

## DIGITAL HR: THE DIGITAL TRANSFORMATION IN HUMAN RESOURCES MANAGEMENT IN THE AVIATION BUSINESS

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### Abstract

Technology played a vital role in human life, especially during the pandemic of COVID-19 technology plays a critical role, including being an assistant driver in all business areas. Digital transformation in the Human Resources Department-HR involves changes that apply technology in human resource tasks. This article described how digital is necessary nowadays in HR departments and how to be a successful digital HR. HR new generations tasks should be more strategic work planning, goal-oriented, compact & flexible organizational structure, emphasize labor relations, reskill and upskill staff competency, and utilize technology in HR tasks such as recruitment & selection, training & development, salary & benefits, and employee self-services online. The preparation for digital transformation began with clarifying the objective and its importance, communicating with all staff, allocating the budget, and arranging for the risk plan. The benefits of digital HR were increasing personnel efficiency and effectiveness, increasing efficiency and effectiveness in the HR outcomes, creating a competitive advantage, developing staff essential technology skills, and enhancing the image of an intelligent organization. The limitations of digital HR consisted of internal factors such as employee factors, factors relating to the organization's existing infrastructure, budgeting; and external factors, including economic, political, social, technological, environmental, regulatory, and competitors. The guideline for digital HR for aviation businesses were to communicate to all staff about the digital transformation, educate them, give them time to practice and implement, prepare a budget for the whole digital transformation process, plan for digital transformation step by step, evaluate the digital transformation process, and listen to staffs' opinions and feedback.

**Keywords:** Digital, Transformation, Human Resources, Management, Airline Business

### Introduction

The 21st century is an era in which technology plays a vital role in every aspect of the world's population regarding lifestyle, society, culture, and learning, including business operations. Many business sectors have applied technology in their organizations. Especially during the pandemic of COVID-19 technology plays a critical role. Some organizations have succeeded, but some have encountered many problems and obstacles.

The HR-Human Resources Department is another department that has used technology in HR work. The following question is whether there is still a need for an HR department in the organization. When technology can work for people. In addition, the HR department is not a unit that directly generates profits for the organization. The author answers that the HR team is still needed as long as people work in the organization. Even though the technology is used in the organization, who will control, command, and supervise the technology work?

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The answer is the HR team. The point is that the HR department is not a unit that directly generates profits for the organization. The author argues that in any organization with a sound Human Resource Management-HRM system, employees will have good morale and deliver good customer service, which is a

good performance, customers will be satisfied and impressed; those customers will be loyal customers of the organization and will forward that impression to other customers, which increases more customers in the organization. This is a way to generate long-term profits for the organization. As shown in Figure 1.

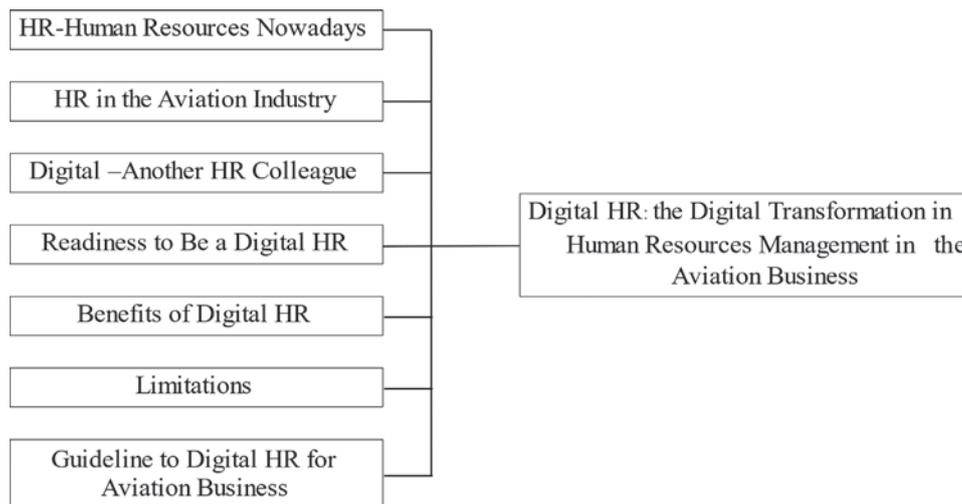


**Figure 1** HR Generates Long-Term Profit for the Organization

However, when technology plays a vital role in today’s world, HR needs to exploit this opportunity to use technology as one of the tools of HR work to be efficient, effective, and up-to-date, enhancing the organization’s image, equivalent to the word Intelligence HR.

