Human Factor in Digital Transformation of Workforce Management: A Case of Southeastern European Telecommunication Company

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Abstract. *This paper presents the importance of the human factor in digital transformation. More specifically, it presents this on the case of Southeastern European telecommunications company. Modern age brought customers with highest expectations ever, but also new and agile competitors. Existing companies have to adopt modern technologies and train their employees to use them in the most efficient way possible, in order to keep their step in a competitive market.*

Keywords. digital transformation, workforce management, telecommunications, human factor, digitalisation

1 Introduction

Nowadays, the world is changing at an unprecedented speed, leading to significant and fundamental transformations, and therefore organisations need to respond to changes, and constantly change in an agile manner in order to adapt to the fast-changing business environment and survive (Szamosi & Duxbury, 2002; Van de Ven & Sun, 2011; Vey, Fandel-Meyer, Zipp, & Schneider, 2017).

Digital transformation, whether within industries or within corporations, is the largest change businesses and organisations face nowadays (Baker, 2015). It offers huge opportunities for both businesses and public organisations. Constant change, disruption, innovation and rapid development are the most widespread mantras of today (Savić, 2019). According to Harvard Business Review (2018), 87% of senior business executives say that digital transformation is a priority these days and in many cases has a direct relation with organisational survival. If an organisation wants to survive, digital transformation is the unavoidable change, and it is likely to be revolutionary rather than evolutionary (Baker, 2015; Gersick, 1991).

Digital transformation is happening all around us and pervade and transform all aspects of our daily lives fundamentally (Reddy & Reinartz, 2017). It is a long-term change, and if organisations refuse to play this new game and adapt in a changing world, they will be destroyed and swept away into history (Baker, 2015). Undoubtedly, digital transformation is tending to be very disruptive and disturbing. It is a complex issue that is related with the changes new technologies can bring in an organisation's business model, which result in changes of products or services or organisational structures or in the processes' automation (Hess, Matt, Benlian, & Wiesbock, 2016). Digital transformation is much more than just having the PCs on every desktop, web site in place already, or digital strategy in general, and if organisations stop there, they probably won't be around to see executions of strategic and business plans their competitors have today (Baker, 2015). Reddy & Reinartz (2017) point out that the underlying computing and information technology is the key driver of these changes. Finally, Harvard Business Review (2018) indicates that digital transformation offers new technology-enabled ways for companies to improve their productivity.

According to Lesaint, Voudouris, and Azarmi, (2000), workforce management is related to sending the right employee to the right customer at the right time at the right place with the right equipment, and it helps companies to achieve maximum workforce productivity and low operational costs. They identified many factors contributing to the complexity of workforce management, such as a variety of workforce skill requirements and workforce geographical distribution.

Organisational culture is probably the most important factor of the digital transformation of modern organisations, much more important than the size of organisations, the number of geographic locations, the inequality of business and products, and the extent of legacy systems (Sacolick, 2017). Additionally, Baker (2015) argues that mindset is

essential for the success of the digital transformation. By creation and cultivation of an organisational culture that encourages a digital mindset, a workforce will be in a better position to drive the digital maturity of an organisation (O'Brien, 2017).

Aim of this paper is to emphasise the importance of the human factor in digital transformation. In addition to the literature review of this topic, the case of the digital transformation of workforce management in Southeastern European Telecommunications Company (TC) is presented.

After the introduction, literature review on digital transformation and the importance of customers and employees for successful digital transformation is presented. Section two covers the case of the digital transformation of workforce management in Southeastern European TC. Finally, in the last section, concluding remarks and future directions of the study are provided.

1.1 Digital Transformation

Digital transformation leverages existing knowledge in order to completely change the basic and most important characteristic of an organisation (i.e. organisational culture, management strategy, mix of technologies, and operational setup), and puts customers at the center of all organisational strategic initiatives, plans, decisions and actions (Sacolick, 2017; Savić, 2019). The disturbance caused by digital transformation also creates cultural tensions, since organisational digital ambitions and initiatives are in confrontation with long-time operating goals and generate competing priorities that are very difficult to balance.

According to Reddy and Reinartz (2017), it is expected that digital transformation will bring higher tangible and intangible values, but, at the same time, the changes will come with unavoidable costs and risks. Therefore, they underline the importance of understanding the opportunities and challenges that surround new value creation in digital environments for the various groups, because people will more or less all be affected. If organisations think that digital transformation is just process of change related to the application of digital technology to the internal systems, it will not generate new values that improve their competitive positioning and significantly increase their chances of survival (Baker, 2015).

Almost all processes in modern companies can be digitally transformed. Some of them are attractive and easy to transform with significant returns in a short period, while most of them are difficult and painful but crucial for the survival of an organisation. During digital transformation, most of the companies expect much of their short-term growth by completing just minimal changes, such as using few new applications or restructuring their web site, and they are often disappointed (Baker, 2015). Gates, Myhrvold, and Rinearson (1995) said this nicely: "We always

overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Do not let yourself be lulled into inaction".

