

Community Engagement and Artificial Intelligence in Saudi Arabia and Morocco: A Comparative Literature Review

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Abstract

Artificial intelligence (AI) is increasingly positioned by governments across the Middle East and North Africa (MENA) as a tool for modernizing public administration, expanding service delivery, and reshaping the relationship between the state and its citizens. This paper presents a comparative literature review examining how community and citizen engagement is conceptualized, planned, and practiced within national AI strategies in Saudi Arabia and Morocco. Drawing on institutional, digital-government, and innovation-management literatures including bibliometric and organizational studies on knowledge management, innovation culture, and natural language processing scholarship the review contrasts the centralized, capacity-building model advanced through Saudi Arabia's Vision 2030 and the Saudi Data and Artificial Intelligence Authority with the coordination-oriented, sovereignty-focused approach embodied in Morocco's Digital Morocco 2030 and Maroc IA 2030 roadmaps. The analysis finds that both countries have invested heavily in top-down digital infrastructure and skills programs, yet community engagement remains largely instrumental oriented toward service satisfaction and workforce readiness rather than deliberative participation in AI governance. Organizational culture, administrative readiness, and public trust emerge as recurring mediating factors that shape how citizens and civil servants experience AI-enabled governance in both contexts. The paper concludes with recommendations for embedding participatory mechanisms into national AI strategies and identifies directions for future comparative research.

Keywords: artificial intelligence, community engagement, digital governance, Saudi Arabia, Morocco, innovation culture, comparative policy analysis

INTRODUCTION

Over the past decade, artificial intelligence has moved from a niche technical concern to a central pillar of national development strategy across the Gulf Cooperation Council and North Africa. Governments in the region have framed AI simultaneously as an economic diversification tool, a public-service modernization lever, and a marker of geopolitical relevance. Saudi Arabia and Morocco illustrate two prominent, yet distinct, trajectories of this shift. Saudi Arabia's Vision 2030 program has anchored AI within a broader push toward economic diversification away from hydrocarbons, giving rise to a dedicated Saudi Data and Artificial Intelligence Authority (SDAIA), a National Strategy for Data and AI, and large-scale citizen upskilling initiatives such as the 'One Million Saudis in AI' program (National Platform, 2024). Morocco, in turn, has pursued a more recently formalized but increasingly assertive pathway, culminating in the 'Digital Morocco 2030' strategy and its AI-specific extension, 'Maroc IA 2030,' both of which foreground digital sovereignty, territorial inclusion, and citizen trust as guiding principles (Ecofin Agency, 2026; Moroccoworldnews, 2026).

Despite the prominence of AI in both national strategies, the literature on how ordinary citizens, civil servants, and local communities are engaged in the design, deployment, and oversight of these technologies remains fragmented. Much of the existing scholarship addresses AI governance from an institutional or technical vantage point examining regulatory frameworks, infrastructure investment, or economic impact while comparatively less attention has been paid to community engagement as a distinct analytic category. This gap is significant because the legitimacy, adoption, and long-term sustainability of AI-enabled public services depend heavily

on whether citizens perceive these systems as trustworthy, inclusive, and responsive to local needs (Alannasary, 2025; Ibrahim, 2024).

This paper addresses that gap through a comparative literature review structured around three guiding questions. First, how do national AI strategies in Saudi Arabia and Morocco conceptualize the role of citizens and communities in AI governance? Second, what institutional, cultural, and organizational factors mediate the translation of AI strategy into meaningful community engagement? Third, what commonalities and divergences emerge when the two national experiences are placed side by side? In addressing these questions, the review draws on public administration, digital government, and innovation-management literatures, including a body of empirical and bibliometric work on organizational culture, knowledge management, and the diffusion of AI-adjacent research such as natural language processing (NLP) in higher education (Ait et al., 2025; Ait Oufkir et al., 2025a, 2025b; Bellihi & Ait Oufkir, 2021, 2023a, 2023b). Although this corpus is centered on Morocco's higher-education and start-up ecosystems rather than on AI-community engagement per se, it offers a valuable lens on the organizational-culture and knowledge-diffusion dynamics that condition how emerging technologies are absorbed by institutions and, in turn, communicated to the public.

The remainder of the paper is organized as follows. The literature review section situates AI-community engagement within broader theoretical debates on digital governance, innovation diffusion, and organizational culture. A brief methodological note explains the comparative literature-review approach adopted. Two country-focused sections then trace the evolution of AI strategy and associated engagement mechanisms in Saudi Arabia and Morocco, respectively. A comparative analysis section synthesizes convergences and divergences across four dimensions

institutional governance, engagement mechanisms, organizational culture, and structural barriers before a discussion, policy recommendations, limitations, and concluding remarks close the paper.