Applying technology in HR work, the process of transitioning from the old HR to the new HR is something the HR team must

do carefully and cautiously. In this article, the author describes human resources nowadays in the age of digital HR in the aviation industry, digital-another HR colleague how to implement HR tasks, readiness to be a digital HR, benefits of digital HR, limitations, and guidelines to digital HR for aviation businesses to transform smoothly. As shown in Figure 2.



**Figure 2** The Conceptual Framework

## HR-Human Resources Nowadays

The Human Resource Department is one of the departments that play a significant role in driving the organization toward success. Roles and responsibilities of the human resource department, in addition, to looking after employees in the organization who have good physical and mental health, and have great potential to work with the organization, then the HR department is also a facilitator in various fields so that the organization can drive towards the goal smoothly. Although nowadays, technology plays an essential role in business operations, especially during the COVID-19 crisis and it seems that the HR department will not be longer have a crucial role in the organization but in the practical, the HR department has used technology as a tool in their operations to develop and improve work processes for maximum efficiency, mainly the HR routine works such as attendance checks, communication with employees, staff service, disbursement of wages and salaries, and other benefits, etc. Therefore, in the current era, the primary responsibilities of the human resource department still revolve around recruitment, leadership development, succession planning, career management, talent management, compensation and benefits plans, including employee relations & work-life management, but change the way to work (Pongsiri, 2016).

Marr (2018) discussed the role of HR will undoubtedly shift away from the more administrative tasks concerning people management to activities that help the organization to meet its goals. HR needs to embrace new technologies and increase automation. Administrative tasks can be automated; it frees up HR to focus on more strategic things that add greater value to the organization.

Elysiunhr (2022) mentioned the roles of human resource department's primary role is to fulfill the organization's commitments, such as encouraging employees, obtaining higher performance from them through effective training, and maintaining a healthy work environment.

RayMach (2021) said the key functions of the HR department in the aviation industry are human capital management, resourcing and talent pool management, learning and development, planning and recruitment, employee retention and engagement, evaluation thru KPI, employment legislation/verification and procedures and also managing compliance and paperwork.

Adams (2021) mentioned that HR will certainly have experienced many changes in the way you work: saving money, driving up creativity, restructuring, and attracting new and different people are all on your agenda. Besides that, there are seven main ideas of change that HR needs to address: Technology is transforming our business, our competitors aren't who they used to be (not the enemy anymore, they are network), organizations are changing structurally, companies want more for less, the workforce is shapeshifting, and the public are increasingly scrutinizing our leaders and finding them lacking. So, the way that HR should be treat the employee as adults, as a consumer, and as human beings.

When the HR department faces various changes, they must develop their working style more creatively and productively, corresponding to multiple situations, including integration with multi-generation employees (Millenium, Gen Z, Gen Y, Gen X), lifestyle. Therefore, HR new generations tasks should be:

1. More strategic work planning 5-10 years plan or more, the program must look ahead; there must be systematic planning from a set vision and mission, explicit SWOT Analysis-strength, weakness, threat, and opportunity, including setting guidelines, action plan, and desired outcomes.

2. Manage the organization with a goal oriented. It is aimed at achieving the objectives of the organization.

3. The organizational structure should be compact and flexible and be managed by various methods such as downsizing, outsourcing, reengineering, and employee freezing.

4. Emphasize labor relations with more role from various environmental factors such as a political conflict, economic turndown, and epidemics affecting their lives. Therefore, if workers are not assisted, they will affect the organization.

5. Reskill and upskill staff's competencies. Reskill refers to learning a new skill different from the current job so that the employee will gain more multi-skills to perform their job. While upskill means improving the existing skill to develop the employee's job performance leads to professionalism. Both reskilling and upskilling play an essential role in human resource development in the digital HR age. And support employees' work-life balance so that they can work effectively.

6. Utilize technology as a tool in the HR working process including directing, controlling, supervising, evaluating, and solving problems when the system crashes.

