FUTURE INSIGHTS

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Everything is moving – except for HR?

HRForecast

ESCP EUROPE BUSINESS SCHOOL

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SUMMARY

1. INTRODUCTION

Every organization, company, your boss, colleague or probably even your neighbour talks about Artificial Intelligence, Big Data, newest technologies, its possibilities and limits. We all hear, read and think about how it will change the way we live and work. It influences all aspects of our lives and businesses, whether we want it or not. HR departments are not an exception.

HR is in the forefront for this process for two reasons: first, central tasks of HR like recruiting, onboarding, talent management, and career planning are predestined to use Big Data, robotics and A.I., starting from chatbots, workforce analytics, or real-time digital learning systems. Technologies could make HR more human by automizing all manual work and giving HR experts more time to concentrate on strategy, creativity and human contact. Second, HR is responsible for designing a workplace with open collaboration, knowledge sharing and ongoing upskilling possibilities. HR is in charge of creating an environment of meaningful work, employee commitment and an effective symbiosis between humans and machines.

2. DIGITALIZATION AND THE INCREASING PERMEATION OF TECHNOLOGY

We have gathered and analyzed more than 120,000 HR-specific job postings from nine countries to examine how far HR has adapted to the changing business environment. In contrast to other focus countries in our investigation, we observe a decrease in the demand for IT skills for HR jobs in Germany. This indicates that German HR departments still do not sufficiently exploit the potentials from advanced technologies and hence, may lack the capabilities to help lead the digital transformation.

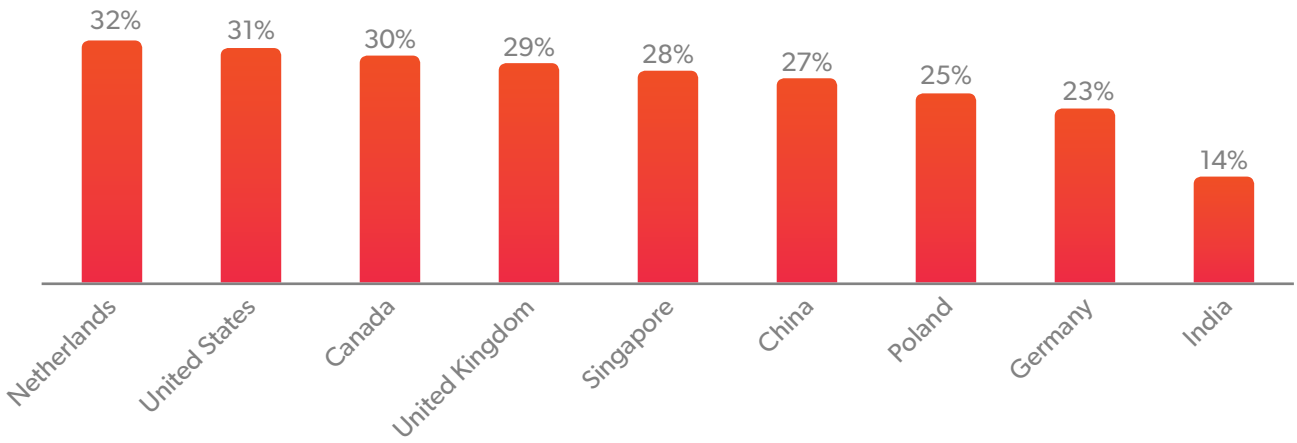
2.1. BACKGROUND

In a business landscape where digitization changes both society and the economy at an ever-accelerating pace, the effective use and application of big data, robotics, AI and Internet-of-Things (IoT) have become the key challenge for companies to drive sustainable and profitable growth.
Hence, it is important to rethink the work architecture and reorganize existing work processes in order to exploit the potentials from digitization and create an environment where humans and machines strive together. In this new world of work, HR is in the forefront for two reasons: first, central functional areas of HR like recruiting, onboarding, talent management, and career planning are in a state of flux due to big data, robotics and AI which calls for innovative solutions to use the vast potential arising from gamification, chatbots, workforce analytics, or real-time digital learning systems. Second, HR is responsible for designing a workplace where open collaboration, knowledge sharing, ongoing development, and reskilling is reinforced to create an environment of meaningful work, employee commitment and an effective complementarity between humans and machines.

