
Caught Between Duty and Disruption: A Psychosocial Model of Civil Servants' Adaptation to Forced Digitalization.

Auteur 1 : DRISSI EL BOUZAIIDI Oussama.

Oussama DRISSI EL BOUZAIIDI, (PhD student)

Research Laboratory in Management of Organizations, Law and Diversity (M.O.D.D.)
Business School, International University of Casablanca (UIC), Morocco

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Abstract

Digital transformation has become a governance imperative for public administrations the world over, yet its implementation keeps running into the same overlooked paradox: the civil servants asked to carry the change forward are also the people most exposed to its psychosocial strain. Scholarship has examined technology acceptance and organisational change management at length, but rarely together, and the compound psychosocial pressures that forced digitalization produces inside bureaucracies remain thinly theorised. This article proposes an original framework — the Psychosocial Adaptation Model for Forced Digitalization (PAM-FD) — that draws on three complementary traditions: the Technology Acceptance Model (Davis, 1989), the Transtheoretical Model of behaviour change (Prochaska & DiClemente, 1983), and institutional theory (DiMaggio & Powell, 1983). The model turns on four constructs: Psychosocial Readiness (PSR), the Institutional Pressure Index (IPI), the Psychosocial Double Bind (PDB), and Change Management Leverage (CML). Taking Morocco’s public sector as its anchoring case PAM-FD maps five sequential stages of adaptation: institutional shock, cognitive dissonance, negotiated compliance, adaptive internalisation, and transformative engagement. For each stage it sets out the dominant psychosocial barriers, the isomorphic pressures at work, and the change-management interventions most likely to help. The framework links individual psychology to institutional dynamics, brings the Transtheoretical Model back into organisational scholarship, and introduces “performative compliance” as a meaningful intermediate state between surface adoption and genuine transformation. The article closes with a structured empirical research agenda and practical implications for those leading public-sector digital change.

Keywords : *digital transformation; change management; public administration; civil servants; psychosocial adaptation; Morocco;*

Introduction

The digitalization of public services has become one of the defining governance challenges of the twenty-first century. Governments everywhere are rolling out e-government platforms, automated administrative workflows, integrated citizen portals and cloud-based management systems, and they often impose these tools on civil servants within tight timelines and with little real consultation. Morocco illustrates this pattern with unusual clarity. A succession of national strategies — from the early-2000s e-Morocco initiative, through Morocco Numeric 2013 and Morocco Digital 2020, to the current Morocco Digital 2030 strategy adopted in 2024 and backed by a budget of 1.1 billion dirhams over 2024–2026 — reflects a sustained and intensifying commitment to digitalizing public services (Atalayar, 2024). The Ministry of Digital Transition and Administrative Reform now coordinates this effort across dozens of ministries, agencies and local authorities at once, with a headline objective of training 240,000 professionals for the national digital sector.

Beneath this momentum, however, lies a stubborn and under-theorised implementation gap. Morocco's e-government ranking drifted between 82nd and 110th place from 2014 to 2018, exposing the fragility of gains won through largely technical approaches (Elhazziti et al., 2023). International evidence points the same way: public-sector digital transformation stalls not mainly because of infrastructure or money, but because of human, cultural and organisational factors — procedural inertia, hierarchical resistance, weak digital literacy, and the psychosocial discomfort that comes with overturning long-settled professional routines (Elbachiri et al., 2024). UNESCO (2022) frames the problem in global terms: nearly half of the 198 countries it surveyed had no formal digital-skills strategy for their public servants at all, leaving millions of frontline administrators stranded between a mandate to digitalize and a genuine lack of readiness to do so.

The theory available to make sense of this human dimension is rich but fragmented. The Technology Acceptance Model (TAM), introduced by Davis (1989), has generated three decades of valuable work on the cognitive drivers of adoption. Yet TAM is built on an assumption of voluntariness and rational deliberation that simply does not hold under top-down, mandated digitalization. When a civil servant is ordered to abandon a familiar workflow and take up an unfamiliar system, adoption is not principally a cost-benefit calculation; it is an experience of disruption, identity threat and forced adjustment. Change-management frameworks — chiefly Kotter's (1996) eight steps and Lewin's (1951) unfreeze-change-refreeze schema — offer macro-level roadmaps for leading change but say little about the

granular, emotionally charged experience of individuals living through a compulsory transition. The Transtheoretical Model (TTM) of Prochaska and DiClemente (1983) does attend to individual readiness and staged adaptation, but it has rarely been brought to bear on public-sector digital transformation.