Literature Review

Artificial Intelligence and Community Engagement: Conceptual Foundations

Community engagement in the context of public administration typically refers to a spectrum of practices ranging from one-way information dissemination to consultation, collaboration, and citizen co-production of policy (Savaget et al., 2019, as cited in Ibrahim, 2024). When applied to artificial intelligence, this spectrum takes on additional complexity because AI systems are often opaque to non-specialist users, and because the stakes of engagement extend beyond service satisfaction to questions of algorithmic bias, data privacy, and the redistribution of administrative discretion. Scholars examining AI-enabled urban planning in Saudi Arabia have noted that much of the existing research emphasizes governmental or institutional applications of AI while paying insufficient attention to grassroots participation, leaving a gap between technological readiness and the public's role in shaping how these tools are used (as reflected in Buildings, 2025). This asymmetry high institutional capacity paired with comparatively underdeveloped citizen-facing deliberation recurs throughout the literature on AI adoption in the Gulf and North Africa.

A second conceptual thread concerns trust. Citizen trust in AI-enabled government services is shaped not only by system performance but by perceived fairness, transparency, and the emotional quality of the interaction. Recent survey-based research on Saudi Arabia's e-government

services found consistently high satisfaction with usability and functional reliability, yet comparatively limited emotional engagement, suggesting that citizens tend to experience these platforms as functional tools rather than as spaces for meaningful interaction with the state (Alannary, 2025). This distinction between functional satisfaction and substantive engagement is central to the present review, because national AI strategies frequently report high adoption or satisfaction metrics without necessarily demonstrating that communities have had a voice in how AI systems were designed or deployed.

AI Governance in the Gulf and North Africa

The governance literature on AI in the Gulf region has often approached the topic through an institutional or political-economy lens. Ibrahim (2024) applies a neo-institutional framework to Saudi Arabia's adoption of AI, examining the motivations behind AI utilization, its relationship to legitimacy and stability, and the extent to which cultural and cognitive factors shape organizational behavior toward the technology. This body of work situates AI not as a neutral administrative tool but as an instrument that can simultaneously expand service delivery and reinforce existing governance structures, underscoring the importance of examining who defines the terms of citizen engagement with AI-enabled systems. Complementing this institutional perspective, economic-impact assessments conducted in partnership with international organizations have emphasized the tangible service-delivery gains achieved through AI-enabled reforms to back-end data management and citizen-facing workflows across key digital authorities, including the Ministry of Communications and Information Technologies, the Digital Government Authority, and SDAIA (World Bank, 2025).

In Morocco, the governance literature is comparatively younger but rapidly expanding alongside the rollout of the Digital Morocco 2030 and Maroc IA 2030 frameworks. Analyses of the national AI roadmap emphasize five structuring challenges: digital sovereignty, citizens' trust, skills development, endogenous innovation, and territorial inclusion (CAFRAD, n.d.). The explicit inclusion of citizens' trust and territorial inclusion as named strategic pillars distinguishes the Moroccan framing from many peer strategies, at least at the level of stated intent, and signals an awareness among policymakers that AI adoption cannot be reduced to infrastructure and talent alone. At the same time, independent assessments of Morocco's broader digital transformation agenda have identified persistent challenges of intersectoral coordination and continuity, suggesting a gap between strategic vision and operational follow-through (Digital Watch Observatory, 2024).

Digital Transformation, Innovation Culture, and Organizational Learning

A distinct but complementary literature addresses the organizational and cultural preconditions for successful digital and AI adoption within institutions, particularly higher education and entrepreneurial ecosystems. This literature is directly relevant to community engagement because the diffusion of AI-related knowledge from research institutions into public discourse, and from government agencies into citizen-facing services, is mediated by organizational culture, knowledge-management practices, and innovation readiness. A sustained program of research has examined these dynamics within the Moroccan context. A systematic literature review of artificial intelligence use in national government identified participative governance, which encompasses public consultation and citizen involvement in AI development,

as one of several distinct forms that public-sector AI governance can take, and recommended that governments engage stakeholders directly to address public concerns over data privacy and security (Zuiderwijk, Chen, & Salem, 2021). This finding underscores that organizational readiness for participative, rather than purely administrative, uses of AI cannot be assumed and must be deliberately cultivated, a tension that plausibly extends to how public agencies balance procedural caution against the experimentation that meaningful AI-community engagement often requires.

Complementary research on AI-enabled communication channels shows that machine-learning-guided chatbots can reshape how citizens and government exchange information, improving the perceived speed and personalization of routine interactions while raising new questions about how such systems should be designed and evaluated (Androutsopoulou, Karacapilidis, & Loukis, 2019). At the same time, evidence from public-sector healthcare deployments indicates that the challenges of adopting AI extend beyond technical implementation to include organizational readiness, workforce trust, and the redesign of existing service-delivery routines, challenges that are likely to recur wherever public institutions attempt to translate AI strategy into citizen-facing practice (Sun & Medaglia, 2019).