»IT IS IMPORTANT TO RETHINK THE WORK ARCHITECTURE AND REORGANIZE EXISTING WORK PROCESSES«

In today's networked organizations, this can only be realized by a combination of consequent technological permeation, reasonable space design, new leadership approaches and innovative work practices (cf. Deloitte, 2018). Hence, the question is: how far has HR advanced in translating these conditions into action? In order to understand the current state of HR we analyzed more than 120,000 job postings in nine focus countries (see figure 1) across various seniority levels. In the following we discuss our findings to see how tech-savvy German HR departments are in comparison to the other focus countries. Afterwards, we identify key technologies and their impact on HR.

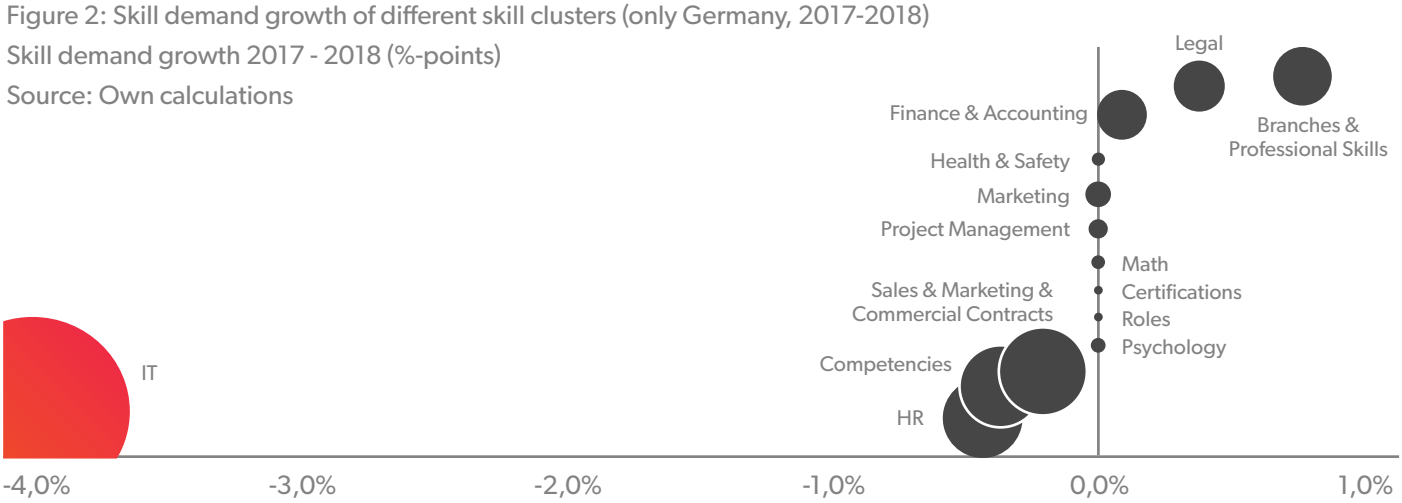
Figure 1: Future readiness score
Source: Own calculations



2.2. INSIGHTS

We clustered different skill groups in order to retrace the demand growth for different skills listed in job postings for HR positions in Germany (see Figure 2). An impressive and striking observation is the decline in the demand for IT skills by 4 percent points between 2017 and 2018. This does not align with the necessity to invest in advanced technologies to develop an effective digital strategy. It requires advanced IT skills for optimizing and connecting business processes, forecasting skill shortages, building a meaningful data architecture, and integrating robotics into the workflows.

Figure 2: Skill demand growth of different skill clusters (only Germany, 2017-2018)
Skill demand growth 2017 - 2018 (%-points)
Source: Own calculations

