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ARTIFICIAL INTELLIGENCE, ROBOTICS AND AUTOMATIZATION IN THE TOURISM INDUSTRY

The tourism industry has been greatly influenced by huge globalization changes that started in the late 20th– early 21st centuries when GDS (Global Distribution Systems), the Internet, social media, websites and mobile applications made the world smaller and changed the rules of business and competition among travel, tourism and hospitality companies [1]. Consequently, the tourism industry is now experiencing a new revolution, which is more powerful, transformational and will probably have long-term consequences.

Nowadays, travel, tourism and hospitality companies have already begun to introduce robots, artificial intelligence and service automation, in other words RAISA technology, most recently. At the moment, they are in the form of a variety of chats, delivery robots, concierge robots, conveyor restaurants, self-service, check-in and check-out information that already perform their functions in various sectors of the tourism industry [2; 3].

In particular, robots are used to greet guests at hotel receptions, to serve as waiters in restaurants, to order room service, to clean floors and swimming pools, to cut grass in green areas of hotels, to provide information at airports and to prepare food in automated kitchens [4]. It is also worth mentioning the self-service kiosks used by check-in / check-out hotels or travel agencies and tourist information centres to provide concise information about some destination [5]. Travellers can easily and freely search for travel information and book a trip via chat bot [6], as well as access their hotel rooms using the mobile app on their smartphones [7].

Despite such a huge impact of RAISA technologies on the tourism industry there are advantages and disadvantages of their implementation in this sector [8].

The main advantage of RAISA technologies is that they could work twenty-four hours a day, seven days a week. According to statistics, unlike human workers who can work 40-60 hours per week depending on position, legislation, physical and mental health and urgency, RAISA technologies are available twenty-four hours a day, 168 hours per week. [9]. Moreover, they could implement various tasks and expand their scope with software and hardware upgrades. The kiosk will only need a new software package to respond appropriately to customer requests. On the other hand, human workers need trainings that can be significant and time-consuming, depending on the new tasks they have to accomplish. In addition, RAISA technologies do not go on strikes, spread rumours, discriminate customers or employees, leave their job without notice, show negative emotions, ask for pay increases, get ill etc. This advantage can make the managers' life in companies much easier, because robots will only be able to perform all the tasks and do the actions that will be programmed.

On the other hand, RAISA technologies have some disadvantages as well. One of the disadvantages of RAISA technologies is that they may be perceived as a threat by human employees. There is an important fact that people and employees already see robots as a threat to their jobs, and these fears are quite clear. A recent study found that 47% of jobs in the US could be lost through computerization and automatization [10]. Therefore, the fear of losing their jobs and incomes makes people think of RAISA as a threat to their survival. People will no longer need to compete with other people for work, but they will have new competitors, namely robots [9].

Another disadvantage is that RAISA will not be any time completely independent of human supervision. This is also one of the important factors that are expected in the near future, because

human intervention will only occur in an urgent need, for example in the event of a service or technical failure.

To sum up, robots and artificial intelligence have real use in the tourism industry. But for most travel businesses, their application remains quite limited, as there are plenty of disputes nowadays about whether additional RAISA technologies should be designed and implemented for wide use. Therefore, a critical analysis of all positive and negative effects of RAISA technology, robotics and artificial intelligence on tourism operations has proved that these technologies can provide greater consistency and accuracy in the workplace and ensure faster performance, especially when it comes to calculations.

Having analysed some advantages and disadvantages of implementing RAISA technologies, it is obvious that they affect not only the development of travel and hospitality companies, but also ordinary workers and employers, most of whom do not still accept the possibility of replacement of human employees by robots and artificial intelligence.

However, in the near future the introduction of robotics, artificial intelligence and service automation will help to promote the sustainable development and management of travel business and contribute to the successful development of operations, financial resources, marketing, increasing the level of supply chain management, as well as make great changes to human resources management.

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