This article responds to that gap with the Psychosocial Adaptation Model for Forced Digitalization (PAM-FD), an original multi-level framework that integrates TAM, TTM and institutional theory (DiMaggio & Powell, 1983) to theorise the staged psychosocial process by which civil servants adapt to compulsory digital transitions. PAM-FD works across three levels — micro-psychological, meso-organisational and macro-institutional — and introduces four constructs: Psychosocial Readiness (PSR), the Institutional Pressure Index (IPI), the Psychosocial Double Bind (PDB) and Change Management Leverage (CML). The Moroccan public administration, where ambitious top-down mandates coexist with deeply embedded bureaucratic inertia, serves as the model's primary empirical anchor.

The subject of this research is therefore the psychosocial process through which civil servants in public organizations adapt to forced digital transformation. The objective of this article is to propose and theoretically substantiate an original integrative model — PAM-FD — capable of explaining this adaptation process across its successive stages, and of deriving from it actionable change management recommendations for public administration. To achieve this objective, the article proceeds as follows. Section 2 reviews the three theoretical pillars and surveys the literature on change management in public administration. Section 3 sets out the conceptual architecture and core constructs of PAM-FD. Section 4 develops the five adaptation stages, each with its characteristic barriers, institutional dynamics and stage-matched interventions. Section 5 discusses the theoretical contributions, the practical implications for Morocco, the model's limits and a research agenda. Section 6 concludes.

1. Theoretical Foundations and Literature Review

1.1. Technology acceptance in the public sector: the limits of cognitive voluntarism

The Technology Acceptance Model, set out by Davis (1989) in “Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology,” is the most widely cited framework in information-systems research. Grounded in the Theory of Reasoned Action (Fishbein & Ajzen, 1975) and the Theory of Planned Behaviour (Ajzen, 1991), it holds that adoption is driven chiefly by two beliefs: perceived usefulness — how far using the system is thought to improve job performance — and perceived ease of use — how far it is expected to

be effortless. Together these shape attitude, behavioural intention and, ultimately, system use (Davis, 1989).

TAM has been extended several times. TAM2 (Venkatesh & Davis, 2000) folded in subjective norms and cognitive-instrumental processes; TAM3 (Venkatesh & Bala, 2008) added individual differences and system characteristics; and the Unified Theory of Acceptance and Use of Technology (UTAUT), synthesising seven competing models, introduced performance expectancy, effort expectancy, social influence and facilitating conditions (Venkatesh et al., 2003). Useful as these refinements are, one assumption survives intact across the whole family: that adoption is at least partly voluntary and rationally weighed. That assumption breaks down under forced digitalization, where civil servants must adopt a system regardless of their beliefs, attitudes or intentions. PAM-FD keeps TAM's two beliefs but recasts them — no longer as rational inputs to a free choice, but as outputs that shift across a staged psychosocial journey.

1.2. Change-management frameworks: from macro-models to human realities

The change-management literature offers a complementary but incomplete resource. Lewin's (1951) three-stage model — unfreezing the status quo and building motivation, changing behaviours and mental models, then refreezing the new behaviours as norms — established the basic grammar of planned change. Intuitive as it is, the model has been criticised for its linear simplicity and its inattention to the emotional and identity dimensions of change (Burnes, 2004). Under forced digitalization the difficulty is sharper still: “unfreezing” is imposed by decree rather than cultivated through readiness-building, which produces a truncated and disruptive process the model does not really capture.

Kotter's (1996) eight steps — creating urgency, building a guiding coalition, developing and communicating a vision, empowering action, generating short-term wins, consolidating gains and anchoring change in culture — give change leaders a more operational map, and several of these steps map neatly onto the stage-specific interventions proposed below. But Kotter's framework is prescriptive: it tells managers what to do without diagnosing the individual psychological states that decide whether any given step will land.

Work on the Moroccan public sector documents a recurring pattern: technically sound reform programmes underperform because they neglect the human side of transition. Elbachiri et al. (2024) single out a digital-culture deficit, hierarchical communication barriers and inadequate training as the three leading organisational obstacles. Barhon et al. (2024) show how the crisis-driven digitalization of the COVID-19 period amplified these deficits, generating acute distress among civil servants pushed into immediate transitions without support. Taken together, these

findings call for a framework that joins the macro-organisational prescriptions of Kotter and Lewin to a micro-psychological account of how individuals actually adapt.