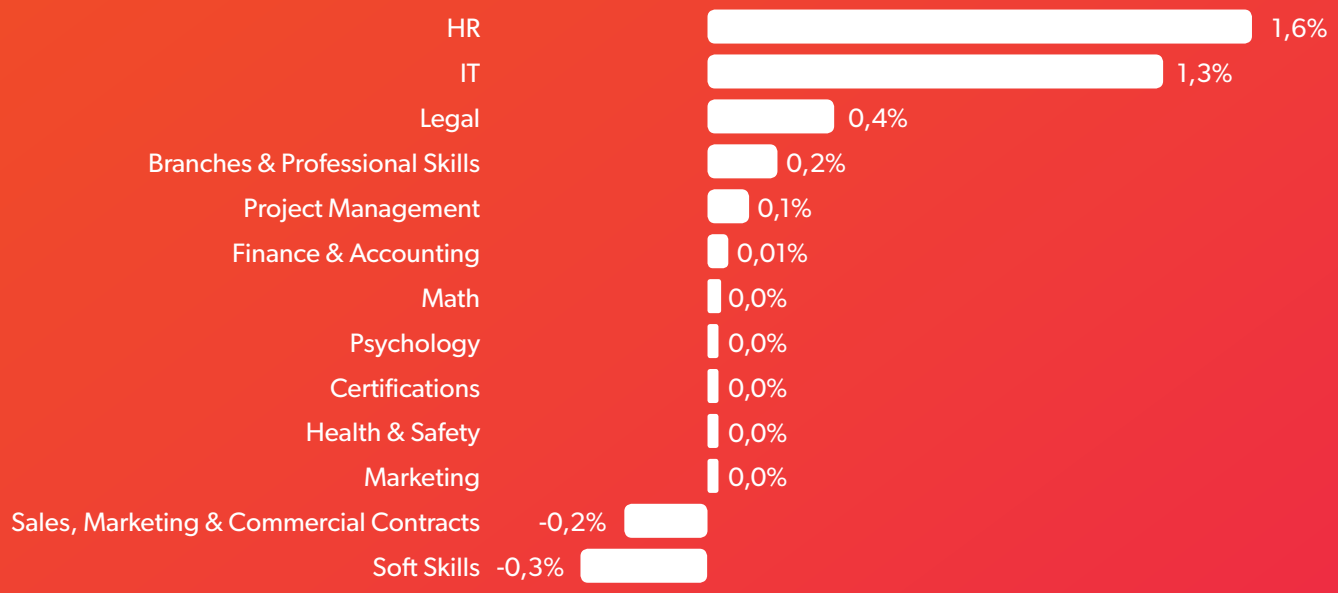


Overall, according to this data HR departments in Germany lack behind the expectations and do not seem to be properly prepared for the upcoming challenges. This is even more striking as the demand for IT skills is increasing in many other countries.
In Figure 3, results for all nine focus countries are combined and offer a different picture; the demand for IT skills in advertised HR positions grew by 1.3 percent between 2017 and 2018.

»HR DEPARTMENTS IN GERMANY LACK BEHIND THE EXPECTATIONS«

This signals a growing emphasis on technical expertise in order to enable HR to step up as a business partners and make use of process-optimizing technologies. Surprisingly, HR departments in Germany do not seem to follow this trend and two possible reasons could help to explain this divergence: companies operating in Germany may have anticipated the technological advancement in HR quickly and reacted sufficiently in previous years which are not covered by the data.
The other possible explanation is that many HR departments in Germany have not yet realized the potentials of big data, predictive analytics and AI and may mostly perform administrative tasks rather than progressing as strategic business partners providing data-based decision making. While we cannot clarify what really explains our results based on the data, we emphasize that the potentials arising from technological progress reflect an ongoing and even accelerating process. In other words, a good understanding on the potential of different technologies would have most likely induced an even higher investment in and demand for IT skills, which runs contrary to our findings.

Figure 3: Skill demand growth of different skill clusters (all countries included, 2017-2018)
Skill demand growth (in %-points)
Source: Own calculations



In order to support companies to jump aboard the digital bandwagon, we identified some key areas in which the technological progress offers most potential for HR.

1. Big data

In order to step up as a valuable business partner, it is essential to make use of the huge amount of real-time organizational data. Big data is the basis for strategic decision making and indispensable for identifying labor shortages, trends and economic developments. In order to collect, process, and analyze data on a large scale, it is important to develop a data strategy, invest in the organizational data architecture and use advanced cloud technologies (Sivathanu & Pilai, 2018).

2. Predictive analytics

Predictive analytics function complementary to big data and can be understood as an evidence-based approach for precise decision making based on numbers rather than feelings (Staritz & Biemann, 2018). The value for HR is vast and includes speeding up decision making, decreasing costs, spotting suitable talent pools and candidates, and identifying unsatisfied employees and attributes of high performing personnel (ibid.; Fitz-enz & Mattox, 2014). However, organizations need to address concerns about data security and transparency issues and hence, have to formulate and openly communicate guidelines, policies and limits of their data usage.

»ROBOTICS CAN BOOST PRODUCTIVITY THROUGH AUTOMATION, LABOR AUGMENTATION AND INNOVATION«

3. Robotics

Robotics based on AI creates new capabilities for HR and frees up time by automating rule-based, standardized, and repetitive tasks. This enables HR to focus more on the strategic side of the job and simultaneously increase the overall performance of these tasks (Jesuthasan, 2017). Software based on machine learning and natural language processing is now able to recognize faces, identify moods and feelings, and decode video interviews (Deloitte, 2018). Hence, software bots can help HR departments to evaluate and select candidates, identify employees' career options, coach managers to improve their leadership skills, conduct engagement surveys and interact with job candidates in form of chatbots (ibid.; PwC, 2017). In this sense, robotics can boost productivity through automation, labor augmentation and innovation (Platino & Purdy, 2018).

