

Reimagining performance management in the age of AI: beyond algorithmic control

Emmanuel Senior Tenakwah and Esther Asiedu

Abstract

Purpose – This paper aims to examine the challenges of implementing artificial intelligence (AI)-powered performance management systems. It proposes principles for more human-centred approaches that balance efficiency with employee well-being and dignity.

Design/methodology/approach – Drawing on recent labour disputes in Australia and existing literature on AI integration and performance management, this conceptual paper analyses the tensions inherent in algorithmic performance monitoring. It develops a framework for reimagining performance management in the AI era.

Findings – The paper argues that surveillance-based, AI-driven performance management systems create significant tensions between productivity optimisation and worker well-being. Success requires moving beyond algorithmic control towards augmentation models that preserve human agency, incorporate contextual understanding and balance quantitative metrics with qualitative judgement.

Practical implications – The paper provides human resources leaders with principles and practical guidance for implementing AI-enhanced performance management systems that support both organisational objectives and employee dignity, trust and engagement.

Originality/value – This paper contributes to the emerging discourse on AI in Human Resource Management by critically examining the limitations of algorithmic control approaches and proposing alternative frameworks that prioritise human-centred design and balanced governance structures.

Keywords Artificial intelligence, Performance management, Algorithmic management, Human resource management, Employee well-being

Paper type General review

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Introduction

The emergence of artificial intelligence (AI)-powered performance management represents one of the most contentious developments in modern workplace management. The recent industrial dispute at Woolworths, where workers challenged an AI-generated coaching and productivity framework that monitors their movements and sets algorithmic pick rates, provides a stark illustration of what can go wrong when performance management becomes purely algorithmic (Tenakwah and Amankwaa, 2025). The dispute, which cost the company \$50m in lost sales, demonstrates that technological sophistication does not automatically translate into effective people management.

As organisations increasingly adopt AI to monitor, measure and manage employee performance, they face a fundamental challenge: how to harness the efficiency gains of algorithmic systems while preserving the human elements that make performance management effective – trust, context, judgement and dignity. The rise of what researchers call the Amazonian era of workplace management, characterised by continuous monitoring, real-time performance tracking and algorithmic target-setting, has created new tensions in employer–employee relationships (Barnes, 2024).

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These tensions are not merely technical challenges to be solved through better algorithms. They reflect deeper questions about the nature of work, the balance between organisational control and employee autonomy and the role of human judgement in an increasingly data-driven world. As [Tenakwah and Watson \(2025\)](#) argue, AI implementation represents one of the most complex transformations in the modern era, requiring strategic human resource management that goes far beyond technical deployment.

This paper examines the current state of AI-powered performance management, identifies key tensions and limitations of algorithmic control approaches and proposes principles for reimagining performance management in ways that leverage AI's capabilities while maintaining human-centred values. The goal is to move beyond the false dichotomy of technology versus humans towards integrated systems that genuinely augment human capability and judgement.

The current state of AI-powered performance management

The integration of AI into performance management has accelerated dramatically in recent years. Organisations across industries are deploying sophisticated systems that collect vast amounts of data on employee activities, analyse patterns, set performance targets and provide real-time feedback. These systems promise several compelling benefits: objective measurement free from human bias, consistent standards across the organisation, real-time performance insights and the ability to identify optimisation opportunities that might escape human observation.

In practice, AI-powered performance management takes several forms. Algorithmic monitoring systems track employee activities in granular detail – keystrokes, mouse movements, time spent on tasks and even physical movements in warehouses and retail environments. Predictive analytics systems use historical data to forecast performance, identify high and low performers and flag potential issues before they escalate. AI-driven target-setting algorithms establish performance benchmarks based on data analysis rather than managerial judgement. Automated coaching systems provide real-time guidance and feedback based on algorithmic assessment of employee actions.

The appeal of these systems is understandable. In an era of increasing competition and pressure for operational efficiency, the promise of data-driven, objective performance management is attractive. AI systems can process information at scales beyond human managers' capacity, identify subtle patterns in performance data and maintain consistent standards across large, geographically distributed workforces. These capabilities align with long-standing goals in performance management: fairness, consistency and evidence-based decision-making.