1.3. The Transtheoretical Model: mapping the stages of behavioural adaptation

Prochaska and DiClemente (1983) developed the Transtheoretical Model in research on smoking cessation. Its central insight was that behavioural change is not a single event but a staged, non-linear process, and that people at different stages need fundamentally different help. The original model set out five stages — precontemplation (no intention to change), contemplation (awareness of the need but ambivalence), preparation (commitment plus early planning), action (active change) and maintenance (consolidating the new behaviour) — to which later work added termination, representing full stabilisation (Prochaska & Velicer, 1997). Beyond the stages, the model rests on three further constructs. Decisional balance captures how a person weighs the pros and cons of changing; progression from precontemplation toward action consistently tracks a rise in perceived pros and a fall in perceived cons (Prochaska & Velicer, 1997). Self-efficacy, drawing on Bandura (1977), measures confidence in sustaining the new behaviour under pressure. And ten processes of change — among them consciousness raising, dramatic relief, self-reevaluation and reinforcement management — describe the mechanisms that move people from one stage to the next (Prochaska et al., 1992). For forced digitalization the relevance is diagnostic: at any moment, different civil servants sit at different stages of readiness, and interventions blind to that fact will fail large parts of the affected population.

1.4. Institutional theory: the iron cage of bureaucratic resistance

DiMaggio and Powell's (1983) "The Iron Cage Revisited" introduced institutional isomorphism to explain why organisations in the same field tend, over time, toward structural sameness. They identify three mechanisms: coercive isomorphism (pressures from regulators and state mandates), mimetic isomorphism (imitation of apparently successful peers under uncertainty) and normative isomorphism (the spread of professional standards through training, certification and networks). In public-sector digital transformation, the coercive mechanism dominates at the outset: the state issues mandates that organisations must obey whatever their cultural or operational readiness.

Meyer and Rowan (1977) add a crucial qualification. Organisations under coercive pressure often adopt required practices ceremonially — displaying the outward signs of compliance while leaving their working logic largely untouched. In the civil-service context this ceremonial adoption is exactly what PAM-FD calls performative compliance: using a digital system in

ways that satisfy an audit while stopping short of genuine behavioural or cognitive change. Institutional theory also explains the rhythm of Morocco’s successive reforms (e-Morocco, Numeric 2013, Digital 2020, Digital 2030): each round of coercive pressure bought short-term compliance followed by fatigue, without ever dissolving the underlying cultural barriers (Elbachiri et al., 2024).

1.5. Comparative positioning: toward an integration

Table N°1 summarises what each of the three frameworks contributes and where each falls short, and positions PAM-FD as a deliberate response to those gaps.

Table N°1: Comparative analysis of theoretical frameworks

Criterion	TAM (Davis, 1989)	TTM (Prochaska & DiClemente, 1983)	Institutional Theory (DiMaggio & Powell, 1983)	PAM-FD (this article)
Level of analysis	Individual	Individual	Organisational / field	Multi-level
Voluntariness assumed	Yes	Partially	No	No
Staged process	No	Yes (5–6 stages)	No	Yes (5 stages)
Psychosocial depth	Low	High	Low	High
Institutional pressure	Absent	Absent	Central	Central
Change-management guidance	Indirect	Partial	Absent	Explicit, stage-matched
Handles forced adoption	No	Partially	Yes	Yes
Public-sector application	Possible	Rare	Common	Direct

Source: Author’s construction.

As the table shows, no single existing framework captures at once the multi-level character, the staged psychosocial depth, the institutional embeddedness and the change-management operability needed to theorise civil servants' adaptation to forced digitalization. The integrative architecture of PAM-FD is built to close that combined gap.

2. The Psychosocial Adaptation Model for Forced Digitalization (PAM-FD)

2.1. Conceptual architecture and foundational premises

PAM-FD rests on three premises that set it apart from existing approaches. The first is that civil servants' adaptation to forced digitalization is irreducibly psychosocial. It cannot be collapsed into a rational adoption decision, as TAM would have it, nor managed through macro-organisational steps alone, as Kotter implies, nor explained wholly by structural pressures, as institutional theory suggests. The emotional, cognitive, identity-related and relational experience of being made to overhaul one's professional practice is constitutive of adaptation, not incidental to it.

The second premise is that this process is shaped simultaneously by forces at three levels. At the micro-psychological level sit individual readiness, emotional response, beliefs, self-efficacy and decisional balance. At the meso-organisational level lie leadership quality, training, peer dynamics, culture and change-management practice. At the macro-institutional level operate coercive mandates, mimetic and normative pressures, and national strategy. These levels interact continuously and in both directions: institutional pressure constrains but does not determine individual trajectories, and individual trajectories, in sufficient aggregate, can reshape culture and norms over time.

