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Integrated Human Resources and Work Environment Management System

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Abstract : The Integrated Human Resources and Work Environment Management (HOWE) System optimises employee productivity, improves the work environment, and, at the same time, meets the employer's strategic goals. The HOWE system has been designed to ensure an organisation can successfully compete in the global market, thanks to the high performance of its employees. The HOWE system focuses on raising workforce productivity and improving work conditions to boost employee performance and motivation. The methods used in our research are linear correlation, INVAR multiple criteria analysis, digital twin, and affective computing. The HOWE system is based on two patents issued in Lithuania (LT 6866, LT 6841) and one European Patent application (No: EP 4 020 134 A1). Our research analyses ways to make human resource management more efficient and boost labour productivity by improving and adapting a personalised work environment. The efficiency of human capital and labour productivity can be increased by applying personalised workplace improvement systems that can optimise lighting colours and intensity, scents, data, information, knowledge, activities, media, games, videos, music, air pollution, humidity, temperature, vibrations, and other workplace aspects. HOWE generates and maintains a personalised workspace for an employee, taking into account the person's affective, physiological and emotional (APSE) states. The purpose of this project was to create a HOWE for the customisation of quality control in smart workspaces taking into account the user's APSE states in an integrated manner as a single unit. This customised management of quality control covers the levels of lighting and colour intensities, scents, media, information, activities, learning materials, games, music, videos, temperature, energy efficiency, the carbon footprint of a workspace, humidity, air pollution, vibrations and other aspects of smart spaces. The system is based on Digital Twins technology, seen as a logical extension of BIM.

Keywords : human resource management, health economics, work environment, organizational behaviour and employee productivity, prosperity in work, smart system
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