However, the reality of algorithmic performance management has proven more problematic than the promise. The Woolworths case illustrates several critical issues. Workers reported that the AI-generated pick rates failed to account for unavoidable delays, created unsafe pressure to move too quickly and eliminated the professional discretion that experienced workers used to balance speed, accuracy and safety ([Tenakwah and Amankwaa, 2025](#)). Rather than experiencing the system as objective and fair, workers perceived it as oppressive surveillance that treated them as machines rather than skilled professionals.

These challenges reflect broader patterns observed across industries adopting algorithmic management. Research indicates that AI-driven performance systems often struggle with context – understanding the legitimate reasons for performance variations that experienced managers would recognise. They can create perverse incentives that lead employees to optimise for measured metrics at the expense of unmeasured but important aspects of job performance. They frequently undermine trust and psychological safety, as employees feel constantly monitored and judged by systems they do not understand or trust. Moreover,

they can erode professional identity and job satisfaction by reducing complex, skilled work to quantified metrics (Tenakwah, 2021b).

The algorithmic control problem

At the heart of these challenges lies what might be called the algorithmic control problem – the tendency for AI-powered performance management to drift towards surveillance-based control systems that prioritise measurement and compliance over development and enablement. This drift occurs not through malicious intent but through the logic of algorithmic systems themselves, which inherently favour what can be measured, standardised and optimised.

The algorithmic control problem manifests in several ways. Firstly, it creates the critical tension between efficiency optimisation and worker well-being (Tenakwah and Watson, 2025). AI systems excel at identifying ways to extract additional productivity from existing processes, but they struggle to account for the human costs of such optimisation. The Woolworths workers wearing headsets receiving AI-directed instructions represent an extreme example. However, the pattern is visible in many contexts – call centre agents monitored for talk time and script adherence, knowledge workers tracked for keyboard activity and drivers monitored for route optimisation. In each case, the algorithmic focus on measurable efficiency can override considerations of worker dignity, autonomy and sustainable work practices.

Secondly, algorithmic control systems struggle with the contextual nature of performance. Effective performance management has always required understanding the context in which work occurs – the unique challenges of specific situations, the trade-offs involved in different approaches and the legitimate reasons why standardised approaches may not always be optimal. Human managers can recognise these contextual factors and adjust expectations accordingly. Algorithmic systems, in contrast, tend to enforce standardised expectations regardless of context, leading workers to experience inflexibility and unfairness.

Thirdly, these systems can undermine the developmental purpose of performance management. Traditional performance management, at its best, serves not just to measure and control but to develop capabilities, provide coaching and align individual growth with organisational needs. When performance management becomes primarily algorithmic, it often shifts from a developmental tool to a control mechanism. The focus moves, from how can we help you improve? to, are you meeting the algorithm's standards? This shift can be particularly problematic given that employees increasingly value development opportunities and meaningful work over purely transactional employment relationships (Tenakwah, 2021a).

The psychological impact of algorithmic control should not be underestimated. Research on technology adoption indicates that employee perception and readiness are critical factors in successful implementation (Tenakwah *et al.*, 2022). When employees perceive performance management systems as surveillance rather than support, as judgement rather than development, it undermines trust, reduces engagement and can trigger resistance. The industrial action at Woolworths demonstrates how this dynamic can escalate to severe organisational disruption.

Moreover, algorithmic control creates an accountability gap. When AI systems make or heavily influence performance-related decisions, questions arise about responsibility and recourse. If the algorithm sets an unrealistic target or makes an unfair assessment, who is accountable? How can employees challenge or appeal decisions made by opaque algorithmic systems? These questions of accountability and authority become particularly acute when critical decisions involve joint human-AI inputs.

Key tensions in AI-driven performance management

Understanding the specific tensions that arise in AI-powered performance management helps clarify what needs to be addressed in reimagining these systems. Several key tensions emerge from both research and practice.

Productivity versus dignity: AI systems are typically optimised for productivity metrics – output per hour, tasks completed, time on task. However, human dignity involves elements that resist quantification – respect for professional judgement, recognition of skill and experience and autonomy in how work is conducted. The Woolworths case exemplifies this tension: the AI-driven system optimised for picking speed, but workers experienced this optimisation as a degradation of their professional dignity and an assault on their ability to exercise judgement about safe and sustainable work practices (Tenakwah and Amankwaa, 2025).