With the technological evolution that permeates every sector of the world today, technology is therefore critical to driving the organization into the digital era, which is fast, accurate, efficient, and effective. On the other hand, the HR department must be well prepared to deal with potential problems like employee dissatisfaction. But that is a challenging task. The aviation business is another organization that needs a large number of personnel to achieve organizational goals. Those employees are an essential key to success because they give the customer a pleasurable and convenient mode of transportation. HR in the aviation industry must develop a working model within departments that is the same as in other organizations but with more intricate details to handle and more factors to be concerned with.

### **HR in the Aviation Industry**

Due to the specific characteristics of the aviation business, certain features differ from other business sectors, which also affects the performance of the HR department. Working parts of the HR department need to be strict with international rules and regulations, but HR must have a creative and friendly approach to

all staff to deliver good service to customers. HR departments, therefore, need to behave positively in disruptive situations. HR departments perform their tasks differently from other business sectors can be summarized as follows:

1. The aviation business is highly internationalized, and English is used in communication, documents, and manuals. Many International agencies come to control standards, such as IATA-International Air Transport Association, ICAO-International Civil Aviation Organization, FAA-Federal Aviation Administration, etc. Therefore, the personnel's good English skills are required. So how does HR maintain their staff competencies?

2. Personnel in the aviation business must be qualified and have specific skills. Professional skills are needed according to international standards, such as pilots, crews, air traffic controllers, ticketing & reservation staff, and technical staff.

3. Aviation personnel must follow the rules, regulations, and disciplines strictly. HR must design how to encourage employees to follow those rules and regulations with a willingness to comply with do not feel compelled.

4. Employee working schedules are diverse based on position; each position has specific rules and regulations for on-duty time based on safety issues. So, the HR team must know those rules and regulations and correctly apply them to work, an important consideration and equality of employee income.

5. The aviation business has high safety standards. There are various regulators are involved in both domestic and international organizations. HR must understand the rules and regulations, apply, and implement them in taking care of employees correctly and appropriately.

6. Given the high-investment nature of aviation enterprises, any resulting damage can incur significant costs. Consequently, a well-designed training and development program is indispensable for equipping employees with

the requisite knowledge base and professional competencies that are incumbent upon adherence to established rules and regulations within the industry. As such, the task at hand presents a complex undertaking for the HR department, which necessitates scrupulous attention to detail and tactful decision-making.

7. The government sector participates in the aviation business at every step. This is because the aviation business is related to the country's stability. Government involvement, such as determination on the freedom of the air, certificate of airworthiness, certificate of registration, CPL-Commercial Pilot License, and other licenses related to professional, etc. The HR team needs to understand and apply it to HR tasks.

8. The aviation industry's revenue stream is characterized by volatility, subject as it is to seasonality of sales as well as unpredictable external factors such as natural calamities, pandemics, geopolitical tensions, terrorism, armed conflicts, and economic fluctuations among others. The HR team needs to prepare employees to cope with unforeseen problems. Probably, this crisis is an appropriate time for staff training, reskilling, and upskilling, or in a worse case, staff freezing, transferring, and layoff might be a better way; that's HR judgment.

9. The aviation business is highly competitive. Personnel differences are, therefore, an important strategy. The HR team should develop a corporate culture that can differentiate itself from competitors, such as soft skills, including service mind, service skills, teamwork, personality, etc. That is another HR commitment in the new age.

10. The aviation business is a network business. Collaborate with various organizations, both domestic and international. Then, the HR team must fulfill both the organization's and the employee's goals.

Owing to the distinctive attributes of the aviation industry, the HR department is confronted with intricate job demands. However, in situations where technological disruptions create additional challenges, what modifications should the HR team make to its functions? This

question assumes particular significance given that the organization must function effectively within a framework of multiple regulations and guidelines.

### **Digital-Another HR Colleague**

Digital HR, Data-driven HR, HR digital transformation, or intelligent HR all reflect human resources in the new age with their new colleague; Digital or Technology.

Pongsiri (2016) mentioned there is a pressing need for organizations to transform into digital entities by integrating technology across four work models, namely social, mobility, analytics, and cloud. In the context of digital HR, technology plays a crucial role in facilitating diverse functions such as data analytics, employee self-service portals, e-learning and gamification-based training, internal communication and social networking, and employee engagement. To remain competitive and retain top talent, HR departments must consequently adapt to these technological advancements or risk being left at a disadvantage.

