports while complying with Algerian accounting regulations.

CGED (General Control of State Commitments) monitors financial commitments and purchases, ensures transparency in spending and warehouses, and conducts internal financial audits.

Attendance automatically tracks employee attendance and departure, calculates working hours, delays, and overtime, and integrates with the payroll system for accurate wage calculation.

GLPI is an open-source IT service management system for managing computer inventory, printers, and networks, ticketing for technical requests, tracking maintenance and repairs, and managing software licenses according to ITIL standards.

AnyDesk is secure remote access software for remote technical support, system maintenance without field visits, remote employee training, and real-time monitoring and assistance.

These systems are semi-integrated: BIG GRH and BIG GT are fully integrated (same provider), while GLPI and AnyDesk work independently. This leads to some duplicate data entry and lack of real-time synchronization across all departments.

Question 7: Are these systems sufficient to meet the company's needs or do they need development?

NO. They are insufficient for inter departmental integration as there is no unified ERP system. They also lack advanced analytics with no BI dashboards, and employee self-service is limited and needs a mobile and web application development. What we need includes a unified ERP connecting all departments (HR, accounting, procurement, warehouses, sales), an employee self-service platform, analytical dashboards for management, and automatic integration between systems via APIs.

Question 8: What challenges did you face in digitalizing HR?

The organization faced several challenges during the implementation of digitalization. First, resistance to change was observed among employees, as many preferred traditional working methods, which slowed down the adoption of new systems. This situation was further reinforced by a lack of digital skills, with only a few employees properly trained, making continuous training necessary. In addition, several technical and organizational

constraints were identified. The high cost of investing in integrated systems (ERP, servers, licenses) delayed system updates. Weak infrastructure, particularly unstable internet connectivity, also caused frequent service interruptions. The lack of system integration led to data duplication and time losses in information processing. On the human side, fear of job loss created stress and tension among employees. Cybersecurity risks also required additional investments to ensure adequate data protection. Finally, the absence of a clear long-term digitalization strategy resulted in fragmented and uncoordinated initiatives, limiting the overall effectiveness of the digital transformation process.

Question 9: What factors explain the delay of a company with 20+ years of experience in electronics in digital transformation?

- ◆ Satisfaction with the status quo: prevailed with the mindset "if it's not broken, don't fix it," and past success created resistance to change.
- ◆ High investment costs: for ERP, servers, licenses, and training were significant barriers.
- ◆ Lack of strategic vision where top management didn't consider digitalization a strategic priority.
- ◆ Fear of risk with concerns about project failure or disrupting current operations.
- ◆ Lack of internal expertise with no dedicated technical team for digital transformation.
- ◆ Competing priorities focused on market survival rather than innovation.

Question 10: What role did the HR Directorate (MRH) play in supporting employees during company changes?

We implemented transparent communication through explanatory meetings highlighting digitalization benefits, reducing fear and anxiety. We provided progressive training with intensive courses on each system (BIG GRH, BIG GT, GLPI) to raise digital skills, offered continuous technical support with a support team ready to answer questions and solve problems, speeding up adoption. And then we applied flexibility in transition by allowing dual operation (paper + digital) for a transitional period to reduce pressure.

Question 11: For the future, do you plan to digitalize all company departments?

Yes, we have a comprehensive digitalization plan from 2026 to 2028. First targets HR, accounting, and procurement with BIG GRH + BIG + CGED integration. Then targets sales, warehouses, and logistics with an integrated ERP system (inventory, orders management). we

also plane to target marketing and customer service with a CRM system. Finally targets all departments with a unified digital platform and mobile application. Our strategic goals include unifying data in one platform, reducing administrative time by 40%, increasing report accuracy to 99%, and improving employee and customer experience comprehensively.

2.Discussion of results

The analysis of the questionnaire and interview results shows that digitalization has become an important component of HRM practices within GEANT Electronics. The findings indicate a high adoption of digital HR tools, with 100% of respondents confirming the use of digital HRM systems. The most digitalized activities were salary management, recruitment, and employee data management. Furthermore, 90% of respondents stated that HRIS improves process efficiency and reduces administrative tasks, while 80% considered digital recruitment effective and 74% believed that digital training contributes to employee development.