4. Internet-of-Things (IoT)

All these trending technologies are connected by a network that can be understood as a digital nervous system referred to as the Internet-of-Things. This technology architecture is fuelled by data and stitches together many different types of gadgets and technologies to perform new actions (Bersin, Mariani & Monahan, 2016). Apart from risks of data security and worries about the quantified self, HR can exploit the potentials from IoT by creating a holistic employee experience platform by incorporating digital apps, bots, AI, and case management to support, scale, and empower their employees (Deloitte, 2017).

5. Virtual reality (VR)

VR is a 3D computer-created fully immersive reality which can be accessed through specialized glasses. In this world, different situations can be simulated to be experienced by the user. HR can use this technology in three different ways: VR can be used in recruiting to facilitate the hiring process by simulating different hands-on working experiences which candidates have to pass through and cope with. Moreover, VR can support onboarding by introducing the work environment to new employees in a safe and controlled setup with a high fault tolerance. Lastly, training and development can benefit from VR as ongoing training can be made more accessible to employees across divisions, countries and subsidiaries (Chalmers, 2018).

2.3. CONCLUSION

In this short report we examined the impact of technological progress on the role of HR and explored the question how fast HR is adapting to the changing conditions. On the basis of our data we have found indications that German HR departments may lack behind the digital trend. We are drawing this conclusion as the demand for IT skills has decreased in Germany between 2017 and 2018 in contrast to the other focus countries in our investigation. However, advanced IT skills are indispensable for driving the digital change and encounter it as a valuable chance rather than a threat. The digitalization of HR bears the potential to incorporate technologies such as analytics, AI, or VR in order to implement new management practices and design a working environment that enable productivity, deliver solutions and establish an organizational culture based on innovation, collaboration, and sharing. The digital shift is occurring rapidly and HR should see it as an opportunity to climb up the organizational ladder and help lead the digital transformation.

3. ABOUT THE AUTHORS

Florian Fleischmann is dedicated to the development of cybernetic decision making processes. In the past, he was working as a financial manager at Nokia Siemens and Siemens and also founded a company with the focus on the analysis of marketing data. In cooperation with large German companies, also from the telecommunications branch, he developed a data driven HR management approach, which was the baseline for the foundation of HRForecast. At HRForecast, he is responsible for project management and for the implementation of data-driven decision-making tools.

Maximilian Tallgauer is a research associate and PhD student at the Chair of Human Resource Management and Intercultural Leadership at the ESCP Europe Berlin Business School. He studied international economics at the University of Paderborn, the Tohoku University in Sendai (Japan) and the ISG Business School in Paris. His doctoral thesis deals with the effects of digitization on organizational justice and the premises for an effective implementation of big data analytics.

Prof. Dr. Marion Festing holds the Chair of Human Resource Management and Intercultural Leadership at the ESCP Europe Berlin Business School and is founder of the ESCP Europe Talent Management Institute. She researches and teaches on matters of human resource management, leadership and intercultural management in master programs and in executive education and is the author of numerous scientific publications and the internationally leading textbook on International Human Resource Management. In various functions (e.g. as Rector of the Berlin Campus 2012-2017) she has played a major role in the development of the ESCP Europe.

Established in 1819, ESCP Europe is the world's first business school and has educated generations of leaders and forefront thinkers. With its five urban campuses in Paris, London, Berlin, Madrid, and Torino, ESCP Europe has a true European identity which enables the provision of a unique style of business education and a global perspective on management issues. Triple-crown accredited (EQUIS, AMBA, AACSB), ESCP Europe welcomes 4,000 students and 5,000 executives from 90 different nations every year, offering them a wide range of general management and specialised programmes. The School's alumni network counts 50,000 members in 150 countries and from 200 nationalities. Together with its long-standing relationships with national and multinational companies, this network allows ESCP Europe to provide unique career opportunities on an international scale.

HRForecast is a Germany based startup that answers today's and tomorrow's questions of HR managers by utilizing Big Data, Analytics and Artificial Intelligence. The idea of HRForecast was born, when two business controllers of the German-based company Siemens heard about the planned release of 2.000 employees. An interest for a better, more sustainable HR management, where nobody is left behind, was awaken. Five years later, HRForecast customers can benefit from the self-developed Big Data technologies and innovative analytics methods to gain an individual, strategic competitive advantage from it.

4. LITERATURE

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