The third premise — the most consequential in practice — is that stage-sensitive diagnosis is the precondition for effective change management. The common failure of public-sector transformation is to apply uniform interventions (the same training, the same messaging, the same incentives) to a workforce spread across very different stages of readiness. PAM-FD supplies both the rationale for diagnosing that distribution and an architecture for designing interventions matched to it.

2.2. Core theoretical constructs

2.2.1. Psychosocial Readiness (PSR)

Psychosocial Readiness is the civil servant's composite state of cognitive, emotional and motivational preparedness to engage constructively with a forced transition. It has three correlated components: cognitive readiness (an accurate grasp of what the system is for and why it is being introduced, echoing TAM's perceived usefulness); practical readiness

(confidence in one's ability to operate it, echoing perceived ease of use and TTM's self-efficacy); and motivational readiness (genuine willingness to make the behavioural change, echoing decisional balance and stage of change). PSR is the model's primary individual-level outcome: it moves along a low-to-high continuum, evolves non-linearly across the five stages, and proximately decides whether digital engagement amounts to real adaptation or mere performative compliance.

2.2.2. Institutional Pressure Index (IPI)

The Institutional Pressure Index captures the intensity and composition of the isomorphic pressures bearing on civil servants at any given stage. Following DiMaggio and Powell (1983), it breaks down into coercive IPI (directives, regulations, sanctions and supervisory monitoring), mimetic IPI (peer observation, social comparison and imitation of colleagues seen to be coping well) and normative IPI (professional norms, certification requirements and collegial expectations of proficiency). In Morocco, coercive IPI dominates throughout, given the centralised, top-down design of Digital 2030. As the analysis of the stages will show, however, the relative weight of mimetic and normative pressure grows as the transformation matures.

2.2.3. Psychosocial Double Bind (PDB)

The Psychosocial Double Bind is the model's most original construct. It adapts Bateson et al.'s (1956) theory of the double bind, in which a person receives two contradictory imperatives that cannot both be satisfied, producing inescapable tension. In PAM-FD, the bind is the tension civil servants face between a coercive mandate to adopt digital systems and an organisational culture that has long rewarded precisely the procedural expertise, hierarchical compliance and rule-following that digitalization now seeks to dismantle. The PDB is not a personal failing; it is a structural condition created by the contradictory demands of coercive reform inside a resistant field. Its characteristic resolution is performative compliance: outward conformity paired with covert operational continuity.

2.2.4. Change Management Leverage (CML)

Change Management Leverage refers to the full set of organisational interventions through which managers can ease the PDB, build PSR and move people forward. It runs along four dimensions: communicative interventions (transparent, empathetic, timely communication about purpose, pace and support); educational interventions (role-specific training, skills workshops, peer learning); structural interventions (writing digital competencies into job descriptions and appraisal, ring-fencing time for learning); and relational interventions (mentoring, communities of practice, coalition-building among champions). Crucially, the

model holds that CML works only when it is stage-appropriate: an intervention that helps someone at Stage 2 may be useless, or even counter-productive, for someone at Stage 4 who needs recognition and leadership rather than reassurance and basic training.

Table N°2: Summary of the PAM-FD Model’s Core Constructs

Construct	Level of Analysis	Theoretical Origin	Key Indicator
PSR (Psychosocial Readiness)	Micro-psychological	TAM (Davis, 1989) + TTM (Prochaska & DiClemente, 1983)	Composite score of cognitive, practical, and motivational readiness
IPI (Institutional Pressure Index)	Macro-institutional	Institutional Theory (DiMaggio & Powell, 1983)	Ratio of coercive, mimetic, and normative pressure
PDB (Psychosocial Double Bind)	Micro-meso	Bateson et al. (1956)	Intensity of perceived contradictory institutional imperatives
CML (Change Management Leverage)	Meso-organizational	Kotter (1996)	Number and type of stage-matched interventions deployed

Source: Author’s construction

3. The Five Psychosocial Adaptation Stages

3.1. Stage 1: Institutional shock

Stage 1 begins with the announcement or imposition of a transition. The civil servant faces a *fait accompli*: the existing analogue or hybrid process is to be replaced, and opting out is not on the table. The result is a state PAM-FD calls institutional shock — close to TTM’s precontemplation — in which the person has not yet processed, cognitively or emotionally, what the change means for them. Three barriers dominate: role ambiguity (sharp uncertainty about what will be expected and whether one can meet it), perceived status threat (the fear that

hard-won expertise, informal authority and professional identity are about to be made obsolete) and anticipatory anxiety (a diffuse dread about an uncertain technological future).

