

Research Article

From Manual to Digital Public Services: User Satisfaction through Digital Service Quality and Perception in a Local Fisheries Agency

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Abstract, This study examines how the transition from manual to digital services influences user satisfaction through digital service quality and user perception at the Marine and Fisheries Office of Pekalongan Regency. The research employs a mixed-methods approach, combining a quantitative survey (N = 40) using Pearson correlation analysis with qualitative interviews involving service leaders and operators. The results reveal very strong correlations between service quality, user perception, and user satisfaction, as well as the critical role of system stability and operator assistance in shaping user experience. Qualitative findings confirm that changes in work culture, leadership, and human resource adaptation are key factors in the success of digitalisation. The study implies that the success of digital public services is determined not only by technology but also by strengthening human resource capacity, simplifying service design, and providing operator support for users with low digital literacy. The limitations of this study include the small sample size, the single organisational context, and reliance on perception-based data. Future research is recommended to conduct comparative cross-agency studies, longitudinal approaches, and structural model testing to examine the mediating roles of digital literacy and operator assistance.

Keywords: Digital Service Quality; Operator Assistance; Public Service User Satisfaction; User Perception; Transition From Manual To Digital Services

1. INTRODUCTION

Digital transformation has become a central pillar of contemporary public administration reform. Governments increasingly recognise that digitalisation is not merely a technological upgrade, but a strategic shift toward citizen-centred governance that prioritises efficiency, transparency, and service accessibility. In Indonesia, the Electronic-Based Government System (SPBE) policy mandates public institutions to integrate information technology into service delivery as part of achieving effective and user-oriented governance.

However, evidence from e-government implementation in developing countries shows that technological availability alone does not guarantee improved public service outcomes. Heeks (2006) argues that many digital government initiatives fail due to a mismatch between system design and user characteristics. Consequently, the success of digital public services must be evaluated not only from technical performance but also from how users perceive, experience, and evaluate these services. This perspective aligns with Expectation–Disconfirmation Theory, which posits that satisfaction arises when perceived performance meets or exceeds user expectations.

These challenges are particularly pronounced at the local government level, where digital services are introduced to communities with uneven levels of digital literacy. The Marine and Fisheries Office of Pekalongan Regency provides a compelling case in which the digitalisation of fishermen’s administrative services requires not only procedural change but also behavioural adaptation from both service providers and users. The transition from manual to digital systems alters interaction patterns, work routines, and user experiences, raising an

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important question: how does this transition shape perceived service quality, user perception, and ultimately user satisfaction?

Although digital public services have been widely studied, existing research largely focuses on general administrative sectors such as civil registration and licensing. Empirical studies linking the transition from manual to digital services with user satisfaction in sector-specific local government contexts—particularly in the marine and fisheries sector—remain limited. Moreover, many studies emphasize organizational readiness or policy implementation rather than placing user satisfaction at the centre of evaluation.

This study addresses this gap by examining how the transition from manual to digital services influences user satisfaction through the mediating roles of digital service quality and user perception in a local fisheries administration context. By focusing on fishermen as primary service users—who represent a group with limited formal education but extensive service experience—this research provides empirical insight into how digital transformation is experienced in practice. The findings are expected to contribute to public administration scholarship on digital public services and to provide practical guidance for improving user-oriented digital service delivery in local government settings.

2. LITERATURE REVIEW

Theoretical Foundation and Conceptual Linkages

This study integrates Expectation–Disconfirmation Theory (Oliver, 1980) and SERVQUAL (Parasuraman et al., 1988) to explain how digital service experiences translate into user satisfaction. EDT explains satisfaction as the result of a comparison between expectations and perceived performance. In digital public services, users expect efficiency, transparency, and ease of access; satisfaction emerges when these expectations are fulfilled.

Expectation–Disconfirmation Theory (EDT) posits that user satisfaction emerges from a cognitive comparison between prior expectations and perceived performance. When performance exceeds expectations, positive disconfirmation occurs, leading to satisfaction; conversely, unmet expectations generate dissatisfaction. In the context of digital public services, expectations typically relate to efficiency, transparency, accessibility, and timeliness. Users approach digital platforms with the belief that technology will simplify procedures, reduce waiting times, and provide clearer information. Satisfaction, therefore, arises when the digital system performs beyond these anticipated standards by delivering faster processes, accurate information, and seamless interaction. EDT is particularly relevant for understanding how citizens evaluate the transition from manual to digital services, as it captures the psychological process underlying their judgment of service experiences.

