

Digital Transformation In Justice: Impacts Of The Electronic Warrant Center On Bailiffs 'Motivation, Work Efficiency, And Occupational Health In Brazil

Author

Abstract

This research investigates the impacts of the Electronic Warrant Center (CEM) on the motivation, efficiency, and health of court officers in Goiás - Brazil. The objective was to analyze the multidimensional effects of new technologies, considering not only procedural speed metrics but also the human costs of judicial modernization. The methodology combined qualitative and quantitative approaches with document analysis. Seventy court officers participated, and institutional data revealed that 24 officers assigned to the CEM requested medical leave between December 2023 and December 2024. The results demonstrate significant operational benefits: faster distribution of warrants, reduced travel, and better workflow control. An expressive 90% of respondents agreed with the technological improvements implemented. However, important challenges emerged. Only 42.9% showed satisfaction with the current workload, indicating work overload. Only 15.9% perceived a reduction in occupational diseases, indicating negative health impacts. The research identified productivity pressure, difficulties adapting to digital tools, and isolation due to virtualization as problematic factors. Motivational elements highlighted included job stability, remuneration, and professional recognition. The study concludes that digitalization must be accompanied by professional development policies, technological training, and health support, promoting a balance between technological innovation and employee well-being. The study contributes to integrated approaches in public sector modernization.

Keywords: Digital transformation; Occupational health; Public service motivation; Judicial efficiency; Electronic Warrant Center.

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I. Introduction

The acceleration of digital transformation in the public sector, driven by the Covid-19 pandemic, has promoted profound changes in work organization, notably the adoption of telework as an emergency solution to maintain public services and reduce contamination risk during daily commutes. Initially seen as beneficial—due to reduced traffic stress, greater schedule flexibility, and work-life balance—telework also revealed adverse effects such as work overload, adaptation difficulties, weakened organizational ties, and lack of awareness about workplace quality of life initiatives (Filardi, Castro & Zanini, 2020).

With technological advances, judicial bodies have incorporated digital systems aimed at modernization and procedural speed. In this context, the Court of Justice of Goiás (TJGO) implemented the Electronic Warrant Center (CEM), a tool for centralizing, automating, and optimizing warrant management, reducing physical travel and promoting greater control and traceability of diligences (TJGO, 2024). This initiative is part of the broader digital transformation of the public sector, aiming to expand access to justice, reduce bureaucracy, and increase administrative efficiency (Monte, 2023; Mancuso, 2020).

However, the implementation of the CEM and intensive technology use have required court officers to reorganize routines and develop new digital skills, which may directly impact their motivation, work efficiency, and health conditions. Recent studies show that workload accumulation and intensified technology use, especially without institutional support, contribute to physical and emotional exhaustion, potentially leading to Burnout Syndrome, characterized by extreme fatigue, insomnia, irritability, and cognitive difficulties (Pimenta, 2022; Viana & Martins, 2021; Figueiredo et al., 2022).

Technological dependence and productivity pressure intensified by systems like the CEM pose significant challenges to work management, especially in the public sector, where structured health and well-being policies are often lacking. Thus, the debate on technological stress is pertinent, considering that work overload and prolonged hours without adequate compensation can compromise service quality and workers' psychosocial health (Nascimento & Creado, 2020; Maranhão, 2020).

The Electronic Warrant Center, implemented statewide in Goiás, directly impacts court officers responsible for executing judicial decisions and warrants, adapting their routines to new technological demands. Therefore, it is necessary to understand how these transformations affect officers' motivation, work efficiency,

and health (TJGO, 2024). Despite technological advances yielding gains in speed and effectiveness of judicial services, there is a literature and policy gap regarding the effects of these changes on professionals executing warrants. Hence, it is necessary to investigate how organizational and technological changes, especially the CEM, impact court officers' motivation, efficiency, and health.