In TAM terms, perceived usefulness and ease of use are both at their lowest here: people have too little exposure to form accurate beliefs, and their negative priors go uncorrected by the information-light, coercive communication that usually accompanies a top-down mandate. Coercive IPI is at its peak, and the PDB is fully active — the mandate is unambiguous, but the resources, support and cultural legitimacy needed to comply in good faith are absent. The Moroccan evidence is concrete: Elhazziti et al. (2023) report widespread anxiety and defensive resistance among civil servants meeting e-government for the first time, and Barhon et al. (2024) document how the pandemic sharpened that reaction.

The right CML response at Stage 1 puts psychological safety first. Drawing on Kotter's (1996) opening steps, managers should open transparent, empathetic channels that acknowledge the difficulty of the transition rather than minimising it; build a visible coalition of credible champions drawn from the ranks rather than from management alone; and create protected spaces — Q&A sessions, anonymous channels for raising concerns, peer forums — where uncertainty and resistance can surface without penalty. UNESCO's (2022) global review names psychological-safety creation as the non-negotiable first step: organisations that skip it consistently stumble in the training and adoption phases that follow.

How long Stage 1 lasts varies widely, and it depends heavily on the quality of leadership and communication. Where leaders communicate clearly, empathetically and consistently, Stage 1 is markedly shorter than in settings dominated by information vacuums, mixed messages or purely coercive communication (Elbachiri et al., 2024). The practical lesson follows directly: investment in good Stage 1 communication pays disproportionate dividends downstream by heading off the entrenched resistance that becomes so much harder to shift at Stage 2.

3.2. Stage 2: Cognitive dissonance

As the transition moves from announcement to reality — systems go live, training is mandated, expectations are reset and supervisors begin monitoring compliance — civil servants enter a stage of active cognitive dissonance. Bateson's (1972) notion of double description is apt: the person holds two incompatible but equally compelling stories about the system. The institutional story, sustained by pressure, authority and official discourse, casts it as legitimate, beneficial and necessary. The experiential story, rooted in daily encounters with a tool that may be demanding, disruptive and threatening, casts adoption as risky, hard and costly. The tension between them is the dissonance that defines Stage 2, matching TTM's contemplation phase.

The behaviour most distinctive of this stage is what PAM-FD terms performative compliance: a split strategy in which the civil servant meets every visible requirement — attending training, logging in, producing digital output — while quietly keeping a parallel manual or hybrid process that does the actual work. Irani et al. (2023), in a longitudinal study of European public administrations, found shadow manual systems persisting for as long as six years after formal adoption in several ministries. Performative compliance is not laziness or dishonesty; it is a rational way to manage the PDB, a provisional truce that keeps operations running while the appearance of compliance is maintained.

The key insight for Stage 2 is that performative compliance cannot be pressured away — more coercion tends to deepen it — but must be dissolved by addressing the underlying decisional balance. Managers need to make the system's benefits concrete and tangible, not through abstract claims about efficiency but through role-specific demonstrations that it cuts a real workload, reduces error or simplifies a step people find tedious. Pairing early adopters with Stage 2 colleagues through mentoring, providing responsive technical support and applying Kotter's (1996) short-term-wins approach — publicly celebrating specific cases where the system plainly improved an outcome — are the three best-supported interventions at this point.

3.3. Stage 3: Negotiated compliance

Stage 3 is the first genuinely constructive phase. Real adoption begins, but on terms the civil servant negotiates individually or with colleagues rather than on the terms prescribed. People at this stage use the system consistently enough to satisfy expectations while developing informal adaptations and practical workarounds that make it manageable within their particular context. This corresponds to TTM's preparation stage: the commitment to change is real and acted on daily, but it is still effortful, not yet automatic or woven into identity.

Mimetic isomorphism (DiMaggio & Powell, 1983) becomes the leading mechanism here, displacing the raw coercion of Stages 1 and 2. Stage 3 civil servants actively watch colleagues who have integrated the tools successfully, trying to decode the strategies that make integration workable. This peer-observation dynamic is especially strong in Morocco, where informal internal networks carry real authority and trust, often outweighing formal hierarchy in matters of day-to-day practice (Elbachiri et al., 2024). In TAM terms, perceived usefulness starts to settle in positive territory, even as perceived ease of use still fluctuates while people work out their informal adaptations.

Managers should resist labelling the resulting workarounds as non-compliance or resistance. The sociology of organisations, and de Certeau's (1984) work on everyday practice in

particular, shows that informal adaptations often encode sophisticated practical knowledge about how a formal system can be made to fit real constraints. Forward-looking managers can harvest that knowledge through participatory co-design: inviting Stage 3 staff to feed their adaptations into formal improvements turns negotiated compliance into ownership and produces changes that improve adoption across the whole workforce.

