Chapter 2
Application of RPA in Human Security Systems in Smart Cities

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ABSTRACT

Human security faces several difficulties in the coming years. Resources will become scarce because of these changes, especially water, food, and energy. Concurrently, increasing social media connectivity and changes in labor and production brought on by the spread of new technologies will put new strains on the global economy and lead to significant shifts in political and economic power. Robotic process automation (RPA) applications may help secure fundamental necessities and lessen or halt aggressive behavior through improved connection, sophisticated sensor data, and algorithms. RPA has the potential to offer quick, economic, and effective answers to a range of security-related problems involving people. It is essential that larger data-sharing programs be used by people, groups, and governments in applications linked to relief from disaster, prevention from conflicts, and safeguarding human rights and justice. However, it is also important that data that is shared and acquired be safeguarded as much as feasible.

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INTRODUCTION

Smart cities are rapidly emerging as the urban hubs of the future, leveraging advanced technologies to enhance the quality of life for their residents. As cities become more interconnected, the need for robust security systems becomes increasingly crucial. One innovative approach to addressing this challenge is the application of Robotic Process Automation (RPA) in the human security system of smart cities. RPA, a technology that utilizes intelligent software robots to automate repetitive tasks, holds the potential to revolutionize how security is managed and maintained in urban environments (Tailor & Khan, 2022). By combining RPA with existing security infrastructure, such as surveillance cameras, sensor networks, and data analytics, smart cities can achieve enhanced surveillance, proactive monitoring, intelligent incident response, and predictive analytics (Khan S., Tailor, Uygun, & Gujrati, 2022). This integration of RPA into the human security system promises to create more efficient, accurate, and scalable security operations, leading to safer and more secure smart cities. This article explores the benefits and implications of applying RPA in the human security system and highlights the transformative potential it brings to the concept of security in the context of smart cities.

Smart cities, powered by advanced technologies and interconnected systems, are at the forefront of urban development. As these cities strive to create safer and more secure environments for their residents, the application of Robotic Process Automation (RPA) in human security systems has emerged as a game-changing solution. RPA, a cutting-edge technology that automates repetitive tasks using software robots, offers a transformative approach to strengthening security measures in smart cities (Khan S., Tailor, Gaujrati, & Uygun, 2022). Human security systems in smart cities traditionally rely on a combination of surveillance cameras, sensor networks, data analytics, and emergency response systems. While effective, these systems often face challenges such as delayed response times and limited scalability due to human intervention. By integrating RPA into these systems, cities can unlock a host of benefits and overcome these limitations. The application of RPA in human security systems brings forth a new era of advancements (Chen D., Wawrzynski, & P. Lv, Cyber security in smart cities: A review of deep learning-based applications and case studies, 2021). Through intelligent algorithms and computer vision techniques, RPA enables enhanced surveillance by swiftly identifying and tracking suspicious activities in real-time. Proactive monitoring becomes possible as RPA continuously analyzes sensor data, detecting anomalies and swiftly responding to potential threats. Moreover, RPA streamlines incident response by automating the dispatch of emergency services and facilitating seamless communication between stakeholders during critical situations (Tailor & Kumar, 2020). The synergy between RPA and advanced analytics enables predictive modeling, empowering authorities