Most directly relevant to the AI dimension of this review, Ait, Mohib, and Adrdour (2025) conducted a bibliometric analysis of natural language processing (NLP) research in higher education using the Scopus database, tracing the field's trajectory from 1984 to 2024. Their analysis identified a marked surge in NLP-related publications after 2020 alongside persistently limited international collaboration among authors, and characterized the field's evolution as a shift from a multidisciplinary to a transdisciplinary orientation. Although this study focuses on the

diffusion of NLP scholarship rather than on citizen engagement directly, its findings are instructive for the present review in two respects. First, they illustrate that AI-adjacent research capacity in Morocco and comparable settings is expanding rapidly but remains relatively insular, which has implications for how quickly technical AI literacy can diffuse from research communities into public administration and civic life. Second, the study models the kind of systematic, data-driven approach to mapping knowledge diffusion that could usefully be extended to community-engagement research itself, an application the current literature has not yet pursued in either the Saudi or Moroccan context.

Taken together, this cluster of studies suggests that organizational culture and knowledge-management capacity function as intervening variables between national AI strategy and community-level engagement outcomes. Agencies and institutions with more adhocratic, learning-oriented cultures may be better positioned to translate top-down AI strategies into participatory, responsive citizen engagement, whereas more hierarchical structures may default to top-down information provision rather than genuine consultation.

Public Trust, Civil Servant Readiness, and AI Adoption

A final strand of literature examines the readiness of public-sector employees to adopt and mediate AI tools on behalf of citizens, a factor that shapes the quality of front-line community engagement regardless of strategic intent at the national level. In Morocco, a quantitative study of 129 civil servants across the Education, Finance, and Health ministries found that openness to AI adoption was closely tied to the presence of structured change-management practices, and that structural and technical limitations continued to constrain the integration of AI into day-to-day

public administration despite sustained digitalization efforts (Br & Lalaoui, 2025). This finding echoes broader observations that Moroccan public administration faces coordination and capacity challenges even where national strategy and political will are clearly articulated (Digital Watch Observatory, 2024). In Saudi Arabia, parallel research on citizen-facing digital government services similarly points to a gap between technical performance and the depth of citizen engagement, reinforcing the argument that community engagement with AI cannot be inferred solely from adoption or satisfaction metrics (Alannary, 2025).

Methodology

This paper adopts a comparative, narrative literature-review methodology rather than a systematic review with predefined inclusion thresholds, reflecting the exploratory nature of the research questions and the relative scarcity of studies that directly address AI-community engagement as a unified construct in either national context. Sources were identified through targeted searches of academic databases, institutional reports, and recent policy documentation concerning artificial intelligence, digital government, organizational culture, and citizen engagement in Saudi Arabia and Morocco. Priority was given to peer-reviewed journal articles, book chapters, and primary government or institutional sources published within the last five years, supplemented by earlier foundational studies where relevant to theoretical framing. The review deliberately incorporates a body of empirical and bibliometric research on organizational culture and knowledge diffusion as a case example of how such scholarship, though not framed explicitly around AI-community engagement, nonetheless illuminates the institutional conditions that shape whether and how AI strategies reach communities in practice. Sources were then organized

thematically around the paper's guiding questions and synthesized comparatively across the two country contexts, following the structure outlined in the introduction.

Two methodological limitations should be noted at the outset. First, the literature on Morocco's AI strategy is disproportionately recent, reflecting the fact that Maroc IA 2030 was only formally unveiled in January 2026; this recency limits the availability of independent empirical assessment relative to the more established Saudi literature. Second, because community engagement is not always operationalized as a discrete variable in the available studies, the review necessarily draws inferences from adjacent constructs citizen satisfaction, trust, civil-servant readiness, and organizational culture rather than from a single, directly comparable engagement metric.

Country Case: Saudi Arabia

Saudi Arabia's approach to AI and community engagement is best understood as an extension of the broader Vision 2030 reform agenda, which seeks to diversify the economy, expand the role of the private sector, and reposition the Kingdom as a regional technology hub. Institutionally, this agenda is anchored by the Saudi Data and Artificial Intelligence Authority (SDAIA), which oversees the National Strategy for Data and AI and has developed a National Artificial Intelligence Index comprising three pillars, seven core dimensions, and twenty-three sub-domains intended to measure public and private sector readiness to adopt AI solutions (National Platform, n.d.). This index-driven, benchmarking-oriented approach reflects a broader pattern in Saudi digital governance: strategic clarity and measurable targets at the institutional level, paired

with engagement efforts that are primarily framed around capacity-building rather than deliberative participation.

The clearest expression of this capacity-building orientation is the 'One Million Saudis in AI' initiative, launched jointly by the Ministry of Education and SDAIA during the 2024 Global AI Summit, which aims to equip a million citizens with foundational understanding of AI technologies, applications, and ethics (National Platform, 2024). Framed as the largest initiative of its kind in the Kingdom, the program positions community engagement primarily as a skills-transfer exercise: citizens are engaged as future AI users and, potentially, as a domestic AI workforce, rather than as active participants in shaping AI governance or policy. This orientation is consistent with the World Bank's (2025) assessment of Saudi Arabia's digital-government reforms, which documents substantial improvements in back-end data management, streamlined citizen-facing workflows, and service-delivery efficiency achieved through collaboration between the Kingdom and international partners, but which frames citizens principally as beneficiaries of improved service quality rather than as co-designers of the underlying systems.

