

Beyond Technology: a Human Systems Framework for Diagnosing Organizational Readiness in AI Adoption

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Abstract

While the technical hurdles of AI adoption are steadily being cleared, organisational failure rates remain stubbornly high. This disconnect stems from a persistent framework bias: implementation programmes continue to prioritise "can the system work?" over "will the human system let it?".

This study addresses that gap. Drawing on qualitative data from fifteen cross-sector knowledge workers, it presents the HuSAT (Human System for Adaptive Trust) framework. A five-condition diagnostic model mapping the human system factors that determine whether AI deployment produces calibrated trust or entrenched resistance.

The central finding is that professional identity functions as a master variable. When AI threatens a user's sense of professional self, they actively subvert adoption by resorting to shadow manual processes, sandbagging, and self-exclusion from digital workflows, regardless of technical literacy or organisational mandate. Identity threat is not a soft concern; it is the primary mechanism through which technically sound implementations fail.

The research makes three contributions. First, it distinguishes calibrated trust from binary adoption as the appropriate success metric for AI integration. Second, it reframes parallel running (widely treated as a technical precaution) as a psychological safety mechanism. Third, it identifies assumption transparency and co-creation as the primary conditions under which trust builds incrementally rather than being granted at deployment.

The HuSAT framework offers practitioners a structured diagnostic for identifying human-centric failure points in finance functions undergoing intelligent automation and a more honest account of what successful AI adoption actually requires.

Keywords: AI adoption, calibrated trust, human systems, professional identity, psychological safety