SERVQUAL further complements this perspective by conceptualising service quality through dimensions such as reliability, responsiveness, assurance, empathy, and tangibles. Within digital environments, these dimensions transform into system reliability, ease of use, clarity of information, data security, and digital responsiveness. Together, EDT and SERVQUAL provide a robust conceptual foundation for assessing how perceived digital service quality influences user satisfaction in public sector digital transformation. In digital environments, these dimensions evolve into system reliability, ease of use, information clarity, and digital responsiveness (Zeithaml et al., 2002). These aspects directly shape how users evaluate digital services.

Concept Development

From Digital Transition to User Satisfaction

The transition from manual to digital services represents more than procedural change; it is an organisational and behavioural transformation that reshapes service delivery and user interaction. Digitalisation can improve speed, reduce administrative burden, and enhance transparency. However, if users struggle to understand or access the system, perceived quality may decline (Heeks, 2006).

The transition from manual to digital services represents a multidimensional transformation encompassing organisational change, technological adaptation, and evolving patterns of citizen–government interaction. Digital transition is not merely the introduction of information systems, but a restructuring of administrative processes, workflows, and service delivery mechanisms to leverage technology for greater efficiency and transparency. It requires institutions to redesign procedures, enhance staff competencies, and develop interoperable systems that support seamless data exchange. At the same time, citizens are expected to adjust

their service expectations and interaction habits, shifting from face-to-face encounters to platform-based engagement.

This transformation establishes the foundation for perceived digital service quality. As services migrate to digital platforms, users begin to evaluate quality through system performance, ease of access, clarity of information, and responsiveness. Thus, digital transition shapes how citizens interpret and assess service experiences, influencing their perceptions of reliability, usability, and trustworthiness. Successful digital transition, therefore, is a prerequisite for achieving positive user perceptions and satisfaction, as it aligns organisational capabilities with user expectations in a technology-mediated environment. Thus, digital transition alone does not produce satisfaction. It first influences digital service quality, which shapes user perception, which in turn determines user satisfaction. This creates a sequential relationship: Digital Transition → Digital Service Quality → User Perception → User Satisfaction

Digital Service Quality as a Central Mediator

Digital service quality refers to how well technology-based services meet user needs in terms of reliability, accessibility, and responsiveness (Zeithaml et al., 2002). Digital service quality functions as a central mediating construct between digital transformation initiatives and user satisfaction. As public services migrate to technology-based platforms, users evaluate their experiences primarily through the performance of the digital system rather than through direct interaction with public officials. Reliable access, system stability, intuitive navigation, and clear information architecture contribute to positive user perceptions, fostering trust and perceived value. Conversely, system disruptions, complex procedures, and poor usability diminish perceived quality and weaken confidence in digital services.

Within the Expectation–Disconfirmation Theory (EDT) framework, digital service quality becomes the mechanism through which expectations are either confirmed or exceeded. When digital platforms operate smoothly and deliver services more efficiently than anticipated, users experience positive disconfirmation, which translates into satisfaction. If performance falls short—due to technical errors, slow response times, or confusing interfaces—negative disconfirmation occurs, leading to dissatisfaction. Thus, digital service quality is not merely a technical attribute but a perceptual bridge linking system performance with user judgments. By mediating the relationship between digital transition and satisfaction, digital service quality determines whether technological reforms are experienced as meaningful improvements in public service delivery.

User Perception as Experiential Evaluation

User perception represents the subjective evaluation through which individuals interpret the benefits, usability, and overall value of digital public services. Beyond objective system performance, users assess services based on how easily they can navigate platforms, understand information, and accomplish their intended tasks. This perceptual process is shaped by prior experiences, digital literacy, expectations, and contextual factors influencing how technology is received. As a result, identical levels of technical quality may produce different satisfaction outcomes depending on how users perceive the service experience.

In the relationship between digital service quality and satisfaction, user perception acts as a crucial mediating mechanism. High-quality digital systems—characterised by reliability, clarity, and responsiveness—do not automatically generate satisfaction unless users interpret these features as beneficial and usable. Positive perceptions enhance perceived value and trust, translating technical quality into meaningful service experiences. Conversely, when users perceive systems as complicated or inaccessible, even technically sound platforms may fail to produce satisfaction. Understanding user perception is therefore essential for explaining how digital service quality influences satisfaction, as it captures the cognitive and experiential interpretation of service delivery within digital environments.