The results also reveal that digitalization has generated significant organizational changes. In fact, 87% of employees agreed that digital transformation has introduced important changes within the organization, and 92% believed that it improves talent management practices. Moreover, 77% reported that employees adapt easily to digital transformation, highlighting the positive perception of digital initiatives.

However, several challenges were identified. The main obstacles to digital transformation were fear of job loss (28%), insufficient training (28%), and lack of communication (27%). Additionally, 63% of respondents acknowledged the existence of resistance to change. According to the HR Director, other challenges include system integration issues, infrastructure limitations, and implementation costs.

Despite these difficulties, employees generally adapted well to the transformation process. Most respondents described resistance as low or moderate, and identified **HR management involvement (28%), employee training (26%), and the availability of appropriate technological tools (21%) as the main factors supporting successful digitalization and reducing resistance to change.

Conclusion

This chapter analyzed the digitalization of Human Resource Management practices within GEANT Electronics through both quantitative and qualitative approaches. By combining questionnaire results with the interview conducted with the HR Director, the study provided a

clearer understanding of how digital transformation affects HR practices and organizational change management within the company.

The analysis revealed that GEANT has successfully implemented several digital HR practices, including HRIS systems, digital recruitment, payroll automation, attendance management, and digital training platforms. These tools contributed to improving administrative efficiency, reducing manual tasks and errors, facilitating decision-making, and enhancing overall HR performance. The findings also showed that digitalization introduced important organizational changes and strengthened the company's ability to modernize its management practices.

However, the study also highlighted several challenges associated with HR digitalization. Resistance to change, insufficient digital skills, lack of communication, infrastructure limitations, and fear of job loss were identified as the main obstacles faced during the transformation process. Despite these difficulties, the results demonstrated that management support, employee training, transparent communication, and awareness programs played a significant role in facilitating employee adaptation and reducing resistance to change. Overall, the findings confirm that HR digitalization represents both an opportunity and a challenge for GEANT Electronics. While digital technologies improve organizational efficiency and support strategic decision-making, the success of digital transformation largely depends on effective change management practices and the organization's ability to support employees throughout the transition process.

GENERAL CONCLUSION

General conclusion

The digitalization of Human Resource Management practices and organizational change management have become essential elements for modern organizations seeking to improve efficiency, adaptability, and competitiveness. This transformation offers several advantages, including the automation of administrative tasks, faster access to information, improved decision-making, better communication, and more effective management of human resources processes. Organizations that adopt digital HR practices are better prepared to respond to technological, economic, and organizational changes in an increasingly digital environment.

However, the successful implementation of HR digitalization also requires effective organizational change management. The findings of this study demonstrated that digital transformation may generate challenges such as resistance to change, lack of digital skills, communication difficulties, and employee concerns about adaptation. Therefore, organizations must establish clear strategies based on employee training, transparent communication, technical support, and management involvement in order to facilitate acceptance of digital transformation and reduce resistance.

In the digital era, organizations that successfully combine technological innovation with effective change management are more capable of improving organizational performance, strengthening employee engagement, and maintaining long-term competitiveness. Consequently, HR digitalization should not be viewed only as a technological investment, but also as a strategic and human transformation that requires continuous development, adaptation, and support.

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Appendices

ABEDERRAHMANE MIRA UNIVERSITY OF BEJAIA

FACULTY OF ECONOMICS, COMMERCE AND MANAGEMENT SCIENCES

Option: Human Resources Management

A study for the digitalization of HRM and organizational change management (OCM)

Objectif:

This questionnaire explores how digital technologies are reshaping HR practices within organizations. My goal is to gather your valuable insights and experiences regarding the use of digital tools across key HR functions, such as recruitment, training and development, and HR information systems and organizational change management.