3.4. Stage 4: Adaptive internalisation

Stage 4 marks the most important threshold in the model. The civil servant's relationship to the tools shifts from external compliance to internal integration: digital competencies stop feeling like imposed burdens and start to register as genuine professional assets that enhance, rather than threaten, identity and effectiveness. This reconstruction of identity is the defining feature of Stage 4, matching TTM's action stage. Self-efficacy is high and stable, decisional balance is consistently positive, perceived usefulness and ease of use are both solidly favourable, and the PDB has eased substantially as the clash between mandate and culture is resolved at the individual level through integration.

Normative isomorphism (DiMaggio & Powell, 1983) now takes the lead. Professional peer communities begin to set and enforce norms of competency: being digitally proficient is no longer just a supervisory demand but a collegial expectation. The OECD's (2024) cross-national analysis underlines how formal competency frameworks reinforce this stage — when digital skills enter job descriptions, appraisal criteria and promotion pathways, the expectation of competence becomes institutionalised, strengthening the individual integration already under way. Morocco's commitment under Digital 2030 to national digital-certification standards is precisely this kind of normative reinforcement.

CML at Stage 4 should shift decisively from remedial support — managing anxiety, building basic skills, generating early wins — to recognition, advancement and knowledge-sharing. Those who reach adaptive internalisation should be formally designated as digital resources within their units, given structured opportunities to mentor colleagues at earlier stages, and offered advanced training that deepens rather than merely maintains their skills. Building cross-departmental communities of practice — durable peer networks for sharing experience, innovation and know-how — is among the most generative investments available here: it both consolidates Stage 4 gains and creates the peer-modelling effects that speed Stage 3 colleagues along.

3.5. Stage 5: Transformative engagement

Stage 5 is the model’s ideal endpoint: the civil servant has not merely adapted but become a proactive, self-directed driver of digital innovation within the organisation and the wider professional community. This matches TTM’s maintenance and termination stages — digital behaviour is fully habitual, relapse is negligible even under stress, and professional identity is stably rebuilt around competence, adaptability and agency. In TAM terms, usefulness and ease of use are at their height but have receded into the background, taken for granted; the person uses digital tools as unreflectively as they once used paper.

At this stage the macro-institutional dynamic reverses. Where Stages 1 and 2 saw coercive pressure pushing against individual resistance, Stage 5 civil servants have themselves become sources of pressure: they exert mimetic pull on Stage 3 colleagues through visible success and they feed the normative expectations of the whole field. In Kotter’s (1996) terms, this realises the final and most durable step — anchoring new behaviour in culture. Once a critical mass of Stage 5 staff exists, transformation tips from a supervised requirement into a self-sustaining norm. Morocco’s bet on producing 240,000 digitally skilled professionals is, in effect, a supply-side wager on reaching that critical mass nationally.

It is worth stressing that Stage 5 is not a universal destination within any realistic horizon. Within a given transformation cycle, most civil servants will settle at Stage 3 or Stage 4. Stage 5 demands not only successful adaptation but specific enabling conditions: genuine leadership support for experimentation, institutional tolerance for process innovation, and recognition systems that reward transformative engagement rather than mere compliant use. Organisations that want Stage 5 outcomes must invest in those conditions deliberately, rather than assuming Stage 4 will mature into Stage 5 on its own.

Table N°3: The PAM-FD model — stages, constructs and stage-matched interventions

Stage	TTM stage	Dominant IPI	Core psychosocial barrier	Stage-matched CML intervention
1. Institutional shock	Precontemplation	Coercive (max.)	Role ambiguity, status threat, anticipatory anxiety	Psychological safety, transparent communication, guiding coalition

Stage	TTM stage	Dominant IPI	Core psychosocial barrier	Stage-matched CML intervention
2. Cognitive dissonance	Contemplation	Coercive (high)	Performative compliance, negative decisional balance	Role-specific training, peer mentoring, short-term wins
3. Negotiated compliance	Preparation	Mimetic (emerging)	Informal workarounds, partial adoption	Coalition building, participatory protocol co-design, peer-norm leveraging
4. Adaptive internalisation	Action	Normative (dominant)	Identity reconstruction, competency anxiety	Formal recognition, communities of practice, advanced training
5. Transformative engagement	Maintenance / termination	Normative (generative)	Anchoring change in culture, sustaining innovation	Digital leadership roles, innovation programmes, culture embedding

Source: Author's construction, drawing on Davis (1989); Prochaska & DiClemente (1983); DiMaggio & Powell (1983); Kotter (1996); Lewin (1951).