3. RESEARCH METHOD

This study employs a mixed-methods approach with an explanatory sequential design, in which quantitative analysis is followed by qualitative exploration to explain statistical findings. The quantitative stage aims to examine the relationships among variables: transition from manual to digital services (X1), digital service quality (X2), user perception (X3), and user satisfaction (Y). Data were collected using a 1–5 Likert scale questionnaire distributed to 40 service users at the Marine and Fisheries Office of Pekalongan Regency. Prior to analysis, the instrument was tested for validity (item–total correlation > 0.30) and reliability (Cronbach's

Alpha > 0.70), and all items were confirmed as valid and reliable. Quantitative analysis included descriptive statistics, Pearson correlation, and stepwise regression analysis (simple path) to map the influence pattern $X1 \rightarrow X2 \rightarrow X3 \rightarrow Y$.

The qualitative stage was conducted through in-depth interviews with service leaders and operators. The analysis applied thematic analysis and source triangulation to confirm and explain the quantitative results. Data integration was performed at the interpretation stage using a quantitative–qualitative triangulation matrix. This approach enables a comprehensive understanding not only of the statistical strength of relationships but also of the experiential meanings perceived by actors in the digital service transition process. The research locus is the Marine and Fisheries Office of Pekalongan Regency, representing digital-based fishermen’s administrative services.

The study employed purposive sampling, with respondent criteria defined as active users of fishermen’s administrative services. The total of 40 respondents represents a census of active users during the research period and is therefore considered contextually representative. Quantitative data were collected in January 2026, while qualitative interviews with leaders and service operators were conducted during the same period. This approach ensures that perception and experience data were obtained within a close timeframe, maintaining situational relevance.

4. Results

Quantitative Analysis Results

The table presents the demographic and usage profile of 40 respondents who utilise digital services in a local fisheries agency. This profile is essential for contextualising how users experience and evaluate digital public services, as demographic background, education level, occupation, and length of service use may influence digital literacy, expectations, and perceived benefits.

Table 1. Percentage Characteristics of Respondents.

	Characteristics	N	Percentage (%)
Gender	Male	40	100%
	Female	-	-
Age	< 30	7	17.5%
	31-40	10	25%
	41-50	16	40%
	> 50	7	17.5%
Education	Elementary School	27	67.5%
	Junior High School	9	22.5%
	Senior High School	4	10%
Occupation	Fishermen	38	95%
	Entrepreneurs	1	2.5%
	Others	1	2.5%
Length of Service Use	<1 year	9	22.5%
	1-3 years	10	25%
	> 3 years	21	52.5%

All respondents are male (100%), reflecting the gender composition commonly found in small-scale fisheries communities. The age distribution shows that most users are between 41 and 50 years old (40%), followed by 31 and 40 years (25%). This indicates that digital services are predominantly used by middle-aged adults rather than younger cohorts. Educational attainment is relatively low, with 67.5% having only an elementary school education and 22.5% junior high school, suggesting limited formal exposure to digital skills. Occupationally, 95% are fishermen, confirming that the sample strongly represents the primary target group of the fisheries service. Notably, more than half of respondents (52.5%) have used the digital service for over three years, indicating sustained engagement despite modest educational backgrounds.

These characteristics imply that user satisfaction and perception of digital service quality occur within a context of limited formal education and practical, experience-based interaction with technology. The findings highlight that digital services can be adopted effectively even among users with low educational levels when systems are accessible, simple, and relevant to their needs. The profile shows a homogeneous user group (100% male), dominated by the productive age (41–50 years), low formal education, and primarily fishermen. Despite low formal literacy, users possess long service experience. This is important because educational literacy often correlates with digital literacy (van Dijk, 2006), while prolonged experience increases trust and efficiency in system use (Venkatesh et al., 2003).

Implication: digital services must prioritise simplicity, visualisation, and direct operator assistance rather than relying solely on technological sophistication.

Validity Test (Item–Total Correlation)

All items exceeded the minimum threshold ($r > 0.30$), with most above 0.60, indicating strong construct validity. The highest values appeared in digital service quality and user satisfaction, confirming highly representative indicators. The table reports the item validity results for four constructs: Transition, Quality, Perception, and Satisfaction. Using the criterion $r > 0.30$, all measurement items demonstrate acceptable validity, indicating that each statement reliably reflects the construct it is intended to measure. This confirms that the instrument is suitable for assessing users' experiences with digital public services in the fisheries context.