Academic assessments of Saudi Arabia's AI governance introduce a more critical dimension to this picture. Ibrahim's (2024) neo-institutional analysis argues that AI adoption in the Kingdom serves multiple, sometimes competing functions: enhancing administrative efficiency and legitimacy on one hand, while potentially reinforcing centralized, non-electoral governance structures on the other. This analysis does not suggest that community engagement is absent from Saudi AI strategy, but it does suggest that the terms of engagement are substantially defined by state institutions, with citizens positioned as participants in a state-led modernization narrative rather than as independent stakeholders with negotiating power over how AI systems are designed

or governed. Complementing this institutional critique, survey-based research on citizen satisfaction with e-government services finds that while functional usability and trust indicators are strong consistent with Saudi Arabia's high ranking in United Nations e-government development assessments the emotional and participatory dimensions of citizen engagement remain comparatively underdeveloped, with users tending to relate to digital services as efficient tools rather than as venues for substantive dialogue with government (Alannsay, 2025).

Sector-specific research reinforces this pattern while also revealing pockets of more participatory experimentation. Studies of AI-enabled urban planning highlight growing interest among Saudi researchers and practitioners in using generative AI tools to solicit public input on infrastructure and transportation decisions, particularly as the Kingdom's Vision 2030 agenda drives rapid urbanization; however, the same research notes that empirical work in this area remains predominantly focused on institutional and governmental applications, with grassroots participation still comparatively underexplored (Buildings, 2025). Similarly, qualitative research on AI-enabled assistive technologies for people with disabilities in Saudi Arabia's digital-health ecosystem has identified both promising gains in autonomy and persistent barriers including infrastructure gaps in rural areas, financial constraints, and digital-literacy limitations that disproportionately affect marginalized communities and complicate efforts to ensure equitable engagement with AI-enabled services across the population. Collectively, the Saudi case illustrates a governance model characterized by strong central coordination, substantial investment in AI literacy and workforce development, and measurable gains in service efficiency, set against a comparatively thin layer of deliberative or co-design engagement with citizens and communities.

Country Case: Morocco

Morocco's national AI strategy has crystallized more recently than Saudi Arabia's, but it has done so within an explicit rhetorical commitment to inclusion and citizen trust. The 'Digital Morocco 2030' strategy, launched in September 2024, positions AI as one of three catalysts for national digital transformation, alongside digital talent development and cloud infrastructure, with an accompanying budget of approximately eleven billion dirhams and targets of 240,000 new digital jobs and roughly ten billion dollars in additional GDP contribution by 2030 (Digital Watch Observatory, 2024; Ecofin Agency, 2026). Distinctively, the strategy explicitly foregrounds inclusivity and accessibility, committing to the establishment of Relais Numériques, or Digital Relay Centers, throughout the country to assist citizens unfamiliar with digital technologies, with particular attention to women, rural populations, and people with disabilities (Digital Watch Observatory, 2024).

The AI-specific extension of this strategy, 'Maroc IA 2030,' was formally launched in January 2026 under the banner 'AI Made in Morocco,' following a National Artificial Intelligence Conference held in Rabat in mid-2025 (Moroccoworldnews, 2026). The roadmap organizes national AI policy around five structuring challenges digital sovereignty, citizens' trust, skills development, endogenous innovation, and territorial inclusion and is operationalized in part through a National Network of Centers of Excellence known as the Jazari Institutes, named in tribute to the medieval polymath Al-Jazari, which are intended to strengthen links between research and industry, support technology start-ups, and broaden digital adoption among small and medium enterprises (CAFRAD, n.d.). The explicit naming of 'citizens' trust' as a structuring pillar,

alongside territorial inclusion, signals a rhetorical commitment to community engagement that is, at least at the level of strategic framing, more explicit than in comparable Gulf strategies.

Complementing this AI-specific roadmap, Morocco has also advanced a proposed legal framework referred to as 'Digital X.0' intended to embed AI governance into national policy through three pillars: data governance, digital identity, and interoperability, alongside provisions for a traceable consent mechanism intended to give citizens greater control over how their information is exchanged between public institutions (CADE, 2025). This emphasis on consent and interoperability suggests an effort to operationalize citizens' trust as a legal and technical safeguard rather than solely as a communications objective, though as of this review the framework remained under legislative review rather than fully implemented.