Steps Academy (2020) described HR Digital Transformation as using technology to transform human resources tasks. Using data analytics to predict outcomes, evaluate programs correctly, and provide employees with a digital experience. Build up skills that will benefit organizations and employees. Digital Transformation also makes an organization more modernized and helps HR plan more efficiently.

Marr (2018) said data-driven HR, or intelligent HR, is about using the data explosion in a smart way and extracting insights that not only improve the performance of people within the company, including HR team. HR can use data to make better HR decisions, better understand, improve leadership, and make HR processes more efficient and effective.

Halid, Yusoff, and Somu (2020) mentioned digital Human Resources Management (HRM) is a digital transformation of HR practices and processes through the use of electronic media, mobile, analytics, and information technology to make HRM more efficient.

Aravamudhan and Alwadi (2021) said digital human resources management is digital upgrading in the field of human resources management. The working process will take place through mobile, electronic media, social media through the internet, and also with the help of information technology. Without digital transformation, HR will lag far behind the demand of the organization worldwide.

The transformation of technology in the HR department is essential nowadays.

Technology helps the HR team handle administrative work instead. The HR team can focus on strategic work or the soft skill task, which is a job that technology cannot do, such as communication, creativity, Collaboration, negotiation, criticism, problem-solving, and decision-making. So we can call technology one of the HR.

Colleagues. The aviation business is also bringing technology to work. The HR tasks driven by digital are shown in Table 1.

**Table 1** The HR Tasks Driven By Digital

HR Tasks	HR Tasks Are Driven by Technology
HR strategies	HR data management: manpower planning, career planning, clarifying a roadmap to achieve company goals, manage the priority of work, HR budget, a remote work
Recruitment & Selection	Job vacancy announcement, collect and sort application forms, highlight the best candidate, target the key talent, assessment process, selection process, e-profile
Training & Development	Online classes, online virtual tour, training by gamification, training assessment, training feedback, training record, development plan, brush up/reskill/upskill training courses
Performance Appraisal	Online performance appraisal, data analysis, feedback, the development plan for poor performance, plan to reward for good performance, data update, result comparison
Salary & Benefits	Work attendance checked, payroll, reimbursement of welfare, welfare reimbursement record
Employee-self Services online	Work schedule, benefit disbursement, HR forms, confirmation letters, counselling, internal communication channel, e-library, online work regulation, announcements, complaint & guidance, recreation

### Readiness to be a Digital HR

Transformation of digital HR tasks is standard practice for modern HR. The aviation business is one of the businesses involved in technological evolution. Because the aviation business runs its business based on the advancement of technology. Therefore, transforming technology in the HR department is not a new issue to maximize organizational efficiency. The HR team should have a good preparation plan for the following topics:

1. Clarify the objective and its importance. The HR team should declare the purpose, vision, and mission in a brief and a simple statement about why your team brings digital transformation to HR tasks; what is your goal? How HR functions look in the future, including your values, behavior, and presentation of new HR procedures related to employees.

2. Communicate with all staff. The HR team should prepare employees, executives or business owners, and stakeholders aware of the necessity of transforming technology in HR work. Employees need to change the working process and how to work. What is the assistance plan that the HR team could help with? How employees, organizations, and stakeholders cope with change, including benefits that everyone will receive from this change.

3. Allocate budget. HR team must Plan a budget for adopting the technology for HR tasks to go smoothly. The budget should cover the following issues: technology supplier, equipment, installation, maintenance, upgrade, demonstration and training, and others.

4. Plan for the risks. Unexpected events may occur in internal and external factors that affect Digital HR plans, such as economic,

political, social, competitors, regulatory, organization's finances, and even people. Identifying solution countermeasures if there is a risk management plan could help the HR team cope with problems efficiently and promptly.

The Preparation plan for employees, executives, organizations, and stakeholders will help make the change effective and more smooth and maximize the benefits to the organization.

### **Benefits of Digital HR**

The use of technology in the organization, in addition to being according to that technology era, it also benefits the entire organization: efficiency, effectiveness, and competitive advantage.

Pongsiri (2016) mentioned that digital HR's benefits are effectively extend HR work in various areas, promote communication at all levels within the organization, develop a mobile working system, technology enables efficient mobility, reduce the cost of laying off unnecessary employees, creating new jobs, and build technology skills, which are essential in the 21st century to employees. Marr (2018) mentioned in his book that the business will be benefits from good use of technology are making better decisions, understanding customers, improving operations, and monetizing data.