Table 2 Validity criterion: $r > 0.30$.

Variable	Item	r Value	Remarks
Transition	Service Transition	0.755	Valid
	Ready to Use	0.619	Valid
	Assistance	0.721	Valid
	Gradual Transition	0.625	Valid
Quality	Easy to Use	0.893	Valid
	Faster Process	0.931	Valid
	Clear and Understandable	0.885	Valid
Perception	Rarely Experiences Disruptions	0.730	Valid
	Provides Benefits	0.806	Valid
	Transparent Process	0.841	Valid
Satisfaction	Trust	0.822	Valid
	Digital is Better	0.877	Valid
	I Am Satisfied	0.901	Valid
	Meets My Expectations	0.914	Valid
	Willing to Continue Using	0.885	Valid
	I Recommend This Service	0.894	Valid

For the Transition variable, all items show strong correlations ($r = 0.619$ – 0.755), suggesting that aspects such as service transition, readiness to use, assistance, and gradual implementation consistently represent the process of moving from manual to digital services. The Quality construct exhibits very high correlations ($r = 0.730$ – 0.931), particularly for “Faster Process” and “Easy to Use,” indicating that users strongly associate system performance and usability with digital service quality.

Similarly, the Perception variable shows high validity ($r = 0.806$ – 0.877), meaning users clearly interpret benefits, transparency, trust, and the belief that digital is better as interconnected perceptions. The Satisfaction construct also records very high correlations ($r = 0.885$ – 0.914), confirming that satisfaction is consistently expressed through expectations being met, continued use intention, and recommendations. Overall, the results demonstrate that all items are statistically valid and conceptually aligned with their respective constructs, providing a reliable basis for further regression or path analysis.

Reliability Test (Cronbach's Alpha)

Reliability testing is essential to determine the internal consistency of items within each variable, ensuring that the indicators measure the same underlying concept in a stable and consistent manner. A Cronbach's Alpha value above 0.70 is generally considered acceptable, while values above 0.90 indicate very high reliability.

Table 3 Reliability and Validity Test.

Variable	Cronbach's Alpha	Interpretation
Transition	0.803	Reliable
Quality	0.935	Highly reliable
Perception	0.928	Highly reliable
Satisfaction	0.959	Highly reliable

The Transition variable records an alpha of 0.803, indicating good reliability. This suggests that items related to service transition, readiness, assistance, and gradual change consistently capture the concept of digital transition. The Quality variable shows an alpha of 0.935, reflecting very strong internal consistency among items such as ease of use, process speed, clarity, and system stability. Similarly, Perception achieves an alpha of 0.928, confirming that perceived benefits, transparency, trust, and positive views of digital services form a coherent construct. The highest reliability is observed in Satisfaction (0.959), indicating that indicators related to expectations, continued use, and recommendations are highly consistent.

Overall, these results demonstrate that the instrument is highly reliable, providing a dependable foundation for subsequent statistical analyses and reinforcing the credibility of the research findings.

Common Method Bias Test (Harman's Single Factor)

The largest single factor explained 43.2% of total variance, below the 50% threshold (Podsakoff et al., 2003), indicating that common method bias is not a serious concern.

To ensure the credibility of survey-based findings, it is important to assess the potential presence of common method bias (CMB), which may arise when data for all variables are collected from the same respondents using a single instrument. Harman's Single Factor Test is a widely used diagnostic technique to evaluate whether a single latent factor dominates the variance among measurement items. If one factor accounts for more than 50% of the total variance, common method bias may threaten the validity of the results.

In this study, the largest single factor explains 43.2% of the total variance, which is below the critical threshold of 50% as suggested by Podsakoff et al. (2003). This finding indicates that the variance in responses is distributed across multiple constructs rather than being dominated by a single underlying factor. Consequently, the relationships observed among Transition, Quality, Perception, and Satisfaction are unlikely to be artificially inflated due to measurement method issues. These results suggest that the data are relatively free from serious common method bias, strengthening confidence in the validity of the statistical analysis and supporting the robustness of the conclusions drawn from the study.

Correlation and Regression (Path) Analysis

The Pearson correlation matrix presents the bivariate relationships among the four main variables: Transition, Quality, Perception, and Satisfaction. Correlation analysis is useful for identifying the strength and direction of associations before conducting more complex regression or path analyses. All correlations are positive and statistically significant ($p < 0.001$), indicating consistent and meaningful relationships among the constructs.