Standardisation versus context: Algorithmic systems derive their power from standardisation – applying consistent rules and expectations across situations. However, practical work often requires contextual judgement – adapting approaches to specific circumstances, recognising legitimate exceptions and understanding when standard procedures should be modified. Performance management systems that cannot accommodate contextual risk create bureaucratic inflexibility, frustrating both employees and customers.

Quantification versus qualitative judgement: AI systems excel at processing quantitative data but struggle with qualitative assessment. However, much of what constitutes good performance involves qualitative elements – relationships with colleagues and customers, creative problem-solving, mentoring and knowledge-sharing and cultural contributions. When quantitative metrics dominate performance management, these crucial qualitative contributions can be ignored, leading to incomplete and potentially distorted assessments.

Real-time monitoring versus autonomy: The capability for continuous, real-time performance monitoring represents both an opportunity and a threat. While immediate feedback can support learning and development, constant monitoring can undermine the autonomy that many knowledge workers value and that research suggests supports motivation and engagement. The challenge is determining the appropriate frequency and intensity of monitoring for different contexts and roles.

Individual optimisation versus team dynamics: Algorithmic performance management typically focuses on individual metrics and optimisation. However, much organisational performance depends on effective collaboration and teamwork. When individuals are primarily evaluated and managed based on individual metrics, it can undermine collaborative behaviour and create unhealthy internal competition. This tension becomes particularly acute in organisations that claim to value teamwork while implementing performance management systems focused exclusively on individual outputs.

Principles for reimagining performance management

Moving beyond algorithmic control requires a fundamental re-conceptualisation of AI's role in performance management. Rather than viewing AI as a tool for enhanced surveillance and control, organisations should embrace principles that position AI as an enabler of more human-centred, developmental and contextually sensitive performance management. Five key principles emerge from analysis of both the problems with current approaches and the broader literature on successful AI integration.

Principle 1: augmentation over automation: The most fundamental shift required is from automation to augmentation – from AI systems that replace human judgement to systems that enhance and support it. Successful AI integration requires balancing technological capabilities with human agency. In performance management, this means using AI to provide insights and identify patterns while preserving human judgement for interpreting and acting on them. For example, AI might flag that an employee's performance metrics

have declined. However, a human manager would investigate the context, understand the contributing factors and work with the employee to develop appropriate responses. The algorithm provides the signal; the human provides the understanding and response.

Principle 2: transparency and explainability: Employees must understand how their performance is being assessed and have confidence that the process is fair. This requires AI systems that can explain their assessments in terms employees can understand and processes that allow for questioning and appeal. As research on people analytics highlights, opacity in data-driven systems can create significant risks (Tenakwah, 2021b). Transparency builds trust and enables employees to understand what is expected and how they can improve. It also enables detection and correction of algorithmic errors or biases.

Principle 3: developmental focus: Performance management should primarily serve developmental purposes – helping employees improve, grow and succeed – rather than simply measurement and control. AI systems should be designed to support this developmental purpose, providing insights that inform coaching and learning rather than merely issuing judgements. This aligns with research indicating that employees increasingly value development opportunities (Tenakwah, 2021a) and requires rethinking performance management as a learning system rather than a control system.

Principle 4: contextual sensitivity: AI-enhanced performance management must incorporate mechanisms to recognise and account for context. This might involve building contextual factors into algorithmic models, creating transparent processes for human override when context demands it or limiting algorithmic decision-making to domains where standardisation is truly appropriate. As Tenakwah and Amankwaa (2025) note, the Woolworths system failed partly because it could not account for unavoidable delays and contextual factors that experienced workers routinely navigate.

Principle 5: participatory governance: Decisions about the design and deployment of the performance management system should involve those affected by it. This participatory approach serves multiple purposes: it provides practical insights into how systems will function in reality, builds buy-in and trust and ensures that worker perspectives on fairness and feasibility are incorporated from the outset. The lack of such participation in the Woolworths case contributed to a system design that workers experienced as unfair and unsafe.

Practical framework and recommendations

Implementing these principles requires a structured approach that addresses both system design and organisational context. Human resources (HR) leaders should consider the following framework:

Assessment and alignment: Before implementing or modifying AI-powered performance management systems, organisations should conduct thorough assessments of their current performance management philosophy and objectives. What is the primary purpose of performance management in this organisation – development, accountability, compliance, improvement? How do current systems align with stated values? What are employees' actual experiences with existing approaches? This assessment should inform decisions about appropriate roles for AI.