Given this scenario, this study aims to analyze the impacts of new technologies, especially the CEM, on motivation, work process efficiency, and health of TJGO court officers. Specifically, it seeks to identify motivational factors influencing these professionals, describe the effects of technological innovations on their duties, and evaluate implications for their health and well-being.

II. Methodology

This study adopts a mixed-methods approach, integrating quantitative and qualitative methods to analyze the impacts of new technologies, particularly the Electronic Warrant Center, on motivation, work efficiency, and health of court officers at the Court of Justice of Goiás. It is a descriptive exploratory study investigating a phenomenon still little addressed in national literature (Flick, 2022; Marconi & Lakatos, 2021).

The target population comprises 631 court officers active at the Court of Justice of Goiás, with 209 in the capital and 391 in interior regions. The sample included officers in active service during data collection, excluding those on extended leave, secondment, or administrative roles unrelated to core duties. Non-probabilistic sampling aimed to explore specific group characteristics and ensure representation from capital and interior segments (Flick, 2022).

Anonymity and confidentiality were ensured per ethical guidelines. All participants gave formal consent via Informed Consent Forms, ensuring voluntariness and data anonymity.

Data collection used an electronic questionnaire with closed and open questions based on validated models like the Job Diagnostic Survey (JDS), organizational climate questionnaires, and workplace well-being scales. The instrument had four thematic blocks: Satisfaction and Impact of Technological Changes; Working Conditions and Recognition; Well-being and Health; Opinions and Suggestions.

Closed questions used a five-point Likert scale measuring perception intensity. The questionnaire was electronically sent to active officers, ensuring anonymity and voluntariness.

Additionally, quantitative data on medical leave and retirement requests from December 2023 to December 2024 were obtained from the TJGO Personnel Records Division. Data were aggregated and anonymized per institutional authorization and the General Data Protection Law (Law No. 13,709/2018).

Quantitative data underwent descriptive analysis, converting Likert responses to numerical values. Analyses included: (1) overall sample results; (2) stratification by location (capital vs. interior); (3) thematic block analysis. Arithmetic means, standard deviations, agreement/disagreement indexes, mode, and variance were calculated. Motivational factors (question 14) were analyzed by frequency. Qualitative responses (question 15) underwent content analysis with thematic categorization and frequency quantification (Marconi & Lakatos, 2021).

Comparative analysis between regional groups used mean scores per question, with bar charts and comparative tables created in Microsoft Excel.

III. Results And Discussion

The study had 70 responses from first-instance court officers, mostly from Goiânia and a significant number from interior Goiás. Of these, 45 were from Goiânia and 25 from interior regions (see Figure 1). The questionnaire covered Satisfaction and Impact of Technological Changes; Working Conditions and Recognition; Well-being and Health. It included closed questions with Likert-scale agreement levels and open questions for suggestions.

Figure 1 - Distribution of Respondent First-Instance Court Officers by Location: Goiânia and Interior Goiás.
Source: Author's elaboration based on research results (2025).

The court has 600 active first-instance officers plus 31 ad hoc, totaling 631. Of these, 391 work in interior Goiás and 209 in the capital. Among capital officers, 155 are assigned to the Electronic Warrant Center, and 54 to other departments (misallocation). Approximately 33% of officers are in the capital and 62% in interior regions; of those in the capital, about 74.2% serve in the CEM and 25.8% elsewhere.

To analyze occupational health, formal consultation was made to the Personnel Records Division regarding medical leave and retirement requests from December 2023 to December 2024.

Official data showed 24 medical leave absences among officers in the Goiânia Warrant Distribution Division during the period (TJGO, 2025). All absences were medical leaves, covering both permanent and supplementary staff, without personal identification (TJGO, 2025).

Among 155 CEM officers, there was an average of approximately 1.85 absences per month, corresponding to 15.5% of local staff. These data indicate health demands compatible with work overload and the need for more effective prevention and support policies (Veltman, 2016; Castro, 2014; Siqueira et al., 2023).