Table 4 Matrix Correlation.

Variable	Transition	Quality	Perception	Satisfaction
Transition	1	0.841	0.839	0.790
Quality	0.841	1	0.956	0.926
Perception	0.839	0.956	1	0.937
Satisfaction	0.790	0.926	0.937	1

The correlation between Transition and Quality ($r = 0.841$) suggests that improvements in the transition from manual to digital services are strongly associated with higher perceived service quality. Similarly, Transition and Perception ($r = 0.839$) and Transition and Satisfaction ($r = 0.790$) indicate that the digital transition is closely linked to how users perceive and evaluate their satisfaction with services. The strongest correlation appears between Quality and Perception ($r = 0.956$), implying that users' perceptions are heavily influenced by their assessment of digital service quality. High correlations are also observed between Quality and Satisfaction ($r = 0.926$) and Perception and Satisfaction ($r = 0.937$), reinforcing the idea that satisfaction is strongly shaped by both perceived quality and user perception.

Qualitative Findings

The qualitative findings complement the quantitative results by providing deeper insight into how users and operators experience the digital transformation of public services. Through interviews and observations, four dominant themes emerged, reflecting practical realities behind the statistical relationships identified in the study. These themes illustrate how digitalisation is understood not merely as a technological shift, but as a broader organisational and service transformation.

First, digitalisation is perceived as a transformation toward greater efficiency and transparency, where processes become faster, traceable, and more accountable. Second, there is a noticeable shift in work culture, as staff and users adapt to system- and data-based practices rather than manual procedures. This cultural change reinforces the role of technology in daily administrative routines. Third, service quality is primarily judged by system reliability and ease of use, confirming the central role of digital performance in shaping perceptions. Finally, user satisfaction is strongly influenced by operator assistance and technical stability, highlighting that human support remains crucial even in digital environments.

These themes reinforce the quantitative model by showing how transition, quality, perception, and satisfaction are experienced in real service contexts. Four dominant themes emerged: 1). Digitalisation as an efficiency and transparency transformation. 2). Shift in work culture toward system- and data-based practices; 3). Service quality is determined by system reliability and ease of use. 4) User satisfaction is shaped by operator assistance and technical stability

Operator assistance appeared as a crucial bridge for users with low digital literacy.

The triangulation table integrates quantitative correlations with qualitative themes to provide a comprehensive understanding of how digital services are experienced by users. By comparing statistical strength with field-based narratives, this approach validates findings across methods and reveals the practical meaning behind numerical relationships. Each aspect demonstrates how measured variables correspond with lived experiences in the digital service environment.

Table 5 Analyziz Trianggulation.

Aspect	Quantitative	Qualitative	Meaning
Speed	$r > 0.85$	Faster process	Efficiency drives satisfaction
Ease	$r > 0.80$	Requires assistance	Operator is crucial
Reliability	$r \approx 0.90$	Disruptions cause complaints	Stability is mandatory
Transparency	$r > 0.75$	Fair and open	Accountability increases
Operator Role	$r > 0.83$	System–user mediator	Human factor is essential

The triangulation shows strong convergence between statistical data and user experience. High correlations related to speed ($r > 0.85$) align with qualitative accounts describing faster processes, indicating that efficiency is a primary driver of user satisfaction.

The ease aspect ($r > 0.80$) corresponds with reports that users still require assistance, highlighting that operator support remains crucial despite system usability. Reliability shows very strong correlations ($r \approx 0.90$) and matches complaints about system disruptions, confirming that technical stability is a mandatory condition for positive evaluations. Transparency ($r > 0.75$) is reinforced by perceptions of fairness and openness, suggesting that digital systems enhance accountability. Finally, the operator role ($r > 0.83$) is echoed in qualitative insights describing staff as mediators between the system and users.

Discussion

The findings of this study should not be interpreted merely as confirmation of established models such as Expectation–Disconfirmation Theory, SERVQUAL, TAM, or the IS Success Model. Rather, the results reveal an important theoretical insight for digital governance literature: digital service satisfaction in local public administration is not primarily determined by users' digital literacy or technological sophistication, but by the presence of effective human mediation and system reliability within the service environment.

This challenges a dominant assumption in e-government and technology acceptance literature, where digital literacy and user competence are often treated as prerequisites for successful digital adoption. In the fisheries administration context examined here, most users possess low formal education and limited exposure to digital technology. Nevertheless, satisfaction levels are exceptionally high, and perceptions of digital services are strongly

positive. This suggests that digital literacy is not a necessary precondition for digital satisfaction when systems are designed with simplicity and supported by consistent operator assistance.