As Reddy and Reinartz (2017) state, digital technology transforms businesses seriously and, sometimes, provides companies with opportunities to reinvent themselves. Digital transformation is about organisational restructuring in order to use all modern digital technologies that increase organisational competitiveness and help transformed companies to become more successful than companies that failed to innovate and never embraced new technologies (Baker, 2015). In this era of digital transformation, establishing an innovation culture seems to be a crucial organisational activity (Vey et al., 2017). Sometimes even the most successful organisations do not have an adequate reaction to disruptive threats and show so-called "innovation blindness" symptoms (Neus, Buder, & Galdino, 2017). Obviously, an innovation of technology is very important for modern companies that strive to provide differentiated value for their customers (Reddy & Reinartz, 2017).

1.2 Human Factor in Digital Transformation

When we are talking about the human factor in digital transformation, customers and employees take the most important role.

Taking into consideration that digitalisation is also characterised by transformative shifts in customer needs and demands, service-oriented companies must pay particular attention to positioning employees to be more adaptive, customer-centric, productive and effective in a new dynamic business environment and play their role in translating digital ambitions of their companies into commercial values and success (Harvard Business Review, 2018). Nowadays, customers are better informed, and their expectations regarding businesses, products, services and unique customer experiences are rapidly increasing (Vey et al., 2017). Business and organisations have to move quickly, adapt and change themselves in order to meet the shift in behaviour and requirements of modern customers (Dench, 2017). According to (Baker, 2015), the presentation of differentiated customer experiences can probably make the best short-term improvement. As a consequence, changing customers' behaviour becomes one of the most significant innovation drivers (Vey et al., 2017).

Modern companies expect to compete mostly based on end-users experience, and therefore they have to rethink what their end-users value the most and establish new operating models that take advantage of the digital technology and create competitive differentiation (Vey et al., 2017). Companies should create new value propositions and make the company's products or services attractive to customers by combining existing capabilities of their companies with capabilities enabled by digital technologies

(Sebastian et al., 2017). Because of the fact that the asset-light structure of the new disruptive technologies makes them agile, the focus could be placed on technology in order to create better user experience (Reddy & Reinartz, 2017).

As companies advance in the digital era, employees are more and more concerned that their skills will become irrelevant, because they are aware of the fact that existing skills are evolving and expiring while new skills are emerging (Harvard Business Review, 2018). As Heymann (2015) notes, having employees with the right skills may improve the quality of service delivery. While HR (human resources) departments of most of the modern companies have already been thinking about talent management, reskilling initiatives, and strategic workforce planning, on a macro level, there is an overall demand for digital mastery (a set of thoughts, beliefs, and behaviours that help employees to be more effective during the execution of strategic digital initiatives) (Harvard Business Review, 2018). Gaál (2018) also emphasises the importance of IT familiarity, and notes that employees need to be familiar with IT (information technologies), because learning IT outside of traditional roles will provide new professional development opportunities and help employees to improve their operational skills.

Organisations should be aware of their employees' digital-ready talent. Nowadays, there are not enough employees with the proper digital skills, and, even though millennials are entering the workforce, there are still considerable gaps that must be filled in the organisational skillsets (O'Brien, 2017). As Smith (2019) notes, it is obvious that in healthy modern organisations by the year 2020, almost half of the workforce will consist of Millennials. He underlines the importance of understanding how to support the needs of these highly skilled employees who demand that their work is enabled by new technologies.

According to Smith (2019), embracing digital transformation from a human perspective is of great importance to modern organisations which must connect employees to an overall framework that encourage the development of real-time communication, stronger data management and more effective team. He adds that the digital transformation of employees transforms the organisation and the work experience of each of its employees.

The workforce part of the digital transformation of an organisation is just as important as the technology part or infrastructure part, and employees are key to the success of the digital transformation process (O'Brien, 2017). When companies perceive their employees as strategic assets, they can use employees' talents more effectively, leading to enhanced engagement, and revenue per employee (Heymann, 2015). Similarly, Smith (2019) argues that when employees, being the most important asset of an organisation, are engaged via a real-time and continuous loop of communication, they become part of connected operational framework creating more efficient and more productive

organisations. Certainly, a connected workforce that foster communication between employees can help in leveraging of the expertise of more experienced employees and create a workforce that is more engaged and productive.

If we want to test whether an organisation is actually driving digital transformation forward, we should test the existence and quality of the continuous interaction between the business environment, the information and the workforce (Smith, 2019). Organisations that fail to engage field employees in the digital transformation process are less successful than others (O'Brien, 2017).

2 Human Factor in Digital Transformation of Workforce Management in Southeastern European Telecommunications Company

TC is a large old telecommunications company which operates in three Southeastern European countries. The company's core activity is the provision of different types of telecommunications services. TC is the incumbent company in its home country. In order to maintain its leading market position in the very competitive telecommunications market, TC has started with digital transformation to develop new solutions and services according to the customers' demand, accelerate service delivery, enhance the level of customer satisfaction, and gain competitive advantage. According to Springborn (2007), companies depending on communication with field workforce, among other things, use workforce management systems mainly for customer-focused reasons. As Heymann (2015) points out, companies that use tools related to new digital technologies to address delivery of their services coupled with workforce engagement gain a competitive advantage.