Your responses will remain strictly confidential and will be used exclusively for academic purposes.

AXE 01: identifications of the study sample:

➤ Gender*

- ☐ Female
- ☐ Male

➤ Age*

- ☐ <25
- ☐ 25_35
- ☐ 35_45
- ☐ 45_55
- ☐ >55

➤ Level of education *

- ☐ Middle School
- ☐ High School

☐ Higher Technician (BTS)

☐ Bachelore

☐ Master degree

☐ Doctorate

➤ Position in the company*

.....

➤ Experience*

☐ <5 years

☐ 5_10 years

☐ 10_15 years

☐ >15 years

➤ Does your company use digital tools in HR management?

☐ Yes

☐ No

➤ Does your company use HRIS

☐ Yes

☐ No

☐ I dont know

➤ if yes, when did it start to use it

☐ Before the Cov-19

☐ With in the Cov-19

☐ After the CoV-19

➤ Do you think the CoV-19 was the main reason to transforme to a digital HR?*

☐ Yes

☐ No

☐ I dont know

➤ If No, was the 4th industrial revolution the reason?

- ☐ Yes
- ☐ No
- ☐ I don't know

➤ Does the HRIS improve the efficiency of HR processes

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

➤ Which HR activities are digitalized in your organization?

- ☐ Remuneration
- ☐ Recruitment
- ☐ Training
- ☐ Performance evaluation
- ☐ Talent Management
- ☐ Employee data management
- ☐ onboarding

Autre :.....

➤ What types of training have been offered to support the digitalization of HR processes?

- ☐ CyberSecurity & Data Protection Training
- ☐ Technical / Digital Skills Training
- ☐ Change Management Training
- ☐ Time Management
- ☐ All

Autre :.....

➤ Digital recruitment helps attract better candidates.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

➤ How effective is the digital onboarding system? *

- ☐ Very effective
- ☐ Effective
- ☐ Neutral
- ☐ Ineffective

➤ Digital onboarding improves the efficiency of HR processes.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

➤ HRIS minimizes errors in payroll and attendance

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

➤ HRIS contributes to fairness in compensation *

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree

Strongly Disagree

➤ The HRIS reduces manual administrative tasks *

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly Disagree

➤ Digital training platforms improve employee skills. *

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly Disagree

➤ Digitalization increases talent management in HR practices. *

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly Disagree

➤ How often is HR data used to support managerial decision-making? *

☐ Always

☐ Often

☐ Sometimes

☐ Rarely

☐ Never

➤ Are the HR digital tools used suitable for the users' needs?*

☐ Yes, completely

- ☐ Partially
- ☐ No, not really
- ☐ Not at all

➤ How satisfied are you with the level of digitalization in your organization *

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Dissatisfied
- ☐ Very dissatisfied

➤ Rate your satisfaction with HR digitalization within your company from 1 to 10 *

.....

➤ Digitalization has introduced important changes in the organization. *

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

➤ Employees easily adapt to digital changes. *

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

➤ The company's Management supports employees during organizational change. *

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly Disagree

➤ In your opinion, what are the key success factors for an HR digitalization project?

☐ Involvement of top management

☐ Involvement of HR management

☐ Support for change management

☐ Employee training

☐ Selection of the appropriate technological tools

Autre :.....

➤ In your opinion, what are the main objectives that your company seeks to achieve through HR digitalization?*

☐ Time saving

☐ Cost reduction

☐ Improvement of HR performance

☐ Better employee experience

☐ Centralization and traceability of data

☐ Regulatory compliance

Autre :.....

➤ Some employees resist digital transformation. *

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly Disagree

➤ What is the level of resistance to change in your company during the implementation of digitalization?*

☐ Very low ☐ Low ☐ Average ☐ High ☐ Very High

- What do you consider to be the main causes of resistance to change in your organization *

- ☐ Fear of job loss
☐ Lack of communication
☐ Insufficient training
☐ Lack of trust in management
☐ Organizational culture

Autre :.....