Requests for retirement data were unavailable due to personnel system maintenance. Future studies should request these data to compare illness trends with service termination.

The first questionnaire block addressed Satisfaction and Impact of Technological Changes after CEM implementation. Results showed predominantly positive perception of work process efficiency (Mean: 3.46; SD: 1.26). Interior officers showed slightly higher satisfaction than Goiânia officers (see Figure 2). The overall satisfaction mean with technological changes (question 1) was 4.0, with 90% agreeing fully or partially that innovations improved their work; the most frequent response was “Partially Agree.”

Table 1 - Questions in the “Satisfaction and Impact of Technological Changes” domain.

Source: Author’s elaboration based on research results (2025).

Figure 2 - Comparative Chart of Satisfaction Means: Interior vs. Goiânia.

Source: Author’s elaboration based on research results (2025).

These data show that the Electronic Warrant Center brought advances in judicial process agility and efficiency, corroborated by Robbins and Judge (2020), who emphasize that technology adoption improves internal processes when aligned with organizational workflows. However, differences between interior and capital officers may reflect local context variations, which influence perceptions of technological change.

Regarding task distribution and workload, results were more heterogeneous. Question 2 (task distribution) had a mean of 3.1 (SD: 1.49), with 54% agreeing that improvements occurred. Question 3 (workload perception) had a mean of 2.74; less than half (42.86%) agreed fully or partially with the statement. Means were similar between capital (2.71) and interior (2.80) officers.

However, when analyzing aspects related to task distribution and workload, the results are more heterogeneous. In question 2, regarding task distribution, the average was 3.1 (SD: 1.49), with 54% of respondents fully or partially agreeing that improvements occurred in this regard.

In question 3, referring to the perception of the current workload, the overall average was 2.74. Less than half of the respondents (42.86%) fully or partially agreed with the statement. Furthermore, the averages between officers assigned to the capital and the interior were quite close, being 2.71 for Goiânia and 2.80 for the interior, respectively.

This data indicates that although the Electronic Warrant Center brought advances in judicial process agility and efficiency, challenges remain regarding workload distribution and perceived work overload. Such findings align with Robbins and Judge (2020), who emphasize that technology adoption improves internal processes when aligned with organizational workflows, but local context variations can influence perceptions of technological change.

Regarding health impacts, only 15.9% of respondents perceived a reduction in occupational diseases since the implementation of the CEM, indicating that health issues related to workload and technological adaptation persist. The study identified productivity pressure, difficulties adapting to digital tools, and isolation due to virtualization as significant stress factors.

Motivational factors highlighted by participants included job stability, remuneration, and professional recognition. The research concludes that digitalization must be accompanied by professional development policies, technological training, and health support to promote a balance between technological innovation and employee well-being.

Moreover, the averages measured among the officers assigned to the capital and those in the interior were quite close, being 2.71 for Goiânia and 2.80 for the interior, respectively.

This data indicates that, although the Electronic Warrant Center brought advances in the speed and efficiency of judicial processes, challenges remain regarding the distribution of tasks and the perception of work overload. Such findings are corroborated by the literature of Robbins and Judge (2020), which emphasizes that the adoption of new technologies can improve internal processes, provided there is alignment between technology and organizational processes. However, the observed difference between professionals in the interior and those in Goiânia may indicate variations in the local context, aspects that, according to Robbins and Judge (2020), can influence perceptions of technological changes in organizational environments.

With regard to health impacts, only 15.9% of respondents perceived a reduction in occupational diseases since the implementation of the CEM, indicating that health issues related to workload and technological adaptation persist. The study identified productivity pressure, difficulties in adapting to digital tools, and isolation resulting from virtualization as significant stress factors.

Motivational factors highlighted by participants included job stability, remuneration, and professional recognition. The research concludes that digitalization must be accompanied by professional development policies, technological training, and health support, promoting a balance between technological innovation and employee well-being.

The study contributes to integrated approaches in the modernization of the public sector.

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