TC's primary goal is to have a more systematic approach for conducting field activities by making field processes more transparent. It is essential to have a complete picture of all activities in the field with precise information about field technician's activities, in order to have full knowledge about the field operations and therefore the possibility to continually improve them. Digital Transformation of WFM processes is conducted in multiple phases. The first phase was the implementation of WFM solution in one geographically separated organisational unit. The scope of this phase was training of employees (managers, telecommunication technicians and all others affected). Observations and experience from this, initial, phase were valuable in the process of WFM solution implementation in the whole TC.

Table 1. Daily employment and the number of solved tickets per technician

	2017	**2018 Q1**	**2018 Q2**	**2018 Q3**	**2018 Q4**	**2019 Q2**
Efficiency *(number of solved tickets)*	8,53	9,03	10,21	12,12	14,87	16,10
Employment *(hours)*	3,82	3,89	4,01	4,14	4,61	5,89

WFM solution has been implemented in all operational units in the 3rd quarter of 2017. Besides being implemented in the 3rd quarter of 2017, real progress is visible after some time because of a delay in new technology acceptance and technicians' training.

Table 1 presents daily employment and the number of solved tickets per technician. It is evident that employees are still making progress with new, digitally transformed processes. From 8,53 tickets solved daily in 2017, they managed to almost double the number with 16,10 solved tickets daily in 2019 Q2. One would assume that they simply doubled the time spent in the field. Fortunately for them, this is not the case. Efficiency is mostly improved thanks to better work organisation and communication. Namely, for 88,75% increased efficiency, only 45,19% more time is spent in the field. On the other side, TC is using its resources more efficiently, as its technicians now have less free time – they are paid monthly, not per solved ticket. The same data is presented graphically in Figure 1. Digital transformation of workforce management processes also resulted in transparency, control and feedback information. These changes provided managers with a clear picture of the state in the field. Before the transformation, many things depended on managers and their experience, but now decisions are made based on real-time information provided by the system.
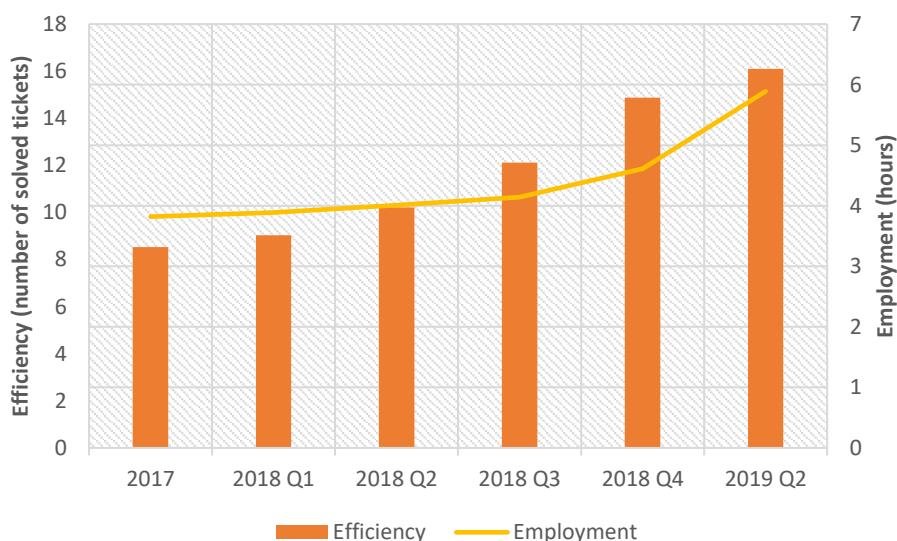

Figure 1. Daily employment and the number of solved tickets per technician

Effects of the successfully executed digital transformation of workforce management processes are visible in other sectors, too. For example, the HR sector is now able to plan training and employment on new employees based on skills database provided by workforce management solution database.

The most important result is probably the customers' satisfaction. The time they are waiting for installing new services or resolving issues with existing services is significantly shorter.

One can clearly see positive results of digital transformation, but the process itself requires great additional efforts. Namely, for the transformation to be successful, employees have to get appropriate training about new procedures and equipment.

3 Conclusion

Modern era brought customers that are more demanding than ever before. Companies have to find a way to answer the challenge. This usually means upgrading internal processes, that are employees-related.

As we presented in this paper, customers' needs lead to the digital transformation of workforce management processes, which improved the overall performance of the company. Quality of the services is improved, thus the customer satisfaction, too. Additionally, operational costs are cut, which made the

organisation more efficient. Also, the workforce is more flexible, and resources allocation is better. Complete transparency of field activities improved traceability and control of all field activities. The new solution also enables faster flow of information, integration with other systems within the organisation and support for better two-way communication.

This paper contributes to digital transformation literature both with literature review and the case of the digital transformation of workforce management processes in a big telecommunications company.

It will be interesting to track performances of field forces in a longer period, find a saturation point for a number of tickets solved daily and maybe give a suggestion for further improvement.

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