- What forms of resistance to change have been observed in your organization *

- ☐ Expression of negative attitudes or criticism toward change initiatives
☐ Violence toward other employees
☐ Increase in error rates during task execution
☐ Increased absenteeism or disengagement from work responsibilities
☐ Decrease in job performance and overall productivity compared to normal levels

Autre :.....

- What measures have been put in place to overcome resistance to change?*

- ☐ Awareness sessions
☐ Appropriate training
☐ Transparent communication
☐ Involvement of teams from the beginning
☐ None

THANK YOU FOR YOUR HONESTY AND TIME

Interview guide

Question 1: What does digitalization of the company's information system mean to you operationally and strategically?

Question 2: How did digitalization contribute to the decision-making process?

Question 3: How does HRIS support HR practices and make them aligned with organizational goals?

Question 4: Is the ERP system available to all employees or restricted by roles and responsibilities?

Question 5: How is data security and confidentiality ensured?

Question 6: What are the different digital systems used to support company digitalization and their roles?

Question 7: Are these systems sufficient to meet the company's needs or do they need development?

Question 8: What challenges did you face in digitalizing HR?

Question 9: What factors explain the delay of a company with 20+ years of experience in electronics in digital transformation?

Question 10: What role did the HR Directorate (MRH) play in supporting employees during company changes?

Question 11: For the future, do you plan to digitalize all company departments?

THANK YOU FOR YOUR TIME AND HONESTY

Abstract

This study highlights the strategic role of HRM digitalization in modernizing human resource management practices and supporting organizational change. The integration of digital tools has led to significant transformations affecting managerial practices, work modes, and employee adaptation. The results show that HR digitalization helps to enhance organizational efficiency, while change management is a crucial factor in promoting employee buy-in and ensuring the success of digital transformation.

Keywords: Digitalization; digital transformation (DT); HRM); organizational change management; resistance to change.

Resumé

Cette étude met en évidence le rôle stratégique de la digitalisation de MRH dans la modernisation des pratiques de gestion des ressources humaines et dans l'accompagnement du changement organisationnel. L'intégration des outils numériques a entraîné des transformations importantes touchant les pratiques managériales, les modes de travail ainsi que l'adaptation des employés. Les résultats montrent que la digitalisation RH contribue à renforcer l'efficacité organisationnelle, tandis que la conduite du changement constitue un facteur essentiel pour favoriser l'adhésion des employés et assurer la réussite de la transformation digitale.

Mots-clés: Digitalisation; transformation digitale (TD); gestion des ressources humaines (GRH); système d'information des ressources humaines (SIRH); conduite du changement organisationnel; résistance au changement.

الملخص

تسلط هذه الدراسة الضوء على الدور الاستراتيجي لرقمنة إدارة الموارد البشرية في تحديث ممارسات إدارة الموارد البشرية ودعم التغيير التنظيمي داخل المؤسسات. وقد ساهم دمج الأدوات والتقنيات الرقمية في إحداث تحولات جوهرية مست مختلف الممارسات الإدارية وأساليب العمل، كما عزز قدرة الموظفين على التكيف مع متطلبات بيئة العمل الحديثة. وتظهر نتائج الدراسة أن رقمنة الموارد البشرية تساهم في تحسين الكفاءة التنظيمية ورفع مستوى الأداء داخل المؤسسة، في حين تُعد إدارة التغيير عاملاً أساسياً في تعزيز تقبل الموظفين للتحويل الرقمي وضمان نجاحه واستدامته. كما تؤكد النتائج أن نجاح التحويل الرقمي لا يعتمد فقط على تبني التقنيات الحديثة، بل يتطلب أيضاً إدارة فعالة للتغيير تأخذ بعين الاعتبار الجوانب البشرية والتنظيمية المصاحبة لهذه العملية.

الكلمات المفتاحية:

الرقمنة؛ التحويل الرقمي؛ إدارة الموارد البشرية؛ نظام معلومات الموارد البشرية؛ إدارة التغيير التنظيمي، مقاومة التغيير.