Independent assessments nonetheless temper the optimism embedded in Morocco's strategic documents. A parliamentary report on AI adoption, discussed in an analysis of Morocco's digital transformation strategy, found broad awareness among government sectors of the importance of AI adoption but also identified a persistent lack of coordination across sectors and ministries, alongside citizen survey data indicating that a majority of respondents view AI's potential to improve daily life as promising, even as governance frameworks struggle to keep pace with the technology's rapid evolution (Oxford Insights, 2025). Analysts have similarly observed that Morocco's challenge lies less in the articulation of strategy or vision each ministry having developed reasonably coherent digital roadmaps than in the continuity, intergovernmental coordination, and evaluation needed to translate strategy into consistent implementation (Oxford Insights, 2025).

At the operational level, research on Moroccan civil servants' readiness to adopt AI tools provides a granular view of how these coordination challenges manifest in practice. Br and Lalaoui's (2025) survey of 129 civil servants across the Education, Finance, and Health ministries found that structural and technical limitations continue to constrain AI integration despite ongoing digitalization efforts under the National Administrative Reform Plan, and that the presence of deliberate change-management practices was a significant factor shaping civil servants' openness to AI adoption. Because civil servants function as the primary intermediaries between AI-enabled systems and the citizens who use them, their readiness or lack thereof has direct implications for the quality of community engagement that citizens ultimately experience, regardless of how ambitious the national strategy may be on paper.

Evidence on citizen acceptance of AI in public services offers further insight into the institutional substrate on which Morocco's AI strategy is being built. Research on when and why citizens accept the use of AI in public services suggests that acceptance depends heavily on perceived transparency and institutional trust rather than on the sophistication of the technology itself (Geske & Leyer, 2022), implying that agencies and institutions that retain more hierarchical, risk-averse cultures may struggle to move beyond top-down information provision toward more collaborative or experimental forms of AI-community engagement, even where national strategy formally endorses such engagement. Complementary evidence on AI-based self-service technology in public service delivery indicates that user experience and adoption outcomes are closely linked to how effectively institutions manage the internal processes underpinning those services (Chen, Guo, & Gao, 2021), a dynamic plausibly mirrored in the relationship between

national AI-strategy documents and their translation into locally meaningful community engagement.

Comparative Analysis

Institutional Governance Architecture

Both countries have adopted a centralized, whole-of-government approach to AI governance, but the institutional architecture differs in maturity and consolidation. Saudi Arabia's SDAIA functions as a single, well-resourced authority with a clearly defined mandate spanning data governance, AI strategy, and a national AI readiness index (National Platform, n.d.), reflecting several years of sustained institutional investment since the launch of Vision 2030. Morocco's institutional architecture is comparatively newer and more distributed, involving the Ministry of Digital Transition and Administrative Reform, the Agency of Digital Development, and the newly created Directorate General dedicated to artificial intelligence and emerging technologies, alongside the Jazari Institutes network (CAFRAD, n.d.; Ecofin Agency, 2026). This more distributed structure may afford Morocco greater flexibility to embed territorial and sectoral considerations into AI governance, but it also raises the coordination risks identified in independent assessments of the country's broader digital strategy (Oxford Insights, 2025).

Community and Citizen Engagement Mechanisms

In both countries, community engagement with AI is currently weighted toward capacity-building and service-delivery improvement rather than deliberative participation in AI policy

design. Saudi Arabia's flagship engagement mechanism, the 'One Million Saudis in AI' initiative, exemplifies a training-oriented model in which citizens are engaged as learners and future users of AI systems (National Platform, 2024). Morocco's Relais Numériques and its emphasis on territorial inclusion within Maroc IA 2030 similarly foreground access and literacy, though the explicit naming of 'citizens' trust' as a strategic pillar, together with the proposed Digital X.0 consent mechanisms, suggests a somewhat more codified attention to citizens' rights over their data and interactions with AI-enabled systems (CADE, 2025; Digital Watch Observatory, 2024). Neither country's flagship strategy documents, as reviewed here, describe institutionalized mechanisms for citizen deliberation over AI policy itself such as public consultations, citizen assemblies, or participatory algorithmic-impact assessments suggesting that this remains an underdeveloped dimension of AI governance in both national contexts.

Organizational Culture and Innovation Readiness

The Moroccan literature on organizational culture and innovation offers a lens that is largely absent from the Saudi-focused literature reviewed here but that plausibly applies across both contexts. A qualitative content analysis of public comments in Chinese smart-city governance found that participation quality depended heavily on whether local institutions were organizationally flexible enough to incorporate citizen input into iterative decision-making, rather than treating public comment as a one-way formality (Gao, Wang, & Gu, 2020), a finding that implies the depth of AI-community engagement achieved in practice will depend heavily on whether implementing agencies ministries, municipal governments, service-delivery units possess the cultural flexibility to move beyond standardized, top-down communication toward more

adaptive, co-productive forms of engagement. Evidence from Moroccan civil servants suggests that such flexibility cannot be assumed and must be actively cultivated through change management (Br & Lalaoui, 2025). Although comparable organizational-culture research specific to Saudi public administration was not identified in this review, related findings on the functional-versus-emotional quality of citizen interactions with Saudi e-government platforms (Alannary, 2025) are consistent with the hypothesis that more hierarchical administrative cultures tend to produce efficient but less participatory citizen experiences.