4. Discussion

4.1. Theoretical contributions

PAM-FD makes five main contributions to the literatures it draws on. The first is to treat forced digitalization as a category in its own right. Earlier work has tended to place forced and voluntary adoption on a single continuum, differing only in degree; PAM-FD argues that coercion generates qualitatively different dynamics — above all the Psychosocial Double Bind — that call for distinct explanatory tools. This carries a methodological warning: research designs that treat mandated adoption as continuous with voluntary adoption are likely to produce systematically misleading results.

Second, the model introduces the Psychosocial Double Bind as a workable construct for change research. The PDB displaces the familiar “resistance to change” framing that has long dominated the field and that pathologises non-adoption as individual deficit. By shifting the explanatory weight from individual psychology to structural contradiction, it opens tractable questions: under what conditions is the bind most intense, which leadership behaviours best ease it, and how does it vary across administrative cultures? These are answerable in ways that the diffuse notion of resistance is not.

Third, the model names performative compliance as a distinct and significant category. Most digital-transformation research measures adoption through usage metrics — log-in frequency, transaction volume, output rates — but these cannot tell genuine Stage 4 internalisation apart from Stage 2 performance. A civil servant recording 95% digital transactions might be at Stage 4 (integrated, identity-aligned) or at Stage 2 (performing compliance while keeping a manual backup). The two trajectories diverge sharply and demand different responses, so building instruments that can distinguish them is among the highest priorities on the research agenda.

Fourth, the model brings the Transtheoretical Model back into organisational scholarship. TTM has been invoked loosely in organisational settings, but its systematic application to forced digitalization in public institutions has been missing. PAM-FD offers the first grounded mapping of TTM’s stages onto the specific texture of public-sector transformation, enriching each stage with institutional content. The payoff is not only conceptual: it makes TTM’s validated instruments — stage-of-change questionnaires, decisional-balance scales, self-efficacy measures — available to this field.

Fifth, and most broadly, PAM-FD supplies a multi-level architecture that the digital-transformation literature has lacked. Existing theory operates either at the micro level (TAM and its descendants) or at the macro level (institutional theory), with little systematic bridge between them. PAM-FD theorises the cross-level mechanisms explicitly: how macro-institutional pressure (IPI) translates into micro-psychological states (PSR, PDB), and how individual trajectories aggregate into institutional change. That bridge opens a research horizon spanning information systems, organisational behaviour and public administration — communities that usually work apart.

4.2. Practical implications for Morocco’s Digital 2030 strategy

PAM-FD has direct implications for how change-management programmes are designed under Digital 2030. The strategy’s architecture — strong central coordination through the Ministry of Digital Transition and Administrative Reform, a substantial budget, and explicit human-capital

objectives — is a favourable setting for the model. But the model also exposes several gaps between current design and the stage-sensitive approach it recommends.

The most important concerns sequencing. Current programmes lean toward uniform, competency-based training that implicitly assumes everyone is already at Stage 3 or above — that is, ready to acquire skills and merely needing instruction. PAM-FD predicts the opposite: most civil servants in institutions undergoing forced digitalization are at Stages 1 and 2, where psychological safety, anxiety management and decisional-balance work matter more than technical training. Rolling out training prematurely, before the conditions for learning exist, wastes resources and can deepen resistance by confronting people with demands they are not yet ready to meet.

A PAM-FD-informed rollout would run in three phases. In Phase 1 (months 1–3), each institution would deploy the proposed PADS instrument (see Section 5.4) to map its workforce across the five stages. In Phase 2 (months 4–12), it would deliver differentiated interventions according to that diagnosis: psychological-safety workshops and empathetic leadership communication for Stage 1; role-specific training and mentoring for Stage 2; participatory co-design for Stage 3; advanced training and community leadership for Stage 4. In Phase 3 (year 2 onward), repeated PADS assessments would track progression and allow continuous recalibration as the workforce moves along the trajectory.

4.3. Limitations

As a theoretical construction, PAM-FD carries limits that honesty requires naming. It assumes a degree of linearity in stage progression that may not fit every individual path. TTM research shows that regression — slipping back to an earlier stage — is common, often triggered by disruptions such as system upgrades, leadership changes or policy reversals that reactivate earlier barriers. The model acknowledges this non-linearity but does not yet specify which organisational conditions most often trigger regression, a priority for future work.

The model was also developed with the Moroccan public sector in view, a setting marked by high coercive pressure, a strong hierarchical culture and a progressive reform agenda. The relative weight of its constructs — and the intensity of the PDB in particular — may differ in administrative cultures with more participatory traditions, stronger professional civil-service norms or different reform histories. Comparative research is needed to test transferability and identify context-specific moderators. Finally, PAM-FD focuses on civil servants and does not theorise the parallel adaptation of citizens as users of digital services — a complementary gap for future research.