Co-design processes: System design should involve diverse stakeholders, including employees at various levels, managers, union representatives (where applicable) and relevant technical experts. Co-design processes should address questions such as: What metrics genuinely reflect valuable performance in different roles? What contextual factors need to be considered in performance assessment? What levels and types of monitoring are appropriate for different positions? How should algorithmic insights be balanced with human judgement? These discussions often reveal that adequate performance is more

complex than initially assumed and that meaningful measurement requires more nuanced approaches than simple productivity metrics.

Pilot and iterate: Rather than enterprise-wide deployment, organisations should pilot AI-enhanced performance management approaches in limited contexts, gather systematic feedback and refine based on experience. This iterative approach allows for course correction before systems become entrenched, reducing the risk of large-scale implementation failures. The Woolworths case demonstrates the costs of insufficient piloting and refinement (Tenakwah and Amankwaa, 2025).

Governance structures: Clear governance structures should define how AI systems will be used in performance decisions, what human oversight is required, how employees can appeal or question assessments and how systems will be monitored for fairness and effectiveness (Jia and Hou, 2024). These structures should address the accountability gap created by algorithmic decision-making.

Capability building: Both managers and employees need capabilities to work effectively with AI-enhanced performance management. Managers need to understand system capabilities and limitations, interpret algorithmic insights appropriately and balance data-driven insights with contextual understanding and human judgement (Fountain et al., 2019). Employees need to understand how they are being assessed, how to interpret feedback and how to use system insights for development.

Continuous monitoring and adjustment: AI-enhanced performance management systems should be monitored for unintended consequences, bias, employee experience and alignment with organisational objectives. This monitoring should include both quantitative metrics (employee engagement scores, turnover in specific roles, grievance patterns) and qualitative understanding (focus groups, interviews, observation). Organisations should be prepared to adjust or even abandon approaches that create more problems than they solve.

Ethical frameworks: Organisations should develop explicit ethical frameworks for AI use in performance management that address issues such as employee privacy, data use and retention, fairness and bias, transparency and worker well-being. The role of HR leadership in this transformation cannot be overstated. As Tenakwah and Watson (2025) argue, HR leaders must position themselves as strategic partners in AI integration, developing competencies in organisational development, skills forecasting and culture evolution. They must act as translators between technological capabilities and human needs, ensuring that AI deployment serves both organisational effectiveness and worker well-being.

This requires HR professionals to develop new capabilities themselves – understanding AI technologies and their limitations, analysing ethical implications of algorithmic decision-making, designing participatory processes that generate genuine insights and managing complex change processes that involve both technical and cultural transformation. HR must also be willing to push back against purely efficiency-driven approaches to AI deployment when such approaches threaten worker well-being or organisational values.

Conclusion

The challenge of AI-powered performance management is fundamentally about what kind of workplaces we want to create. The choice is not between embracing or rejecting AI but between different visions of how AI should be integrated into performance management processes. The algorithmic control model, exemplified by the system that sparked the Woolworths dispute, treats AI as a tool for enhanced surveillance and control, subordinating human judgement and autonomy to algorithmic optimisation. This approach may generate short-term efficiency gains but at the cost of worker well-being, trust and, ultimately, organisational sustainability.

The alternative is a human-centred augmentation model that leverages AI to enhance rather than replace human judgement, preserves dignity and autonomy while improving performance insights, and treats performance management as a developmental process rather than a control mechanism. This approach is more complex to implement as it requires thoughtful design, participatory processes, careful governance and ongoing adjustment (Kolbjørnsrud *et al.*, 2017). However, it offers the prospect of genuinely improved performance management that serves both organisational objectives and worker interests.

As organisations continue to integrate AI into performance management, the stakes are high. Done well, AI-enhanced performance management could provide better insights, more consistent processes and more effective development support. Done poorly, it risks creating dehumanising work environments that undermine trust, engagement and ultimately performance. HR leaders must ensure that organisations take the more difficult but ultimately more sustainable path towards human-centred AI integration in performance management.

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Further reading

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