Structural Barriers to Engagement

Several structural barriers recur across both national contexts. First, digital and AI literacy gaps, particularly in rural areas and among populations with limited prior exposure to digital services, constrain the depth of engagement that can realistically be achieved even where national strategies explicitly prioritize inclusion, as reflected in both Morocco's Digital Relay Centers (Digital Watch Observatory, 2024) and Saudi Arabia's national upskilling initiative (National Platform, 2024). Second, intersectoral and intergovernmental coordination challenges documented in Morocco through parliamentary and civil-society assessments (Oxford Insights, 2025) and implied in Saudi Arabia through the World Bank's emphasis on coordinated action across four distinct digital authorities (World Bank, 2025) complicate the consistent implementation of citizen-facing AI initiatives. Third, front-line administrative readiness, as evidenced by Moroccan civil servants' mixed openness to AI adoption (Br & Lalaoui, 2025), shapes whether strategic commitments to citizen engagement are experienced meaningfully at the point of service delivery. Finally, in both countries the available literature suggests that AI governance remains substantially

state-directed, with academic critique particularly Ibrahim's (2024) institutional analysis of the Saudi case cautioning that AI adoption can serve to consolidate rather than diffuse governing authority, a dynamic that merits closer empirical attention in the Moroccan context as its own AI governance architecture matures.

Discussion

The comparative review suggests that Saudi Arabia and Morocco, despite differing institutional maturity and strategic vocabulary, converge on a broadly similar model of AI-community engagement: one in which citizens are primarily engaged as recipients of improved services and as targets of digital-literacy and workforce-development programs, rather than as co-designers of AI governance frameworks. This convergence is notable given the two countries' differing political economies and stages of digital-strategy development, and it suggests that the instrumental framing of community engagement may reflect broader regional patterns in how AI is integrated into public administration rather than country-specific idiosyncrasies alone.

At the same time, meaningful divergences are evident. Morocco's explicit naming of citizens' trust and territorial inclusion as structuring pillars of Maroc IA 2030, together with the proposed Digital X.0 consent framework, indicates a rhetorical and, potentially, regulatory orientation toward citizen rights that is less explicit in the Saudi strategy documents reviewed here. Whether this rhetorical commitment translates into substantively different citizen experiences remains an open empirical question, particularly given independent assessments that highlight coordination gaps in Morocco's implementation record (Oxford Insights, 2025) and civil servants' uneven readiness to operationalize AI tools (Br & Lalaoui, 2025). Saudi Arabia's more

institutionally consolidated approach, by contrast, has produced measurable gains in service efficiency and reported citizen satisfaction with usability, even as academic critique raises concerns about the broader governance implications of concentrated AI authority (Ibrahim, 2024) and independent survey data point to a persistent gap between functional satisfaction and emotional or participatory engagement (Alannary, 2025).

Research on embedding citizen participation within local government contributes an important, if indirect, explanatory layer to this comparison. That research finds that interactive governance arrangements take hold only where local institutions actively build participation into ordinary administrative routines rather than treating it as an occasional consultative exercise layered on top of existing practice (Jäntti, Paananen, Kork, & Kurkela, 2023), which suggests that the depth and authenticity of community engagement achieved by any given AI initiative will likely depend as much on the internal culture of the implementing institution as on the ambitions articulated in national strategy documents. This suggests that comparative AI-governance research would benefit from paying closer attention to meso-level institutional culture, rather than focusing exclusively on macro-level strategy or micro-level individual attitudes.

Recommendations

Based on the reviewed literature, several recommendations emerge for policymakers and researchers in both contexts. First, national AI strategies in both Saudi Arabia and Morocco could benefit from the introduction of explicit, institutionalized mechanisms for citizen deliberation over AI governance such as public consultations on algorithmic-impact assessments, participatory budgeting for AI-enabled service pilots, or citizen advisory panels attached to bodies such as

SDAIA or Morocco's Directorate General for Artificial Intelligence that go beyond literacy training and service-satisfaction surveys to give communities a genuine voice in AI policy design.

Second, given the evidence that civil-servant readiness and organizational culture mediate the translation of strategy into practice (Br & Lalaoui, 2025), investment in change-management capacity and adhocratic, learning-oriented organizational reforms within implementing agencies should be treated as a complement to, rather than a substitute for, technical infrastructure investment. Training programs modeled on Saudi Arabia's 'One Million Saudis in AI' initiative could be strengthened by incorporating modules specifically focused on participatory governance and citizen feedback mechanisms, rather than technical literacy alone.