Aravamudhan and Alwadi (2021) argued that digital HR can help business reduce the distance in organizations so that employee can work from home and interact with other across geographical areas, shift employees to a digital mindset, emphasize the importance of investing in the development of required new skills in technology, encourage green HRM-Human resource management concept, and improve the employee experience by integrating digital technology.

The essential of digital HR is to ensure smooth functioning and security of individual process in HR tasks (RayMach Technologies, 2021).

It can be said that digital transformation in HR works in this era seems to be the right thing to do with the current situation. There are many benefits to all, as follows:

1. Increase personnel efficiency and effectiveness. HR roles in the past focused on supervising and controlling the personnel. The new era of the HR, the department focuses on developing various skills for personnel to have the necessary knowledge and skills to apply to their duties appropriately.

2. Increase efficiency and effectiveness in the HR outcomes. Technology that streamlines HR processes and services will replace the routine workload, and employees can get accurate, convenient, and fast HR services. The HR management and analytics, policy setting, strategic planning, problem-solving, etc.; good HRM-Human Resource Management could drive an organization's performance.

3. Creating a competitive advantage for the organization, with employees' soft and hard skills competency, can promote a good image for the organization and differentiate it from other competitors, encouraging more revenues.

4. Developing essential technology skills in modern living for employees can help employees live in the contemporary world without tension in possession, working for the organization will be more efficient, and work-life balance will occur.

5. Enhance the image of a competent organization or intelligent organization. Employees will be proud of working with an organization that can reduce turnover rate and resignation.

Digital HR seems beneficial to the organization in many issues. Still, the HR team should not neglect some factors or other circumstances that may hinder or limit the implementation of digital in the organization is not smooth. Therefore, it should not be overlooked that factors that will make being a digital HR just a dream.

## Limitations

Pongsiri (2016) there are some barriers to digital HR. One such barrier is the attitude of corporate executives who view HR as a cost center and not a profit driver like other departments, leading to inadequate budgetary support. Additionally, technology constantly evolves, and organizations may need to upgrade their systems frequently, which can make it challenging to systematically store personnel databases and develop the system.

Adams (2021) discussed that the barriers to digital HR are our leader's attitude to change, the pressure from external regulators, and management's preference for dealing with numbers and processes rather than people-oriented.

Various environmental factors affecting the success of digital HR that apply technology in the HR system can be divided into two main factors: within and outside the organization. Details are as follows:

Internal factors include employee factors, infrastructure, and budget.

1. Employee factors at all levels from executive level/owner, employees to the operational level. Their attitudes, knowledge, and understanding, including accepting changes that affect the way of life and working process. If their attitude is in the same direction as the organization, it will positively impact the organization. On the other hand, if they see it differently, they may be a problem that organizations need to solve. In addition, the diversity of the employees' generation gap is another issue the HR team faces.

2. Factors relating to the organization's existing infrastructure exist, such as workplace, existing technology, data storage, and all infrastructure supporting operation of the organization. If conducive to the use of technology in modern HR works, it will make the transformation easy and smooth.

3. Budgeting seems to be an essential issue for digital transformation because budget allocations for transforming requires constant budgeting. Due to the rapid evolution of

technology, the organization must upgrade, maintain, train, and development at all times.

External factors include economic, political, social, technological, environmental, regulatory, and competitors which is consistent with Pongsiri (2016), Marr (2018), and Adams (2021) opinions that discussed regulatorily, and competitors are the success factors of digital HR.

Therefore, when the HR team is aware of various limitations, they should prepare guidelines or action plans to become digital HR. The guidelines will make the HR team able to handle things that will happen in a timely and efficient manner.

## Guideline to Digital HR for Aviation Business

The fear of change is a common human response, as people are often unsure whether changes will yield positive or negative outcomes. This uncertainty persists despite extensive research on the topic, leaving many individuals apprehensive. However, if one understands the potential impact of these changes and how they can contribute to improved operations and well-being, acceptance may come more easily. The aviation industry, which relies heavily on human resources, is particularly sensitive to such changes. To facilitate a smooth and efficient transition from traditional HR systems to digital HR systems in the aviation industry, it is necessary to clarify the implications of this shift for all stakeholders. By highlighting the benefits for employees and other stakeholders, potential problems can be minimized. To this end, the author proposes a guideline for stakeholders to follow.