4.4. An empirical research agenda

The model invites systematic validation through several complementary methods:

- Scale development and validation. The most urgent priority is the Psychosocial Adaptation to Digitalization Scale (PADS), a multi-dimensional self-report instrument measuring, for each respondent: stage classification (via a validated algorithm built on TTM staging items adapted to the digital context); Psychosocial Readiness as a composite of cognitive, practical and motivational subscales; the Institutional Pressure Index broken into coercive, mimetic and normative components; the intensity of the Psychosocial Double Bind; and perceived Change Management Leverage. Development should follow standard protocols (item generation from expert review and qualitative data, exploratory and confirmatory factor analysis, convergent and discriminant validity, test–retest reliability) and be piloted with at least 300 civil servants across three Moroccan ministries.
- Longitudinal panel studies. Cross-sectional PADS data can describe how civil servants are distributed across stages at one moment, but testing the model’s dynamic claims requires panels that track individual scores over time (T0: pre-transition baseline; T1: three months; T2: twelve months; T3: twenty-four months) through a major transition. Such data could test the core longitudinal claims: that progression is non-linear and partly cyclical; that the dominant IPI shifts from coercive toward mimetic and normative as the transition matures; and that CML quality at each stage predicts the speed of progression at the next.
- Interpretative phenomenological analysis. The lived experience of the stages — especially the subjective texture of the double bind and of performative compliance — needs qualitative investigation that quantitative tools cannot reach. Interpretative Phenomenological Analysis (IPA), focused on how people make meaning of significant experiences, is well suited. IPA studies should purposively sample civil servants identified at different stages through PADS and conduct in-depth interviews exploring their experience of the transition, their identity responses to it, and the organisational factors they see as most helping or hindering their adaptation.
- Cross-national and cross-sectoral comparison. To probe generalisability and surface moderators, comparative studies should span African and MENA public sectors with different reform trajectories (for example Tunisia, Senegal and Jordan) and different organisational types within Morocco (central ministry, local government, public agency). These designs would help establish which elements of the model are broadly portable and which depend on national culture, governance architecture or organisational size and type.

Conclusion

This article has proposed the Psychosocial Adaptation Model for Forced Digitalization (PAM-FD), a multi-level framework addressing a consequential gap where digital transformation, change management and public administration meet. By integrating the Technology Acceptance Model (Davis, 1989), the Transtheoretical Model (Prochaska & DiClemente, 1983) and institutional theory (DiMaggio & Powell, 1983) within one architecture, and by anchoring that integration in Morocco's long series of digital reforms, the model offers the first systematic account of the staged psychosocial process through which civil servants navigate compulsory digital transitions.

Its contributions are fivefold: it treats forced digitalization as a distinct category warranting its own framework; it introduces the Psychosocial Double Bind to explain digital resistance as structural rather than personal; it identifies performative compliance as a category distinct from genuine adoption; it returns the Transtheoretical Model to organisational scholarship; and it provides a multi-level architecture linking individual adaptation to institutional forces in ways that advance all three contributing fields.

Empirically, the model grounds its claims in the Moroccan case, where three decades of successive reforms make for a revealing study of the gap between digital ambition and organisational reality. The persistent distance between Morocco's sophisticated, well-funded agenda and its disappointing e-government outcomes is exactly the gap PAM-FD is built to explain. That gap is not chiefly technical, financial or political; it is psychosocial — the unmanaged distance between the mandates of forced digitalization and the readiness of the people asked to enact them.

The prescription follows plainly: public-sector transformation must invest as seriously in the psychosocial preparation of civil servants as in the technical infrastructure of systems. That means moving from uniform, stage-blind programmes to diagnostically informed, stage-matched ones — programmes that recognise the uneven distribution of readiness inside any real organisation and deploy differentiated, evidence-based interventions matched to where people actually are, not where reformers assume or wish them to be.

PAM-FD is offered as a grounded foundation for that more human-centred approach. The research agenda set out in Section 5.4 will determine how far its explanatory and prescriptive value extends. The hope is that the article contributes to a broader reorientation of scholarship and practice — one that places the psychosocially complex, institutionally embedded and identity-laden experience of civil servants at the centre of analysis rather than treating them as

passive recipients of technical change. The civil servants caught between duty and disruption, in Morocco and beyond, deserve an approach to digital transformation that genuinely understands the human challenge their situation represents.

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