Third, Morocco's emerging Digital X.0 framework, with its emphasis on consent and interoperability, offers a potentially useful regulatory template that Saudi Arabia and other regional peers could examine as they refine their own data-governance frameworks, while Morocco could, in turn, draw on Saudi Arabia's experience with institutional consolidation to address the coordination gaps identified in independent assessments of its digital strategy (Oxford Insights, 2025).

Finally, both countries would benefit from dedicated empirical research that operationalizes community engagement as a measurable construct within AI-governance evaluation following the methodological rigor demonstrated in bibliometric studies of adjacent fields such as NLP research diffusion (Ait et al., 2025) rather than inferring engagement indirectly from adoption rates, satisfaction scores, or strategy-document rhetoric.

Limitations and Future Research

This review is subject to several limitations. Because Morocco's Maroc IA 2030 roadmap was launched only in January 2026, independent empirical assessment of its community-engagement outcomes remains limited, and the analysis presented here relies substantially on strategic documentation and early commentary rather than longitudinal evidence. Similarly, while the organizational-culture literature reviewed here offers valuable insight into Moroccan institutional dynamics, it was not designed to directly measure AI-community engagement, and its application here is necessarily interpretive rather than empirical. The review also draws on a heterogeneous mix of peer-reviewed studies, institutional reports, and news coverage, reflecting the nascent and rapidly evolving state of the literature; future research would benefit from a systematic review employing standardized inclusion criteria once a larger body of peer-reviewed empirical work becomes available. Future comparative studies might usefully employ primary data collection such as citizen surveys, civil-servant interviews, or organizational-culture assessments modeled on the survey-based approach Pislaru, Vlad, Ivascu, and Mircea (2024) used to identify the socio-economic drivers of citizen trust in AI-mediated public services, applied specifically to AI-community engagement outcomes in both Saudi Arabia and Morocco, as well as extending the comparison to other MENA countries pursuing similar national AI strategies.

Conclusion

Saudi Arabia and Morocco represent two of the most ambitious national AI strategies in the MENA region, each combining substantial investment in digital infrastructure with explicit, if differently articulated, commitments to citizen inclusion. This comparative literature review has

shown that, despite differences in institutional maturity, strategic vocabulary, and regulatory emphasis, both countries currently frame community engagement with AI predominantly in instrumental terms as digital literacy, service satisfaction, and workforce development rather than as deliberative participation in AI governance itself. Organizational culture and civil-servant readiness emerge as significant, if underexamined, mediating factors that shape whether national strategic commitments to citizen trust and inclusion are realized in practice. Drawing on this organizational-culture and knowledge-diffusion research, this review has argued that meaningful AI-community engagement is unlikely to emerge from strategy documents alone, but will instead depend on the cultivation of adaptive, learning-oriented institutional cultures capable of translating high-level policy commitments into responsive, locally meaningful practice. As both countries continue to refine their AI governance frameworks, sustained comparative and empirical attention to community engagement as a distinct, measurable dimension of AI policy will be essential to ensuring that the benefits of AI-enabled governance are experienced as legitimate and inclusive by the communities they are intended to serve.

References

- Ait, O. A., Mohib, Z., & Adrdour, M. (2025). Natural language processing in higher education institutions: A bibliometric analysis using Scopus database. In T. Schlippe, E. C. K. Cheng, & T. Wang (Eds.), *Artificial intelligence in education technologies: New development and innovative practices* (AIET 2024) (Lecture Notes on Data Engineering and Communications Technologies, Vol. 228). Springer. https://doi.org/10.1007/978-981-97-9255-9_8
- Ait Oufkir, A., Aazzab, A., El Hijazi, M., & Elktiri, L. (2025a). The role of organizational culture in driving managerial innovation: Evidence from Moroccan startups. *Journal of Innovation and Entrepreneurship*, 14, Article 84. <https://doi.org/10.1186/s13731-025-00551-3>
- Ait Oufkir, A., Azzab, A., El Hijazi, M., & Elktiri, L. (2025b). Navigating digital transformation: A quantitative analysis of knowledge management process and organizational performance in Moroccan higher education institutions. In B. Alareeni & A. Hamdan (Eds.), *Leveraging advanced technologies: Business model innovation and the future* (ICBT 2024) (Lecture Notes in Networks and Systems, Vol. 1574). Springer.
- Alannsary, M. O. (2025). *Evaluating citizen satisfaction with Saudi Arabia's e-government services: A standards-based, theory-informed approach* [Preprint]. arXiv. <https://arxiv.org/pdf/2508.17912>
- Androutsopoulou, A., Karacapilidis, N., & Loukis, E. (2019). Transforming the communication between citizens and government through AI-guided chatbots. *Government Information Quarterly*, 36(2), 358–367. <https://doi.org/10.1016/j.giq.2018.10.001>