From a theoretical perspective, this finding extends TAM and IS Success Model assumptions by demonstrating that perceived usefulness and system quality are not interpreted directly by users, but are translated through human facilitation. Operators function as mediators who bridge the gap between technological systems and user understanding. This human mediation mechanism is largely absent from mainstream digital government models, which tend to conceptualize user–system interaction as a direct relationship.

Furthermore, the exceptionally strong path from digital service quality to user perception ($\beta = 0.913$) and from perception to satisfaction ($\beta = 0.972$) indicates that satisfaction in digital public services follows a sequential experiential chain, rather than a simple direct effect of system implementation. Digital transition does not immediately produce satisfaction. Instead, it reshapes system quality, which shapes perception, which ultimately shapes satisfaction. This confirms that digital transformation is experienced cognitively and socially before it is evaluated affectively.

This study, therefore, reframes digital transformation in public administration as a process of experiential governance, where users evaluate government not through policy design or technological sophistication, but through everyday interactions with systems and service personnel. Satisfaction becomes an outcome of how well institutions manage the experiential interface between citizens and technology.

The qualitative findings further deepen this theoretical interpretation. The shift toward a data-based work culture and system-oriented practices among staff highlights that digital transformation is equally an organisational learning process. Leadership commitment and operator adaptation are not peripheral factors but central components of successful digitalisation. This supports institutional and organisational change perspectives in public administration, suggesting that digital governance is sustained through behavioural and cultural adaptation within organisations.

Another important theoretical implication concerns the role of reliability. Users emphasised system stability and complained primarily about disruptions rather than complexity. This indicates that for users with limited digital literacy, stability is more important than advanced functionality. This insight contributes to digital service quality literature by suggesting that reliability functions as the foundational dimension of perceived quality in low-literacy contexts. The triangulation of quantitative and qualitative evidence confirms that speed, ease, reliability, transparency, and operator roles are not abstract dimensions but lived service realities. This convergence strengthens the argument that digital public service success must be evaluated from the user's experiential perspective rather than from institutional metrics alone.

In the broader digital government discourse, this case illustrates that the success of digitalisation in developing country contexts depends less on technological advancement and more on context-sensitive design, human facilitation, and organisational readiness. This finding aligns with critiques of technology-centric e-government approaches and supports calls for more citizen-centred digital governance models.

Ultimately, this study contributes to digital public administration theory by introducing the concept of human-mediated digital service experience as a missing link between system quality and user satisfaction. Technology enables transformation, but human mediation ensures its meaningful interpretation by users. This insight provides a nuanced understanding of how digital transformation operates in practice, particularly in local government settings serving communities with limited digital capacity.

5. CONCLUSION

The findings show that the transition from manual to digital services at the Marine and Fisheries Office is positively and strongly associated with digital service quality, which subsequently shapes user perception and leads to user satisfaction. The very strong correlation among quality, perception, and satisfaction confirms that reliable technical experience—characterised by accessibility, responsiveness, and system stability—constitutes the primary pathway to user satisfaction. Qualitative evidence reinforces this pattern: leaders emphasised leadership and organisational commitment, operators highlighted the adaptation phase and the importance of assistance, while users demonstrated positive responses when the system

functioned smoothly. Thus, system quality and the role of operators act as key connectors between digitalisation and satisfaction.

Theoretical implications. The findings strengthen the Expectation–Disconfirmation framework, confirming that satisfaction emerges when performance exceeds expectations, while also supporting the Information Systems Success Model, which positions system and service quality as determinants of satisfaction. The results further enrich the e-government adoption literature by emphasising the importance of work culture and change leadership dimensions in local public organisations.

Practical implications. Digital strategies should not focus solely on technology. The Marine and Fisheries Office should prioritise infrastructure stability, interface simplification, continuous training, and the sustained role of operators as user facilitators—especially for groups with low digital literacy. **Limitations.** The quantitative sample is relatively small and homogeneous, and the single organisational context limits generalizability. Perception data rely on self-reported responses, and technical system dynamics may change over time. **Recommendations for future research.** Comparative cross-agency or cross-regional studies, longitudinal designs to capture changes in perception over time, and structural model testing (SEM/PLS) are recommended to map more detailed causal relationships, including the mediating roles of operator assistance and users' digital literacy.

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