1. Communicate to all. Let them know how the world has changed and why technology is essential nowadays. Technology is another part of life. Why do organizations have to transform technology into the organization, especially in HR tasks which can provide more efficiency? Which can benefit staff, management, stakeholder, and society.

2. Educate all staff on how to utilize it in order to release their fear, uncertainty, and stress. Let them understand that technology is a friendly colleague.

3. Give them time to practice and implement their responsibilities.

4. Prepare a budget for the whole digital transformation process, including technology supplier, equipment, installation, maintenance, upgrade, demonstration and training, and others.

5. Plan for digital transformation step by step. For the transition to take place simultaneously without anyone left behind.

6. Prepare a risk management plan. To deal with adverse events promptly.

7. Evaluate the digital transformation process, including digital equipment, workforce, workplace, work procedure, outcomes, strengths & limitations, and additional suggestions.

8. Listen to opinions and feedback to improve the digital HR system. Encourage all employees at all levels to participate in the change. These guidelines might help HR teams in a new age overcome the barriers. However, adjustments may be required depending on the circumstances encountered.

## Conclusion

The pandemic of COVID-19 is a big trouble for HR departments in the aviation business which requires a lot of workforce to perform the work. The HR team faced many problems, such as human resource policy, workforce management, work schedule, transforming to remote work, adapting to virtual work, compliance and regulation related

to COVID-19 and international air transport, etc. These lead HR to digital HR. The transition to digital HR is something that employees, executives, and stakeholders of the organization should focus on. In the digital transformation of the HR department, the HR team should study the surrounding situation and changing environments that impact the HR department. And how does the HR department handle or how to change its working model?

Implementing technology in HR tasks in the aviation business is not a new event because aviation business operations are related to the evolution of technology. But the characteristic of the aviation business makes its HR working procedure different from other businesses, so the aviation business team should blend its features into HR tasks that impact the HR team's work more meticulously in detail.

The digital transformation in the HR department as a whole benefit to the organization in terms of efficiency, competitive advantage, enhance the better image of the organization. For employees benefit, developing technology skills that are essential new skills for living in the 21st century, encouraging employees better lifestyle and work-life balance.

Successful implementation of digital HR systems requires thorough analysis of internal and external factors, risk management planning, and effective communication with stakeholders. Consulting with experts and involving all relevant parties throughout the transition process can increase buy-in and minimize resistance.

## References

- Adams, L. (2021). *HR disrupted: It's time for something different*. England, United Kingdom: Practical Inspiration Publishing.
- Aravamudhan, V., & Alwadi, B. M. (2021). A study on contribution of digital human resources management towards organization. *International Journal of Management Science and Business Administration*, 7(5), 43-51.
- Dryer, C., & Shepherd, K. (2021). *Remote work*. Great Britain and the United States: KoganPage.
- Elysiumhr (2022). *Importance of HR and their roles in aviation industry*. Retrieved March 24, 2023, from <https://www.elysiumhr.com/2022/importance-of-hr-and-their-roles-in-aviation-industry/>
- Halid, H., Yusoff, Y. M., & Somu, H. (2020). *The relationship between digital human resource management and organizational performance*. Retrieved March 24, 2023, from [https://www.researchgate.net/publication/341471206\\_The\\_Relationship\\_Between\\_Digital\\_Human\\_Resource\\_Management\\_and\\_Organizational\\_Performance](https://www.researchgate.net/publication/341471206_The_Relationship_Between_Digital_Human_Resource_Management_and_Organizational_Performance)
- Marr, B. (2018). *Data-Driven HR: How to use analytics and metrics to drive performance*. New York: KoganPage.
- Pongsiri, N. (2016). Digital economy: Digital HR. *People Journal*, 36, 51-57.
- RayMach Technologies. (2021). *Performance and limitations of human resources in aviation industry*. Retrieved March 28, 2023, from <https://raymach.in/Post/performance-and-limitations-of-human-resources-in-the-aviation-industry>
- Steps Academy. (2020). *7 steps guideline to develop your organization by digital transformation*. Retrieved March 23, 2023, from <https://stepstraining.co/strategy/how-to-implement-hr-digital-transformation-to-the-organization>