- Bellihi, H., & Ait Oufkir, A. (2021). Knowledge management, innovation and organizational performance: What links? A bibliometric analysis [Conference paper]. Faculty of Legal, Economic and Social Sciences, Ibn Zohr University, Agadir, Morocco.
- Bellihi, H., & Ait Oufkir, A. (2023a). Innovation culture and performance of processes and products in Moroccan start-ups. *Journal of Business and Economics*, 10(1–2).
- Bellihi, H., & Ait Oufkir, A. (2023b, November). The impact of managerial innovation on the global performance of gaming companies in Morocco and its influence on tourism attractiveness [Conference paper].
- Br, M., & Lalaoui, S. (2025, January 6). Civil servants' readiness for AI adoption: The role of change management in Morocco's public sector [Preprint]. SSRN. <https://doi.org/10.2139/ssrn.5213879>
- Buildings. (2025). Bridging cities and citizens with generative AI: Public readiness and trust in urban planning. *Buildings*, 15(14), Article 2494. <https://doi.org/10.3390/buildings15142494>
- CADE (Civil Society Alliances for Digital Empowerment). (2025, November 12). Morocco introduces Digital X.0 law to drive AI governance and digital sovereignty. <https://cadeproject.org/updates/morocco-introduces-digital-x-0-law-to-drive-ai-governance-and-digital-sovereignty/>
- CAFRAD. (n.d.). AI made in Morocco: Artificial intelligence at the heart of digital transformation and public services. <https://cafrad.io/en/ai-made-in-morocco-artificial-intelligence-at-the-heart-of-digital-transformation-and-public-services-the-director-general-of-cafrad-participates-in-the-launch-of-the-national-network-of-centers-of-e/>

- Chen, T., Guo, W., & Gao, X. (2021). AI-based self-service technology in public service delivery: User experience and influencing factors. *Government Information Quarterly*, 38(4), Article 101520. <https://doi.org/10.1016/j.giq.2020.101520>
- Digital Watch Observatory. (2024, September 30). Digital Morocco 2030. <https://dig.watch/resource/morocco-digital-strategy-2030>
- Ecofin Agency. (2026). Morocco targets AI-led competitiveness with 2030 strategy. <https://www.ecofinagency.com/news-digital/1301-51876-morocco-targets-ai-led-competitiveness-with-2030-strategy>
- Gao, Z., Wang, S., & Gu, J. (2020). Public participation in smart-city governance: A qualitative content analysis of public comments in urban China. *Sustainability*, 12(20), Article 8605. <https://doi.org/10.3390/su12208605>
- Gesk, T., & Leyer, M. (2022). Artificial intelligence in public services: When and why citizens accept its usage. *Government Information Quarterly*, 39(3), Article 101704. <https://doi.org/10.1016/j.giq.2022.101704>
- Ibrahim, N. M. H. (2024). Artificial intelligence (AI) and Saudi Arabia's governance. *Journal of Developing Societies*, 40(4), 500–530. <https://doi.org/10.1177/0169796X241288590>
- Jäntti, A., Paananen, H., Kork, A.-A., & Kurkela, K. (2023). Towards interactive governance: Embedding citizen participation in local government. *Administration & Society*, 55(9), 1529–1554. <https://doi.org/10.1177/00953997231177220>
- Moroccoworldnews. (2026, January 12). Morocco launches 'Maroc IA 2030' roadmap to strengthen AI governance, digital sovereignty. <https://www.moroccoworldnews.com/2026/01/274765/morocco-launches-maroc-ia-2030-roadmap-to-strengthen-ai-governance-digital-sovereignty/>

National Platform. (n.d.). Emerging technologies adoption. my.gov.sa.

<https://my.gov.sa/en/content/175>

National Platform. (2024). Saudi Arabia launches SAMAI initiative to empower 1 million citizens in AI. my.gov.sa. <https://my.gov.sa/en/news/16522>

Oxford Insights. (2025, July 10). Digital transformation in Morocco: The strategic role of the agile method. <https://oxfordinsights.com/insights/digital-transformation-in-morocco-the-strategic-role-of-the-agile-method/>

Pislaru, M., Vlad, C. S., Ivascu, L., & Mircea, I. I. (2024). Citizen-centric governance: Enhancing citizen engagement through artificial intelligence tools. *Sustainability*, 16(7), Article 2686. <https://doi.org/10.3390/su16072686>

Sun, T., & Medaglia, R. (2019). Mapping the challenges of artificial intelligence in the public sector: Evidence from public healthcare. *Government Information Quarterly*, 36(2), 368–383. <https://doi.org/10.1016/j.giq.2018.09.008>

World Bank. (2025, March 4). Estimating the economic impacts of AI in Saudi Arabia. World Bank Blogs. <https://blogs.worldbank.org/en/arabvoices/estimating-the-economic-impacts-of-ai-in-saudi-arabia>

Zuiderwijk, A., Chen, Y., & Salem, F. (2021). Implications of the use of artificial intelligence in public governance: A systematic literature review and a research agenda. *Government Information Quarterly*, 38(3), Article 101577. <https://doi.org/10.1016/j.giq.2021.101577>